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August 30, 2024

VIA ELECTRONIC CASE FILING

Ms. Lisa Felice, Executive Secretary
Michigan Public Service Commission
7109 W. Saginaw Highway
Lansing, MI 48917

Re: **MPSC Case No. U-21534**: 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.

Dear Ms. Felice:

Enclosed for filing please find the public version of the ***Revised Testimony of Richard Bunch and Proof of Service*** for the above referenced case.

For convenience, the revised testimony:

- Strikes Exhibit MAU-31: Ann Arbor City LED Conversion Webpage;
- Revises page 14, line 15;
- Adds the word "published" to p. 15, line 9;
- Corrects a typo on p. 57, line 18;
- Corrects one cell in the table in the first line of p. 58;
- On p. 58, corrects a typo in line 6 and corrects one cell of the table immediately following;
- Strikes the question and answer beginning p. 60, line 17 and ending on p. 61, line 8, and the associated footnote referencing Exhibit MAU-31 on p. 61; and
- On p. 63, corrects one cell of the table in line 4.

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Sincerely,

Valerie J.M. Brader
Counsel to MI-MAUI

cc: w/enclosure: Parties of Record

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **DTE Electric Company** for authority to increase its rates for the generation and distribution of electricity and for other relief.	U-21534 ALJ Sally Wallace

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REVISED TESTIMONY OF RICHARD BUNCH

ON BEHALF OF

THE MICHIGAN MUNICIPAL ASSOCIATION FOR UTILITY ISSUES

~~July 26~~August 29, 2024

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I. INTRODUCTION & QUALIFICATIONS

Q. Please state for the record your name, position, and business address.

A. My name is Richard Bunch. I am Executive Director of the Michigan Municipal Association for Utility Issues (MI-MAUI). I am also a senior consultant at 5 Lakes Energy, LLC. My business address is 220 MAC Ave, Suite 220, Lansing, MI.

Q. On whose behalf is this testimony being offered?

A. I am testifying on behalf of Michigan Municipal Association for Utility Issues (MI-MAUI).

Q. What is MI-MAUI?

A. MI-MAUI is a non-profit membership association formed by Michigan municipal governments to provide them with a collective voice and technical support in their relationships with regulated utilities and in Michigan Public Service Commission proceedings.

Q. Please summarize your experience in the field of utility regulation.

A. I have worked since 2015 in positions related to clean energy, primarily on behalf of local governments. A significant portion of that work has included analysis of MPSC rate and other cases and supporting local government participation in rate cases and other MPSC proceedings. From 2015 to 2017 I organized and led the Municipal Street Lighting Coalition, a group of 24 municipalities served by DTE Energy, which intervened in Cases U-17767, U-18014, U-20836 and U-21297 and participated in the subsequent MPSC-ordered street lighting collaborative. I organized and supported the intervention of several municipalities receiving street lighting services from Consumers Energy in cases U-20134, U-20697, U-20963, U-21224 and U-21389. I have submitted comments in several other case dockets on behalf of MI-MAUI and have participated in various MI Power Grid

working groups and the Electric Distribution Planning working group. I directed MI-MAUI's intervention in DTE Energy's Voluntary Green Power case U-20713.

In the field of consumer protection, I am president and board chair of the Washington Public Interest Group (WashPIRG), an independent, non-partisan, non-profit organization based in Seattle that works to protect consumers and promote good government. I am also an officer of the WashPIRG Foundation, an affiliated research and public education organization. I was Executive Director of WashPIRG from 1989 to 1992 and worked on a number of consumer protection issues during that time and in more junior positions prior to that. I also served until 2020 as an officer of the PIRG in Michigan (PIRGIM) Education Foundation, a non-partisan consumer protection and good government public education and research organization based in Ann Arbor.

I am currently a stakeholder co-chair of the Commission's Data Analysis and Regulatory Review working group, and I am a member of the Commission's Low Income Energy Policy Board.

My energy-related work experience, educational and professional development background are summarized in my resumé.[1]

Q: Please list your training and education relevant to the field of utility regulation.

- EUCI Outdoor Street Lighting Conference, June 2019
- EUCI Electric Cost-of-Service - Essential Concepts for a Changing Industry, July 2019
- MSU-IPU Accounting and Ratemaking course, September 2020
- EUCI Utility Green Tariffs: A to Z course, November 2020
- MSU-IPU Advanced Regulatory Accounting and Auditing course, October 2021

[1] See Exhibit MAU-1, Resume of Richard Bunch.

- NRRI Regulatory Training Institute, Regulating Public Utility Performance course, 2022.

Q. Have you testified before this Commission or as an expert in any other proceedings?

A. I have previously testified before the Michigan Public Service Commission (Commission) in the following cases:

- Case U-20530 (I&M PSCR Reconciliation case)
- Case U-20561 (DTE Electric Company Electric General Rate Case)
- Case U-20697 (Consumers Energy Company Electric General Rate Case)
- Case U-20836 (DTE Electric general rate case)
- Case U-20963 (Consumers Energy Company Electric General Rate Case)
- Case U-21087 (DTE Electric PrePay case)
- Case U-20836 (DTE Electric Company Electric General Rate Case)
- Case U-21224 (Consumers Energy Company Electric General Rate Case)
- Case U-21297 (DTE Electric Company Electric General Rate Case)
- Case U-21389 (Consumers Energy Company Electric General Rate Case)

I have testified before the Kentucky Public Utilities Commission in rate cases 2020-349 and 2020-350, the combined Kentucky Utilities and Louisville Gas & Electric electric and gas rate cases.

Q. What is the purpose of your testimony?

A. I am testifying on behalf of MI-MAUI regarding DTE Electric's (the Company) customer billing practices, coordination of infrastructure projects with local governments and street lighting service, rates, and tariffs.

Q. Are you sponsoring any exhibits?

A. I am sponsoring the exhibits listed below. Exhibits MAU-1 through MAU-9, MAU-12 through MAU-16, MAU-18 through MAU-31, MAU-33, and MAU-35 through MAU-38 were prepared by me. Exhibits MAU-10, MAU-11, MAU-17, MAU-32, and MAU-37 were prepared under my direction.

Exhibit MAU-1:	Resume of Richard Bunch
Exhibit MAU-2:	DTE 'Ways to Pay' Kiosks Webpage
Exhibit MAU-3:	DTE Response to MAUIDE-3.17a (S1)
Exhibit MAU-4:	DTE Response to MAUIDE-3.14 (S1)
Exhibit MAU-5:	DTE Response to MAUIDE-3.13
Exhibit MAU-6:	DTE 'Ways to Pay' Authorized Agents Webpage
Exhibit MAU-7:	DTE Response to MAUIDE-3.15
Exhibit MAU-8:	DTE Response to MAUIDE-3.17a Attachment
Exhibit MAU-9:	DTE Response to MAUIDE-3.16
Exhibit MAU-10:	DTE Kiosk Census Data
Exhibit MAU-11:	National Utility Cash Payment Requirements
Exhibit MAU-12:	Identity Theft Statistics
Exhibit MAU-13:	DTE Response to MAUIDE-4.19a
Exhibit MAU-14:	Bellini Rebuttal Testimony U-21297 p. 9-10
Exhibit MAU-15:	City of Ferndale LED Conversion Cost Proposal
Exhibit MAU-16:	Consumers Energy LED Bill Credit
Exhibit MAU-17:	U-21585 Consumers Witness Schmoekel Testimony, p. 18
Exhibit MAU-18:	Electric Sales Forecast Reduction

Exhibit MAU-19:	DTE Response to MAUIDE-4.28b
Exhibit MAU-20:	DTE Response to MAUIDE-6.52
Exhibit MAU-21:	DTE Response to MAUIDE-6.53
Exhibit MAU-22:	U-20147 DTE 2023 EDIIP Comments MI-MAUI
Exhibit MAU-23:	DTE Response to MAUIDE-4.26
Exhibit MAU-24:	DTE Response to MAUIDE-4.24
Exhibit MAU-25:	U-21297 Witness Bellini Testimony, p. 18
Exhibit MAU-26:	DTE Response to MAUIDE-6.55
Exhibit MAU-27	U-20836 Bellini Rebuttal excerpt
Exhibit MAU-28:	DTE Response to MAUIDE-6.56 REDACTED
Exhibit MAU-29:	DTE Response to MAUIDE-4.20
Exhibit MAU-30:	DTE Response to MAUIDE-5.47 - GCJ_J Specs
~~Exhibit MAU-31:~~	~~Ann Arbor City LED Conversion Webpage~~
Exhibit MAU-32:	Consumers Energy LED Streetlight Crossovers
Exhibit MAU-33:	Grand Rapids LED Conversions
Exhibit MAU-34:	LED Luminaire Plant Balance Disallowance
Exhibit MAU-35:	COS Cost Comparisons from WP U-21534 RAB Lighting Rate Model
Exhibit MAU-36:	Google Search Results of Capital Improvement Plans
Exhibit MAU-37:	DTE Response to MAUIDE-2.5
Exhibit MAU-38:	DTE Response to AADE-1.7
Exhibit MAU-39:	DTE Response to MAUIDE-2.8
Exhibit MAU-40:	DTE Response to MAUIDE-2.7
Exhibit MAU-41:	DTE Response to MAUIDE-1.2

II. DTE CASH PAYMENT REQUIREMENTS

Q. How can most customers pay their DTE bills?

A. Most customers have a range of options, including automatic bill payment (using both withdrawals from bank accounts or credit cards), by check, money order, credit or debit card and in cash. If customers want to pay by mail, then they must use either checks or money orders.[2]

Q. Are there DTE customers who have been required to pay their bills only in cash for a year?

A. Yes. In 2023, 48,410 customers were required to pay in cash; this was a little more than two-thirds of customers subject to payment restrictions.[3]

Q. Under what conditions does DTE say it imposes the cash-only payment requirement?

A. The Company states, "Customers with a returned payment and arrears greater than $100 are subject to the payment restriction." If arrears are $100 or less, then "two returned payments with or without arrears will trigger the same restriction."[4]

Q. Does the cash payment requirement apply only to customers facing shutoff?

A. No. Customers who have made payments on time for months are still required to pay in cash for one year following a returned payment, according to the Company's communications.

Q. If a customer had a monthly electric bill of $101, was a victim of identity theft, cancelled a credit card as a result, and forgot to update their DTE payment method

[2] See Exhibit MAU-2 (DTE "Ways to Pay").
[3] Exhibit MAU-3, response to MAUIDE-3.17a (S1).
[4] Exhibit MAU-4, response to MAUIDE-3.14 (S1).

to change the card on file, under current practice the Company may require them to pay in cash for a year?

A. Yes, that scenario is consistent with the Company's statements regarding when it could impose this restriction.

Q. How does DTE inform customers that it will require them to provide payment in cash?

A. DTE's rate book does not include any specific requirement for the form of notice (e.g., phone call, email, letter), advance notice or content of notice.[5] In practice, DTE states that it sends the customer an e-mail including the following text "For the next 12 months you are required to make your payment using cash at a kiosk or at an authorized payment location."[6]

Q. If required to pay bills in cash, how can customers do that without incurring additional fees?

A. The only way to pay bills in cash without incurring additional fees is to pay at a kiosk. Otherwise, customers will have to use an authorized agent and pay that agent a fee. See R. 460.123(5)(b). The amount of the fee varies from agent to agent and is not disclosed on DTE's website.[7]

Q. Does DTE use geographic criteria when imposing the cash-payment-for-a-year restriction, such that it ensures customers who must pay in cash have access to kiosks?

[5] Exhibit MAU-4, MAUIDE-3.14 (S1).
[6] Exhibit MAU-5, response to MAUIDE-3.13, attachment 2.
[7] Exhibit MAU-6, DTE Ways to Pay – authorized pay agents webpage.

A. No.[8]

Q. DTE's website says kiosks "are located all across the service territory."[9] Do you believe this is an accurate statement?

A. No. There are only five communities with kiosks currently: Detroit, Ecorse (which borders Detroit), Harper Woods (which borders Detroit), Highland Park (which is surrounded by Detroit), and Redford Charter Township (which borders Detroit).[10]

Q. Do you believe that most DTE customers that are required to pay in cash are functionally required to pay a processing fee to an authorized agent every time they are billed for a year?

A. Yes. Even if all the people in Wayne County who were required to pay in cash in 2023 (23,178) lived in and around the five Detroit-area communities with kiosks (which is unlikely), then more than half of the people required to pay in cash would not have access to fee-less payments. For instance, in 2023, there were 10,040 cash-only customers in Oakland County, 8,488 in Macomb County, 2,365 in Washtenaw County and 1,211 in Saint Clair County.[11] DTE currently operates no kiosks in these counties.

Q. Does every customer ordered to pay in cash at least have access to an authorized agent or kiosk within a 5-mile radius of their billing address?

A. Probably not. For example, Sanilac County has only one authorized agent (in Sandusky)

[8] Exhibit MAU-4.
[9] Exhibit MAU-2.
[10] Exhibit MAU-7, response to MAUIDE-3.15.
[11] Exhibit MAU-8, attachment to response to MAUIDE-3.17a (S1).

but in 2023 had 262 customers who were required to pay in cash.[12] Parts of Sanilac County are 30 miles away from Sandusky.

Commission Rules Regarding Cash Payments

Q. Do the Commission rules permit utilities to require customers to pay only in cash or by money order, and to bar access to other payment options?

A. As I read them, such restrictions are permitted only when the customer is facing shutoff. In a Rule labelled as regulating the "manner of shutoff," a utility must permit the customer to "pay in any reasonable manner, including by personal check, credit card, or debit card" but the rule clarifies that if a customer has tried any of those three methods and in the last year has had payment denied for a reason other than financial institution error, then "payment by personal check, credit or debit card" is not reasonable. R. 460.142(4). While Rule 460.123 discusses automatic bill payment plans, it does not address whether and when customers may use them.

Q. Is the practice of requiring customers to pay in cash for a year included in the Company's tariff?

A. The cash-payment provision language included in DTE's rate book at section C4.6B mirrors the language of found in Rule 460.142(4), without reference to a shutoff scenario.

> Payment by personal check, credit or debit card is not reasonable if the customer has paid with a personal check, credit or debit card within the last 12 months and at least 1 check has been returned for insufficient funds or no account, or at least 1 credit or debit card payment has been denied excluding financial institution error.

[12] Location of authorized agents determined from DTE's "Ways to Pay" webpage. Number of cash-payment customers in Sanilac County taken from U-21534 Exhibit MAU-8, attachment to response to MAUIDE-3.17a.

Q. Are forms of payment other than "personal check, credit or debit card" discussed elsewhere in the rules?

A. Yes. The rule listing forms of payment that "are not reasonable" to accept to avert shutoff does not include automatic bill payment plans, which are referenced elsewhere in the rules.

Q. What do you conclude from your review of the Billing Rules and DTE's rate book?

A. I conclude that DTE's cash-payment requirement is inconsistent with, if not explicitly prohibited by, the Billing Rules.

Q. What do the billing rules contemplate as the method by which to balance utility interests with customer interests, in situations when a check has bounced or a credit card has been declined?

A. The rules specify that in such situations, the utility may require the customer to provide a deposit. R. 460.109(1)(f). Those deposits are returned to the customer with annual interest of 5% after a year of making on-time payments. R. 460.111(8).

Q. Does DTE's rate book state that a customer who has bounced a check or had a declined credit card payment may provide a deposit consistent with Rule 460.109(1)(f)?

A. No, it does not.

Q. In what way is a deposit potentially better for a utility than requiring customers to pay in cash for a year?

A. Because the deposit is paid up front, the utility has greater certainty that overdue bill amounts may be recouped if the customer falls into arrears.

Q. In what way is a deposit potentially better for a customer than being required to pay in cash for a year?

A. There are at least three reasons a customer might prefer to pay a deposit rather than pay in cash for a year: safety, cost, and the reduced burden of finding a payment location.

Q. Why would a deposit be safer for customers than paying in cash?

A. Having to carry a large amount of cash on a regular schedule to a known location can create a risk of robbery. The fact that such a risk is real and not merely perceived is shown by the fact that in recent years, DTE experienced "kiosk theft activity" and requests from store owners to remove kiosks "to protect their business from possible theft activity."[13]

Q. How many kiosks have been taken out of service for theft activity?

A. Although DTE did not provide specific data on this, the Company did report it has cut the number of kiosks by two-thirds in the last five years, and identified only one instance when a kiosk was removed for reasons not related to theft.[14] Specifically, DTE had a total of 38 kiosks in operation after 2019 and only operates 13 kiosks now.[15]

Q. Does DTE warn customers ordered to pay in cash about the kiosk theft activity it has experienced or that its store owners have warned the Company about?

A. No. Despite the Company's experience, DTE's website states that the kiosks "…offer a safe, secure place to access account information and make payments."[16]

Q. Why could paying a deposit be cheaper for customers than paying in cash?

A. While provision of a deposit is often burdensome to a customer (requiring up-front cash), at the end of a year of making payments on time, deposits are returned in full with 5% interest to the customer. If a customer pays in cash at any location but one of the thirteen

[13] Exhibit MAU-9, response to MAUIDE-3.16.
[14] Exhibit MAU-9, response to MAUIDE-3.16.
[15] Exhibit MAU-7, Response to MAUIDE-3.15.
[16] Exhibit MAU-2.

remaining kiosks, then the customer must pay a processing fee each time, and will never recoup any of that money, much less any interest they would have earned.

Q. Why could paying DTE a deposit be more convenient for a customer than paying in cash?

A. As I discussed above, most customers have poor access to kiosks, and some customers do not have any option that accepts cash payments within a 5-mile radius. Therefore, the ability to make a single payment and then use normal payment methods could prevent having to make a monthly trek to a particular location.

Q. Are there customers for whom having to pay in person would be even more problematic?

A. Yes. For example, customers who have medical conditions that compromise their immune systems or render them homebound may find the requirement to pay in cash imposes unreasonable logistical or personal safety risks when trying to deliver cash payments.

Q. Does the geographic distribution of the remaining kiosks create concerns in other dimensions?

A. Yes. In general, Commission rules prohibit requiring a deposit for reasons including race and residence location. R.460.108. When examining where kiosks are located, all of them are in higher-poverty areas that have high African-American and other non-white populations. There are other communities within DTE's service territory with comparable size and poverty rates but a racial makeup that is more heavily white. For instance, Lapeer and Port Huron Charter Township are similar in size and poverty rate to Ecorse. Hazel Park, Port Huron, and Mt. Clemens are similar in size and poverty rates to Harper Woods.[17]

[17] Exhibit MAU-10, DTE Kiosk Census Data.

Yet only Detroit and a few inner-ring suburbs have kiosks.

Q. Do customers who do not live near payment kiosks have any reasonable way to avoid paying the authorized agent processing fees?

A. In my opinion, they do not. In effect, to pay their bill they are compelled to pay an unavoidable fee, additional to the tariff, that the Commission has not reviewed or approved. In addition, they face security risks and inconveniences related to securing significant sums of cash and traveling to a payment location at least once per month.

While the Billing Rules authorize utilities to use payment agents who may assess fees, most customers are not compelled to pay those fees because they have other ways to pay their bills; in other words, if they pay the processing fee it is by choice. Customers required to pay in cash have no option, and if they do not live reasonably close to a DTE kiosk they will have little choice but to pay through an agent and incur the processing fee.

Increased Ratepayer Costs from Requiring Cash-Only Payments for a Year

Q. Do other large Michigan utilities require their customers to pay in cash for a year?

A. ~~It does not appear they do.~~ The websites, and MPSC-approved tariffs~~,~~ and rate books ~~and websites~~ of Consumers Energy and Indiana-Michigan Power do not state any circumstances in which the utility may require a customer to pay their bill in cash.[18]

Q. Do any municipal electric utilities in Michigan impose similar cash-payment requirements on their customers?

A. It does not appear they do. MI-MAUI reviewed the websites of thirty-nine municipal utilities in Michigan, of which all but two had websites explaining how bills could be paid. None of these sites stated requirements for customers to pay in cash under any

[18] Exhibit MAU-11, MI-MAUI Cash Payment Requirements research.

circumstances.[19]

Q. Was MI-MAUI able to identify large utilities outside of the state of Michigan that require their customers to pay in cash?

A. No. MI-MAUI reviewed the websites of seven of the biggest electric investor-owned electric utilities operating outside of Michigan. None of these websites stated requirements for customers to pay in cash under any circumstances.[20]

Q. What do you conclude from this review of other utilities' practices?

A. DTE is the only utility we were able to identify among a large peer sample in Michigan and nationally that has a published policy of regularly requiring cash payments from customers. Therefore, DTE is not following common or standard practices among its peers in Michigan and nationwide, who do not appear to require customers to pay in cash for a year, if ever.

Q. Do you believe the practice of requiring cash-only payments for a year harms all ratepayers by increasing uncollectibles?

A. Yes. It is common sense that making it harder for people to pay you is generally going to decrease your collections and drive up your collection costs. Moreover, given that the Department of Justice reported that 1 in 10 Americans were victims of identity theft in 2021,[21] situations in which customers may be needing to freeze a bank account or cancel a credit card and may not remember to change the DTE form of payment are likely to be common and easily rectifiable by providing another credit card or setting up payment from an alternative bank account. Customers given the opportunity to rectify these situations

[19] Exhibit MAU-11.
[20] Exhibit MAU-11.
[21] Exhibit MAU-12, US Department of Justice press release, identity theft statistics.

with little inconvenience means that DTE is more likely to get paid. I believe this is why other utilities do not impose such a requirement.

Imposing a cash-payment on some customers – even if they have no reasonable explanation for their returned payment – is likely to drive up uncollectibles. For example, it would simply be imprudent to make customers who are enrolled in shutoff protection programs pay in cash, because they will be much more likely not to bother paying at all. If the Commission finds that the Company may continue imposing a cash-only requirement on some customers, it should at least prevent the Company from recovering uncollectible costs caused by imprudent management decisions of this nature.

Q. How can DTE incentivize customers to present valid forms of payment, and avoid increased collections costs caused by returned payments, if it cannot require customers to pay in cash?

A. DTE has other means to minimize the impact on the cost of service of returned forms of payment and to encourage valid forms of payment.

First, DTE assesses customers a $15 charge for payments returned by banks or other financial institutions under section C4.6c of the rate book.

Second, returned payments frequently result in late fees, limited to 2% of the portion of the bill, net of taxes, that is delinquent.[22]

These provisions limit cost-of-service impacts on other ratepayers of returned payments and establish appropriate incentives for customers to present valid forms of payment. In addition, per my preceding point, there is no reason to think that making it harder for customers to pay their bills will reduce uncollectible expense.

[22] R460.125, late payment charges.

Q. Is the Company's late fee policy appropriately documented in its rate book?

A. No, it is not. The Company's rate book section C4.8A, Late Payment Charge Residential, refers to Rule 460.122. This reference is incorrect. Rule 460.122 is titled Cycle Billing. The correct reference is to Rule 460.125. The Commission should order the Company to correct this error in its rate book. Because the Billing Rules were recently revised, it may be prudent for the Company to conduct a general reconciliation of its rate book to the revised rules.

Recommendations Regarding Cash Payment Requirements

Q. If the Commission agrees that DTE's practice of requiring customers not facing imminent shutoff to pay in cash is a violation of the billing rules, what do you recommend it do?

A. The Commission should order an amendment to DTE's tariff to restrict the Company's ability to require customers to pay in cash to the specific and narrow circumstance covered by Rule 42, because doing otherwise is a violation of the billing rules and results in an unauthorized rate for many customers.

Q. If the Commission does not agree the billing rules prohibit DTE from imposing cash-only requirements when payments are returned, what notice requirements should it order the Company to observe?

A. The Commission should create requirements pertaining to both the form and content of such notices.

First, the Commission should order the Company to mail notice to the customer, in addition to the email notice it already provides.

Second, the notice should state that the cash-payment requirement pertains only to the

person whose payment was returned. The Company should continue to accept standard forms of payment from others. Imagine a restaurant that, following presentation of a declined credit card, refused to accept anything but cash from everybody else in the party: such a policy would be petty and self-defeating.

Third, the notice should describe how a customer may appeal imposition of the requirement by providing a reasonable explanation for the returned payment or by demonstrating undue hardship from paying in cash.

Q. If the Commission does not agree the billing rules prohibit DTE from imposing cash-only requirements, but does agree the Company's practice of requiring it for customers in vulnerable or protected groups is unreasonably burdensome, what do you recommend the Commission do?

A. The Commission should order the Company to ensure that no customer will be unreasonably burdened by a requirement to pay cash. The Commission should specify that no customer enrolled in critical care protection or medical emergency protection may be required to pay in cash. Per my preceding point, customers should be afforded an appeal process allowing them to present evidence of undue hardship or unreasonable burden.

Q. If the Commission does not agree the billing rules prohibit DTE from imposing cash-only requirements, but does agree the Company's practice of requiring it for customers who cannot access a kiosk imposes on them a higher rate than is authorized due to the effective requirement to pay processing fees with every bill, what do you recommend the Commission do?

A. The Commission should find that before imposing a requirement that a customer pay in cash, the Company must ensure there is an opportunity for the customer to pay their bill at

a location without an additional fee within five miles of the billing location.

Q. If the Commission does not agree DTE's cash-only-for-a-year requirement for some customers violates the billing rules, but does believe that the practice unreasonably increases uncollectibles, what do you recommend?

A. The Commission should disallow 1% of the expense amount uncollectibles contribute to the revenue requirement, and disallow the costs associated with the high rate of theft, etc. of kiosks that has also been borne by ratepayers.

Q. What is the basis for the recommendation regarding 1% of uncollectibles?

A. DTE does not keep data that would allow us to determine the degree to which customers required to pay in cash for a year default compared to customers not required to do so. Therefore, the 1% number is a reasonable assumption that this practice has driven up uncollectibles, but also recognizes that the default rate from approximately 70,000 customers is likely to make up a small percentage of overall revenue.

Q. Do you have any other recommendations for the Commission on this topic?

A. On a related topic, I recommend the Commission order the Company to correct the erroneous reference regarding late payment fees to Rule 460.122 in section C4.8A of the rate book. The correct reference is to Rule 460.125.

III. STREETLIGHTING

Q. Please summarize why local governments are concerned about street lighting services provided by DTE.

A. Local governments are concerned about the street lighting services they receive from DTE for fiscal, service delivery and social and environmental policy reasons.

For many local governments, street lighting is their biggest utility cost. They need to

deliver good street lighting service, but they also need it to be cost-effective, to be appropriately responsive to their taxpayers. My testimony here is mostly concerned with costs.

Streetlighting is an important municipal service. Badly designed or unreliable street lighting reflects poorly on the capabilities of the local government, even if the service is provided by DTE. Part of my testimony here is concerned with outage reporting, a key accountability component that can help improve reliability. Another part of my testimony addresses O&M priorities and costs.

Street lighting also impacts attainment of social and environmental policy goals. As the biggest electricity use for many local governments, streetlights that use more electricity than is necessary to achieve lighting standards make it harder to achieve local climate goals. A growing number of cities are also adopting lighting ordinances intended to reduce obtrusive light, including glare, light trespass, and light pollution. These phenomena can have public health, environmental and scientific impacts to which communities are increasingly attuned. Alignment of utility rates and practices with public policy goals, including state and local climate goals, is especially important for the streetlighting class of customers, which is made up entirely of governments.

Q. What street lighting topics will you address in testimony?

A. I will follow the outline used by DTE witness Bellini, and address the following topics in turn:

- Community Lighting Assets
- Community Lighting Sales Forecast
- Company Preventive Maintenance Programs

- Outage Restoration Activities
- Community Lighting Operation & Maintenance and Capital Expenditures
- LED Luminaire Selection Methodology Specific to HID to LED Conversions
- Community Lighting Rate Design

Community Lighting Assets

Q. Do you support phasing out HPS streetlights and replacing them with LED luminaires upon failure?

A. I agree that HPS fixtures should be phased out, because LEDs were the standard offering before DTE recognized that. I testified to this effect in case no. U-21297, DTE's previous electric rate case. I agree that any HPS fixture that fails should be replaced with an LED luminaire.

Q. Would you recommend even speedier phasing out of HPS streetlights than witness Bellini recommends to lower overall costs?

A. Yes, I would. To reduce the number of truck rolls necessary for the conversion, I would go slightly further: any maintenance event requiring a visit to an HPS fixture, including its mast arm, pole, and wiring, should result in replacement of the fixture. Making another repair now, only to return in a few years when the lamp burns out, is an expensive waste of crew time and leaves an inefficient fixture in service all that time.

Q. Do you support DTE's proposal to allow for immediate replacement of failed HPS with LED luminaires upon customer request, without assessment of a contribution in aid of construction ("CIAC")?

A. Yes: I support witness Bellini's commitment to allow any customer to request that the Company replace failed HPS lights with LED luminaires starting immediately, rather than

after stocks of replacement HPS lamps are depleted, without assessing a CIAC.[23]

Q. Do you support DTE's proposal to continue to require CIACs for group conversions of HPS fixtures to LED technology?

A. No. No CIAC should be assessed, because a planned conversion of a set of lights *en masse* ("group conversion") would lower overall costs compared to a conversion done as lights in the same area or on the same street burn out at different times ("reactive conversion"). There is no justification to charge CIAC for a customer-requested project that will be cheaper for the Company to implement than if the customer did nothing and thus reactive conversions were the way every light in a City were addressed.

In addition, as witness Bellini noted in his testimony in case no. U-21297, charging a CIAC when LEDs are the standard offering creates a situation where municipalities that act proactively and choose to pay for the entirety of their conversion will effectively subsidize future LED municipal conversions; this problem should not be deliberately exacerbated by continuing the practice when LEDs have become the default.[24]

Finally, if reactive conversions were actually cheaper and a CIAC was appropriate, then credits would need to reduce the CIAC for group conversions, as witness Bellini notes (though I believe the proper credit would be calculated differently than the labor credit witness Bellini describes).

Q. Why do you find the proposal to continue charging a CIAC for conversions to be inappropriate?

A. That is concerning to me for a few reasons. First, we have argued for some time that LEDs

[23] Exhibit MAUI-13, discovery response 4.19a.
[24] Exhibit MAU-14, Bellini rebuttal, case U-21297, p. 10 lines 6-8.

are becoming the standard light and people should not have to pay up front as if they were a specialty item. The Company argued this was not true right up until the time their suppliers told them they would not even carry HPS lights anymore. The Company's communication to its customers about the change in policy seems like an effort by DTE to entice customers to rush into a process that will result in those customers covering the project costs for converting from HIDs to LEDs when they would not have to pay hundreds of thousands – or even millions – of dollars up front for that conversion if they just waited for their existing lights to fail.[25] It also raises concerns regarding whether those customers will essentially pay for their conversion and the conversion of other customers, without getting any credit for that.

Q. Do you agree that it is cost-effective for DTE to continue to re-lamp HPS light fixtures until its inventory of HPS lamps is depleted?

A. No, I do not. DTE has testified in the last rate case, when it was arguing that a CIAC should continue to be charged for LED conversions because LEDs should not be viewed as the default offering, that some customers prefer HPS fixtures.[26] Assuming Mr. Bellini is correct, then the remaining stock of HPS fixtures should be reserved for those customers who request them.

Moreover, for customers who do not actively prefer HPS fixtures, it is wasteful to keep an HPS fixture in service. It uses much more electricity than an LED luminaire and requires more-frequent service, which is a major cost-driver. Every HPS fixture that DTE relamps can be expected to remain in service for another eight years – the rated life of the HPS

[25] Bellini Exhibit A-25, Sch O3.
[26] Exhibit MAU-14, Bellini rebuttal, case U-21297, p. 9-10.

lamps that DTE uses. Converting luminaires to LED at the first service opportunity reduces the customer's tariff significantly, rather than pushing realization of that savings out another eight years.

Q. What is your recommendation to ensure that streetlighting rates are based on the most efficient practices?

A. The Commission should deny the proposal to continue a CIAC for group LED conversions. Absent that, the Commission should put DTE on notice that costs of any truck roll to a streetlight in the eight years following replacement with an HPS instead of an LED light will be presumed to be unrecoverable, a presumption that could be rebutted and recovery assumed if the Company can show the roll would have been reasonable and necessary if an LED had replaced the HPS light (e.g. for a pole knockdown event).

Q. Would your recommendation be a departure from past practice, since DTE historically collected CIAC for customer-requested conversions of HPS fixtures to LED?

A. Yes: until now, any conversion of an HPS fixture to LED has been done only at customer request and has required a CIAC.

Q. If as you recommend, customers should get LED group conversions without paying CIAC up front, won't they be getting something for free that they formerly had to pay for?

A. No, they will not get LEDs for free. DTE will recover the cost of new LEDs through its tariff, as it already does. In fact, the current system of collecting CIAC creates the actual equity problem, because customers who pay for conversions pay the same tariff, including LED cost recovery, as customers who did not pay up front (e.g., customers whose Mercury

Vapor (MV) fixtures were replaced upon failure without a CIAC payment). Moreover, the continuation of a CIAC charge as Bellini recommends is poor policy as well as being unfair to customers: it will likely slow societal take-up of the environmental and cost-savings associated with LED conversions, since customers who wait could get the same benefit for free.

Q. Many customers already paid up front to get LEDs. Are you arguing that customers who have not invested in LEDs should get the same benefit without having the same costs?

A. I agree it is not fair for one customer who paid for their LED luminaires to pay the same tariff as another customer who got them at no out-of-pocket cost. It is also not fair that customers be charged for installation of the standard offering (LEDs). I believe there are ways to effectively address the potential disadvantage to those who did pay without knowing that LEDs would become the standard offering, as other utilities have done successfully.

Q. Can you give a specific example that will illustrate the cost implications of DTE's proposal for communities that chose to pay a CIAC for LED group conversions in prior years?

A. Yes, I can. Several years ago, the City of Ferndale, a MI-MAUI member, paid DTE $418,240 to convert all its streetlights to LED.[27]

Under DTE's reactive-conversion proposal, going forward other customers will get their LEDs without having to pay CIAC, via reactive conversions. LED rates will rise as LED luminaire plant-in-service balances rise. Ferndale cannot benefit because all its lights are

[27] Exhibit MAU-14, City of Ferndale LED conversion quote from DTE.

already LEDs, so its rates will rise to pay for other customers' LEDs. That would not be fair to Ferndale.

Q. What rate structure would be more reflective of the cost-of-service principle in ratemaking for LED "early adopters" like Ferndale?

A. Ferndale should not have to pay the portion of the LED rates, going forward, that recover costs of installing other customers' LEDs. Fortunately, we already have a Commission-approved model for handling this exact situation. Several years ago, Consumers Energy decided to discontinue charging customers CIAC for LED conversions, and instead to convert any HID fixture to LED when any kind of maintenance visit was required. Recognizing that rate-basing no-cost conversions would be unfair to customers who had previously paid for them, Consumers worked out a system of time-limited bill credits that protect early-mover LED customers against the rate impacts of those later no-CIAC conversions.

Q. How does Consumers Energy determine its bill credits for early adopters?

A. The Consumers bill-credit has three notable features: first, the credits are time-limited, meaning the credit scheme will end as of a specified date. Second, every customer receives the same credit amount per LED per year (only for LEDs they paid for through CIAC), regardless of the amount of original CIAC they paid or current tariff. Third, the credit amount is adjusted each time new rates incorporate changes in LED plant in service balances. I recommend that DTE bill credits have the same three features.

Q. When should bill credits sunset?

A. I recommend that the bill credits sunset after DTE has replaced half of the LEDs that were paid for by CIAC fees. At that point, it becomes reasonable for those early-mover LED

customers to end the credit because the CIAC contribution will have been effectively exhausted and replacement cost for those LEDs is recovered through rates.

DTE depreciates LEDs on a 15-year schedule. Although a few LEDs were installed earlier, I would recommend starting the 15-year clock at 2018, meaning that the bill credits would continue through 2033.

Q. Can you illustrate how this 2033 end to the credit would be applied in the Ferndale example?

A. Ferndale's LED conversion was finished in 2020. Ferndale's LEDs, according to DTE's depreciation policy, should last, on average, through 2035. To end bill credits much before 2035 would be to charge Ferndale for LED conversions they do not benefit from – i.e., a cost they do not cause; to credit after 2035 would not be appropriate.

The choice of 2033 also roughly coincides with the end of the period over which DTE will be replacing HPS fixtures with LEDs. DTE uses HPS lamps rated to last for eight years, meaning the great majority will burn out by 2033. Consequently, reactive conversion of HPS fixtures to LED will stop adding appreciably to the rate base after 2033.

Q. Why use a single year when customers' installation timelines varied?

A. Using a fleet approach would be much more workable, less confusing to customers and be much easier to administer. A perfectly equitable credit would account for when each customer's CIAC-paid LEDs entered service. DTE does not track service records of individual streetlights with the granularity necessary to establish a credit schedule for each light or even each conversion project.

Q. What data should be used to determine the credit amount?

A. The test-year revenue requirement associated with rate-based LED conversion costs should

be tracked. Customers who were assessed CIAC fees for LED conversions should not contribute to that cost recovery. This calculation should be performed separately for UG and OH lights because they have different luminaire costs. The resulting figure gives the annual amount that should be credited back to customers for each LED paid for by CIAC. I attach the exhibit provided by Consumers Energy in rate case no. U-21389 showing the inputs and calculation method they use.[28]

Consumer's methodology is instructive, but DTE may reasonably use a simpler approach. Consumers accounts for costs of all rate-based conversions going back several years. Until now, DTE has rate-based conversion costs only for failed MV fixtures, and it is reasonable to assume those conversions benefitted all customers with reasonable equity. Thus, DTE should be able to track only past CIAC-paid LED conversions to figure the credit amount. I recommend that the credit should be the same for all CIAC-paid LEDs and should be recalculated with each successive rate case because the number of rate-based LED conversions and the associated revenue requirements will rise over time. Just like the bill credit sunset timeline, the bill credit amount would be prohibitively difficult and confusing to implement with perfect equity. Ideally, the bill credit amount would be figured separately for each LED model and wiring type, and the rate impact would be divided by the number of LEDs of that model that were paid for through CIAC. In my opinion, this level of accuracy would be more trouble than it is worth and would be confusing to customers; it is also likely that DTE does not have the installation and cost records for every conversion project that this approach would rely upon as inputs.

Q. How do you recommend such a credit be implemented?

[28] Exhibit MAU-16, Consumers LED bill credit worksheet.

A. I recommend that the Commission instruct DTE to file a bill credit method and initial amount with its next rate case, including the features I have described here. I also recommend that the Commission instruct DTE to consult with staff and intervenors in the development of its proposed credit scheme in advance of its next filing.

Q. Why does your calculation of a credit differ from witness Bellini's proposal for a credit for labor against a CIAC?

A. I believe witness Bellini and I differ on how to think about what costs are being caused and avoided by early adopters (in addition to disagreeing about whether a CIAC is appropriate) in a world where all conversions will eventually occur. Witness Bellini approaches the question of conversion CIACs from the perspective of total cost of the group conversion, rather than the marginal cost – that is, the difference in cost between a group conversion and the alternative, which would be many reactive conversions that would happen over a period of time, each requiring a visit by a restoration crew. His proposal to provide a labor credit recognizes that the Company will, eventually, incur labor costs to convert any given HPS fixture to LED, so it might as well cover the labor cost now for any customer prepared to sign up for a group conversion.

This reasoning is sound as far as it goes, but it does not go far enough. In fact, if the customer does not request conversion now, then the Company, sooner or later, is going to have to cover the entire cost of an HID-LED conversion, including the cost of the luminaire, the cost of a truck roll and crew time, various other staff costs (planning, supervision, bill updates, etc.) and administrative and general costs, to name a few. That time will come when the HID fixture fails, in most cases owing to a lamp burnout. Witness Bellini has articulated no underlying rationale for crediting group-conversion customers

for labor costs -- but not all the other conversion costs saved by group conversions -- when assessing what credit should be applied.

I believe the better method is to calculate marginal costs, comparing the cost per fixture of a group conversion project today to the cost per fixture of reactive (post-failure) conversions over an extended period of time. We already have good building blocks to determine these figures, because we know how much DTE charges per light for group conversions and we know how much DTE spends per light to respond to individual outages. Cost of service is lower with group conversions than with reactive conversions – not to mention that group conversions improve reliability by preventing outages that trigger reactive conversions.

Q. Can you illustrate some of the savings that group conversions can deliver compared to the current CIAC that is charged for such projects?

A. In the case of the City of Ferndale's LED conversion project, the net unit CIAC fee DTE assessed was $279.81, calculated as follows:

$418,240 gross project cost + $69,750 DTE contribution = $487,990

$487,990/1,744 fixtures = $279.81 total unit cost recovered through CIAC

We also know how much it costs DTE to respond to a streetlight outage. In Exhibit A-25, Sch O2, we see that the "Outage cost per event" in 2023 was $568. This amount is several hundred dollars higher than the cost of replacing the fixture with an LED as part of a group conversion project.

Cost data from Consumers Energy tends to confirm this finding. Consumers performs vicinity conversions: when a HPS light is reported out, the crew not only converts the non-functioning light to LED but also converts other nearby fixtures to LED even though there

is nothing wrong with them. Consumers witness Dan Schmoekel testifies, "Approximately $253,000 in customer savings has been realized since 2022 through vicinity conversions by reducing non-premise time of field personnel."[29] If it is more cost-effective to convert two fixtures in one trip, as Consumers does, then it is even more cost effective to convert 20 or 30 fixtures in one trip – about the number of conversions that a crew can typically complete in a workday.

Q. If DTE does not assess a CIAC for group conversion projects, won't there be greater demand for group conversions than the Company can keep up with?

A. If so, this would be a solvable problem. A project queue could be established that DTE could work through in an orderly manner. While I might in other circumstances be more concerned with establishing an equitable process for rationing group conversion projects among customers, in this case no such concern is warranted. First, when other customers had to pay to be "first," those who were not volunteering to pay up front for a project will have little basis to object about now having to wait. Second, the customers who still have HPS lights have not responded to various financial incentives and outreach promoting LED conversions for the last ten years; meaning they are less likely to complain about delays in receiving a benefit that now comes without up-front cost to them.

The reason that escalated demand for conversions is properly understood as an opportunity, not a problem, is that it presents the opportunity to get fleet LED conversion done faster and cheaper, while preventing future HPS outages, and transitioning customers to the cheaper LED tariff sooner. Having not paid a CIAC, of course, these customers would not

[29] U-21534 Exhibit MAU-16, U-21585 Consumers witness Schmoekel direct testimony, p. 18, lines 9-10.

receive the LED bill credits I describe above; but their new LED tariffs should still be less than the HPS tariffs they are paying today.

Q. Please summarize your recommendation to the Commission regarding CIAC fees for customer-requested HID-LED group conversion projects.

A. No CIAC should be assessed for HPS-LED conversion projects going forward. The cost of service will be less by converting lights to LED in group projects than by converting them one-by-one upon failure.

Community Lighting Sales Forecast

Q. What adjustment do you recommend making to the community lighting sales forecast as described by witness Bellini?

A. I mostly agree with the forecast but recommend that the Commission update the inputs used to determine reduction to the E1 Option I annual usage to account for lights that are non-operational throughout the course of the year.

Q. Please explain why DTE reduces its sales forecast to account for outages.

A. In case no. U-21297, the Commission adopted MI-MAUI's recommendation to reduce the streetlighting E1-Option I Sales Forecast for Company-owned lights. Until then, street lighting rates assumed that all streetlights were fully operational and using electricity 4,200 hours per year. MI-MAUI objected that streetlight electricity use is drastically reduced when a streetlight is out of service and recommended using the Company's Night Patrol outage rate as a reliable measure of overall outage rate. We also recommended that the Night Patrol outage rate of 3.57% be reduced slightly to account for the small amount of electricity used by HID fixture ballasts when their lamps have burned out. The Commission accepted MAUI's recommendations and ordered a net reduction of 3.25% in the E1-Option

I sales forecast.

Q. Please describe what changes to the forecast you would recommend.

A. I do not recommend any changes in the methodology. However, three key calculation inputs have changed measurably compared to the figures used in case no. U-21297. The updated inputs should be used to recalculate the sales forecast reduction.

Q. Please describe and quantify the three input values that have changed.

A. The first input value that has changed is the Night Patrol outage rate. In 2023, that rate was 4.37%, which is an increase in outages from the 2022 rate used in in case no. U-21297 of 3.57%.[30]

The second input value that has changed is the number of HID fixtures remaining under the E1, Option I rate. DTE has since converted many of those fixtures to LED. It is important to track this change in figuring the sales forecast reduction because the ballasts in HID fixtures use about 15% of normal electricity even when their lamps are burned out, whereas non-functioning LED luminaires use essentially no electricity. Fewer HIDs means fewer ballasts using energy during outages.

The third input value that has changed is the total (unadjusted) electric sales forecast, which declines as LED luminaires replace HID fixtures. I note that I do not recommend any changes based on this input because unlike the two factors above, DTE accounts for this change in its sales forecast adjustment.

Q. Based on these changed inputs, what reduction in the sales forecast for E1, Option I lighting do you recommend?

A. I recommend a reduction of 3,308,045 kwh, equivalent to 4.06% of DTE's unadjusted

[30] DTE Exhibit A-25, Schedule O1.

forecast for E1, Option I streetlights.[31]

Company Preventive Maintenance Programs

Q. What preventive maintenance topics will you address?

A. I will address streetlight post inspection and painting, Night Patrol and underground cable replacement.

Q. What concerns do you have about the Company's proposals for streetlight post inspection and painting?

A. I have concerns that the Company has a history of vastly over-collecting for this area. MI-MAUI members are concerned about the condition of their decorative posts, which are typically located in neighborhoods where aesthetics matter, such as commercial areas with heavy pedestrian traffic. Inspection and painting of posts is necessary to maintain the appearance and condition of posts and guard against the need for more rapid capital investment.

The Company proposes to spend significantly less on inspections and painting ($260,000 total) than the Commission approved in previous cases. Further investigation reveals that in recent years the Company has collected substantially more than half a million dollars for this work that was not spent, as shown in the following table. Calendar years and test years do not align perfectly but suffice for comparison purposes, especially given the large differences.

[31] Exhibit MAU -18, sales forecast outage adjustment worksheet.

	CY2022/U-20561	2023/U-20836	CY2024/U-21297
Approved spend (inspection + painting)	$489,000	$486,580	$718,810
Actual spend	$218,005	$102,886	n/a
Difference	$270,995	$383,694	

Actual spend per U-21534 Exhibit MAU-18, response to MAUIDE-4.28b.

Actual 2024 spending has not been provided, but witness Bellini's explanations of his proposed amounts for the test year in the instant case gives us some clues. He explains that Community Lighting spent less in 2023 than in prior years because wood-pole inspections are now conducted by the Pole Top Maintenance program.[32] Thus, there should be no need for higher post inspection budget going forward.

Regarding post painting, witness Bellini explains that the Company anticipates reduced painting capacity going forward because it now uses one painting contractor instead of the two it used prior to 2024.[33] Therefore, the 2024 amount should be less than the 2023 amount, as should the test-year amount. Based on witness Bellini's testimony and discovery responses, then, it seems reasonable to assume that 2024 inspection and painting costs will be no greater, and possibly less than, 2023 expenditures.

Based on actual historical spending and witness Bellini's explanations, I would normally recommend that the Commission approve spending at 2023 levels plus inflation.

The table above, however, makes it obvious that the Company has already recovered its projected test-year inspection and painting costs several times over by vastly underspending approved amounts over the past several years. Between 2022 and 2023, the Company recovered about $650,000 more than it spent, and reasonable extrapolation

[32] Exhibit MAU-20, response to MAUIDE-6.52.
[33] Exhibit MAU-21, response to MAUIDE-6.53.

supports an estimate that will recover at least $500,000 more than it will spend in 2024. In total, then, through 2024 the Company will have recovered at least $1,150,000 more than it will have spent on inspections and painting – and that is looking back only three years. Another way to look at it is to observe that the Company has spent only about 25% (~$425,000/$1,694,390) of what it has recovered from customers to pay for inspections and painting from 2022-2024.

Therefore, my recommendation to the Commission is that it disallow any recovery of inspection and painting costs in the test year, based on evidence in the record that the Company has already been paid to do that work. However, the Commission should also make clear that DTE must continue to inspect and paint posts at the historical pace, if not more to avoid further disallowances.

Q. Do you have any other recommendations for the Commission pertaining to post inspection and maintenance?

A. Yes, I do. First, the Commission should clearly state that the Company must implement robust inspection and maintenance programs. It is not acceptable for the Company to maintain assets poorly and then incur premature capital replacement costs. Specifically, the Commission should instruct DTE to state annual targets for inspections and painting and to report on its performance to those targets in rate filings.

Second, the Commission should make clear that it will not pay twice to perform important O&M once. Given the Company's dramatic failure to spend recovered money on maintenance of decorative lamp posts that customers paid an additional amount for, and which are highly visible in the community, I recommend that the Commission order the Company to file as part of their next rate case a report on actual costs with amounts

recovered in rates, looking back five years.

Q. DTE proposes to spend significantly more on Night Patrol in the projected test year than in 2023. Do you support this change?

A. Yes, I support increasing the scope of Night Patrol. Night Patrol is an innovative program that has identified many outages before they are reported by community members, allowed for quick restoration of service, and given the Company valuable data to understand causes of outages. Outage occurrences and durations have been a long-standing challenge for the Company, and I believe that Night Patrol is a key element in helping the Company turn the corner and improve overall reliability.

Q. What concerns do you have about the Company's underground cable replacement program?

A. The Company has not provided reliability or cost data to justify this program. The Commission should disallow the proposed spending and make clear what information the Company should provide if it chooses to propose this program in future rate cases.

The first waypoint in this analysis should be the Company's plan for improving streetlight reliability as articulated in its Distribution Grid Plan. As I noted in my comments dated March 15, 2024 and submitted to docket U-20147, DTE makes absolutely no mention of streetlights or streetlight cable replacement in its DGP.[34] As a general proposition, the Commission should not authorize distribution system investments that have not been incorporated as part of DTE's DGP.

That said, I commend the Company for exploring preventive maintenance approaches that may prevent future outages. Preventive replacement of underground cable holds the

[34] Exhibit MAU-22, MI-MAUI comments in U-20147 docket in re DTE DGP.

promise of preventing outages that impact multiple lights and last longer than other outages.

Replacing underground cable is expensive, however, and prioritization should be data-driven. This is an analysis that the Company should have conducted in its DGP but did not; nor has it done so here. Witness Bellini states, "The cable replacement program uses the following criteria to determine selection and prioritization of projects: 1) age of cable, 2) pedestrian conflict (level of pedestrian traffic), 3) recurring outages, 4) number of lights on the circuit, and 5) type of road."[35] The Company provides no data to support this prioritization, and evidence that is in the record suggests that it does not even have the relevant data necessary to perform this prioritization. For instance, the Company has previously maintained it does not have data on how many lights are impacted by outages, so it will not have the historical information necessary to perform this prioritization.

Presumably, the best predictor of future outages is past outages, especially those that occur spontaneously (e.g., not from third-party strikes). The Company's OMS might be queried to find areas that are experiencing the most spontaneous cable breaks, but the Company has previously indicated that it is unable to classify outages by cause, including the ability to distinguish between spontaneous breaks and third-party damage.

It is also plausible to suppose that old cable is more likely to break and therefore ought to be prioritized for preventive replacement, but this depends on knowing where the old cable is located and showing a correlation between age and failure rates. Again, this hypothesis is testable, but there is neither data nor analysis in the record.

Witness Bellini states other criteria for replacing underground cable preventively include

[35] Exhibit MAU-23, response to MAUIDE-4.26.

road type, pedestrian traffic, and number of lights on the circuit but makes no logical connection between them and light failures, nor does he provide any data or analysis.

Witness Bellini also argues that preventive maintenance is more cost-effective than reactive repairs, an appealing proposition that may well be correct, but one without any underlying quantified analysis.

Q. What would make the case for preventive cable replacement more persuasive?

A. A data-driven approach would demonstrate that:

- Underground cable with certain characteristics, ages, installation types or locations is prone to repeated and reasonably predictable failures.
- The Company can identify where the failure-prone cable is installed.
- Failures of this type account for a disproportionate number of outage days, considering the number of lights impacted and the time it takes to restore service.
- Replacing the cable altogether costs less than repeatedly repairing it and prevents outages.
- To whatever extent preventive cable replacement is not strictly cost-effective, the Company can quantify the reliability benefits customers will realize from the investment.

Based on witness Bellini's descriptions of the new outage management system and the Night Patrol database, the data needed to make this case may be available for the next rate case, in a way the data is unavailable today.

Q. What do you recommend the Commission order regarding replacement of underground street lighting cable?

A. The Commission should not include spending on this program in the revenue requirement.

Consonant with my comments on DTE's DGP, filed in case no. U-20147, the Commission should require the Company to support its plans for this part of the distribution grid in its DGP.

If the Commission does not wish to instruct the Company to amend its DGP, it should leave the door open for the Company to support its cable replacement plans in a future rate filing. I have testified repeatedly about the Company's inferior performance with streetlight reliability. I welcome investments that can be shown to improve that performance. Spending based on hunches, when those hunches can be tested using straightforward analyses, is not prudent.

Community Lighting Outage Restoration Activities

Q. What is your assessment of DTE's streetlight outage restoration performance?

A. Both outage frequency and outage duration are declining. However, it is likely that reductions in outage counts are not attributable to the Company's outage response efforts. Because the Company's spending on outage restoration activities has been growing rapidly, the Commission should require the Company to provide additional data to demonstrate cost effectiveness.

Q. Is DTE achieving its target for outage durations?

A. No, it is not. In 2023, average outage duration was 4.17 days, continuing a downward trend from 2021's peak of 5.22 days.[36] The Company is still about 39% over its previously stated target of 3.0 days for outage durations and well above its average for 2017-2020 of 3.57 days – despite greatly increased spending. The improvement we see has come since 2021,

[36]Bellini, Exhibit A-25, Sch O1. I note that witness Bellini's testimony (RAB-17, line 21) states that 2022 performance was 4.2 days, but the exhibit shows 4.7 days. I assume that witness Bellini's testimony refers to 2023 performance.

which is not a useful baseline year for measuring performance. When we compare to a more useful pre-pandemic performance baseline, we are not seeing remotely the kind of performance improvement we should expect from the Company's greatly increased spending in this area. In fact, from a pre-pandemic baseline, performance has worsened. Furthermore, outage durations data for 2023 are derived from less than three months of data, from some point in October through December.[37] Months with the longest average streetlight outages tend to be those when distribution system outages are most widespread and crews de-prioritize streetlight repairs in favor of restoring power to buildings. Outages occur at all times of the year, of course, but generally the worst periods are late summer and winter, not the fall months from which the 2023 outage durations data were extrapolated. Thus, there are grounds to suspect that the reported durations understate the true full-year average.

Q. What is the company's target for outage durations?

A. I note that witness Bellini's testimony no longer includes a stated target for outage restoration time, as it has in the past. Witness Bellini's testimony in case no. U-21297 stated an outage duration target of 3.0 business days.[38]

Q. Please summarize the Company's spending trend on outage restoration activities.

A. The average outage cost per event has risen, almost without interruption, from $221 per event in 2017 to $568 per event in 2023.[39] Total outage restoration costs have increased over that period from $4.5 million to $9.4 million. Spread over approximately 200,000 lights, that increase equates to about $25 in increased annual cost per light for outage

[37] Exhibit MAU-24, response to MAUIDE-4.24.
[38] Exhibit MAU-25, U-21297, Bellini direct testimony RAB-18, line 24.
[39] Bellini, Exhibit A-25, Sch O2.

restoration, the majority of which is capitalized. This increase in costs is significantly impacting the cost of service and has not been adequately explained.

Q. Why do you state that reductions in outage counts are not attributable to the Company's outage restoration efforts?

A. All the reductions in outage counts can be attributed to increased deployment of LED luminaires, because they do not require bulb replacements every eight years or so. The Company had about 71,000 fewer HID streetlights (and 71,000 more LEDs) in 2023 than it had in 2017.[40] On average, one-eighth of those decommissioned HIDs would have had reportable outages each year caused by lamp failures – accounting for roughly 9,000 of the reported outages in 2017. Yet Mr. Bellini reports that total outage events went from 20,670 in 2017 to 16,544 in 2023 – a reduction of only 4,026 events.[41] Increased deployment of LEDs alone should have led to 5,000 fewer outages than were reported in 2023. The Company's increased spending on outage restoration should have contributed an additional reduction in outage events on top of the reduction attributable to LEDs, but we see no evidence of any such contribution – in fact, we see the opposite.

Except when the Company replaces failed Mercury Vapor fixtures with LEDs, customers pay for HID-LED conversions. A reasonable interpretation of the data available is that the Company's greatly increased spending on outage restoration has contributed nothing to the observed reduction in outage events. The *entire* reduction in outage frequency – and then some – is likely attributable to out-of-pocket spending via CIACs by customers on LED conversions.

[40] Bellini testimony, Table 2, RAB-8.
[41] Bellini, Exhibit A-25, Sch O2.

Q. Why do you estimate the contributions of LEDs to the observed reduction in outage counts rather than using actual outage data?

A. The Company has not provided data on root causes of outages, so we cannot isolate outages caused by lamp and fixture failures from other causes. My understanding is that the new OMS described in witness Bellini's testimony will greatly increase the Company's ability to track and report on root causes and their costs.

Q. What do you recommend the Commission order with respect to DTE's outage restoration costs?

A. I recommend that the Commission approve the Company's proposed costs. Reliability is the biggest concern of most streetlight customers and nobody wants to see a decline in performance. The decision to deploy the new OMS is particularly welcome, however, because of the impact it could have on better targeting spending.

Simply put, current data does not demonstrate that the Company's spending or efforts are effective – much less cost-effective. That is, the Company provides annual outage occurrence and duration data but cannot demonstrate any association between its programs and changes in those metrics. Therefore, I recommend that the Commission order the Company to provide detailed outage event data with its next rate case filing, covering both customer-reported outages and Night Patrol outages. Reporting should be organized by root cause and should include average restoration cost and average duration per root cause. Reporting should also include detailed data on long-duration events, organized by cause of the delay in restoration. Rather than being more prescriptive than this in its order, I recommend the Commission order the Company to provide a proposed reporting scheme within three months of its final order in this case, for review and discussion with Staff and

intervenors. The proposal should provide a proposed taxonomy of root outage causes, causes of delays in restoration, cost breakdowns and other data to be provided.

Q. Witness Bellini proposes a plan for periodically reporting outage data to streetlight customers. Do you support his proposal?

A. Yes, I do. MI-MAUI met with DTE and Commission staff and reviewed the Company's proposal. We asked questions and made several recommendations, and we received reasonable responses from the Company. We consider this a valuable and important step forward on what we hope will be a more strategic and informed approach to tackling streetlight reliability issues.

Q. Witness Bellini proposes to narrow the scope of the Commission's order in case no. U-21297 by providing outage reports only to E1, Option I customers rather than all E1 customers. Do you support this change?

A. Yes, I do. I agree with witness Bellini's reasoning on this point.

Q. Do you support the timeline witness Bellini proposes for sending outage reports to customers?

A. Witness Bellini's testimony does not commit to a date by which the Company will begin to send outage reports, evidently because of uncertainty about the timeline for achieving full operation of the new OMS system he describes. However, Mr. Bellini's testimony also estimates that the OMS will be fully functional by Q2 or Q3 of 2024, which time is already upon us. Therefore, I believe it would be reasonable for the Commission to include in its order a date certain by which the Company should provide initial reports.

Specifically, I recommend that the Commission order the Company to provide the required quarterly reports to its largest customers for Q3 and Q4 of 2024 no later than January 31,

2025, and thereafter to comply with the reporting schedule specified in its U-21297 order.

Q. Would you recommend that the Commission put any stipulations on its approval of the Company's proposal?

A. Yes. Currently, the Company asserts that it has the ability only to report outage events. Each event may impact more than one streetlight. For example, an underground conductor strike may interrupt electric service to multiple lights. The Company explains that its outage management system currently does not have the ability to track how many lights each event impacts. Thus, while the Company reports 12,264 "standard events adjusted" in 2023,[42] the number of streetlights out of service during those events may have been, and likely was, significantly higher.

While I understand why there may be a technical issue with reporting the number of lights that have experienced outages in any given period, it is important to recognize that customers see the number of lights that are out, not some common root cause. They are unlikely to feel confident in the integrity of a report that represents that (for example) six lights out is "1" outage.

Mr. Bellini has described the Company's efforts to improve its outage management system and it is my understanding that the Company anticipates being able to report outages on a "per light" rather than "per event" basis soon. This capability is one of the key factors in MAUI's support for the OMS. Therefore, I recommend that the Commission order DTE to propose a specific timeline for reporting on outages per light rather than per event as part of its next rate filing, or to justify why it cannot do so.

[42] Bellini Exhibit A-25, Sch O1.

Community Lighting Operations & Maintenance and Capital Expenditures

Q. Do you support witness Bellini's proposed O&M expenditures?

A. No, I do not. The Company is proposing an unjustified increase in spending on staff. Per my testimony about preventive maintenance activities above, the Company is also proposing unjustified costs for post inspection and painting.

Q. What change in staff O&M spending does the Company propose?

A. In its order in case no. U-21297, the Commission approved staff O&M spending of $1,279,807, and in this case proposes spending of $1,800,000, an increase of about $520,000 or 41%.

Witness Bellini explains that the increase is meant to cover new hires for unfilled positions, inflation and increase in administrative costs inclusive of using contractors.[43] When invited to explain the changes in number of FTEs broken down by title and or classification, witness Bellini provided only historic and projected total head counts showing that 2025 staffing will be about [redacted] lower than 2024 and [redacted] lower than 2021.[44] The Company does not explain why it needs a 41% increase in the staff budget when it will have fewer staff in the test year than in the past. A significantly higher staffing budget is being proposed for a team that is projected to do fewer inspections and respond to fewer outages than in the past. The following table compiles the Company's proposed O&M spending in the instant case to the levels approved in the Commission's order in case no. U-21297 and to my recommendations for test-year spending.

[43] Exhibit MAU-26, Bellini response to MAUIDE-6.55.
[44] Exhibit MAU-28, Bellini NDA response to MAUIDE-6.56.

	O&M 2024 Rate Case Test Period	U-21297 approved spending	MI-MAUI test-year recommendation
Streetlight Inspection	$130,000	$334,383	$0
Streetlight Painting	$130,000	$384,427	$0
Night Patrols	$400,000	$384,427	$400,000
Cancelled Projects/Other	$60,000	$80,252	$60,000
Outage Restoration	$5,653,000	$7,490,173	$5,653,000
OPL Outage Restoration	$665,000	$802,519	$665,000
Gross direct cost of O&M projects	$7,038,000	$9,476,181	$6,778,000
Supervisory & Administration	$1,800,000	$1,279,807	$941,950
Supv & Admin as % of direct project costs	25.6%	13.5%	13.9%
Capitalization Credit	($4,750,000)	($6,921,723)	No recommendation
Damage Claims	$0	$0	
Net Total	$4,088,000	$3,834,265	No recommendation

I recommend that the Commission approve $6,778,000 on direct O&M project spending in the test year, with the only difference from the Company's proposal being my proposed disallowance of any further cost recovery for inspections and painting.

I recommend that the Commission approve Supervisory & Administration spending of $941,950. As the table shows, this is the same ratio of staff budget to direct project cost as the Commission approved in case no. U-21297, plus a 2.9% adjustment for inflation.

I make no recommendation concerning capitalization credits, and consequently no recommendation about total net spending on O&M.

Q. Do you have any other comments on the Company's proposed Community Lighting O&M?

A. Yes, I do. I support robust O&M with emphasis on outage prevention. I see outage prevention as even more important with streetlights than with other rate classes, for two reasons. First, streetlight outages get reported slowly, which is why Night Patrol finds so many outages that have not yet been reported by customers. Second, streetlight outages are

at the bottom of the restoration priority list – rightly so: it is more important to restore power to buildings. If we de-prioritize restoration, allowing known streetlight outages to wait until crews become available after serving higher priorities, then at least we should take strong steps to prevent those outages happening to begin with.

Regrettably, the Company has greatly underspent its inspection and painting budgets over the past several years. It would be imprudent to support recovery of O&M costs that history shows the Company will not incur. I would support an O&M plan that provided specific targets for inspections and painting, and I would support an O&M budget grounded in evidence that the spending was likely to improve reliability. For now, though, in my view the Company has already been paid in advance for the next several years' worth of inspections and painting at historic levels, has experienced decreasing reliability, and should not be allowed to recover additional money until it can reconcile how it has used funds it already received.

Q. Do you support the Company's proposed Community Lighting capital expenditures?

A. First, I renew my objection to the Company's failure to address street lighting in any way in its Distribution Grid Plan. I recommend that the Commission order DTE to address its plans for all Community Lighting services in its next DGP, where it may be analyzed with the same level of rigor as other distribution system investments.

My objection notwithstanding, I support the costs itemized in Exhibit A-12, Sch, B5.5 except for the underground cable replacement program. Per my testimony above, the Company has failed to show that this program is cost-effective. The Commission should disallow this expenditure while also inviting the Company to propose this program in a future filing with appropriate cost-effectiveness data and analysis. Total test-year capital

expenditure for Community Lighting should therefore be $15.575 million.

LED Luminaire Selection Methodology Specific to HID to LED Conversions

Q. Please summarize your concerns about DTE's practices and costs for conversions of HID streetlights to LED.

A. I am concerned that the Company continues to install LED luminaires that are unnecessarily bright and drive up the cost of service.

In case no, U-21297, the Commission found that the Company's costs for choosing LED luminaires to replace HID fixtures were unreasonable. The Commission noted that the Company significantly exceeded its manufacturer's guidance for choosing LED replacements for each kind of HID fixture, without providing any other evidence that its conversion standards are reasonable.

Q. What is DTE's proposal in this case pertaining to conversion costs?

A. The Company is providing new evidence and arguments that purport to justify its conversion practices and costs and asks the Commission to allow the Company to recover the costs that were disallowed in case no. U-21297.

Q. Do you support the Company's proposal?

A. No, I do not. The Company has failed to meet the clear standard that the Commission set in case no. U-21297, which is to demonstrate that its costs are consistent with reasonable efforts to comply with roadway lighting standards.

Instead, the Company disavows that its objective is to comply with roadway lighting standards when it converts HID streetlights to LED and asserts that it is therefore reasonable for it only to match performance of the incumbent HIDs when choosing LEDs. It then provides expert opinions that its methodology for matching LEDs to HIDs is

technically sound. Here, the Company is making the perfect the enemy of the good, claiming that since complete compliance with a standard of roadway lighting would be burdensome due to the need to develop new lighting designs, it should be permitted to disregard the standards entirely when more closely approximating the standards would lower customer costs. The Commission should sustain its prior disallowances.

Q. Has DTE consistently taken the position that new lighting designs for LED streetlights would be an added expense?

A. No. When MI-MAUI first raised the issue that DTE's standard LED light replacements were too expensive and too bright, witness Bellini opposed those proposed revenue reductions in part because he testified that the Company's light selection would provide the opportunity for cost reductions through redesigns: "[u]sing higher wattage fixtures means fewer poles and luminaires are used which is economical and reduces the need for additional infrastructure."[45] However, when pressed, the Company admitted that its practice was to replace all poles with HPS fixtures with LEDs rather than undertake the necessary redesign to determine if fewer poles could be used. DTE's purchase of higher wattage fixtures, therefore, does not reduce the need for additional infrastructure, or the costs to customers, in practice.

Q. Does the ability of customers to depart from DTE recommended wattage lights address your concerns about higher costs of the DTE recommended lights?

A. No; this argument is a red herring. The Company makes it inconvenient and expensive for customers to choose materials other than the Company's default choices and asks customers to agree that other choices will not comply with lighting standards, without

[45] Exhibit MAU-27, U-20836 Bellini Rebuttal excerpt.

providing analysis regarding whether their choices are compliant or not.

Q. DTE witness Bellini makes four recommendations regarding HID-LED streetlight conversion costs in his testimony. Do you support his recommendations?

A. No, I disagree with witness Bellini's recommendations.[46] I will summarize my concerns first, then develop each more fully further on.

Q. What is witness Bellini's first recommendation and why do you disagree with it?

A. Witness Bellini argues it would be prudent for the Company to continue utilizing its current default LED replacements for certain HID streetlight fixtures, rather than the LEDs recommended in a crossover chart provided by its supplier, Leotek, which is not currently available. Witness Bellini argues that expert analyses provided in his exhibits and workpapers support the Company's choices of standard LED replacements for its incumbent HID fixtures. The Company's testimony does not do so, for the reasons summarized below and explained in more detail in my testimony.

In U-21297, the Commission sought evidence that the Company's preferred luminaires were necessary to comply with streetlighting standards, and without such evidence, denied cost recovery for the needlessly expensive lights. The expert assessments that witness Bellini provides vouch for the comparability of the Company's standard LED luminaire replacements for common HID fixtures, but do not find that this replacement is necessary to meet standards. Moreover, the modeling data his experts provide belies the Company's contention that such lights are necessary. The Company's workpapers provide modeling results that show its default LEDs usually and often significantly deliver more light than standards indicate is needed. The modeling results also show that using other, less

[46] Bellini testimony, p. 35, line 5 – p. 36, line 24.

expensive LED models would yield better cost and lighting results.

Q. What is witness Bellini's second recommendation regarding HID-LED conversions and why do you disagree with it?

A. Witness Bellini describes the Company's current and proposed practices for informing customers about its compliance with roadway lighting standards. The Company proposes "explicitly informing the customer in the contract and during discussions that the customer has the choice to select another LED at their discretion and confirmed in the municipal conversion agreement."[47]

I support this proposal as far as it goes, but it does not go far enough. Witness Bellini's proposal is insufficient to meaningfully empower customers and lead to greater accountability for quality of conversion practices. Empowered customers need reliable, sufficient, and comprehensible information and the ability to act on that understanding. That is not the case here. Checkbox-style disclosure that standards will not be met is insufficient because customers are unlikely to understand the implications of that disclosure. Customers cannot rely on DTE's information, either: I will show that DTE does not consider reasonable alternatives, much less present these more cost-effective options to customers. It makes little sense to make customers responsible for a decision they expect DTE to have the technical capacity to make, and most customers will depend on the Commission to confirm the reasonableness and cost effectiveness of standard offerings. Finally, customers' freedom of choice is significantly constrained: DTE makes alternative light choices more expensive and inconvenient for the customer.

This is a textbook example of the need for regulation. When customers have a difficult

[47] Bellini testimony, RAB- 36 starting at line 6.

time gathering and understanding technical information, and have no ability to choose different providers, then the solution is to ensure the choices provided are reasonable and prudent, without needless built-in costs.

Q. What is witness Bellini's third recommendation regarding HID-LED conversion practices and costs and why do you disagree with it?

A. Witness Bellini states that DTE would be amenable to a staff-facilitated technical workshop with various stakeholders to examine the Company's conversion standards and costs.[48]

I would not support convening of a technical workshop at this time. If the Commission were presented here with relevant technical evidence about which experts could reasonably disagree, then convening a technical collaborative might make sense. While we can glean some evidence about compliance of the Company's LED installations with the ANSI/IES RP-8 standards, witness Bellini's testimony and the consultants' reports focus on the equivalency of DTE's HID-LED conversions, not to compliance with standards. Once DTE presents comprehensive and credible information in a rate case filing about its efforts to comply with roadway lighting standards, supported by comparative cost data, which intervenors can scrutinize and reply to, then the Commission can choose whether to decide the issue then and there or refer it for technical study. Moreover, since DTE's lighting choices are very different than those of other Michigan utilities, there is little evidence that the issue here is truly technical as opposed to a continuing effort to attempt to increase capital spending beyond reasonable and prudent levels.

Q. What is witness Bellini's fourth recommendation and why do you disagree with it?

[48] Bellini testimony, RAB-36 starting at line 6.

A. Witness Bellini asks the Commission to revisit its decision in case no. U-21297 to disallow $5.8 million in LED gross plant.

I disagree because witness Bellini has not met the clear standard that the Commission articulated in case no. U-21297. The Commission wrote, "…the company is simply guided by the original lumen output, which does not equate to compliance with the relevant standards and is based on an outdated technology that is undergoing replacement."[49]

Rather than attempting to show that the Company makes reasonable attempts to comply with relevant standards, witness Bellini declares, without offering any evidence, that the standards are impractical for HID-LED conversions. Instead, he attempts to demonstrate how well the Company performs a function that the Commission has stated is not relevant to the task at hand: matching the *original* lumen output. Not only does this ignore testimony offered about output, it sidesteps the question of whether that original output was appropriate in the first place.

My argument for disallowance does not rest solely on DTE's failure to respond to the Commission's prior order. It is based on evidence that shows DTE does have cost-effective options for improving compliance of its HID-LED conversions with roadway lighting standards, and that these options are used by comparable utilities here in Michigan.

Q. Please outline your argument against witness Bellini's first recommendation, regarding prudency of DTE's practices for choosing LEDs to replace each type of HID streetlight.

A. My argument has two key elements.

[49] U-21297 order, p139.

First, witness Bellini has not addressed the Commission's concerns stated in its U-21297 order. Rather, he tries to move the metaphorical goalposts by focusing his testimony on comparability of LEDs to HIDs. He also inappropriately delegates responsibility for satisfying roadway lighting standard to customers, obfuscating the technical role the Company necessarily plays in lighting conversion projects and the barriers customers encounter when they want to diverge from DTE recommendations.

Second, his attempt to move the goalposts is ill-founded. He simply asserts that meeting roadway lighting standards is unreasonable for HID-LED conversion projects, without providing any supporting data. The modeling data he does provide proves the opposite case: the Company could come into closer compliance with roadway lighting standards and save customers money while doing it.

Q. In its U-21297 order, the Commission discussed the Leotek conversion chart, which was congruent with your interpretation of a key lighting standard (ANSI/IES RP8) in contrast to DTE's interpretation. Is that chart discussed in DTE's current testimony?

A. No, because Leotek has removed that chart and now offers no conversion advice.

Q. Should the removal of the conversion chart by Leotek excuse DTE from discussing why its preferred but more expensive lights are necessary to meet lighting standards?

A. No. In its U-21297 order, the Commission did not say that DTE must follow the manufacturer's guidance; it merely noted that DTE failed to justify why it was departing from that guidance, without providing any evidence that its preferred approach yields better results. If DTE cannot rely on the manufacturer's guidance to show its brighter lights are needed to comply with roadway lighting standards, then it must find another way to do so,

for example through the modeling exercises it offers as evidence in this case.

Q. Does DTE put forward evidence in this case that its brighter lights are needed to comply with ANSI/IES RP8 standards when converting existing HPS streetlights?

A. No. DTE's position in this case is that it would be "impractical and costly to conform to current ANSI/IES RP8 lighting standards for pre-existing lighting systems" because older systems would need extensive reconfiguration inclusive of work such as pole relocations and rewiring of the overhead and underground system cable. [50] Therefore, it continues to install an LED that is as bright at the HPS was projected to be at the start of its life, without first analyzing whether lower wattages would suffice.[51]

Q. Would lower-wattage lights better approximate lighting standards without extensive redesign of older systems, and save customers money?

A. Yes, in most cases I believe they would, for several reasons. The expert analyses provided by witness Bellini, support this contention – DTE could more closely approximate roadway lighting standards without redesign by installing LED luminaires from the same product line but with lower wattages.

Q. Can we assume incumbent HID lights at their brightest were compliant with roadway lighting standards?

A. No. Even if original designs did meet lighting standards at the time (which is itself an assumption that we have no data to support), lighting standards, designs and technologies have all changed over decades.

Second, data available suggest that DTE's HID fixtures vary greatly with respect to their

[50] Bellini testimony RAB-25, lines 12-18.
[51] Bellini testimony RAB-25, lines 12-18.

performance against standards. The modeling done by Mr. McLean, described in Exhibit A25, Schedule O5 and documented in his workpapers submitted by Mr. Bellini, shows wide variance in lighting provided by 100w HPS fixtures compared to standards, and consistent overlighting of areas served by 250w HPS fixtures.[52]

Although Mr. McLean's narrative report primarily addresses whether DTE's choices of LED luminaires reasonably match the HID fixtures they replace (which I note was never in dispute in U-21297), his workpapers also model performance of the incumbent HID fixtures and show the ANSI/IES RP-8 standards for the roadways he modeled. Data in the tables below is copied from Mr. McLean's workpapers, with the only addition being a simple calculation to show how each original HPS light modeled stacks up against the lighting standards Mr. McLean identified for each location. Note that this table, and others to follow, provide both luminance and illuminance values. For straight roadways, the ANSI/IES RP-8 handbook prefers use of luminance. I focus my discussion on luminance but provide illuminance values for reference.

For the roadways labeled 100A through G (originally served by 100w HPS fixtures), modeling shows that average luminance varied considerably with respect to the standards. Notably, Roadway 100A provided 240% of the standard, Roadway 100D provided only 85% of standard and Roadway 100E provided 165~~0~~% of the standard. Choosing LED replacements based on HIDs that performed very inconsistently with respect to standards, but overlit the roadway in the majority of modelled intersections, is not prudent practice.

[52] Bellini Exhibit A-25, Sch O5.

DTE ID	Surface	Road Type	100W HPS Avg Lum	100W HPS Avg Ill
A,B,C,F,G	IES Standard		0.3	0.4
D,E	IES Standard		0.4	0.6
100 A	R3	Local	0.72	0.87
			240%	218%
100 B	R1	Local	0.43	0.42
			143%	105%
100 C	R1	Local	0.51	0.49
			170%	123%
100 D	R3	Collector	0.34	0.45
			85%	75%
100 E	R3	Collector	0.66	0.84
			165%	140%
100 F	R3	Local	0.33	0.39
			110%	98%
100 G	R3	Local	0.35	0.46
			117%	115%

Data source: Witness Bellini's Work Paper H - Application Performance Results 100 HPS All LED to HPS 11 11 22. Note: revision corrects Road Type for 100 A from "Unspecified" to "Local"

Turning to the roadways formerly lit by 250w HPS fixtures, we see that Mr. McLean's modeling found all modelled roadways to be drastically overlit by the HPS fixtures per standards, providing 266~~16~~% to 314% of the average luminance standard.

DTE ID	Surface	Road Type	250 HPS Avg Lum	250 HPS Avg Ill
A,F	IES Standard		0.80	1.20
B,C	IES Standard		0.50	0.70
250 A	R3	Collector	2.22	2.98
			278%	248%
250 B	R1	Local	1.36	1.29
			272%	184%
250 C	R1	Local	1.57	1.51
			314%	216%
250 F	R2	Collector	2.13	2.94
			266%	245%

Data source: Witness Bellini's Work Paper J - Application Performance Results 250 HPS All LED to HPS 11 11 22. Note: revision corrects Road Type for 250 A from "Unspecified" to "Collector"

Thus, DTE's own expert results indicate it is not sound to assume that the original lights complied with relevant standards, so matching their initial output will not be a good predictor of the necessary wattage, just as I argued in U-21297. At least one expert the Company engaged stated explicitly that the analysis the Company asked it to perform

contained the assumption that past HPS lighting levels were appropriate: "It is noteworthy that this method of comparing to incumbent technology assumes that the existing technology does not over- or under-light the roadway."[53] That is an assumption which the DTE experts' modeling shows is unsound.

Q. If local governments have important fiscal, social, and environmental goals impacted by street lighting, why do they not simply exercise their power as customers to have DTE install different lights?

A. Customers with the resources to devote staff engineering time to selecting streetlights, the ability to warehouse streetlighting stock, and the upfront cash necessary to meet the CIAC can depart from standard offerings. There are very few municipalities that have the staffing and financial resources to make departing from standard offerings an accessible option.

Q. How does DTE describe lighting standards to customers considering alternative models?

A. DTE's HID-LED group conversion proposals to customers regularly include a checkbox asking the customer to agree it has been told the design does not meet roadway lighting standards. Customers are not informed by the Company or ever asked to certify that it understands that current lights may *also* not meet roadway lighting standards, and that overlighting is a more common non-compliance result than underlighting in DTE's own modelling. When DTE moves to a system of automatically replacing failed HPS lights with LEDs, as witness Bellini proposes in this case, this problem will become more acute because there will be no dialogue or sign-off with the customer for the Company's

[53] Bellini Exhibit A-25, Sch O9, "Review of the DTE Energy Luminaire Selection Process," by Prof. Ronald Gibbons, p3.

conversion standards.

Second, DTE makes it expensive for customers interested in departing from the Company's streetlight models. The Company applies additional fees for "special order materials," including LEDs with different wattages or color temperatures than DTE usually uses. The Company requires the customer either to pay a stocking fee or keep special order materials on hand themselves when they select a non-standard offering.[54] To the instant point, this practice demonstrates that the Company's policies make it impractical or infeasible for customers to choose luminaire specifications that comply better with ANSI/IES RP-8 standards than the Company's default choices, and thus it is all the more important that the Commission continue to deny recovery when the standard lights provided are more expensive to purchase and operate than is necessary. A quick review of spec sheets show that it is not difficult to find or procure luminaires of different wattages, optics, and color temperature from DTE's standard offerings, and thus it would not be difficult for the Company to adopt a new, more cost-effective model that responds to customer feedback.

I will discuss how this standard should apply to luminaire wattage choices, optics, and color temperature.[55]

~~**Q. Does DTE have a standard offering LED with a color-correlated temperature recommended in the ANSI/IES RP-8 standard?**~~

~~A. No. DTE stocks luminaires with CCT of 4,000k. The ANSI/IES RP-8 standard recommends luminaires around 3,000k on highways to improve driver visibility and reduce glare. The standard also states that streets may have a wider range depending on the specific~~

[54] Exhibit MAU-29, response to MAUIDE-4.20.
[55] Exhibit MAU-30, response to MAUIDE-5.47, Leotek GCJ_J Specs.

~~application. Furthermore, lower-temperature lights are generally preferred by customers and can reduce obtrusive light. The City of Ann Arbor recently polled residents on LED CCT options and found a strong preference for 3,000 or 2,700k lights rather than 4,000k.[56] Lower-temperature lights, finally, emit less energetic photons, which are less likely to reflect off incident surfaces and create obtrusive light problems such as glare and sky glow. In short, DTE's standard offering LED not only is of a wattage that is likely to over-light compared to the standard, the Company also fails to offer a standard-order light that conforms to the color temperature preferred by ANSI/IES RP-8 and customers.~~

Q. Has DTE provided any evidence directly responsive to the Commission's stated focus on compliance with roadway lighting standards?

A. Yes, it has, and that evidence undermines the Company's testimony. As I have already shown, the Company's own workpapers reveal that incumbent HPS fixtures do not consistently comply with roadway lighting standards, and most often exceed those standards. The modeling also shows that the Company's criteria and method for matching replacement LED luminaires to incumbent HID fixtures usually results in illumination above, and often well above, the standards.

None of these data, however, come forth in the exhibits or testimony offered by the Company, but rather become evident only upon close examination of witness Bellini's workpapers. Witness Bellini's testimony is concerned only with demonstrating that the Company has a robust method for matching LED luminaires to the HPS fixtures they replace. This was never disputed by MI-MAUI; the dispute was whether this method resulted in over-spending, which it does and continues to do, a conclusion the work done

[56] ~~Exhibit MAU-31, City of Ann Arbor webpage for LED conversion project.~~

by the Company's own lighting experts supports.

Q. What do the modeling results show happens when 58w LED luminaires are substituted for 100W or 250W HPS lights – would similar overlighting occur when compared to the HPS lights that they replace?

A. The most common result is significant exceedance of the standards. I reach this conclusion by comparing Mr. McLean's modeling of LEDs over the various roadways to the lighting standards he found apply to each of them. Mr. McLean modeled five local roadways for 58w LED luminaires and found they would average 188% of the luminance standard, varying from 150% to 313%. Mr. McLean modeled another two collector roadways for 58w LED luminaires and found they would provide 113% and 218%, respectively, of the luminance standard.

			58.4W LED		37W LED	
DTE ID	Surface	Road Type	Avg Lum	Avg Ill	Avg Lum	Avg Ill
A,B,C,F,G	IES Standard		0.3	0.4	0.3	0.4
D,E	IES Standard		0.4	0.6	0.4	0.6
100 A	R3	Local	0.94	0.93	0.70	0.75
			313%	233%	233%	188%
100 B	R1	Local	0.52	0.44	0.43	0.39
			173%	110%	143%	98%
100 C	R1	Local	0.59	0.52	0.46	0.42
			197%	130%	153%	105%
100 D	R3	Collector	0.45	0.48	0.32	0.37
			113%	80%	80%	62%
100 E	R3	Collector	0.87	0.9	0.64	0.71
			218%	150%	160%	118%
100 F	R3	Local	0.45	0.4	0.36	0.36
			150%	100%	120%	90%
100 G	R3	Local	0.46	0.5	0.33	0.38
			153%	125%	110%	95%
Total	*Average*		*188%*	*133%*	*143%*	*108%*
A,B,C,F,G	*Average*		*197%*	*140%*	*152%*	*115%*
D,E	*Average*		*165%*	*115%*	*120%*	*90%*

Data source: Witness Bellini's Work Paper H - Application Performance Results 100 HPS All LED to HPS 11 11 22.

Mr. McLean's modeling also shows that DTE's preferred 136w LED replacement for the

250w HPS fixtures delivers, on average, 317% of the average luminance standard (see table). In other words, the modelling predicts the Company's preferred LED results in the average street will be more than three times as bright as design standards recommend.

			136W LED		111W LED		89W LED		72W LED	
DTE ID	Surface	Road Type	Avg Lum	Avg Ill	Avg Lum	Avg Ill	Avg Lum	Avg Ill	Avg Lum	Avg Ill
A,F	IES Standard		0.80	1.20	0.80	1.20	0.80	1.20	0.80	1.20
B,C	IES Standard		0.50	0.70	0.50	0.70	0.50	0.70	0.50	0.70
250 A	R3	Collector	2.62	3.03	2.19	2.64	1.81	2.18	1.46	1.76
			328%	253%	274%	220%	226%	182%	183%	147%
250 B	R1	Local	1.43	1.21	1.39	1.04	1.15	1.04	0.93	0.84
			286%	173%	278%	149%	230%	149%	186%	120%
250 C	R1	Local	1.66	1.44	1.52	1.39	1.26	1.15	1.02	0.93
			332%	206%	304%	199%	252%	164%	204%	133%
250 F	R2	Collector	2.59	3.12	2.13	2.60	2.13	2.15	1.42	1.74
			324%	260%	266%	217%	266%	179%	178%	145%
Total	*Average*		*317%*	*223%*	*281%*	*196%*	*244%*	*168%*	*188%*	*136%*
A,F	*Average*		*326%*	*256%*	*270%*	*218%*	*246%*	*180%*	*180%*	*146%*
B,C	*Average*		*309%*	*189%*	*291%*	*174%*	*241%*	*156%*	*195%*	*126%*

Data source: Witness Bellini's Work Paper J - Application Performance Results 250 HPS All LED to HPS 11 11 22. Note: revision corrects Road Type for 250 A from "Unspecified" to "Collector".

Q. Could DTE satisfy lighting standards by using lower-wattage LEDs on the modeled roadways, instead of the 58w and 136w models used now?

A. Yes, the data provided by Mr. McLean strongly suggest it could in almost all cases. The "100A-100G" roadways he modeled would provide, on average, 143% of the luminance standard with 37w LEDs, with only one of the seven roadways coming in below the standard.

The modeling results make an even more compelling case for using a lower-wattage LED over the "250A-250D" roadways. If the Company were to step down to a 72w LED instead of 136w LED in place of 250w HPS fixtures, average roadway luminance would still be 188% of the standard level.

Q. If the models show that lower-wattage LEDs would comply with roadway lighting standards, then why did the Company's experts rule out their use?

A. The Company's experts ruled out the use of lower-wattage LEDs because they were not

asked to find which LEDs would best satisfy roadway lighting standards. Rather, they were asked to determine which LEDs would best match incumbent HPS lights.

Q. What would be the benefit of using lower-wattage LEDs?

A. The 37w luminaire uses about 36% less electricity than the 58w model. The cost of service of a 37-watt LED is about $34 less per year than that of a 58w LED ($203 vs $237).[57] The 72w LED luminaire uses just over half the electricity of the Company's preferred 136w LED. Witness Bellini's Lighting Rate Model shows that the 72w LED has a COS total rate of $271.50 per year, whereas the Company's preferred 136w model has a COS total rate of $374 – more than $100 extra per year.

Q. Modeling aside, do any other streetlight service providers in Michigan use HID-LED conversion practices similar to what you recommend?

A. Consumers Energy and the City of Grand Rapids both use significantly lower LED wattages to replace common HID wattages than DTE does.

Consumers Energy, for example, uses a 40-watt LED cobrahead luminaire as the standard replacement for 100-watt high pressure sodium (HPS) luminaires.[58] For this same conversion, DTE uses a 58-watt LED luminaire, which uses 45% more electricity than Consumers' choice. It costs DTE about $15 more to buy a 58-watt LED than a 40-watt LED.[59] The cost of service for a 58-watt LED cobrahead luminaire is about $17 more per year than for a 40-watt LED. Across the board, Consumers is replacing HID luminaires with LED luminaires that are cheaper and use less electricity than DTE's choices. The

[57] WP RAB U-21534 Lighting Rate Model, Output worksheet, Column AP.
[58] Exhibit MAU-32, Consumers Energy LED Streetlight Crossovers, excerpt from testimony of Consumers Energy witness Schmoekel in case no. U-21585.
[59] WP RAB U-21534 Lighting Rate Model, E1 Option I OH, worksheet.

choice is consequential for customer cost, lighting quality and customer climate and energy goals.

Differences between Consumers' more-rural service territory compared to DTE's may justify differences in standard lighting levels. However, DTE also serves rural areas and has not shown that it uses different lights there than in cities. Furthermore, this point simply underscores why it is important to choose lights based on standards that take such factors into account, rather than using a cookie-cutter approach.

Given this observation, it may nevertheless be useful for the Commission also to consider how another large street lighting provider has converted to LEDs in an urban environment. The City of Grand Rapids recently completed conversion of its streetlights to LED. Grand Rapids uses 55-watt LEDs to replace 100-watt HPS luminaires – closer to DTE's choice of 58-watt LEDs. However, Grand Rapids also installs dimmers on its LEDs, and drives those 55-watt LEDs initially at 70% of maximum, equivalent to only about 40 watts.[60] As the luminaire's light output slowly decreases over time, Grand Rapids can adjust to yield constant illumination by giving the luminaire more electricity. This practice also significantly extends the service life of the luminaire, which saves the City money, because replacing failed lights is more expensive.

Q. What conclusion do you draw from the fact that other streetlight conversions in Michigan use lower wattage lights or operate similar lights at lower wattage output?

A. The Commission was right to deny recovery to DTE for the unreasonable costs its unusual LED conversion choices cause customers in U-21297, and it should do so again in this

[60] Exhibit MAU-33, Grand Rapids LED Conversion, "City of Grand Rapids FOIA Response Letter to Request PR-2024-368 to Michigan Municipal Association for Utility Issues," answers 1 and 6.

case. DTE has failed to offer evidence that the Commission should reconsider the unreasonable nature of the costs that DTE's choices are creating.

DTE's LED conversion practices, according to its own modeling, result in overlighting of public streets. Other large streetlight fleet owners in Michigan use different practices, suggesting that DTE has viable options for improving its compliance.

Q. Witness Bellini recommends that the Commission should reverse itself by allowing the Company to recover on the $5.8 million in excess LED costs disallowed in case no, U-21297. Do you agree?

A. No. The evidence in this case clearly shows the Company has cost-effective ways to improve compliance with ANSI/IES RP-8 that it has not properly evaluated, and it is not making lighting that is more likely to comply with lighting standards available without charging an up-front CIAC and imposing other cost and staffing burdens on customers who wish lights that better meet their lighting, environmental, and economic goals.

Q. Witness Bellini recommends that the Commission order a technical collaborative on lighting conversion standards if it is not prepared to approve the Company's LED costs with its order in this case. Do you agree?

A. No, I do not agree. DTE's own technical experts have given it all the information it needs to understand that its conversion practices usually overlight roadways. Until recently, its own preferred supplier had a conversion chart that suggested DTE's selections were more expensive than were recommended. Other utilities in Michigan choose lights of lower wattages or deliberately operate them to consume less energy and last longer. If DTE will not accept that it is wrong when it is out of step with its peers, its supplier, and even the analysis of its own experts, a technical conference is unlikely to do more than absorb a lot

of time without achieving any consensus.

If DTE can present comprehensive and credible technical and cost information in a rate case filing about why its preferred light is more likely to comply with roadway lighting standards than the more usual alternatives, which intervenors can then scrutinize and reply to, then a technical collaborative may be a reasonable path forward. Ordering one in this case, in which the Company's experts provide some of the best evidence that the Company's lights are too expensive, would not be appropriate.

Q. Has DTE continued to install the same LEDs that the Commission found were unreasonably expensive in its order in case no. U-21297?

A. Yes, it has. The Commission should not allow the Company to recover on unreasonable LED costs it has incurred subsequent to the order in case no. U-21297. The Commission found that the Company's LED costs were unreasonable, yet the Company persists in the very overspending the Commission disallowed. Below, I explain how the Commission should update this disallowance, and provide a supporting exhibit.

Q. Why should the Commission update the LED luminaire plant in service values that it disallowed in case no. U-21297?

A. The disallowance in plant-in-service values should be updated to include unreasonable costs incurred after the plant balances used to calculate the disallowance were established. The Company has continued to install the unreasonably costly LEDs, thus increasing the unreasonable costs. It should no more be allowed to recover those new excessive costs than it was the historic excessive costs.

Q. How do you propose calculating the updated disallowance amount?

A. There are two reasonable approaches; one is to follow the same procedure as last time,

including substitutions of the same LEDs. This is a reasonable approach because Leotek has not disavowed the chart that the Commission used in U-21297, so there is no indication that continuing the same method previously used is currently unreasonable.

The second approach is to benchmark against another regulated provider in Michigan. The obvious choice in this regard is Consumers Energy, and use the lights Consumers Energy installs as the comparison set.

I recommend that the disallowance should be baselined against the recommendations available from Leotek in the last rate case, because Leotek is DTE's supplier and this will allow consistent YOY calculation methods. That said, using the Consumers Energy data as an alternative guide for a more reasonable conversion model for each type of light would also be reasonable.

Q. What disallowance amount do you recommend?

A. I recommend that the Commission disallow $7,705,567 in unreasonable LED conversion costs to date, based on the most recently available equivalency recommendations made by DTE's supplier, Leotek. If the Commission prefers to use Consumers Energy's LED equivalencies as a benchmark, then the disallowed amount should be $5,833,539.[61]

Q. Is your recommended disallowance cumulative or incremental to the amount disallowed by the Commission in case no. U-21297?

A. My recommended disallowance is cumulative; that is, it covers costs of LEDs installed both before and after the Commission's order in case no. U-21297.

The reason I am providing a cumulative figure is that I have improved my calculation of the disallowance. In case no. U-21297, I used the difference in tariffs for DTE's LED

[61] Exhibit MAU-34, LED luminaire plant balance disallowance.

choices versus those recommended by the manufacturer. In my instant recommendation, I am using the difference in cost of service. Using differences in rates between different LED models, as I did before, is imprecise because those very rates change depending on the case outcome. In addition, because the Company is still adjusting streetlight rates slowly to align with cost of service, many rates still differ significantly from cost of service.

Q. Is your proposed disallowance a conservative estimate of unreasonable costs resulting from DTE's imprudent conversion practices?

A. Yes. My proposed disallowance is conservative, in two ways.

First, my proposed disallowance excludes costs of a significant number of LEDs that the Company has installed. I excluded LEDs of wattages that are deployed in small numbers because I do not have reliable data on what wattage of HID lamps they replaced; consequently, I do not know what replacement LED Leotek would have recommended.

Second, my proposed disallowance assumes that all the LEDs included in my analysis were installed in place of HPS fixtures. But we know that many were installed in place of MV fixtures, and we know that Leotek recommends substantially larger reductions in wattage for MV-LED conversions. The data on MVs that have been replaced by LEDs is older and less reliable than that for HPS conversions, and rather than estimating I made the simplifying assumption that all decommissioned HID fixtures to date have been HPS.

Given these two conservative elements of my approach to the analysis, my proposed disallowance should be understood to represent a significantly smaller amount than DTE's actual level of overspend on LED conversions.

Q. Do you have any other concerns about DTE's continued use of LED luminaires that the Commission has found to be too expensive?

A. Yes, I do. Excessively bright street lighting is not only a utility-cost concern: it creates several external costs. Excessive outdoor lighting has social, human health, environmental and scientific impacts. Attainment of state and local climate change goals are impeded by lights that use too much energy. Lights of the preferred color temperature improve visibility in ways that promote traffic and pedestrian safety. Light trespass risk also increases when lights are brighter than needed, and fewer city-dwellers can see the stars. These impacts, which go beyond the financial, point to why regulatory oversight of this matter is so important.

Community Lighting Rate Design

Q. What rate design topics will you address here?

A. I will address the Company's continuing gradual adjustment to streetlight rates to bring them into alignment with the cost of service.

Q. Do you support continued gradual adjustment of E1 streetlight rates to bring them into alignment with cost of service?

A. No, I do not. I recommend the Commission order adoption of full cost of service rates in this case. The gradual adjustment has not worked as intended nor within a reasonable timeline, and its perpetuation causes a subsidy of less-efficient lights by more-efficient LEDs.

Q. Why did the Commission order the gradual adjustment?

A. As of 2016, streetlights served by underground wires ("UG") were paying more than the cost of service, and streetlights served by overhead wires ("OH") were paying less than the cost of service. A one-time adjustment would have caused a rate shock for customers with a preponderance of OH lights, many of whom are older communities with limited financial

ability to absorb rate increases.

The less disruptive way out of this problem was to adjust the rates slowly, which would also give those customers time to transition their existing OH lights to LEDs. Because LED rates are lower than HID rates, the change in technology could fully (or more than) offset the concurrent change in relative OH and UG rates.

Q. Why do you believe the period of gradual rate adjustment should end?

A. Customers have had plenty of time, by now, to convert to LED to offset increases in OH rates. The Commission commenced this process with its order in Case no. U-18014 on January 31, 2017. Since then, more than seven years have elapsed, and the Company has filed six subsequent rate cases. The Company and the state have offered consistent and significant technical and financial support to customers to convert their OH lights to LED. Seven years is a long time to pay less than the costs you are causing, and customers who have spent time and effort to lower their bills through LED adoption should not continue to subsidize communities that have put their resources elsewhere. Subsidized OH rates are causing rates for customers with UG lights, customers with LED lights and customers served under rates E1, Options II and III to pay higher than their cost of service, which is not fair.

Furthermore, continuing the subsidy of OH lights results in all LED lights paying more than their cost of service, a perverse disincentive to reduce energy waste which the Commission should seek to avoid. The Company's proposed rates would have LED lights (OH and UG combined) paying about $1 million more than cost of service.[62]

[62] Exhibit MAU-34, WP RAB U-21534 Lighting Rate Model, Output sheet, MAUI-modified (LED totals for columns 195 +196).

Q. Aside from the perverse or unfair subsidies created by the slow adjustment to cost of service, is the gradual adjustment serving its stated objectives?

A. No, it is not. Witness Bellini's Lighting Rate Model shows that, collectively, UG lights are currently annually paying $156,935 more than cost of service.[63] Witness Bellini's proposed revenue for UG lights under the E1 rate would be $745,523 higher than Cost of Service.[64] Rather than being a gradual move towards cost-causation, the proposed rates would move drastically in the opposite direction. Stated another way, the Company's proposed rates for UG lights would widen the gap between the cost of service compared to current rates. Thus, the mechanism is failing not only to accomplish its intended objectives of moving gradually to cost of service, but while doing so, is also failing to signal to customers the true cost advantages of moving to LEDs.

Q. What is your recommendation to the Commission regarding E1 rate design?

A. Tariffs for all E1, Option I lights should reflect full cost of service and the adjustments should be concluded.

Summary of Municipal Street Lighting Recommendations

Q. Please summarize your street lighting recommendations to the Commission.

A. In the same order as above:

- The Commission should eliminate the CIAC for HID-LED conversions from the tariff, whether individual or group conversions. The only exception should allow CIAC for special order materials that are not more likely to comply with

[63] Exhibit MAU-34, WP RAB U-21534 Lighting Rate Model, Output sheet, MAUI-modified (total of column 79).
[64] Exhibit MAU-34, WP RAB U-21534 Lighting Rate Model, Output sheet, MAUI-modified (total of column 196).

streetlighting standards. Relatedly, the Company should stop servicing HPS fixtures right away, with the only exception being for customers who want to keep HPS fixtures in service as long as possible.

- I recommend that the Commission instruct DTE to file a bill credit method and initial amount with its next rate case, including the features I have described above, to assure equitable rate treatment of customers who have paid for past LED conversions versus those who will receive them with no CIAC in the future. I also recommend that the Commission instruct DTE to consult with staff and intervenors in the development of its proposed credit scheme in advance of its next filing.
- For the street lighting sales forecast, I recommend a reduction of 3,308,045 kwh, equivalent to 4.06% of DTE's unadjusted forecast for E1, Option 1 streetlights, to adjust for known outage rates when streetlights are using no, or almost no, energy.
- I recommend that the Commission approve the Company's proposal for streetlight outage reporting to customers, including witness Bellini's proposal to narrow the scope of reporting to E1, Option I lights only. However, I recommend the Commission include two additional stipulations in its order. First, the Commission should set a deadline by which the Company will provide customers with the outage reports. I recommend that Commission order the Company to provide initial quarterly outage reports to large customers for Q3 and Q4 of 2024 by January 31, 2025; and thereafter comply with the reporting schedule detailed by the Commission in its order in case no. U-21297. Second, in the next rate case filing, the Company should be required to make a specific proposal and timeline for

including accurate outage counts by light, rather than bundling multiple lights into reported outage events.

- I recommend that the Company be instructed to include in its next rate-case filing information regarding its inspection and painting annual targets as well as a report on inspection and painting completed in the prior years and the costs incurred for such activities;
- I recommend that the Commission order DTE to include street lighting capital and distribution O&M plans in its Distribution Grid Plan, including reliability, energy efficiency and cost-benefit analyses.
- Regarding O&M costs, I recommend the Commission approve $941,950 for Community Lighting Supervisory and Administrative staff (instead of the proposed $1,800,000) and allow no cost recovery for streetlight inspections and painting in the projected test year.
- I recommend the Commission approve other proposed O&M line items specified in this testimony (e.g. the costs of the new outage management system).
- I recommend the Commission require the Company to provide outage event root-cause data in the next rate case filing, covering both customer-reported outages and Night Patrol outages, to facilitate informed analysis of the Company's outage response and prevention expenditure proposals. Rather than being more prescriptive than this in its order, I would recommend the Commission order the Company to propose a sample report within three months of its final order in this case, for review and discussion with MPSC Staff and intervenors.

- Regarding streetlight capital costs, I recommend the Commission disallow spending on the underground cable replacement program. This program was not discussed in the Company's DGP and no meaningful cost-benefit analysis is included with the Company's filings in the instant case.
- I recommend no changes to other capital expense line items. Therefore I recommend that total test-year capital expenditure for Community Lighting should be $15.575 million.
- I recommend that the Commission maintain its disallowance of unreasonable spending on excessively bright LED streetlights as ordered in case no. U-21297, and to disallow excessive spending on LEDs installed since then. The total cumulative disallowed amount should be $7,705,567.
- I recommend that the Commission order the Company to implement full cost-of-service rates for all E1 rate schedules.

IV. MUNICIPAL COORDINATION PRACTICES

Q. Why do local governments want better coordination of electric infrastructure projects with DTE?

A. Local governments can be impacted by uncoordinated infrastructure project coordination in several ways. Poor coordination of projects can lead to:

- avoidable damage to municipal infrastructure or easements.
- avoidable levels of disruptions to residential neighborhoods, business districts and vehicle traffic.

- avoidable costs that impact the electric rates paid by the residents and businesses served by local governments.

Q. Can you illustrate how a utility project might cause avoidable problems and costs?

A. Utilities often need to excavate, or otherwise operate, in the public right-of-way or easements. Such projects may be coordinated with municipal (or other) infrastructure projects that could be implemented concurrently or consecutively. While coordination of project implementation may cause costs of its own, as might adjustment of utility-project timelines, financial economies may also be realized related to permitting processes, excavation, and infrastructure repair costs. Municipal governments, for example, plan road, sidewalk, water and sewer projects typically years in advance; excavations conducted during these projects may create the opportunity for a utility to service or install its own underground infrastructure. If the utility were to implement its own project before or after the municipal project, avoidable damage and disruption might be incurred.

The need, and opportunity, for this kind of coordination is growing as project volumes grow. Increased federal infrastructure spending, along with emphasis in Michigan on improving road conditions, is causing local governments to increase the scope and scale of their infrastructure projects. At the same time, DTE is significantly increasing investments in its electric infrastructure to improve reliability and resilience, support distributed resources and electrification of buildings and vehicles. Many local governments are keenly interested in the undergrounding of electric infrastructure as a reliability measure, the high costs of which might be reduced were projects scheduled to coincide with local road, water, sewer and other projects. The opportunity to coordinate project planning and scheduling has never been greater, nor has the need to seek financial economies to moderate the impact

of all these projects on electric rates, taxes, and quality of life in communities served by these projects.

This recent and future coincidence of escalating investment in utility and municipal infrastructure heightens the need for coordination to reduce disruptions to the community. It is said that Michigan experiences five seasons: winter, spring, summer, fall and construction – highlighting the inconveniences forced on residents and businesses by the short seasonal window of opportunity afforded to infrastructure projects in Michigan. Exacerbating this unavoidable consequence of our climate by missing opportunities to coordinate projects adds insult to injury.

City of Ann Arbor witness Stewart provides examples of actual infrastructure project coordination opportunities that DTE's normal processes failed to identify.

Q. Has the Commission addressed infrastructure project coordination in prior DTE case orders?

A. Yes. In its final order in case no. U-21297, the Commission wrote:

> "…in its next rate case, DTE Electric shall include a demonstration of its efforts to improve communication and coordination with local governments regarding construction activities."[65]

Q. Did the Company respond fully to this order in its filing in the current case?

A. No, it did not. Witness Kryscynski testified:

> "When DTE is ready to move forward with a capital project the Company coordinates with the appropriate municipal personnel to set up a briefing meeting to discuss the details of the project, benefits, and collaboration opportunities of the work. We request that the municipality provide any potential conflicts to the project before permits are sought. This provides both the municipality and DTE some assurance that the planned project

[65] U-21297 final order, p361.

> does not conflict with a municipal project, whether it's in the conceptual or planned stage.
>
> Once the project is in progress, periodic updates are provided to the municipality and meetings may be held work through any questions that arise. …
>
> The company is working to improve the frequency of updates to municipalities and garnering feedback to determine their preferred methods to receiving these updates. In addition, we are working with county road commission to support their projects, and to coordinate where possible to avoid conflicts."[66]

Q. How does witness Kryscynski's testimony fall short of fully responding to the Commission's prior order?

A. Witness Kryscynski's testimony falls short in multiple ways.

First, where the Commission ordered the Company to provide a "demonstration of its efforts," witness Kryscynski provides only a cursory, high-level description of how the Company approaches a complex and complicated process. A demonstration would involve data, a more detailed description of policies and practices, and examples.

Second, the Commission said it wanted a description of the Company's efforts to *improve* coordination. Witness Kryscynski's testimony does not do that. The Company describes communications that occur after the Company has decided when and where it will be working – communications that are very similar to what the Company did in previous years. If this is in any way an improvement, it is still a description of communication, not coordination. This belated communication robs both DTE and the local government of opportunities to compare planned projects over the next 5-6 years and choose to schedule co-located projects concurrently or consecutively. Thoroughgoing coordination would

[66] Kryscynski direct testimony, AJK-102, lines 6-22.

involve consultation from the beginning of the prioritization and planning processes, not a separate process that culminates in belated notification.

Third, witness Kryscynski twice refers to conflict avoidance, as if that is the only value DTE sees in coordination and communication. While that is valuable, concurrent or consecutive scheduling may yield the best results for minimizing costs and disruptions for both parties. Ann Arbor witness Stewart lists several costs – totaling a notable percentage of overall costs for a project, which DTE can avoid by coordinating a single project. For instance, without coordination, DTE may have to bear the costs of sidewalk restoration; with coordination those costs could be avoided. Municipal governments, in contrast to DTE, see coordinated project planning and implementation as an opportunity as well as a risk-management exercise, and as part of their responsibility to the ratepayers and taxpayers they serve.

Q. Did you ask the Company to elaborate on witness Kryscynski's testimony in discovery?

A. Yes. In discovery request MAUIDE-2.8, MAUI asked DTE to "list all projects in the historical test year, or which are planned from now through the end of the test year, that were or are planned to be coordinated with another utility or local unit of government." DTE's response included the following statements: "The Company does not currently have a database system that includes coordination efforts between the Company and other utilities or local units of government," and, "there is no formal analysis on this work." DTE's response went on to provide "some examples that are illustrative of the coordination between DTE, local units of government and other utilities. Included in these examples are DTE-owned or municipal-owned projects on which DTE *collaborates to resolve conflicts*

and eliminate delays where possible." [67] (emphasis added)

In addition, Ann Arbor asked specifically "how the Company has complied with the Commission's directive in Case No. U-21297 to 'include a demonstration of its efforts to improve communication and coordination with local governments regarding construction activities.'" In response DTE referred solely to MAUIDE-2.8.[68]

Q. How did DTE's discovery response demonstrate lack of understanding of the purpose of the Commission's directive in case no. U-21297?

A. The Commission's prior order sought to encourage the Company to proactively plan projects with local governments. The list of projects witness Kryscynski provides in his discovery response fall into two categories: municipal projects for which the local government has requested relocations of DTE infrastructure, and DTE projects that depend on local government permitting or other enabling actions. These are mostly examples of tactical and final-stage coordination: DTE responds when asked, and in turn asks for local help to facilitate its own projects. DTE provides no evidence that it is aware of or incorporating local infrastructure project plans so it can plan and schedule its own projects in ways that might realize cost efficiencies or reduce disruptions.

Q. Are there any other indications that DTE has not tried to improve its communication and coordination with local governments?

A. Yes, there are such indications. An examination of DTE's FERC accounts for Regional Relations (which it describes as work with local governments to "facilitate dialogue on operational matters such as storm recovery, infrastructure improvements and other capital

[67] Exhibit MAU-39, response to MAUIDE-2.8.
[68] Exhibit MAU-38, response to AADE-1.7.

projects") suggests the Company is not committed to improving its communication or coordination with local governments. The total of these FERC accounts in the historical test year (2022) was $0.733 million, and the total requested for the projected test year (2025) is $0.801 million, which is the "adjusted historical cost of $733,000 plus inflation."[69]. Thus, DTE is demonstrating its intent to maintain the status quo regarding its relations with local governments and not to devote any additional staff time to coordination efforts.

Q. Do local governments employ processes for planning and coordinating infrastructure projects and communicating plans and priorities to stakeholders?

A. Yes. Local governments are required to produce Capital Improvement Plans (CIPs). In implementation of their CIPs, local government agencies also conduct careful coordination of municipal infrastructure projects with each other and with private infrastructure projects. These processes are neither easy nor fast, but they represent the responsibility of local governments to manage costs and disruptions caused by projects. Participation in such processes would not cause delays or interfere with any franchise rights, but rather allow DTE to coordinate with municipalities and other utilities in a way that would minimize conflicts but also identify cost-saving opportunities.

Q. Please describe CIP objectives and content.

A. CIPs are roadmaps for local governments' long-term investments in their physical assets. These plans aim to achieve several key objectives including strategic alignment, efficient resource allocation, financial planning, project prioritization, and proactive infrastructure management. A typical CIP centers upon a multi-year list of capital-intensive projects, such

[69] Exhibit MAU-41, response to MAUIDE-1.2.

as new construction, renovations, and equipment purchases for physical assets like roadways, sewer lines, public buildings, and more. Accompanying the project list are annual forecasted expenditures, funding sources, location, and timeline for each project.

Q. How are CIPS developed?

A. Every municipality has their own distinct process for developing a CIP. In general, though, the development process is highly collaborative and includes the following pieces:

- Initiation and Leadership: the CIP project is kicked off and a lead department is designated.
- Needs Assessment: municipal infrastructure needs are identified through department project proposals.
- Project Evaluation and Prioritization: submitted projects are evaluated on a variety of factors, potentially including urgency, alignment with strategic goals, environmental impact, and potential community benefits.
- Financial Analysis: project costs are estimated, and potential funding sources are explored.
- Drafting and Public Input: a draft CIP is prepared and presented to relevant stakeholders for feedback and adjustments.
- Review and Approval: relevant governing bodies review and approve the CIP.
- Updating and Monitoring: the approved CIP is updated periodically to reflect changes in priorities, funding, and project progress.

Q. How are CIPS communicated?

A. Similar to the previous answer, each local government communicates their approved CIP in different ways. CIPs are typically documented as either a spreadsheet or pdf document

and uploaded to municipal websites.

Q. Would a CIP normally contain information that could constructively inform utility infrastructure project prioritization and planning?

A. Yes, it would. CIPs contain information on planned and in-progress municipal infrastructure investments. Relevant project information includes the timeline, location, and type of project (i.e., surface penetration). Knowing such information would answer the "when", "where", and "what" of project planning, and could help inform a utility about potential project coordination opportunities.

Q. Are CIPs readily available for utilities to review?

A. Yes. They are public records. In most cases, local governments make them readily available through their websites. If a CIP were not available on a website, a utility could easily get a copy by contacting the local government – no FOIA request is needed.

Q. Are the CIPs of MI-MAUI member governments readily available to anybody?

A. Yes, they are. MI-MAUI was able easily to locate and download member governments' CIPs online using simple web search methods.[70]

Q. Does DTE review local government CIPs when planning and prioritizing its own electric infrastructure projects?

A. No, it does not.[71] Witness Kryscynski offers, in elaboration, that "Once a DTE project is selected to move forward, our local governmental affairs team reaches out to the affected municipalities to notify them of the work and identify potential coordination opportunities." Ann Arbor witness Stewart's testimony provides a concrete example (no

[70] Exhibit MAU-36, Capital Improvement Plans Google search results
[71] U-21534 Exhibit MAU-37, response to MAUIDE-2.5.

pun intended) of opportunities this approach can easily miss, and the increased costs that result from failing to take advantage of those opportunities.

Q. Does DTE coordinate project planning with local governments in other ways?

A. Yes, it does, but DTE normally initiates this coordination late in the planning process, potentially avoiding outright conflicts but missing opportunities to save money and reduce disruption through joint project implementation. For example, DTE provides an extensive list of projects in Detroit that require relocations or coordination.[72] These efforts are appreciated and important, but reflect the Company being responsive to customer requests rather than proactive about coordinating and communicating its own plans and work and finding opportunities to identify cost savings.

Q. Does DTE Electric coordinate with other right-of-way users?

A. DTE Electric does not routinely coordinate, even with DTE Gas on infrastructure projects. Witness Deol states, "The Buffalo-Charles pilot project was the first construction collaboration between DTE Electric and DTE Gas. Based on the efficiencies realized the company will determine next steps."[73] It is notable that collaboration even between "sister" companies of DTE has never been attempted before, and witness Deol's response suggests this first-of-its-kind project will be used to definitively determine whether future collaborations occur.

Recommendations Regarding Coordination

Q. Please summarize your recommendations to the Commission regarding coordination of DTE electric infrastructure projects with local governments.

[72] U-21534 Exhibit MAU-39, response to MAUIDE-2.8
[73] U-21534 Exhibit MAUI-40, response to MAUIDE-2.7.

A. The Commission should make clear that it will presume that 10% of the costs of electric infrastructure projects that involve excavation in the public right of way or easements are not recoverable unless the Company can show neither DTE Gas nor the government plans potential work in the same area, or that the Company made reasonable attempts to coordinate work with such projects. In most cases, the requirement regarding local governments could be met by reference to publicly-available CIPs with very little effort. For example, the Commission should require DTE to demonstrate that it prioritizes locations of infrastructure undergrounding and underground maintenance projects, in part, by identifying local-government infrastructure projects that require excavation with which the DTE projects could be co-located and -scheduled. This discipline should apply to preventive maintenance projects, as well: the Company should prioritize maintenance of its underground infrastructure at times and places where local governments plan to implement their own infrastructure projects.

Given DTE's lackluster response to the Commission's order in the last rate case, it is important that the Commission set a higher and clearer bar for this requirement than it did with its order in case no. U-21297. The Company's filings and responses in the instant case on this issue gave cursory attention to the Commission's prior order. The Commission should be more prescriptive in its order in this case.

Q. Does this complete your direct testimony?

A. Yes, it does.

Q. Do you swear under penalty of perjury that the statements above are true to the best of your knowledge, information and belief?

A. Yes.

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3 Richard Bunch

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

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.	U-21534 ALJ Sally L. Wallace

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PROOF OF SERVICE

On the date below, an electronic copy of the public version of the **Revised Direct Testimony of Richard Bunch** was served on the following:

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The statements above are true to the best of my knowledge, information and belief.

Dated: August 30, 2024

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