



DTE Electric Company
One Energy Plaza, 1635 WCB
Detroit, MI 48226-1221

Estella R. Branson
estella.branson@dteenergy.com
(313) 235-6985

September 12, 2024

Lisa Felice
Acting Executive Secretary
Michigan Public Service Commission
7109 West Saginaw Highway
Lansing, MI 48917

RE: In the matter of the Application of **DTE ELECTRIC COMPANY** for authority to increase its rates, amend its rate schedules and rules governing the distribution and supply of electric energy, and for miscellaneous accounting authority
MPSC Case No. U-21534

Dear Ms. Felice:

The following is attached for paperless electronic filing:

Official Exhibits of the DTE Electric Company admitted into the record on September 4-6, 2024 and September 9-10, 2024:

Exhibit A-24, Schedules N1.1 thru N10

If you have any questions or concerns with this filing, please contact me at the above referenced number.

Respectfully submitted,

Estella R.
Branson

 Digitally signed by Estella R.
Branson
Date: 2024.09.12 12:42:27 -04'00'

Estella R. Branson
Senior Paralegal

Enclosure

Line No.	Business Case / Project Name	IT Portfolio/Program	Spend Year	BCD ID	Exhibit Page Number
1	ACPP/Time of Day	Customer Service	2022	BCD-CS-22-029	5
2	ACPP/Time of Day	Customer Service	2023	DMND0001297	7
3	Corporate Energy Forecasting	Customer Service	2022	BCD-CS-22-054	10
4	Customer Notifications - TCPA Compliance	Customer Service	2024	DMND0002984	12
5	MIGP Customer - Requested Renewable Energy Projects	Customer Service	2022	BCD-CS-22-047	14
6	MIGP Customer - Requested Renewable Energy Projects	Customer Service	2023, 2024, 2025	DMND0001265	17
5	MIGP - Fixed Price Product(Rider17)	Customer Service	2022, 2023	BCD-CS-21-025	20
7	MIGP Low Income Solar Pilot	Customer Service	2024, 2025	DMND0001685	22
8	MIGP Reservation System for New Enrollments	Customer Service	2023	DMND0002268	24
9	MIGP Website Update	Customer Service	2022	BCD-CS-21-019	27
11	MIGP Section 61 Settlement	Customer Service	2022, 2023	BCD-CS-21-067	29
12	MIGreenPower Large Customer Prepayment	Customer Service	2025	DMND0001683	31
10	MIGP Scope 3 Billing and Enrollment	Customer Service	2025	DMND0002493	33
14	PCI Compliance	Customer Service	2022	BCD-CS-22-030	35
15	PCI Compliance	Customer Service	2023, 2024, 2025	DMND0001282	37
13	Payment Stability Plan	Customer Service	2022	BCD-CS-22-053	39
16	Regulatory Compliance	Customer Service	2022	BCD-CS-22-007	41

Line No.	Business Case / Project Name	IT Portfolio/Program	Spend Year	BCD ID	Exhibit Page Number
17	Regulatory Compliance	Customer Service	2023, 2024, 2025	DMND0001284	43
18	Rider 17 – MIGreenPower, Residential and Small Commercial & Industrial	Customer Service	2023	DMND0001286	45
19	Rider 17 – MIGreenPower, Residential and Small Commercial & Industrial	Customer Service	2024	DMND0001756	47
20	Rider 17 – MIGreenPower, Residential and Small Commercial & Industrial	Customer Service	2025	DMND0002604	49
21	Securitization	Customer Service	2022	BCD-XX-21-NNN	51
22	Treasury Credential on File	Customer Service	2022, 2023	BCD-CS-22-031	53
23	Advanced Analytics AA Use Cases Implementation	Customer Service	2022	BCD-CS-22-005	55
24	Advanced Analytics AA Use Cases Implementation	Customer Service	2023, 2024, 2025	DMND0001241	57
25	Automated Application Monitoring Enhancement	Customer Service	2022	BCD-CS-22-015	61
26	Automated Application Monitoring Enhancement	Customer Service	2023, 2025	DMND0001482	63
27	Customer Legacy Applications Enhancement	Customer Service	2022, 2023	BCD-CS-22-011	65
28	Customer Relationship and Billing Program Enhancement	Customer Service	2022, 2023	BCD-CS-22-010	67
29	IT Application Environments Enhancement	Customer Service	2022	BCD-CS-22-027	69
30	IT Application Environments Enhancement	Customer Service	2023	DMND0001275	71
31	MDM Stabilization	Customer Service	2025	DMND0002303	74
32	Never Billed Accounts due to Theft/Fraud	Customer Service	2025	DMND0001921	77
33	Supporting Capabilities Test Data and Test Data Management	Customer Service	2022, 2023	BCD-CS-22-038	79

Line No.	Business Case / Project Name	IT Portfolio/Program	Spend Year	BCD ID	Exhibit Page Number
34	Transform and Modernize PO Architecture	Customer Service	2025	DMND0001788	81
35	Bill Management	Customer Service	2022	BCD-CS-21-058	83
36	Billing Web Self-Service	Customer Service	2023, 2024	DMND0002368	84
37	Collection Web Self-Service	Customer Service	2023, 2024	DMND0002367	86
38	Collection Web Self-Service	Customer Service	2025	DMND0002720	88
39	Contact Center Enablement	Customer Service	2023, 2024	DMND0002370	90
40	Contact Center Enablement	Customer Service	2025	DMND0002729	92
41	Customer Closed Loop Development	Customer Service	2022	BCD-CS-22-056	94
42	Customer Closed Loop Development	Customer Service	2023	DMND0001254	96
43	Customer Service Communications	Customer Service	2023	DMND0001262	98
44	Customer Service Communications - Phase 2	Customer Service	2024	DMND0002730	100
45	Enhanced Training Environments	Customer Service	2022	BCD-CS-21-069	103
46	Error Free Communication - Outage Status	Customer Service	2022	BCD-CS-21-073	105
47	Error Free Communication - Outage Status	Customer Service	2023, 2024	DMND0001695	107
49	Field Service Management for RM&P	Customer Service	2022, 2023	BCD-CS-22-050	111
48	Field Service Management Billing & Metering	Customer Service	2022, 2023	BCD-CS-21-071	113
50	IVR Virtual Assistants	Customer Service	2022, 2023	BCD-CS-22-045	115

Line No.	Business Case / Project Name	IT Portfolio/Program	Spend Year	BCD ID	Exhibit Page Number
52	Journey Work Product Transformation Teams	Customer Service	2022	BCD-CS-22-042	117
51	MIGP Data and Reporting	Customer Service	2023	DMND0001267	119
53	MIMO Web Self-Service	Customer Service	2023, 2024	DMND0002365	121
54	MIMO Web Self-Service	Customer Service	2025	DMND0002721	123
55	Payment Web Self-Service	Customer Service	2023, 2024	DMND0002369	125
56	Payment Web Self-Service	Customer Service	2025	DMND0002724	127
57	Platform Integration Component	Customer Service	2022, 2023	BCD-CS-22-043	130
58	Qualtrics Expansion	Customer Service	2022, 2023	BCD-CS-21-070	132
59	SIP in Call Center	Customer Service	2023	DMND0001293	134
60	Speech Analytics	Customer Service	2022, 2023	BCD-CS-21-006	136
61	Workforce Automation for Contact Center	Customer Service	2022, 2023	DMND0001526	138



Executive Summary

Business Case ID	BCD-CS-22-029	Business Case Name	Time of Use TOU Full Rollout
------------------	---------------	--------------------	------------------------------

Stakeholders

IT Portfolio	Customer	Business Unit	Billing and Metering
IT Sub-Portfolio	CIT	Business Unit Director	Jason E Sparks
IT Director	Lisa LeGault	Business Unit SME	Toni M Martin/M Cassandra Crutcher
Managed by	MEP	Business Units Impacted	Electric

Project Description

Initiative Category	Regulatory/Compliance	Initiative Type	Solutions Delivery - On Prem
---------------------	-----------------------	-----------------	------------------------------

Business Opportunity	
What business problem are we trying to solve?	The Michigan Public Service Commission Order U-20162 directed DTE to pilot multiple residential rate structures and test messaging to customers, to assess and evaluate the impact of potential new rate structures. A one-year Time of Use rates pilot was implemented in February 2021, to identify and propose an appropriate rate structure for a full rollout. At this time, Regulatory filing is expected October 2021. Preparations for full rollout activities are expected to begin in August of 2021 with development continuing through December 2022. Conversions and enrollments are expected to begin in January 2023 with the full rollout completed by December 2023. This Business Case includes the entire scope and cost needed for implementing a Time of Use Full Rollout effort.
What system or process is being affected?	Full implementation and rollout of Time of Use rate structure will impact the SAP-CR&B System, AMI System, and the Billing and Rates process. Impacted business areas and workstreams include: Rates; Customer IT; Billing and Metering; AMI operations; Customer Contact Center; Revenue Management and Protection; Digital Experience; Insight Application; Major Enterprise Projects; Marketing; Corporate Communications and Organizational Change Management
What functionality or capability is being provided?	The Time of Use pilot currently has 15,000 customers enrolled in the program. The current technology and business process design is expected to be able to support 95% of DTE's residential electric customers. The TOU Full Rollout effort will add technology and business process capabilities to support the remaining 5% of customer types not included in the TOU Pilot. Customers will be provided with Opt-Out (pre-enrollment) and Un-Enroll options, as well as additional tools related to usage and rate and bill comparisons for increased customer experience in the Web and Mobile channels.
What is the customer or employee value?	Full implementation and rollout of Time of Use rate structure will provide rate options for customers and improve customer and employee experience.
What alternatives have been considered?	Offering an Opt-Out option is currently under consideration for the full rollout however, a "do nothing" alternative is not in scope because this is regulatory context with a mandatory implementation.

Key Objectives	
1)	The Time of Use pilot currently has 15,000 customers enrolled in the program. The deployed technology and business process design is expected to be able to support 95% of DTE's residential electric customers. Need to a
2)	Provide customers with Opt-Out (pre-enrollment) and Un-Enroll options, as well as additional tools related to usage and rate & bill comparisons for increased customer experience in Web and Mobile channels.
3)	Technology and business processes need to be scaled up to handle approximately 2 million customers and approximately 2 million customers need to be converted to the new TOU rate over a 5 month go-live period.
4)	TOU/AMI meters: The transition to TOU Full Rollout will capture usage at the hourly level, resulting in a significant increase to the volume of data currently being handled. Need to ensure that the system can handle the inf
5)	TOU/AMI meters: With all residential customers moving to TOU, there is an increase in the licensing needed for the SUMCheck module. This ensures that rounding does not occur between the systems.
6)	TOU/AMI meters: A profile must be created for every customer that transitions to TOU. Approximately 2 million profiles will need to be created and verified.
7)	BOTs: Need to develop BOTs for specific TOU functions.
8)	Planned Scope includes, but is not limited to: EA, Unbilled Sim, Conversion, Billing & MIMO, Changes to Eligibility Rules, AMI Scalability, Micro Sites, Communication, and Regression.
9)	
10)	

Start Month	January	2022
Duration to Complete	Years	23 Months
End Month	December	2023

Funding Source	ITS
----------------	-----

IT Financial Impact						
	Year 1	Year 2	Year 3	Year 4	Year 5	Total amount is sent for approval on all business cases.
						Total
Capital	\$24,235,470	\$7,517,000	\$0	\$0	\$0	\$31,752,470
O&M	\$2,392,000	\$1,708,000	\$0	\$0	\$0	\$4,100,000
Total	\$26,627,470	\$9,225,000	\$0	\$0	\$0	\$35,852,470

Business Unit Costs						
BU O&M	\$12,600,000			Trailing BU O&M Costs	\$0	
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$236,200	\$141,000	\$0	\$0	\$0	\$377,200



Executive Summary

Business Case Number	Business Case Name
DMND0001297	Time of Day

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Jason E Sparks
Portfolio Manager	Business Unit SME
Lisa A LeGault	Toni Martin
Managed By	PPS
MEP	150

Project Description

Investment Type	Initiative Type
Regulatory/Compliance	Solutions Delivery - On Prem

What business problem or opportunity are we trying to solve?

The Michigan Public Service Commission (MPSC) Order U-20162 directed DTE to pilot multiple residential rate structures and test messaging to customers, to assess and evaluate the impact of potential new rate structures. A one-year Time of Day rates pilot was implemented in February 2021, to identify and propose an appropriate rate structure for a full rollout. The Regulatory filing was in January 2023. Preparations for full rollout activities are underway. The technical conversion began in January 2023, and full rollout will be completed by May 31, 2023. This Business Case includes the entire scope and cost needed for implementing a Time of Day Full Rollout effort. In November 2022, the MSPS issued order U-20836 with the final rate structure. Please note that at DTE this rate will simply be known as Time of Day 3 p.m. to 7 p.m.

What functionality or capability is being provided?

The Time of Day pilot currently has 15,560 customers enrolled in the program. The current technology and business process design is expected to be able to support 95% of DTE's residential electric customers. The TOD Full Rollout effort will add technology and business process capabilities to support the remaining 5% of customer types not included in the TOD Pilot. Customers will be provided with Opt-Out (pre-enrollment) and Un-Enroll options, as well as additional tools related to usage and rate and bill comparisons for increased customer experience in the Web and Mobile channels.

The Time of Day pilot currently has 15,560 customers enrolled in the program. The deployed technology and business process design is expected to be able to support 95% of DTE's residential electric customers. Need to add technology and business process capabilities to support the remaining 5% of customer types not included in the TOD Pilot. Provide customers with Opt-Out (pre-enrollment) and Un-Enroll options, as well as additional tools related to usage and rate & bill comparisons for increased customer experience in Web and Mobile channels. Technology and business processes need to be scaled up to handle approximately 2 million customers and approximately 2 million customers need to be converted to the new TOD rate over a 5 month go-live period.

TOD/AMI meters: The transition to TOD Full Rollout will capture usage at the hourly level, resulting in a significant increase to the volume of data currently being handled. Need to ensure that the system can handle the influx of data. Additional hardware (servers) and disk space will need to be installed and configured to process the increase in data.

TOD/AMI meters: With all residential customers moving to TOD, there is an increase in the licensing needed for the SUMCheck module. This ensures that rounding does not occur between the systems.

TOD/AMI meters: A profile must be created for every customer that transitions to TOD. Approximately 2 million profiles will need to be created and verified.

BOTs: Need to develop BOTs for specific TOD functions. Planned Scope includes, but is not limited to: EA, Unbilled Sim, Conversion, Billing & MIMO, Changes to Eligibility Rules, AMI Scalability, Micro Sites, Communication, and Regression.

Success is the ability to transition from a Time of Day Pilot with currently 15,000 customers to a full rollout implementation for approximately 2 million customers by the end of 2023.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

The system will require modifications to allow the new TOD rate structure to be applied to the 1.9 million electric residential.

Define the Benefit/Value to the Organization, Customer, Employee.

Full implementation and rollout of Time of Day rate structure will provide rate options for customers and improve customer and employee experience.

How will you monitor and measure expected value?

Project and business resources will:
Run and operate the command center daily at the Program level
Monitor ACPP solution for issues, defects and risks
Monitor enrollment and conversion of customer rates including exceptions
Generate and distribute defects and conversion/enrollment and exception reports
Facilitate daily check points across all teams involved
Escalate risks and issues to DTE leadership as appropriate

What alternatives have been considered?

This is an MPSC mandatory change. In the future, customers could request to move to another residential base rate (time of day 11 a.m. – 7 p.m. or DPP).

Start Date	End Date	Shared Asset	Funding Source
2023-01-02	2023-12-31	No	IT



IT Costs

Type	FY23	Total
Capex	\$6,484,912	\$6,484,912
Total	\$6,484,912	\$6,484,912

BU Costs

Category	Term of Contract	BU O&M Cost
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0



Executive Summary

Business Case ID	BCD-CS-22-054	Business Case Name	Corporate Energy Forecasting
------------------	---------------	--------------------	------------------------------

Stakeholders

IT Portfolio	Customer	Business Unit	Corporate Energy Forecasting
IT Sub-Portfolio	BPD	Business Unit Director	Joyce Leslie
IT Director	Lisa LeGault	Business Unit SME	Markus Leuker
Managed by	IT	Business Units Impacted	Electric

Project Description

Initiative Category	Strategic	Initiative Type	Solutions Delivery - On Prem
Business Opportunity			
What business problem are we trying to solve?	The Corporate Energy Forecasting team is in the process of developing an Integrated Forecasting Solution designed to deliver a circuit-level forecast fully aligned with the traditional Service Area forecast and integrated with Distribution Operations planning and design feedback. The forecasting solution will be able to deliver a full 8760 hourly profile at the circuit level for the length of the forecast horizon that can be aggregated at the substation and Service Area level.		
What system or process is being affected?	Corporate Energy Forecasting, Distribution Planning and Forecasting, Integrated Resource Planning and Financial Planning		
What functionality or capability is being provided?	Phase One of the project (currently underway) is scheduled to be complete by the end of calendar year 2021. This phase consists of significant modeling upgrades at the hourly level to facilitate the adoption of new technologies (EV, PV, Battery, EWR, Electrification, etc...) into the forecast at a circuit-level. Phase Two of the project will begin in 2022 and will require the purchase of Metrix IDR and Forecast Manager software solutions. Metrix IDR is an ITRON forecasting software fully compatible with current ITRON forecasting software utilized by the Corporate Energy Forecasting team (Metrix ND and Metrix LT) in producing the current Service Area forecast. Metrix IDR will allow for the reconciliation of circuit-level forecasts with Service Area forecasts in a powerful analytics platform to run significant scenario analysis. Forecast Manager allows for the scheduling of multiple scenario's withing the Metrix IDR solution set.		
What is the customer or employee value?	The current forecasting approach across the organization is quite siloed. The Corporate Energy Forecasting team produces a system-level forecast while Distribution Operations and other parts of the organization produce their own forecasts. This leads to confusion and inconsistencies. For example, DO may require significant capital for projects that may include load growth initiatives however, the system load forecast is flat to declining. The Integrated Forecasting Solution being developed intends to bring both functions into alignment along one common platform of tools and assumptions. The DO team will be playing an integral role in the modeling of Metrix IDR with circuit-level assumptions that the Corporate Energy Forecasting team does not have the insight to provide. Metrix IDR will be the software platform to integrate and align the forecast and provide a fully reconciled forecast from circuit to service area. Forecast Manager allows for the scheduling of multiple scenario's withing the Metrix IDR solution set. Additionally, with the adoption of new technologies (EV, PV, Battery, EWR, Electrification, etc...), DTE will now have the insight into investment requirements at a much more granular level than ever before. The insight gained from this effort will provide clarity and have the potential to save millions of dollars of investments in the distribution system.		
What alternatives have been considered?	The Corporate Energy Forecasting team has been working with SAS as a data analytics platform for the past three years. As data analytics solutions continue to grow and develop, new options became available. We aligned our needs with our data platform structure. As a result, SAS was no longer considered the ideal solution and the Python/Databricks solutions combined with the ITRON forecasting platform became the most cost effective solution for our needs into the future.		

Key Objectives	
1)	Enhance the forecasting process to include additional clarity on system requirements and developments into the future
2)	Deliver 8760 forecast at the circuit and substation level that reconciles with the service area load forecast
3)	Deliver rate-level forecasts to the finance team for better forecasting and accuracy of margin
4)	Enhance advanced statistical modeling capabilities
5)	Provide clarity to the organization on the impacts of changing technology (EV, PV, DERs) on system and distribution load
6)	Enhance modeling capability at the circuit level for additional clarity on system requirements into the future
7)	Enhanced profitability
8)	
9)	
10)	

Start Month	January	2022
Duration to Complete	0 Years	3 Months
End Month	April	2022

Funding Source	ITS
----------------	-----

IT Financial Impact						
	Year 1	Year 2	Year 3	Year 4	Year 5	Total amount is sent for approval on all business cases.
Capital	\$255,568	\$0	\$0	\$0	\$0	\$260,000
O&M	\$8,089	\$0	\$0	\$0	\$0	\$10,000
Total	\$263,657	\$0	\$0	\$0	\$0	\$270,000

Business Unit Costs						
BU O&M	\$0			Trailing BU O&M Costs		\$66,000
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$0	\$0	\$0	\$0	\$0

Executive Summary

Business Case Number	Business Case Name
DMND0002984	Customer Notifications-TCPA Compliance

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Jacqueline L Robinson
Portfolio Manager	Business Unit SME
Lisa A LeGault	Joyce E Lepage
Managed By	PPS
IT	150

Project Description

Investment Type	Initiative Type
Regulatory/Compliance	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

Telephone Consumer Protection Act (TCPA), a federal regulation enacted in 1991 was amended and expanded in 2023 to include SMS/text messages sent to a customer. The regulation includes guidelines on what constitutes a marketing communication versus necessary account communication. Heavy fines are applied per instance of non-compliance. With our established automated notifications program, we need to enhance reporting to ensure proper monitoring of quantities and types of notifications sent to the customer to ensure our TCPA compliance.

What functionality or capability is being provided?

This business case will enable us to update templates to better track TCPA status (exempt, non-exempt, etc.) It will also allow us to build custom TCPA reporting to ensure we have a pulse on which customers have reached their notifications limit by time in a given time frame. Improved internal processes and robust governance will ensure people and systems are aligned toward the goal of 100% TCPA compliance.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

The solution is required for regulatory compliance related to the amended TCPA (July 2023).

Define the Benefit/Value to the Organization, Customer, Employee.

The solution is required for regulatory compliance related to the amended TCPA (July 2023).

How will you monitor and measure expected value?

Timeliness of notifications sent. Visibility of the content of notifications sent to the customers and ability to use information across all channels.
Engagement of the customer in the Preference Center.

What alternatives have been considered?

The solution is required for regulatory compliance related to the amended TCPA (July 2023), therefore alternatives have not been evaluated.

Start Date	End Date	Shared Asset	Funding Source
2024-01-08	2024-12-20	Yes	IT



IT Costs

Type	FY24	Total
Capex	\$300,000	\$300,000
Opex	\$100,000	\$100,000
Total	\$400,000	\$400,000

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0



Executive Summary

Business Case ID	BCD-CS-22-047	Business Case Name	MYR YR1 Customer Requested Renewable Energy Projects
------------------	---------------	--------------------	--

Stakeholders

IT Portfolio	Customer	Business Unit	Renewable Energy
IT Sub-Portfolio	BPD	Business Unit Director	Brian T Calka
IT Director	Lisa LeGault	Business Unit SME	Eric J Markel
Managed by	MEP	Business Units Impacted	Electric

Project Description

Initiative Category	Regulatory/Compliance	Initiative Type	Solutions Delivery - On Prem
---------------------	-----------------------	-----------------	------------------------------

Business Opportunity	
What business problem are we trying to solve?	The Business problem is to meet the creation and integration of the "customer requested" solar park product into the C360 billing system. Creating Solar Energy parks financed and managed by DTE energy which would allow customers to participate in renewable energy projects in an affordable cost-effective manner by offering unique financing contracts.
What system or process is being affected?	The systems being affected are SAP CR&B (Customer Relationship and Billing), SAP BW (Business Warehouse) Reporting and SAP Marketing cloud. The process being affected are Enrollment, Unenrollment, Billing and Reporting.
What functionality or capability is being provided?	The functionality is being provided for creation and integration of the customer requested solar park product into the C360 billing system. DTE will assist large electric customers in offering solar energy which that they can resale to their tenant customers. A new solar park process is being created to expand DTE's commitment to renewable energy. These projects will be individually approved by MPSC.
What is the customer or employee value?	DTE Electric large customers will be able to resell renewable energy and DTE will achieve strategic growth in the renewable energy sector.
What alternatives have been considered?	No alternatives have been identified.

Key Objectives

- 1) Ability to enroll and unenroll customers by Renewable energy staff by using CRM or other source.
Ex: This is similar to Rider 19 program, all contract based Enrollments will need start and end date, can't be fixed based/kWh enrollment (Anchor /Tenant).
- 2) Create 2 types of customer programs 1) behind the meter- assets on customer's site.
2) Off-site - assets not tied to the customer (similar to other solar parks).
Billing for behind the meter - Customer received a fixed rate charge, energy credit based on outflow meter.
- 3) Off-site billing - there are 3 scenarios for this type all based on production meter not associated with the customer premise:
1) Fix rate charge; fixed rate credit; one-time termination fee
2) Fixed rate charge; variable energy credit based on LMP (from Large customer; variable capacity credit; termination fee. This will be based on production meter less any #1 from the project.
3) Variable charge; 2 credits same as #2, annual true up of variable charge; termination fee.
- 4) Add MIGreenPower customer projects to website. Static content, No web enrollment, No Notification and No CR training. Develop training materials (similar to MIGreenPower Program). Creation of multiple reports containing enrollment and total bill credit data available in Business Object Reports from the DTE Quest website.
New Enrollment report(Anchor/Tenant level), Enrollment report (Total Enrollments for that particular site), Unenrollment report, Auto enrollment report, Revenue report, Change Participation report
- 5) Can handle multiple customers enrolled in a single project with one anchor tenant .
All customers would be billed based on fixed price or % based kWh, with the anchor customer being responsible for the remaining kWh from the production meter.
System should allow the ability to create more than 1 anchor /tenant.
- 6) Must have ability to rebill customers for previous billing periods at the bill credit rate they were charged at the time of past invoicing. Must have the ability to read production meter at customer's site to determine billing fees and credits.
- 7) Ability to enroll Residential and C&I customers in to the Fixed price or % based usage program via CR&M and Web channel. Enrollment process is similar to MIGreenPower fixed/combo programs. The Residential and small C&I portion will have same back end requirements (Eligibility , MIMO & Auto enrollment ...etc). Ability to enroll, unenroll, or switch from existing MIGreenpower offerings to a customer requested project.
- 8) Redesign of the MIGreenPower website to include the Customer requested project in addition to existing functionality such as enrolling , unenrolling, FAQs, etc. This should be a responsive design on Mobile Web and include all devices & browsers.
- 9) Must have ability to rebill customers for previous billing periods at the rate they were charged at the time of past invoicing. Customer enrollment will be immediate. Customers must have the option to easily unenroll in their current non-fixed price MIGP programs to enroll in MIGP Fixed-price program. Need ability to start /stop program based on the number of customers enrolled (Customers limit yet to be determined).
This customer requested project must be mutually exclusive from other MIGP program.
Ex: Fixed MIGP eligibility will need to be updated.
Ability to create multiple the customer requested projects , including VPPA type programs.
- 10) Customer Requested Program- Anchor/Tenant and Public offerings
VPPA - Virtual purchase program agreement (this is for one customer, or multiple customers with out any public offering enrollments)

Michigan Public Service Commission
DTE Electric Company
Customer Service IT Business Cases- Executive Summaries

Executive Summary

Case No. U-21534

Exhibit: A-24

Schedule: N1.1

Witness: M. Hatsios

Page 16 of 139

Start Month	June	2022
Duration to Complete	Years	10 Months
End Month	April	2023

Funding Source	ITS
----------------	-----

IT Financial Impact						
	Year 1	Year 2	Year 3	Year 4	Year 5	Total amount is sent for approval on all business cases.
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$2,386,562	\$1,591,042	\$0	\$0	\$0	\$3,980,000
O&M	\$198,622	\$183,343	\$0	\$0	\$0	\$380,000
Total	\$2,585,184	\$1,774,385	\$0	\$0	\$0	\$4,360,000

Business Unit Costs						
BU O&M	\$48,000			Trailing BU O&M Costs		\$0
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$0	\$0	\$0	\$0	\$0

Executive Summary

Business Case Number	Business Case Name
DMND0001265	MIGP Customer - Requested Renewable Energy Projects

Stakeholders

Portfolio Category	Business Unit
Customer	Renewable Operations
Portfolio	Business Unit Director
Customer Service	Knox W Cameron
Portfolio Manager	Business Unit SME
Lisa A LeGault	Eric J Markel
Managed By	PPS
MEP	150

Project Description

Investment Type	Initiative Type
Regulatory/Compliance	Solutions Delivery - On Prem

What business problem or opportunity are we trying to solve?

Customer-requested renewable energy projects are unique contracts between a customer and DTE to build dedicated renewable assets to offset their electric use. In addition to building the programs per the contracts, these unique contracts require the creation and integration of a new product named "customer-requested solar park" into the SAP CR&B system.

Similar in scope to many of our MIGP renewable projects, this project will include end-to-end enhancements to the CR&B system that will include billing, reporting, accounting, and enrollment functionality for individual customer-requested projects, and any additional updates to fulfill the Company's commitment under these contracts.

What functionality or capability is being provided?

Enroll customers into unique customer-requested projects. Create new billing options and formats. Integrate generation data and hourly MISO price from the new solar parks into SAP. Enhance website with customer-requested data. Create reporting capabilities within SAP BW and SAP Commerce Cloud.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

On August 31, 2020, DTE Electric Company filed an application in Case No. U-20713 seeking approval of its VGP program. On June 9, 2021, the Commission issued an order that approved a financial incentive for power purchase agreements serving the DTE Electric's VGP program, along with a contested partial settlement agreement that included revisions to Riders 17 and 19 and an agreement on a VGP build plan. DTE Electric Company filed its biennial voluntary green pricing program proposal in Case No. U-21172 August 31, 2022, in accordance with MCL 460.1061 and the guidance provided by the July 12, 2017, and December 20, 2017 orders in Case Nos. U-18349 et al. A contested case shall be conducted in Case No. U-21172.

The MPSC has also approved a special contract between DTE Electric Co. and Ford Motor Co. for the utility to build up to 675 megawatts (MW) of dedicated solar projects that would serve the automaker's goal of powering its Michigan manufacturing plants with 100% renewable energy (Case No. U-21285). The deal, which was announced in August, is the largest renewable energy purchase from a utility in U.S. history.



Define the Benefit/Value to the Organization, Customer, Employee.

Fulfill the customer-stated contracts to build a 650 Megawatt and a 400 Megawatt dedicated solar park for uniquely contracted customers.

Through its MIGreenPower program, DTE to add 650 megawatts of new solar energy in Michigan for Ford, increasing the total amount of installed solar in Michigan by nearly 70%

By 2025, every Ford vehicle manufactured in Michigan will be assembled with the equivalent of 100% carbon-free electricity, 10 years earlier than Ford's global goal

Ford's purchase of carbon-free electricity will avoid as much as 600,000 tons of carbon dioxide emissions

While advancing Ford's progress towards carbon neutrality, the purchase will also create jobs and tax revenue in Michigan

Stellantis partners with DTE Energy to add 400 megawatts of new solar projects in Michigan through DTE's MIGreenPower program

Clean energy purchase is second largest of its kind in U.S. history. Automaker aims to achieve carbon net zero emissions globally by 2038. Deal includes 70 southeast Michigan Stellantis sites. By 2026, every Stellantis vehicle manufactured in the state will be assembled with the equivalent of 100% carbon-free electricity.

Additional customers will add additional 300 megawatts

How will you monitor and measure expected value?

Measure success by using the reporting tools developed to ensure the accuracy of program enrollments, billing, and payments for uniquely contracted customer-requested projects.

What alternatives have been considered?

No alternatives have been identified.

Regarding Do Nothing - This is an MPSC requirement and DTE has to implement.

Start Date	End Date	Shared Asset	Funding Source
2023-09-01	2025-12-30	No	IT



IT Costs				
----------	--	--	--	--

Type	FY23	FY24	FY25	Total
Capex	\$55,511	\$2,250,001	\$5,493,212	\$7,798,724
Opex	\$100,036	\$499,965	\$300,000	\$900,000
Total	\$155,547	\$2,749,965	\$5,793,212	\$8,698,724

BU Costs		
----------	--	--

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$156,000
Vendor Support & Licensing		\$0

Executive Summary

Business Case ID	BCD-CS-21-025
------------------	---------------

Business Case Name	MIGP - Fixed Price Product(Rider 17)
--------------------	--------------------------------------

Stakeholders

IT Portfolio	Customer
IT Sub-Portfolio	BPD
IT Director	Melissa Cox
Managed by	IT

Business Unit	Renewable Energy
Business Unit Sponsor	Michael Rivet
Business Units Impacted	Electric

Project Description

Project Category	Regulatory/Compliance
Project Type	Solutions Delivery - Cloud

Innovation?	No
Strategic Fit	Strong Political & Regulatory Context

Business Outcome

Integration of a Fixed-Price product into the C360 billing system, MIGP - Fixed Price Product, MIGP - Fixed Price Product enrolment, MIGP - Fixed Price Product unenrollment , ability to add fees and credits to invoices, create reports on enrollments and revenue; update DT's MiGreenPower website, create training materials and provide customer/system notifications.

Key Objectives

- 1) Ability to enroll, unenroll, or switch from existing Rider 17 offering to a Fixed-Price product and MiGreenPower website (authenticated and unauthenticated(Guest)) at the contract account level.
- 2) Redesign of the MiGreenPower website to include the Fixed-Price products in addition to existing functionality such as enrolling , unenrolling, FAQs, etc.
Product1:Customers will have the ability to choose a fixed price option of \$5 or \$10 per month and be billed accordingly. Customer must have ability to pick quantity of each (example: 1 - \$5/month and 2 - \$10/month). No limit to the quantity.
- 3) Develop training materials to educate customer service reps, including updating current MIGP simulation training.
- 4) For both the products, creation of multiple reports containing enrollment and revenue data available in Business Object Reports from the DTE Quest website.
- 5) This should be a responsive design on Mobile Web and include all devices & browsers tested in MIGP WSLI(Wind Solar Low Income) should be included in MIGP Fixed Price products.
- 6) Customer unenrollment will be back dated to the last day of their previous billing period(No proration), this applies to both the products.
Must have ability to rebill customers for previous billing periods at the rate they were charged at the time of past invoicing(this will also applies to both the products).Customer enrollment will be immediate(this will also applies to both the products).Customers must have the option to easily unenroll in their current non-fixed price MIGP programs to enroll in MIGP Fixed-price program(this will also applies to both the products).
- 7) MIGP LCVGPP - Large Customer Voluntary Renewable:
 1. Change the eligibility requirement to allow any contract Account to enroll /unenroll in to Large Customer program.
 2. All Kwh consuming meters (non commercial or residential) must be eligible for Large customer(Street lighting, Overhead lamps...etc..).
 3. Reports must have the ability to include the residential data.
- 8) 4. Ability to bill the large customer on residential bill format.
MIGP WSLI changes:Need to make the following changes to the MIGP Low income program in production
 - a) Change the eligibility requirements
(Removing the restriction on other subsidiaries(Currently we are not allowing customers to participate in MIGP who are already enrolled in to (SPP, LSP, LIA and RIA) or over 100\$ in arears).
 - b) Need ability to start /stop program based on the number of customers enrolled(Customers limit yet to be determined).
 - c) Need ability to change the Customers limit without IT intervention.
 - d) Make changes to the Low income section to the MIGP website (Static Content).
 - e) Update training materials.
- 9) f) Potential accounting changes to the revenue accounts.
- 10)

Start Month	January	2021	
Duration to Complete	Years	8	Months
Michigan Public Service Commission	September	2021	ive Summary

DTE Electric Company

Customer Service IT Business Cases- Executive Summaries

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$480,000	\$0	\$0	\$0	\$0	\$480,000
O&M	\$120,000	\$0	\$0	\$0	\$0	\$120,000
OCM	\$40,000	\$0	\$0	\$0	\$0	\$40,000
Total O&M	\$160,000	\$0	\$0	\$0	\$0	\$160,000
Total	\$640,000	\$0	\$0	\$0	\$0	\$640,000

Hardware/Software/ Cloud	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$0	\$0	\$0	\$0	\$0	\$0
O&M	\$25,000	\$0	\$0	\$0	\$0	\$25,000

BU O&M	\$0	Incremental Costs	\$0
--------	-----	-------------------	-----

Funding Source	ITS
----------------	-----

Case No. U-21534

Exhibit: A-24

Schedule: N1.1

Witness: M. Hatsios

Page 21 of 139

Executive Summary

Business Case Number	Business Case Name
DMND0001685	MIGP Low Income Solar Pilot

Stakeholders

Portfolio Category	Business Unit
Customer	Renewable Operations
Portfolio	Business Unit Director
Customer Service	Knox W Cameron
Portfolio Manager	Business Unit SME
Lisa A LeGault	Eric J Markel
Managed By	PPS
MEP	150

Project Description

Investment Type	Initiative Type
Regulatory/Compliance	Solutions Delivery - On Prem

What business problem or opportunity are we trying to solve?

The business problem is to fulfill the Low-income solar pilot program requirements agreed upon in the section 61 settlement, building 3 new solar parks (Detroit, Highland Park and River Rouge).

What functionality or capability is being provided?

Enhance SAP Billing and MIGP enrollment program. Update customer notification templates. Enhance SAP commerce cloud with changes. Enhance reporting capabilities within SAP BW and SAP Commerce Cloud.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Fulfill the requirements in the section 61 settlement, August 2022.

Define the Benefit/Value to the Organization, Customer, Employee.

Fulfill the requirements in the section 61 settlement, August 2022

How will you monitor and measure expected value?

Measure success by using the reporting tools developed to ensure the accuracy of program enrollments, billing, and payments for individual site projects.

What alternatives have been considered?

No alternatives identified. This is a tariff and this project must be completed to support low income solar pilot mandate.

Start Date	End Date	Shared Asset	Funding Source
2024-02-01	2025-04-30	No	IT

IT Costs

Type	FY23	FY24	FY25	Total
Capex	\$0	\$1,242,000	\$785,330	\$2,027,330
Opex	\$0	\$90,985	\$55,048	\$146,033
Total	\$0	\$1,332,985	\$840,377	\$2,173,362

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$128,960
Vendor Support & Licensing		\$0



Executive Summary

Business Case Number	Business Case Name
DMND0002268	MIGP Reservation System for New Enrollments

Stakeholders

Portfolio Category	Business Unit
Customer	Renewables Operations
Portfolio	Business Unit Director
Customer Service	Knox W Cameron
Portfolio Manager	Business Unit SME
Lisa A LeGault	Eric J Markel
Managed By	PPS
MEP	150

Project Description

Investment Type	Initiative Type
Regulatory/Compliance	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

DTE is required to allow customers to enroll in the waiting list when the capacity is not available, and then DTE will need to allow customers to enroll in the existing MIGreenPower program when the capacity available on first come, first serve basis. Additionally we expect this waiting list to be used for next 24 months. In the current system, DTE is allowing the customers to enroll in to MIGP program and no mechanism to allow for waiting list. By using this feature, we will monitor the customer enrollments into the waiting list and the current capacity. Also, **we will be able to** update the notification templates to reflect the reservation system details. To support this initiative the following applications **are** being used: SAP CR&B (Customer Relationship and Billing), SAP BW (Business Warehouse) Reporting and SAP Commerce Cloud.

This was added to our section 61 filing on 08/31, this will need to implemented to comply with the filing.

What functionality or capability is being provided?

The functionality is being provided to improve renewable energy applications

- 1) Stop New enrollments for MIGreenPower Flex program
- 2) All MIMO should remain the same
- 3) Auto enrollment should occur when the customer MIMO happens
- 4) Currently enrolled MIGP Flex customers can't increase their subscription rate, but they can decrease or Unenroll
- 5) No changes to Flex support/Community support enrollment process, ensure that reservation does not impede community support enrollments - CSRs will be pitching both Flex reservation and Community support in CRM and Guest enroll. Having 2 methods to enroll a customer into flex reservation and community support would impede the enrollment process.
- 6) Create a reservation system for MIGreenPower Flex 5% to 85% increments
- 7) Referral code details should be available in the reservation system (existing referral code process)
- 8) Add a reservation system details in the CRM, WEB and DTE insight
- 9) Create a notification template when customer enrolled in the reservation system
- 10) Update the terms and conditions section in the front end
- 11) System should be able to move the customer from Reservation to actual enrollment when Flex program is available
- 12) Eligibility check will need to be verified when the customer move from Reservation to Flex enrollment (Different rules for Reservation system: we are not going to check for NSF and areas the rest of the eligibility will follow the flex program, but the Flex enrollment process should follow the existing eligibility rules)
- 13) Embedded test for eligibility on the wait list. Check periodically (this functionality required for capacity projection and how many accounts were eligible vs not eligible).
- 14) No change in the eligibility check when converting from reservation system to Flex
- 15) We have to keep the reservation list current, keep update the latest information (this should follow same MIMO rules as with Flex. Ex1: If customer moves within 60 days then system should allow the customer to keep the same place in the reservation system line. Ex2: Auto enrollment: Customer maintains the same place in the reservation system if customer moves in to new location.
- 16) Create BW report: customer reservation list, new enrollment list, unenrollment, and Auto enrollment (all the same details that are in the Flex)
- 17) Update the training material
- 18) Ability to unenroll the customer upon request or self-service from reservation list
- 19) Existing enrolled customers (already enrolled in MIGP Flex program), they will need to join the reservation system If they wanted to increase the subscription (Customer can only do the enrollment up to 85%). It is the only at the time of reservation and it has to happen at ISU
- 20) Ability to create new record in the reservation list if customer wanted to change (increase/decrease) their existing % subscription
- 21) Customer is in the reservation list, if MIMO happens then capture the dates

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

This is a regulatory requirement. It is to create the sale pipe line renewable subscriptions to maximize future revenue.

Define the Benefit/Value to the Organization, Customer, Employee.

As of Aug 2022, 68000 residential and 700 commercial customers already enrolled in MIGreenPower program, DTE is already supporting to offset total 1.1 MWh energy.
Target to grow the enrollments by 2027 (Residential 200K and Commercial 5k).
To support this initiative DTE will need to produce the energy 6.6 MWh by 2027.

How will you monitor and measure expected value?

Renewable team will monitor the number of enrollments and profits through BW reports and SAP analytics tool. By the amount of energy offset with Renewable by comparing with current state.

What alternatives have been considered?

No alternatives have been identified. This is an MPSC requirement and If we don't implement the Reservation system use case it will impact the DTE MIGreenPower sales campaign and goals. Also as we are running out of capacity, we can't stop the MIGreenPower enrollments without implementing this reservation system.

Start Date	End Date	Shared Asset	Funding Source
2022-10-10	2023-06-30	No	IT



IT Costs			
----------	--	--	--

Type	FY22	FY23	Total
Capex	\$756,615	\$1,544,562	\$2,301,178
Opex	\$69,382	\$160,036	\$229,418
Total	\$825,997	\$1,704,598	\$2,530,595

BU Costs		
----------	--	--

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0



Executive Summary

Business Case ID	BCD-CS-21-019	Business Case Name	MIGP Website Update
------------------	---------------	--------------------	---------------------

Stakeholders

IT Portfolio	Customer	Business Unit	Renewable Energy
IT Sub-Portfolio	BPD	Business Unit Sponsor	Brian Calka
IT Director	Melissa Cox	Business Units Impacted	Electric
Managed by	IT		

Project Description

Project Category	Strategic	Innovation?	No
Project Type	Solutions Delivery - Cloud	Strategic Fit	Clear Growth & Value Creation Strategy

Business Outcome

Improving the MIGP website will provide a better CX resulting in increased enrollment number. Because the CX friction points and barriers to enrollment have been mitigated.

Key Objectives

- 1) Redesign and improve the MIGP webpages to reduce the (Customer Experience) friction to enroll customer that want to Enroll or change their percentage of enrollment.
Add options to Guest Enroll that leverage additional identification options beyond Service Address and Account Number (for e.g., ability to enroll in MIGP without a DTE email account). Alternative identifiers like
- 2) social media(facebook/gmail ..etc), biometric recognition.
- 3) Improve the Customer Experience for customers using a mobile devices and provide responsive design allowing scaling to various devices in Web pages.
- 4) Improve the Customer Experience for customers using other mobile platforms to enroll (e.g., Provisioning capability for integrating the 3rd party applications).
- 5) Reduce the complexity and number of steps required to enroll in MIGreenPower giving customers incentive to enroll in a rewable program.
- 6) Provide greater flexibility and options in identifying customer enabling the enrollment process.
- 7) Enable customers to use a variety of mobile platform that will enhance the customer experiance for enrollment (e.g., Insight and 3rd Party IC - implementation contractor Platforms)
- 8) Customers without email accounts will be able to enroll.
- 9)
- 10)

Start Month	January	2021	Funding Source	ITS
Duration to Complete	Years	8		
End Month	September	2021		

Financial Impact

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$520,000	\$0	\$0	\$0	\$0	\$520,000
O&M	\$120,000	\$0	\$0	\$0	\$0	\$120,000
OCM	\$0	\$0	\$0	\$0	\$0	\$0
Total O&M	\$120,000	\$0	\$0	\$0	\$0	\$120,000
Total	\$640,000	\$0	\$0	\$0	\$0	\$640,000

Hardware/Software/ Cloud	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$0	\$0	\$0	\$0	\$0	\$0
O&M	\$25,000	\$0	\$0	\$0	\$0	\$25,000

BU O&M	\$0	Incremental Costs	\$0
--------	-----	-------------------	-----

Executive Summary

Business Case ID	BCD-CS-21-067
------------------	---------------

Business Case Name	MIGP Section 61 Settlement
--------------------	----------------------------

Stakeholders

IT Portfolio	Customer
IT Sub-Portfolio	BPD
IT Director	Lisa LeGault
Managed by	MEP

Business Unit	Renewable Energy
Business Unit Director	Brian T Calka
Business Unit SME	Eric J Markel
Business Units Impacted	Electric

Project Description

Initiative Category	Regulatory/Compliance
---------------------	-----------------------

Initiative Type	Solutions Delivery - Cloud
-----------------	----------------------------

Business Opportunity

What business problem are we trying to solve?	This business problem is to fulfill the following additional requirements agreed to within the settlement of Section 61 filing. Create new MIGP kWh program with a new credit structure and retire MIGP Combo and Wind programs. Transfer the existing Combo and Wind program customers to the new kWh program.
What system or process is being affected?	The systems being affected are SAP CR&B (Customer Relationship and Billing), SAP Marketing Cloud, SAP Commerce Cloud and SAP BW (Business Warehouse) Reporting. The process being affected are Customer enrollment, unenrollment, billing and reporting.
What functionality or capability is being provided?	The functionality is being provided to enroll customers in new mandated kWh based MIGP program, also update new credit calculations.
What is the customer or employee value?	The customer value is more affordable renewable energy offering to enroll.
What alternatives have been considered?	No alternatives identified.

Key Objectives

1)	Create a new MIGP kWh based program - exact replica of the MIGP Combo (with a potential exception in bill format and credit structure. See dependencies)
2)	Update training materials/simulations for customer service.
3)	Create/update all MIGP reports to include new kWh program.
4)	Include new kWh program on website/commerce platform.
5)	Must have ability to rebill customers for previous billing periods at the rate they were charged at the time of past invoicing.
6)	Retire MIGP Combo and Wind programs (Same day as new kWh program is implemented).
7)	Convert all customers in Combo and Wind to new kWh program (The week following new kWh program is implemented).
8)	Remove Combo and Wind pages/content from website/commerce platform.
9)	Update training materials/simulations for customer service to remove Combo and Wind.
10)	Update Rider 19 pricing to include Discounting (this may be additional rate classes, or a fixed amount added to the current energy calculation. See Dependencies).

Start Month	July	2021
Duration to Complete	Years	10 Months
End Month	May	2022

Funding Source	ITS
----------------	-----

IT Financial Impact						
Michigan Public Service Commission DTE Electric Company Customer Service IT Business Cases - Executive Summaries						Total amount is sent for approval on all business cases.
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$1,497,804	\$998,536	\$0	\$0	\$0	\$2,500,000
O&M	\$139,968	\$113,312	\$0	\$0	\$0	\$250,000
Total	\$1,637,772	\$1,111,848	\$0	\$0	\$0	\$2,750,000

Business Unit Costs						
BU O&M	\$79,000		Trailing BU O&M Costs		\$0	
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$0	\$0	\$0	\$0	\$0

Executive Summary

Business Case Number	Business Case Name
DMND0001683	MIGP Large Customer Prepayment

Stakeholders

Portfolio Category	Business Unit
Customer	Renewable Operations
Portfolio	Business Unit Director
Customer Service	Knox W Cameron
Portfolio Manager	Business Unit SME
Lisa A LeGault	Eric J Markel
Managed By	PPS
MEP	150

Project Description

Investment Type	Initiative Type
Regulatory/Compliance	Solutions Delivery - On Prem

What business problem or opportunity are we trying to solve?

To fulfill the Prepayment requirement per section 61 filing
In the current system, we do not have the capability to process the Prepayment dollar amount for future MIGreenPower purchases. This program will offer an ability for large customers to prepay a dollar amount for future MIGreenPower purchases.
In order to deliver the Prepayment initiative, the Company will have to develop and deploy the new code to support the Prepayment requirements.
To support this initiative the following applications being used. SAP CR&B (Customer Relationship and Billing), SAP BW (Business Warehouse) Reporting and SAP Commerce Cloud.

What functionality or capability is being provided?

Create the new billing and accounting options for Prepayment functionality and to create new customer notification templates.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Fulfill the requirements in the section 61 settlement

Define the Benefit/Value to the Organization, Customer, Employee.

Fulfill the requirements in the section 61 settlement

How will you monitor and measure expected value?

Measure success by using the reporting tools developed to ensure the accuracy of program enrollments, billing, and payments for individual IT projects.

What alternatives have been considered?

No alternatives have been identified.
Do nothing is not an option as it will result in a non-compliance with regulatory.

Start Date	End Date	Shared Asset	Funding Source
2025-02-01	2025-11-30	No	IT



IT Costs

Type	FY25	Total
Capex	\$1,327,065	\$1,327,065
Opex	\$125,666	\$125,666
Total	\$1,452,731	\$1,452,731

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0

Executive Summary

Business Case Number	Business Case Name
DMND0002493	MIGP Scope 3 Billing and Enrollment

Stakeholders

Portfolio Category	Business Unit
Customer	Renewable Operations
Portfolio	Business Unit Director
Customer Service	Knox W Cameron
Portfolio Manager	Business Unit SME
Lisa A LeGault	Eric J Markel
Managed By	PPS
MEP	150

Project Description

Investment Type	Initiative Type
Regulatory/Compliance	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

To fulfill the Scope 3 requirements as found in the section 61 filing.
In order to deliver the scope 3 initiative, the Company will have to develop and deploy potential enrollment, billing and reporting requirements to support contract account enrollments in MIGreenPower program to be billed another business partner. This cannot be accomplished manually without technology capabilities.
To support this initiative the following applications being used. SAP CR&B (Customer Relationship and Billing), SAP BW (Business Warehouse) Reporting and SAP Commerce Cloud.

What functionality or capability is being provided?

1. Create new billing options and formats for Scope 3
2. Create new options in SAP commerce cloud
3. Create new customer notification templates
4. Create new tables and data and queries reporting capabilities within SAP BW and SAP Analytics Cloud to support Scope 3 initiative

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Fulfill the requirements in the section 61 settlement.

Define the Benefit/Value to the Organization, Customer, Employee.

Fulfill the requirements in the section 61 settlement.

How will you monitor and measure expected value?

Measure success by using the reporting tools developed to ensure the accuracy of program enrollments, billing, and payments for individual IT projects.

What alternatives have been considered?

No alternatives have been identified because SAP CRB is the chosen platform for Customer relationship and billing services and offerings.
Do Nothing is not an option and would result in noncompliance with MPSC and regulatory requirements.



Start Date	End Date	Shared Asset	Funding Source
2025-02-01	2025-11-30	No	IT

IT Costs		
----------	--	--

Type	FY25	Total
Capex	\$3,900,000	\$3,900,000
Opex	\$390,000	\$390,000
Total	\$4,290,000	\$4,290,000

BU Costs		
----------	--	--

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0



Executive Summary

Business Case ID	BCD-CS-22-030	Business Case Name	PCI Compliance
------------------	---------------	--------------------	----------------

Stakeholders

IT Portfolio	Customer	Business Unit	Contact Center
IT Sub-Portfolio	CIT	Business Unit Director	Dawn M Hayes
IT Director	Lisa LeGault	Business Unit SME	Robert Raab
Managed by	IT	Business Units Impacted	Electric

Project Description

Initiative Category	Regulatory/Compliance	Initiative Type	Solutions Delivery - On Prem
---------------------	-----------------------	-----------------	------------------------------

Business Opportunity	
What business problem are we trying to solve?	Payment Card Industry (PCI) audits are done quarterly by IT and once a year by a third party to ensure the standards are met. To maintain compliance throughout the year, a regular cadence of asset scanning to uncover vulnerabilities for patching is required.
What system or process is being affected?	The following customer payment processes will be affected: - Customers making a payment by phone - Customers making a payment by speaking with a Customer Service Representative
What functionality or capability is being provided?	Regular scanning and hardening of assets to ensure compliance with PCI standards for payments made through phone channels (phone, and contacting a customer service representative).
What is the customer or employee value?	The customer is provided the security that their data is private and secure when making payments with a credit card.
What alternatives have been considered?	Outsourcing payments is being considered. However, current standards must be maintained while alternatives are being investigated.

Key Objectives	
1)	Perform weekly scans to identify new vulnerabilities.
2)	Perform monthly reviews of vulnerabilities with vendor companies to identify resolution paths.
3)	Perform quarterly server hardening of PCI assets.
4)	Perform quarterly internal audits of PCI assets.
5)	Annual audit performed by a third party and the Contact Center. Assets will be updated / adjusted based on any security risks identified.
6)	
7)	
8)	
9)	
10)	

Start Month	January	2022
Duration to Complete	Years	11 Months
End Month	December	2022

Funding Source	ITS
----------------	-----

IT Financial Impact						
	Year 1	Year 2	Year 3	Year 4	Year 5	Total amount is sent for approval on all business cases.
Capital	\$184,782	\$0	\$0	\$0	\$0	\$180,000
O&M	\$526,756	\$0	\$0	\$0	\$0	\$530,000
Total	\$711,538	\$0	\$0	\$0	\$0	\$710,000

Business Unit Costs						
BU O&M	\$0			Trailing BU O&M Costs	\$0	
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$0	\$0	\$0	\$0	\$0

Executive Summary

Business Case Number	Business Case Name
DMND0001282	PCI Compliance

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Dawn M Hayes
Portfolio Manager	Business Unit SME
Lisa A LeGault	Robert C Raab
Managed By	PPS
IT	150

Project Description

Investment Type	Initiative Type
Regulatory/Compliance	

What business problem or opportunity are we trying to solve?

DTE takes customer credit card payments over the phone both through our IVR and directly with customer representatives in the contact center through our 1-800-477-4747 phone number. To continue to take these payments, DTE must comply with all Payment Card Industry (PCI) guidelines that are put in place by the credit card industry to safeguard consumer data.

Historically, there have been slight changes to requirements as relates to vulnerabilities which must be successfully implemented with little or no impact to DTE.

To maintain compliance throughout the year, a regular cadence of asset scanning is required to uncover vulnerabilities for updates or patching. Weekly scans happen for all DTE managed PCI servers while quarterly server hardening is performed by our telephony vendor to ensure vendor-supplied applications remain in compliance. In addition, quarterly audits must be done by IT and our business partners while once a year by a third party to validate that the standards are being met. There are also PCI Quarterly Privileged Accounts and Terminated Employee audits. This business case addresses any ongoing changes or issues that arise from these audits. On average these various scans find 492 new vulnerabilities each month that need to be remediated in a certain amount of time depending on their severity.

Failure to apply patches and updates as required to maintain compliance will result in DTE losing its ability to take credit card payments.

What functionality or capability is being provided?

Regular scanning, auditing, patching, updating and hardening of assets to ensure compliance with PCI standards for payments made through phone channels (IVR and contacting a customer service representative).

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Operational Reliability- Required to maintain PCI compliance.

Define the Benefit/Value to the Organization, Customer, Employee.

The customer is provided the security that their data is private and secure when making payments with a credit card.

PCI compliance is maintained, and a PCI Report on Compliance (RoC) is issued annually, allowing DTE to continue to take payments.



How will you monitor and measure expected value?

Quarterly audits and the yearly PCI Report on Compliance (RoC) validates our successful compliance each year.

What alternatives have been considered?

Outsourcing payments is being considered and is tentatively planned for 2024 which would remove some of the PCI guidelines we need to follow. However, current standards must be maintained while an outsourcing solution is developed.

Do Nothing: Doing nothing or not applying patches and updates as required to maintain compliance results in DTE losing its ability to take credit card payments through the phone systems.

Start Date	End Date	Shared Asset	Funding Source
2023-01-02	2025-12-31	Yes	IT

IT Costs

Type	FY23	FY24	FY25	Total
Capex	\$175,691	\$175,697	\$175,684	\$527,072
Opex	\$528,000	\$527,312	\$527,728	\$1,583,040
Total	\$703,691	\$703,009	\$703,412	\$2,110,112

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0



Executive Summary

Business Case ID	BCD-CS-22-053	Business Case Name	PSP Pilot -Payment Stability
------------------	---------------	--------------------	------------------------------

Stakeholders

IT Portfolio	Customer	Business Unit	CR&B New Business
IT Sub-Portfolio	CIT	Business Unit Director	Lisa A LeGault
IT Director	Lisa LeGault	Business Unit SME	Maria E Christian
Managed by	MEP	Business Units Impacted	Electric

Project Description

Initiative Category	Regulatory/Compliance	Initiative Type	Solutions Delivery - On Prem
---------------------	-----------------------	-----------------	------------------------------

Business Opportunity	
What business problem are we trying to solve?	This business case is requesting funding for warranty/hyper-care support that will be needed through the second bill cycle ending by April 1, 2022. While Low Income Assistance (LIA) and Residential Income Assistance (RIA) credits reduce customer bills, they do not address energy burden affordability. Low-income customers require a plan that that offers payment stability while also encouraging and rewarding reduced energy consumption. As a result, separate from existing assistance programs, development of a 2 year pilot program (Payment Stability Plan) is scheduled to be completed by the end of 2021 with pilot enrollments beginning January 3rd, 2022. Project warranty/hypercare support is expected to be provided through the second bill cycle ending on April 1, 2022.
What system or process is being affected?	The Payment Stability Plan pilot program will require modifications to the following applications: Customer Relationship & Billing system (CR&B), Agency Website/Online Resource for Agencies (AGW/ORA) and Enterprise Service Bus (ESB). DTE Energy customer advocates will work closely and provide support to enrollees of the pilot. Communication in the forms of electronic and traditional mail, soft calling and direct calls, where needed, will be utilized.
What functionality or capability is being provided?	The Payment Stability Plan (PSP) pilot, will utilize a percentage of income approach for low-income customers. Qualifying customers will have flat bill payments based on percentage of gross income, single or dual commodity and actual usage. The variant between the flat payment and the customer's actual usage will be covered by program credits. The PSP pilot will incorporate arrears forgiveness at a rate of 1/24th per month, triggered by the on-time and in full payment by the customer. During the annual cycle, customers who make eleven consecutive on-time and in full payments will receive a credit benefit equal to one plan amount.
What is the customer or employee value?	This pilot program is designed to gather data about the efficacy of percentage of income plans. The percentage of income approach provides low-income customers a flat bill payment, removing the seasonal volatility of energy affordability throughout the year. The pilot will incorporate arrears forgiveness and a credit benefit equal to one plan amount for customers who make eleven consecutive on-time and in full payments. The pilot will also incorporate energy reduction education and services to promote energy efficiency strategies and behaviors for long term applications.
What alternatives have been considered?	By not implementing the Payment Stability Plan pilot we would be out of compliance with MPSC order U-20929 which was approved on April 21, 2021. If we don't do this pilot low income customers will have a significantly higher energy burden.

Key Objectives	
1)	2,000 income eligible (at or below 200% FPL) customers will be targeted for the pilot, which is expected to be implemented in the first quarter of 2022. Arrears will not exceed \$1,500 and annual consumption cannot exceed \$3,750.
2)	The PSP pilot will incorporate arrears forgiveness at a rate of 1/24th per month, triggered by the on-time and in full payment by the customer.
3)	During the annual cycle, customers who make eleven consecutive on-time and in full payments will receive a credit benefit equal to one plan amount, either 6% or 10% of their gross household monthly income.
4)	The variant between the flat payment and the customer's actual usage will be covered by program credits which will be absorbed as a direct expense and be recorded in a regulatory asset.
5)	Pilot participants will be required to go through recertification annually before their anniversary date to remain enrolled. This recertification will capture any changes in income for enrollees and may affect the payment plan amount.
6)	For customers who may fall out of the program by missing three consecutive payments, re-enrollment will be available by the customer making up such missed plan payments. Those payments will not earn any arrears forgiveness but will keep the customer on a flat payment of the percentage of income calculation.
7)	The Company will work with partner agencies and internal resources will be utilized to help identify those customers to best benefit from the program.
8)	Customer advocates will work closely and provide support to enrollees of the pilot to ensure that customers achieve success.
9)	Communication in the forms of electronic and traditional mail, soft calling and direct calls where needed will be utilized.
10)	The pilot will develop and track standardized data to accurately measure the success and opportunities of the payment plan. Key performance indicators include enrollment cycle time, success rate, service suspension rates, and Energy Waste Reduction (EWR) performance measures such as energy reduction.

Start Month	January	2022
Duration to Complete	Years	3 Months
End Month	April	2022

Funding Source	ITS
----------------	-----

IT Financial Impact						Total amount is sent for approval on all business cases.
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$453,270	\$0	\$0	\$0	\$0	\$450,000
O&M	\$435,097	\$0	\$0	\$0	\$0	\$440,000
Total	\$888,367	\$0	\$0	\$0	\$0	\$890,000

Business Unit Costs						
BU O&M	\$29,000			Trailing BU O&M Costs	\$0	
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$0	\$0	\$0	\$0	\$0



Executive Summary

Business Case ID	BCD-CS-22-007	Business Case Name	Regulatory Compliance
------------------	---------------	--------------------	-----------------------

Stakeholders

IT Portfolio	Customer	Business Unit	CR&B New Business
IT Sub-Portfolio	CIT	Business Unit Director	Lisa A LeGault
IT Director	Lisa LeGault	Business Unit SME	Aaron Willis
Managed by	IT	Business Units Impacted	Electric

Project Description

Initiative Category	Regulatory/Compliance	Initiative Type	Solutions Delivery - On Prem
---------------------	-----------------------	-----------------	------------------------------

Business Opportunity	
What business problem are we trying to solve?	This business case is to accommodate for emergent Regulatory work for the year 2022 , including compliance with Commission Orders in general rate cases or other proceedings, and any unexpected work related to new energy legislation.
What system or process is being affected?	Systems to support compliance with Commission Orders and any unexpected work related to new energy legislation would potentially include logic and screen changes to the Customer Relationship & Billing system (CR&B), the Agency Website/Online Resource for Agencies (AGW/ORR) application and StreamServe for bill formatting changes.
What functionality or capability is being provided?	This investment will allow DTE to implement changes needed to support the compliance with Commission Orders and any unexpected work related to new energy legislation.
What is the customer or employee value?	This investment ensures that all Regulatory policies and processes are in place and in compliance. As a result, DTE remains in compliance with the Commission Orders, and avoids the risk of non-compliance.
What alternatives have been considered?	No other alternatives have been considered as this investment is required to remain in compliance with Commission Orders and any legislative requirements. If Regulatory changes are not implemented, DTE could become non-compliant with Commission Orders or legislative requirements.

Key Objectives	
1)	Implement the 2022 Commission Orders for general rate cases and other proceedings
2)	Implement any unexpected work related to new energy legislation for 2022.
3)	
4)	
5)	
6)	
7)	
8)	
9)	
10)	

Start Month	January	2022
Duration to Complete	Years	11 Months
End Month	December	2022

Funding Source	ITS
----------------	-----

IT Financial Impact						
	Year 1	Year 2	Year 3	Year 4	Year 5	Total amount is sent for approval on all business cases.
Capital	\$2,234,578	\$0	\$0	\$0	\$0	\$2,230,000
O&M	\$325,502	\$0	\$0	\$0	\$0	\$330,000
Total	\$2,560,080	\$0	\$0	\$0	\$0	\$2,560,000

Business Unit Costs						
BU O&M	\$0			Trailing BU O&M Costs		\$0
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$0	\$0	\$0	\$0	\$0

Executive Summary

Business Case Number	Business Case Name
DMND0001284	Regulatory Compliance

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Neal T Foley
Portfolio Manager	Business Unit SME
Lisa A LeGault	Aaron Willis
Managed By	PPS
IT	150

Project Description

Investment Type	Initiative Type
Regulatory/Compliance	

What business problem or opportunity are we trying to solve?

This business case is to accommodate for emergent Regulatory work, including compliance with Commission Orders in general rate cases or other proceedings, and any unexpected work related to new energy legislation. The frequency in which DTE has to address regulatory work varies. In 2022, DTE completed the D13 project which provides customers with competitively priced electricity consistent with cost-of-service-based rates to address the changing circumstances of its automotive and other advanced manufacturing customers. In 2023, the CR&B system application revised outflow billing determinant calculation for all Rider 18 demand rates. The invoice information under the Current Billing Information section of the invoice will include peak information for Rider 18 D1.9 customers. In 2024, DTE is proposing the transtion of D1.6 customers to the new D1.11 TOD rate which requires changes to the CR&B system. This project is anticipated to be implemented during the projected test year. In 2025, we fund changes to rates per the Final Order for Case No. U-21534.

What functionality or capability is being provided?

This investment will allow DTE to implement changes needed to support the compliance with Commission Orders and any unexpected work related to new energy legislation.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Alignment is with Regulatory Affairs in ensuring we are MPSC compliant or meeting MPSC requirements when offering electrical and gas rates to our customers.

Define the Benefit/Value to the Organization, Customer, Employee.

This investment ensures that all Regulatory policies and processes are in place and in compliance. As a result, DTE remains in compliance with the Commission Orders, and avoids the risk of non-compliance.

How will you monitor and measure expected value?

Remain in compliance with MPSC 100%

What alternatives have been considered?



No other alternatives have been considered as this investment is required to remain in compliance with Commission Orders and any legislative requirements. If Regulatory changes are not implemented, DTE could become non-compliant with Commission Orders or legislative requirements.
To 'Do Nothing' would result in DTE falling out of compliance and thus incurring potential fines.

Start Date	End Date	Shared Asset	Funding Source
2023-01-02	2025-12-31	Yes	IT

IT Costs

Type	FY23	FY24	FY25	Total
Capex	\$2,566,628	\$2,769,406	\$2,767,007	\$8,103,041
Opex	\$837,807	\$842,519	\$837,949	\$2,518,275
Total	\$3,404,435	\$3,611,925	\$3,604,956	\$10,621,316

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Vendor Support & Licensing		\$0

Executive Summary

Business Case Number	Business Case Name
DMND0001286	Rider 17 – MIGreenPower, Residential and Small Commercial & Industrial

Stakeholders

Portfolio Category	Business Unit
Customer	Renewable Operations
Portfolio	Business Unit Director
Customer Service	Knox W Cameron
Portfolio Manager	Business Unit SME
Lisa A LeGault	Eric J Markel
Managed By	PPS
MEP	150

Project Description

Investment Type	Initiative Type
Regulatory/Compliance	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

This business problem is to fulfill the following Rider17 requirements in the section 61 settlement, August 2022.

What functionality or capability is being provided?

Enhance SAP Billing and MIGP enrollment programUpdate customer notification templatesEnhance SAP commerce cloud with changesEnhance reporting capabilities within SAP BW and SAP Commerce Cloud.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Fulfill the requirements in the section 61 settlement, August 2022.

Define the Benefit/Value to the Organization, Customer, Employee.

Fulfill the requirements in the section 61 settlement, August 2022.

How will you monitor and measure expected value?

Measure success by using the reporting tools developed to ensure the accuracy of program enrollments, billing, and payments for individual IT projects.

What alternatives have been considered?

No alternatives have been identified.

Start Date	End Date	Shared Asset	Funding Source
2023-01-09	2023-12-30	No	IT



IT Costs

Type	FY23	Total
Capex	\$1,576,830	\$1,576,830
Opex	\$139,759	\$139,759
Total	\$1,716,589	\$1,716,589

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$19,413
Vendor Support & Licensing		\$0

Executive Summary

Business Case Number	Business Case Name
DMND0001756	Rider 17 – MIGreenPower, Residential and Small Commercial & Industrial

Stakeholders

Portfolio Category	Business Unit
Customer	Renewable Operations
Portfolio	Business Unit Director
Customer Service	Knox W Cameron
Portfolio Manager	Business Unit SME
Lisa A LeGault	Eric J Markel
Managed By	PPS
MEP	150

Project Description

Investment Type	Initiative Type
Regulatory/Compliance	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

This business problem is to fulfill the Rider17 requirements resulting from any DTE filing. In order to deliver the Rider 17 requirements, the Company will have to develop and deploy potential enrollment, billing and reporting requirements. To support this initiative the following applications being used. SAP CR&B (Customer Relationship and Billing), SAP BW (Business Warehouse) Reporting, SAP Commerce cloud, SAP Marketing cloud and SAP Analytics cloud.

What functionality or capability is being provided?

To deliver the Rider 17 requirements design, develop, test and deploy the following.

1. Create new program offerings / billing options and formats.
2. Create new program options in SAP commerce cloud.
3. Create new customer notification templates.
4. Create new program offerings/definitions in the SAP business warehouse and SAP Analytics cloud to support Rider17 new initiative.
5. Create new tables, configurations and column mappings between SAP CRM, SAP BW and SAP Analytics cloud to support the new MIGP Rider17 initiative.
6. Create new data sets, queries and reporting capabilities within SAP CRM, SAP BW and SAP Analytics cloud to support the new MIGP Rider17 initiative.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Fulfill the requirements of the Rider 17 resulting from any DTE filing. To drive Revenue, to respond the customer demands to comply with any MPSC order. To comply with any Audit findings. Target to generate 500 MWH Renewable energy each year next 10 years.

Define the Benefit/Value to the Organization, Customer, Employee.

This is to fulfill the Renewable energy initiative for the customers. Revenue growth and Customer satisfaction. To remain in compliance with any MPSC order.



How will you monitor and measure expected value?

Measure success by using the reporting tools developed to ensure the accuracy of program enrollments, billing, and payments for individual IT projects.

Growth in revenue and program enrollments and continued customer satisfaction.

DTE will monitor accuracy in enrollments, billing, generation data, goals and metrics using the analytics and dashboarding tools.

What alternatives have been considered?

No alternatives have been identified.

Do Nothing was not an option and would result in noncompliance with MPSC and regulatory requirements.

Start Date	End Date	Shared Asset	Funding Source
2024-01-02	2024-12-30	No	IT

IT Costs

Type	FY24	Total
Capex	\$1,507,834	\$1,507,834
Opex	\$123,190	\$123,190
Total	\$1,631,024	\$1,631,024

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0

Executive Summary

Business Case Number	Business Case Name
DMND0002604	Rider 17 – MIGreenPower, Residential and Small Commercial & Industrial

Stakeholders

Portfolio Category	Business Unit
Customer	Renewable Operations
Portfolio	Business Unit Director
Customer Service	Knox W Cameron
Portfolio Manager	Business Unit SME
Lisa A LeGault	Eric J Markel
Managed By	PPS
MEP	150

Project Description

Investment Type	Initiative Type
Regulatory/Compliance	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

To fulfill the Rider17 requirements in the section 61 settlement as well as any other filings or MPSC requests that will be filed. The requirements will be determined based on the filing. As per the previous history this project will have requirements year over year based on the filings. Similar to many of our MIGP projects, this initiative will include billing, reporting, accounting, enrollment functionality and any additional updates based on the requirement filing. The following applications will be utilized based on the nature of work and previous history, SAP CR&B (Customer Relationship and Billing), SAP BW (Business Warehouse) Reporting and SAP Commerce cloud.

What functionality or capability is being provided?

1. Create new billing options and formats.
2. Create new options in SAP commerce cloud.
3. Create new customer notification templates.
4. Create new tables, data and queries reporting capabilities within SAP BW and SAP Analytics Cloud to support Rider17 initiative.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Fulfill the requirements in the section 61 settlement as well as any other filings or MPSC requests that will be filed.

Define the Benefit/Value to the Organization, Customer, Employee.

Fulfill the requirements in the section 61 settlement as well as any other filings or MPSC requests that will be filed.

How will you monitor and measure expected value?

Measure success by using the reporting tools developed to ensure the accuracy of program enrollments, billing, and payments for individual IT projects.

What alternatives have been considered?

No alternatives have been identified. Do Nothing was not an option and would result in non-compliance with MPSC and regulatory requirements.



Start Date	End Date	Shared Asset	Funding Source
2025-01-01	2025-12-31	No	IT

IT Costs		
----------	--	--

Type	FY25	Total
Capex	\$3,000,000	\$3,000,000
Opex	\$300,000	\$300,000
Total	\$3,300,000	\$3,300,000

BU Costs		
----------	--	--

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0



Executive Summary

Business Case ID	BCD-XX-21-NNN	Business Case Name	Securitization
------------------	---------------	--------------------	----------------

Stakeholders

IT Portfolio	Customer	Business Unit	Regulatory Affairs
IT Sub-Portfolio	CIT	Business Unit Director	Neal Foley
IT Director	Lisa LeGault	Business Unit SME	Kelly Holmes
Managed by	MEP	Business Units Impacted	Electric

Project Description

Initiative Category	Regulatory/Compliance	Initiative Type	Operational
---------------------	-----------------------	-----------------	-------------

Business Opportunity	
What business problem are we trying to solve?	DTE filed case number U-21015 requesting MPSC approval to issues securitization bonds and implement a surcharge to collect funds for debt payoff.
What system or process is being affected?	As a results this requires a rate change in our SAP CR&B application billing functionality for 6 new surcharges (as described above).
What functionality or capability is being provided?	The following functionality will be provided by implementing this project changes in our CR&B Billing functionailty. RESIDENTIAL: "Other Power Supply Surcharges" - roll up of Base Rate Credit, Securitization Charge, Deferred Tax Charge. "Other Delivery Surcharges" - include roll up of Base Rate Credit, Securitization Charge, Deferred Tax Charge. Commercial and Industrial: "Other Power Supply Volumetric Surcharges" - roll up of Base Rate Credit, Securitization Charge, Deferred Tax Charge. "Other Delivery Volumetric Surcharges" - roll up of Base Rate Credit, Securitization Charge, Deferred Tax Charge.
What is the customer or employee value?	The value of completing the project is the lowest cost method that will save our customers money over the life of the mandated surcharge.
What alternatives have been considered?	If DTE does not implement this changes would result in higher cost charges to ALL our DTE customers.

Key Objectives

- 1) Accurately implement 6 surcharges per MPSC direction in our billing functionality
- 2) Implement within 2021 for custome billing readiness by September 1, 2021
- 3) Accurately display new billing line items on customers billing statements
- 4)
- 5)
- 6)
- 7)
- 8)
- 9)
- 10)

Start Month	June	2021
Duration to Complete	Years	3 Months
End Month	September	2021

Funding Source	ITS
----------------	-----

IT Financial Impact

						Total amount is sent for approval on all business cases.
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$512,443	\$0	\$0	\$0	\$0	\$510,000
O&M	\$48,067	\$0	\$0	\$0	\$0	\$50,000
Total	\$560,510	\$0	\$0	\$0	\$0	\$560,000

Business Unit Costs

BU O&M	\$2,000			Trailing BU O&M Costs		\$0
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$0	\$0	\$0	\$0	\$0



Executive Summary

Business Case ID	BCD-CS-22-031	Business Case Name	Treasury Credential on File
------------------	---------------	--------------------	-----------------------------

Stakeholders

IT Portfolio	Customer	Business Unit	CR&B New Business
IT Sub-Portfolio	CIT	Business Unit Director	Lisa A LeGault
IT Director	Lisa LeGault	Business Unit SME	Allison D Logan
Managed by	MEP	Business Units Impacted	Electric

Project Description

Initiative Category	Regulatory/Compliance	Initiative Type	Solutions Delivery - On Prem
---------------------	-----------------------	-----------------	------------------------------

Business Opportunity	
What business problem are we trying to solve?	Credentials on File is a Visa and MasterCard mandate that currently exists , but is not being enforced. Although the effective date of this mandate is currently not known, once it's enforced, DTE would be subject to associated fines for non-compliance. The purpose of this project is to implement back-end system changes to remain PCI compliant and avoid eventual associated fines.
What system or process is being affected?	Credentials on File provides information about whether the customer or merchant has initiated a re-occurring payment and is storing credentials on file: 1. CIT vs MIT (Customer Initiated Transaction vs Merchant Initiated Transaction) –during authorization. 2. Stored payment method or entered by customer –during authorization. 3. Receive Trans ID/Network ID as part of authorization response - only during CIT. 4. One time cut over to receive Trans ID/Network ID.
What functionality or capability is being provided?	The Credentials on File functionality being provided includes a stored Credentials flag (Y/N) and a Customer Initiated Transaction/Merchant Initiated Transaction (CIT/MIT) indicator (about 15-16). These are new fields that will be passed, and a Transaction ID will then be returned. No impact to system users will be impacted as there are no front-end changes required.
What is the customer or employee value?	The value of completing the project ensures that DTE remains PCI compliant. Rejection rates on credit cards will be reduced and approval rates improved.
What alternatives have been considered?	The purpose of this project is to remain PCI compliant and avoid eventual associated fines. Credentials on File is a Visa and MasterCard mandate that currently exists , but is not being enforced. Although the effective date of this mandate is currently not known, once it's enforced, DTE would be subject to associated fines for non-compliance.

Key Objectives

- 1) Outbound authorization needs to send two additional fields:
- 2) 1. (Y/N) if stored credential is being used (Y-for stored Indicator) 2. send Customer Initiated Transaction (CIT)/Merchant Initiated Transaction (MIT) indicator
- 3) Trans ID/Network ID received back on CIT authorization response from Visa (first time) should be stored in ISU and need to send back every time.
- 4) Auto Payment and Scheduled Payments to use Merchant Initiated Transaction (MIT).
- 5) Customer stores payment method, then the payment processor generates Network ID.
- 6) Need to get Trans ID (or Network ID) by passing CIT for first time as cut over for all saved payment methods.
- 7) Security scan may be required
- 8) Channel teams (with payment capability) will be needed for testing and include: Web, Mobile, Kiosk and IVR.
- 9)
- 10)

Start Month	March	2022
Duration to Complete	Years	7 Months
End Month	October	2022

Funding Source	ITS
----------------	-----

IT Financial Impact

						Total amount is sent for approval on all business cases.
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$2,130,137	\$0	\$0	\$0	\$0	\$2,130,000
O&M	\$384,715	\$0	\$0	\$0	\$0	\$380,000
Total	\$2,514,852	\$0	\$0	\$0	\$0	\$2,510,000

Business Unit Costs

BU O&M	\$0	Trailing BU O&M Costs	\$0
--------	-----	-----------------------	-----

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$0	\$0	\$0	\$0	\$0

DTE Electric Company
Customer Service IT Business Cases- Executive Summaries
Executive Summary

Business Case ID	BCD-CS-22-005
------------------	---------------

Business Case Name	Advance Analytics AA use case Implementation
--------------------	--

Stakeholders

IT Portfolio	Customer
IT Sub-Portfolio	Customer Service
IT Director	Lisa LeGault
Managed by	MEP

Business Unit	CR&B New Business
Business Unit Director	Paolo Morra
Business Unit SME	Felicia Woo
Business Units Impacted	Electric

Project Description			
Initiative Category	IT Enhancements	Initiative Type	Solutions Delivery - Cloud
Business Opportunity			
What business problem are we trying to solve?	Three projects under this AA business case umbrella: 1) UCX Segmentation Implementation: Support enterprise goals to reduce Uncollectible Expense (UCX). We have developed a predictive model that predicts the probability of a customer's account to enter final arrears (i.e., UCX customer segmentation project.) By knowing which accounts are at high risk for entering final arrears, we can reduce their growth during active arrears through creating targeted collection processes, programs and policies. Thereby, reducing the company's long-term UCX expense. Also by recognizing and helping customers early, we can improve the customer's experience. This project will be to integrate the risk profile and scores to ISU and CRM and update reporting queries or reports to pull this data. 2) NPS Phase 2: In order to improve our customer's experience, we are leveraging machine learning to identify the drivers of a customer being a promoter, passive or detractor. Phase 2 brings in additional datasets and model refinement to improve prediction accuracy and insights to the business to develop action plans and implement countermeasures. The model output, reports, dashboard and visualizations, and insights provide business capability. 3) Reactive Collection Cycle: Currently, collection activities are not formally prioritized based on the expected amount we hope to recover from a customer once they've entered final arrears. This project leverages machine learning to develop an analytics engine to maximize collections recovery and support a pilot with collection agencies. We are also trying to reduce our collection agency SO&M costs.		
What system or process is being affected?	SAP Customer Relationship and Billing (CR&B - ISU and CRM), SAP BW(Business Warehouse), ADLS (Azure Data Lake), DebtNext, Collection Processes (Dunning), HPP Arrears Prioritization, NPS improvement initiatives.		
What functionality or capability is being provided?	1) Risk profiles and risk scores from the predictive model will be stored in ISU, CRM and BW as well as interfacing systems so that this data can be used in downstream Collection processes. 2) The NPS model outputs, reports, dashboard and visualizations, and insights provide business capability. 3) Probabilities from the analytics engine will inform prioritization of collection activity and support a pilot with collection agencies.		
What is the customer or employee value?	1) UCX Segmentation: Reduce the company's long-term UCX by taking early steps to curb high risk customer's active arrears growth and address their needs through targeted collection processes, programs and policies. By preventing rapid growth in arrears, we are helping the customer to better manage their bills and reduce the likelihood and frequency of the customer being in disconnect status. We also can connect the customer to potential federal and state payment assistance programs. 2) Improve NPS score which reflects customer sentiment and satisfaction. Prioritize NPS initiatives across the enterprise by focusing on the most important features identified by the model. Properly allocate resources to NPS efforts. 3) Reduce collection agency costs (O&M) and increase recovery.		
What alternatives have been considered?	No alternatives are considered		

Key Objectives		Case No. U-21534
Michigan Public Service Commission DTE Electric Company Customer Service Improvement Case Executive Summary 1) UCX Segmentation: Data will be available to feed reporting systems such as BW and dashboards. 2) NPS: Model output will help business users develop and prioritize their improvement efforts. 3) Reactive Collection Cycle: Data will be available via flat files until we decide to integrate with CR&B. 2) 1) UCX Segmentation: External users such as third-party collection agencies and low income assistance agencies would also be able to see the risk score or BP risk profile to make their determination. 3) 1) UCX Segmentation: Risk score and/or BP risk profile would be available and able to easily integrate with CR&B by storing the score and profile in ISU and CRM. 4) 5) 6) 7) 8) 9) 10)		Exhibit A-24 Schedule N.1.1 Witness: M. Hatsios Page 56 of 139

Start Month	January	2022
Duration to Complete	Years	11 Months
End Month	December	2022

Funding Source	ITS
----------------	-----

IT Financial Impact						
	Year 1	Year 2	Year 3	Year 4	Year 5	Total amount is sent for approval on all business cases.
Capital	\$2,235,859	\$0	\$0	\$0	\$0	\$2,240,000
O&M	\$177,889	\$0	\$0	\$0	\$0	\$180,000
Total	\$2,413,748	\$0	\$0	\$0	\$0	\$2,420,000

Business Unit Costs						
BU O&M	\$0		Trailing BU O&M Costs		\$180,000	
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$0	\$0	\$0	\$0	\$0

Executive Summary

Business Case Number	Business Case Name
DMND0001241	Advanced Analytics AA Use Cases Implementation

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Paolo Morra
Portfolio Manager	Business Unit SME
Lisa A LeGault	Leena Khiani
Managed By	PPS
MEP	4.3

Project Description

Investment Type	Initiative Type
IT Enhancements	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

2023 AA Use Case

Develop an analytics model that uses Natural Language Processing (NLP) technology to improve the accuracy with which customer calls are categorized, especially as it relates to those calls that would often be manually categorized as "Other" by the CRs. By dispositioning calls to the appropriate call categories, the Company can gain greater visibility into the total volume and most common reasons for calls and to identify process and policy improvements in the key transactions to reduce calls.

2024 AA Use Cases

1) Contact Center Journey Mapping: Identify the precise touchpoints and scenarios in key customer interactions that either cause a customer to call, or that result in a failure to successfully complete their interaction in digital self-service to reduce calls and identify improvements in the key transactions.

2) Energy Assistance and EWR: Today, energy assistance is available to low-income customers whose balances are past due or who otherwise qualify for assistance. A better long-term approach would be to assisting them in reducing their bills and managing their arrears, with a combined offering of energy assistance (EA) paired with Energy Waste Reduction (EWR). We need an advanced analytics model to help us determine the eligibility of customers for EA and EWR so that we can be proactive in our outreach and better ensure customers who can benefit the most are provided with the support available.

2025 AA Use Cases

1) Reduce MPSC Complaints: By better understanding the drivers underlying Customer Service MPSC complaints, we can make improvements in our key transactions, especially in Collection and Billing, which generate ~80% of Customer Service complaints. We want to be proactive in anticipating and resolving customer pain points in our key transactions.

2) Automate CR Notes: 30% of annual calls require CRs to take manual notes which increases their call handle time by ~21 seconds. This process can be automated using advanced analytics technology which will reduce handle time.



What functionality or capability is being provided?

The Advanced Analytics models, modeling dataset and features, and data pipelines will be developed per the specific use cases and the models' outputs will be deployed and operationalized by integrating the models' outputs with our CR&B system or other customer systems and dashboards, and deploying the models and data pipelines in our cloud platform. These models also require a significant amount of data and data engineering based on the use case. These are the common functionality and capabilities being developed and will need to be supported by our data science teams.

2023 AA Use Case

An advanced analytics model that will be self-learning and improve call categorization while continually updating its categorization algorithm and enhancing its ability to provide even deeper insight over time into customer calls and call patterns. The model output will be integrated with existing dashboards.

2024 AA Use Cases

- 1) Use of advanced analytics modeling and tools to map all customer interactions to uncover the underlying reasons why a customer chooses to call.
- 2) Develop a machine learning model to optimally allocate available energy assistance and EWR that will match customers with the best energy assistance fundign and EWR program and provided to business users to operationalize after it has been integrated into the customer systems.

2025 AA Use Cases

- 1) Develop a model to identify the drivers of Customer Service MPSC complaints. The model output will be integrated with our CR&B system so users can be proactive in resolving customer pain points.
- 2) Develop an anaytical technique and process to automate the generation of notes from call transcripts, providing far richer content and insight into improving the customer's experience in all channels.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

The 2023 through 2025 Advanced Analytics Use Cases leverage advanced analytics, machine learning and other data science techniques and technologies in specific use cases described in testimony to derive greater insight into customer segments, behaviors, and pain points, to understand the drivers of customer satisfaction from our customer data, and support reduction in O&M costs and uncollectible expense or to capture operational efficiencies that improve the effectiveness of our processes and key transactions.



Define the Benefit/Value to the Organization, Customer, Employee.

2023 AA Use Case

Understand why customers call and how to improve their experience in each transaction and reduce 30,000 calls from 2023 through 2027 and provide \$340,000 in O&M savings.

2024 AA Use Cases

- 1) Understand why customers' call and how to improve their experience in each transaction and reduce 17,500 calls in 2024 and 2025 and provide ~\$200,000 in O&M savings.
- 2) Energy Assistance Eligibility: Pairing the right customers with the appropriate energy assistance will help customers reduce past-due balance, thereby reducing arrears and uncollectible expense. We estimate UCX savings of ~\$300,000 in 2024 through 2025.

2025 AA Use Cases

- 1) Reduce Customer Service MPSC Complaints by ~110 or 15 percent through 2030. Being proactive in addressing customer concerns and taking customer pain points out of our key transactions.
- 2) Reduce average call handle time and provide ~\$300,000 in O&M savings annually and also improve contact center service levels.

How will you monitor and measure expected value?

2023 AA Use Case

Accuracy of the call categorization process and reduction in call volume outside of deflecting calls to self-service per our estimate.

2024 AA Use Cases

- 1) Understanding the drivers of customer calls and identifying process improvements. Reduction in call volume per our estimate.
- 2) Accuracy of the model in identifying eligibility of customers for their best suited energy assistance program and benefit in reducing customer bills from EWR. If together, they provide the benefits we anticipate. Reaching our UCX reduction estimate.

2025 AA Use Cases

- 1) Reduction in Customer Service MPSC Complaints. Ability to be proactive and resolve customer issues and concerns before they become a complaint.
- 2) Reduction in average handle time by 21 seconds and improving utilizing the CR notes for more insight and improvements in call quality and in all channels and interactions.

What alternatives have been considered?



2023 AA Use Case

There were no alternatives considered for the 2023 use case to developing an analytics model that uses natural language processing technology to improve the accuracy with which customer calls.

2024 AA Use Cases

There are no alternatives being considered for the 2024 use case to develop an advanced analytics model using natural language processing to enhance categorization of calls and reduce calls from the Other bucket from 2023-2027. There are no other alternatives for the 2024 use case to utilize advanced analytics to match low-income customers with energy assistance and energy waste reduction.

2025 AA Use Cases

There are no alternatives being considered for the 2025 use case to develop an advanced analytics model to understand the drivers of Customer Service MPSC complaints. The alternative to the 2025 use case to automate CR notes is to leave the current process as it is which unnecessarily adds handle time to 30% of all calls.

There are no other alternatives to integrating the analytics solution with our CR&B system or other customer systems and dashboards or utilizing the DTE cloud platform for all use cases.

Start Date	End Date	Shared Asset	Funding Source
2023-01-02	2025-12-31	Yes	IT

IT Costs

Type	FY23	FY24	FY25	Total
Capex	\$401,295	\$2,000,001	\$3,009,198	\$5,410,494
Opex	\$115,057	\$101,782	\$375,546	\$592,385
Total	\$516,352	\$2,101,783	\$3,384,744	\$6,002,879

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$10,000
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0



Executive Summary

Business Case ID	BCD-CS-22-015	Business Case Name	Automated Application Monitoring Enhancement
------------------	---------------	--------------------	--

Stakeholders

IT Portfolio	Customer	Business Unit	CR&B New Business
IT Sub-Portfolio	Customer Service	Business Unit Director	Lisa LeGault
IT Director	Lisa LeGault	Business Unit SME	Anbukumar Sivasubramanian
Managed by	IT	Business Units Impacted	Electric

Project Description

Initiative Category	IT Enhancements	Initiative Type	Solutions Delivery - On Prem
---------------------	-----------------	-----------------	------------------------------

Business Opportunity	
What business problem are we trying to solve?	We do not have the capabilities to perform Process monitoring (Meter to Cash & Order to Close), Root Cause Analysis, Data Volume Management, user monitoring, end user experience monitoring and advance application monitoring in Solution Manager. This result in manual measuring of Key Performance Indicators (KPI) for the Business Process which is prone to errors. In absence of these monitoring capabilities or root cause analysis, we will not be able to identify/resolve performance issues or system errors
What system or process is being affected?	ISU (Industry Solutions- Utilities),CRM (Customer Relationship Management),BW (Business Warehouse),PO (Process Orchestrator) - These applications do not have the advanced monitoring capabilities to track their individual health
What functionality or capability is being provided?	"We need to implement the following capabilities in Solution Manager in 2022; Process monitoring to measure the Key Performance Indicators in Meter to Cash & Order to Close processes ServiceNow - Will be used to send communication to the stakeholders based on the alerts End user experience monitoring will help to simulate specific process steps to evaluate its performance and identify any opportunities for improvement Advance application monitoring will help us monitor the HANA data base for any performance issues
What is the customer or employee value?	- Process monitoring will help to take corrective actions for process improvement based on the measured Key Performance Indicators - Root cause analysis will help to identify the defects in the programs more efficiently thus improving the resolution turn around time - Data volume management will help DTE to monitor the data growth in CR&B landscape to keep the applications within the optimum operating conditions resulting in improved system performance- User monitoring will help to assess the operations for any specific user if they report any performance issue
What alternatives have been considered?	- Solution Manager is the native tool to monitor the SAP platform hence no other alternatives have been explored; no licensing cost is incurred for Solution Manager

Key Objectives

- 1) Implement Process monitoring to provide a dashboard of process related KPIs for business to monitor the health of the Business process and help to take corrective actions for process improvement
- 2) Implement Root cause analysis to identify the defects in the programs more efficiently
- 3) Implement Data volume management to monitor the data growth in CR&B landscape to keep the applications with in the optimum operating conditions
- 4) Extend End user experience monitoring to simulate additional process steps to evaluate its performance and identify any opportunities for improvement
- 5) Implement User monitoring to assess the operations for any specific user if they report any performance issue
- 6) Implement Advance application monitoring to monitor the HANA data base for any performance issues
- 7)
- 8)
- 9)
- 10)

Start Month	January	2022
Duration to Complete	0 Years	11 Months
End Month	December	2022

Funding Source	ITS
----------------	-----

IT Financial Impact

						Total amount is sent for approval on all business cases.
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$1,634,790	\$0	\$0	\$0	\$0	\$1,630,000
O&M	\$158,048	\$0	\$0	\$0	\$0	\$160,000
Total	\$1,792,838	\$0	\$0	\$0	\$0	\$1,790,000

Business Unit Costs

BU O&M	\$0	Trailing BU O&M Costs	\$0
--------	-----	-----------------------	-----

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$0	\$0	\$0	\$0	\$0

Executive Summary

Business Case Number	Business Case Name
DMND0001482	Automated Application Monitoring Enhancement

Stakeholders

Portfolio Category	Business Unit
Customer	Customer
Portfolio	Business Unit Director
Customer Service	Lisa A LeGault
Portfolio Manager	Business Unit SME
Lisa A LeGault	Suresh Udayagiri
Managed By	PPS
IT	3.5

Project Description

Investment Type	Initiative Type
IT Enhancements	Solutions Delivery - On Prem

What business problem or opportunity are we trying to solve?

While we have implemented the Solution Manager application, the monitoring tool can be expanded to provide broader coverage of business process applications and the performance of the CR&B system. Expanded capabilities to be implemented during the bridge and test periods include enabling 100+ interface monitoring (104 currently), adding 50 more jobs to job monitoring (58 jobs currently), 10 additional user experience monitoring of key transactions (six jobs being monitored today), 10 more business process / intelligence monitoring (38 currently), and providing an alert and sending a notification when computing power/performance is low for supporting these processes.

What functionality or capability is being provided?

Expand Core CR&B Operational visibility of existing Solutions by adding Technology and Business Process Monitoring, Optimize Alerting & Notifications, Improve Standard Operational Procedures, Analytics and Dashboards. Also, expand scope to implement Focus Build, Focus Insights and code mgmt modules.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Improve CR&B application and business process monitoring coverage by adding new configurations for the existing solution.
Business Process Monitoring – Identify and implement 2 Business Process Monitoring
User Experience monitoring - Identify and implement 5 transactions for User Experience monitoring
Interface Monitoring – Identify how many interfaces in addition need to be monitored and which those are
Configure DVM work center



Define the Benefit/Value to the Organization, Customer, Employee.

The Customer or employee value is configuration and deployment in line with application operations, business operations resulting in reduced unplanned downtime.

The monitoring enhancements provided by this project also are expected to improve the SAP CR&B system's uptime by reducing the time to monitor unplanned system outages after they are restored. In 2022-23, there were 10 system outages that required 20 IT resources working eight hours each to restore the system and implement fixes after the system is back up. These same resources then spend a minimum of the next eight hours monitoring the system after the system is restored to ensure it is stable. By implementing the additional monitoring features and coverage of key processes, transactions and interfaces, the automated monitoring based on rules and thresholds reduces valuable IT resource time to monitor the system after restoring. Assuming the frequency of outages can be reduced from 10 to 3 from 2026-2028, this translates to a reduction of \$112,000 in scarce resource time that can be re-directed to higher value activities.

How will you monitor and measure expected value?

Improved CR&B Uptime %
Avoidance of scarce monitoring time by IT resources and avoidance of O&M costs.

What alternatives have been considered?

A "do nothing" alternative is not in scope because this is an on-going IT effort for business sustainment.

Start Date	End Date	Shared Asset	Funding Source
2023-01-02	2025-12-31	Yes	IT

IT Costs

Type	FY23	FY24	FY25	Total
Capex	\$895,000	\$0	\$895,000	\$1,790,000
Opex	\$30,000	\$0	\$30,000	\$60,000
Total	\$925,000	\$0	\$925,000	\$1,850,000

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0



Executive Summary

Business Case ID	BCD-CS-22-011	Business Case Name	Customer Legacy Applications Enhancement
------------------	---------------	--------------------	--

Stakeholders

IT Portfolio	Customer	Business Unit	CR&B New Business
IT Sub-Portfolio	CIT	Business Unit Director	Lisa Legault
IT Director	Lisa LeGault	Business Unit SME	Gomathi
Managed by	IT	Business Units Impacted	Electric

Project Description

Initiative Category	IT Enhancements	Initiative Type	Solutions Delivery - On Prem
---------------------	-----------------	-----------------	------------------------------

Business Opportunity	
What business problem are we trying to solve?	Manage the discretionary needs of our Business Partners as it relates to the Legacy Applications.
What system or process is being affected?	The Legacy applications that support the Customer Portfolio will be impacted. This includes the following systems: c CSB (read only), KCS (read only), AGW/ORA, CICPS, EBPS, EUDM (MDM C&I), Ei Server (MDM C&I), PSO, OFC/AMA, PGP, COCM, DTE I can Help (Quest), QPM, SVMs
What functionality or capability is being provided?	The functionality or capabilities to be provided are in support our overall meter to cash process. This includes middleware applications that integrate our customer facing application and employee facing applications with our billing system.
What is the customer or employee value?	The customer or employee value are the enhancements that result in new business capabilities/new functionality, automation in support of business processes and/or continuous improvement of the overall functionality of the meter to cash applications. The goal of this effort is to work on the highest business prioritized work that align with business goals and aspirations. .
What alternatives have been considered?	

Key Objectives

- 1) Align request work to business goals and objectives
- 2) Limit the requests to authorized requestors - which will result with work that is better aligned to business aspirations/goals.
- 3) Deliver the enhancements based on business priority
- 4) Deliver in enhancements in an iterative methodology improving the time to delivery
- 5) Create a collaborative team dynamic between business units and IT by focusing on our customers and employees challenges and delivering solutions that alleviate or eliminate challenges.
- 6)
- 7)
- 8)
- 9)
- 10)

Start Month	January	2022
Duration to Complete	0 Years	11 Months
End Month	December	2022

Funding Source	ITS
----------------	-----

IT Financial Impact

						Total amount is sent for approval on all business cases.
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$984,781	\$0	\$0	\$0	\$0	\$980,000
O&M	\$155,589	\$0	\$0	\$0	\$0	\$160,000
Total	\$1,140,370	\$0	\$0	\$0	\$0	\$1,140,000

Business Unit Costs

BU O&M	\$0	Trailing BU O&M Costs	\$0
--------	-----	-----------------------	-----

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$0	\$0	\$0	\$0	\$0



Executive Summary

Business Case ID	BCD-CS-22-010	Business Case Name	Customer Relationship and Billing Program Enhancement
------------------	---------------	--------------------	---

Stakeholders

IT Portfolio	Customer	Business Unit	CR&B New Business
IT Sub-Portfolio	Customer Service	Business Unit Director	Lisa Legault
IT Director	Lisa LeGault	Business Unit SME	Amit Gadgil
Managed by	IT	Business Units Impacted	Electric

Project Description

Initiative Category	IT Enhancements	Initiative Type	Solutions Delivery - On Prem
---------------------	-----------------	-----------------	------------------------------

Business Opportunity	
What business problem are we trying to solve?	Manage the discretionary needs of our Business Partners as it relates to the Customer Relationship & Billing system (CR&B/SAP). This includes enhancements to address customer and employee needs.
What system or process is being affected?	The SAP (CR&B) is the core system that will be impacted. This includes CRM, ISU, PI/PO & BW, as well as Streamserve and Extend ECM (Bill presentment & storage applications). The meter to cash to cash process will be affected.
What functionality or capability is being provided?	The functionality or capabilities to be provided are within 6 main disciplines that align with key SAP functionality, which include Customer Relationship Management (front end to our call center), Finance and Contract Accounting, Billing & Rates, Mass Print/Bill Presentment, Device Management and Service Orders and Reporting. Supporting our overall meter to cash process.
What is the customer or employee value?	The customer or employee value are the enhancements that result in new business capabilities/new functionality, automation in support of business processes and/or continuous improvement of the overall functionality of the CR&B system. The goal of this effort is to work on the highest business prioritized work that aligns with business goals and aspirations.
What alternatives have been considered?	No alternatives have been identified.

Key Objectives

- 1) Align requested work to business goals and objectives
- 2) Limit the requests to authorized requestors - which will result with work that is better aligned to business aspirations/goals.
- 3) Deliver the enhancements based on business priority
- 4) Deliver enhancements in an iterative methodology improving the time to delivery
- 5) Create a collaborative team dynamic between business units and IT by focusing on our customers and employees challenges and delivering solutions that alleviate or eliminate challenges.
- 6)
- 7)
- 8)
- 9)
- 10)

Start Month	January	2022
Duration to Complete	Years	11 Months
End Month	December	2022

Funding Source	ITS
----------------	-----

IT Financial Impact

						Total amount is sent for approval on all business cases.
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$2,327,087	\$0	\$0	\$0	\$0	\$2,330,000
O&M	\$260,088	\$0	\$0	\$0	\$0	\$260,000
Total	\$2,587,175	\$0	\$0	\$0	\$0	\$2,590,000

Business Unit Costs

BU O&M	\$0	Trailing BU O&M Costs	\$0
--------	-----	-----------------------	-----

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$93,600	\$0	\$0	\$0	\$0	\$93,600



Executive Summary

Business Case ID	BCD-CS-22-027	Business Case Name	IT Application Environments Enhancement
------------------	---------------	--------------------	---

Stakeholders

IT Portfolio	Customer	Business Unit	Contact Center
IT Sub-Portfolio	Customer Service	Business Unit Director	Lisa LeGault
IT Director	Lisa LeGault	Business Unit SME	Piyush Patel
Managed by	IT	Business Units Impacted	Electric

Project Description

Initiative Category	IT Enhancements	Initiative Type	Infrastructure - On Prem
---------------------	-----------------	-----------------	--------------------------

Business Opportunity

What business problem are we trying to solve?	There are multiple projects and upgrades occurring in the Integrated Voice Response (IVR) space and not enough landscape to manage them all. A second Quality Assurance (Q/A) environment is needed to accelerate the development and deployment of IVR applications with the ability to perform regression testing on backend systems for multiple simultaneous projects.
What system or process is being affected?	Applications that integrate with the IVR: - o Avaya Aura Communication Manager (ACM) - o Avaya Aura Application Enablement Services (AE Services) - o Avaya Aura Experience Portal(s), Nuance Automatic Speech Recognition (ASR) and Text-To-Speech (TTS)
What functionality or capability is being provided?	This business case will provide an additional fully functional IVR Test Environment.
What is the customer or employee value?	The new Q/A environment will provide DTE the ability to emulate the production segmentation and call center routing, allowing development, deployment and regression testing on backend systems for multiple simultaneous projects.
What alternatives have been considered?	No alternatives are being considered at this time.

Key Objectives

- 1) Add an additional IVR QA environment. Swampfox is the vendor that will assist in setting this up. We will require licensing from them.
- 2) Add 4 additional Inx servers to accomplish this that are same specifications and size as existing Inx servers: Inx 1275, Inx1273 or 1274, Inx 1346, Inx1347.
- 3) Add 3 Web Logic Application Server Licenses that are same as existing types.
- 4) Add an additional database server with two schemas that has the same specification and size as the existing Oracle DB AIX10031.
- 5) Add Load Balancers (LB) for IVRAdmin that is the same/higher as existing LB ivrADqa.dteco.com.
- 6) Add 2 Load Balancers for WebLogic that is same/higher as existing LB ivrqa1.dteco.com and ivrqa2.dteco.com.
- 7) Add Load Balancer for DRM that is the same/higher as existing LB drmqa.dteco.com.
- 8)
- 9)
- 10)

Start Month	January	2022
Duration to Complete	Years	4 Months
End Month	May	2022

Funding Source	ITS
----------------	-----

IT Financial Impact

						Total amount is sent for approval on all business cases.
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$299,638	\$0	\$0	\$0	\$0	\$300,000
O&M	\$21,542	\$0	\$0	\$0	\$0	\$20,000
Total	\$321,180	\$0	\$0	\$0	\$0	\$320,000

Business Unit Costs

BU O&M	\$0	Trailing BU O&M Costs	\$3,328
--------	-----	-----------------------	---------

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$0	\$0	\$0	\$0	\$0

Executive Summary

Business Case Number	Business Case Name
DMND0001275	IT Application Environments Enhancement

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Lisa A LeGault
Portfolio Manager	Business Unit SME
Lisa A LeGault	Piyush Patel
Managed By	PPS
IT	2.4

Project Description

Investment Type	Initiative Type
IT Enhancements	Infrastructure - On Prem

What business problem or opportunity are we trying to solve?

IVR requires an additional QA environment so that projects do not compete for QA space which makes it especially hard on smaller projects. Also, there is lack of flexibility to accommodate emergent or emergency requests that arise and need to be accommodated into deployment schedules. There is only a single testing environment for testing service and work order to close process and for the customer channels (i.e., web and mobile).

In 2022, the new Q/A environment will provide DTE the ability to emulate the production environment and call center routing, allowing development, deployment, and regression testing for multiple, simultaneous projects. Completing projects on time is a key part of any project plan and with the additional Q/A environment, projects will not have to compete as frequently for Q/A time, potentially causing delays or adjustments in their timelines and delivery dates. Competition for the Q/A space can be especially hard on smaller projects when a larger project requires testing for extended periods of time. The additional Q/A environment also provides more flexibility for emergent or emergency requests that arise and need to be accommodated into the overall deployment schedules.

In 2023 the Company is investing \$0.7 million in 2023 bridge and 2024 test period capital for establishing additional environments for testing of new enhancement in the N+1 and N+2 environments for the Service and Work Order to Close Process and for the Customer Channels (i.e., Web and Mobile) projects. Similar to the backup and backlog of IT projects waiting to go through Q/A, multiple projects are developed at the same time and must queue up waiting to complete regression testing in the single N environment that is connected to the CR&B system for testing before they can be implemented into production. The single testing environment delays delivery of projects and implementation of improvements that benefit the customer. There is also an opportunity to reduce server and operational costs through sharing the N+1 and N+2 environments for testing that can be captured with these investments.

What functionality or capability is being provided?

2022 Scope: This business case will provide an additional fully functional IVR QA Environment.
2023 Scope: Enabling the testing of end-to-end service order to close process in N, N+1 and N+2 in CR&B landscape

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

This investment aligns with the enterprise strategy to improve the speed to deliver IT projects. Operational Excellence, Employee Engagement and Customer Experience.

Define the Benefit/Value to the Organization, Customer, Employee.

In 2022, the new Q/A environment will provide DTE the ability to emulate the production environment and call center routing, allowing development, deployment, and regression testing for multiple, simultaneous projects. Completing projects on time is a key part of any project plan and with the additional Q/A environment, projects will not have to compete as frequently for Q/A time, potentially causing delays or adjustments in their timelines and delivery dates. Competition for the Q/A space can be especially hard on smaller projects when a larger project requires testing for extended periods of time. The additional Q/A environment also provides more flexibility for emergent or emergency requests that arise and need to be accommodated into the overall deployment schedules.

In 2023, the Company is investing \$0.7 million in 2023 bridge and 2024 test period capital for establishing additional environments for testing of new enhancement in the N+1 and N+2 environments for the Service and Work Order to Close Process and for the Customer Channels (i.e., Web and Mobile) projects. Similar to the backup and backlog of IT projects waiting to go through Q/A, multiple projects are developed at the same time and must queue up waiting to complete regression testing in the single N environment that is connected to the CR&B system for testing before they can be implemented into production. The single testing environment delays delivery of projects and implementation of improvements that benefit the customer. There is also an opportunity to reduce server and operational costs through sharing the N+1 and N+2 environments for testing that can be captured with these investments.

How will you monitor and measure expected value?

2023:Speed to deliver any project, Projects will be able to test end-to-end scenarios in N+1 and N+2 environments before moving to the production path. In this way we will not be blocking any production support activities in the N landscape for a long time. This will remove the dependencies of the projects on N environment which is the only environment integrated with Click and Maximo as of today. These benefits would be realized as soon as change is implemented.

What alternatives have been considered?

2022 Do Nothing: The impact of doing nothing is that we are limited in the amount of changes that can be tested at the same time for the IVR. Projects will continue to experience sequencing issues.

2023 Do Nothing Impact : We will not have the ability to test Order to Cash in N+1 and N+2, The current limitation to test end to end scenarios in N+1 and N+2 will remain, hindering our ability to align with the enterprise strategy of delivering projects at a faster pace.

2023 Alternative: Dedicated instance of Click and Maximo to connect to N+1 and N+2, This alternative was not selected due to the operating and Capital cost.

Start Date	End Date	Shared Asset	Funding Source
2023-01-02	2023-12-29	Yes	IT



IT Costs

Type	FY23	FY24	Total
Capex	\$351,810	\$0	\$351,810
Opex	\$35,460	\$0	\$35,460
Total	\$387,270	\$0	\$387,270

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0



Executive Summary

Business Case Number	Business Case Name
DMND0002303	MDM Stabilization

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Jason E Sparks
Portfolio Manager	Business Unit SME
Lisa A LeGault	Steven P Jackson
Managed By	PPS
MEP	4.4

Project Description

Investment Type	Initiative Type
IT Enhancements	Solutions Delivery - On Prem

What business problem or opportunity are we trying to solve?

In 2022, the Meter Data Management (MDM) system was launched. The new system replaced an outdated and unsupported DTE IT solution. Since the launch, opportunities to enhance the MDM solution have been identified. These enhancements focus on reducing billing exceptions, manual work, improving forecasts, and preventing delayed bills for the largest commercial and industrial customers.

What functionality or capability is being provided?

By developing the suggested changes in the system, we can provide the following:
The MRO files should be bulked to allow for a 6-file process to support the operational process which decreases business exception process handling time due to less volume of files. EEDM02 option in Fiori will auto-populate the installation with interval dates, monitoring and exception screen reads. SOX reports will be updated to include all information regarding the billing determinants changes made by business unit for auditing purposes. Off-peak and on-peak data values will be synced between the Fiori and billing system. The usage split between Rider 3 and Base rates will be accurate so that customer receives the correct invoice and customer billing. Energy Usage billing determinant updates in Fiori will be reflected in SAP customer invoice. SAP and Fiori systems to contain accurate move-out interval data and move-out reads to generate correct and consistent final customer bills. Interval data reporting will show accurate off-peak and on-peak which results in accurate customer invoicing without any manual interventions. Billing determinants will be updated within Fiori to allow successful invoicing in the SAP system. Fiori report updates for monthly interval data, Power Factor reporting, complex billing reports and validation reports.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

This solution is critical for aligning with the business unit and strategies by:
Eliminate the risk of customers being sent inaccurate billing information leading to customer MPSC complaint, eliminate the increase in head-count due to increased billing exceptions based on current solution, and avoid delayed revenue by decreasing the number of customer exceptions.

Define the Benefit/Value to the Organization, Customer, Employee.

These enhancements will reduce by 80% the number of manual touches (~12,000) that are currently required to remediate exceptions and prevent delayed bills, providing ~\$100,000 annually in O&M savings. The MDM project will also reduce potentially higher energy market settlement charges due to forecasting errors from estimated commercial and industrial load.

How will you monitor and measure expected value?

Business will monitor the following:
Number of MPSC complaints, billing exceptions, resources to complete work, delayed bills, accurate charges, forecasting error, and the timeliness of sending out the customer bills.

What alternatives have been considered?

If this work is not completed the increase of staff augmentation will be needed increasing overall business cost.

Start Date	End Date	Shared Asset	Funding Source
2025-03-12	2025-09-18	Yes	IT



IT Costs

Type	FY25	Total
Capex	\$1,801,963	\$1,801,963
Opex	\$94,815	\$94,815
Total	\$1,896,778	\$1,896,778

BU Costs

Category	Term of Contract	BU O&M Cost
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0

Executive Summary

Business Case Number	Business Case Name
DMND0001921	Never Billed Accounts due to Theft/Fraud

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Tamara Johnson
Portfolio Manager	Business Unit SME
Lisa A LeGault	Jodi L Monacelli
Managed By	PPS
MEP	3.6

Project Description

Investment Type	Initiative Type
IT Enhancements	Solutions Delivery - On Prem

What business problem or opportunity are we trying to solve?

Currently DTE has the issue with never billed accounts related to theft or fraud. There are business processes that require RMP to assess charges to a customer on a contract account that does not have a contract. This is done when billing theft using a miscellaneous adjustment or when moving balances from an ID fraud victim to the fraud perpetrator. (This is only in cases where a move in/move out and normal billing cannot be completed.)

When a balance exists on a contract account without a contract, no bill statement is generated or sent to the customer, so the customer does not know this amount is owed. Since no final bill is generated, the account remains in an 'active' status and is never written off. The account also does not progress through dunning, so most of these amounts are not collected on. This is having a negative impact on UCX. Inability to bill and collection on some theft and ID fraud charges.

We need to develop a process in SAP where a bill is generated for these accounts and sent to the customer. These accounts also need to progress through the normal final bill and dunning processes.

What functionality or capability is being provided?

By developing the suggested changes in the system, we can provide:

A new ISU screen, which we can use by the RMP Exceptions team when a customer needs to be billed for Theft/ID Fraud/ Bankruptcy. Create a new z table and store this information in this new table. Create a new billing template that will be used to produce a bill statement/letter using the information captured above and stored in the z table. Create a batch process or feed these bills into the existing batch process that will generate a bill statement nightly for the bills created for the given date and will ensure transmission to the print room for printing/mailing. Once the final bill is produced, ensure all necessary tables are updated to progress this account through the normal dunning process. If this final bill is not paid, follow the inactive dunning process. Send these balances to DebtNext when they reach the appropriate dunning step. Display these balances within the Delinquency check if a customer is requesting a move in/restore and requirement payment of these balances prior to moving in. Billing of theft and ID Fraud cases.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

This project aligns with reducing outstanding active arrears which increase UCX risk.



Define the Benefit/Value to the Organization, Customer, Employee.

We can increase billed revenue and payments collected. Currently, these charges are applied to the account but are never billed and payment is not collected as a result. Target after implementation will be \$0 lost revenue due to this issue.

How will you monitor and measure expected value?

Since the SAP CR&B system went live in April 2017 through March 1, 2024, ~\$1.6 million in charges have accrued on customer accounts that have not been billed and are aging in active arrears. We will measure what we are able to bill.

What alternatives have been considered?

Don't have any alternatives.

Start Date	End Date	Shared Asset	Funding Source
2025-03-04	2025-07-05	Yes	IT

IT Costs

Type	FY25	Total
Capex	\$440,400	\$440,400
Opex	\$68,600	\$68,600
Total	\$509,000	\$509,000

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0



Executive Summary

Business Case ID	BCD-CS-22-038	Business Case Name	Supporting capabilities Test Data and Test Data Mgmt
------------------	---------------	--------------------	--

Stakeholders

IT Portfolio	Customer	Business Unit	Self Service Channels
IT Sub-Portfolio	CIT	Business Unit Director	Siddharth Arigapudi
IT Director	Lisa LeGault	Business Unit SME	Alicia Ramirez
Managed by	IT	Business Units Impacted	Electric

Project Description

Initiative Category	IT Enhancements	Initiative Type	Infrastructure - On Prem
---------------------	-----------------	-----------------	--------------------------

Business Opportunity	
What business problem are we trying to solve?	Currently CR&B application team does not have a process to generate any type of test data to help self service channels, Assisted Channel, and Training with their Sustainment and project testing activities. It is all Manual and every request takes lot of time to provide this.
What system or process is being affected?	Current System Integration Testing and User Acceptance Testing Processes are being impacted. System Integration Tetsing and User Acceptance Testing timelines are being effected due to the delays in producing the test data.
What functionality or capability is being provided?	Generate scripts based on the current functionality use cases to produce required test data.
What is the customer or employee value?	Increase Quality and Minimize cost and time by generating the test data using automating test data generation and management process. It also minimize the defect/error rate as we can provide full coverage to the test use cases by providing test data whenever is required.
What alternatives have been considered?	Currently Technical SME's need be involved to manually produce the test data as required for the teams testing. This will include additional effort, time and cost for every request. If this business case is not implemented then we should stay with the status quo and there is no other alternative solution.

Key Objectives

- 1) Automate the process for generating test data by using the tool Tosca
- 2) Identify key transactions and functionalities and provide scripts to cover all the scenarios
- 3) All self services channels, Training and CR channels are in scope
- 4)
- 5)
- 6)
- 7)
- 8)
- 9)
- 10)

Start Month	January	2022
Duration to Complete	Years	11 Months
End Month	December	2022

Funding Source	ITS
----------------	-----

IT Financial Impact

						Total amount is sent for approval on all business cases.
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$1,167,908	\$0	\$0	\$0	\$0	\$1,170,000
O&M	\$211,408	\$0	\$0	\$0	\$0	\$210,000
Total	\$1,379,316	\$0	\$0	\$0	\$0	\$1,380,000

Business Unit Costs

BU O&M	\$0	Trailing BU O&M Costs	\$0
--------	-----	-----------------------	-----

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$0	\$0	\$0	\$0	\$0

Executive Summary

Business Case Number	Business Case Name
DMND0001788	Transform and Modernize PO Architecture

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Lisa A LeGault
Portfolio Manager	Business Unit SME
Lisa A LeGault	Giridhar Bandari
Managed By	PPS
IT	6.4

Project Description

Investment Type	Initiative Type
IT Enhancements	Solutions Delivery - On Prem

What business problem or opportunity are we trying to solve?

The company will transform and modernize the Process Orchestration (PO) architecture to alleviate system bottlenecks due to network traffic and growing functionalities in the CR&B system. As we enable more capabilities in our customer channels and in the CR&B system, this creates additional stress and burden for the PO to ensure increasingly complex jobs and functions perform as expected. During periods of high traffic such as during a storm or in the fall with the influx of college move-ins, our transactional system and our digital channels must scale up to handle the additional workload or risk an unplanned system outage. In 2022-2023, the company experienced 10 unplanned system outages which prevented the ability to process customer orders and requests while the system was down.

What functionality or capability is being provided?

By upgrading the PO to a more robust architecture, we will be able to reduce unplanned system outages which disrupt our ability to serve customers either digitally or through our contact center.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Strategically aligns with Operational and Transactional Excellence. Reducing impact on customers due to unplanned system outages. Ability to serve customers in their channel of choice, in digital or call channels.



Define the Benefit/Value to the Organization, Customer, Employee.

Unplanned system outages affects our customers and our ability to serve them efficiently. In addition to scarce IT resources that need to work to bring back up the system and put in more permanent fixes after, there is also the cost of CRs who are waiting for the system to be restored. If it takes ~3 hours for the system to come back up. Assuming unplanned system outages reduce from 10 to 3 by 2027, by multiplying the ~3 hour in wait time by the average number of CRs by year between 2026 and 2028 and the hourly labor cost of a CR, this project can reduce the O&M cost of CR wait time by \$310,000

How will you monitor and measure expected value?

Will monitor and measure expected value through SAP Solution Manager that align to defined KPI's and metrics, along with technical delivery metrics.

Key KPI's to measure are:

Number of unplanned outages
2022-2023:10
2026:7
2027:5
2028:3

What alternatives have been considered?

No Alternatives considered. No alternatives are possible without significantly impacting capital budget. A "do nothing" alternative would result in unexpected failures and latency to Customer Billing System that are utilized to support meter-to-cash process.

Start Date	End Date	Shared Asset	Funding Source
2025-01-09	2026-12-30	Yes	IT

IT Costs

Type	FY25	FY26	Total
Capex	\$1,025,798	\$1,104,169	\$2,129,967
Opex	\$199,594	\$196,904	\$396,497
Total	\$1,225,391	\$1,301,073	\$2,526,464

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0



Executive Summary

Business Case ID	BCD-CS-21-058	Business Case Name	Bill Management
------------------	---------------	--------------------	-----------------

Stakeholders

IT Portfolio	Customer	Business Unit	Billing and Metering
IT Sub-Portfolio	CIT	Business Unit Sponsor	Siddharth Arigapudi
IT Director	Melissa Cox	Business Units Impacted	Electric
Managed by	IT		

Project Description

Project Category	Strategic	Innovation?	No
Project Type	Solutions Delivery - On Prem	Strategic Fit	Top-Decile Customer Satisfaction

Business Outcome

With Billing FCR/Call Volume being a blue chip for Customer Service, there is a need to enhance the website to be more user friendly that provides usage/weather comparison and dollar impact on demand for customers. Implementing the Customer Bill Impact, Bill Simulator and Rate Comparison capability to the customer on the web will assist with call volume and the overall customer experience.

Key Objectives

- 1) Enhance the website to be more user friendly that provides usage/weather comparison and dollar impact on demand for customers
- 2) The Customer Bill Analyzer will give customers a comprehensive view and breakdown of their entire billing cycle
- 3) Enhancing the billing experience on the website will have many benefits within the company and for our customers
- 4) Bill Simulator - Develop tool for customers to understand their energy consumption and provide bill simulation capabilities to understand what their upcoming bills are forecasted to be
- Rate Comparison tool - Enable customers to easily understand if they are on the best rate for them, along with recommendations for how to become more efficient on their rate and how to select a new rate if their situation is changing
- 5)
- 6) Develop customer-facing experience to manage their energy usage and bill as part of BWB program, including recommending the program for customers and helping them manage their usage while enrolled.
- 7)
- 8)
- 9)
- 10)

Start Month	February	2021	Funding Source	Other Business Unit
Duration to Complete	Years	10		
End Month	December	2021		

Financial Impact

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$2,100,000	\$0	\$0	\$0	\$0	\$2,100,000
O&M	\$300,000	\$0	\$0	\$0	\$0	\$300,000
OCM	\$0	\$0	\$0	\$0	\$0	\$0
Total O&M	\$300,000	\$0	\$0	\$0	\$0	\$300,000
Total	\$2,400,000	\$0	\$0	\$0	\$0	\$2,400,000

Hardware/Software/ Cloud	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$0	\$0	\$0	\$0	\$0	\$0
O&M	\$0	\$0	\$0	\$0	\$0	\$0

BU O&M	\$0	Incremental Costs	\$150,000
--------	-----	-------------------	-----------

Executive Summary

Business Case Number	Business Case Name
DMND0002368	Billing Web Self-Service

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Jacqueline L Robinson
Portfolio Manager	Business Unit SME
Lisa A LeGault	Mariam A Mohamed
Managed By	PPS
IT	4.9

Project Description

Investment Type	Initiative Type
Strategic	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

Current Billing Web experiences enable customers to enroll/un-enroll in various billing plans, check balances/access current billing details for all accounts and analyze their current bill. While we have self-serve capabilities across all our digital channels, resulting in ~89% of Billing transactions being completed in a digital channel in 2022, ~15% of the calls handled by the Contact Center are still related to bills and various pain points in billing processes. Additionally, with the Time-of-Day (TOD) rate change in 2023, billing-related calls are anticipated to increase by 200,000 calls.

The 2023 and 2024 Billing Web Self-Service project will enable the Company to reach its projected long-term Billing call volume of 415,000 a year, a ~244,000 reduction in calls by 2027. The cumulative call volume reduction from 2023-2027 provides annualized savings of \$2.8 million in Contact Center O&M costs.

Re-platform the Billing experience on the cloud to improve performance and reliability. Improve the end-to end customer experience end-to-end. By improving self-serve in the Web, this provides the Company an opportunity to better serve customers and to reduce calls by driving engagement to our digital channel for Billing transactions and improving the Billing DER to 94% by 2027.

What functionality or capability is being provided?

Customers will have an improved experience managing their bills, comparing rates, and evaluating and enrolling in Billing programs on the Web. The cloud migration will support a better overall Web experience and provide the opportunity to build additional functionality or engaging user interaction features. We intend to communicate and promote the availability of new Web features and encourage customers to perform their Billing transactions in the Web.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Managing and reducing Billing repeat calls and calls from the TOD implementation. Enabling self-service options for our customers. Improving customer experience and as a result, improving transaction satisfaction. Improve customer affordability by reducing call volume and hence, Contact Center O&M costs.

Define the Benefit/Value to the Organization, Customer, Employee.

Customers will have an improved experience managing their bills, comparing rates, and evaluating and enrolling in billing programs on the Web. The cloud migration will support a better overall Web experience and provide the opportunity to build additional functionality or engaging user interaction features. We intend to communicate and promote the availability of new Web features and encourage customers to perform their Billing transactions in the Web. The 2023 and 2024 Billing Web Self-Service project enable the Company to reach its projected long-term Billing call volume of 415,000 a year, a 244,000 reduction from its 2022 year-end call volume. The cumulative call volume reduction from 2023-2027 provides annualized savings of \$2.8 million in Contact Center O&M costs.

How will you monitor and measure expected value?

Improvements in these metrics: Self-Serve Completion Rate. Digital Engagement Rate. Transaction Satisfaction. Call Volume. O&M Savings. Countermeasures will be created if the expected performance of these metrics and the call volume reductions are not being met.

What alternatives have been considered?

Maintaining the web transactions on the existing platform and not migrate them to the cloud. Minor improvement if any in completion rates, digital engagement rates, and call deflection opportunity. Limited options for customers to interact in their channel of choice.

Start Date	End Date	Shared Asset	Funding Source
2023-01-02	2024-12-31	Yes	IT

IT Costs

Type	FY23	FY24	Total
Capex	\$888,000	\$888,000	\$1,776,000
Opex	\$105,000	\$197,000	\$302,000
Total	\$993,000	\$1,085,000	\$2,078,000

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0

Executive Summary

Business Case Number	Business Case Name
DMND0002367	Collections Web Self-Service

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Jacqueline L Robinson
Portfolio Manager	Business Unit SME
Lisa A LeGault	Mariam A Mohamed
Managed By	PPS
IT	6.7

Project Description

Investment Type	Initiative Type
Strategic	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

While the Collections transaction makes up ~34% of all calls handled by our Contact Center, our self-serve capabilities were limited to the IVR when requesting to perform a Restore Service order or a Payment Extension hold. Customers in any part of the collection process did not have the ability to engage in a channel of their choice given the minimal capabilities to self-serve, and no capability on the Web. With the limited self-serve capabilities provided today, we have already learned that customers who are in the collections process want to engage digitally with DTE given the 16% engagement rate from the IVR alone. From the early IVR data and our current state assessment, the ability to process a Restore Service request, Promise-to-Pay 10-day hold and enroll in a payment agreement appear to be the top transactions and present opportunities to enabled in the Web. Together with IVR and VA self-service solutions, the planned 2023 and 2024 Collection Web self-service projects will increase the overall Collection DER from 16% (2022) to 48% (2027), and enable the Company to reach its projected long-term Collection call volume of 945,000 a year, a 344,000 reduction in calls by 2027. The higher DER and cumulative call volume reduction from 2023-2027 provides annualized savings of \$3.9 million in Contact Center O&M costs.

Customers who find themselves in the collection process are unable to engage in their channel of choice, with no functionality beyond the IVR, forcing customers to call to complete critical Collection transactions. By providing an option for customers to self-serve in the Web this provides the Company an opportunity to better serve them and to reduce calls by driving engagement to our digital channel for Collection transactions and improving the Collection DER to 48% by 2027.

What functionality or capability is being provided?

Customers will be provided with a Web self-service option that encompasses several key Collection transactions restoring electric service, requesting a payment extension, statusing, and making a payment arrangement.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Enabling more self-service options for our customers. Improving customer experience and as a result, improving transaction satisfaction. Improve customer affordability by reducing call volume and hence, Contact Center O&M costs.



Define the Benefit/Value to the Organization, Customer, Employee.

Customers will be provided with a Web self-service option that encompasses several key Collection transactions like restore service, requesting a payment extension, statusing, and making a payment arrangement. They will also be offered the ability to interact in their channel of choice by providing another option in addition to the IVR. We intend to communicate and promote the availability of new Collections Web transactions and encourage customers to perform transactions in the Web. The 2023 and 2024 Collection Web Self-Service project will provide cumulative call volume reduction from 2023-2027 of 344,000 calls providing annualized savings of \$3.9 million in Contact Center O&M costs.

How will you monitor and measure expected value?

Improvements in these metrics: Self-Serve Completion Rate. Digital Engagement Rate. Transaction Satisfaction. Call Volume. O&M Savings. Countermeasures will be created if the expected performance of these metrics and the call volume reductions are not being met.

What alternatives have been considered?

Maintaining the web transactions on the existing platform and not migrate them to the cloud. Minor improvement if any in completion rates, digital engagement rates, and call deflection opportunity. Limited or less-desirable (does not meet customer's needs) options for customers to interact in their channel of choice.

Start Date	End Date	Shared Asset	Funding Source
2023-01-02	2024-12-31	Yes	IT

IT Costs

Type	FY23	FY24	Total
Capex	\$6,475,000	\$3,500,000	\$9,975,000
Opex	\$805,000	\$799,000	\$1,604,000
Total	\$7,280,000	\$4,299,000	\$11,579,000

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$186,266
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0

Executive Summary

Business Case Number	Business Case Name
DMND0002720	Collections Web Self-Service

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Jacqueline L Robinson
Portfolio Manager	Business Unit SME
Lisa A LeGault	Mariam A Mohamed
Managed By	PPS
IT	6.55

Project Description

Investment Type	Initiative Type
Strategic	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

In 2025, we will continue to refine the functionality in the web to achieve our Collection long-term digital engagement target of 60% and digital completion rate of 80%. This will result in an overall call volume reduction for the Collection transaction. This 2025 project provides continued investment in self-service solutions for the Collections transaction in support of the Company's goal to reach top-quartile handled call volume by 2027, and reduce Collection calls (~1.12 million projected in 2025) to the projected long-term Collection call volume of ~945,000.

What functionality or capability is being provided?

Expand functionality and features built and deployed in 2023-2024 such as providing Web options to multiple account customers and making more customers eligible for a payment extension or adding new features and transactions to the Web such as an Energy Assistance and Payment Plan Web Portal with an intelligent customer matching analytics engine in the back-end. New functionality will also be determined by examining completion and engagement rates, analyzing call volumes to the Contact Center, and benchmarking. We intend to communicate and promote the availability of new Web features and encourage customers to perform their Collection transactions in the Web and all digital channels vs calling the Contact Center.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Enabling more self-service options for our customers. Improving customer experience and as a result, improving transaction satisfaction. Improve customer affordability by reducing call volume and hence, Contact Center O&M costs.

Define the Benefit/Value to the Organization, Customer, Employee.

Customers will be provided with self-service options that are not available today, broadening their ability to interact in their channel of choice. We intend to communicate and promote the availability of new Collections Web transactions and encourage customers to perform their transactions in the Web or IVR. By building self-service solutions that enable high completion rates, the Collection self-service investment is expected to increase overall Collection DER to 60% and enable the Company to reach its projected long-term Collection call volume of ~945,000 a year.



How will you monitor and measure expected value?
Improvements in the following metrics will be tracked: Self-Serve Completion Rate. Digital Engagement Rate. Transaction Satisfaction. Call Volume. Contact Center O&M Savings. Countermeasures will be created if the expected performance of these metrics and the call volume reductions are not being met.

What alternatives have been considered?
Limiting the capabilities to complete Collection transactions in the IVR. Minor improvement if any in completion rates, digital engagement rates, and call deflection opportunity. Limited or less-desirable (does not meet customer's needs) options for customers to interact in their channel of choice.

Start Date	End Date	Shared Asset	Funding Source
2025-01-06	2025-12-19	Yes	IT

IT Costs

Type	FY25	Total
Capex	\$2,001,358	\$2,001,358
Opex	\$200,000	\$200,000
Total	\$2,201,358	\$2,201,358

BU Costs		
Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0

Executive Summary

Business Case Number	Business Case Name
DMND0002370	Contact Center Enablement

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Jacqueline L Robinson
Portfolio Manager	Business Unit SME
Lisa A LeGault	Jennifer Gamet
Managed By	PPS
IT	3

Project Description

Investment Type	Initiative Type
Strategic	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

The Contact Center handled ~1.25 million collection calls in 2023 and this call type has the highest AHT at 758 seconds vs. the overall AHT across call types of 635 seconds. We need to reduce the length of collection calls to reduce O&M costs and improve service level.

What functionality or capability is being provided?

SAP CRM and back-end enhancements that reduce the average handle time for Collection calls.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Leverage call handling efficiencies in order to reduce the cost of service and improve Contact Center service levels.

Define the Benefit/Value to the Organization, Customer, Employee.

We expect the SAP enhancements to support the CRs will shorten the length of a collection call by 8 seconds, providing an annualized O&M savings to the customer of ~\$130,000 by 2027.

How will you monitor and measure expected value?

Measure AHT to projected level of 34 second reduction. Achieve annual contact center O&M projection in 2027.

What alternatives have been considered?

No alternatives. The risk of having no alternative is that collection calls lengthen over time and customers are not able to take full advantage of the energy assistance available.

Start Date	End Date	Shared Asset	Funding Source
2023-01-02	2024-12-31	Yes	IT



IT Costs

Type	FY23	FY24	Total
Capex	\$400,000	\$400,000	\$800,000
Opex	\$40,000	\$40,000	\$80,000
Total	\$440,000	\$440,000	\$880,000

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0

Executive Summary

Business Case Number	Business Case Name
DMND0002729	Contact Center Enablement

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Jacqueline L Robinson
Portfolio Manager	Business Unit SME
Lisa A LeGault	Matthew J Klucevek
Managed By	PPS
IT	5.7

Project Description

Investment Type	Initiative Type
Strategic	Solutions Delivery - On Prem

What business problem or opportunity are we trying to solve?

This demand supports the achievement of this goal by providing funding for SAP IT enhancements that improve the operational efficiency of the Contact Center and SAP back-end work that is not directly associated with a digital channel or accounted for in another transaction self-service project. Customers and Contact Center will be provided with enabled services that would lead to reduction in call minutes and average handle time (AHT), which also improve service levels.

What functionality or capability is being provided?

2025
CRs will have an improved experience viewing and managing Customer bills, comparing rates, and evaluating and enrolling in Billing programs.

2026
Support functionality and features built and deployed in 2023-2024 such as providing options to multiple account customers and making more customers eligible for a payment extension or adding new features and transactions such as an Energy Assistance and Payment Plan with an intelligent customer matching analytics engine in the back end.

2027
Enhance existing experience to reduce failure points and build new features to increase Contact Center capabilities. The enhancement will deliver a more user-friendly experience and address some failure points like allowing to submit the last four digits of Customers personal identification number (PID) instead of the full PID.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Improving customer experience and as a result, improving transaction satisfaction. Improve customer affordability by reducing call minutes, and hence, Contact Center O&M costs.

Leverage call handling efficiencies in order to reduce the cost of service and improve service levels.



Define the Benefit/Value to the Organization, Customer, Employee.

Improving customer experience and as a result, improving transaction satisfaction. Improve customer affordability by reducing call volume and hence, Contact Center O&M costs.

How will you monitor and measure expected value?

Improvements in the following metrics as applicable will be tracked: Transaction Satisfaction.
Contact Center O&M Savings.
Measure AHT to reach long-term goal of 700 seconds from 758 seconds in 2023, providing an annualized O&M savings to the customer of ~\$130,000 by 2027.

What alternatives have been considered?

No alternatives. The risk of having no alternative is that collection calls lengthen over time and customers are not able to take full advantage of the energy assistance available.

Start Date	End Date	Shared Asset	Funding Source
2025-01-06	2027-12-17	Yes	IT

IT Costs

Type	FY25	FY26	FY27	Total
Capex	\$400,000	\$400,000	\$400,000	\$1,200,000
Opex	\$40,000	\$40,000	\$40,000	\$120,000
Total	\$440,000	\$440,000	\$440,000	\$1,320,000

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0



Executive Summary

Business Case ID	BCD-CS-22-056	Business Case Name	Collection Closed Loop Phase 2
------------------	---------------	--------------------	--------------------------------

Stakeholders

IT Portfolio	Customer	Business Unit	Contact Center
IT Sub-Portfolio	Customer Service	Business Unit Director	Mike Htatsios
IT Director	Lisa LeGault	Business Unit SME	Matt Klucevek
Managed by	MEP	Business Units Impacted	Electric

Project Description

Initiative Category	IT Enhancements	Initiative Type	Operational
---------------------	-----------------	-----------------	-------------

Business Opportunity	
What business problem are we trying to solve?	DTE's transactional Collections journey is not: 1. Instrumented to allow for statistical analysis and continuous improvement; 2. Collections order workflow and status driven to allow for clear expectations to be set with regard to next actions and timing for either customers and employees; 3. Have triggers at important statuses to provide customers with timely process information; 4. Actively managed to receive customer feedback and act upon said feedback; 5. Integrated with DTE's order tracking system; 6. Do not present customers with status via digital channels such as the web.
What system or process is being affected?	SAP Customer Relationship and Billing (CR&B - ISU and CRM), Collection Processes, Digital (Web and Mobile), Backoffice team
What functionality or capability is being provided?	Present Customers program details through Web via Digital channels & Backoffice Collection communication process to be enhanced by developing new communications
What is the customer or employee value?	Increase in Customer Satisfaction and Increased Net Promoter Score
What alternatives have been considered?	No Alternatives are being considered at this time

Key Objectives	
1)	Present Customers program details through Web via Digital channels- Details of the specific plan can be seen via the respective Web Pages
2)	Develop workflow in SAP and status driven automation to allow for clear expectations to be set with regard to next actions and timing for either customers Develop communication (email, SMS, etc.) triggers in SAP at important statuses to provide customers with timely process information through digital communication methods
3)	
4)	Instrument Collections transaction in SAP (through I/R, BPEM, triggers, etc.) to allow for statistical analysis and continuous improvement
5)	Backoffice Collection communication process to be enhanced by developing new communications
6)	
7)	
8)	
9)	
10)	

Start Month	January	2022
Duration to Complete	Years	5 Months
End Month	June	2022

Funding Source	ITS
----------------	-----

IT Financial Impact						
	Year 1	Year 2	Year 3	Year 4	Year 5	Total amount is sent for approval on all business cases.
						Total
Capital	\$864,026	\$0	\$0	\$0	\$0	\$860,000
O&M	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$864,026	\$0	\$0	\$0	\$0	\$860,000

Business Unit Costs						
BU O&M	\$0			Trailing BU O&M Costs		\$0
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$0	\$0	\$0	\$0	\$0

Executive Summary

Business Case Number	Business Case Name
DMND0001254	Customer Closed Loop Development

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Michael J Hatsios
Portfolio Manager	Business Unit SME
Lisa A LeGault	Matthew J Klucevek
Managed By	PPS
MEP	4.2

Project Description

Investment Type	Initiative Type
Strategic	Operational

What business problem or opportunity are we trying to solve?

We are improving our transactional performance (Customer Satisfaction, First Contact Resolution, Call volume) through enhanced closed loop processes to build functionality and communications in "Moments that Matter." Moments that matter are when we need complete an order or request from the customer. For instance, a customer wants to sign up for a payment plan. We will get the required information from them and enroll them. The moment that matters is when the Company successfully signs them up on the payment plan. To close the loop, we send the customer a message confirming their enrollment.

What functionality or capability is being provided?

Customer Service will be provided new and enhanced customer communication within the billing and payments transactions that will guide customers through a successful interaction

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

This investment aligns with the Company's Transactional Excellence priority - creating distinctive transactional experiences across customer experiences

Define the Benefit/Value to the Organization, Customer, Employee.

The benefit to the organization is a fully informed customer that has a clear understanding of where they are at with their transaction. This will result in fewer calls for the organization and higher customer satisfaction for the customer. The customer will have a full visibility into their transactions and will not need to contact us for further information



How will you monitor and measure expected value?

Expected value will be measured by in improvement with the customer interaction, as measured by:

Transaction Satisfaction (TSAT) increase

First Contact Resolution (FCR) increase

What alternatives have been considered?

The alternative to this project is to utilize our current product team enhancement model to build our closed loop communications. This solution would be slower to implement, and would take away other product defect remediation's and improvements

Start Date	End Date	Shared Asset	Funding Source
2023-01-02	2023-12-01	Yes	IT

IT Costs

Type	FY23	Total
Capex	\$1,523,908	\$1,523,908
Opex	\$247,229	\$247,229
Total	\$1,771,137	\$1,771,137

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0

Executive Summary

Business Case Number	Business Case Name
DMND0001262	Customer Service Communication

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Jacqueline L Robinson
Portfolio Manager	Business Unit SME
Lisa A LeGault	Alicia A Ramirez
Managed By	PPS
MEP	5.7

Project Description

Investment Type	Initiative Type
Strategic	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

On any given day (assuming no significant outages) the Company sends out on average 165,000 notifications to customers. During large storm events, this number increases significantly and generally exceeds 1,000,000 per day, so on an annual basis, the Company sends out about 60,000,000 customer notifications. Despite the high volume of notifications, the Company sends, the current communication platform for notifications struggles to consistently send customer notifications in a timely manner and cannot easily scale up to the volume of notifications to be sent. There is also no reliable record of the content of these notifications and if the customer received the notification.

Under storm conditions when all our customer and communication systems are put to the test and must perform during peak times, the current notification platform cannot be relied upon to deliver the volume of customer notifications.

As we make improvements to the quality (e.g., restoration estimate accuracy, timeliness, clarity) of our customer outage status notifications as part of the EFC Outage Status project, we need a communication platform that can deliver this information. The quantity of notifications will also grow as we expect to communicate more frequently with our customers by providing updates at multiple stages of the customer's restoration process when they would want to receive updated information about the status of their restoration (in moments-that-matter).

What functionality or capability is being provided?

Utilizing the EFC project as the first phase of implementing a more robust notifications platform.

Notifications - Ability to catalog, store and customize customer notifications with delivery confirmation. Visibility by all channels to the notifications sent to and received by the customer.

Preference Center - that allows customers to provide their notifications and communication channel of choice by type of communication.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Improvement in the timeliness and relevance of the communications sent to the customer.

Higher productivity and efficiency in building and delivering communication.



Define the Benefit/Value to the Organization, Customer, Employee.

To transition to a solution that will utilize an auto-scaling communications platform (i.e., automatically increases capacity during peak demand periods) integrated with a robust, self-service preference management application. The communications platform will support email, SMS and voice call functionality. The preference center will allow customers to self-serve by selecting the types of communications they would like to be notified about, the channel(s) they would like to be notified in, and what times they would like to be notified.

How will you monitor and measure expected value?

Timeliness of notifications sent. Visibility of the content of notifications sent to the customers and ability to use information across all channels.
Engagement of the customer in the Preference Center.

What alternatives have been considered?

Customer Service notification preferences and communications can be inconsistently applied and sent. Do nothing is not an option given the importance of outage communications in support of the Error Free Communications initiative.

Start Date	End Date	Shared Asset	Funding Source
2022-11-01	2023-12-31	Yes	IT

IT Costs

Type	FY22	FY23	Total
Capex	\$1,000,000	\$2,355,000	\$3,355,000
Opex	\$250,000	\$675,000	\$925,000
Total	\$1,250,000	\$3,030,000	\$4,280,000

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$25,000
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0



Executive Summary

Business Case Number	Business Case Name
DMND0002730	Customer Service Communication- Phase 2

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Jacqueline L Robinson
Portfolio Manager	Business Unit SME
Lisa A LeGault	Joyce E Lepage
Managed By	PPS
IT	5.8

Project Description

Investment Type	Initiative Type
Strategic	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

During the EFC project, an interim notification platform was put into place. The immediate goal of the EFC project was to achieve consistent, accurate and timely communications to our customers during outage events and to deploy them prior to the 2021 storm season.

The existing notification platform, Nuance, was not considered for the EFC deployment because it was overdue for replacement and the work needed to implement the new notifications would have had to be completed by the vendor and they could not meet our timelines. Replacement of the platform was also not considered for the initial deployment as there was not adequate time for the due diligence necessary to choose a vendor/product. At the time, DTE did have an in production platform (SAP Marketing Cloud) that we decided to leverage as a stop-gap.

Our goal with the Customer Communication project is to provide the highest quality customer notification experience possible. In order to achieve this, we require a modern, elastic and highly performant foundational system that can manage the volumes of a catastrophic weather event and offer those features that are not available in our current systems that will allow us to further elevate the customer experience. Also, we must be able to quickly and efficiently be able to react to changes in what the optimal experience provides, without having to rely on the vendor to change existing messaging. Our current platforms do not meet these needs. The Customer Communication project began in parallel with the EFC implementation, when we began the process of identifying our replacement notification platform/vendor. A vendor was chosen in mid-2022 and an agreement finalized with the vendor and implementation partner by the end of that year. Work began early 2023 on the replacement solution, Message Broadcast.

We seek to optimize our customers' experience with notifications they receive from DTE. This will be achieved by modernizing our current solution by replacing it with an advanced, robust and performant platform which will improve reliability, speed and accuracy.

What functionality or capability is being provided?

In Phase 2- The Notification platform will provide the ability to create, customize, catalog and store customer notifications with delivery confirmation. Tools will be available to ensure the integrity of the customer contact data, quickly create Messages On Demand (MODs) by an assortment of methods, including list, Zip Code, Electrical device and geography. The capability for our customer to initiate contact with us via SMS will also be available. Our top 99% notifications campaigns by volume will be migrated from the legacy Nuance system to Message Broadcast. Preference Center - that allows customers to provide their notifications and communication channel of choice by type of communication.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Improvement in the timeliness and relevance of the communications sent to the customer.
Higher productivity and efficiency in building and delivering communication.



Define the Benefit/Value to the Organization, Customer, Employee.

Improvement in the timeliness and relevance of the communications sent to the customer.
Higher productivity and efficiency in building and delivering communication.
Define the Benefit/Value to the Organization, Customer, Employee
To transition to a solution that will utilize an auto-scaling communications platform (i.e., automatically increases capacity during peak demand periods). The communications platform will support email, two-way SMS and voice call functionality.

How will you monitor and measure expected value?

Timeliness of notifications sent. Visibility of the content of notifications sent to the customers and ability to use information across all channels.

What alternatives have been considered?

Do nothing is not an option given the importance of outage communications in support of the Error Free Communications initiative.

Start Date	End Date	Shared Asset	Funding Source
2024-01-08	2024-12-20	Yes	IT

IT Costs

Type	FY24	Total
Capex	\$2,000,908	\$2,000,908
Opex	\$320,000	\$320,000
Total	\$2,320,908	\$2,320,908

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0



Executive Summary

Business Case ID	BCD-CS-21-069	Business Case Name	Enhanced Training Environments
------------------	---------------	--------------------	--------------------------------

Stakeholders

IT Portfolio	Customer	Business Unit	Continuous Improvement
IT Sub-Portfolio	CIT	Business Unit Director	Michiel T Bates
IT Director	Lisa LeGault	Business Unit SME	Julie Maher
Managed by	MEP	Business Units Impacted	Electric

Project Description

Initiative Category	Strategic	Initiative Type	Infrastructure - Cloud
---------------------	-----------	-----------------	------------------------

Business Opportunity	
What business problem are we trying to solve?	Current Training environment does not enable customer service representatives the ability to be trained in a full capacity due to the current data in the training environment not able to be refreshed because of the inadequate size of the system. In addition, the training environment does not have the same interface functionality as the Production Systems which limits the type of training conducted with the customer service representatives.
What system or process is being affected?	SAP ISU & CRM Training Environments
What functionality or capability is being provided?	Enhanced the Infrastructure (Hardware/OS/Application) of the Training Environment provides superior training capabilities. Capability that allows Training team to mine data that can be used during training sessions.
What is the customer or employee value?	Enhanced Training Environment that can provide full training with data and Transactions necessary to equip the Customer Service representatives with the knowledge needed to do their Job.
What alternatives have been considered?	No Alternatives are being Considered. We are implementing a solution to create a same system as production for training purposes by enhancing the existing training environment.

Key Objectives	
1)	Planning, analysis, design and implementation of a training environment where customer service representatives have the ability to be trained in a full capacity due to the current data being aligned with the training and knowledge that customer representatives are required to possess
2)	Implement a new training environment for customer reps that reflects and mimics prod today in data and functionality. This solution will reduce the friction on our CRs for using out of date data.
3)	Supporting improved performance of customer representatives by driving the decrease of outdated data and training scenarios and increasing customer satisfaction by providing our customer reps with current data and scenarios
4)	Success for this initiative would be defined by a properly scaled training environment that mimics production and properly trained customer reps in process and data
5)	Functional training requirements attached
6)	150 -200 Users Concurrent Logging for training systems to access it at the same time
7)	PO in Scope for mocking/stubbing data
8)	Cost of changes to training environment due to Future enhancements to the code/application will be paid/implemented as part of the enhancement project and not in scope of this initiative
9)	
10)	

Start Month	September	2021
Duration to Complete	Years	11 Months
End Month	August	2022

Funding Source	ITS
----------------	-----

IT Financial Impact						Total amount is sent for approval on all business cases.
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$570,029	\$244,298	\$0	\$0	\$0	\$810,000
O&M	\$108,757	\$163,135	\$0	\$0	\$0	\$270,000
Total	\$678,786	\$407,433	\$0	\$0	\$0	\$1,080,000

Business Unit Costs						
BU O&M	\$0		Trailing BU O&M Costs		\$192,000	
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$0	\$0	\$0	\$0	\$0



Executive Summary

Business Case ID	BCD-CS-21-073	Business Case Name	MYR YR2 Error Free Data for Customer Communications
------------------	---------------	--------------------	---

Stakeholders

IT Portfolio	Customer	Business Unit	Self Service Channels
IT Sub-Portfolio	Customer Service	Business Unit Director	Siddharth Arigapudi
IT Director	Lisa LeGault	Business Unit SME	Alicia Ramirez
Managed by	IT	Business Units Impacted	Electric

Project Description

Initiative Category	IT Enhancements	Initiative Type	Solutions Delivery - Cloud
---------------------	-----------------	-----------------	----------------------------

Business Opportunity	
What business problem are we trying to solve?	Customer Journey Mapping and Feedback from various sources indicate customer frustration with unreliable information during their outage. Their frustration is related to inaccurate status of their meter condition (e.g. channels are reporting to them that they are restored when they are not) and unreliable estimates for when they can expect to be restored. This lack of accuracy is impacting our customers' trust in DTE during these high volume events.
What system or process is being affected?	1. Creation of new central data repository that aggregates key outage status that are AMI modified. 2. Creation of business logic on top of the Outage Data Repository to identify customer status 3. Creation of new customer status service layer to expose data for all endpoints consumption 4. Updated Outage Map experience 5. Updated Customer facing website and Mobile application 6. Updated IVR and CRM 7. Updated Customer Notifications
What functionality or capability is being provided?	The proposed solution provides the following functionality/capabilities: Creation of new central data repository that aggregates key outage status that are AMI modified, creation of business logic on top of the Outage Data Repository to identify customer status and creation of new customer status service layer to expose data for all endpoints consumption
What is the customer or employee value?	The proposed solution provides confidence every customer is accounted for, accurate data for outage communications, consistent data to all endpoints and accurate restoration times
What alternatives have been considered?	None. No alternatives are possible without significantly impacted the capital budget.

Key Objectives

- 1) Channels provide clarity to customers who do not have a reported outage
- 2) Voice of the Customer is refreshed to include feedback from Summer 2021 Storms

Michigan Public Service Commission
DTE Electric Company
Customer Service IT Business Cases- Executive Summaries

Executive Summary

Case No. U-21534
Exhibit: A-24
Schedule: N1.1
Witness: M. Hatsios
Page 106 of 139

- 3) Digital channels can consume "AMI Validated" outage status
- 4) Configurable user experience (feature toggles)
- 5) Single data source for each customer outage status (Yes/ No/Don't Know) to be available all-weather (not just storm)
- 6) Customer status and outage map API service layer created, deployed, and consumed by operations and customer systems
- 7)
- 8)
- 9)
- 10)

Start Month	October	2021
Duration to Complete	1 Years	2 Months
End Month	December	2022

Funding Source	ITS
----------------	-----

IT Financial Impact						Total amount is sent for approval on all business cases.
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$1,965,127	\$5,895,382	\$0	\$0	\$0	\$7,860,000
O&M	\$299,655	\$699,196	\$0	\$0	\$0	\$1,000,000
Total	\$2,264,782	\$6,594,578	\$0	\$0	\$0	\$8,860,000

Business Unit Costs						
BU O&M	\$0		Trailing BU O&M Costs		\$125,000	
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$187,200	\$0	\$0	\$0	\$187,200



Executive Summary

Business Case Number	Business Case Name
DMND0001695	Error Free Communication - Outage Status

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Jacqueline L Robinson
Portfolio Manager	Business Unit SME
Lisa A LeGault	Stacie L Guzy
Managed By	PPS
IT	4.5

Project Description

Investment Type	Initiative Type
Strategic	Solutions Delivery - On Prem

What business problem or opportunity are we trying to solve?

After the 2021 summer storm impacted DTE Customers, Customer Service team conducted a customer feedback session with affected customers. From the feedback it was clearly understood the key reason for customer frustration was NOT providing reliable information during their outage. Their frustration is related to inaccurate status of their meter condition (e.g., channels are reporting to them that they are restored when they are not) and unreliable estimates for when they can expect to be restored. This lack of accuracy is impacting our customers' trust in DTE during these high-volume events. Customers are not satisfied with their current outage communication experience across all channels. They want accurate, meaningful and timely restoration updates. In order to achieve our customer's needs, significant changes will be required across all our systems resulting in new architecture designs and information presentation. Our digital channels and proactive messaging systems will need to be updated and redesigned to meet our new and improved outage communication strategy that will meet our customer's needs.



What functionality or capability is being provided?

Ability to know the status of the outage when customer reports their outage and to identify if the earlier provided estimated time of restoration will not be met or restored earlier.

Ability to confirm the affected customer premise power outage has not only been restored but also has the correct power quality and communicate the restoration to the customers in a timely manner.

Ability to send and confirm delivery of notifications and measure timeliness and retrieve content.

New Outage Map allows customers to view their outage area and filter by zip and county, situation-based banners would help the customers aware of the outages of their premises and neighborhood; updated Outage Center and map statistics and provide a customer outage checklist.

Resolve defects in CRM and digital channels from ADMS implementation.

Police and Fire personnel can report downed power line, provide wire types and upload photos; expand to residential customers.

Enable re-designed native Outage Mobile App with new features and functionality.

After Feb 2023, June 2023, and July 2023 Storms, the EFC program learned and identified areas of improvement. The areas include:

- a) Estimation of the Outages so that the system generates reliable Outage estimates and communicates the same to the customer in a timely manner
- b) The system needs to be tuned to be resilient to handle the high amount of transactions per second during the initial stages of the storm
- c) Ensure consistency in providing Outage Counts, and statuses across self-service channels.
- d) Ensure the jobs and outages are closed in WISMO and PPS if the job closure from ADMS does not arrive at these systems.
- e) Resiliency of map and enable instrumentation: De-couple from CRM migrate functionality in WISMO.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

This project aligns with the Company's commitment to improve the customer's Outage experience and provide them with accurate and timely information about their restoration status throughout their outage experience, re-gaining their trust and eliminating any additional frustrations during a critical experience (power outage).

By providing more proactive notifications to the customer with accurate outage status information, this will reduce the cost of service for our customers by reducing calls to the Contact Center, thereby reducing O&M costs.

By maximizing the use of AMI to pro-actively report outages on behalf of the customer to eliminate the burden on the customer to report their outage, reducing calls to the Contact Center, thereby reducing O&M costs.

As with many of our key customer transactions, this project aligns with our top priorities to improve self-service options for our customers to interact in their channel of choice and to deliver the best experience on that channel.



Define the Benefit/Value to the Organization, Customer, Employee.

The proposed solution provides confidence every customer is accounted for, accurate data for outage communications, consistent data to all endpoints and accurate restoration times

Outage Digital Completion Rate

2022: 87%
2023: 92%
2024: 93%
2027: 95%

Outage Digital Engagement Rate

2022: 94%
2023: 96%
2024: 94%
2027: 95%

How will you monitor and measure expected value?

Real-time reporting has been developed to monitor all success metrics for outage web self-service and EFC performance metrics, which include

- Digital Completion Rate
- Digital Engagement Rate
- Power Restoration Accuracy & Timeliness
- Outage Notification Delivery
- First Estimate Accuracy

Additional monitoring has been established in our web-monitoring tool to measure and track the customer's experience.

What alternatives have been considered?

No alternatives considered.

Start Date	End Date	Shared Asset	Funding Source
2023-01-09	2024-12-31	No	IT



IT Costs

Type	FY23	FY24	Total
Capex	\$12,733,195	\$7,563,000	\$20,296,195
Opex	\$100,086	\$100,000	\$200,086
Total	\$12,833,281	\$7,663,000	\$20,496,281

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$25,000
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0



Executive Summary

Business Case ID	BCD-CS-22-050	Business Case Name	Field Service Management for RM&P (ClickSoft)
------------------	---------------	--------------------	---

Stakeholders

IT Portfolio	Customer	Business Unit	Revenue Mngmt & Protection
IT Sub-Portfolio	CIT	Business Unit Director	Tamara Johnson
IT Director	Lisa LeGault	Business Unit SME	Lisa R Spader
Managed by	MEP	Business Units Impacted	Electric

Project Description

Initiative Category	Strategic	Initiative Type	Solutions Delivery - Cloud
---------------------	-----------	-----------------	----------------------------

Business Opportunity

What business problem are we trying to solve?	The purpose of this project is to move all of Revenue Management & Protection's (RM&P) Collection and Theft field order scheduling and dispatching functions from its existing system, to a cloud-based solution (ClickSoft).
What system or process is being affected?	Revenue Management & Protection's (RM&P) Collection and Theft field order scheduling and dispatching functions will be moved from its existing application (Service Suite) to ClickSoft, a cloud-based solution. Existing interfaces and applications such as CR&B will also be affected.
What functionality or capability is being provided?	Remaining development, testing, implementation and warranty work for RM&P is scheduled to be completed by May 2022. Once all business units are converted to ClickSoft, the existing system will be eliminated with all of the Company's field work forces consolidated onto a single system, rather than the multiple systems currently employed.
What is the customer or employee value?	The ClickSoft solution will reduce system maintenance activities (daily and weekly manual maintenance) and improve system availability (greater flexibility, Optimizations and enhancements to reporting), while at the same time increase operational efficiencies in areas such as productivity and performance, crew visibility, safety, time management and mobility.
What alternatives have been considered?	The alternative to switching from ServiceSuite to ClickSoft would require an upgrade to ServiceSuite 9.7. Upgrading to this version of ServiceSuite would not provide a cloud-based option, nor would it align with the DTE roadmap strategy for field crews which suggests that all scheduling and dispatching functions move to ClickSoft.

Key Objectives

- 1) Provide functional enhancements to ClickSoft with regards to order creation, tracking and completion including: condition found, condition left and meter status updates to CR&B for the premise.
- 2) Provide the ability to attach, upload, send and store service order-related data and content utilizing Data Lake.
- 3) Provide visual map enhancements such as the ability to have an interactive map of Michigan and the ability to segregate various service areas.
- 4) Provide enhancements to reporting such as actual and average time to complete a job for each employee.
- 5)
- 6)
- 7)
- 8)
- 9)
- 10)

Start Month	January	2022
Duration to Complete	Years	4 Months
End Month	May	2022

Funding Source	ITS
----------------	-----

IT Financial Impact

						Total amount is sent for approval on all business cases.
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$1,597,815	\$0	\$0	\$0	\$0	\$1,600,000
O&M	\$54,799	\$0	\$0	\$0	\$0	\$50,000
Total	\$1,652,614	\$0	\$0	\$0	\$0	\$1,650,000

Business Unit Costs

BU O&M	\$39,000	Trailing BU O&M Costs	\$88,389
--------	----------	-----------------------	----------

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$156,000	\$0	\$0	\$0	\$0	\$156,000



Executive Summary

Business Case ID	BCD-CS-21-071	Business Case Name	Field Service Management FSM Billing
------------------	---------------	--------------------	--------------------------------------

Stakeholders

IT Portfolio	Customer	Business Unit	Billing and Metering
IT Sub-Portfolio	CIT	Business Unit Director	Jason E Sparks
IT Director	Lisa LeGault	Business Unit SME	Renee L Carpenter
Managed by	MEP	Business Units Impacted	Electric

Project Description

Initiative Category	Strategic	Initiative Type	Solutions Delivery - Cloud
---------------------	-----------	-----------------	----------------------------

Business Opportunity

What business problem are we trying to solve?	The purpose of this project is to move all of Billing's Meter Read field order scheduling and dispatching functions from its existing system, to a cloud-based solution (ClickSoft).
What system or process is being affected?	Meter Reading field order scheduling and dispatching functions will be moved from its existing application (Service Suite) to ClickSoft, a cloud based solution. Existing interfaces and applications such as CR&B will also be affected.
What functionality or capability is being provided?	ClickSoft project kick-off for Billing and Metering is scheduled to begin in August 2021, with implementation in March 2022. Once all business units are converted to ClickSoft, the existing system will be eliminated with all of the Company's field work forces consolidated onto a single system, rather than the multiple systems currently employed.
What is the customer or employee value?	The ClickSoft solution will reduce system maintenance activities (daily and weekly manual maintenance) and improve system availability (greater flexibility, and enhancements to reporting), while at the same time increase operational efficiencies in areas such as productivity and performance, crew visibility, safety, time management and mobility.
What alternatives have been considered?	The alternative to switching from ServiceSuite to ClickSoft would require an upgrade to ServiceSuite 9.7. Upgrading to this version of ServiceSuite would not provide a cloud-based option, nor would it align with the DTE roadmap strategy for field crews which suggests that all scheduling and dispatching functions move to ClickSoft.

Key Objectives

- 1) ClickSoft needs to provide functionality similar to current functionality in ServiceSuite. Please refer to Requirements documentation for details.
- 2) ClickSoft needs to provide new functionality currently not offered in ServiceSuite including, but not limited to:
- 3) Add fields to collect Module Number & Type Meter Series (TMS) for gas meters.
- 4) Need all 8 digits of Electric meters to flow from CR&B to ClickSoft
- 5) Add a field to capture "Condition Code Found", with a value of: "Different Module Here". This condition code will need to produce a BPEN in CR&B.
- 6) Ability to quickly and easily identify anywhere in the dispatching system if an account is deemed violent
- 7) Ability to take pictures, upload to a service order in Click, and send pictures that are attached to a service order to a separate repository.
- 8) Ability to generate reports.
- 9) Refer to Requirements and Device/Equipment requirements documentation for details.
- 10) Once all business units are converted to ClickSoft, the existing system will be eliminated with all of the Company's field work forces consolidated onto a single system, rather than the multiple systems currently employed.

Start Month	September	2021
Duration to Complete	Years	7 Months
End Month	April	2022

Funding Source	ITS
----------------	-----

IT Financial Impact

						Total amount is sent for approval on all business cases.
	\$ 325,000	\$ 1,675,000				
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	~~\$320,295~~	~~\$1,681,546~~	\$0	\$0	\$0	\$2,000,000
O&M	~~\$14,433~~	~~\$129,895~~	\$0	\$0	\$0	\$140,000
Total	~~\$334,728~~	~~\$1,811,441~~	\$0	\$0	\$0	\$2,140,000
	\$ 14,000	\$ 126,000				
Total	\$ 339,000	\$ 1,801,000				

Business Unit Costs

BU O&M	\$39,000	Trailing BU O&M Costs	\$39,118
--------	----------	-----------------------	----------

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$29,000	\$109,150	\$0	\$0	\$0	\$138,150

DTE Electric Company
 Customer Service IT Business Cases- Executive Summaries

Executive Summary

Business Case ID	BCD-CS-22-045
------------------	---------------

Business Case Name	IVR Virtual Assistants
--------------------	------------------------

Stakeholders

IT Portfolio	Customer
IT Sub-Portfolio	CIT
IT Director	Lisa LeGault
Managed by	MEP

Business Unit	Self Service Channels
Business Unit Director	Siddharth Arigapudi
Business Unit SME	Michael D Marchetti
Business Units Impacted	Electric

Project Description

Initiative Category	Strategic
---------------------	-----------

Initiative Type	Operational
-----------------	-------------

Business Opportunity	
What business problem are we trying to solve?	In order to contain more incoming customer calls without engaging Contact Center Representatives, opportunities for self-service in the Phone Experience (Interactive Voice Response [IVR] and Virtual Assistant [VA]) must be expanded. Currently, there are no IVR self-service options for: • Move-In, Move-Out [MIMO] Start service (existing customers/new customers) The below four business problems will be addressed once funding becomes available in 2022: • MIMO Transfer Service • Saving or utilizing a Saved a Payment Method (outside of the Promise-to-Pay Virtual Assistant) to pay now, make a Pre-Pay Payment, or to schedule a future dated payment • Customers can Report Outages and Check Statuses in the IVR, but it is the lowest-performing self-service transaction with many customers calling back. There is an opportunity to implement new intelligent self-service by creating a human-like conversation, which will contain more calls within the channel and reduce the frequency of calls. • Additionally, the MIMO Stop Service, High-Bill Inquiry, Promise-to-Pay Virtual Assistants implemented in 2020 and 2021, will need enhancements that may be larger scale that cannot be handled through sustainment. Those enhancements would be handled through this business case as well.
What system or process is being affected?	Below are the Systems and Processes being affected 1. The Phone Experience (the Interactive Voice Response [IVR] system and existing Virtual Assistants) • Move-In Move Out (MIMO) Transactions: -MIMO Start transaction 2. CRM/Back-end systems 3. API 4. Telephony systems (Dynamic Route Manager - assisted by SwampFox [vendor that maintains services])
What functionality or capability is being provided?	The following functionality will be provided by implementing this project: • New Self-Service Functions that will be Virtual Assistants accessible from the IVR are: -Move-In Move Out_Start
What is the customer or employee value?	Move-In, Move-Out Start is expected to save between 30-40K calls annually from being transferred to the Call Center, capturing additional call savings for customers looking to Stop and Start service in a single call. This will eliminate wait times for customers.
What alternatives have been considered?	No alternatives considered

Key Objectives			Case No. U-21534
1) Build MIMO Start Virtual Assistant Michigan Public Service Commission DTE Electric Company Customer Service IT Business Case Executive Summary 2) The below 4 features will be addressed once funding becomes available in 2022: • MIMO Transfer Service • MIMO Transfer Service • MIMO Transfer Service • MIMO Transfer Service			Executive Summary
3) Customers can Report Outages and Check Statuses in the IVR, but it is the lowest-performing self-service transaction with many customers calling back. There is an opportunity to implement new intelligent self-service 4) Additionally, the MIMO Stop Service, High-Bill Inquiry, Promise-to-Pay Virtual Assistants implemented in 2020 and 2021, will need enhancements that may be larger scale that cannot be handled through sustainm			Witness: M. Hatsios
5) 6) 7) 8) 9) 10)			Schedule: N1.1

Start Month	January	2022
Duration to Complete	Years	5 Months
End Month	June	2022

Funding Source	ITS
----------------	-----

IT Financial Impact						
						Total amount is sent for approval on all business cases.
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$1,262,014	\$0	\$0	\$0	\$0	\$1,260,000
O&M	\$317,128	\$0	\$0	\$0	\$0	\$320,000
Total	\$1,579,142	\$0	\$0	\$0	\$0	\$1,580,000

Business Unit Costs						
BU O&M	\$0		Trailing BU O&M Costs		\$50,000	
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$0	\$0	\$0	\$0	\$0



Executive Summary

Business Case ID	BCD-CS-22-042	Business Case Name	Journey Work Product Transformation Teams
------------------	---------------	--------------------	---

Stakeholders

IT Portfolio	Customer	Business Unit	Self Service Channels
IT Sub-Portfolio	Customer Service	Business Unit Director	Siddharth Arigapudi
IT Director	Lisa LeGault	Business Unit SME	Alicia Ramirez
Managed by	IT	Business Units Impacted	Electric

Project Description

Initiative Category	Strategic	Initiative Type	Solutions Delivery - Cloud
---------------------	-----------	-----------------	----------------------------

Business Opportunity	
What business problem are we trying to solve?	Business Problem: The current state DTE digital technology platform does not deliver the standard best-in-class digital experience. The experience is fragmented because of aged technology, causing low customer satisfaction scores due to their unmet digital expectations. In addition, the lack of personalized online interaction too often causes the inability to start or complete transactions in the customer's channel of choice. The current DTE digital technology platform will not meet customer's need without a modernized web experience. 
What system or process is being affected?	Systems Affected: dteenergy.com and corresponding subdomains of our customer web channel.
What functionality or capability is being provided?	Functionality: Improve simplicity of MIMO (Move in Move Out) transactions in digital channels, and add more personalization relevant to individual customers. Improve Billing/Usage transactions to also add simplicity, convenience and personalization to the current experience. Improve Outage Transactions user experience by making accurate, timely data available during outage events (86% of customers interact with DTE here.) Migrate Contact Center calls for customer Collections transaction to the enhanced self-service channels - a new feature not currently available. Add Core Support: Additional capacity for backend services and core (ESB, PO, CRMB, ISU, etc) updates required to enable these capabilities in channels.
What is the customer or employee value?	Continued improvement of the MIMO digital experience on web, increasing customer completion rates. Reduce customer's billing inquiries by using self-service interactions (currently, 75% of customers use digital channels for billing services). Keep customers safe with newly added information during outage events, and allow them to easily report & track outages using the modified self-service channels. Increase customer satisfaction through self-served Collection Transactions that are not available today.
What alternatives have been considered?	Considered switching to an off-the-shelf web solution for personalized interactions instead of implementing custom-built BeSpoke web experiences

Key Objectives

- 1) MIMO (Move in Move Out) Transaction- Improve simplicity of the transaction in our digital channels and add personalization that is relevant to each individual customer.
- 2) Billing/Usage Transaction- Approximately 75% of our customers interact for these services through digital channels. Improving these transactions will add simplicity.
- 3) Outage Transaction- Improve data availability within the channel, keeping customer safe through information, and the ability for them to report outages accurately.
- 4) Collections Transaction- Allow customers to perform self-service Collections Transactions; thereby, reducing Contact Center telephone calls.
- 5)
- 6)
- 7)
- 8)
- 9)
- 10)

Start Month	January	2022
Duration to Complete	Years	11 Months
End Month	December	2022

Funding Source	ITS
----------------	-----

IT Financial Impact

						Total amount is sent for approval on all business cases.
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$6,333,512	\$0	\$0	\$0	\$0	\$6,330,000
O&M	\$765,878	\$0	\$0	\$0	\$0	\$770,000
Total	\$7,099,390	\$0	\$0	\$0	\$0	\$7,100,000

Business Unit Costs

BU O&M	\$0	Trailing BU O&M Costs	\$500,000
--------	-----	-----------------------	-----------

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$0	\$0	\$0	\$0	\$0

Executive Summary

Business Case Number	Business Case Name
DMND0001267	MIGP Data and Reporting

Stakeholders

Portfolio Category	Business Unit
Customer	Renewable Operations
Portfolio	Business Unit Director
Customer Service	Knox W Cameron
Portfolio Manager	Business Unit SME
Lisa A LeGault	Michael Rivet
Managed By	PPS
MEP	3.1

Project Description

Investment Type	Initiative Type
Strategic	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

To provide an end-to-end solution for Renewables Data analytics and Dashboarding that incorporates all MIGreenPower data, including goals and data from multiple source systems. Due to the volume of customer data and billing, the current system of using SAP Business Warehouse reporting is no longer feasible.

What functionality or capability is being provided?

Include the following data within the analytics tool:
Customer billing data. Customer enrollment data. Goals and metrics. Park generation data. Contents of customer SAP table entries. Marketing Data. Customer inquiries and complaints

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

This project is necessary to have accurate and timely information to execute our business unit goals and objectives.

Define the Benefit/Value to the Organization, Customer, Employee.

This solution which will allow the Company to efficiently track and manage MIGP and private solar enrollments, usage data, revenue, and more. The current dashboard and reports rely on a manual process of exporting reports from the source system, analyzing the results, and then importing files to view in a dashboard. A more accurate and efficient solution would allow a new dashboard to be updated directly from the source system without manual intervention, and in real-time. In addition, the existing process is becoming un-sustainable as the number of MIGP enrollments continues to grow. The upward trend in the volume of data points being processed is contributing to further slowdowns in processing time.

How will you monitor and measure expected value?

DTE will monitor accuracy in enrollments, billing, and SAP functionality using the analytics and dashboarding tool.

What alternatives have been considered?

Do nothing.
Continue to use the existing SAP BW manual process which will lead to untimely data.



Start Date	End Date	Shared Asset	Funding Source
2023-01-02	2023-12-01	No	IT

IT Costs

Type	FY23	Total
Capex	\$796,036	\$796,036
Opex	\$90,000	\$90,000
Total	\$886,036	\$886,036

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost	Annual	\$10,000
Digital EXP Design Cost Est		\$0
Maintenance/Renewals	Annual	\$125,000
Organizational Change Management		\$19,413
Vendor Support & Licensing	Annual	\$26,240

Executive Summary

Business Case Number	Business Case Name
DMND0002365	MIMO Web Self-Service

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Jacqueline L Robinson
Portfolio Manager	Business Unit SME
Lisa A LeGault	Mariam A Mohamed
Managed By	PPS
IT	5.8

Project Description

Investment Type	Initiative Type
Strategic	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

Continue re-design of the MIMO (Move-in/Move-out) Web experience and complete the transition of MIMO to a cloud-based solution to provide customers a more robust and improved Web experience to submit orders to start, stop and transfer service as well as modify and check status for existing orders. MIMO is one of our most complex transactions, which interfaces with several other processes and systems. The new Web experience builds upon the current experience to focus on reducing friction and failure points that result in customers being unable to reliably submit their MIMO order on the Web and develop new functionality to expand capabilities for customers to engage on the Web. With the current MIMO self-serve capabilities, only 32% of customers are interacting with a digital channel to submit MIMO orders in 2022. The MIMO Web self-service enhancements in 2023 and 2024 will move the Company towards its goal of a 56% MIMO DER by 2027, a 24% increase over the 2022 MIMO DER of 32%, and the projected long-term MIMO call volume of 430,000 a year. The higher DER and cumulative call volume reduction from 2023-2027 provides annualized savings of \$3.8 million in Contact Center O&M costs.

Opportunities include:

- (1) Reducing calls by driving engagement to our digital channel for MIMO and improving the MIMO DER from 32% to 56% by 2027.
- (2) Eliminating failure points resulting in customers failing to successfully submit a MIMO order on the Web, thereby, improving digital completion rates.
- (3) Improving the overall customer experience on the Web by streamlining connection points to other systems and processes enabled by the new cloud platform.

What functionality or capability is being provided?

By addressing failure points and completion issues, customers will be able to more reliably complete their MIMO transactions in the Web. Promoting the enhanced Web transaction to encourage customers to perform their transaction in the Web. The cloud migration will support a better overall Web experience and provide the opportunity to build additional functionality or engaging user interaction features.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).



Improving self-service options for our customers. Improving customer experience and as a result, improving transaction satisfaction. Improve customer affordability by reducing call volume and hence, Contact Center O&M costs.

Define the Benefit/Value to the Organization, Customer, Employee.

By addressing failure points and completion issues, customers will be able to more reliably complete their MIMO transactions in the Web. Promoting the enhanced Web transaction to encourage customers to perform their transaction in the Web. The cloud migration will support a better overall Web experience and provide the opportunity to build additional functionality or engaging user interaction features. The 2023 and 2024 MIMO Web Self-Service project will provide cumulative call volume reduction from 2023-2026 of 338,000 calls providing annualized savings of \$3.8 million in Contact Center O&M costs.

How will you monitor and measure expected value?

Improvements in these metrics: Self-Serve Completion Rate. Digital Engagement Rate. Transaction Satisfaction. Call Volume. O&M Savings. Countermeasures will be created if the expected performance of these metrics and the call volume reductions are not being met.

What alternatives have been considered?

Maintaining the web transactions on the existing platform and not migrate them to the cloud. Minor improvement if any in completion rates, digital engagement rates, and call deflection opportunity. Limited or less-desirable (does not meet customer's needs) options for customers to interact in their channel of choice.

Start Date	End Date	Shared Asset	Funding Source
2023-01-02	2024-12-31	Yes	IT

IT Costs

Type	FY23	FY24	Total
Capex	\$5,100,000	\$3,500,000	\$8,600,000
Opex	\$636,000	\$601,000	\$1,237,000
Total	\$5,736,000	\$4,101,000	\$9,837,000

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0

Executive Summary

Business Case Number	Business Case Name
DMND0002721	MIMO Web Self-Service

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Jacqueline L Robinson
Portfolio Manager	Business Unit SME
Lisa A LeGault	Mariam A Mohamed
Managed By	PPS
IT	5.05

Project Description

Investment Type	Initiative Type
Strategic	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

The MIMO Web solution will be led by a product owner who will use tools to examine the digital transaction and detect defects that lower completion rates. The focus for the 2025 investment will be to continue to enhance the MIMO Web and VA solutions, with the goal of expanding the number of MIMO scenarios that can be handled in a digital solution, and eliminating defects and cumbersome process flows that are preventing customers from completing their digital transaction.

MIMO opportunities include:

- (1) Reducing calls by driving engagement in our digital channels for completing MIMO transactions
- (2) Eliminating failure points that results in customers failing to successfully submit a MIMO order on the Web or IVR, thereby, improving digital completion rates.
- (3) Improving the MIMO customer experience on the Web by streamlining connection points to other systems and processes enabled by the new cloud platform, and adding MIMO for business customers.

What functionality or capability is being provided?

By addressing failure points and completion issues, customers will be able to more reliably complete their MIMO transactions in the Web. Promoting the enhanced Web transaction to encourage customers to perform their MIMO transaction in the Web. The cloud migration will support a better overall Web experience and provide the opportunity to build additional functionality or engaging user interaction features.

New functionality for business customers will be determined per gathering their inputs and will also be determined by examining completion and engagement rates, analyzing call volumes to the Contact Center, and benchmarking. We intend to communicate and promote the availability of new Web features and encourage customers to perform their MIMO transactions in the Web and all digital channels vs calling the Contact Center.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Enabling more self-service options for our customers. Improving customer experience and as a result, improving transaction satisfaction. Improve customer affordability by reducing call volume and hence, Contact Center O&M costs.



Define the Benefit/Value to the Organization, Customer, Employee.

By addressing failure points and completion issues, customers will be able to more reliably complete their MIMO transactions in the Web. Promoting the enhanced Web transaction to encourage customers to perform their transaction in the Web. The cloud migration will support a better overall Web experience and provide the opportunity to build additional functionality or engaging user interaction features. By building self-service solutions that enable high completion rates with adding business customers, the MIMO self-service investment is expected to increase to overall MIMO DER of 60% and enable the Company to reach its projected long-term MIMO call volume of ~430,000 a year.

How will you monitor and measure expected value?

Improvements in the following metrics will be tracked: Self-Serve Completion Rate. Digital Engagement Rate. Transaction Satisfaction. Call Volume. Contact Center O&M Savings. Countermeasures will be created if the expected performance of these metrics and the call volume reductions are not being met.

What alternatives have been considered?

Maintaining the Web transactions on the existing platform and not migrating them to the cloud. Minor improvement if any in completion rates, digital engagement rates, and call deflection opportunity. Limited or less-desirable (does not meet customer's needs) options for customers to interact in their channel of choice.

Start Date	End Date	Shared Asset	Funding Source
2025-01-06	2025-12-19	Yes	IT

IT Costs

Type	FY25	Total
Capex	\$2,501,698	\$2,501,698
Opex	\$250,000	\$250,000
Total	\$2,751,698	\$2,751,698

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0

Executive Summary

Business Case Number	Business Case Name
DMND0002369	Payment Web Self-Service

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Jacqueline L Robinson
Portfolio Manager	Business Unit SME
Lisa A LeGault	Mariam A Mohamed
Managed By	PPS
IT	4.1

Project Description

Investment Type	Initiative Type
Strategic	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

Payments make up the largest volume of Customer Services' five key transactions. While 82% of payments are processed using one of our digital channels (i.e., Web, IVR, Kiosk, Auto-Pay), ~60% of these transactions are either setup or submitted using the Web. The Payment Web Self-Service project will re-visit the Payment Web experience to address the pain points and friction preventing customers from successfully completing their payment transaction. The 2023 and 2024 work will enable the Company to reach its projected long-term Payment call volume of 215,000 a year by 2027. The higher DER and cumulative call volume reduction from 2023-2027 provides annualized savings of \$4.1 million in Contact Center O&M costs.

Improving Payment self-serve completion rates on the Web. Enhancing the customer's overall experience on the Web. Increasing efficiency by integrating the payment functionality across other Web transactions such as for the Collections and MIMO transactions. By improving self-serve in the Web, this provides the Company an opportunity to better serve customers and to reduce calls by driving engagement to our digital channel for Payment transactions and improving the Payment DER to 85% by 2027.

What functionality or capability is being provided?

Customers will have an improved experience processing their payments on the Web. The cloud migration will support a better overall Web experience and provide the opportunity to build additional functionality or engaging user interaction features.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Improving customer experience and as a result, improving transaction satisfaction. Improve customer affordability by reducing call volume and hence, Contact Center O&M costs.



Define the Benefit/Value to the Organization, Customer, Employee.

Customers will have an improved experience processing their payments on the Web. The cloud migration will support a better overall Web experience and provide the opportunity to build additional functionality or engaging user interaction features. We intend to communicate and promote the availability of new Web features and encourage customers to try again to perform their Payment transactions in the Web. The 2023 and 2024 Web Self-Service project will enable the Company to reach its projected long-term Payment call volume of 215,000 a year. The cumulative call volume reduction from 2023-2027 provides annualized savings of \$4.1 million in Contact Center O&M costs.

How will you monitor and measure expected value?

Improvements in these metrics: Self-Serve Completion Rate. Digital Engagement Rate. Transaction Satisfaction. Call Volume. O&M Savings. Countermeasures will be created if the expected performance of these metrics and the call volume reductions are not being met.

What alternatives have been considered?

Maintaining the web transactions on the existing platform and not migrate them to the cloud. Minor improvement if any in completion rates, digital engagement rates, and call deflection opportunity. Limited or less-desirable (does not meet customer's needs) options for customers to interact in their channel of choice.

Start Date	End Date	Shared Asset	Funding Source
2023-01-02	2024-12-31	Yes	IT

IT Costs

Type	FY23	FY24	Total
Capex	\$888,000	\$1,000,000	\$1,888,000
Opex	\$105,000	\$197,000	\$302,000
Total	\$993,000	\$1,197,000	\$2,190,000

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0

Executive Summary

Business Case Number	Business Case Name
DMND0002724	Payment Web Self-Service

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Jacqueline L Robinson
Portfolio Manager	Business Unit SME
Lisa A LeGault	Mariam A Mohamed
Managed By	PPS
IT	3.7

Project Description

Investment Type	Initiative Type
Strategic	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

While call volume has decreased in recent years, we must continue our journey to achieve our aspiration of first quartile performance. The self-service transactions represent both our greatest opportunities for call deflection and needed enhancements in customer's digital experience. Our plan consists of enhancing functionality, improving the digital experience, and implementing process improvements that address call waste. Delivering excellent self-service transactions for our customers will reduce call volume, increase digital engagement, and improve digital completion rate. Our targets for 2027 are 2.7 million calls, 75% overall digital engagement rate, and 87% overall digital completion rate. The Payment transaction will enhance the functionality of the Web and enhance customer communication. The Web Payment Center was originally designed as a stand-alone application, however, over the years, its purpose has grown into various use cases across different transactions (e.g., paying a past due while starting service, making a payment to restore service), which has created friction when implementing these features and integrating with the payment center as it is designed today. The Payment Center needs to be redesigned to integrate with other transactions more effectively. This project will move the payment transaction to the cloud, a more resilient technology platform. Opportunities to improve the experience and deflect calls include improvements to: The digital process for updating saved payment methods, online tools for locating payment locations, and messaging and edge case scenarios for processing payments (e.g., disconnected customers, cash-only customers). This 2025 project provides continued investment in self-service solutions for the Payment transaction in support of the Company's goal to reach top-quartile handled call volume by 2027, and projected long-term Payment call volume of ~215,000 calls. We will continue to refine the functionality in the web to achieve our Payment digital engagement target of 85% and the Payment digital completion rate of 83%. This will result in an overall call volume reduction for the payment transaction.

What functionality or capability is being provided?

Customers will have an improved experience processing their payments on the Web. Re-visiting the cloud platform on which the current Web Payment transactions resides and incorporating and streamlining payment components across the other Web transactions.

Functionality or Capability to be added include integration with other transactions such as Collections and Billing, and making improvements to the digital process for updating saved payment methods, online tools for locating payment locations, and messaging and edge case scenarios for processing payments (e.g., disconnected customers, cash-only customers).

Customers will have an improved experience processing their payments on the Web. The cloud migration will support a better overall Web experience and provide the opportunity to build additional functionality or engaging user interaction features. New functionality will also be determined by examining completion and engagement rates, analyzing call volumes to the Contact Center, and benchmarking. We intend to communicate and promote the availability of new Web features and encourage customers to perform their Payment transactions in the Web and all digital channels vs calling the Contact Center.

Additionally, the Web product team will continue to monitor the resiliency of the technologies and customer platforms, and implement the appropriate technical upgrades that are necessary to ensure customers will be able to complete their transactions on the Web.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Enabling more self-service options for our customers. Improving customer experience and as a result, improving transaction satisfaction. Improve customer affordability by reducing call volume and hence, Contact Center O&M costs.

Define the Benefit/Value to the Organization, Customer, Employee.

Customers will have an improved experience processing their payments on the Web. We intend to communicate and promote the availability of new Web features and encourage customers to try again to perform their Payment transactions in the Web.

By building self-service solutions that enable high completion rates, the Payment self-service investment is expected to increase overall Payment DER to 85% and enable the Company to reach its projected long-term Payment call volume of ~215,000 a year.

How will you monitor and measure expected value?

Improvements in the following metrics will be tracked: Self-Serve Completion Rate. Digital Engagement Rate. Transaction Satisfaction. Call Volume. Contact Center O&M Savings. Countermeasures will be created if the expected performance of these metrics and the call volume reductions are not being met.

What alternatives have been considered?

By doing nothing, we would expect minor improvement if any in completion rates, digital engagement rates, and call deflection opportunity. Limited or less-desirable (does not meet customer's needs) options for customers to interact in their channel of choice.

Start Date	End Date	Shared Asset	Funding Source
2025-01-06	2025-12-19	Yes	IT



IT Costs

Type	FY25	Total
Capex	\$3,502,377	\$3,502,377
Opex	\$350,000	\$350,000
Total	\$3,852,377	\$3,852,377

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0



Executive Summary

Business Case ID	BCD-CS-22-043	Business Case Name	Platform integration - SAP integration business
------------------	---------------	--------------------	---

Stakeholders

IT Portfolio	Customer	Business Unit	Self Service Channels
IT Sub-Portfolio	CIT	Business Unit Director	Siddharth Arigapudi
IT Director	Lisa LeGault	Business Unit SME	Alicia Ramirez
Managed by	IT	Business Units Impacted	Electric

Project Description

Initiative Category	Strategic	Initiative Type	Solutions Delivery - On Prem
---------------------	-----------	-----------------	------------------------------

Business Opportunity	
What business problem are we trying to solve?	Currently for projects like Move In Move Out for Web, purpose built backend services in Process Orchestration are not available. Due to this, the initiative is using whatever is available in the backend and addressing the gap via new services. This is impacting the performance of the system and delaying the delivery of the project due to multiple redundant calls to Process Orchestration system.
What system or process is being affected?	System being effected are Web applications. These are being impacted by performance and timely delivery
What functionality or capability is being provided?	Purpose built web services in Process Orchestration rather than ad hoc / multiple calls from Azure. Instead of making adhoc calls from Azure and pulling available information and tweaking it to the needs of implementation this business case will build the capability to have web services created to solve straight forward purpose.
What is the customer or employee value?	Employee time and cost can both be reduced and efficiently utilized by developing appropriate backend services and directly accessing them.
What alternatives have been considered?	No alternative identified.

Key Objectives	
1)	Purpose built web service development for MIMO and UCX initiatives
2)	Web channel is in scope for utilizing the new services built
3)	
4)	
5)	
6)	
7)	
8)	
9)	
10)	

Start Month	January	2022
Duration to Complete	Years	11 Months
End Month	December	2022

Funding Source	ITS
----------------	-----

IT Financial Impact						
	Year 1	Year 2	Year 3	Year 4	Year 5	Total amount is sent for approval on all business cases.
						Total
Capital	\$2,349,467	\$0	\$0	\$0	\$0	\$2,350,000
O&M	\$421,815	\$0	\$0	\$0	\$0	\$420,000
Total	\$2,771,282	\$0	\$0	\$0	\$0	\$2,770,000

Business Unit Costs						
BU O&M	\$0			Trailing BU O&M Costs		\$0
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$0	\$0	\$0	\$0	\$0



Executive Summary

Business Case ID	BCD-CS-21-070	Business Case Name	Qualtrics Expansion
------------------	---------------	--------------------	---------------------

Stakeholders

IT Portfolio	Customer	Business Unit	Self Service Channels
IT Sub-Portfolio	CIT	Business Unit Director	Evette G Griffie
IT Director	Lisa LeGault	Business Unit SME	Evette G Griffie
Managed by	MEP	Business Units Impacted	Electric

Project Description

Initiative Category	Strategic	Initiative Type	Solutions Delivery - Cloud
---------------------	-----------	-----------------	----------------------------

Business Opportunity	
What business problem are we trying to solve?	Customer survey feedback is lagging by at least a day for our current collection methods. Because feedback is delayed, we are not able to address the customers issues in the moment. Also survey feedback is currently silo-ed and is only being delivered to the team most directly involved with gathering the feedback, we need to be able to disseminate feedback across the organization. This segmentation is further fragmented with the use of multiple vendors across all communication channels except for text message, for which we have limited collection measures. We seek a customer feedback solution that minimizes feedback lag time and finds synergies by collating feedback across all channels, possibility through the use of one vendor.
What system or process is being affected?	Survey Management Process is being Impacted including self service channels (Web and Mobile Intercepts) and the post customer representative interaction automated voice survey.
What functionality or capability is being provided?	The ability to receive customer feedback on the self-service channels (Web and Mobile) and then to provide customer feedback on interactions with specific DTE representatives.
What is the customer or employee value?	Shorter lag between feedback received and action taken. Customer issues raised in these feedback channels are routed to the appropriate teams to handle their issues as soon as the customer submits their feedback, there is no longer a delay impacting service recovery time. Employees may see feedback from all our channels in one platform and use the results to improve our net promotor score and customer satisfaction by making changes to processes based on feedback. Additionally supervisors can use feedback on specific representatives to recognize performance and potentially identify coaching opportunities.
What alternatives have been considered?	Continue with the current multiple vendors which provide our Web and Mobile Intercept surveys and post customer representative interaction automated voice survey. This means accepting the delay in customers raising issues and our ability to respond to them and continuing to manually compile reports from the three different customer feedback avenues; which is labor intensive and does not provide the monitoring in a timely manner.

Key Objectives	
1)	Get as close to real-time customer feedback as possible (Business expectation is 20 mins after the transaction has completed and survey to be completed)
2)	Create a service recovery mechanism for customers before transaction ends or they give up (Issue Management to send to Appropriate Groups and manage tickets to close the loop)
3)	Provide more access to survey data and dashboards throughout the company
4)	Administer and house all surveys on one platform (Analytics to be done on Qualtrics)
5)	Leverage text and speech analytics software (Clearbridge) to analyze survey feedback (verbatim, etc)
6)	Deliver surveys through multiple channels (Channel based Transaction Ex: Web, Mobile) based on customer preference and strategic fit.
7)	HPP transactional survey through Qualtrics (Create a Batch process or Data Flow to sync every 20 Minutes)
8)	Post call survey in call center (In moment to Qualtrics Migration)
9)	Digital intercepts for web/Mobileapp and IVR Surveys (Email survey after the call ends)
10)	Current Alteryx Infrastructure and user management needs to be ramped up to meet the real time 20 Minutes SLA survey demand.

Start Month	September	2021
Duration to Complete	Years	11 Months
End Month	August	2022

Funding Source	ITS
----------------	-----

IT Financial Impact						Total amount is sent for approval on all business cases.
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$228,732	\$279,562	\$0	\$0	\$0	\$510,000
O&M	\$85,801	\$343,203	\$0	\$0	\$0	\$430,000
Total	\$314,533	\$622,765	\$0	\$0	\$0	\$940,000

Business Unit Costs						
BU O&M	\$0		Trailing BU O&M Costs		\$381,400	
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$0	\$105,000	\$0	\$0	\$0	\$105,000

Executive Summary

Business Case Number	Business Case Name
DMND0001293	SIP in Call Center

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Lisa A LeGault
Portfolio Manager	Business Unit SME
Lisa A LeGault	Elizabeth A Lukacs
Managed By	PPS
MEP	2.1

Project Description

Investment Type	Initiative Type
Strategic	Solutions Delivery - On Prem

What business problem or opportunity are we trying to solve?

The existing public switched telephone network (PSTN) infrastructure is nearing end of life, expensive to operate, and difficult to maintain.

While the current Time Division Multiplexing (TDM) infrastructure is not officially end-of-life, the industry is moving to the new Session Initiation Protocol (SIP) standard and is working hard to move everyone. The current infrastructure costs more per phone minute to utilize and it requires a large amount of physical hardware to be installed on-premises, all of which are aging and expensive to triage issues, keep up to date, and receive replacement parts when needed. Fixing this system often requires someone to come onsite to investigate, a specialized part to be ordered and shipped, and another onsite resource to install and test.

The current infrastructure relies on physical, analog, systems that are hard to scale especially when scaling is only needed at certain times. The inability to scale means that the Contact Center can only support a fixed number of concurrent calls at any given time. If we exceed this limit, which can happen during very large storms, some customers are unable to reach us.

This infrastructure also does not allow for DTE-controlled geographic routing which is needed during both planned and unplanned outages to ensure routing happens through working systems.

Through all of these problems, the old system makes it harder for us to fix issues and provides less flexibility which costs more and can cause degradation to our customer's phone experience.

What functionality or capability is being provided?

The digitization of calls coming into our contact center providing for scalability, flexibility, and easier routing. This setup can provide the basis for future digital enhancements and integrations including multi-channel support.

This functionality/ capability is being provided to contact center supporting both DTE Electric and DTE Gas customers.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

Business Continuity - SIP trunking is more reliable and allows for quicker routing changes to remediate outages.

Resiliency - SIP allows us to dynamically scale the number of concurrent phone calls that can enter the Contact Center at one time.



Define the Benefit/Value to the Organization, Customer, Employee.

Operational Reliability with End of Life Assets - The current TDM infrastructure is being phased out across the industry and while it is still supported, it is becoming more difficult and expensive to maintain. SIP is easier and cheaper to support.

Cost Savings - SIP costs per minute are cheaper than TDM and SIP is also taxed less. This could provide up to a \$370k savings per year off our phone carrier costs.

Scalability and Improved Customer Experience- The contact center would be able to support any number of concurrent phone calls without blocking any customers even during very large storms.

Operational Reliability Less Down Time - The ability for DTE to route calls geographically would allow us to resolve potential geography-based issues faster.

How will you monitor and measure expected value?

Cost Savings will be monitored by measuring monthly usage costs and compared to the previous costs when using TDM. Operational Reliability will be calculated throughout the year to determine the improvements with a special focus during large storms. Operational Reliability will be monitoring total number of concurrent calls. Finally, during both planned and unplanned outages, geographic routing will be utilized and impacts on system outage totals will be compared.

What alternatives have been considered?

The alternative considered is not upgrading and keeping the PSTN lines which has resulted in severe call outages during storm days in the past and could again in the future. In addition, costs to support and maintain will only continue to rise until we are forced by the phone carriers to convert.

Start Date	End Date	Shared Asset	Funding Source
2022-10-01	2023-12-30	Yes	IT

IT Costs

Type	FY22	FY23	Total
Capex	\$200,000	\$1,487,593	\$1,687,593
Opex	\$0	\$393,180	\$393,180
Total	\$200,000	\$1,880,773	\$2,080,773

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0



Executive Summary

Business Case ID	BCD-CS-21-006	Business Case Name	Speech Analytics
------------------	---------------	--------------------	------------------

Stakeholders

IT Portfolio	Customer	Business Unit	Contact Center
IT Sub-Portfolio	Customer Service	Business Unit Director	Paolo Morra
IT Director	Lisa LeGault	Business Unit SME	Leena Khiani
Managed by	MEP	Business Units Impacted	Electric

Project Description

Initiative Category	Strategic	Initiative Type	Solutions Delivery - On Prem
---------------------	-----------	-----------------	------------------------------

Business Opportunity	
What business problem are we trying to solve?	Categorization of all the incoming calls to the contact center enables us to identify key call reason(s). Analyzing the patterns of incoming calls helps us to develop actionable insights to reduce call volume. Currently, calls are categorized by the CR through call wrap screen in SAP CRM. Approximately ~70% of the calls are categorized and it is manual process. The process is heavily dependent on CR compliance and their judgement of the call. In addition, call wrap screen seems to conflict with other projects e.g. Screen Pop. Speech analytics enhancement would enable us to categorize incoming calls automatically and would also help us to standarize the categorization process. The enhancement will help us to further deep dive into new categories and find new opportunities. The limitation of the speech analytics enhancement is that the sentiment analysis cannot be performed as audio files are stored only for 2 weeks.
What system or process is being affected?	SAP CR&B (ISU and CRM), WFO Avaya, Contact Center, Analytics Process.
What functionality or capability is being provided?	Speech analytics capabilities can be leveraged to identify and flag errors in the self service channels. These insights can be fed back to the Channel Managers as inputs to their root cause analysis and efforts to improve the individual channel containment rates.
What is the customer or employee value?	By preventing rapid growth in call volume, we are helping the CR to better manage their handling time and enhance customer experience.
What alternatives have been considered?	Current Alternatives are being considered but does not suffice the long term business needs to meet the Analytics needs.

Key Objectives

- 1) Accurately categorize incoming calls automatically to understand call drivers and help source countermeasures for call volume reduction
- 2) Improve Customer Experience by understanding the underlying issues related to call volume and develop actionable insights
- 3) Add the capability to incorporate vendor recordings into the speech analytics tool
- 4) Route all the call information and transcripts from DTE and vendor contact centers into a central database to ensure we keep an integrated record of all calls
- 5)
- 6)
- 7)
- 8)
- 9)
- 10)

Start Month	October	2021
Duration to Complete	Years	9 Months
End Month	July	2022

Funding Source	ITS
----------------	-----

IT Financial Impact

						Total amount is sent for approval on all business cases.
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Capital	\$296,476	\$659,898	\$0	\$0	\$0	\$960,000
O&M	\$139,018	\$104,874	\$0	\$0	\$0	\$240,000
Total	\$435,494	\$764,772	\$0	\$0	\$0	\$1,200,000

Business Unit Costs

BU O&M	\$133,000			Trailing BU O&M Costs		\$124,075
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OCM O&M	\$20,000	\$0	\$0	\$0	\$0	\$20,000

Executive Summary

Business Case Number	Business Case Name
DMND0001526	Workforce Automation for Contact Center

Stakeholders

Portfolio Category	Business Unit
Customer	Customer Service
Portfolio	Business Unit Director
Customer Service	Dawn M Hayes
Portfolio Manager	Business Unit SME
Lisa A LeGault	Elizabeth A Lukacs
Managed By	PPS
IT	3.9

Project Description

Investment Type	Initiative Type
Strategic	Solutions Delivery - Cloud

What business problem or opportunity are we trying to solve?

The management needs of the contact center change rapidly from one minute to the next. Call volumes can surge suddenly for various reasons. Being able to process and handle these changes quickly is critical to not wasting resources while providing a great customer experience. Today, the contact center uses a combination of out-of-the-box and custom reporting to monitor the large amounts of data produced. Through these reports, manual processes are in place to analyze and react to the changing needs. All of the manual processes leave room for efficiency improvements across staffing, documentation, adherence, call support and more.

What functionality or capability is being provided?

A cloud workforce automation software solution that can be configured by the business to automatically process and react to the changing contact center needs in real-time. This solution will connect to our Avaya telephony systems, which today are on-premises, to collect the information needed for real-time analysis. This functionality/ capability is being provided to Contact center supporting both DTE Electric and DTE Gas and their respective customers.

Describe alignment of project to Business Unit Goal(s) and Strategy(ies).

A workforce automation tool will support many of the business's goals including reducing shrinkage, lowering average handle time, improving adherence, providing better coaching, and generating efficiencies across the contact center management functions.

Define the Benefit/Value to the Organization, Customer, Employee.

A workforce automation tool would add operational efficiencies such as average handle time (AHT) and schedule adherence while also improving the utilization of available time and planned off-phone activities (shrinkage models). These workforce automations will monitor in real-time CR productive status and schedule adherence, and use this data to optimize off-phone activities and reduce "shrinkage" (i.e., non-productive time) by 2%, which is equivalent to the reduction of 16 full-time CRs (FTEs). In other words, workforce automation will allow for the attrition of an additional 16 CRs starting in 2024, which will provide an annualized O&M savings of \$560,000 by 2027.



How will you monitor and measure expected value?

Our key contact center metrics around average handle time, shrinkage, and task management have already been baselined. The baselines will be compared to the same metrics during and after first the pilot and then the full implementation of the automation tool. We expect small movements in our metrics during the pilot period based on which use cases we implement at the time. Full monthly value realization will start after the project is fully implemented.

What alternatives have been considered?

Other much more manual workforce optimization tools have been explored and utilized at various times. These include things like data analysis and forecasting via the current telephony tools we have in place, in-house-built Power Apps, and other Microsoft Office 365 applications to help drive call center efficiency. Improving the efficiency metrics that workforce automation supports is a continuous goal of the contact center and most projects target one or more of them. Doing nothing would result in our metrics remaining static or potentially getting worse.

Start Date	End Date	Shared Asset	Funding Source
2022-09-26	2023-06-30	Yes	IT

IT Costs

Type	FY22	FY23	Total
Capex	\$1,221,522	\$89,791	\$1,311,313
Opex	\$139,961	\$64,722	\$204,683
Total	\$1,361,483	\$154,513	\$1,515,996

BU Costs

Category	Term of Contract	BU O&M Cost
Business Unit		\$0
Cloud Usage Cost		\$0
Digital EXP Design Cost Est		\$0
Maintenance/Renewals		\$0
Organizational Change Management		\$0
Vendor Support & Licensing		\$0

Michigan Public Service Commission
DTE Electric Company
2022 Historical Spend Variance Recovery
Information Technology

Case No.: U-21534
Exhibit: A-24
Schedule: N2
Witness: P. Sharma, M. Hatsios
Page: 1 of 1

(\$000)

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
Line No.	Portfolio	Description	Witness	2022 Capital (U-21297)	2022 Capital (U-21534)	Difference (Recovery)	Variance
1	Customer Service	Error Free Communication - Outage Status	Michael J Hatsios	7,070	14,904	7,834	111%
2	Plant and Field	Production Growth	Pankaj Sharma	1,410	9,132	7,722	548%
3	Customer Service	Journey Work Product Transformation Teams	Michael J Hatsios	-	6,744	6,744	100%
4	Infrastructure Operations	End of Life Asset Replacements	Pankaj Sharma	500	6,845	6,345	1269%
5	Infrastructure Operations	Security Infrastructure Growth and EOL	Pankaj Sharma	1,400	7,416	6,016	430%
6	Infrastructure Operations	Enterprise Monitoring Strategy Implementation	Pankaj Sharma	500	5,000	4,500	900%
7	Infrastructure Operations	Digital Worker Experience Electric EOL	Pankaj Sharma	3,907	7,889	3,982	102%
8	Enterprise Data Analytics	Advance and Enhance the Enterprise Data Platform	Pankaj Sharma	1,996	5,521	3,525	177%
9	Customer Service	Bill Management	Michael J Hatsios	-	3,425	3,425	100%
10	Information Protection Security	Ransomware Protection	Pankaj Sharma	350	2,538	2,188	625%
11	Plant and Field	Maximo Platform Program	Pankaj Sharma	1,910	4,051	2,141	112%
12	Customer Service	IVR Virtual Assistants	Michael J Hatsios	-	1,271	1,271	100%
13	Customer Service	Customer Relationship and Billing Program Enhancement	Michael J Hatsios	1,640	2,794	1,154	70%
14	Customer Service	Advanced Analytics AA Use Cases Implementation	Michael J Hatsios	-	1,131	1,131	100%
15	Information Protection Security	Automated Provisioning	Pankaj Sharma	490	1,581	1,091	223%
16	Customer Service	Customer Closed Loop Development	Michael J Hatsios	-	314	314	100%
17		Total projects subject to variance recovery		\$ 21,173	\$ 80,556	\$ 59,383	
18		Total 2022 IT Capital Spend		\$ 164,963	\$ 224,295	\$ 59,332	

Line No.	Spend Year	Business Case / Project Name	Investment Category	Shared Asset or Exclsr. Only (If applicable)	IT Portfolio/Program	Witness (If multiple)	BCD ID	Cost Estimate Level (If applicable)	Project Synopsis	Value/Benefit	Alternatives Considered including cloud services	Aligned with cloud computing technology strategy?	Please supply an explanation on cloud computing alignment	Equipment Involved and refresh live (If applicable)	Project Start Date	Project End Date	Expected Total Project Cost (Capital + Investment O&M)	Total Projected IT Cost (Capital) U-21534	Projected Labor Cost (Capital)	Projected Capital Non-Labor Cost Contractor	Projected Capital Non-Labor Cost Materials	Projected Capital Non-Labor Cost Software	Projected Overhead & Other Costs (Capital)	Projected Total IT O&M Cost	Projected O&M Labor Costs	Projected O&M Non-Labor Costs Contractor	Projected O&M Non-Labor Costs Materials	Projected O&M Non-Labor Costs Software	Projected Overhead & Other Costs						
1	2022	Core ERP Stacks and Packs	Regulatory / Compliance	Shared	Corporate Applications	Pankaj Sharma	BCD-CA-22-006	Actuals																											
Approved in U-21297																																			
2	2023	Core ERP Stacks and Packs	Regulatory / Compliance	Shared	Corporate Applications	Pankaj Sharma	DMND0001215	Level 3																											
3	2024	Core ERP Stacks and Packs	Regulatory / Compliance	Shared	Corporate Applications	Pankaj Sharma	DMND0001215	Level 2																											
Approved in U-21297																																			
4	2025	Core ERP Stacks and Packs	Regulatory / Compliance	Shared	Corporate Applications	Pankaj Sharma	DMND0001215	Level 2	The Core ERP Stacks and Packs project is a recurring annual investment to ensure the Core Enterprise Resource Planning platform is up to date with the latest required support packs and stacks. The Enterprise Resource Planning system (ERP) is a core platform that supports all resource planning processes and systems supported through the SAP platform for the Corporate Services, Human Resources (HR), and Finance organizations. We expect to have a major upgrade of the operating system (Hereafter) by 2025, thus increasing the funding in that year. In addition, the Company preparing for migrating to the SAP S/4 Hana platform by 2027 and preparation for that move that will begin in 2025, with conversion to UNICODE.	Benefits include critical processes such as Financial Close, Financial Asset Management, Financial Reporting, Time Management, Payroll Processing, Purchasing, and Tax Management being supported.	The alternative to this investment would be to do nothing which is not a viable option. This would eliminate required updates, such as current pay codes and tax rules, which must be implemented to process year-end financial statements, payroll reporting/processing, and tax filings. Without these core ERP upgrades, the Company's financial statements and filings and employee payroll would be inaccurate. The costs for this investment were developed with input from SAP, which is the application vendor, as well as leveraging historical investments and guidance from our Annual Planning Cycle. For cloud consideration refer to Columns N and O.	No - IoT is Industry Specific (core capability) and does not follow cloud computing strategy	Solution is an Industry Specific (core capability) and does not follow cloud computing strategy. Portions of EBS (SuccessFactors, myITFE) are cloud-based. Remaining portions of EBS are on premise. It is on the roadmap to move to cloud based by 2027.	No	1/2/2023	12/30/2025	\$ 2,026,918	\$ 1,800,027	\$ 457,930	\$ 876,700	\$ -	\$ -	\$ 465,397	\$ 226,891	\$ 92,091	\$ 134,800									
Approved in U-21297																																			
5	2022	Corporate Services Application Health	Sustainment	Shared	Corporate Applications	Pankaj Sharma	BCD-CA-22-011	Actuals																											
Approved in U-21297																																			
6	2023	Corporate Services Application Health	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001218	Level 3																											
Approved in U-21297																																			
7	2024	Corporate Services Application Health	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001218	Level 2																											
Approved in U-21297																																			
8	2025	Corporate Services Application Health	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001218	Level 2	Corporate Services Application Health is an ongoing and annual investment to upgrade applications running on unsupported infrastructure and operating systems to ensure the health and viability of a suite of 36 applications within the portfolio to support organizations such as Supply Chain, Environmental Management and Safety, and the overall health, reliability, and security of our corporate services applications such as mail services, fleet and fuel management, and emissions monitoring. Between 2024 and 2025 several corporate facility monitoring applications are to be replaced by a single enterprise application (Tridium Niagara). Allowing the facilities engineers to have quick access to our DTE buildings to assess and respond to water, gas, heating and cooling issues that arise. Additionally in 2024 - 2025 the Corporate Services Application health budget will invest in LDAP retirement, Single Sign on initiatives, and automation of user imports which will improve the application health for multiple applications' benefit for DTE by	This ongoing annual investment ensures IT assets avoid outages or disruption to business processes that may occur due to IT component failure, security issues, incompatibility with newer components, and inappropriate vendor support is maintained.	The Company did not select a "do nothing" alternative as a viable option because, without this continued investment, we would fall out of compliance with PCI, lose the ability to plan our resources and capital effectively in these areas, and negatively impact core human resource and finance processes.	Not Applicable	Yes	1/2/2023	12/31/2025	\$ 930,237	\$ 775,530	\$ 238,897	\$ 251,700	\$ 61,667	\$ 70,000	\$ 362,867	\$ 135,097	\$ 105,797	\$ 29,300										
Approved in U-21297																																			
9	2023	Documentum (EDM) Application Health	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001382	Level 3																											
10	2024	Documentum (EDM) Application Health	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001382	Level 2																											
Approved in U-21297																																			
11	2025	Documentum (EDM) Application Health	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001382	Level 2	This project represents the year over year investment that will be required in the Documentum platform including yearly capital investments to account for security vulnerability remediation, system upgrade value added enhancements, and organic system growth (usage).	Organizations should expect to see benefits such as productivity and efficiency improvements, reduction in operating costs, higher team engagement and elevated protection and management of critical information. For instance, the project scope entails reducing the number of manually entered pieces of information by pre-populating the meta-data implementation of this functionality will save one (1) to two (2) hours of each user's time. In addition, manual interventions will be minimized and indexing enabled to improve document searches.	A do nothing approach would mean that future enhancements slated to be executed after the project go live would not occur. Examples include remediating the hardware and Corporate document repository dependency in terms of performing upgrades, patching, and ensuring Documentum index solution works as desired. An alternative technology solution would require fully abandoning a platform with decades of investment and would therefore also be undesirable.	Not Applicable	No	1/2/2025	12/31/2025	\$ 445,466	\$ 386,863	\$ 94,936	\$ 221,100	\$ -	\$ 70,827	\$ 58,603	\$ 19,203	\$ 39,400											
Approved in U-21297																																			
12	2022	Enterprise Applications Health	Sustainment	Shared	Corporate Applications	Pankaj Sharma	BCD-CA-22-005, BCD-CA-22-002	Actuals																											
Approved in U-21297																																			
13	2023	Enterprise Applications Health	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001221	Level 3																											
Approved in U-21297																																			
14	2024	Enterprise Applications Health	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001221	Level 2																											
Approved in U-21297																																			
15	2022	Enterprise Resource Planning	Sustainment	Shared	Corporate Applications	Pankaj Sharma	BCD-CA-22-016, BCD-CA-21-017	Actuals																											
Approved in U-21297																																			
16	2023	Enterprise Resource Planning	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001213, DMND0001214	Level 3																											
Approved in U-21297																																			
17	2024	Enterprise Resource Planning	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001213, DMND0001214	Level 2																											
Approved in U-21297																																			
18	2025	Enterprise Resource Planning	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001213, DMND0001214	Level 2	The Enterprise Resource Planning system (ERP) is a core platform that supports all resource planning processes and systems supported through the SAP platform for the Corporate Services, Human Resources, and Finance organizations. For 2023-2025, the scope of this project includes: SuccessFactors, BODS (SAP Data Services Enterprise), SWO (Safe Worker Observation), SHW (Supplier Relationship Management) additional functionality, 2 follow tests, integration with Aspire Learning Management System, and Electronic Data interchange in addition. Several JAVA systems will be out of support under NetWeaver 7.40 and will need to be upgraded: 1) Process Orchestration - SAP PO 2) Adobe Document Services - AOS, and 3) Master Data Management - SAP MDM. This annual investment ensures the Company maintains compliance with mandatory requirements from Governmental, Union, and other entities for which DTE has responsibility. Enterprise Business System is a SAP application, and this allows the business to comply with reporting over "benefits" for DTE beyond an enhanced storm performance; this will help	This investment supports the non-regulatory and compliance requirements such as monthly releases to upgrade end-of-life systems, complete required critical system follow-on testing, and enhance associated applications with changing business processes in each of these organizations.	We did not select a "do nothing" alternative as a viable option because, without this continued investment, we would fall out of compliance with PCI, lose the ability to plan our resources and capital effectively in these areas, and negatively impact core human resource and finance processes.	No - IoT is Industry Specific (core capability) and does not follow cloud computing strategy	Solution is an Industry Specific (core capability) and does not follow cloud computing strategy. Portions of EBS (SuccessFactors, myITFE) are cloud-based. Remaining portions of EBS are on premise. It is on the roadmap to move to cloud based by 2027.	No	1/2/2025	12/31/2025	\$ 1,632,348	\$ 1,498,999	\$ 396,922	\$ 811,200	\$ -	\$ 290,878	\$ 133,349	\$ 84,549	\$ 48,800										
Approved in U-21297																																			
19	2022	Financial Applications Health	Sustainment	Shared	Corporate Applications	Pankaj Sharma	BCD-CA-22-014	Actuals																											
Approved in U-21297																																			
20	2023	Financial Applications Health	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001224	Level 3																											
Approved in U-21297																																			
21	2024	Financial Applications Health	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001224	Level 2																											
Approved in U-21297																																			

22	2025	Financial Applications Health	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001224	Level 2	This project represents periodic updates which include significant capital investment in environment upgrades to maintain the health, reliability, and security of our financial systems and covers 21 unique applications under the financial applications portfolio.	This investment provides services (10 resources) to test and deploy monthly releases, support planned service outages, development, testing and deployment of enhancement requests. New capabilities are requested and prioritized based on criticality and capacity of sustainment team. Additionally, there are applications such as The Cheque Source Sales and Use Tax and Teammate applications that require Windows 2008 server replacements.	The Company did not select a "do nothing" alternative as a viable option because historical data reflects the demand for support of new business process requirements and required environment upgrades to support the 21 applications.	Not Applicable	N/A - None of the Finance Application Health initiatives are Cloud based.	Yes	1/2/2025	12/31/2025	\$	280,240	\$	250,935	\$	138,438	\$	45,265	\$	8,968	\$	78,266	\$	25,306	\$	10,620	\$	9,069	\$	9,637						
23	2022	Human Resources Applications Health	Sustainment	Shared	Corporate Applications	Pankaj Sharma	BCD-CA-22-004	Actuals																																		
24	2023	Human Resources Applications Health	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001227	Level 3																																		
25	2024	Human Resources Applications Health	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001227	Level 2																																		
26	2025	Human Resources Applications Health	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001227	Level 2	Human Resources Applications Health investment is annual and ongoing to ensure the health and stability of applications within the Human Resources portfolio, such as the SuccessFactors Platform, OnDemand, and Oracle backends.	This project will cover the required upgrades these applications to ensure they are running on supported infrastructure and that operating systems are replaced as required.	The alternative options considered were a "do nothing" approach which would leave the asset at risk because it was past its end-of-life and security vulnerability remediation was not possible. These actions could lead to asset failure and loss of PII Personal identifiable information) data, violation of HIPAA (Health Insurance Portability and Accountability) security guidelines, potential incurrance of additional costs to maintain production needs of users in the Human Resources organization of the Company.	Yes - soft'n is an Industry Specific (core) capability and will use private cloud	Success Factors is in alignment with our technology platform plan which is currently in place.	No	1/2/2023	12/31/2025	\$	296,710	\$	247,391	\$	138,244	\$	19,733	\$		\$	89,414	\$	49,320	\$	48,120	\$	1,200								
27	2022	Production Growth	Sustainment	Shared	Corporate Applications	Pankaj Sharma	BCD-CA-22-015	Actuals																																		
28	2023	Production Growth	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001231	Level 3																																		
29	2024	Production Growth	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001231	Level 2																																		
30	2025	Production Growth	Sustainment	Shared	Corporate Applications	Pankaj Sharma	DMND0001231	Level 2	The Production Growth project addresses the ongoing increase in the size and capability of our computing environment as our premier Corporate Application systems expand to meet the demands of our business. This investment primarily covers server and storage capacity needed by existing business systems.	This investment primarily covers server and storage capacity needed by existing business systems.	A "do-nothing" approach would include having all upgrades, enhancements, and replacements of hardware and the requisite licensing and would mean the IT infrastructure could not meet and support the demands of the business and customer computing. Another option would be to purchase hardware and licenses on-demand or in an ad-hoc manner. This would cause unnecessary delays in implementation of requested enhancements, which could negatively impact both the business unit and customers and may lead to undue licensing and support costs. An example of an impact would be slow response time for time sensitive applications and processes like SAP Enterprise Resource Planning (ERP) for the Month End financial close processing, reports, and	Not Applicable	Solution is an Industry Specific (core) capability and will use public cloud per strategy requirements	Yes	1/2/2023	12/31/2025	\$	746,883	\$	746,883	\$	5,802	\$	30,900	\$	667,487	\$		\$	42,694	\$	-	\$	-	\$	-	\$	-	\$	-		
31	2024	Cloud Health and Safety	Return-to-Health	Shared	Corporate Applications	Pankaj Sharma	DMND0001490	Level 2																																		
32	2025	Cloud Health and Safety	Return-to-Health	Shared	Corporate Applications	Pankaj Sharma	DMND0001490	Level 2	The current DTE Energy safety reporting systems are not integrated and contain minimal workflow capabilities resulting in lagging safety information which is used for internal metrics, to return the company's safety reporting capabilities to health the company will design, configure, test, and deploy a Software as a Service (SaaS) SAP solution. The SAP solution will improve reporting on near-miss and unsafe working conditions along with consolidating multiple systems for recording Potential Serious Injury and Fatality (PSIR) into a single system.	This investment primarily covers server and storage capacity needed by existing business systems.	Alternatives considered were migrating the custom developed enter in-house application to SOTerra 2.0 cloud for incident response reporting, and reduce last productivity. The complexity of integration with all information into multiple systems determined that an in-house solution would not be an alternative. The alternative to "do nothing" would result in security vulnerabilities and performance issues with Soterra 1.0 that the company would be unable to mitigate. This solution was inoperable to the Company's security and safety priorities.	Not Applicable	SAP SOTerra Cloud is already in place and meets DTE cloud technology requirements.	No	1/2/2024	12/31/2025	\$	682,451	\$	582,504	\$	49,068	\$	427,957	\$	650	\$	104,829	\$	99,947	\$	7,284	\$	92,863								
33	2024	Core ERP Data Archiving	Return-to-Health	Shared	Corporate Applications	Pankaj Sharma	DMND0001217	Level 2																																		
34	2025	Source to Pay (S2P) Transformation	Return-to-Health	Shared	Corporate Applications	Pankaj Sharma	DMND0001210	Level 2	This project will replace the existing SAP SRM outdated software with cloud-based technology that directly integrates with ECC and the S4 trane application. SAP has not invested in their current purchase to pay (P2P) functionality Supplier Relationship Management (SRM) product in nine years.	The benefits of this project will provide modernized integrated tools and technologies that support the trading, sourcing, requisitioning, ordering, receiving, payment, and work management business processes. This would include Application Programming Interface (API), portals and external (SRM) product in nine years.	Alternative would be to "do nothing". This would mean continuing to use SRM (disruptal and would be a strategic risk to the business the organization was are unwilling to take. If it fails without the resources to fix it, we encounter enterprise-wide work stoppage.	Not Applicable	Solution is an Industry Specific (core) capability and will use private cloud in alignment with the strategy B	No	1/2/2023	12/31/2025	\$	2,991,741	\$	1,094,742	\$	648,453	\$	-	\$	-	\$	1,346,289	\$	996,999	\$	72,239	\$	699,760	\$	225,000						
35	2022	Powerplan Upgrade	IT Enhancements	Shared	Corporate Applications	Pankaj Sharma	BCD-CA-21-002	Actuals																																		
36	2023	Powerplan Upgrade	IT Enhancements	Shared	Corporate Applications	Pankaj Sharma	BCD-CA-21-002	Level 3																																		
37	2022	SOTerra Safe Worker Observations (SWO)	IT Enhancements	Shared	Corporate Applications	Pankaj Sharma	BCD-CA-22-012	Actuals																																		
38	2023	SOTerra Safe Worker Observations (SWO)	IT Enhancements	Shared	Corporate Applications	Pankaj Sharma	BCD-CA-22-012	Level 3																																		
39	2022	SuccessFactors Program	IT Enhancements	Shared	Corporate Applications	Pankaj Sharma	BCD-CA-22-001	Actuals	The Company will implement the SuccessFactors Cross board and product suites, which provides a streamlined business process for the HR business partner to hire (onboard), terminate (offboard) and internally transfer (cross-board) employees.	The implementation of this module will integrate onboarding, offboarding, and cross-boarding with the existing employee central processes and will enable improved process efficiency and compliance, faster time to employee contribution, increased employee engagement, improved employee socialization, and higher employee retention rate based on input from our vendor partner, we anticipate improvements in voluntary turnover - an average of 9% to 10% (top 25% benchmark) annually, improve percentage of external workers that all through cross-board process from 66 (avg) to 100 (top 25% benchmark) and improve time to full productivity for new hires in days from 61 (avg) to 30 (top 25% benchmark).	The alternative to the implementation of EC Shared Services would be to research solutions outside of the SuccessFactors and replace the platform. This would result in significant and expensive duplication of capabilities with existing SuccessFactors capabilities, additional training would be needed to add to new platform, and organizational change initiatives to use any different programs to reculture core work that is more efficiently performed using a single system. For this reason, the Company continues to leverage its initial investments in SuccessFactors to add important HR functionality into this expanding system.	Yes - solution is an Industry Specific (core) capability and will use private cloud	Solution is aligned with technology strategy for cloud computing. This is a core capability and will use private cloud in alignment with the strategy B	Yes	1/2/2022	7/1/2022	\$	249,962	\$	187,486	\$	-	\$	176,786	\$	804	\$	-	\$	7,805	\$	62,496	\$	62,496	\$	-	\$	-	\$	-	\$	0
40	2023	SuccessFactors Program	IT Enhancements	Shared	Corporate Applications	Pankaj Sharma	DMND0001236	Level 3	Please see line 39 above.	Please see line 39 above.	Please see line 39 above.	Yes - soft'n is an Industry Specific (core) capability and will use private cloud	Success Factors is in alignment with our technology platform plan which is currently in place.	Yes	1/2/2023	12/31/2023	\$	369,001	\$	329,463	\$	50,815	\$	241,856	\$	411	\$	-	\$	36,382	\$	39,538	\$	32,486	\$	7,052	\$	-	\$	-	\$	-
41	2022	Enterprise Automation	Strategic	Shared	Corporate Applications	Pankaj Sharma	N/A	Actuals																																		
42	2024	Enhanced Document Management Capability Projects	Strategic	Shared	Corporate Applications	Pankaj Sharma	DMND0001448	Level 2	This project will begin in 2024 and address significant functional improvements in how documents are received, processed, reviewed, approved, stored, retrieved, and eventually purged. In 2024 we will design, build and deploy Automate document workflow to streamline business processes consistently. Automate the addition of new documents as well as version control of existing. And integrate documents to work management tools & other systems. Integrate documents to Work Management Tools &amp; Other Systems (Mavenio, ESRI, SharePoint, Clicksoft) and support the ability to link video and photos to Mavenio object structures and Work Orders. Assign records to specific assets within the workflow process. We will do the design and partial build to prepare for migration to D3 (updated version of Documentum).	The alternative would be to continue to use the existing manual business processes with the same gaps and inefficiencies, which is a very labor intensive. Other technologies were not considered as D3 has recently invested in the OpenText Documentum and this investment is aligned with our Platform Strategy.	Investment will be made in the manual business processes with deployed on prem. The system will be reevaluated when the platform is at end of life. Due to containing BCD (Bulk Electric Cyber System Information) data, the application cannot reside in the cloud.	No	1/2/2024	12/31/2024	\$	1,463,926	\$	1,212,974	\$	215,454	\$	547,000	\$	-	\$	400,000	\$	50,520	\$	250,952	\$	64,819	\$	185,700	\$	-	\$	-	\$	-	\$	433

43	2025	Enhanced Document Management Capability Projects	Strategic	Shared	Corporate Applications	Pankaj Sharma	DAMN0001448	Level 2	In 2025 the project will support: • Design, build and deployment of digitalization and indexing to existing scanned paper documents. • Enhanced search capabilities for quick and accurate document retrieval. Streamline access to records with keyword and full-text searching. • Design, build and deployment of record retention. • Well-defined and accessible Business Record Retention Policy and maintain compliance with system support.	Please see line 42 above	Please see line 42 above	Not Applicable	No	1/2/2024	12/31/2025	\$	1,271,013	\$	2,957,979	\$	567,530	\$	1,894,000	\$	496,450	\$	311,013	\$	63,955	\$	312,600	\$		\$		433						
44	2024	Organizational Management Optimization	Strategic	Shared	Corporate Applications	Pankaj Sharma	DAMN0001617	Level 2	Implementation of Organizational Management in 2024 will assist HR in meeting the Company's goal to optimize operating costs and meet customer affordability targets. This project will optimize organization management process within SuccessFactors by removing the manual replication requirements between SuccessFactors and SAP on premise, resulting in 100% reduction in replication errors and data mismatches of 500 or more per month. 30% efficiency in downstream process improvements and achieve productivity gains of 2 full time equivalents.	The Organizational Management optimization will ensure a reduction in time spent in working in two HR systems, SAP On Premise (SAP) and SuccessFactors (SF). Success Factors is the system of record, but due to inconsistencies between the two systems, dual entry is often required. Current state key project measure is 100% HR FTE equivalent dedicated to manual work due to replication between SAP and SuccessFactors. Additionally, with this solution there is a 30% improvement efficiency of HR FTE equivalent, and they will be able to focus on more value-added work. Finally, there will be a productivity gain of 2 FTE equivalents as a result in the efficiency gains due to reduction in maintaining both systems.	do nothing alternative is not feasible because if this solution is not implemented, we have 100% of our FTEs doing manual work nor will we be able to implement other process improvements.	Yes - SAP is an Industry Specific (core) capability and will use private cloud	Success Factors is in alignment with our technology platform plan which is currently in place.	No	1/9/2024	10/2/2024	\$	557,144	\$	500,671	\$	65,108	\$	213,000	\$	-	\$	-	\$	222,563	\$	56,474	\$	54,474	\$	2,000	\$	-	\$	-	\$	
45	2025	SAP Employee Central Payroll	Strategic	Shared	Corporate Applications	Pankaj Sharma	DAMN0001785	Level 2	This project will implement the SAP Employee Central Payroll application to replace the current SAP ERP payroll system implemented in April 2007. Our current SAP ERP application houses a built-in Payroll application; however, SAP is phasing out SAP ERP application and replacing it with SAP S/4 Hana application by 2027. However, SAP S/4 Hana does not have a built-in payroll system. Therefore, SAP SuccessFactors Payroll, an eighteen-month initiative, requires implementation starting in 2024 as a predecessor project, to avoid delaying the start of the S/4 Hana implementation. It is prudent for the Company to make this investment at the time as the future S/4 Hana implementation project, which will take 2 years to implement (requiring the same environments and resources to implement), to ensure critical business processes are still operating on a supported platform by SAP S/4 Hana in 2027. The cloud-based SAP Payroll application will be configured, tested, and integrated with multiple business unit interfaces, we non-negotiated hardware/licenses as the Company would	The benefits of this investment will reduce bi-weekly Payroll Help Desk inquiries to average 300 (75% reduction based on 400 Payroll Help Desk inquiries) and reduce time to process / run payroll to 17 to 18 hours (75% based reduction on 23 hours to process / run payroll). This project is aligned to the Company IT Cloud and Platform strategy.	A do-nothing approach is not an option. SAP is phasing out the current SAP ERP application, which includes time entry, payroll, benefits, and compensation. This will be replaced with that SAP S/4 Hana application by 2027. The SAP S/4 Hana does not have a payroll system. It is impossible to delay replacing the SAP ERP payroll system with SAP Employee Central later than 2025 due to resource, environment and financial constraints which would result in inability to complete the SAP S/4 Hana ERP implementation by 2027, which will ensure the Company's HR and Finance operation are operating on a supported platform.	Yes - SAP is Market Based Commodity or Supporting Capability (non-core) and will use public cloud	The SAP Employee Central Payroll time entry application is an application that is based on cross-industry enterprise software and/or supporting Business capabilities that are not directly in the energy value chain	No	9/2/2024	12/31/2025	\$	894,420	\$	863,982	\$	69,697	\$	380,718	\$	327,120	\$	86,448	\$	30,438	\$	30,438										
46	2025	Talent System Optimization	Strategic	Shared	Corporate Applications	Pankaj Sharma	DAMN0001619	Level 2	The following functionality will be provided: Skills and Competency Mapping to LMS, providing employees with alignment between their learning plans within the LMS and skills and competencies to better perform their jobs; Career Pathing in the SuccessFactors Development and Succession planning modules that assist employees with how to best navigate their careers; Mentoring matchmaking, job description management, internal job board and AI for career development to assist employees with job descriptions that match their skills and competencies, internal job boards that showcase opportunities for career growth, and career development and mentoring that support the employees career development journey. These features will improve employee engagement, improve productivity, produce better leaders, build diversity, and support a learning culture. This project will build on the existing SAP SuccessFactors cloud platform with the addition of the modules Opportunity Marketplace and JMS. Most of the project will focus on benefit for DTE beyond an enhanced storm performance; this will help DTE IT "keep frog" to a more modern, flexible IT organization and architecture utilizing the Cloud (i.e. VMware/VMware System 21/OpenShift/C/Program Files (x86)/Pulse Secure/VCS42/CRTM6A/C/Program Files (x86)/Pulse Secure/VCS42/CRTM6A/C/Uservs/7078/AppData/Local/Infrastr or/Windows/AppPath/EXT-COM_EXE_BAT_CMD_VBS_VBE_JS_JS_E_WSH_WSH_MS/PROCESSOR_ARCHITECTURE-AMD64/PROCESSOR_ARCHITECTURE).	The primary benefit will be employee engagement, skill and competency inventory and the increase of awareness for developmental opportunities for employees. The Talent Management Optimization is also expected to build a high-performance workplace by improving diversity, equity and inclusion engagement score from 4.3 to 4.3, and a 5% increase in the adoption of learning programs. It focuses on learning climate, it adds value to the employee brand, and it improves diversity.	A do nothing alternative will continue to provide adequate employee development system but it will inhibit our ability to attract and retain quality employees. This can be countered by increasing headcount to manually track and recommend opportunities for employees that would slow grow cost initiative	Yes - SAP is an Industry Specific (core) capability and will use private cloud	Success Factors is in alignment with our technology platform plan which is currently in place.	No	7/21/2025	12/31/2025	\$	313,064	\$	280,000	\$	30,000	\$	2,000	\$	125,000	\$	323,000	\$	33,064	\$	17,779	\$	2,000							\$	13,285
47	2024	Transparency Electric Data	Strategic	Electric	Corporate Applications	Pankaj Sharma	DAMN0003095	Level 2	The Company is proposing the development of two tools: an internal dashboard for all things reliability performance and investment data and an enhanced external customer map that leverages the investment we are making to improve reliability in a manner that informs customers and gamers support for investment agenda. The benefits of this investment will provide customers with transparent visibility to reliability performance and grid investment data, leading to increased trust in DTE's commitment to improve reliability.	This project will provide customers and external stakeholders visibility to reliability performance and investment work at a hyper localized level.	In assessing our strategic approach for this project, we identified that maintaining the status quo – relying on our current set of tools or amplifying traditional communications channels without advanced tools – would not meet the needs of our customers and community stakeholders. Providing our customers with localized and specific data on reliability and infrastructure investments – data that is routinely refreshed and validated – requires advanced tools and internal platforms.	Yes - SAP is an Industry Specific (core) capability and will use private cloud	Team will leverage existing maps... outage issues and reliability which are cloud based internally. These maps will be a part of the bigger picture for both external and internal dashboards.	No	1/31/2024	6/30/2024	\$	1,959,110	\$	1,816,520	\$	221,449	\$	161,700	\$	340,004	\$	1,092,967	\$	142,590	\$	42,484	\$	58,796					\$	41,310		
48	2022	Automated Application Monitoring Application Health	Sustainment	Shared	Customer Service	Pankaj Sharma	BCD-CS-22-022	Actuals																																		
49	2023	Automated Application Monitoring Application Health	Sustainment	Shared	Customer Service	Pankaj Sharma	DAMN0001243	Level 3																																		
50	2024	Automated Application Monitoring Application Health	Sustainment	Shared	Customer Service	Pankaj Sharma	DAMN0001243	Level 2																																		
51	2025	Automated Application Monitoring Application Health	Sustainment	Shared	Customer Service	Pankaj Sharma	DAMN0001243	Level 2	This project will add Solution Monitoring, End User Experience Monitoring, Dynatrace Monitoring, and SAP Solution Manager. The SAP Solution Manager systems also require ongoing operational asset health upgrades to maintain the overall reliability and availability of the infrastructure hosting the application. These upgrades provide foundation for application changes due to evolving business processes and security compliance updates. In 2025 this investment will support the ongoing sustainment, minor enhancement, any mandatory upgrades and incident management for the Solution Manager platform and application.	These features will provide additional Monitoring, Optimize Alerting & Notifications, Improve Standard Operational Procedures, Data Volume Management, and Analytics and Dashboards. It will provide greater visibility across systems.	Doing nothing will not be acceptable as monitoring and upgrades are critical for maintaining high availability for Customer Applications and Business Processes.	Not Applicable	No	1/2/2023	12/31/2025	\$	443,492	\$	413,000	\$	5,433	\$	388,739	\$	18,828	\$	30,492	\$	1,482	\$	29,010											
52	2022	Business Planning and Development (BPD) and Electric Sales & Marketing (ESM) Application Health	Sustainment	Electric	Customer Service	Pankaj Sharma	BCD-CS-22-013	Actuals																																		
53	2023	Business Planning and Development (BPD) and Electric Sales & Marketing (ESM) Application Health	Sustainment	Electric	Customer Service	Pankaj Sharma	DAMN0001246	Level 3																																		
54	2024	Business Planning and Development (BPD) and Electric Sales & Marketing (ESM) Application Health	Sustainment	Electric	Customer Service	Pankaj Sharma	DAMN0001246	Level 2																																		
55	2025	Business Planning and Development (BPD) and Electric Sales & Marketing (ESM) Application Health	Sustainment	Electric	Customer Service	Pankaj Sharma	DAMN0001246	Level 2	The BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business Planning and Development team, such as EOPF and newer systems like IMA and Strengthen Outage Management, and the BPD and ESM project supports annual refresh of 12 IT assets that support the operation of Corporate Energy Forecasting, Integrated Resource Planning, Demand Response, Community Lighting, Joint Use, and Customer Choice. These departments and the associated applications support the Company's ability to effectively forecast system load for planning purposes and provide customers with alternative rates and products that assist them with managing their energy usage. In 2025 this investment will support the asset health upgrades for all the systems supported by the Business																																	

[illegible]

[illegible]

118	2025	Advance Metering Infrastructure (AMI) Application Health	Sustainment	Shared	Plant & Field	Pankaj Sharma	DMND0001165	Level 2	In 2025, the project will focus on enhancing the system to communicate and integrate with the new meters installed each year. Additionally, we will complete business enhancement involving the health and security of AMI applications, critical infrastructure, compliance with SDX regulation, and systems.	These upgrades to the core AMI infrastructure will replace unlicensed IT systems outages by 10% and provide foundation for required application changes required to maintain vendor supported platform support evolving business processes and maintain enhanced security and performance. Maintaining long-term asset health and improving the asset lifecycle ensures that there is a reduction of IT systems negatively impacting business functions.	Doing nothing to mitigate operational asset health issues or migrate system infrastructure experiences will prevent our ability to process future upgrades to the AMI collection engine. Negatively impact maintaining ongoing vendor support, and will increase the need for additional maintenance outages. This option was not selected as it is not a prudent use of capital funding.	Yes - so/n is Industry Specific (core) capability will use public cloud per strategy requirements	The AMI team is building a fully redundant production system utilizing the current cloud strategy, moving data directly to cloud storage (ADLS).	No	1/2/2025	12/31/2025	\$ 1,476,908	\$ 1,376,857	\$ 838,118	\$ 15,600		\$ 523,140	\$ 100,051	\$ 98,532	\$ 1,200		\$ 318				
119	2022	ClickSoft Application Health	Sustainment	Shared	Plant & Field	Pankaj Sharma	BCD-PFD-22-007	Actuals																							
120	2023	ClickSoft Application Health	Sustainment	Shared	Plant & Field	Pankaj Sharma	BCD-PFD-22-007.DMND0001373	Level 3																							
121	2024	ClickSoft Application Health	Sustainment	Shared	Plant & Field	Pankaj Sharma	DMND0001373	Level 2																							
122	2025	ClickSoft Application Health	Sustainment	Shared	Plant & Field	Pankaj Sharma	DMND0001373	Level 2	The investment will provide improved auto-capture timesheet functionality and features of the appointment book module which further necessitates additional alignment between associated subsidiary systems (ClickSoft, Maximo, SAP, CRM and OMS).	The value from the investment includes optimization of business process as seen through the advancement of crew routes and automatic judgement of field work to respond to our customer needs more efficiently.	An alternative approach would be to report to the previous software product to manage the field workforce. This is not viable because the product is no longer supported by the vendor. A "do nothing" alternative is also unacceptable because a failure to invest could potentially result in system degradation and unplanned outages of the hardware or software assets. Additionally, doing nothing would eventually hinder the Company's ability to respond to customer requests.	Yes - so/n is Market Based Commodity or Supporting Capability (low-cost) and will use public cloud	click soft is a cloud based computing system hosted in AWS	No	1/2/2023	12/30/2025	\$ 868,030	\$ 395,212	\$ 101,214	\$ 219,200		\$ 74,798	\$ 472,817	\$ 188,084	\$ 284,300		\$ 433				
123	2022	Distribution Operations Application Health	Sustainment	Electric	Plant & Field	Pankaj Sharma	BCD-PFD-22-003.DMND0001380	Actuals																							
124	2023	Distribution Operations Application Health	Sustainment	Electric	Plant & Field	Pankaj Sharma	DMND0001380	Level 3																							
125	2024	Distribution Operations Application Health	Sustainment	Electric	Plant & Field	Pankaj Sharma	DMND0001380	Level 2																							
126	2025	Distribution Operations Application Health	Sustainment	Electric	Plant & Field	Pankaj Sharma	DMND0001380	Level 2	This project will continue with non-discretionary capital investment in the suite of Distribution Operations applications which includes hardware (MOTS, cell phones and Tablets) for field service crews, software upgrades and license renewal fees, end-of-life server replacements and require operating system software work and asset management system enhancements include store restoration system new roles required for integration with OMS redesign of outage status application to enable supervisor dashboard for crew management, and a new repository in the enterprise data analytics platform for vendor timesheets. In addition to the above, an annual schedule of monthly releases is scheduled to fulfill requirements from the business unit to be developed, tested, and deployed upon prioritization.	We expected value is an improved customer and employee experience. These improvements target our mobile applications used by field workers for status and complete customer restoration work completed by both employees and contractors. This investment is an ongoing effort important because our business partners regularly review and enhance their processes to benefit their customers, and ask us to accommodate for their organizational change.	The Company did not select the "do nothing" scenario as a viable option for two key reasons. Insufficient investment within the sustainment category would result in the degradation and replacement failure of IT hardware assets, lack of vendor support for out-of-date software assets, and our inability to provide or support business needs. Perhaps even more importantly, the critical applications supported by this investment are those controlling, monitoring, and supporting the electrical grid directly.	Yes - so/n is Industry Specific (core) capability per strategy requirements	The use of cloud computing will be reviewed and approved by Tech and Arch group where applicable.	Yes	1/2/2022	12/31/2025	\$ 1,231,139	\$ 1,180,414	\$ 233,279	\$ 663,800	\$ 78,367	\$ 24,490	\$ 380,478	\$ 50,725	\$ 23,607	\$ 26,800		\$ 318			
127	2022	OTE Electric Generation Capacity Application Health	Sustainment	Electric	Plant & Field	Pankaj Sharma	BCD-PFP-22-004.DMND0001424	Actuals																							
128	2023	OTE Electric Generation Capacity Application Health	Sustainment	Electric	Plant & Field	Pankaj Sharma	DMND0001424	Level 3																							
129	2024	OTE Electric Generation Capacity Application Health	Sustainment	Electric	Plant & Field	Pankaj Sharma	DMND0001424	Level 2																							
130	2025	OTE Electric Generation Capacity Application Health	Sustainment	Electric	Plant & Field	Pankaj Sharma	DMND0001424	Level 2	For the duration of 2023-2025, there will be an annual project spend to fund regularly scheduled releases to our Generation Supply Management System (GSMS) platform, which the Company uses to effectively calculate which generation plants it will offer into the MISO market, which in turn contributes to the selection of plant capacity running per the MISO market schedule. Specifically, the GSMS vendor targets a quarterly release schedule, which the Company must adapt to remain compliant with MISO regulations such as the determination of how a plant is offered to the market and the need to remain current with MISO Shadow Billing (the method used to settle charges and revenue with the Company).	Complete IT support for all applications that support the buying, selling, and dispatching of power in the wholesale power market and the bulk electric systems. Critical system applications are supported by IT personnel who understand the business, Strong Political and Regulatory Control – By ensuring support of applications that directly impact needed compliance to ERC and NERC, and Superior and Sustainable Financial Performance by ensuring support of applications that directly impact power supply cost recovery (PSCR) savings initiatives.	We did not select a "do nothing" alternative because a lack of investment in this area will take us out of compliance with MISO regulations and eliminate our ability to determine financial exposure in the market. Technology alternatives considered were to choose another vendor - of which there are two key players in the MISO market. The company had a component provided through the alternative vendor in 2016, after which we ended our partnership as the vendor was not able to align with MISO changes in a timely fashion. Continuing our work as forecasted is the prudent action for the Company.	Not Applicable	This funding provides IT support for existing on-prem applications	No	1/2/2022	12/31/2025	\$ 625,151	\$ 563,011	\$ 347,342		\$ 215,669	\$ 62,140	\$ 62,140								
131	2023	OTE Electric Utility Network (UN)	Sustainment	Shared	Plant & Field	Pankaj Sharma	DMND0001466	Level 3	The DTE Electric Utility Network project will implement the new ESR UN product in the cloud. To pursue this needed transition, we must first upgrade to a level of ArchMap that can most easily provide a starting point for product-to-product migration. The ESR ArchMap 3.0.8 Upgrade provides this foundation and is a key component of this project. Our GIS system interfaces with the following 12 critical systems. • ADAMS/OMS – This is the Outage Management System (ADAMS/OMS), Click Mobile • CMIS – This is a simulation software for distribution electrical grid. It simulates, analyzes, and assesses DTE's distribution circuits. • CRANE – Cable Routing and Access File (CRANE) is a web-based application that requires role-based access to view/manage/download cable and manhole records. It also supports display of cable records on a map interface. • DMS – Intelligent Data Management System (IDMS) is a web-based application which supports displaying data quality metrics governance model through validation of Data Quality and Service Level Agreements (DSLA), and identification of data gaps. • Maximo – Supports Workforce Management as mentioned previously. • ArcFM Designer – Designer is a comprehensive graphic word design solution that where utilities build and analyze new construction designs in a single application. It streamlines the entire design, estimating, construction, and as-built workflow.	This product replacement will increase availability, recoverability, scalability, and security while enabling business process efficiency. The initiative will leverage the latest technology on location data, business intelligence, and integrated systems to improve performance for our public facing and internal IT systems. It will improve safety in the field, improve customer complaints, and improve overall customer satisfaction.	DTE rejected the "do nothing" approach because the current GIS system will not be supported by ESR Core. Continued use despite obsolescence would result in extensive costs for limited application support from Microsoft, Oracle, and ESR. Any assistance with a new issue with the software or operating system could not be supported. These include security vulnerabilities. Further, DTE relies on the ESR GIS system for both Energy Gas and Energy Gas business units. GIS is the system of record for all spatial related assets that DO Distribution, GAS Distribution and GAS Transmission Business units primary interact with. Business continuity in these areas is required to serve our customers and communities with efficient and prudent capital use.	Yes - so/n is an Industry Specific (core) capability and will use private cloud	The solution will be in alignment with DTE&R9's roadmap to cloud computing as it can be hosted in the cloud as a SaaS solution that provide a platform of future growth and support of GIS functions.	Yes	1/2/2023	12/31/2024	\$ 297,979	\$ 297,979	\$ 16,116	\$ 32,969	\$ 233,081	\$ -	\$ 14,913	\$ -							
132	2024	OTE Electric Utility Network (UN)	Sustainment	Shared	Plant & Field	Pankaj Sharma	DMND0001466	Level 2	Please see line 131 above	Please see line 131 above	Please see line 131 above	Yes - so/n is an Industry Specific (core) capability and will use private cloud	The solution will be in alignment with DTE&R9's roadmap to cloud computing as it can be hosted in the cloud as a SaaS solution that provide a platform of future growth and support of GIS functions.	Please see line 131 above	1/2/2023	12/31/2024	\$ 439,376	\$ 372,799	\$ 122,001	\$ 165,200	\$ -	\$ -	\$ 84,698	\$ 61,197	\$ 38,032	\$ 16,300	\$ 6,195	\$ 650	\$ -		
133	2024	ESRI Application Health	Sustainment	Shared	Plant & Field	Pankaj Sharma	DMND0001385	Level 2	ESRI application health supports enhancements to the Company's automated mapping system (Geographic Information System or GIS) that supports all GIS mapping data including operating maps and customer-facing outage maps. This investment includes procuring additional user licenses, IT labor cost associated with testing/installing service packs and security vulnerability remediation as part of regularly scheduled release enhancements.	Enhance the productivity of Distribution Operations by providing access to the status of additional equipment in the field, improve safety in the field, reduce customer complaints and improve their satisfaction.	An alternative to this ESR investment would be to "do nothing" which would also result in the inability to support Electric and Gas business units or need for an additional or replacement technology would incur prohibitive cost as ESR is the established platform in use.	Not Applicable	DTE&R9's cloud computing Alignment will continue to involve the ability to access GIS mapped services for reporting and will be positioned to provide AI analytical reporting to DTE&R9's GIS assets.	No	1/2/2023	12/31/2025	\$ 461,227	\$ 441,383	\$ 112,443	\$ 247,000	\$ -	\$ -	\$ 81,940	\$ 19,843	\$ 7,410	\$ 12,000	\$ -	\$ 433	\$ -		
134	2025	ESRI Application Health	Sustainment	Shared	Plant & Field	Pankaj Sharma	DMND0001385	Level 2	The 2025 scope includes the development and improve areas for integration between ESR and Maximo (work management system). This development would include multiple features classes designed to follow Distribution or Substation workflow.	Please see line 133 above.	Please see line 133 above.	Not Applicable	DTE&R9's cloud computing Alignment will continue to involve the ability to access GIS mapped services for reporting and will be positioned to provide AI analytical reporting to DTE&R9's GIS assets.	No	1/2/2023	12/31/2025	\$ 455,961	\$ 436,664	\$ 111,024	\$ 243,700		\$ 81,940	\$ 19,296	\$ 7,163	\$ 11,700		\$ 423				
135	2022	Fuel Supply Application Health	Sustainment	Electric	Plant & Field	Pankaj Sharma	BCD-PFP-22-006.DMND0001437	Actuals																							
136	2023	Fuel Supply Application Health	Sustainment	Electric	Plant & Field	Pankaj Sharma	DMND0001437	Level 3																							
137	2024	Fuel Supply Application Health	Sustainment	Electric	Plant & Field	Pankaj Sharma	DMND0001437	Level 2																							

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

312	2024	Field Worker Device End Of Life	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	DAMN0002889	Level 3	This project will establish and execute the annual EOL replacement cycle for the enterprise MDT devices. Mobile Data Terminal is a computerized device used in mobile devices (laptops) in transit vehicles that are required on systems that are always on (live) to communicate with a centralized control system. Annually, the Company will replace 350 EOL MDT's.	This effort provides DTE field crews with technology that provides the ability to reliably address customer issues, react to line down during storms, prevent safety incidents and communicate effectively with systems and leadership.	The alternative would be to do nothing, and this will continue to impact operational excellence and the ability to respond to customer issues during field operations including storms.	Not Applicable	This is a one-to-one replacement of MDTB#931 and would not require cloud usage.	Yes	1/2/2024	12/31/2024	\$ 900,000	\$ 900,000	\$ 71,676	\$ -	\$ 710,653	\$ 16,433	\$ 101,837	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
313	2025	Field Worker Device End Of Life	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	DAMN0002889	Level 3	Please see line 311 above	Please see line 311 above	Please see line 311 above	Not Applicable	This is a one-to-one replacement of MDTB#931 and would not require cloud usage.	Please see line 311 above	1/2/2024	12/31/2025	\$ 900,000	\$ 900,000	\$ 70,072	\$ -	\$ 711,658	\$ 16,433	\$ 101,837	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
314	2025	Load Balancer Asset Health and Re-Engineering	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	DAMN0002421	Level 2	This project will replace the hardware load balancers that will be deemed end of life by 2025 with modern virtual load balancers. In 2025, the Company will complete the replacement of 20 physical load balancers with virtual load balancers.	1) Replacement of FS's with the software-based solution will ensure elimination of all vulnerabilities, providing significant value to both organization and customers. 2) IT & BU productivity: Up to 4 hours a week would be freed up in support and maintenance as the need for hardware is eliminated.	The alternative to replace hardware-based load balancers for new hardware would require approximately two times the capital investment and was not the right decision for customer reliability. The option to do nothing is not an alternative due to the increase cyber vulnerability the end-of-life load balancers would create for the company and our customers.	Yes - soft'n is an industry Specific (core) capability and will use private cloud	The solution may utilize public cloud wherever applicable and private cloud as compliance requires.	Yes	1/1/2025	12/31/2025	\$ 466,000	\$ 466,000	\$ 21,000	\$ 10,000	\$ 435,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
315	2022	Microwave End Of Life	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	BCD-ID-22-008	Actuals																							
316	2023	Microwave End Of Life	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	DAMN0001329	Level 3																							
317	2024	Microwave End Of Life	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	DAMN0001329	Level 2																							
318	2025	Microwave End Of Life	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	DAMN0001329	Level 2	The Company owns and operates its own set of microwave communications installations. This investment includes replacement of microwave paths, enhancements to stabilize the microwave ring, and support changes mandated by the FCC in the deregulation of the 4 gigahertz (GHz) frequency. In 2025, we will continue these efforts through the replacement of licensed critical paths and unlicensed paths. Implementation of these replacement paths will improve quality of service, reliability, and allow the Company to release our leased telecom services and replace it with privately-owned communications.	Provides fully capable devices and networks for replacement of microwave paths, enhancements to stabilize the microwave ring, and support changes mandated by the FCC in the deregulation of the 4 gigahertz (GHz) frequency. In 2025, we will continue these efforts through the replacement of licensed critical paths and unlicensed paths. Implementation of these replacement paths will improve quality of service, reliability, and allow the Company to release our leased telecom services and replace it with privately-owned communications.	The Company rejected a "do nothing" alternative as it would increase the potential for outages in microwave communications, fail to meet changes mandated by the FCC, and delay our ability to release telecom services.	Not Applicable	This project involves continued implementation of DTE microwave hardware and hence, no cloud solution required for this effort	Yes	1/2/2025	12/31/2025	\$ 402,000	\$ 402,000	\$ 43,766	\$ 100,000	\$ 204,758	\$ 53,476	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
319	2025	Modernize Disaster Recovery Tools	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	DAMN0002534	Level 2	This technology (DTNA Commander) has become increasingly difficult and expensive to maintain due to outdated programming language maintenance and gap in industry of skilled resources required to support it. The security risk has increased as it is no longer supported by the operating system vendor. This system must be modernized in order to maintain the capability to withstand and recover from unplanned system failures that impact the Company's computing infrastructure. This project scope will design, test, and deploy a modern disaster recovery solution onto DTE's private cloud platform ensuring operational reliability of core operational systems within the Company.	The benefit and value provided to the organization is to ensure business continuity and uninterrupted business operations that affect our employees and customers. • DTE's external customers have exceeding high expectations for reliable energy to meet their needs and business requirement. This project supports their expectations by returning the DTNA application to a supportable state that will continue to support the SAP, Maximo and AAMI systems that support field operations. • DTE's ITS organization will benefit from having a failover system and application which will be supported by a vendor, easier to maintain, and built using modern technologies. Additional automation will reduce the amount of time internal IT resources required to perform a system recovery action. • DTE's organization and employees need access to these critical applications to do their job to support both their internal and external customers – providing them with uninterrupted access to critical business applications	The alternative considered is to do nothing. Continue using the existing system which results in greater security concerns, cost, time, and effort to maintain. This includes internal resources that must be trained/knowledgeable in the outdated techniques and lack of technology future and was rejected.	Yes - soft'n is an industry Specific (core) capability and will use private cloud	100% aligned with DTE#939's cloud and hybrid computing technology strategy and will utilize DTE#939's investments in modern technologies.	Yes	1/1/2025	12/31/2025	\$ 320,000	\$ 500,000	\$ 300,000	\$ -	\$ 100,000	\$ 100,000	\$ 20,000	\$ 20,000							
320	2022	Network Advanced Metering Infrastructure Support	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	BCD-ID-22-011	Actuals																							
321	2023	Network Advanced Metering Infrastructure Support	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	DAMN0001330	Level 3																							
322	2024	Network Advanced Metering Infrastructure Support	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	DAMN0001330	Level 2																							
323	2025	Network Advanced Metering Infrastructure Support	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	DAMN0001330	Level 2	The Network AAMI Support project sustains the network and connected devices that the Company uses to enhance and support the AAMI mesh. To meet the business requirements of maintaining the mesh, the Company will continue to annually replace components as they reach end-of-life. This prudent investment ensures that AAMI Owners have the required backend infrastructure to provide send real time energy utilization data for bill analysis and billing.	This prudent investment ensures that AAMI meters have the required backend infrastructure to provide send real time energy utilization data for bill analysis and billing. This investment is in direct support of the Company's Distribution Grid Plan regarding telecommunications no regrets investment.	While there are alternative technological solutions available, this would require a change of the existing AAMI meter strategy resulting in loss of millions of dollars in capital cost. The Company ultimately opposes a do-nothing alternative. If we were to halt or reduce the efforts described in this investment, we could experience loss of customer data, directly impacting generation. Additionally, instead of remotely viewing the status of the AAMI meters, the Company would be required to send a field service team to evaluate and follow up with manual resolution further increasing costs, lowering customer satisfaction, and reducing response capabilities in the case of an outage.	Not Applicable	This only applies to hardware, therefore does not require any cloud computing effort.	Yes	1/2/2025	12/31/2025	\$ 2,399,347	\$ 2,200,000	\$ 248,211	\$ 660,000	\$ 992,683	\$ 299,106	\$ 195,947	\$ 195,947							
324	2022	Network Data Center End of Life Project	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	BCD-ID-22-019	Actuals																							
325	2023	Network Data Center End of Life Project	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	DAMN0001331	Level 3																							
326	2024	Network Data Center End of Life Project	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	DAMN0001331	Level 2																							
327	2025	Network Data Center End of Life Project	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	DAMN0001331	Level 2	This effort will replace data-center core switches, routers, and include the installation of new components to allow the Company to increase the connection bandwidth between its two data centers.	Ensures that the work demand of the business meets their requirements for the processing of user enterprise data transference. This effort will improve asset health by replacing end of life devices in order to ensure security and capability. Thus, ensuring more reliable, robust and secure networks.	The do-nothing alternative was rejected as this would increase the likelihood of system and operational downtime, causing interruption to normal business operations.	Not Applicable	This project involves maintaining the DTE Datacenters therefore cloud solution is not required.	Yes	1/2/2025	12/31/2025	\$ 490,000	\$ 450,000	\$ 91,850	\$ 259,722	\$ 98,428	\$ 40,000	\$ 40,000								
328	2022	Network End of Life Electric	Return to Health	Electric	Infrastructure Operations	Pankaj Sharma	BCD-ID-22-018	Actuals																							
329	2023	Network End of Life Electric	Return to Health	Electric	Infrastructure Operations	Pankaj Sharma	DAMN0001332	Level 3																							
330	2024	Network End of Life Electric	Return to Health	Electric	Infrastructure Operations	Pankaj Sharma	DAMN0001332	Level 3																							
331	2025	Network End of Life Electric	Return to Health	Electric	Infrastructure Operations	Pankaj Sharma	DAMN0001332	Level 3	This project is an ongoing program to replace EOL network hardware that is not physically located in either of the corporate data centers.	Ensures that the work demand of the business meets their requirements for the processing of user enterprise data transference.	The do-nothing alternative would have us not complete the refresh for core components as they reach the serviceable end-of-life. This was rejected as it would increase system and workforce demand and cause interruption to normal business operations and increase unplanned outages due to network device failures.	Not Applicable	This project involves replacing end of life network assets, therefore no cloud solution is required for this effort.	Yes	1/2/2023	12/31/2025	\$ 700,000	\$ 700,000	\$ 118,566	\$ 441,696	\$ 139,739	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
332	2022	Security Infrastructure Growth and EOL	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	BCD-ID-22-002	Actuals																							
333	2023	Security Infrastructure Growth and EOL	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	DAMN0001315	Level 3																							
334	2024	Security Infrastructure Growth and End of Life	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	DAMN0001315	Level 2																							
335	2025	Security Infrastructure Growth and End of Life	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	DAMN0001315	Level 2	This ongoing program covers annual investment replacing 15% to 20% of security infrastructure equipment.	This project will provide a 5% reduction in the frequency and duration of unplanned outages in systems based on historical reductions.	A "do nothing" alternative is not acceptable as unmitigated cyber risks could lead to financial and data loss implications.	Not Applicable	LM&M Expense	Yes	1/1/2023	12/31/2025	\$ 3,400,000	\$ 1,400,000	\$ 154,994	\$ 104,700	\$ 958,172	\$ 182,134	\$ 2,000,000	\$ 2,000,000							
336	2023	Wide Area Network and Wireless Local Area Network Expansion	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	BWIN00001732	Level 3																							
337	2024	Wide Area Network and Wireless Local Area Network Expansion	Return to Health	Shared	Infrastructure Operations	Pankaj Sharma	BWIN00001732	Level 2																							

[illegible]

355	2024	Data Power Replacement Phase 2	Strategic	Shared	Infrastructure Operations	Pankaj Sharma	DMND0001645	Level 2	This project will move current functionality away from physical data centers and into the cloud—specifically Microsoft application proxy in the Azure cloud. The project will replace Data Power infrastructure capabilities for the targeted applications with an optimal solution including reverse proxy provision as well as identity provider capabilities.	The benefits of this investment support customer experience, due to the growth in customer usage of the external facing applications, there is a need to implement this cloud solution. Failure to do so could increase customer complaints by 10% due to performance issues in key applications as monitored through help desk tickets and tickets to the Infrastructure Operations Center. For internal users, we anticipated a targeted reduction of 10% from them. This would not be an application issue, experienced by DTE employees (*10,000) (measured through helpdesk tickets).	A "do nothing" alternative would result in an elevated risk level for the Company's applications due to the complexity of the DMZ and the level of expertise required to maintain them. This would not be an application issue, experienced by DTE employees for the Company.	Yes - so/n is Market Based Commodity or Supporting Capability (non-cord) and will use public cloud	This is a Cybersecurity project.	Yes	1/3/2024	12/22/2024	\$ 691,148	\$ 650,654	\$ 122,055	\$ 528,599	\$ -	\$ -	\$ -	\$ 40,494	\$ 22,494	\$ 18,000	\$ -	\$ -	\$ -		
356	2022	Digital Infrastructure and Services	Strategic	Shared	Infrastructure Operations	Pankaj Sharma	DMND0002356	Actuals																							
357	2022	DTE Private Cloud Infrastructure as a Service	Strategic	Shared	Infrastructure Operations	Pankaj Sharma	BCD-IT-22-021	Actuals																							
358	2023	DTE Private Cloud Infrastructure as a Service	Strategic	Shared	Infrastructure Operations	Pankaj Sharma	DMND0001356	Level 3																							
359	2024	Endpoint Operating System and Hardware Upgrade	Strategic	Shared	Infrastructure Operations	Pankaj Sharma	DMND0001855	Level 2																							
360	2025	Endpoint Operating System and Hardware Upgrade	Strategic	Shared	Infrastructure Operations	Pankaj Sharma	DMND0001855	Level 2	This three-year project further supports the strategic direction to upgrade to Windows 11 for the entire organization across roughly 10,000 devices	The benefits of this investment are Windows 11 has reported 99.8 % crash free experience for end users and ensures the future operating systems for all 10,000 users within the Company upon Windows 10 end-of-life in 2025.	There are no alternatives identified at this time. DTE has identified the Microsoft platform which directs our operating system selection and support. It is incumbent that DTE use the best up to date operating systems and hardware requirements to be compliant with the platform.	Not Applicable	This is not a cloud solution or activity.	Yes	1/3/2024	12/22/2025	\$ 4,395,545	\$ 4,099,528	\$ 46,000	\$ 103,000	\$ 3,728,000	\$ -	\$ 232,528	\$ 296,017	\$ 272,617	\$ 23,400					
361	2022	Enterprise Monitoring Strategy Implementation	Strategic	Shared	Infrastructure Operations	Pankaj Sharma	BCD-IT-22-007	Actuals																							
362	2023	Enterprise Monitoring Strategy Implementation	Strategic	Shared	Infrastructure Operations	Pankaj Sharma	BCD-IT-22-007	Level 3																							
363	2024	External Secure File Transfer Replacement	Strategic	Shared	Infrastructure Operations	Pankaj Sharma	DMND0001641	Level 2																							
364	2025	External Secure File Transfer Replacement	Strategic	Shared	Infrastructure Operations	Pankaj Sharma	DMND0001641	Level 2																							
365	2023	Firewall Threat Protection	Strategic	Shared	Infrastructure Operations	Pankaj Sharma	DMND0001746	Level 3																							
366	2024	Firewall Threat Protection	Strategic	Shared	Infrastructure Operations	Pankaj Sharma	DMND0001746	Level 2																							
367	2023	Mobile Device Management (MDM)	Strategic	Shared	Infrastructure Operations	Pankaj Sharma	DMND0001720	Level 3																							
368	2024	Mobile Device Management (MDM)	Strategic	Shared	Infrastructure Operations	Pankaj Sharma	DMND0001720	Level 2																							
369	2022	Network Operations Center (NOC) Automation Project	Strategic	Shared	Infrastructure Operations	Pankaj Sharma	BCD-IT-22-002	Actuals																							
370	2023	Network Operations Center (NOC) Automation Project	Strategic	Shared	Infrastructure Operations	Pankaj Sharma	BCD-IT-22-002	Level 3																							
371	2024	Storm Cloud	Strategic	Electric	Infrastructure Operations	Pankaj Sharma	DMND0003227	Level 2	In 2024, the Company will build a 3 layer architecture design for all storm related applications in Azure cloud to improve security, scalability, and resiliency. Base Layer: this layer provides foundational services such as identity, security, networking, and logging. Subsequent layers inherit the policies set here. Currently, no global policy is enforced, which leads to a multitude of designs that are difficult to control and administer. Most apps will inherit one base layer which creates more consistent control and enforcement due to fewer control points. Landing Zones: A set of isolated accounts with baseline shared services such as Identity Management (IAM) and network isolation as well as app development frameworks and policies using Policy as Code (PoC) principles. The layer creates boundaries between environments such as production and non-production and enforces compliance requirements such as PCI or GDPR. Application Patterns: A set of code artifacts that automate the secure, compliant, and standardized configuration & deployment of applications that have similar functional and non-functional requirements using Infrastructure as Code (IaC). Used by application developers to deploy in a consistent way. This will reduce up-front developer work while providing flexibility through standardized patterns that can be adapted to specific use cases.	This project targets to increase uptime and overall reliability for cloud-based apps by at least 10% and (continued) reduce storm application incident ticket generation during outages. Customer Service incidents and future changes or load related to technology such as cloud-based customer facing apps will increase applications will be significantly reduced. This effort targets a reduction in the number of technology related incident tickets opened by customers during storm season outages. Customers have complained about application related issues, and this solution will reduce technology related customer complaints by at least 20% during storm seasons. The cloud infrastructure will be more stable, resulting in reduction of internal incident tickets between internal teams due to downtime.	An alternative would be to "Do nothing" which would result in increased risk of system outages in terms of duration and severity and future changes or load related to technology such as cloud-based customer facing apps will increase applications will be significantly reduced. This effort targets a reduction in the number of technology related incident tickets opened by customers during storm season outages. Customers have complained about application related issues, and this solution will reduce technology related customer complaints by at least 20% during storm seasons. The cloud infrastructure will be more stable, resulting in reduction of internal incident tickets between internal teams due to downtime.	Yes - so/n is Industry Specific (core) capability - will use public cloud per strategy requirements	No	1/3/2024	12/31/2024	\$ 9,999,998	\$ 9,999,998	\$ 2,923,287	\$ 32,100	\$ 2,866,666	\$ 4,177,945	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
372	2025	Storm Cloud	Strategic	Electric	Infrastructure Operations	Pankaj Sharma	DMND0003227	Level 2	In 2025, the Company will align storm critical applications in the cloud to the new approach. This cloud initiative will initially identify the cloud-relevant components of storm critical apps and identify the work, if any, needed to ensure they are in a more scalable and reliable architecture. Over the course of this initiative, this effort will remediate a subset of the most critical issues identified above and create a roadmap for addressing the other issues. In addition, the cloud foundation efforts will ensure the new capabilities being created to support storm activities will be built on a scalable and reliable architecture and can be deployed quickly using Infrastructure-as-code (IaC) for standardized patterns. It is through this combination of approaches that this initiative will "meaningfully moving the needle" in the near-term, in the long-term, beyond just storm activities, the cloud foundations will help DTE get the full benefit of adopting cloud. Finally, this effort will have significant "spillover" benefit for DTE beyond an enhanced storm performance; this will help DTE IT "leap frog" to a more modern, flexible IT organization and architecture utilizing the Cloud.	Please see line 373 above.	Please see line 373 above.	Yes - so/n is Industry Specific (core) capability - will use public cloud per strategy requirements	No	1/2/2025	12/31/2025	\$ 5,999,999	\$ 5,999,999	\$ 1,508,111	\$ 15,900	\$ 701,378	\$ 3,774,610	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
373	2024	Enterprise Data Platform Application Health	Sustainment	Shared	Enterprise Data Analytics	Pankaj Sharma	DMND0001299	Level 2	The Enterprise Data Platform Application Health project is primarily to secure layer commitments for licenses and Azure services which allows for reduced costs over the pay-as-you-go pricing. On average, the Company will save 60% by reserving the use of Azure spots for a three-year period. As the cloud-based data platform grows we can add additional reservations each year to take advantage of more savings.	Process Efficiency: We anticipate significant benefits to be gained by enabling one datasets in near real-time or batch from a centralized platform via APIs and microservices. This pattern will eliminate data silos and improve data consistency, accuracy, timeliness, and data availability for our business partners. The benefit/value comes when the business uses the data to analyze and answer business questions, and provide metrics to solve business problems. Add new environment and foundational capabilities to support incoming requests from the business regarding unstructured data. AI (Artificial Intelligence) and ML (Machine Learning)	"Do nothing" alternative was rejected because the Enterprise Data Platform will not be able to support the right mix of the applications being unstructured and was rejected.	Yes - so/n is Market Based Commodity or Supporting Capability (non-cord) and will use public cloud	Microsoft Azure is not industry specific and in alignment with cloud computing technology strategy.	Yes	1/2/2024	12/31/2024	\$ 1,872,189	\$ 1,561,789	\$ 68,980	\$ 672,667	\$ 716,667	\$ -	\$ 103,476	\$ 310,400	\$ 308,000	\$ 2,400	\$ -	\$ -	\$ -	\$ -	
374	2025	Enterprise Data Platform Application Health	Sustainment	Shared	Enterprise Data Analytics	Pankaj Sharma	DMND0001299	Level 2	Please see line 375 above.	Please see line 375 above.	Please see line 375 above.	Please see line 375 above.	Yes	1/2/2025	12/31/2025	\$ 1,859,753	\$ 1,556,526	\$ 65,917	\$ 672,667	\$ 716,667	\$ 103,476	\$ 301,227	\$ 300,027	\$ 1,200							
375	2022	Advance and Enhance the Enterprise Data Platform	IT Enhancements	Shared	Enterprise Data Analytics	Pankaj Sharma	BCD-EDA-22-001	Actuals	In 2022, this project insured the \$3.5 million related to Enterprise Data Platform Application Health licenses (Azure, vls, Reservations) and services renewal and supporting labor.	Productivity and efficiency with data reporting and analytics across utilizing business units.	Alternative would be to "Do nothing" and would result in the applications being unstructured and was rejected.	Yes - validation is a Market Based Commodity or Supporting Capability (non-cord) and will use the public cloud	Microsoft Azure is not industry specific and in alignment with cloud computing technology strategy.	Yes	1/2/2022	12/31/2022	\$ 5,520,551	\$ 5,520,551	\$ 202,462	\$ 1,785,298	\$ 3,160,354	\$ -	\$ 372,037	\$ -	\$ -	\$ -	\$ -				
376	2023	Advance and Enhance the Enterprise Data Platform	IT Enhancements	Shared	Enterprise Data Analytics	Pankaj Sharma	BCD-EDA-22-001	Level 3	In 2023, which was not included in U-21297, this project added the capability to bring near real-time data to support both operational and historical analytics use cases (projects CDOO and AODMS). Additionally, this project developed and implemented a data catalog and historical analytics use cases. These additional capabilities will enable quicker response time to customer queries, improved decision making, and increased satisfaction. Additionally, DTE was responsible for the 2023 Azure cost for all the business units using Azure Cloud.	Please see line 378 above.	Please see line 378 above.	See line 378 above.	See line 378 above.	Yes	1/2/2023	12/31/2023	\$ 4,660,292	\$ 3,999,891	\$ 329,647	\$ 1,586,936	\$ 1,790,030	\$ -	\$ 293,258	\$ 660,401	\$ 354,033	\$ 306,368	\$ -	\$ -	\$ -		
377	2022	Applied Innovation	Strategic	Shared	Innovations	Pankaj Sharma	BCD-EA-20-002	Actuals	Please see U-21534 Sharma Testimony for the detailed scope	1) DDO leadership pool productivity improves by approximately 83 hours daily by ability to view and process the same data from a single application page in 10 minutes or less 2) SCADA device deployment: 3000 devices approximately 15 minutes per request versus 45,000 minutes (750 hours). This also saves 10% manual entry errors, preventing 300 errors for 3000 devices.	"do-nothing" approach was rejected since the company will lose the ability to rapidly evaluate and respond to a new business challenges efficiently.	Not applicable	Scope for Applied Innovation is to identify technology for use and execute experiments to test. Each solution that is ultimately implemented will be considered against the cloud strategy.	Yes	1/2/2022	12/31/2022	\$ 3,121,643	\$ 2,789,196	\$ 123,705	\$ 2,407,009	\$ 16,000	\$ -	\$ 242,681	\$ 332,247	\$ 296,842	\$ -	\$ (1,454)	\$ 16,860	\$ -		

Line No.	Spend Year	Business Case / Project Name	Investment Category	Shared Asset or Electric Only (if applicable)	IT Portfolio/Program	Witness (if multiple)	BCD ID	Cost Estimate Level (if applicable)	Project Synopsis	Value/Benefit	Alternatives Considered including cloud services	Aligned with cloud computing technology strategy?	Please supply an explanation on cloud computing alignment	Equipment involved and refresh live (if applicable)	Project Start Date	Project End Date	Expected Total Project Cost (Capital + Investment O&M)	Total Projected IT Cost (Capital) U-2134	Projected Labor Cost (Capital)	Projected Capital Non-Labor Cost	Projected Capital Non-Labor Cost	Projected Capital Non-Labor Cost	Projected Overhead & Other Costs (Capital)	Projected Total IT O&M Cost	Projected O&M Labor Costs	Projected O&M Non-Labor Costs	Projected O&M Non-Labor Costs	Projected O&M Non-Labor Costs	Projected O&M Non-Labor Costs	Projected Overhead & Other Costs					
1	2022	ACRP/Time of Day	Regulator/Compliance	Electric Only	Customer Service	Michael J Ratios	BCD-CS-22-029	Actuals					Approved in U-21297																						
2	2023	ACRP/Time of Day	Regulator/Compliance	Electric Only	Customer Service	Michael J Ratios	DMN000021297	Level 3					Approved in U-21297																						
3	2022	Advanced Analytics AA Use Cases Implementation	IT Enhancements	Shared	Customer Service	Michael J Ratios	BCD-CS-21-005	Actuals	The 2022 - 2025 Advanced Analytics Use Cases leverages advanced analytics, machine learning and other data science techniques and technologies in specific use cases described in testimony to derive greater insight into customer segments, behaviors, and pain points, to understand the drivers of customer satisfaction, and support reduction in O&M costs and uncollectible expense (UCX) or to capture operational efficiencies that improve the effectiveness of our processes and key transactions. The Advanced Analytics models, modeling dataset and features, and data pipelines will be developed and deployed for the specific use cases and the models' outputs will be deployed and operationalized by integrating the models' outputs with our CRM system or other customer systems, and deploying the models and data pipelines in production, mostly in our OTS cloud platform.	The 2022 AA use cases provided insight into customer segments, behaviors and how to optimize collection agency spend in reducing growth in customer arrears.	No alternatives to developing the advanced analytics models were considered due to the significant amount of data and data engineering that would be required to complete the use cases.	Yes - so/it's Industry Specific (core capability) - will use public cloud per strategy requirements	The solution is in alignment with Technology strategy for Cloud Computing	Yes	12/2/2022	12/31/2022	\$ 1,205,857	\$ 1,130,645	\$ 47,771	\$ 1,012,710	\$ 5,067	\$ -	\$ 65,097	\$ 75,212	\$ 11,223	\$ 63,988	\$ -	\$ -	\$ -	\$ -	\$ 1				
									There were two AA-use cases in 2022. Specific details on the use cases, including the capital spent and the benefit provided for each use case is described in testimony in the call reduction section.																										
4	2023	Advanced Analytics AA Use Cases Implementation	IT Enhancements	Shared	Customer Service	Michael J Ratios	DMN000021241	Level 3	Please see line 3 above. There was one AA use case in 2023 for which the funding supported to improve the automated categorization of calls. Specific details on the use cases, including the capital spent and the benefit provided for each use case is described in testimony in the call reduction section.	The 2023 AA use case to enhance and build upon our automated call categorization process is estimated to reduce ~30,000 calls cumulatively through 2027, providing O&M savings of ~\$340,000.	There were no alternatives considered for the 2023 use case to develop an analytics model that uses Natural Language Processing (NLP) technology to improve the accuracy with which customer calls are categorized, especially as it relates to those calls that would often have been manually categorized as "Other" by the CCR. There are also no other alternatives for integrating the analytics solution with our Customer CRM Billing system as it is the primary customer system	Yes - so/it's Industry Specific (core capability) - will use public cloud per strategy requirements	The solution is in alignment with Technology strategy for Cloud Computing	No	12/2/2023	12/31/2025	\$ 532,133	\$ 456,544	\$ 25,134	\$ 365,021	\$ 31,860	\$ -	\$ 32,528	\$ 75,589	\$ 5,134	\$ 66,344	\$ -	\$ -	\$ -	\$ -	\$ 4,112				
5	2024	Advanced Analytics AA Use Cases Implementation	IT Enhancements	Shared	Customer Service	Michael J Ratios	DMN000021401	Level 2	Please see line 3 above. There are two AA use cases in 2024 for which the funding supports. Specific details on the use cases, including the capital spent and the benefit provided for each 2024 use case is described in testimony in the call reduction and operational efficiency sections.	The 2024 AA use case to analyze touchpoints in customer transactions to identify reasons why customer call or call-in to our digital self-service transactions is estimated to reduce 17,500 calls in 2024 through 2025 and provide ~\$200,000 in O&M savings. The 2024 use case to utilize machine learning to match eligible low-income customers with energy assistance funding and EWR is estimated to provide ~\$300,000 in UCR savings in 2024 through 2025.	There are no alternatives being considered for the 2024 use case to develop an advanced analytics model using natural language processing to enhance categorization of calls and reduce calls from the other bucket from 2023-2027. There are no other alternatives for integrating the analytics solution with our Customer CRM Billing system as it is the primary customer system	Yes - so/it's Industry Specific (core capability) - will use public cloud per strategy requirements	The solution is in alignment with Technology strategy for Cloud Computing	No	12/2/2023	12/31/2025	\$ 2,201,783	\$ 2,000,001	\$ 9,507	\$ 1,877,850	\$ -	\$ -	\$ 112,644	\$ 101,786	\$ 1,482	\$ 95,300	\$ 5,000	\$ -	\$ -	\$ -	\$ 5				
6	2025	Advanced Analytics AA Use Cases Implementation	IT Enhancements	Shared	Customer Service	Michael J Ratios	DMN000021241	Level 2	Please see line 3 above. There are two AA use cases in 2025 for which the funding supports. Specific details on the use cases, including the capital spent and the benefit provided for each use case is described in testimony in the operational efficiency section.	The 2025 use case to understand the drivers of Customer Service MPCSC complaints and anticipate customer pain points and frustration to proactively resolve customer issues and concerns is estimated to reduce ~110 or 15% of Customer Service MPCSC complaints (based on 2023 data) over a five year period starting in 2025 through 2030, and provide operational efficiency by effectively improving customer processes or transactions that lead to customer complaints. The 2025 use case to automate the transcription of CR notes for 30% of annual calls is estimated to provide ~\$200,000 in UCR savings in 2024 through 2025.	There are no alternatives being considered for the 2025 use case to develop an advanced analytics model to understand the drivers of Customer Service MPCSC complaints. The alternative of the 2025 use case to automate CR notes is to leave the current process as it is which unnecessarily adds hand time to 30% of all calls.	Yes - so/it's Industry Specific (core capability) - will use public cloud per strategy requirements	The solution is in alignment with Technology strategy for Cloud Computing	No	12/2/2023	12/31/2025	\$ 3,284,744	\$ 3,009,198	\$ 8,890	\$ 2,887,665	\$ -	\$ -	\$ 112,643	\$ 375,546	\$ 1,359	\$ 374,188	\$ -	\$ -	\$ -	\$ -	\$ -				
7	2023	Automated Application Monitoring Enhancement	IT Enhancements	Shared	Customer Service	Michael J Ratios	BCD-CS-22-015	Actuals					Approved in U-21297																						
8	2023	Automated Application Monitoring Enhancement	IT Enhancements	Shared	Customer Service	Michael J Ratios	DMN000021482	Level 3					Approved in U-21297																						
9	2025	Automated Application Monitoring Enhancement	IT Enhancements	Shared	Customer Service	Michael J Ratios	DMN000021482	Level 2	2024 scope has been re-viewed to 2025. While we have implemented the Solution Manager application, the monitoring tool is to be expanded to provide broader coverage of business process applications and the performance of the CRM8 systems. Expanded capabilities to be implemented during the bring and test periods include enabling 100 interface monitoring (100 currently), adding 10 more jobs to job monitoring (10 jobs currently), 10 additional user experience monitoring of transactions (in jobs being monitored today), 10 more business process / intelligence monitoring (38 currently), and providing an alert and sending a notification when comparing power/performance is low for supporting these processes. The 2025 project will complete the originally approved scope, and expands the scope to include implementation of the Focus Built, Focus Insights, and Customer Code Management modules.	The customer or employee value is configuration and deployment to align application performance with business operations, resulting in reduced unplanned down-time.	The monitoring enhancements provided by this project also are expected to improve the SAP CRM8 system's uptime by reducing the time to monitor unplanned system outages after they are detected. The system's uptime is expected to improve by 20% if resources working eight hours with the system and implement them after the system is back up. These same resources then spend a minimum of the next eight hours monitoring the system after the system is restored to ensure it is stable. By implementing the additional monitoring features and coverage of key processes, transactions and interfaces, the automated monitoring based on rules and thresholds reduces valuable IT resource time to monitor the system after restoring.	A "do nothing" alternative is not in scope because this is an ongoing effort for business management.	No	12/2/2023	12/31/2025	\$ 925,000	\$ 895,000	\$ 10,986	\$ 839,000	\$ -	\$ -	\$ 45,014	\$ 30,000	\$ 2,964	\$ 27,036	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
10	2022	Bill Management	Strategic	Shared	Customer Service	Michael J Ratios	BCD-CS-21-058	Actuals	In 2021, the Company launched a new online bill analyzer that consists of two components, a bill impact analyzer and a bill simulator, that together provide customers with an estimate of those items that impacted their current bill – usage, weather, billing days – along with the ability to simulate their next bill based on usage forecasts, and the impact of any usage reductions they could realize by changing their behavior. The Commission, in its final order in Case No. U-20836, approved for recovery \$2.6 million in capital for the implementation of this new "Bill Management" tool, as reflected in Exhibit A-34, Schedule No. Page 1, line 5. The Company invested an additional \$3.4 million in the Bill Management tool in 2022 to address identified defects, to continue to enhance the experience, and to incorporate the ability for the tool to effectively analyze and simulate Time of Day (TOD) bills, to support the TOD project to go live in March of 2023.	In 2022, customers completed over 6.2 million Billing Transactions, with 5.5 million completed in a digital solution (89% DCR), and 0.68 million completed through a CR call. In 2023, total completed Billing transactions increased to 6.8 million, however, the number of transactions completed in a self-service solution increased to 6.3 million (92% DCR), while those completed through a CR decreased to 0.55 million. This implies that while customer Billing inquiries increased in 2023 due to the TOD implementation, significant numbers of those customers chose to engage in a digital solution to handle their inquiries. In fact, in 2023, over 213,500 customers accessed the Company's online bill management tool, over 483,300 times, to get answers to their questions about their bill. Will enable the results achieved to-date, the Company is forecasting that historical and planned investments in the Billing digital self-service solutions will increase the Billing DCR to 94% by 2027, will enable a cumulative decrease of 244,000 calls (2023-2027), and will provide customers with a net cumulative \$2.8 million in O&M savings (2023-2027).	No alternative to the Bill Management Tool was considered as the 2023 project enhanced or supported Capability (non-core) and will not use the public cloud	Yes	2/2/2022	12/1/2022	\$ 5,195,715	\$ 3,419,189	\$ 62,896	\$ 2,414,021	\$ 793,790	\$ -	\$ 148,483	\$ 1,776,526	\$ 10,372	\$ 4,954	\$ -	\$ 1,763,400	\$ -								
11	2023	Billing Web Self-Service	Strategic	Shared	Customer Service	Michael J Ratios	DMN00002368	Level 3	The 2023 Billing Web Self-Service project scope was reduced since U-21297 and hence, the lower capital to focus on remaining defects related to the TOD implementation, integrating any updates required due to the enhancement of the Bill Management Tool in 2022 that also supported the TOD implementation, and enhancements to the digital self-service solution that enabled customers to effectively complete their self-service Billing inquiries. As noted in testimony, we saw a significant increase in Billing inquiries as compared to 2022 which increased the Billing DCR to 92% in 2023 thereby, deflecting calls and supporting customers to engage with us in their channel of choice for their Billing questions.	In 2022 customers completed over 6.2 million Billing transactions, with 5.5 million completed in a digital solution (89% DCR), and 0.68 million completed through a CR call. In 2023, total completed Billing transactions increased to 6.8 million, however, the number of transactions completed in a self-service solution increased to 6.3 million (92% DCR), while those completed through a CR decreased to 0.55 million. This implies that while customer Billing inquiries increased in 2023 due to the TOD implementation, significant numbers of those customers chose to engage in a digital solution to handle their inquiries. In fact, in 2023, over 213,500 customers accessed the Company's online bill management tool, over 483,300 times, and over 113,700 customers used the Company's high bill inquiry VA over 159,300 times, to get answers to questions about their bill.	Maintaining the web transactions on the existing platform and not migrate them to the cloud. Minor improvement if any in completion rates, digital engagement rates, and call deflection opportunity. Limited options for customers to interact or customers to interact in their channel of choice.	Yes - so/it's Market Based Commodity or Supporting Capability (non-core) and will use public cloud	Billing Web is a non-core capability and is being deployed to the public cloud in alignment with the strategy.	No	12/2/2023	12/31/2024	\$ 600,932	\$ 600,932	\$ -	\$ 573,000	\$ (54)	\$ 27,987	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
12	2024	Billing Web Self-Service	Strategic	Shared	Customer Service	Michael J Ratios	DMN00002368	Level 2	In parallel with the migration of the Billing Web Transactions to a new cloud platform, the 2024 project will fund the implementation of a new Billing Web UX/UI experience. This new experience will incorporate the impacts and emerging learnings from the implementation of the TOD rates, and will streamline the customer's overall Billing experience, particularly in regard to the information they see when they login to the O&M website. Today, when customers login to their online account, prominently displayed to them is their current bill amount due and a link to pay. To enhance the customer's billing experience, the web UI will more prominently display for customer comparisons of their current bill prior bills, their usage patterns, and opportunities to reduce usage and save money, which will be supported by ongoing minor enhancements to the Bill Management tool.	Given the results achieved to-date, the Company is forecasting that its historical and planned investments in the Billing digital self-service solutions will increase the Billing DCR to 94% by 2027, will enable a cumulative decrease of 244,000 calls (2023-2027), and will provide customers with a net cumulative \$2.8 million in O&M savings (2023-2027).	Maintaining the web transactions on the existing platform and not migrate them to the cloud. Minor improvement if any in completion rates, digital engagement rates, and call deflection opportunity. Limited options for customers to interact or customers to interact in their channel of choice.	Yes - so/it's Market Based Commodity or Supporting Capability (non-core) and will use public cloud	Billing Web is a non-core capability and is being deployed to the public cloud in alignment with the strategy.	No	12/2/2023	12/31/2024	\$ 1,085,000	\$ 888,000	\$ 355,702	\$ 562,930	\$ -	\$ -	\$ 171,969	\$ 197,000	\$ 9,063	\$ 187,037	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
13	2023	Collection Web Self-Service	Strategic	Shared	Customer Service	Michael J Ratios	DMN00002367	Level 3	The capital allocated to the Collection digital self-service solutions is intended to enhance the Company's existing Collection digital solutions, and to expand the number of available digital solutions such as: • Increase Collection DCR and DCR by addressing defects and cumbersome process flows in the digital solutions that are preventing customers from successfully completing their digital transaction (2022-2023). • Provide customers the ability to process a restore of service on the Web (February 2023). • Provide customers the ability to enroll in a payment extension hold on the Web (August 2023). • Provide customers the ability to check on the status of an account lock on the Web for the status of payment extension holds, medical holds, pending energy assistance funding, and pending income status verifications (October 2023).	In terms of call volume reductions, while 2023 Collection call volumes are not materially different than they were four or five years ago, they have been reduced by 50,000 relative to 2022 (figure 5). This is despite an 11% increase in the number of active low-income customers versus 2022, a 28% increase in the number of low-income customers who reached final arrears status, a 15% reduction in available Energy Assistance (EA) funding, and an increase in shut-off notices from 1.3 million to 2.1 million.	The Collection transactions available through self-service would be limited to only the IVR, keeping the DCR rate at 16%. Minor improvement if any in completion rates, digital engagement rates, and call deflection opportunity. Limited or less-desirable (does not meet customer's needs) options for customers to interact in their channel of choice.	Yes - so/it's Market Based Commodity or Supporting Capability (non-core) and will use public cloud	Collections Web is a non-core capability and is being deployed to the public cloud in alignment with the strategy.	No	12/2/2023	12/31/2024	\$ 2,379,363	\$ 2,379,363	\$ 322,000	\$ 1,840,000	\$ 250	\$ -	\$ 208,113	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
									Together, these factors would be expected to significantly increase the volume of Collection calls, especially for general inquiries and inquiries related to EA funding. The Company maintains that the expected increase in Collection inquiry calls, was mitigated by a reduction in the number of calls from customers who chose to use a digital solution to restore service, to enroll in a payment agreement, or to check on the status of an account hold.	Given the results achieved to-date from the Collection digital self-service capital investments, the Company is forecasting that its historical and planned investments in the Collection digital self-service solutions will increase the Collection DCR to 48% by 2027, will enable a cumulative decrease of 343,600 calls (2023-2027), and will provide customers with a cumulative \$3.9 million in O&M savings (2023-2027).																									
14	2024	Collection Web Self-Service	Strategic	Shared	Customer Service	Michael J Ratios	DMN00002367	Level 2	The capital allocated to the Collection digital self-service solutions is intended to enhance the Company's existing Collection digital solutions, and to expand the number of available digital solutions such as: • Increase Collection DCR and DCR by addressing defects and cumbersome process flows in the digital solutions that are preventing customers from successfully completing their digital transaction (2024-2025). • Expanding restore and payment extension eligibility to include more customers (2024-2025). • Provide the ability for customers to enroll in a payment arrangement on Web to pay their past due amount over time (May/June 2024). • Provide customers with new online assistance tools that will guide customers who are having difficulty paying their bills, the most appropriate payment solutions, and sources of energy assistance (2024-2025).	In terms of call volume reductions, while 2023 Collection call volumes are not materially different than they were four or five years ago, they have been reduced by 50,000 relative to 2022 (figure 5). This is despite an 11% increase in the number of active low-income customers versus 2022, a 28% increase in the number of low-income customers who reached final arrears status, a 15% reduction in available Energy Assistance (EA) funding, and an increase in shut-off notices from 1.3 million to 2.1 million.	The Collection transactions available through self-service would be limited to only the IVR, keeping the DCR rate at 16%. Minor improvement if any in completion rates, digital engagement rates, and call deflection opportunity. Limited or less-desirable (does not meet customer's needs) options for customers to interact in their channel of choice.	Yes - so/it's Market Based Commodity or Supporting Capability (non-core) and will use public cloud	Collections Web is a non-core capability and is being deployed to the public cloud in alignment with the strategy.	No	12/2/2023	12/31/2024	\$ 4,208,000	\$ 3,409,000	\$ 419,982	\$ 2,431,128	\$ -	\$ -	\$ 557,889	\$ 799,000	\$ 18,013	\$ 780,987	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
15	2025	Collection Web Self-Service	Strategic	Shared	Customer Service	Michael J Ratios	DMN00002720	Level 2	Please see line 14 above.	Please see line 14 above.	The Collection transactions available through self-service would be limited to only the IVR, keeping the DCR rate at 16%. Minor improvement if any in completion rates, digital engagement rates, and call deflection opportunity. Limited or less-desirable (does not meet customer's needs) options for customers to interact in their channel of choice.	Yes - so/it's Market Based Commodity or Supporting Capability (non-core) and will use public cloud	Collections Web is a non-core capability and is being deployed to the public cloud in alignment with the strategy.	No	1/6/2025	12/19/2025	\$ 2,201,358	\$ 2,001,358	\$ 200,000	\$ 1,500,000	\$ -	\$ -	\$ 301,358	\$ 200,000	\$ 20,000	\$ 180,000	\$ -	\$ -	\$ -	\$ -					
16	2023	Contact Center Enablement	Strategic	Shared	Customer Service	Michael J Ratios	DMN00002370	Level 3					Approved in U-21297																						
17	2024	Contact Center Enablement	Strategic	Shared	Customer Service	Michael J Ratios	DMN00002370	Level 2					Approved in U-21297																						

Line No.	Spend Year	Business Case / Project Name	Investment Category	Shared Asset or Electric Only (if applicable)	IT Portfolio/Program	Witness (if multiple)	BCD ID	Cost Estimate Level (if applicable)	Project Synopsis	Value/Benefit	Alternatives Considered including cloud services	Aligned with cloud computing technology strategy?	Please supply an explanation on cloud computing alignment	Equipment involved and refresh fee (if applicable)	Project Start Date	Project End Date	Expected Total Project Cost (Capital + Investment O&M)	Total Projected IT Cost (Capital) U-21534	Projected Labor Cost (Capital)	Projected Capital Non-Labor Cost Contractor	Projected Capital Non-Labor Cost Materials	Projected Capital Non-Labor Cost Software	Projected Overhead & Other Costs (Capital)	Projected Total IT O&M Costs	Projected O&M Labor Costs	Projected O&M Non-Labor Costs Contractor	Projected O&M Non-Labor Costs Materials	Projected O&M Non-Labor Costs Software	Projected O&M Overhead & Other Costs		
18	2025	Contact Center Enablement	Strategic	Shared	Customer Service	Michael J Hattis	DMND00001729	Level 2	The Company has committed to reducing Contact Center call volume to first quartile levels by 2027 which translates into a reduction of 1.53 million calls from 2022 call volume levels. This project supports the achievement of this goal by providing funding for SAP IT enhancements in CRM that improve the operational efficiency of the Contact Center and SAP back-end work (not to be accounted for in another project. Customers and Contact Center will be provided with enabled services that would lead to call volume Deflection and Average Handle time (AHT) Reduction. The 2025 enhancements in CRM will also reduce AHT across the other key transactions.	Reducing AHT and repeat calls due to First Contact Resolution (FCR), which is a measure of the Company's ability to address a customer's request or inquiry, over the phone or in a digital channel, on the first try, without the customer having to reach out repeatedly, and thus, improving customer satisfaction. This project also supports the CSR to be more operationally efficient through presenting information in CRM more readily and making customer details more easily retrievable.	No alternatives. The risk of having no alternative is that Collection calls, together over time and across any of the transactions are not addressed.	Not Applicable	N/A	No	1/6/2025	12/31/2025	\$ 440,000	\$ 400,000		\$ 400,000					\$ 40,000	\$ 40,000	\$ -	\$ -	\$ -	\$ -	
19	2022	Corporate Energy Forecasting	Regulatory/Compliance	Electric Only	Customer Service	Michael J Hattis	BCD-CS-22-054	Actuals				Approved in U-21297																			
20	2022	Customer Closed Loop Development	Strategic	Shared	Customer Service	Michael J Hattis	BCD-CS-22-056	Actuals	The Customer Closed Loop Development project represents the framework for how the Company is enhancing the design of its customer interactions by providing customers with information and notifications in "Moments-that-Matter" (MTMM) which was described in detail in my testimony in Case No. U-21297. The Closed Loop Framework has also been foundational in creating the ability for the Company to track customer requests related to the key transactions from inception through fulfillment of the transaction. To accomplish this, the Company developed the "Where is My Order" (WISMO) application. The 2022 Closed Loop project leveraged the WISMO application and updated notifications to apply in Closed Loop framework to the MIMO and Collection transactions.	Closed Loop Notifications are expected to reduce customer calls and increase customer satisfaction and First Contact Resolution (FCR), which is a measure of the Company's ability to address a customer's request or inquiry, over the phone or in a digital channel, on the first try, without the customer having to reach out repeatedly.	No alternatives were considered as this Closed Loop investment made enhancements or leveraged the design of the WISMO (Where is my Order) tracker, which was developed in 2021.	Not Applicable	Solution aligns with corporate cloud and platform strategy.	Yes	1/2/2022	6/30/2022	\$ 314,142	\$ 314,142	\$ 136,592	\$ 94,860	\$ 474	\$ -	\$ 82,215	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
21	2023	Customer Closed Loop Development	Strategic	Shared	Customer Service	Michael J Hattis	DMND00001254	Level 3	In 2023, the Company expanded the Closed Loop Framework to the Billing and Payment transactions by developing notifications that provide customers greater visibility into their Billing and Payment interactions, to share with them clear and concise communications related to those interactions, and to provide them clickable links that would allow to track the status of these interactions in a digital self-service solution. All Billing notifications had an update component (i.e., SMS function added) or were newly developed in this project. The new Closed Loop notifications were added where the customer would benefit from more visibility into their billing transaction. One such update was with the Handle Due Date (HDD) Process with manual communications. This was addressed by automating all HDD communications via email or SMS. This notification's intent is to inform customers that their request for Free Due Date has been received and provide updates throughout the process (received, being reviewed, eligible, or ineligible). This level of visibility did not exist for customers before the project as it was being sent inconsistently. All Payment notifications were reviewed for completeness and accuracy in their messaging and to incorporate modern language as advised by Corporate Communications. New Closed Loop notifications were added where the customer would benefit from more visibility into their payment transaction such as for Autopay where there was not an email and SMS notification previously for Autopay withdrawals. The new Autopay notifications informed customers if the Autopay did not withdraw (for reasons described) and that a manual payment would be required. This visibility did not exist for customers before the project. Through our voice of the customer surveys, customers indicated that notifications were important for communicating completion and confirmation of their payment status.	Closed Loop Notifications are expected to reduce customer calls and increase customer satisfaction and First Contact Resolution (FCR), which is a measure of the Company's ability to address a customer's request or inquiry, over the phone or in a digital channel, on the first try, without the customer having to reach out repeatedly.	The alternative to this project is to fund the required enhancements from other projects to build out closed loop communications. This solution would be slower to implement, and would compete with other projects.	Not Applicable	Cloud Alignment is not applicable for the Project.	No	1/2/2023	12/1/2023	\$ 1,713,884	\$ 1,523,884	\$ 158,706	\$ 1,055,140	\$ 153,607	\$ -	\$ 156,431	\$ 190,000	\$ 91,958	\$ 83,811	\$ -	\$ -	\$ -	\$ -	\$ 14,231
22	2022	Customer Legacy Applications Enhancement	IT Enhancements	Shared	Customer Service	Michael J Hattis	BCD-CS-22-011	Actuals				Approved in U-21297																			
23	2023	Customer Legacy Applications Enhancement	IT Enhancements	Shared	Customer Service	Michael J Hattis	BCD-CS-22-011	Level 3				Approved in U-21297																			
24	2024	Customer Notifications - TCPA Compliance	Regulatory/Compliance	Shared	Customer Service	Michael J Hattis	DMND00002984	Level 2	Telephone Consumer Protection Act (TCPA), a federal regulation enacted in 1991 was amended and expanded in 2023 to include SMS/text messages sent to a customer. The regulation includes guidelines on what constitutes a marketing communication versus necessary account communication. Heavy fines are applied per instance of non-compliance. With our established automated notifications program, we need to enhance reporting to ensure proper monitoring of quantities and types of notifications sent to the customer to ensure our TCPA compliance.	The solution is required for regulatory compliance related to the amended TCPA (July 2023).	The solution is required for regulatory compliance related to the amended TCPA (July 2023). No alternatives were considered as the changes need to happen in the CR&B system.	Yes - solution is Market Based Commodity or Supporting Capability (non-core) and will use public cloud application.	Proposed solution will utilize the public cloud and will be a certified SAP S/4H on application.	No	1/6/2024	12/30/2024	\$ 400,000	\$ 300,000		\$ 300,000			\$ 100,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
25	2022	Customer Relationship and Billing Program Enhancement	IT Enhancements	Shared	Customer Service	Michael J Hattis	BCD-CS-22-010	Actuals	A portion of the 2022 Customer Relationship and Billing project investment, in the amount of \$400K, was allocated to support the Billing, Collection, and MIMO Web Self-Service digital solutions. The remainder of the 2022 and most of the 2023 CR&B enhancements were related to fixing defects or enhancing the MIMO, Collection, and Billing transactions in the SAP back-end and some in CRM. These improvements are intended to increase First Contact Resolution (FCR) and remediate defects affecting customer experience. The total number of 2022-2023 non-digital transaction defects remediated, and enhancements implemented as measured by user stories were 150 for Collections, 50 for MIMO, and 50 for Billing. Highlights of the more significant enhancements are described in testimony for each of these transactions.	The majority of these 2022-2023 CR&B enhancements were related to the MIMO, Collection, and Billing transactions, and were intended to increase First Contact Resolution (FCR), which is a measure of the Company's ability to address a customer's request or inquiry, over the phone or in a digital channel, on the first try, without the customer having to reach out repeatedly. Overall, these investments resulted in an increase in the average FCR across the five key transactions, from 84% in 2021 to 86% in 2023. With over 43 million transactions completed each year, every 1% increase in FCR impacts the experience of a significant number of customers, making it easier for them to complete their transaction, and avoiding the frustration that comes with having to repeatedly engage with the Company to resolve their inquiry or request.	No alternatives were considered as the changes need to happen in the CR&B system.	Not Applicable	There is a cloud solution. We can't leverage that due to NERC SCB requirements.	Yes	1/2/2022	12/30/2023	\$ 2,772,856	\$ 2,794,496	\$ -	\$ 2,398,212	\$ 241,689	\$ -	\$ 154,595	\$ (21,640)	\$ -	\$ (21,640)	\$ -	\$ -	\$ -	\$ -	\$ -
26	2023	Customer Relationship and Billing Program Enhancement	IT Enhancements	Shared	Customer Service	Michael J Hattis	BCD-CS-22-010	Level 3	Most of the 2023 CR&B enhancements were related to fixing defects or enhancing the MIMO, Collection, and Billing transactions in the SAP back-end and some in CRM. These improvements are intended to increase First Contact Resolution (FCR) and remediate defects affecting the customer experience. The total number of 2022-2023 non-digital transaction defects remediated, and enhancements implemented as measured by user stories were 150 for Collections, 50 for MIMO, and 50 for Billing. Highlights of the more significant enhancements are described in testimony for each of these transactions.	Please see line 25 above.	No alternatives were considered as the changes need to happen in the CR&B system.	Not Applicable	There is a cloud solution. We can't leverage that due to NERC SCB requirements.	Yes	1/2/2022	12/30/2023	\$ 1,347,487	\$ 1,195,866	\$ -	\$ 1,114,560	\$ 2,706	\$ -	\$ 78,600	\$ 151,621	\$ -	\$ 151,621	\$ -	\$ -	\$ -	\$ -	
27	2023	Customer Service Communications	Strategic	Shared	Customer Service	Michael J Hattis	DMND00001262	Level 3				Approved in U-21297																			
28	2024	Customer Service Communications - Phase 2	Strategic	Shared	Customer Service	Michael J Hattis	DMND00002730	Level 2	This Customer Service Notifications - Phase 2 project, which includes the migration of 99% of all customer notifications to the new Message Broadcast platform, and the leveraging of the new platform to enhance the quality and effectiveness with which we communicate with customers. This includes the ability to create, customize, catalog, and store customer notifications with delivery confirmation, so that we have visibility into which customers did not receive which notifications, and the use of an automation tool to ensure the integrity of the customer contact data, to quickly create Messages On Demand (MODs) by an assortment of methods, including list, zip code, electrical device, and geography, and to be able to provide customers the ability to communicate with us via SMS/texting.	Improvement in the timeliness, consistency and relevance of the communications sent to the customer. Higher productivity and efficiency in building and delivering communication. Transition to a solution that will utilize an auto-scheduling communications platform (i.e., an automatically increases capacity during peak demand periods). The communications platform will support email, Two-Way SMS and voice call functionality.	Do nothing is not an option given the importance of outage communications in support of the EFC system.	Yes - solution is Market Based Commodity or Supporting Capability (non-core) and will use public cloud application.	Proposed solution will utilize the public cloud and will be a certified SAP S/4H on application.	No	1/6/2024	12/30/2024	\$ 2,320,908	\$ 2,000,908	\$ 248,864	\$ 1,346,887	\$ -	\$ 405,157	\$ 320,000	\$ -	\$ 320,000	\$ -	\$ -	\$ -	\$ -	\$ -	
29	2022	Enhanced Training Environments	Strategic	Shared	Customer Service	Michael J Hattis	BCD-CS-21-069	Actuals				Approved in U-21297																			
30	2022	Error Free Communication - Outage Status	Strategic	Shared	Customer Service	Michael J Hattis	BCD-CS-21-073	Actuals	The frequency and impact of the 2021 storms caused a great deal of frustration for customers who lost power, for the Company's employees engaged in restoration activities, for CS who were handling customer inquiries, and for employees who were responding to customer complaints. Customer feedback during this period of heavy storm activity made it clear that were the pain points that needed to be addressed. This project provided the funding for the development of new and enhanced Core System components and Customer Facing System workstreams to address the customer difficulties, and a fundamental redesign of all the processes, core systems, sub-systems, new systems, and system integrations that work together to monitor and manage customer outage communications as well as to ensure the information provided to customers across all channels are consistent. The Company determined that it needed to transition from a "work-based" power status system to a "premise-based" system with premise being the Company's term for a customer's home or business location. The Company's "work-based" system aggregates outage data from the AMI network, input from field crews, and customer calls, and couples this data with the electrical system equipment hierarchy to determine outages at a circuit level. The work-based system does not focus on tracking and monitoring individual customer outages. Creation of a "premise-based" system allows the Company to leverage its AMI infrastructure to monitor individual premise outage data and restoration status, and provide power status and notifications at the customer level. This significantly enhances the relevance and quality of the data and communication provided to customers, and improves the customer Outage experience.	The Company, through its investments in EFC, has realized improvements in: 1) the timeliness and accuracy of its outage restoration communications, 2) the timeliness and accuracy of its restoration estimates, and 3) the percentage of successfully delivered outage notifications. 1) With the implementation of EFC, where the customer's power status is based on AMI meter data, the Company has consistently achieved a 99% accuracy rate for the customer's power status as opposed to 94% accurate, but with a range between 80% to 94% during high impact and storm days, when the customer power status was tied to job status. 2) To improve the timeliness and accuracy of the first Estimate Time of Restoration (ETR) that is delivered to the customers, the Company measures First Estimate Accuracy, which is the percent of customers that received a single and accurate estimated restoration time (ETR). We have improved our first estimate accuracy between 2022 and 2023 by 48% for catastrophic storms (CAT) from 31% to 46%, and by 43% for non-catastrophic storms (Non-CAT) from 43% to 60%. Timeliness to deliver an estimate has also improved, based on all the process improvements, our timelines has dramatically improved for both Non-CAT Storms and CAT storms. For Non-CAT storms, we are delivering estimates on average within 5.5 hours after weather has cleared, compared to 16-24 hours before the standard processes were developed. For CAT storms, we are providing estimates on average within 10 hours after the weather has cleared, as compared to 24-36 hours before the standard processes were developed. 3) Historically, only 45% of customers with reported outages successfully received the expected outage status notification, which includes confirmation of their outage, global restoration estimates, their personal restoration estimates, updates on the status of their outage (e.g., crew assigned, damage being assessed), and their power restored status. With its investments in EFC, the Company has increased this percentage to 70% in 2022 and 88% in 2023, and is forecasting to increase this percentage further to 92% in 2024, with a long-term target of 95%.	No alternatives were considered as EFC is a departure and improvement on the Company's prior job status or work-based power status to provide awareness of customer outages.	Yes - solution is a Market Based Commodity or Supporting Capability (non-core) and will use the public cloud.	This business case covers a projects that will be performed against a portfolio of applications, some of which are cloud-based, some are on-premise. Each solution that exceeds \$500K and funded under Sustained Funding will be evaluated, individually, for alignment with the technology for Cloud Computing.	Yes	10/1/2021	12/30/2021	\$ 15,268,014	\$ 14,903,893	\$ 610,474	\$ 13,058,064	\$ 105,872	\$ -	\$ 1,129,482	\$ 364,122	\$ 148,242	\$ 19,811	\$ 3,500	\$ 192,011	\$ 557		
31	2023	Error Free Communication - Outage Status	Strategic	Electric Only	Customer Service	Michael J Hattis	DMND00001695	Level 3	The 2023 project continues to build upon the investments in the Core technical components (OMS in ADMS, Premise Power Status, AMI, Event Hub, ESRI ArcGIS, Estimate Accuracy) and three Customer-Facing workstreams, including system enhancements to WISMO and the newly launched Outage Map, development and enhancement of notifications and reporting and dashboards, and development and enhancement in the customer channels such as Web, IVR and the Mobile App. Based on what the Company learned from the 2023 catastrophic storms, additional scope was added to the Core and Customer-facing systems. The Company also added scope to address defects and improve the customer-facing interfaces and customer channels with the new ADMS, which was implemented in early 2023.	Please see Line 30 above.	None. No alternatives were considered as EFC is a departure and improvement on the Company's prior job status or work-based power status to provide awareness of customer outages. The 2023 project built on what was developed and learned in 2022.	Yes - solution is a Market Based Commodity or Supporting Capability (non-core) and will use public cloud.	Because Customer Applications and Customer Data is non-core and hosted in public cloud.	No	1/9/2023	12/31/2024	\$ 13,467,383	\$ 13,359,390	\$ 595,385	\$ 11,742,672	\$ 93,030	\$ -	\$ 928,303	\$ 107,993	\$ 90,078	\$ (112,552)	\$ 5,334	\$ 125,132	\$ -		
32	2024	Error Free Communication - Outage Status	Strategic	Electric Only	Customer Service	Michael J Hattis	DMND00001595	Level 2	The 2024 project continues to build upon the investments in the Core technical components (OMS in ADMS, Premise Power Status, AMI, Event Hub, ESRI ArcGIS, Estimate Accuracy and Outage Status Reporting (in 2024) and three Customer-Facing workstreams, including system enhancements to WISMO and the newly launched Outage Map, development and enhancement of notifications and reporting and dashboards, and development and enhancement in the customer channels such as Web, IVR and the Mobile App to improve key EFC metrics. Based on what the Company learned from the 2023 catastrophic storms, additional scope was added to the Core and Customer-facing systems with work continuing into 2024.	Please see Line 30 above.	None. No alternatives were considered as EFC is a departure and improvement on the Company's prior job status or work-based power status to provide awareness of customer outages. The 2024 project built on what was developed and learned in 2023, in particular from the 2023 CAT storms.	Yes - solution is a Market Based Commodity or Supporting Capability (non-core) and will use public cloud.	Because Customer Applications and Customer Data is non-core and hosted in public cloud.	No	1/9/2023	12/31/2024	\$ 7,763,000	\$ 7,563,000	\$ 142,025	\$ 6,969,939	\$ -	\$ 35,000	\$ 416,036	\$ 200,000	\$ 30,963	\$ -	\$ -	\$ 169,038	\$ -		
33	2022	Field Service Management Billing & Metering	Strategic	Shared	Customer Service	Michael J Hattis	BCD-CS-21-071	Actuals				Approved in U-21297																			
34	2023	Field Service Management Billing & Metering	Strategic	Shared	Customer Service	Michael J Hattis	BCD-CS-21-071	Level 3				Approved in U-21297																			
35	2022	Field Service Management for RM&P	Strategic	Shared	Customer Service	Michael J Hattis	BCD-CS-22-050	Actuals				Approved in U-21297																			
36	2023	Field Service Management for RM&P	Strategic	Shared	Customer Service	Michael J Hattis	BCD-CS-22-050	Level 3				Approved in U-21297																			
37	2022	IT Application Environments Enhancement	IT Enhancements	Shared	Customer Service	Michael J Hattis	BCD-CS-22-027	Actuals				Approved in U-21297																			
38	2023	IT Application Environments Enhancement	IT Enhancements	Shared	Customer Service	Michael J Hattis	DMND00001275	Level 3				Approved in U-21297																			
39	2022	IVR Virtual Assistants	Strategic	Shared	Customer Service	Michael J Hattis	BCD-CS-22-045	Actuals	Enhanced and more effective MIMO Web start, stop, and transfer digital solutions, along with the implementation of the MIMO VAA solutions, provided customers with more, and more effective, digital self-service solutions in which they could choose to engage to complete their MIMO request. As a result, the MIMO DER increased from 39% in 2020, to 42% in 2023, which has given the number of MIMO calls to an all-time low of 330,000 in 2023. Given the results achieved to-date, the Company is forecasting that its historical and planned investments in the MIMO digital self-service solutions will increase the MIMO DER to 54% by 2027, will enable a cumulative decrease of 38,000 calls (2023-2027), and will provide customers with a cumulative \$3.8 million in O&M savings (2023-2027).	No alternatives were considered.	Yes - solution is an Industry Specific (core) capability and will use public cloud according to strategy requirements.	No cloud technology will be needed for sustainment solution.	Yes	1/1/2021	6/1/2022	\$ 1,449,936	\$ 1,270,532	\$ 177,390	\$ 937,752	\$ 5,897	\$ -	\$ 149,493	\$ 170,404	\$ -	\$ 170,404	\$ -	\$ -	\$ -	\$ -	\$ -	
40	2023	IVR Virtual Assistants	Strategic	Shared	Customer Service	Michael J Hattis	BCD-CS-22-045	Level 3	Please see line 39 above.		No alternatives were considered.	Yes - solution is an Industry Specific (core) capability and will use public cloud according to strategy requirements.	No cloud technology will be needed for sustainment solution.	Yes	1/1/2021	6/1/2022	\$ (66,871)	\$ (109,072)	\$ (549)	\$ (107,712)	\$ (539)	\$ -	\$ (273)	\$ 42,201	\$ -	\$ -	\$ -	\$ 42,201	\$ -		
41	2022	Journey Work Product Transformation Teams	Strategic	Shared	Customer Service	Michael J Hattis	BCD-CS-22-042	Actuals	This project provided the funding for the front-end enhancements in the 2022 Web Self-Service projects related to making enhancements to build out the Collections, MIMO and Outage digital self-service transactions as referenced in testimony and described in greater detail in my testimony in Case No. U-21257.	This project supported improvements in the digital engagement rate from 2021 to 2023. Collection DER from 5% to 30%, MIMO DER from 25% to 42%, and Outage DER from 31% to 96%. The project also supported the 2023 call volume reduction in these transactions of 159,000 calls.	Considered switching to an off-the-shelf web solution for personalized interactions instead of implementing custom-built web experiences.	Yes - solution is a Market Based Commodity or Supporting Capability (non-core) and will use the public cloud.	No cloud technology will be needed for sustainment solution.	Yes	1/2/2022	12/30/2022	\$ 6,640,489	\$ 6,743,792	\$ 185,910	\$ 5,922,323	\$ 92,605	\$ -	\$ 142,955	\$ 96,496	\$ 5,772	\$ 77,568	\$ 472	\$ -	\$ -	\$ 12,885	

Line No.	Spent Year	Business Case / Project Name	Investment Category	Shared Asset or Electric Only (if applicable)	IT Portfolio/Program	Witness (if multiple)	BCD ID	Cost Estimate Level (if applicable)	Project Synopsis	Value/Benefit	Alternatives Considered including cloud services	Aligned with cloud computing technology strategy?	Please supply an explanation on cloud computing alignment	Equipment Involved and refresh live (if applicable)	Project Start Date	Project End Date	Expected Total Project Cost (Capital + Investment O&M)	Total Projected IT Cost (Capital) U-2134	Projected Labor Cost (Capital)	Projected Capital Non-Labor Cost (Contractor)	Projected Capital Non-Labor Cost (Materials)	Projected Capital Non-Labor Cost (Software)	Projected Overhead & Other Costs (Capital)	Projected Total IT O&M Cost	Projected O&M Labor Costs	Projected O&M Non-Labor Costs (Contractor)	Projected O&M Non-Labor Costs (Materials)	Projected O&M Non-Labor Costs (Software)	Projected Overhead & Other Costs						
42	2025	MIOM Stabilization	IT Enhancements	Shared	Customer Service	Michael J Ratios	DMA00002303	Level 2	In October 2022, DTE launched a new Meter Data Management (MDM) system to replace an outdated and unsupported DTE IT application, and since that time, the Company has identified opportunities to enhance the new MDM system by adding new features, exceptions, reduce manual work, improve forecasting, and prevent delayed bills for its largest commercial and industrial customers.	The MDM enhancements will reduce by 80% the number of manual touches (~12,000) that are currently required to remediate exceptions and prevent delayed bills, providing ~\$100,000 annually in O&M savings. The MDM project will also reduce potentially higher energy market settlement charges due to forecasting error from estimated commercial and industrial load.	If this work is not completed, the increase in staff augmentation costs will be needed to be sustained.	Not Applicable	N/A	No	3/22/2025	10/18/2025	\$ 1,896,975	\$ 1,801,960	\$ 237,836	\$ 1,360,000	\$ -	\$ -	\$ 204,035	\$ 94,815	\$ 38,815	\$ 56,000	\$ -	\$ -	\$ -	\$ -					
43	2022	MIOP - Fixed Price Product(Rider 17)	Regulatory/ Compliance	Electric Only	Customer Service	Michael J Ratios	BCD-CS-21-025	Actuals			Approved in U-21297																								
44	2023	MIOP - Fixed Price Product(Rider 17)	Regulatory/ Compliance	Electric Only	Customer Service	Michael J Ratios	BCD-CS-21-025	Level 3			Approved in U-21297																								
45	2023	MIOP Customer - Requested Renewable Energy Projects	Regulatory/ Compliance	Electric Only	Customer Service	Michael J Ratios	BCD-CS-21-047	Actuals			Approved in U-21297																								
46	2023	MIOP Customer - Requested Renewable Energy Projects	Regulatory/ Compliance	Electric Only	Customer Service	Michael J Ratios	DMA00001265	Level 3			Approved in U-21297																								
47	2024	MIOP Customer - Requested Renewable Energy Projects	Regulatory/ Compliance	Electric Only	Customer Service	Michael J Ratios	DMA00001265	Level 2			Approved in U-21297																								
48	2025	MIOP Customer- Requested Renewable Energy Projects	Regulatory/ Compliance	Electric Only	Customer Service	Michael J Ratios	DMA00001265	Level 2	Customer-requested renewable energy projects are unique contracts between a customer and DTE to build dedicated renewable assets to offset their electric use. In addition to building the program per the contracts, these unique contracts require the creation and integration of a new product named "customer requested solar park" into the SAP CR&B system. Similar in scope to many of our MIOP renewable projects, this project will include end-to-end enhancements to the CR&B system that will include billing, reporting, accounting, and enrollment functionality for individual customer-requested projects, and any additional updates to fulfill the Company's commitment under these contracts.	Fulfill the customer-stated contracts to build a 650 Megawatt and a 400 Megawatt dedicated solar park for uniquely contracted customers. Through its MGInterPower program, DTE to add 650 megawatts of new solar energy in Michigan for Ford, increasing the total amount of installed solar in Michigan by nearly 70%. Starting in 2024, DTE will add 400 megawatts of new solar projects in Michigan through DTE's MGInterPower program.	No alternatives have been identified. Regarding Do Nothing - This is an MPSC requirement and DTE has to implement.	Yes - so/fn is Industry Specific (core capability - will use public cloud per strategy requirements)	The MGSP functionality is already existing in the SAP CR&B and SAP BW reporting, and the scope of this business case is an additional functionality that is being added to the existing platform.	Yes	9/1/2023	12/30/2025	\$ 5,993,212	\$ 5,493,212	\$ 313,761	\$ 4,572,719	\$ -	\$ -	\$ 608,732	\$ 300,000	\$ 73,830	\$ 189,100	\$ 24,969	\$ 12,100	\$ -	\$ -	\$ -	\$ -			
49	2023	MIOP Data and Reporting	Strategic	Electric Only	Customer Service	Michael J Ratios	DMA00001267	Level 3			Approved in U-21297																								
50	2025	MIOP Large Customer Prepayment	Regulatory/ Compliance	Electric Only	Customer Service	Michael J Ratios	DMA00001683	Level 2	The MIOP Large Customer Prepayment project will allow contracted customers the ability to prepay for future renewable energy charges per Section 61 of the Settlement agreement. Development will include creating a separate renewable energy accounts receivable section on the customer's bill, a new accounting and general ledger system, and data and reporting tool to enable the program.	Fulfill the requirements in the section 61 settlement	No alternatives have been identified. Regarding Do Nothing - This is an MPSC requirement and DTE has to implement.	Yes - so/fn is Industry Specific (core capability - will use public cloud per strategy requirements)	MGSP functionality is already existing in the SAP CR&B and SAP BW reporting and the scope of this business case is an additional functionality that is being added to the existing platform.	No	2/1/2025	11/30/2025	\$ 1,452,731	\$ 1,327,065	\$ 300,000	\$ 1,020,642	\$ -	\$ 6,423	\$ -	\$ 125,666	\$ -	\$ 125,666	\$ -	\$ -	\$ -	\$ -					
51	2024	MIOP Low Income Solar Pilot	Regulatory/ Compliance	Electric Only	Customer Service	Michael J Ratios	DMA00001685	Level 2			Approved in U-21297																								
52	2025	MIOP Low Income Solar Pilot	Regulatory/ Compliance	Electric Only	Customer Service	Michael J Ratios	DMA00001685	Level 2	The MIOP Low-Income Solar Pilots project provides the IT functionality in the CR&B system to comprehend the Pilot's program parameters and objectives and enroll qualified low-income customers in the program. Additional functionality must also be developed in the system to collect donations that will offset the premium required for providing solar energy-sourced power to enrolled customers. This project will expand MIOP offerings to low-income customers who might not otherwise be able to participate in the program, and by enabling anyone, whether a DTE customer or not, the option to contribute into a low-income renewables fund. The funds from these voluntary contributions would be used in tandem with third-party donations to fully subsidize MIOP subscriptions for low-income customers. The system capability to offer this program is addressed in the Company's Section 65 Filing in MPSC Case No. U-20731, where further details of this and all MIOP programs can be found. When this project is put into service, cute, or ineligibly. This level of visibility did not exist for customers.	Fulfill the requirements in the section 61 settlement, August 2022	No alternatives identified. This is a tariff and this project must be completed to support low-income solar pilot mandate.	Yes - so/fn is Industry Specific (core capability - will use public cloud per strategy requirements)	MGSP functionality is already existing in the SAP CR&B and SAP BW reporting, DTE Website, SAP Commerce and BW systems) and the scope of this business case is an additional functionality that is being added to the existing platform.	Yes	2/1/2024	4/30/2025	\$ 840,377	\$ 785,330	\$ 180,805	\$ 286,677	\$ 17,983	\$ -	\$ 299,866	\$ 55,048	\$ 25,648	\$ 29,400	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
53	2023	MIOP Reservation System for New Enrollments	Regulatory/ Compliance	Electric Only	Customer Service	Michael J Ratios	DMA00002268	Level 3	The MIOP Reservation System which is a program created to allow residential and small business enrollment into a dedicated demand for the renewable energy program generation for the MIOP program. From the wallet, customers will be enrolled in the MIOP program on a first come, first serve basis when capacity is available. This program includes development in SAP web, and data and reporting.	As of Aug. 2022, 68,000 residential and 700 commercial customers already enrolled in the MIOP program. DTE is already supporting to total about 1.1 MWh energy. Target to grow the enrollments by 2027 (Residential 200,000 and Commercial 5,000). To support this initiative, DTE will need to produce 6.6 MWh of renewable power by 2027.	No alternatives have been identified. This is an MPSC requirement and DTE has to implement the Reservation system and it will impact the DTE MIOP program. Also, as we are running out of capacity, we cannot stop the MGInterPower enrollment without implementing this reservation system.	Yes - so/fn is Industry Specific (core capability - will use public cloud per strategy requirements)	MGSP functionality is already existing in the SAP CR&B and SAP BW reporting and the scope of this business case is an additional functionality that is being added to the existing platform.	No	10/10/2022	6/30/2023	\$ 1,492,842	\$ 1,492,842	\$ 197,326	\$ 1,134,478	\$ 5,683	\$ -	\$ 155,355	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
54	2025	MIOP Scope 3 Billing and Enrollment	Regulatory/ Compliance	Electric Only	Customer Service	Michael J Ratios	DMA00002493	Level 2	The MIOP Scope 3 Billing and Enrollment project will allow for sponsored MIOP enrollment per the section 61 agreement. Customers will have the ability to near the renewable energy charges of another customer. For example, a business could elect to be billed for the renewable energy charges of their employees. Similar in scope to many of our MIOP renewable projects, this project will include end-to-end enhancements to the CR&B system that will include the required billing, accounting, and reporting functionality.	Fulfill the requirements in the section 61 settlement.	No alternatives have been identified because SAP CR&B is the chosen platform for customer relationship and billing services and offerings. Do Nothing is not an option and would result in non-compliance with MPSC and regulatory requirements.	Yes - so/fn is Industry Specific (core capability - will use public cloud per strategy requirements)	MGSP functionality is already existing in the SAP CR&B and SAP BW reporting and the scope of this business case is an additional functionality that is being added to the existing platform.	No	2/1/2025	11/30/2025	\$ 4,290,000	\$ 3,900,000	\$ 850,000	\$ 3,000,000	\$ -	\$ 50,000	\$ -	\$ 390,000	\$ 390,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
55	2022	MIOP Section 61 Settlement	Regulatory/ Compliance	Electric Only	Customer Service	Michael J Ratios	BCD-CS-21-067	Actuals			Approved in U-21297																								
56	2023	MIOP Section 61 Settlement	Regulatory/ Compliance	Electric Only	Customer Service	Michael J Ratios	BCD-CS-21-067	Level 3			Approved in U-21297																								
57	2022	MIOP Website Update	Regulatory/ Compliance	Electric Only	Customer Service	Michael J Ratios	BCD-CS-21-019	Actuals	The MIOP Website Update project redesigned and updated the MIOP Website and migrated it to the Cloud platform in line with the Company's cloud strategy and roadmap for all non-core processes and applications. This upgrade improved the customer experience and ease of use through a streamlined process for new customer enrollments, providing existing customers with the ability to change their enrollment levels, and offering greater flexibility with guest enrollment and the customer identification process, all of which reduced the complexity of these processes.	Reduce the complexity of interacting and transacting in the Website. This project also supports DTE's position as an environmental leader and is aligned with the Carbon Reduction Goals for net zero by 2050, enabling the development of renewable energy without pressuring rate affordability for non-subscribers.	Continue to use the existing MIOP website which was improving the customer experience. Yes, solution is a non-core capability and will use public cloud.	Solution is supported on-premise	Yes	1/1/2021	4/22/2022	\$ 1,081,194	\$ 1,081,194	\$ 7,862	\$ 980,367	\$ 6,262	\$ -	\$ 86,703	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -				
58	2023	MIIMO Web Self-Service	Strategic	Shared	Customer Service	Michael J Ratios	DMA00002365	Level 3	The focus for the MIIMO digital self-service solutions in 2022-2023 was to enhance the existing MIIMO Web, and MIIMO start service Virtual Assistant (VA), solutions to address defects and cumbersome process flows that were preventing customers from completing their transaction (2022-2023), to enhance and expand the MIIMO VA solutions to include start and transfer service request (2022), and to migrate MIIMO Web from an on-premise solution to the cloud (2022-2023).	Enhanced and more effective MIIMO Web start, stop, and transfer digital solutions, along with the implementation of the MIIMO VA solutions, provided customers with more, and more effective digital self-service solutions in which they could choose to engage to complete their MIIMO request. As a result, the MIIMO DER increased from 19% in 2020, to 42% in 2023, which has driven the number of MIIMO calls to an all-time low of \$30,000 in 2023. Given the results achieved to-date, the Company is forecasting that its historical and planned investments in the MIIMO digital self-service solutions will increase the MIIMO DER to 56% by 2027, will enable a cumulative decrease of 38,000 calls (2023-2027), and will provide customers with a cumulative \$3.8 million in O&M savings (2023-2027).	Maintaining the web transactions on the existing platform and not migrate them to the cloud. Minor improvement if any in completion rates, digital engagement rates, and call deflection opportunity. Limited or less-desirable (does not meet customer's needs) options for customers to interact in their channel of choice.	Yes - so/fn is Market Based Commodity or Supporting Capability (non-core) and will use public cloud.	MIIMO Web is a non-core capability and is being deployed to the public cloud, in alignment with the strategy.	No	12/2/2023	12/31/2024	\$ 5,414,580	\$ 5,412,708	\$ 199,438	\$ 4,994,000	\$ 9,447	\$ -	\$ 209,823	\$ 1,872	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
59	2024	MIIMO Web Self-Service	Strategic	Shared	Customer Service	Michael J Ratios	DMA00002365	Level 2	The focus for the Company's 2024-2025 capital investments, will be to continue to enhance the MIIMO Web and VA solutions with the goal of expediting the number of MIIMO courses that can be handled in a digital solution, and eliminating defects and cumbersome process flows that are preventing customers from completing their digital transaction.	Enhanced and more effective MIIMO Web start, stop, and transfer digital solutions, along with the implementation of the MIIMO VA solutions, provided customers with more, and more effective digital self-service solutions in which they could choose to engage to complete their MIIMO request. As a result, the MIIMO DER increased from 19% in 2020, to 42% in 2023, which has driven the number of MIIMO calls to an all-time low of \$30,000 in 2023. Given the results achieved to-date, the Company is forecasting that its historical and planned investments in the MIIMO digital self-service solutions will increase the MIIMO DER to 56% by 2027, will enable a cumulative decrease of 38,000 calls (2023-2027), and will provide customers with a cumulative \$3.8 million in O&M savings (2023-2027).	Maintaining the web transactions on the existing platform and not migrate them to the cloud. Minor improvement if any in completion rates, digital engagement rates, and call deflection opportunity. Limited or less-desirable (does not meet customer's needs) options for customers to interact in their channel of choice.	Yes - so/fn is Market Based Commodity or Supporting Capability (non-core) and will use public cloud.	MIIMO Web is a non-core capability and is being deployed to the public cloud, in alignment with the strategy.	No	12/2/2023	12/31/2024	\$ 4,101,000	\$ 3,500,000	\$ 232,703	\$ 2,885,860	\$ -	\$ -	\$ 391,437	\$ 601,000	\$ 14,830	\$ 586,130	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
60	2025	MIIMO Web Self-Service	Strategic	Shared	Customer Service	Michael J Ratios	DMA00002721	Level 2	Please see line 59 above.	Please see line 59 above.	Yes - so/fn is Market Based Commodity or Supporting Capability (non-core) and will use public cloud.	MIIMO Web is a non-core capability and is being deployed to the public cloud, in alignment with the strategy.	No	1/6/2025	12/19/2025	\$ 2,751,698	\$ 2,501,698	\$ 250,000	\$ 1,875,000	\$ -	\$ -	\$ 376,698	\$ 250,000	\$ 25,000	\$ 225,000	\$ -	\$ -	\$ -	\$ -	\$ -					
61	2025	Newer Billed Accounts due to Theft/Fraud	IT Enhancements	Shared	Customer Service	Michael J Ratios	DMA00001921	Level 2	The Commission previously approved, in its final order in Case No. U-21297, \$0.6 million in 2024 capital for this project. However, the project has been re-tilted to 2025 to provide capacity for other more urgent IT projects. The Company is seeking to continue recovery of this capital in the 2025 test period in the instant case. As discussed in U-21297, this project creates new functionality in the core billing system that will provide a new screen for the Revenue Management and Protection (RMAP) Exceptions Team to utilize when a customer needs to be billed for theft, fraud or bankruptcy, and the normal billing process cannot be used. As no bills generated today, the account does not progress through the collection (SAP billing) process and remains in "active" status and ages in active meters.	We can increase billed revenue and payments collected. Currently, these charges are applied to the account but are never billed and payment is not collected as a result. This aligns to increasing revenue. The current impact is a loss of revenue of approximately \$1.6M from 2017-March 2024. Target after implementation will be \$0.5M net revenue due to this issue.	No alternatives are being considered.	Not Applicable	No	3/4/2025	7/15/2025	\$ 509,000	\$ 440,400	\$ 115,400	\$ 325,000	\$ -	\$ -	\$ 68,600	\$ 68,600	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
62	2022	Payment Stability Plan	Regulatory/ Compliance	Shared	Customer Service	Michael J Ratios	BCD-CS-22-053	Actuals			Approved in U-21297																								
63	2024	Payment Web Self-Service	Strategic	Shared	Customer Service	Michael J Ratios	DMA00002369	Level 3	In 2023, a minimal amount (approximately \$50,000) of the \$4.6 million in Payment Web Self-Service capital was focused on addressing known defects in the Payment digital self-service solutions that were preventing customers from successfully completing their transactions. This investment resulted in increase in the percent of customers who were successfully completing their Payment digital transaction in 76% in 2022 and 79% in 2023. In parallel with its focus on Payment defect remediation, in 2023 the Company increased customer awareness of the availability of the Payment self-service solutions and made it easier for customers to access these solutions, through things like clickable links in email notifications and the user experience and the user interface.	In 2022, the Company handled 32.8M million Payment transactions, of which 26.9M million (82% DER) were completed in a self-service solution, which for Payments includes the Web, Mobile App, IVR, and Kiosk, as well as customers who use Auto Pay and Electronic Funds Transfer (EFT). In 2023, the number of Payment transactions increased to 32.97 million, but at the same time the volume of those transactions completed in a self-service channel also increased to 27.80 million (84% DER). So, while the number of Payment transactions only increased by 0.2% (65,000 transactions) the number of Payment transactions in 2023 that were completed in a self-service channel increased by over 3% (176,000 transactions). However, the increase of 840,000 digital Payment transactions includes the transaction of over 400,000 Payments that in 2022 were made through the mail, but that in 2023 were made electronically through AutoPay. Therefore, the reduction in Payment call volumes from 2022 to 2023 was a net 280,000 calls.	Maintaining the web transactions on the existing platform and not migrate them to the cloud. Minor improvement if any in completion rates, digital engagement rates, and call deflection opportunity. Limited or less-desirable (does not meet customer's needs) options for customers to interact in their channel of choice.	Yes - so/fn is Market Based Commodity or Supporting Capability (non-core) and will use public cloud.	Payment Web is a non-core capability and is being deployed to the public cloud, in alignment with the strategy.	No	12/2/2023	12/31/2024	\$ 812,750	\$ 50,711	\$ 35,669	\$ -	\$ -	\$ 15,047	\$ 762,040	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 762,040
64	2024	Payment Web Self-Service	Strategic	Shared	Customer Service	Michael J Ratios	DMA00002369	Level 2	In 2024-2025, the Company is significantly increasing its capital investment in the Payment digital self-service solutions to improve the Payment digital experience, or further increase the percent of customers who are able to successfully complete their digital Payment transaction, and to improve the experience for customers intending to perform other transactions, which is important because the current Payment digital experience was originally designed and implemented in 2018 with the use case of payments as a stand-alone transaction, however, with the increase in digital transactions in Collections and MIIMO over the past few years, the solution has been leveraged across multiple transactions. As such, it is important that the Company invest in both the Payment digital solutions, and Payment experience within the Collections and MIIMO digital solutions.	In 2024-2025, the Company is significantly increasing its capital investment in the Payment digital self-service solutions to improve the Payment digital experience, or further increase the percent of customers who are able to successfully complete their digital payment transactions, and to improve the experience for customers intending to perform other transactions as described in testimony. Specific 2024-2025 enhancements include: 1) Redesigning the online web environment (authenticated version and guest version) to improve the resiliency and the user experience and the user interface. 2) Streamlining how other transactions integrate with the payment center (e.g., MIIMO & Collections) to improve the user experience and technical implementation process to migrate payments into other transactions. 3) Eliminating failure points for both Authenticated Payments (i.e., customers who login to their online account) and Guest Payments (i.e., customers who do not login or who do not have an online account) that are preventing customers from successfully completing their payment. 4) Simplifying the process for Autopay customers to update their saved payment method, which today requires the customer to re-enroll and re-enroll in the program and can lead to calls to a CR. 5) Implementing more descriptive error messages, so that when customers fail in their attempt to make a payment on the Web, they will know why and can increase the likelihood of success on their next attempt.	Given the results achieved to-date, the Company is forecasting that its historical and planned investments in the Payment digital self-service solutions will increase the Payment DER to 85% by 2027, will enable a cumulative decrease of 30,000 calls (2023-2027), and will provide customers with a cumulative \$4.1 million in O&M savings (2023-2027).	Maintaining the web transactions on the existing platform and not migrate them to the cloud. Minor improvement if any in completion rates, digital engagement rates, and call deflection opportunity. Limited or less-desirable (does not meet customer's needs) options for customers to interact in their channel of choice.	Yes - so/fn is Market Based Commodity or Supporting Capability (non-core) and will use public cloud.	Payment Web is a non-core capability and is being deployed to the public cloud, in alignment with the strategy.	No	12/2/2023	12/31/2024	\$ 1,197,000	\$ 1,000,000	\$ 153,702	\$ 729,615	\$ -	\$ -	\$ 116,681	\$ 197,000	\$ 9,963	\$ 187,037	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Line No.	Spent Year	Business Case / Project Name	Investment Category	Shared Asset or Elect Only (If applicable)	IT Portfolio/Program	Witness (If multiple)	BCD ID	Cost Estimate Level (If applicable)	Project Synopsis	Value/Benefit	Alternatives Considered including cloud services	Aligned with cloud computing technology strategy?	Please supply an explanation on cloud computing alignment	Equipment involved and refresh live (\$ if applicable)	Project Start Date	Project End Date	Expected Total Project Cost (Capital + Investment O&M)	Total Projected IT Cost (Capital) U-21534	Projected Labor Cost (Capital)	Projected Capital Non-Labor Cost Contractor	Projected Capital Non-Labor Cost Materials	Projected Capital Non-Labor Cost Software	Projected Overhead & Other Costs (Capital)	Projected Total IT O&M Cost	Projected O&M Labor Costs	Projected O&M Non-Labor Costs Contractor	Projected O&M Non-Labor Costs Materials	Projected O&M Non-Labor Costs Software	Projected Overhead & Other Costs				
65	2025	Payment Web Self-Service	Strategic	Shared	Customer Service	Michael J Ratsoos	DAMN0002724	Level 2	Please see line 64 above.	Please see line 64 above.	Maintaining the web transactions on the existing platform and not migrate them to the cloud. Minor improvement if any in completion rates, digital engagement rates, and call deflection opportunity. Limited or less-desirable (does not meet customer's needs) for customers to interact in their of choice.	Yes, self is Market Based Economy or Supporting Capability (non-core) and will use public cloud.	Payment Web is a non-core capability and is being deployed to the public cloud in alignment with the strategy.	No	1/6/2025	12/19/2025	\$ 3,852,377	\$ 3,502,377	\$ 350,000	\$ 2,635,000	\$ -	\$ -	\$ 527,377	\$ 350,000	\$ 35,000	\$ 315,000	\$ -	\$ -	\$ -				
66	2022	PCI Compliance	Regulatory/ Compliance	Shared	Customer Service	Michael J Ratsoos	BCD-CS-22-030	Actuals	Please see line 69 below.	Please see line 69 below.	Please see line 69 below.	Not Applicable	Currently the Contact Center Platform is an on-premise solution.	Yes	1/1/2022	12/1/2022	\$ 420,811	\$ 140,138	\$ -	\$ 126,304	\$ 632	\$ -	\$ 13,203	\$ 280,673	\$ -	\$ 280,673	\$ -	\$ -	\$ -				
67	2023	PCI Compliance	Regulatory/ Compliance	Shared	Customer Service	Michael J Ratsoos	DAMN0001282	Level 3				Approved in U-21297																					
68	2024	PCI Compliance	Regulatory/ Compliance	Shared	Customer Service	Michael J Ratsoos	DAMN0001282	Level 2				Approved in U-21297																					
69	2025	PCI Compliance	Regulatory/ Compliance	Shared	Customer Service	Michael J Ratsoos	DAMN0001282	Level 2	DTE takes customer credit card payments over the phone both through our IVR and directly with customer representatives in the contact center through our 1-800-477-4747 phone number. To continue to take these payments, DTE must comply with all Payment Card Industry (PCI) guidelines that are put in place by the credit card industry to safeguard consumer data. Historically, there have been slight changes to requirements as it relates to vulnerabilities which must be successfully implemented with little or no impact to DTE. To maintain compliance throughout the year, a regular cadence of asset scanning is required to uncover vulnerabilities to updates or patching. Weekly scans happen for all DTE managed PCI servers while quarterly server hardening is performed by our technology vendor to ensure vendor-supplied applications remain in compliance. In addition, quarterly audits must be done by IT and our business partners while once a year by a third party to validate that the standards are being met. There are also PCI Quarterly Privileged Accounts and Terminated Employee audits. This business case addresses any ongoing changes or issues that arise from these audits. On average these various scans find 492 new vulnerabilities each month that need to be remediated in a certain amount of time depending on their severity. Failure to apply patches and updates as required to maintain compliance will result in DTE losing its ability to take credit card payments. The customer is provided the security that their data is private and secure when making payments with a credit card. PCI compliance is maintained, and a PCI Report on Compliance (ROC) is issued annually, allowing DTE to continue to take payments.	Outsourcing payments is being considered and is tentatively planned for 2024 which would remove some of the PCI guidelines we need to follow. However, current standards must be maintained while an outsourcing solution is developed. Do Nothing: Doing nothing or not paying periodic and updates is required to maintain compliance results in DTE losing its ability to take credit card payments through the phone systems.	Not Applicable	Currently the Contact Center Platform is an on-premise solution.	No	12/2/2023	12/31/2025	\$ 708,412	\$ 375,884	\$ 8,643	\$ 153,300	\$ -	\$ -	\$ 13,741	\$ 527,728	\$ 83,548	\$ 444,180	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
70	2022	Platform Integration Component	Strategic	Shared	Customer Service	Michael J Ratsoos	BCD-CS-22-043	Actuals				Approved in U-21297																					
71	2023	Platform Integration Component	Strategic	Shared	Customer Service	Michael J Ratsoos	BCD-CS-22-043	Level 3				Approved in U-21297																					
72	2022	Qualtrics Expansion	Strategic	Shared	Customer Service	Michael J Ratsoos	BCD-CS-21-070	Actuals				Approved in U-21297																					
73	2023	Qualtrics Expansion	Strategic	Shared	Customer Service	Michael J Ratsoos	BCD-CS-21-070	Level 3				Approved in U-21297																					
74	2022	Regulatory Compliance	Regulatory/ Compliance	Shared	Customer Service	Michael J Ratsoos	BCD-CS-22-007	Actuals				Approved in U-21297																					
75	2023	Regulatory Compliance	Regulatory/ Compliance	Shared	Customer Service	Michael J Ratsoos	DAMN0001284	Level 3				Approved in U-21297																					
76	2024	Regulatory Compliance	Regulatory/ Compliance	Shared	Customer Service	Michael J Ratsoos	DAMN0001284	Level 2				Approved in U-21297																					
77	2025	Regulatory Compliance	Regulatory/ Compliance	Shared	Customer Service	Michael J Ratsoos	DAMN0001284	Level 2	This business case is to accommodate for emergent Regulatory work, including compliance with Commission Orders in general rate cases or other proceedings, and any unexpected work related to new energy legislation. The frequency in which DTE has to address regulatory work varies. In 2022, DTE completed the C&B project which provides customers with competitively priced electricity consistent with cost-of-service-based rates to address the changing circumstances of its automotive and other advanced manufacturing customers. In 2023, the C&B system application avoided outflow billing determinant calculation for all Rider 18 demand rates. The invoice information under the Current Billing Information section of the invoice will include peak information for Rider 18 D.I.9 customers. In 2024, DTE is proposing the transition of D.I.6 customers to the new D.I.1 TDR rate which requires changes to the C&B system. This project is anticipated to be implemented during the 2025 projected test year. In 2025, this demand will no PCI Quarterly Privileged Accounts and Terminated Employee audits. This business case addresses	No other alternatives have been considered as this investment is required to remain in compliance with Commission Orders and any legislative requirements. If regulatory changes are not implemented, DTE could become non-compliant with Commission Orders or legislative requirements. To Do Nothing would result in DTE falling out of compliance and thus, incurring potential fines.	Not Applicable	No cloud implementation is currently in scope for this effort.	No	1/2/2023	12/31/2025	\$ 3,404,956	\$ 2,767,007	\$ 565,336	\$ 1,623,121	\$ -	\$ -	\$ 578,550	\$ 837,949	\$ 6,049	\$ 831,900	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
78	2023	Rider 17 – MGGreenPower, Residential and Small Commercial & Industrial	Regulatory/ Compliance	Electric Only	Customer Service	Michael J Ratsoos	DAMN0001286	Level 3				Approved in U-21297																					
79	2024	Rider 17 – MGGreenPower, Residential and Small Commercial & Industrial	Regulatory/ Compliance	Electric Only	Customer Service	Michael J Ratsoos	DAMN0001756	Level 2				Approved in U-21297																					
80	2025	Rider 17 – MGGreenPower, Residential and Small Commercial & Industrial	Regulatory/ Compliance	Electric Only	Customer Service	Michael J Ratsoos	DAMN0002604	Level 2	This project replaces the Rider 19 M&I&P Large Commercial & Industrial project as Rider 19 ended on August 19, 2022, and has been merged with Rider 17. The project scope includes C&B system changes required to create a fixed price offering for large customers and the ability to enroll residential and streetlighting accounts, bill customers, and other enhancements to manage and administer the program.	No alternatives have been identified. Do Nothing was not an option and would result in noncompliance with MPSC and regulatory requirements. If DTE does not implement these changes, it would result in higher cost charges to all our DTE customers.	Yes, self is Industry Specific (core) capability, will use public cloud per strategy requirements	MP&P functionality is already existing in the SAP C&B&MP, SAP BW reporting and SAP Commerce, the scope of this business case is an additional functionality that is being added to the existing platform.	No	1/2/2025	12/31/2025	\$ 3,300,000	\$ 3,000,000	\$ 650,000	\$ 2,225,000	\$ -	\$ -	\$ 125,000	\$ 300,000	\$ 300,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
81	2022	Securitization	Regulatory/ Compliance	Electric Only	Customer Service	Michael J Ratsoos	BCD-XX-21-NNN	Actuals	DTE filed MPSC Case No. U-21015 requesting MPSC approval to issue securitization bonds and implement a surcharge related to the cost of the Company's retirement of the River Rouge power plant and a surge in tree trimming costs. The Commission granted approval for the securitization of up to \$23.8 million in qualified costs on June 23, 2021.	As a result, DTE remains in compliance with the Commission Orders, and avoids the risk of non-compliance.	Not Applicable	Not Applicable	Yes	6/1/2021	9/1/2022	\$ 271,406	\$ 267,223	\$ 20,858	\$ 225,372	\$ 1,128	\$ -	\$ 19,865	\$ 4,183	\$ 4,183	\$ -	\$ -	\$ -	\$ -	\$ -				
82	2022	SIP in Call Center	Strategic	Shared	Customer Service	Michael J Ratsoos	DAMN0001293	Level 3				Approved in U-21297																					
83	2022	Speech Analytics	Strategic	Shared	Customer Service	Michael J Ratsoos	BCD-CS-21-006	Actuals				Approved in U-21297																					
84	2023	Speech Analytics	Strategic	Shared	Customer Service	Michael J Ratsoos	BCD-CS-21-006	Level 3				Approved in U-21297																					
85	2022	Supporting Capabilities Test Data and Test Data Management	IT Enhancements	Shared	Customer Service	Michael J Ratsoos	BCD-CS-22-038	Actuals				Approved in U-21297																					
86	2023	Supporting Capabilities Test Data and Test Data Management	IT Enhancements	Shared	Customer Service	Michael J Ratsoos	BCD-CS-22-038	Level 3				Approved in U-21297																					
87	2025	Transform and Modernize PO Architecture	IT Enhancements	Shared	Customer Service	Michael J Ratsoos	DAMN0001788	Level 2	The company will transform and modernize the Process Orchestration (PO) architecture to alleviate system bottlenecks due to network traffic and growing functionalities in the C&B system. As we enable more capabilities in our customer channels and in the C&B systems, this creates additional stress and burden for the PO to ensure increasingly complex jobs and functions perform as expected. During periods of high traffic such as during a storm or in the fall with the influx of college moves, system, transactional systems and our digital channels must scale up to handle the additional workload or risk an unplanned system outage. The Company on average experiences 10 unplanned system outages a year, preventing the ability to process customer orders and requests while the system was down.	When the system is down due to an unplanned outage, there is the cost of CBs who are waiting for the system to be restored to consider. It takes ~3 hours for the system to come back up while it works on a more permanent fix. Assuming unplanned system outages reduce from 10 to 3 by 2028, by multiplying the ~3 hour in wait time by the average number of CBs by year between 2026 and 2028 and the hourly labor cost of a CB, this project can reduce the O&M cost of CB wait time by \$110,000.	No Alternatives considered. No alternatives are possible without significantly impacting capital budget. A "do nothing" alternative would result in unexpected future latency to Customer Billing System that are utilized to support meter-to-cash process.	Not Applicable	Solution recommended is on-premise.	No	1/9/2025	12/30/2025	\$ 1,225,391	\$ 1,025,798	\$ 179,232	\$ 665,992	\$ -	\$ -	\$ 180,574	\$ 199,594	\$ 104,394	\$ 95,200	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
88	2022	Treasury Credential on File	Regulatory/ Compliance	Shared	Customer Service	Michael J Ratsoos	BCD-CS-22-031	Actuals				Approved in U-21297																					
89	2023	Treasury Credential on File	Regulatory/ Compliance	Shared	Customer Service	Michael J Ratsoos	BCD-CS-22-031	Level 3				Approved in U-21297																					
90	2022	Workforce Automation for Contact Center	Strategic	Shared	Customer Service	Michael J Ratsoos	DAMN0001526	Actuals				Approved in U-21297																					
91	2023	Workforce Automation for Contact Center	Strategic	Shared	Customer Service	Michael J Ratsoos	DAMN0001526	Level 3				Approved in U-21297																					

Case No. U-21534
Exhibit: A-24
Schedule: N4

This page intentionally left blank

Michigan Public Service Commission
DTE Electric Company
Customer Service IT Investments
Net Call Volume Reduction and Net Savings Summary
Digital Engagement Rate

Case No.: U-21534
Exhibit: A-24
Schedule: N5
Witness: M. Hatsios
Page: 1 of 2

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
		Manual Call Categorization		Speech Analytics Categorization			Summarized Call Volume Reduction and Savings			
Line	Call Volume by Transaction	2022A Calls (2)	2023A Calls (2)	New call baseline 2023A Calls (3)	2027P Calls (3)		2022-2025 Net Call Reduction	2022-2025 Net O&M Savings	2023-2027 Net Call Reduction	2023-2027 Net O&M Savings
1	MIMO	717,000	526,313	577,498	430,000		231,185	\$ 2,621,639	338,185	\$ 3,835,019
2	Outage	313,000	388,414	352,922	245,000		64,508	\$ 731,517	32,508	\$ 368,637
3	Collection	995,000	951,500	1,245,089	945,000		53,589	\$ 607,697	343,589	\$ 3,896,297
4	Billing	674,000	572,279	557,255	415,000		329,976	\$ 3,741,927	243,976	\$ 2,766,687
5	Payment	720,000	438,977	294,745	215,000		245,768	\$ 2,787,008	360,768	\$ 4,091,108
6	Other and Short Calls (1)	814,000	744,652	594,627	450,000		(70,025)	\$ (794,087)	213,975	\$ 2,426,473
7	Annual Call Volume	4,233,000	3,622,136	3,622,136	2,700,000		855,000	\$ 9,695,700	1,533,000	\$ 17,384,220

Digital Engagement Rate (DER) by Transaction				% Change (2023 vs. 2022)	% Change (2027 vs. 2023)
8	MIMO	32%	42%	56%	11%
9	Outage (4)	94%	96%	95%	-1%
10	Collection	16%	30%	48%	18%
11	Billing	89%	92%	94%	2%
12	Payment	82%	84%	85%	1%
13	Average DER	63%	69%	76%	7%

Historical and Projected Net O&M Savings from Call Reduction								
		2021 (5)	2022	2023A	2024P	2025P	2026P	2027P
14	Annual Net Call Volume Reduction	70,000	(153,000)	610,864	149,136	248,000	425,000	100,000
15	Annual Net O&M Savings	\$ 793,800	\$ (1,735,020)	\$ 6,927,198	\$ 1,691,202	\$ 2,812,320	\$ 4,819,500	\$ 1,134,000
16	Cumulative Net O&M Savings	\$ 793,800	\$ (1,735,020)	\$ 5,192,178	\$ 6,883,380	\$ 9,695,700	\$ 14,515,200	\$ 15,649,200
17	66% DTE Electric Portion (6)					\$ 6,399,162		
18	Cost per Call (CPC)	\$ 11.34						

Footnote:

1. Other and Short Calls are calls that are not included in one of the transactions above and calls that last less than 45 seconds in talk time.
2. To reconcile the call volume reduction in 2023, we calculated the benefit based on the difference between 2022 and 2023 calls utilizing the manual call categorization method.
3. With the implementation of Speech Analytics in 2023, calls are more accurately categorized and a new baseline of calls by transaction was established for calculating future call reductions through 2027.
4. Annual Outage calls and Outage Digital Engagement Rate (DER) are highly influenced by high-impact (storm) events. Hence, we used a more normal storm year like 2022 to project 2027 DER.
5. Only the 2022 - 2025 call volume reduction benefit is reflected in this instant case. Call volume reduction benefit is also assumed to provide benefit in the year following the capital investment unless otherwise indicated.
6. This is the DTE Electric portion (66%) of the Call Reduction O&M savings and deducted in the Customer Service Operation and Maintenance Expenses Exhibit A-13 C5.7 for Customer Records and Collection Expenses on Line 5 in Column (k) and footnote 3.

Line No.	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)		
								2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036		
1	Capital Expenditures																								
2	Call Volume Reduction Projects - Strategic & IT Enhancement (Witness Hatsios)							12,008	18,445	8,890	9,790	8,005													
3	Channel Sustainments / Return to Health Projects (Witness Sharma)								4,022	6,410	7,190	5,063													
4	Incremental Channel Sustainments / Return to Health Projects (based on 2025 spend)							Efficiency	-3.0%				5,063	4,911	4,764	4,621	4,482	4,348	4,217	4,091	3,968	3,849	3,734		
5	Total Investment								12,008	22,467	15,300	16,980	13,068	5,063	4,911	4,764	4,621	4,482	4,348	4,217	4,091	3,968	3,849	3,734	
Assets																									
6	Gross Assets							12,008	34,475	49,775	66,755	79,823	84,886	89,797	94,561	99,182	103,664	108,012	112,229	116,320	120,288	124,137	127,870		
7	Accumulated Book Depreciation							2,402	9,297	19,252	32,603	48,567	63,143	74,207	83,164	89,650	94,418	99,043	103,529	107,881	112,102	116,197	120,169		
8	Net Assets							9,606	25,179	30,523	34,152	31,256	21,743	15,590	11,396	9,532	9,246	8,969	8,700	8,439	8,185	7,940	7,702		
Capitalization																									
9	Deferred Taxes							-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
10	Debt							50.0%	4,803	12,589	15,262	17,076	15,628	10,872	7,795	5,698	4,766	4,623	4,484	4,350	4,219	4,093	3,970	3,851	
11	Equity							50.0%	4,803	12,589	15,262	17,076	15,628	10,872	7,795	5,698	4,766	4,623	4,484	4,350	4,219	4,093	3,970	3,851	
12	TOTAL Capitalization								9,606	25,179	30,523	34,152	31,256	21,743	15,590	11,396	9,532	9,246	8,969	8,700	8,439	8,185	7,940	7,702	
13	Check: Debt / (Debt + Equity)								50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%	
14	Check: Assets = Capital								-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<u>Income Statement - Regulated</u>								2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036		
15	Revenue Requirement																								
16																									
17	Return on Debt							100%	4.1%	195	353	565	656	663	537	379	274	212	190	185	179	174	169	163	159
18	Return on Equity (pre-tax)							100%	13.4%	321	1,162	1,861	2,160	2,185	1,770	1,247	901	699	627	608	590	572	555	539	522
19	TOTAL Return on Capital (pre-tax)								516	1,515	2,425	2,816	2,848	2,308	1,626	1,175	911	818	793	769	746	724	702	681	
20	Return of Capital (Book Depreciation)							100%	2,402	6,895	9,955	13,351	15,965	14,576	11,064	8,957	6,485	4,768	4,625	4,486	4,352	4,221	4,095	3,972	
21	O&M							100%	1,460	4,880	(2,866)	(3,985)	(7,964)	(14,136)	(15,259)	(15,717)	(16,188)	(16,674)	(17,174)	(17,689)	(18,220)	(18,767)	(19,330)	(19,909)	
22	TOTAL Revenue Requirement								4,377	13,290	9,514	12,182	10,848	2,747	(2,569)	(5,584)	(8,792)	(11,088)	(11,756)	(12,434)	(13,122)	(13,821)	(14,533)	(15,257)	
23	NPV of Revenue Requirement								(5,609)	Pre-Tax WACC															
24									(2.19)	Customers (000)															
Expenses																									
25	O&M - One-Time Project (Project Cost to Achieve)								1,460	2,863	1,583	2,363	1,370												
26	O&M - Trailing							3.0%		283	743	535	361	379	390	402	414	426	439	452	466	480	494	509	
27	O&M - Call Volume Reduction Savings							3.0%		1,735	(5,192)	(6,883)	(9,696)	(14,515)	(15,649)	(16,119)	(16,602)	(17,100)	(17,613)	(18,142)	(18,686)	(19,247)	(19,824)	(20,419)	
28	O&M - Property Tax							0.0%		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
29	O&M - Total								1,460	4,880	(2,866)	(3,985)	(7,964)	(14,136)	(15,259)	(15,717)	(16,188)	(16,674)	(17,174)	(17,689)	(18,220)	(18,767)	(19,330)	(19,909)	

30	Book Depreciation	5-Year Straight Line			100.0%	20.00%	20.00%	20.00%	20.00%	20.00%	5	6	7	8	9	10	11	12	13	14	15
31	Tax Depreciation	5-Year Straight Line			100.0%	20.00%	20.00%	20.00%	20.00%	20.00%	5	6	7	8	9	10	11	12	13	14	15
32	Capital					2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
33	Cumulative Capital					12,008	22,467	15,300	16,980	13,068	5,063	4,911	4,764	4,621	4,482	4,348	4,217	4,091	3,968	3,849	3,734
						12,008	34,475	49,775	66,755	79,823	84,886	89,797	94,561	99,182	103,664	108,012	112,229	116,320	120,288	124,137	127,870
	<u>Book Depreciation</u>					2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
		Capital	Year	Check																	
34		12,008	2021	12,008	2,402	2,402	2,402	2,402	2,402	-	-	-	-	-	-	-	-	-	-	-	-
35		22,467	2022	22,467	-	4,493	4,493	4,493	4,493	4,493	-	-	-	-	-	-	-	-	-	-	-
36		15,300	2023	15,300	-	-	3,060	3,060	3,060	3,060	3,060	-	-	-	-	-	-	-	-	-	-
37		16,980	2024	16,980	-	-	-	3,396	3,396	3,396	3,396	3,396	-	-	-	-	-	-	-	-	-
38		13,068	2025	13,068	-	-	-	-	2,614	2,614	2,614	2,614	2,614	-	-	-	-	-	-	-	-
39		5,063	2026	5,063	-	-	-	-	-	1,013	1,013	1,013	1,013	1,013	-	-	-	-	-	-	-
40		4,911	2027	4,911	-	-	-	-	-	-	982	982	982	982	982	-	-	-	-	-	-
41		4,764	2028	4,764	-	-	-	-	-	-	-	-	953	953	953	953	953	-	-	-	-
42		4,621	2029	4,621	-	-	-	-	-	-	-	-	-	924	924	924	924	924	-	-	-
43		4,482	2030	4,482	-	-	-	-	-	-	-	-	-	-	896	896	896	896	896	-	-
44		4,348	2031	4,348	-	-	-	-	-	-	-	-	-	-	-	870	870	870	870	870	-
45		4,217	2032	4,217	-	-	-	-	-	-	-	-	-	-	-	-	843	843	843	843	843
46		4,091	2033	3,273	-	-	-	-	-	-	-	-	-	-	-	-	-	818	818	818	818
47		3,968	2034	2,381	-	-	-	-	-	-	-	-	-	-	-	-	-	-	794	794	794
48		3,849	2035	1,540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	770	770
49		3,734	2036	747	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	747
50	TOTAL	127,870		120,169	2,402	6,895	9,955	13,351	15,965	14,576	11,064	8,957	6,485	4,768	4,625	4,486	4,352	4,221	4,095	3,972	
51	Accumulated Depreciation				2,402	9,297	19,252	32,603	48,567	63,143	74,207	83,164	89,650	94,418	99,043	103,529	107,881	112,102	116,197	120,169	
	<u>Tax Depreciation</u>					2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
		Capital	Year	Check																	
52		12,008	2021	12,008	2,402	2,402	2,402	2,402	2,402	-	-	-	-	-	-	-	-	-	-	-	-
53		22,467	2022	22,467	-	4,493	4,493	4,493	4,493	4,493	-	-	-	-	-	-	-	-	-	-	-
54		15,300	2023	15,300	-	-	3,060	3,060	3,060	3,060	3,060	-	-	-	-	-	-	-	-	-	-
55		16,980	2024	16,980	-	-	-	3,396	3,396	3,396	3,396	3,396	-	-	-	-	-	-	-	-	-
56		13,068	2025	13,068	-	-	-	-	2,614	2,614	2,614	2,614	2,614	-	-	-	-	-	-	-	-
57		5,063	2026	5,063	-	-	-	-	-	1,013	1,013	1,013	1,013	1,013	-	-	-	-	-	-	-
58		4,911	2027	4,911	-	-	-	-	-	-	982	982	982	982	982	-	-	-	-	-	-
59		4,764	2028	4,764	-	-	-	-	-	-	-	-	953	953	953	953	-	-	-	-	-
60		4,621	2029	4,621	-	-	-	-	-	-	-	-	-	924	924	924	924	924	-	-	-
61		4,482	2030	4,482	-	-	-	-	-	-	-	-	-	-	896	896	896	896	896	-	-
62		4,348	2031	4,348	-	-	-	-	-	-	-	-	-	-	-	870	870	870	870	870	-
63		4,217	2032	4,217	-	-	-	-	-	-	-	-	-	-	-	-	843	843	843	843	843
64		4,091	2033	3,273	-	-	-	-	-	-	-	-	-	-	-	-	-	818	818	818	818
65		3,968	2034	2,381	-	-	-	-	-	-	-	-	-	-	-	-	-	-	794	794	794
66		3,849	2035	1,540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	770	770
67		3,734	2036	747	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	747
68	TOTAL	127,870			2,402	6,895	9,955	13,351	15,965	14,576	11,064	8,957	6,485	4,768	4,625	4,486	4,352	4,221	4,095	3,972	
	<u>Deferred Taxes</u>			120,169	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	
69	Tax Depreciation				2,402	6,895	9,955	13,351	15,965	14,576	11,064	8,957	6,485	4,768	4,625	4,486	4,352	4,221	4,095	3,972	
70	Book Depreciation				2,402	6,895	9,955	13,351	15,965	14,576	11,064	8,957	6,485	4,768	4,625	4,486	4,352	4,221	4,095	3,972	
71	Difference			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72	Deferred Tax Asset	25.9%		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73	Cumulative Deferred Tax Asset			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Case No.: U-21534
Exhibit: A-24
Schedule: N6
Witness: M. Hatsios
Page: 3 of 8

Case No.: U-21534
Exhibit: A-12
Schedule: B5.7.3
Witness: M. Hatsios
Page: 1 of 2

Michigan Public Service Commission
DTE Electric Company
Customer Service - IT Capital Investments
NPV Model for Digital Self-Service Capital Projects

Case No.: U-21534
Exhibit: A-24
Schedule: N6
Witness: M. Hatsios
Page: 4 of 8

Michigan Public Service Commission
DTE Electric Company
Capital Expenditures - IT
Customer Service Projects (\$000)
Sustainment and Return-to-Health - Select Projects

Case No.: U-21534
Exhibit: A-12
Schedule: B5.7.2
Witness: P. Sharma
Page: 1 of 1

Line No.	Line No.	(a) Description (Projects that Reduce Call Volume)	(b) Category	(c) Shared or Electric Only	(d)	(e)	(f)	(g)
					Historical	Bridge	Test	
					12 mos. ended 12/31/2022	12 mos. ended 12/31/2023	12 mos. ended 12/31/2024	12 mos. ended 12/31/2025
1	6	Customer Digital Channels and Self Service Program	Sustainment	Shared	1,550	2,219	2,770	2,763
2	19	Customer Experience Suite	Return-to-Health	Shared	2,627	518	-	-
3	21	Digital Channels Transformation Program	Return-to-Health	Shared	502	3,802	4,420	2,300
4		Totals			\$ 4,679	\$ 6,539	\$ 7,190	\$ 5,063

Sustainment Capex

	Description (Projects that Reduce Call Volume)	Self Service (1)	2022	2023	2024	2025
5	Customer Digital Channels and Self Service Program	100%	1,550	2,219	2,770	2,763
6	Customer Experience Suite	75%	1,970	389	-	-
7	Digital Channels Transformation Program	100%	502	3,802	4,420	2,300
8	Totals		\$ 4,022	\$ 6,410	\$ 7,190	\$ 5,063

Michigan Public Service Commission

DTE Electric Company

Customer Service IT Investments

Net Call Volume Reduction and Net Savings Detail by Year

Case No. U-21534

Exhibit: A-24

Schedule: N5

Witness: M. Hatsios

Page: 2 of 2

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)				
Call Volume Reduction by Transaction																				
Line No.	Historical and Projected Call Volume	Manual Call Categorization								Speech Analytics Categorization										
		2019A	2020A	2021A	2022A	2023A (2)				2023A (3)	2024P	2025P	2026P	2027P						
1	MIMO	890,000	720,000	690,000	717,000	526,313				577,498	550,000	510,000	445,000	430,000						
2	Outage	440,000	380,000	400,000	313,000	388,414				352,922	320,000	300,000	260,000	245,000						
3	Collection	960,000	690,000	880,000	995,000	951,500				1,245,089	1,210,000	1,120,000	970,000	945,000						
4	Billing	1,630,000	1,310,000	840,000	674,000	572,279				557,255	533,000	495,000	430,000	415,000						
5	Payments	620,000	660,000	650,000	720,000	438,977				294,745	280,000	260,000	225,000	215,000						
6	Other and Short Calls (1)	590,000	390,000	620,000	814,000	744,652				594,627	580,000	540,000	470,000	450,000						
7	Annual Handled Calls	5,130,000	4,150,000	4,080,000	4,233,000	3,622,136				3,622,136	3,473,000	3,225,000	2,800,000	2,700,000						
							2023 Call Reduction Benefits Detail													
Historical and Projected Call Volume Reduction							2019A	2020A	2021A	2022A	2023A (4)	2023A (5)	2023A (6)	2023A (7)	2024P (8)	2025P (9)	2026P	2027P	2022-2025 Net Call Reduction	2023-2027 Net Call Reduction
8	MIMO		170,000	30,000	(27,000)	190,687						190,687	-	-	27,498	40,000	65,000	15,000	231,185	338,185
9	Outage		60,000	(20,000)	87,000	(75,414)						(75,414)	-	-	32,922	20,000	40,000	15,000	64,508	32,508
10	Collection		270,000	(190,000)	(115,000)	43,500						43,500	-	-	35,089	90,000	150,000	25,000	53,589	343,589
11	Billing		320,000	470,000	166,000	101,721						101,721	-	-	24,255	38,000	65,000	15,000	329,976	243,976
12	Payments		(40,000)	10,000	(70,000)	281,023						154,563	126,460	-	14,745	20,000	35,000	10,000	245,768	360,768
13	Other and Short Calls (1,7)		200,000	(230,000)	(194,000)	69,348						-	-	69,348	14,627	40,000	70,000	20,000	(70,025)	213,975
14												415,056	126,460	69,348						
15	Annual Net Call Volume Reduction		980,000	70,000	(153,000)	610,864									149,136	248,000	425,000	100,000	855,000	1,533,000
Call Volume Reduction O&M Cost Savings							2019A	2020A	2021A	2022A	2023A (4)	2023A (5)	2023A (6)	2023A (7)	2024P (7,8)	2025P (7,9)	2026P (7)	2027P (7)	2022-2025 Net O&M Savings	2023-2027 Net O&M Savings
16	MIMO		1,927,800	340,200	(306,180)	2,162,392						2,162,392	-	-	311,827	453,600	737,100	170,100	2,621,639	3,835,019
17	Outage		680,400	(226,800)	986,580	(855,199)						(855,199)	-	-	373,335	226,800	453,600	170,100	731,517	368,637
18	Collections		3,061,800	(2,154,600)	(1,304,100)	493,288						493,288	-	-	397,909	1,020,600	1,701,000	283,500	607,697	3,896,297
19	Billing		3,628,800	5,329,800	1,882,440	1,153,515						1,153,515	-	-	275,052	430,920	737,100	170,100	3,741,927	2,766,687
20	Payments		(453,600)	113,400	(793,800)	3,186,799						1,752,744	1,434,056	-	167,208	226,800	396,900	113,400	2,787,008	4,091,108
21	Other and Short Calls (1)		2,268,000	(2,608,200)	(2,199,960)	786,403						-	-	786,403	165,870	453,600	793,800	226,800	(794,087)	2,426,473
22												\$ 4,706,740	\$ 1,434,056	\$ 786,403						
23	Annual Net O&M Cost Savings		\$ 11,113,200	\$ 793,800	\$ (1,735,020)	\$ 6,927,198						\$ 1,691,202	\$ 2,812,320	\$ 4,819,500	\$ 1,134,000				\$ 9,695,700	\$ 17,384,220
24	Cumulative Net O&M Cost Savings											\$ 6,883,380	\$ 9,695,700	\$ 14,515,200	\$ 15,649,200					
25	66% DTE Electric Portion (10)															\$ 6,399,162				
26	Cost Per Call	\$	11.34																	
Footnote:																				
1. Other and Short Calls are calls that are not included in one of the transactions above and calls that last less than 45 seconds in talk time.																				
2. To reconcile the call volume reduction in 2023, we calculated the benefit based on the difference between 2022 and 2023 calls utilizing the manual call categorization method.																				
3. With the implementation of Speech Analytics in 2023, calls were more accurately categorized and a new baseline of calls by transaction was established for calculating future call reductions through 2027.																				
4. The 2023 actual call reduction in total is 610,864. This reduction is broken out by the efforts described in footnote 5, 6, and 7.																				
5. This is the portion of the 2023 forecasted call reduction benefits attributed to customers using the self-service digital channels.																				
6. This is the portion of the 2023 forecasted call reduction benefits attributed to promotion of payment self-service options and defect remediation.																				
7. The reduction in Other calls is from the re-categorization of calls to the appropriate transaction and an estimated 2023-2027 reduction of 30,000 calls from the Other calls category attributed to the 2023 Advanced Analytics Use Case for Contact Center Natural Language Enhancement.																				
8. 4,500 calls of the 2025 forecasted call reduction benefits is attributed to the 2024 Advanced Analytics Use Case: Contact Center Journey Mapping and Modeling (reflecting a partial-year benefit).																				
9. 13,000 calls of the 2025 forecasted call reduction benefits is attributed to the 2024 Advanced Analytics Use Case: Contact Center Journey Mapping and Modeling (reflecting a full-year benefit).																				
10. This is the DTE Electric portion (66%) of the Call Reduction O&M savings deducted in the Customer Service Operation and Maintenance Expenses Exhibit A-13 C5.7 for Customer Records and Collection Expenses on Line 5 in Column (k) and footnote 3.																				

	Michigan Public Service Commission DTE Electric Company Capital Expenditures - IT Customer IT Capital Investments with Additional Project Details					Case No.: U-21534 Exhibit: A-24 Schedule: N3 and N3.1 P. Sharma, M. Hatsios
	Sustainment, Return-to-Health, Strategic & IT Enhancement - Select Projects					
	(a)	(b)	(c)	(d)	(e)	
Line No.	Historical and Projected Total IT O&M Costs (One-Time) of Projects that Reduce Call Volume					
	Line No.	Spend Year (1)	Business Case Name	IT Portfolio	Investment Category	Projected Total IT O&M Cost (\$)
	6	2022	Customer Digital Channels and Self Service Program	Customer Service - Sharma	Sustainment	\$ 380,475
	6	2023	Customer Digital Channels and Self Service Program	Customer Service - Sharma	Sustainment	\$ 250,438
	6	2024	Customer Digital Channels and Self Service Program	Customer Service - Sharma	Sustainment	\$ 377,120
	6	2025	Customer Digital Channels and Self Service Program	Customer Service - Sharma	Sustainment	\$ 340,000
	21	2022	Digital Channels Transformation Program	Customer Service - Sharma	Return-to-Health	\$ 723,524
	21	2023	Digital Channels Transformation Program	Customer Service - Sharma	Return-to-Health	\$ 492,798
	21	2024	Digital Channels Transformation Program	Customer Service - Sharma	Return-to-Health	\$ 146,067
	21	2025	Digital Channels Transformation Program	Customer Service - Sharma	Return-to-Health	\$ 230,000
	19	2022	Customer Experience Suite	Customer Service - Sharma	Return-to-Health	\$ 944,348
	18	2023	Advanced Analytics Use Cases	Customer Service - Hatsios	IT Enhancements	\$ 75,589
	18	2024	Advanced Analytics Use Cases	Customer Service - Hatsios	IT Enhancements	\$ 45,802
	21	2022	Customer Relationship and Billing Program Enhancement	Customer Service - Hatsios	IT Enhancements	\$ -
	48	2022	API Integration Security Gateway and API Layer	Customer Service - Hatsios	Strategic	\$ -
	27	2021	Bill Management	Customer Service - Hatsios	Strategic	\$ 201,000
	27	2022	Bill Management	Customer Service - Hatsios	Strategic	\$ 586,254
	28	2023	Billing Web Self-Service (2)	Customer Service - Hatsios	Strategic	\$ 69,607
	28	2024	Billing Web Self-Service	Customer Service - Hatsios	Strategic	\$ 197,000
	29	2023	Collection Web Self-Service (2)	Customer Service - Hatsios	Strategic	\$ 295,768
	29	2024	Collection Web Self-Service	Customer Service - Hatsios	Strategic	\$ 799,000
	29	2025	Collection Web Self-Service	Customer Service - Hatsios	Strategic	\$ 200,000
	31	2022	Customer Closed Loop Development	Customer Service - Hatsios	Strategic	\$ -
	NA	2021	Digital Experience Group	Customer Service - Pizzuti	Strategic	\$ 157,851
	NA	2021	Digital Transactional Experience	Customer Service - Pizzuti	Strategic	\$ 496,000
	35	2022	Error Free Communication	Customer Service - Hatsios	Strategic	\$ 364,122
	NA	2021	IVR Virtual Assistants	Customer Service - Pizzuti	Strategic	\$ 165,000
	38	2022	IVR Virtual Assistants	Customer Service - Hatsios	Strategic	\$ 212,605
	39	2022	Journey Work Product Transformation Teams	Customer Service - Hatsios	Strategic	\$ 96,696
	NA	2021	Kiosk Experience	Customer Service - Pizzuti	Strategic	\$ 440,000
	41	2023	MIMO Web Self-Service	Customer Service - Hatsios	Strategic	\$ 392,507
	41	2024	MIMO Web Self-Service	Customer Service - Hatsios	Strategic	\$ 601,000
	41	2025	MIMO Web Self-Service	Customer Service - Hatsios	Strategic	\$ 250,000
	42	2023	Payment Web Self-Service (2)	Customer Service - Hatsios	Strategic	\$ 6,030
	42	2024	Payment Web Self-Service	Customer Service - Hatsios	Strategic	\$ 197,000
	42	2025	Payment Web Self-Service	Customer Service - Hatsios	Strategic	\$ 350,000
		Total				\$ 10,083,600

Footnote:

1. 2021 projects are not in the Exhibit A-24 Schedule N3.1 project details because the exhibit includes 2022-2025 projects only. We have included historical 2021 one-time project O&M for modeling one-time project and trailing O&M costs.
2. Reduced 2023 original one-time project O&M to be proportionate to the reduction in 2023 project capital.

	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
Line No.	IT One-Time Project O&M Cost by Spend Year (\$)						Trailing IT O&M Cost by Spend Year (\$)						
	Factor (1) (% of capital costs)	2021	2022	2023	2024	2025	Allocation Method (see footnote)	% of One-Time O&M Costs	2022	2023	2024	2025 (9)	2026(9)
1			\$ 380,475				% of One-Time O&M (2)	10%		\$ 38,048	\$ 19,024	\$ 6,658	\$ 2,330
2				\$ 250,438			% of One-Time O&M (2)	10%			\$ 25,044	\$ 8,765	\$ 3,068
3					\$ 377,120		% of One-Time O&M (2)	10%				\$ 26,398	\$ 9,239
4						\$ 340,000	% of One-Time O&M (2)	10%					\$ 23,800
5			\$ 723,524				% of One-Time O&M (2)	10%		\$ 72,352	\$ 36,176	\$ 12,662	\$ 4,432
6				\$ 492,798			% of One-Time O&M (2)	10%			\$ 49,280	\$ 17,248	\$ 6,037
7					\$ 146,067		% of One-Time O&M (2)	10%				\$ 10,225	\$ 3,579
8						\$ 230,000	% of One-Time O&M (2)	10%					\$ 16,100
9	75%		\$ 708,261				No Trailing O&M	N/A					
10				\$ 75,589			Based on Estimated Usage (4)	N/A			\$ 10,000	\$ 7,000	\$ 7,000
11					\$ 45,802			N/A				\$ 75,000	\$ 52,500
12			\$ -				No O&M	N/A					
13			\$ -				No O&M	N/A					
14		\$ 201,000					On-going O&M (6)	N/A	\$ 201,000				
15			\$ 586,254				On-going O&M (6)	N/A		\$ 586,254	\$ 293,127		
16				\$ 69,607			% of One-Time O&M (5)	10%			\$ 6,961	\$ 6,961	\$ 6,961
17					\$ 197,000		% of One-Time O&M (5)	10%				\$ 13,790	\$ 13,790
18				\$ 295,768			% of One-Time O&M (5)	10%			\$ 29,577	\$ 20,704	\$ 20,704
19					\$ 799,000		% of One-Time O&M (5)	10%				\$ 55,930	\$ 55,930
20						\$ 200,000	% of One-Time O&M (5)	10%					\$ 14,000
21	No O&M		\$ -				No O&M	N/A					
22		\$ 157,851					% of One-Time O&M (5)	10%	\$ 15,785				
23		\$ 496,000					% of One-Time O&M (5)	10%	\$ 49,600				
24	42.5%		\$ 154,691				% of One-Time O&M (7)	10%		\$ 15,469	\$ 15,469	\$ 10,828	\$ 10,828
25		\$ 165,000					% of One-Time O&M (8)	10%	\$ 16,500				
26			\$ 212,605				% of One-Time O&M (8)	10%		\$ 21,261	\$ 10,630	\$ 5,315	\$ 2,658
27			\$ 96,696				% of One-Time O&M (5)	10%		\$ 9,670			
28		\$ 440,000					No Trailing IT O&M	N/A					
29				\$ 392,507			% of One-Time O&M (5)	10%			\$ 39,251	\$ 27,475	\$ 27,475
30					\$ 601,000		% of One-Time O&M (5)	10%				\$ 42,070	\$ 42,070
31						\$ 250,000	% of One-Time O&M (5)	10%					\$ 17,500
32				\$ 6,030			% of One-Time O&M (5)	10%			\$ 603	\$ 603	\$ 603
33					\$ 197,000		% of One-Time O&M (5)	10%				\$ 13,790	\$ 13,790
34						\$ 350,000	% of One-Time O&M (5)	10%					\$ 24,500
35	Total	\$ 1,459,851	\$ 2,862,505	\$ 1,582,737	\$ 2,362,989	\$ 1,370,000	Total		\$ 282,885	\$ 743,053	\$ 535,141	\$ 361,423	\$ 378,894

Footnote:

1. Factor is the percentage of the capital costs that was used to support call volume reduction projects. Using this factor to allocate the amount of one-time project and trailing O&M costs.

2. Trailing costs for sustainment / return-to-health projects are 10% of the one-time project O&M costs in Year 1 then decline by 50% in each year after. Sustainment contract efficiencies provide a 30% discount starting in 2025.

3. Trailing costs are 10% of the one-time project O&M costs in each year.

4. Trailing costs for Analytics projects are based on usage, with the majority of the costs related to running the cloud data pipeline and machine learning model pipeline, and is expected to reduce over time as efficiencies are gained.

5. Trailing costs for Web Self-Service projects include all Web and Licensing, Maintenance and Management (LM&M) costs. After Year 1, the trailing O&M for Digital Experience, Digital Transactional Experience and Journey Work Product Maintenance are included in the trailing costs of the four Web Self-Service projects (Billing, Collection, MIMO and Payment).

6. On-going costs to support the Bill Analyzer Platform through partial-year 2024. New maintenance contracts will be negotiated for 2025-2026 with the expectation of reduced pricing.

7. Only a proportion of the EFC trailing costs are included here to support the 2022 Outage Web Self-Service project. All incremental 2022 and future trailing costs are included in the EFC project costs.

8. Trailing costs after Year 1 are captured in the 2022 IVR Assistants project on Line 16, columns (n) through (p). Because the 2022 project is similar to a sustainment project, the trailing costs decline after Year 1.

9. Trailing costs will be reduced by 30% starting in 2025 as we negotiate better vendor pricing and capture operational efficiencies for the majority of our projects.

Michigan Public Service Commission
DTE Electric Company
Customer Service - IT Capital Investments
NPV Model for Digital Self-Service Capital Projects
Electric ROR Inputs

Case No.: U-21534
Exhibit: A-24
Schedule: N6
Witness: M. Hatsios
Page: 8 of 8

Line No.	(a) Description	(b) Capitalization Amounts (\$000)	(c) Pctg. of Perm. Capital	(d) Pctg. of Overall Capitalization	(e) Cost %	(f) Weighted Cost %	(g) After Tax Rate of Return %	(h)	(i) Pre-Tax Rate of Return %	
U-21297 Final (Effective 12/2023)										
	Long-Term Debt	8,876,109	50.00%	39.26%	4.056%	2.03%	1.59%	100.0000%	1.59%	
	Preferred Stock	-	0.00%	0.00%	0.000%	0.00%	0.00%	134.9635%	0.00%	Tax Rate
	Common Shareholders' Equity	8,876,081	50.00%	39.26%	9.900%	4.95%	3.89%	134.9635%	5.25%	74.09% 25.91%
	Total Permanent Capital	17,752,190	100.00%			6.98%				
	Short-Term Debt	330,941		1.46%	4.977%		0.0728%	100.0000%	0.07%	
	Regulatory Liability - REP			0.00%	0.000%		0.0000%	100.0000%	0.00%	
	Job Development - ITC - Debt	15,986		0.07%	4.056%		0.0029%	100.0000%	0.00%	
	Job Development - ITC Equity	15,986		0.07%	9.900%		0.0070%	134.9635%	0.01%	
	Total Job Development - ITC	31,973								
	Deferred Income Taxes (Net)	4,496,126		19.88%	0.000%		0.0000%		0.00%	
	Total	22,611,230		100.00%			5.5610%		6.92%	

(a) (b) (c) (d) (e) (f)

Core System Enhancements						
Capital costs from Exhibit A-12 Schedule B5.4 - Distribution Plant - Technology and Automation (Page 18, Lines 33 and 40)						
Line No.	Project Capital Costs by Technical Component	2022 Actual (1)	2023 Actual (2)	2024 Estimated (3)	2025 Estimated (3)	Total
Data Quality and Integration						
1	Outage Management System (OMS) in ADMS	528,876	-	300,000	-	\$ 828,876
2	Premise Power Status (PPS)	3,448,071	961,131	260,000	260,000	\$ 4,929,202
3	Event Hub	1,419,572	-	-	-	\$ 1,419,572
4	AMI	2,096,673	795,932	-	-	\$ 2,892,605
5	ESRI ArcGIS	889,855	-	-	-	\$ 889,855
6	Estimate Accuracy (4)	-	267,274	824,000	340,000	\$ 1,431,274
7	EFC Outage Status Reporting (5)	-	-	1,816,000	-	\$ 1,816,000
8	Total Project Costs	\$ 8,383,047	\$ 2,024,337	\$ 3,200,000	\$ 600,000	\$ 14,207,384
9	U-21297 Approved Amounts (6)	\$ 8,367,417	\$ -	\$ -	\$ -	\$ 8,367,417
10	Additional Recovery Requested in U-21534	\$ 15,630	\$ 2,024,337	\$ 3,200,000	\$ 600,000	\$ 5,839,967

1) 2022 project costs are part of the total capital included in Line 33 - Operational Technology and EFC (\$4,241,649) and Line 40 - Other Modernize Grid Management (\$4,141,399) of Exhibit A-12, Schedule B5.4.

2) 2023 project costs are part of the total capital included in Line 33 Operational Technology and EFC (\$52,048) and Line 40 Other Modernize Grid Management (\$1,972,289) of Exhibit A-12, Schedule B5.4.

3) 2024 and 2025 project costs are part of the total capital included in Line 33 - Operational Technology and EFC.

4) Estimate Accuracy includes the seven workstreams under the Restoration Estimate Initiative.

5) EFC Outage Status Reporting capital costs provide in-depth analysis to inform investments needed in the Core System.

6) Approved amounts represent the capital recovery requested for the 2022 projected bridge period in U-21297.

(a) (b) (c) (d) (e)

Core System Enhancements - Cost Type Detail

Capital costs from Exhibit A-12 Schedule B5.4 - Distribution Plant - Technology and Automation (Page 18, Lines 33 and 40)

Line No.	Project Capital Costs by Cost Type	2022 Actual	2023 Actual	2024 Estimated	2025 Estimated
Data Quality and Integration					
1	Straight-Time Labor	985,360	334,350	416,000	76,200
2	Over-Time Labor	62,828	14,145	32,000	4,200
3	Contract Labor	6,311,504	1,445,513	2,362,000	447,000
4	Material	15,950	-	6,000	1,200
5	Other - Vendor	586,450	95,742	224,000	39,600
6	Overhead, includes benefits	420,956	134,588	160,000	31,800
7	Total Project Costs	\$ 8,383,048	\$ 2,024,337	\$ 3,200,000	\$ 600,000

	(a)	(b)	(c)	(d)	(e)
Customer-Facing System Enhancements					
Capital costs from Exhibit A-12 Schedule B5.7.3 Line 35					
Line No.	Project Capital Costs by Workstream	2022 Actual	2023 Estimated	2024 Estimated	Total
	System Enhancements				
1	WISMO	3,888,373	4,760,878	2,434,595	11,083,846
2	Outage Map	325,094	1,535,878	866,217	2,727,189
3	Sub-total	\$ 4,213,467	\$ 6,296,756	\$ 3,300,812	\$ 13,811,035
	Customer Notifications				
4	Notifications and Dashboards / Reporting (1)	4,361,638	2,460,878	1,464,524	8,287,040
5	Sub-total	\$ 4,361,638	\$ 2,460,878	\$ 1,464,524	\$ 8,287,040
	Customer Channels				
6	Web and Mobile	6,191,877	4,460,878	2,797,964	13,450,719
7	IVR	136,911	140,878	-	277,789
8	Sub-total	\$ 6,328,788	\$ 4,601,756	\$ 2,797,964	\$ 13,728,508
9	Total Project Cost)	\$ 14,903,893	\$ 13,359,390	\$ 7,563,300	\$ 35,826,583
10	U-21297 Approved Amounts (2)	\$ 7,070,000	\$ 8,122,000	\$ 3,804,000	\$ 18,996,000
11	Additional Recovery Requested in U-21534	\$ 7,833,893	\$ 5,237,390	\$ 3,759,300	\$ 16,830,583

1) Dashboards and Outage Status Reporting capital costs were moved to the Core System Capital tab on Page 1 Line 7 in 2024.

2) Approved amounts represent the capital costs that have been approved for recovery in U-21297 for the 2022 and 2023 bridge period and 2024 test period less disallowances of: a) 2022 Customer Channel capital spend of \$5.2 million and b) Level 2 - 20% disallowance of the projected 2024 test year spend of \$4.8 million, equaling \$0.95 million.

(a) (b) (c) (d)

Order Tracking - Service Channel - Notifications - Outage Map Enhancements

Capital costs from Exhibit A-12 Schedule B5.7.3 Line 35

Line No.	Project Capital Costs by Cost Type	2022 Actual	2023 Estimated	2024 Estimated
1	Straight-Time Labor	\$ 610,474	595,385	142,000
2	Contract Labor	\$ 1,047,647	1,048,085	45,300
3	Material	\$ 105,872	93,030	35,000
4	Other - Vendor	\$ 12,010,417	10,694,587	6,925,000
5	Overhead, includes benefits	\$ 1,129,482	928,303	416,000
6	Total Project Costs	\$ 14,903,893	\$ 13,359,390	\$ 7,563,300

		(a)	(b)	(c)	(d)	(e)	(f)
U-20836 Approved IT Capital for Select Projects							
Line		U-20836 Historical 12 mos. ended 12/31/2020	U-20836 Projected Bridge 12 mos. ended 12/31/2021	U-20836 Projected Bridge 10 mos. ended 10/31/2022	U-20836 Projected Test 12 mos. ended 10/31/2023	Total	Notes
Level 2 Project - Approved IT Capital							
1	Advanced Analytics Use Cases	\$ -	\$ -	\$ 1,750	\$ 490	\$ 2,240	Approved with 20% Blanket Disallowance (1)
2	Total Requested IT Project Capital Costs	\$ -	\$ -	\$ 1,750	\$ 490	\$ 2,240	
3	Approved Amounts	\$ -	\$ -	\$ 1,400	\$ 392	\$ 1,792	
Digital Projects - Approved IT Capital							
		U-20836 Historical 12 mos. ended 12/31/2020	U-20836 Projected Bridge 12 mos. ended 12/31/2021	U-20836 Projected Bridge 10 mos. ended 10/31/2022	U-20836 Projected Test 12 mos. ended 10/31/2023	Total	Notes
4	Digital Experience Group	\$ 5,183				\$ 5,183	2020 Approved with 60% Disallowance (2)
5	Bill Management	\$ -	\$ 2,560	\$ -	\$ -	\$ 2,560	2021 Approved 100% since 0% Disallowance
6	IVR Virtual Assistants	\$ -	\$ 2,010	\$ 980	\$ 275	\$ 3,265	2021 Approved 100%; 2022-2023 20% Disallowance (1)
7	Kiosk Experience	\$ -	\$ 1,500	\$ -	\$ -	\$ 1,500	2021 Approved 100% since 0% Disallowance
8	Customer Relationship and Billing Program Enhancement	\$ -	\$ -	\$ 1,594	\$ 951	\$ 2,544	2022-2023 Approved with 20% Disallowance (1)
9	API Integration Security Gateway and API Layer	\$ -	\$ -	\$ 1,836	\$ 514	\$ 2,350	2022-2023 Approved with 20% Disallowance (1)
10	Customer Closed Loop Development	\$ -	\$ -	\$ 391	\$ -	\$ 391	2022-2023 Approved with 20% Disallowance (1)
11	Error Free Communication - Outage Status	\$ -	\$ 2,000	\$ 4,687	\$ 1,313	\$ 8,000	2021 Approved 100%; 2022-2023 Approved with 20% Disallowance (1)
12	Total Requested IT Project Capital Costs	\$ 5,183	\$ 8,070	\$ 9,487	\$ 3,052	\$ 25,792	
13	Approved Amounts	\$ 2,073	\$ 8,070	\$ 7,590	\$ 2,442	\$ 20,175	
14	Total Approved Amounts	\$ 2,073	\$ 8,070	\$ 8,990	\$ 2,834	\$ 21,967	

(1) Level 2 Blanket Disallowances of 20% per Final Order for U-20836 on November 18, 2022 page 191-192.
(2) Individual Project Disallowance of 60% per Final Order for U-20836 on November 18, 2022 page 204-205.

	(a)	(b)	(c)	(d)
U-21534 Requested IT Capital for Select Projects Net of Approvals in U-20836				
Line	Individual Projects	U-21534	U-21534	U-21534
		Historical	Projected Bridge	
		12 mos. ended	12 mos. ended	2022-2023 Total
		12/31/2022 (5)	12/31/2023 (5)	
	Requested Recovery in Exhibit A-12, Schedule B5.7.3			
1	Advanced Analytics Use Cases (5)	\$ 1,131	\$ 457	\$ 1,587
2	Total IT Project Capital Costs	\$ 1,131	\$ 457	\$ 1,587
3	U-20836 Final Order Approved Amounts (5)	\$ 1,131	\$ 392	\$ 1,523
4	Net Revenue Recovery Requested	\$ -	\$ 64	\$ 64

	Digital Projects	U-21297	U-21534	U-21534	U-21534
		Historical	Historical	Projected Bridge	
		12 mos. ended	12 mos. ended	12 mos. ended	2022-2023 Total
		12/31/2021	12/30/2022 (1,2,3)	12/31/2023	
	Requested Recovery in Exhibit A-12, Schedule B5.7.3				
5	Bill Management	\$ 2,206	\$ 3,425	\$ -	\$ 3,425
6	IVR Virtual Assistants	\$ 2,274	\$ 1,271	\$ (109)	\$ 1,161
7	Kiosk Experience	\$ 1,522	\$ -	\$ -	\$ -
8	Customer Relationship and Billing Program Enhancement (1)	\$ -	\$ 400	\$ -	\$ 400
9	API Integration Security Gateway and API Layer (2)	\$ -	\$ 70	\$ -	\$ 70
10	Customer Closed Loop Development (3)	\$ -	\$ 314	\$ -	\$ 314
11	Error Free Communication - Outage Status (1)	\$ -	\$ 6,330	\$ -	\$ 6,330
12	Total IT Project Capital Costs	\$ 6,002	\$ 11,810	\$ (109)	\$ 11,701
13	U-20836 Final Order Approved Amounts (4,5)	\$ 5,716	\$ 4,253	\$ (109)	\$ 4,144
14	Net Revenue Recovery Requested	286	7,557	-	7,557

	(a)	(b)	(c)
	U-20836	U-20836	U-20836
	Projected Bridge	Projected Bridge	Projected Test
	12 mos. ended	10 mos. ending	12 mos. ended
	12/31/2021 (4)	10/31/2022 (1,5)	10/31/2023 (5)
15	Bill Management \$ 2,206		
16	IVR Virtual Assistants \$ 2,010		
17	Kiosk Experience \$ 1,500		
18	U-20836 Final Order Approved Amounts \$ 5,716		
19	IVR Virtual Assistants (5)	\$ 784	\$ (109)
20	Customer Relationship and Billing Program Enhancement (1)	\$ 400	\$ -
21	API Integration Security Gateway and API Layer (5)	\$ 70	\$ -
22	Customer Closed Loop Development (5)	\$ 312	\$ -
23	Error Free Communication - Outage Status (5)	\$ 3,750	\$ -
24	U-20836 Final Order Approved Amounts \$ 4,253	\$ (109)	

Footnote:

(1) Only a portion of the capital from two 2022 projects provided funding toward the Web Self-Service projects: 2022 Customer Relationship and Billing Program Enhancement - CR&B (\$0.40M of the \$2.79M) and 2022 Error Free Communication - Outage Status - EFC (\$6.33M of the \$14.90M). The full amount of both projects are on Line 21 and Line 35, respectively, in Column d of Exhibit A-12 Schedule B5.7.3.

(2) This project is included in the Projects < \$250k - Customer Service on Line 48 in Column d of Exhibit A-12 Schedule B5.7.3.

(3) Only the funding from the 2022 Closed Loop Development project (\$0.31M) shown on Line 31 in Column d of Exhibit A-12 Schedule B5.7.3 contributed toward the Digital Web Self-Service project.

(4) If the approved amount in U-20836 is greater than the historical costs in U-21297, it is capped at the amount of the historical costs. If the approved amount in U-20836 is less than the historical costs in U-21297, the approved amount is capped at what was approved in U-20836. For example, Bill Management was approved for \$2.56M in cost recovery for 2021 capital spend in U-20836 (see Page 1, Column b, Line 5 of this exhibit), but historical costs for 2021 filed in U-21297 were \$2.2M so the approved amount is capped at \$2.2 M as shown above in Column a, Line 15. For IVR Virtual Assistants and Kiosk Experience projects on Lines 16 and 17 shown above below Bill Management, the approved amount in U-20836 was less than their historical cost filed in U-21297, hence, the approved amount for recovery is capped at the amount approved in U-20836 (Page 1, Column b, Lines 6-7 of this exhibit) .

(5) If the approved amount in U-20836 is greater than the historical costs in U-21534, it is capped at the amount of the historical costs. For example, API on Line 21 above in Column b is capped at its historical cost though it was approved for more in U-20836. If the approved amount in U-20836 is less than the historical costs in U-21534, the approved amount for recovery is capped at the amount approved in U-20836. This is the case with the projects shown above on Lines 19, 22, and 23 above in Columns b through c.

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
Line No.		2024P	2025P	2026P	2027P	2028P	Total
	Call Handling Efficiencies						
1	Contact Center Enablement (Line 30)	\$ (87,120)	\$ (119,683)	\$ (136,747)	\$ (131,817)	\$ (130,426)	\$ (605,793)
2	2025 AA Use Cases - Automation of CR Notes (Line 18)	\$ -	\$ -	\$ (319,084)	\$ (297,078)	\$ (297,078)	\$ (913,240)
3	Total Contact Center O&M Savings	\$ (87,120)	\$ (119,683)	\$ (455,831)	\$ (428,895)	\$ (427,504)	\$ (1,519,033)
	Operational Efficiencies	2024P	2025P	2026P	2027P	2028P	Total
4	MDM Stabilization (Line 23)	\$ -	\$ -	\$ (94,940)	\$ (94,940)	\$ (94,940)	\$ (284,820)
5	Total Operational O&M Efficiency (Cost Avoidance)	\$ -	\$ -	\$ (94,940)	\$ (94,940)	\$ (94,940)	\$ (284,820)
	IT System Efficiencies			2026P	2027P	2028P	Total
	Automated Application Monitoring Enhancement (Line 19)						
7	Reduction in Monitoring Time after Restore	\$ -	\$ -	\$ (48,000)	\$ (32,000)	\$ (32,000)	\$ (112,000)
	Transform and Modernize PO Architecture (Line 26)						
6	Reduction in CR Wait Time	\$ -	\$ -	\$ (218,650)	\$ (57,750)	\$ (33,950)	\$ (310,350)
8	Total IT System O&M Efficiency (Cost Avoidance)	\$ -	\$ -	\$ (266,650)	\$ (89,750)	\$ (65,950)	\$ (422,350)



2022-2024 Outage and EFC Channel Enhancements

2022 – 2024 YTD Releases

Integrated with two new back-end systems: What is the Status of my Order (WISMO) and Premise Power Status (PPS)

Case: U-21534

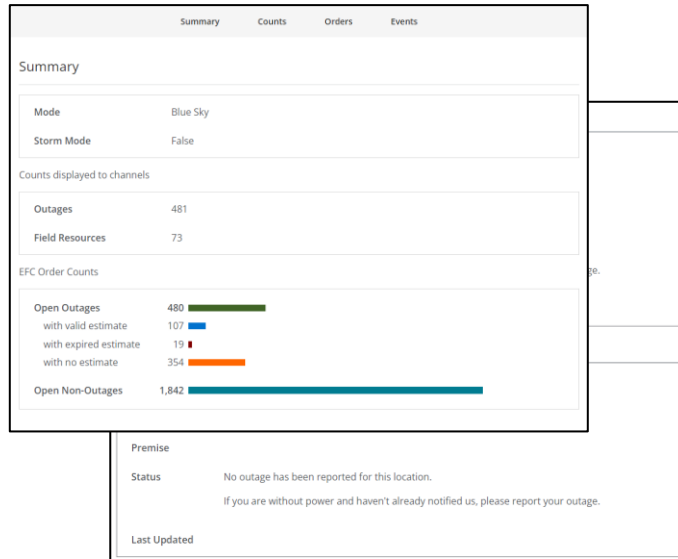
Exhibit: A-24

Schedule: N10

Witness: M. Hatsios

Page 2 of 10

- Created the ability to switch between 'Blue Sky' and 'Storm Mode'
- Using a new dashboard of current open orders and their estimate status
- WISMO utilizes Premise Power Status (PPS) and Outage Management System (OMS) data to update customers on their outage status of Utilizes AMI data when communicating power restoration to customer



Order Status	Events	Debug: Status	Debug: Order	Debug: Events
Premise				
Sunday, October 9				
1:36:59 PM - Power Status - Updated status				
		Old	New	
Power Status		DK	YES	
Job ID		N22100900003		
Off Since Date		10/9 at 2:27 AM	8/3 at 6:48 PM	
AMI Verified		False	True	
12:50:56 PM - Power Status - Updated status				
		Old	New	
Cause Code		TREEBROW	ANIMAL	
12:21:16 PM - Power Status - Updated status				
		Old	New	
Cause Code		SW_OP	TREEBROW	
12:16:09 PM - Power Status				
12:02:04 PM - Sent Status Notification - Sent status notification for request for customer to confirm outage status to: - SMS - Contacts on the account				
12:01:34 PM - Power Status - Resolved order				

Implemented the Error Free Communications (EFC) Storm Journey which significantly improved how we notify customers of their outage status

Case: U-21534

Exhibit: A-24

Schedule: N10

Witness: M. Hatsios

Page 3 of 10

- Created a new customer 'Storm Experience' for use during large scale weather events
- Provides more frequent updates to customer between power out and initial estimate (examples as shown on right)
- Re-wrote all storm notifications and integrated with new notifications platform
- Informs customers of storm progression, Storm Ramp Up, Damage Assessment, Global Estimate, and Individual Premise Estimate
- Acknowledges when Restoration Estimates have changed

Outage Status

Status is current as of April 11 at 8:59 AM [Refresh](#)

[Address](#)

We are aware your power is out.

Estimated Restoration
Currently not available

We know how challenging it is to be without power. Be assured that once the storm passes, we will restore your service as quickly and safely as possible. Please be safe.

Cause
Will be determined when our crew arrives and assesses the damage

[Check Another Address](#)

[Return to Outage Center](#)

2

Estimated Restoration Currently not available

Our crews are assessing damage caused by severe weather that hit Southeast Michigan. We are aware of your outage and how challenging it is to be without power. Once we assess the damage, we will provide an estimated time of restoration. We will restore your power as quickly and safely as possible. Please be safe.

3

Estimated Restoration Currently not available

Our crews are working to restore power to customers impacted by the severe weather that hit Southeast Michigan. We estimate that 80% of customers will be restored by Thursday, Apr 14. We know how challenging it is to be without power, and we will add crews from outside our area as needed to restore your service as quickly and safely as possible. Please be safe.

4

Estimated Restoration Monday, Apr 11

Our crews are working diligently to restore your power. Please be safe.

5

Estimated Restoration Tuesday, Apr 12

Your restoration time has changed. Our crews are dedicated to working as quickly and safely as possible to restore your power. Please be safe.

6

We have restored power to your property.

We have restored power to your property. If you're still experiencing an issue, it is possible that the problem is inside. Please have someone check your circuit breakers or fuse box. If this doesn't solve the problem, please let us know by clicking on the Still Experiencing a Problem button below. There may be additional issues we need to investigate. Thank you for being a valued DTE customer.

Integrated with a new cognitive, type-ahead address search that matches addresses stored in DTE's CRM system to make it easier for customers to search and find their address

Case: U-21534
Exhibit: A-24
Schedule: N10
Witness: M. Hatsios
Page 4 of 10

- Approximately 12% of attempts fail in the existing Check Outage Status address search.
- The address search capability increases the probability of the user being able to complete the transaction online.
- The first Outage transaction to integrate with the new address search is Check Outage Status
- Report Outage and Report Downed Power Line was integrated in Q1 2023.

EXISTING - Web Experience

DTE Cancel
Outage Center

Outage Status
Step 1 of 1: Identify the location

[Choose Saved Location](#)

Address Phone

Please provide the address of the outage.

Street Address

Apt. Suite, etc. (Optional)

City (Optional)

ZIP Code

☐ Remember this location

Continue

NEW - Web Experience

DTE Cancel
Outage Center

Outage Status
Step 1 of 2: Identify the Location

☒ Remember this location

* Search for outage address

Please enter the address where you are experiencing an issue.

[I can't find my address](#)

* Search for start service address

2350 Pri...

Princeton CT, Warren, MI 48091

Princeton Rd, Berkley, MI 48072

Princeton St, Berkley, MI 48072

Princeton Ave, Apt 1, Berkley, MI 48072

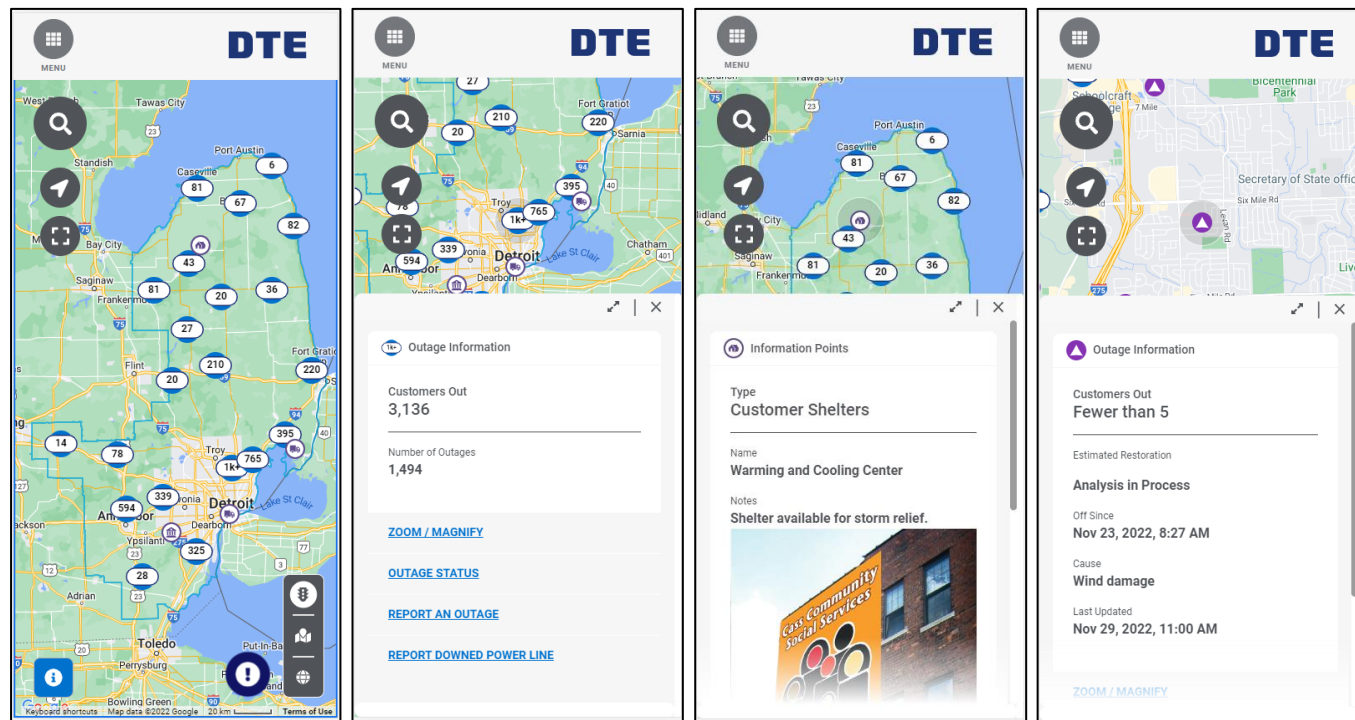
Princeton Ave, Apt 2, Berkley, MI 48072

Princeton Ave, Apt 3, Berkley, MI 48072

© 2021 DTE Energy. All rights reserved.

Development, testing and launch of the new Outage Map

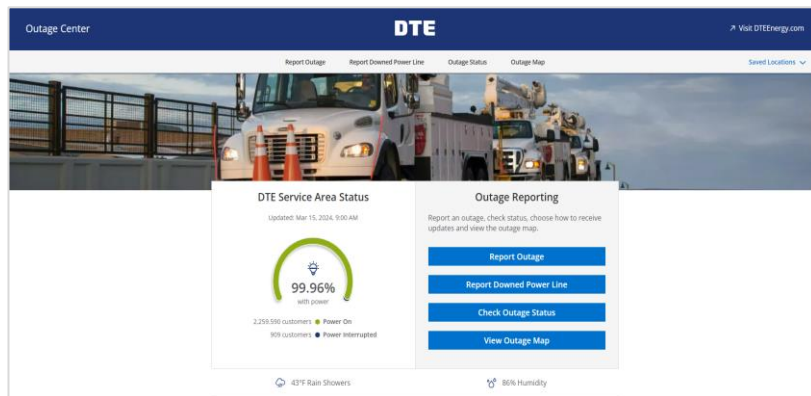
- Connected the new map to the existing Outage Center
- Modern look and feel using Google base maps
- Utilizes modern cloud- based systems
- Demonstrated performance under high outage volumes (4 million + outages processed in 7 mins)
- Displays multiple outages using a cluster design
- Offers new information points for customers (e.g., ice trucks, warming shelters) and new features



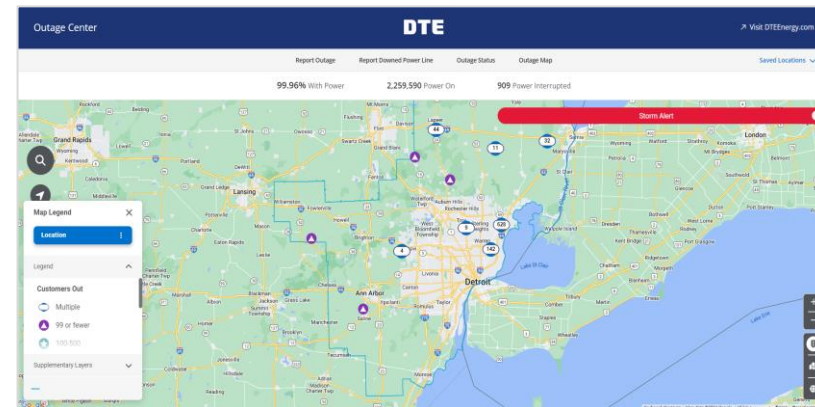
Updated Outage Center and Map Statistics

- Provided an enhanced, animated statistics view of how many customers are with and without power on the Outage Center Map
- Re-organized page visuals for better customer viewing

Outage Center Home Page



Outage Center Outage Map



Updated Customer Checklist – Outage Reporting Step 2

- Provides customers with a list of actions to take that may potentially resolve their power outage without DTE intervention

Step 2 of Reporting an Outage

The screenshot shows the 'Report Outage' interface for DTE. At the top, there's a dark blue header with 'Outage Center' on the left, 'DTE' in the center, and a 'Cancel' button on the right. Below the header, the title 'Report Outage' is centered, followed by the subtitle 'Step 2 of 2: Report the type of outage'. A location field shows 'Address' with a location pin icon and the text '1 ENERGY PLZ', with an 'Edit' link to its right. Below this is a blue-bordered box with an information icon and the text: 'Please review these common power problem solutions before reporting an outage.' Underneath, the 'Type of Outage' section lists five radio button options: 'Power is out' (Electricity isn't working in the home or building), 'Power is partially out' (Electricity is working in some areas of the home or building, but not others), 'Lights are dim or bright' (Lights in the home or building are consistently dim or bright), 'Lights aren't working normally' (The home or building has flickering or blinking lights, or there are temporary outages), and 'Other' (The problem is different than those listed above).

Common Power Solutions Pop-up

The screenshot shows a 'Before Reporting' pop-up dialog with a close button (X) in the top right corner. The title is 'Before Reporting'. The main content area lists 'Power problems that may be resolved on site.' with three items, each accompanied by an icon: 1. A hand plugging a cord into a wall outlet, with text: 'Resetting a breaker switch might resolve the problem. Please check your breaker panel.' 2. A house icon with a lightning bolt, with text: 'If the power problem is isolated to your garage or only some outlets after resetting a breaker switch, please call an electrician.' 3. A Wi-Fi router icon, with text: 'For internet, cable, phone or security camera issues, contact your service provider.' At the bottom of the dialog are two buttons: a blue 'Problem Is Resolved' button and a white 'Close' button with a blue border.

Re-design Native Mobile App Functionality

- Updated the DTE native mobile app to add outage features and functionality enhancing the customer experience
- Initially released in May 2023, then released again as part of the re-write of the Native App final release in December 2023
- Features that were included: Outage Reporting, Down Power Line Reporting, and Outage Status

Outage Reporting

4:15

< Outage Status Done

Outage Status

3731 PINOAK ST, 48348

We have restored power to your property

We have restored power to your property. If you're still experiencing an issue, it is possible that the problem is inside. Please have someone check your circuit breakers or fuse box. If this doesn't solve the problem, please let us know by clicking on the Still Experiencing a Problem button below. There may be additional issues we need to investigate. Thank you for being a valued DTE customer.

🔍 Cause

Private property tree damaged equipment

Still Experiencing a Problem

Return to Outage Center

Down Power Line Reporting

4:16

< Report Downed Power Line Cancel

1 2 3

Report Downed Power Line

3731 PINOAK ST, 48348

General Details

Is the power out?

☒ Yes ☐ No

Downed Power Line Details

☒ Pole to pole

Continue

Outage Status

4:14

< Report Outage Cancel

1 2 3

Report Outage

3731 PINOAK ST, 48348

Select a problem

☒ Power is out
Electricity isn't working in the home or building.

☐ Power is partially out
Electricity is working in some areas of the home or building, but not others.

☐ Lights are dim or bright
Lights in the home or building are consistently dim or bright.

☐ Lights aren't working normally
The home or building has flickering or blinking lights, or there are temporary outages.

Continue

Re-design of Police & Fire Website

- Updated the Police & Fire website to include multiple new enhancements to customer experience
- Development work started in 2023 and carried into early 2024, with the release taking place in Feb 2024
- Enhanced features included: Power Line Issue reporting form, the ability to identify problem location by Map, the ability to upload photos to the reported problem, viewing closed reports on the dashboard (in addition to open reports), and providing Estimated Time of Arrival (ETAs) to the reported problem details

Location Identification by Map Pin (Lat/Long)

DTE

Report Problem

Step 1 of 4: Identify the location

Address
 Intersection

Click or tap the site of the power problem to pin the location.

* Describe the location or surroundings

1st St, west of Beacon Park.

25 / 80

Down Power Line Form Enhancements

DTE

Location

1 ENERGY PLZ

Edit

Critical Information

Police & Fire Standing By

Edit

Problem Information

Please select all that apply.

☒ Power Line Issues

Does location have power?

☐ Yes
 ☐ No

Type of power line:

☐ Pole to Pole
 ☐ Pole to Building

Is there an object on the power line?

☐ Yes
 ☐ No

Is the power line down, low, or within reach?

☐ No
 ☐ Down
 ☐ Low
 ☐ Within reach

Is the power line near a school, park or playground?

☐ Yes
 ☐ No

Is the power line arcing?

☐ Yes
 ☐ No

Photo Upload

DTE

123

Phone Number

(123) 456-7890

Additional information about the problem or the location of the problem (Optional)

Add supporting images (Optional)

1

Drag one file at a time or [select file](#)

We support JPEG, JPG, PNG, BMP, HEIC

Maximum file size 4 MB

test case 2.jpg

✓ Successfully Uploaded!

×

test case 3.jpg

✓ Successfully Uploaded!

×

test case 4.jpg

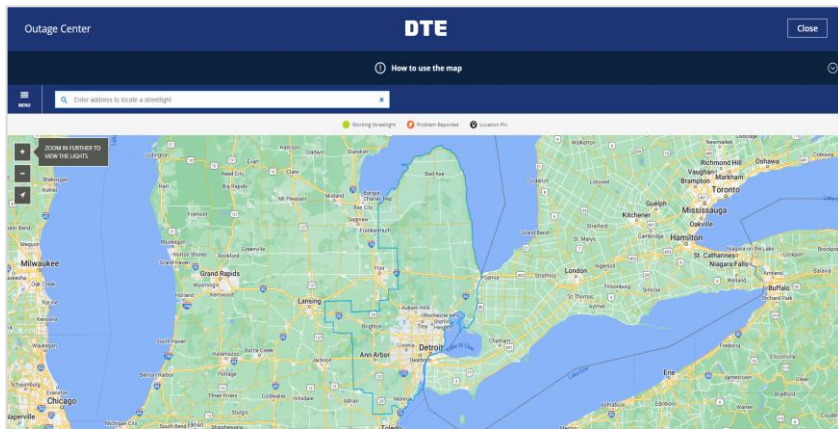
✓ Successfully Uploaded!

×

Streetlight reporting enhancements

- The new map consolidated the series of screens /online form to report streetlight outage on to one screen
- Implemented map for visual view of streetlights for outage reporting in order to increase data quality

Streetlight Reporting Map



Street/Zoomed View

