

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **DTE
ELECTRIC COMPANY** for reconciliation
of its power supply cost recovery plan
for the 12 months ended December 31, 2020.

Case No. **U-20528**
(e-file paperless)

**MICHIGAN PUBLIC SERVICE COMMISSION STAFF'S
INITIAL BRIEF**

Respectfully submitted,

MICHIGAN PUBLIC SERVICE
COMMISSION STAFF

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I. Introduction

On March 31, 2021, DTE Electric (DTE or the Company) filed an application requesting the Michigan Public Service Commission (Commission) approve DTE's proposed 2020 power supply cost recovery (PSCR) reconciliation and authorizing DTE to collect a total PSCR under-recovery at year-end 2020 of \$99,883,041 via a roll-over as the January 2021 starting balance for the 2021 PSCR reconciliation. (DTE Application, p 2.) A prehearing was held on May 12, 2021, and a scheduling memo was entered. At the prehearing, petitions to intervene from the Association of Businesses Advocating Tariff Equity (ABATE), Michigan Environmental Council (MEC), Residential Customer Group (RCG), and the Attorney General (AG) were granted. The resulting scheduling order was issued and subsequently amended, resulting in a March 25, 2022, filing deadline for initial briefs.

II. Analysis

A. Summary of Staff's Disallowances.

Michigan Public Service Commission Staff (Staff) witness Diane Martin offered four adjustments to the Company's filed case: (1) to change the beginning balance; (2) to change the loss multiplier; (3) to support a disallowance by Staff witness Jing Shi; (4) and to change the monthly interest amounts. (2 TR 625.) These adjustments originally resulted in Staff recommending a \$94,372,745 under recovery, inclusive of interest (2 TR 627) and are discussed in the following subsections. However, upon review of the entire record, and as further discussed below section B, Staff also supports the AG's and ABATE's proposed disallowance of

\$1.141 million related to the overly extended Ludington Unit 3 outage. Staff therefore recommends the Commission approve a \$ 93,217,903 under recovery in total for the 2020 PSCR period.

1. The amount should reflect the beginning balance from MPSC Case No. U-20222.

Staff's first adjustment was to the \$3,345,840 under recovery beginning balance, including interest, the Company used in its application. This reflected the 2019 PSCR balance in Case No. U-20222 which had no Commission order at the time of DTE's filing. Staff used a beginning balance of \$128,032 as issued in MPSC Case No. U-20222, October 4, 2021, Errata, p 1. The errata were filed to correct an error in the U-20222, September 24, 2021, Order on page 71. This included a \$2,718,762 limestone disallowance and \$439,023 trona disallowance by the Commission in U-20222. It also incorporated a \$137,250 adjustment by the Commission related to the TEAL amendment ordered in Case No. U-20203 as well as the flow-through effects to interest. (2 TR 625-626.)

Staff reviewed the AG's position and disagreed with its use of a \$145,023 under recovery beginning balance (2 TR 566) as Staff believes that amount is derived from the original U-20222 order before the errata was filed.

2. The amount should reflect Staff's adjustment to the loss multiplier.

Staff's second adjustment changed the loss multiplier the Company used in its June through December 2020 base factor calculation. Staff corrected the formula the Company used in its June loss factor calculation and changed the loss

multiplier in the remaining months to comply with the Commission's 5/8/2020 Order in MPSC Case No. U-20561. The correct loss multiplier used in Staff's June through December calculation caused the base factor to change from 33.52127 to 33.52010 subsequently causing revenue to decrease by \$4,264. (2 TR 626.)

3. The amount should reflect a reduction to the June 2020 purchased power costs.

Staff's third adjustment is a \$2,134,588 reduction to purchased power costs in June 2020 that was discussed and supported in the confidential testimony of Staff witness Shi. (2 TR 626.) Staff maintains this position and asks that the ALJ and Commission accept this adjustment for the reasons outlined in the confidential testimony.

4. The amount reflects additional impacts due to flow-through effects.

The previous adjustments had flow-through effects that caused the monthly over/(under) recovery average balances to change. Interest each month is calculated by multiplying the over/(under) recovery average balance that month by the applicable interest rate. Interest on the average over recoveries in January through April were calculated at the Company's authorized return on common equity (ROE) rate of 10.0%. The ROE rate was reduced to 9.90% in Case No. U-20561, thus the interest on the average over recovery in May was calculated at a prorated ROE rate. MPSC Case No. U-20561, 5/8/2020 Order, p 177. Interest on the under-recovery average balances in June through December were calculated at the Company's monthly short-term borrowing rate. (2 TR 627.)

B. Staff also supports the AG's and ABATE's proposed disallowance of \$1.141 million related to the overly extended Ludington Unit 3 outage

The Ludington Unit 3 outage began May 13, 2019, for an overhaul and upgrade, which was originally planned to be completed on March 1, 2020. However, the outage was extended, and the unit remained out of service for the rest of the 2020 year. (2 TR 270-271.)

The main reason for the delay was due to defects in the discharge ring extension (DRE), which was the failure of the vendor. AG witness Sebastian Coppola and ABATE witness James Dauphinais estimated the replacement power cost to be around \$1.141 million. (2 TR 504.) Staff agrees with ABATE and the AG that the contractor for the Ludington Unit 3 upgrade acted unreasonably and supports disallowing the replacement energy cost of \$1.141 million. The ratepayer should not bear this financial responsibility.

C. Additional Issues

1. Staff submits that DTE Electric's PSCR Expenses during 2020 were reasonable and prudent with the exception of two disallowances.

The below section documents Staff's review of DTE Electric's PSCR expenses during 2020 including coal, oil, natural gas, coke oven gas (COG), petroleum coke, nuclear, urea, limestone, powdered activated carbon (PAC), trona and calcium bromide (CaBr), Net System Output (NSO), PSCR Transmission, and Fuel & Purchase Power Expense.

Staff first reviewed the Company's actual coal expense of \$393.5 million, which is approximately 30% lower than the forecasted coal expense of \$559.3

million. The unit cost of coal expense was \$1.99/MBtu, which is around 4% lower than the forecasted unit cost of coal expenses of \$2.08/MBtu.

DTE Electric produced 8,456 GWh (18,741 GWh actual vs. 27,197 GWh projected) less energy from its coal generation units during 2020. The decrease is 31% lower compared with the forecasted power generation. The lower energy production is in line with the reduced coal expense. Staff agreed with the Company's conclusion that its actual coal expense is reasonable and prudent because the Company increased periods of economic reserve shut down due to the lower energy market prices during 2020. In addition, the market demand was lower than forecasted during 2020 because of the COVID-19 pandemic, therefore, coal was not consumed as much as in the Company's forecast.

Second, DTE Electric's actual oil cost was \$8.3 million, which is 14% lower than the projection of \$9.4 million in Case No. U-20527. The main reason for the lower 2020 oil cost is the lower-than-forecasted consumption and a decrease in the unit cost of oil. All of the fossil fuel units—not including the natural gas units—experienced decreased energy production in 2020. Based on these facts, Staff agreed with the Company that its oil expense is reasonable and prudent.

Third, the Company incurred \$98.2 million in natural gas expenses in 2020. This expense was 58% higher than the forecasted natural gas expense of \$62.0 million in Case No. U-20527. The main reason that contributed to the higher-than-projected natural gas cost was the increased actual net generation compared to the forecast. As explained in Company witness Mr. Pratt's testimony, "The Company burned approximately 41,746 MBtu of natural gas, which is 112% higher than the

forecasted gas burn of 19,724 MBtu.” (2 TR 325.) The actual unit cost of natural gas was lower than forecasted due to depressed natural gas commodity prices. As Mr. Pratt continued in his testimony:

For the 2020 PSCR Plan Year, DTE Electric forecasted MichCon CityGate and Dawn gas prices would average \$2.27/Dtc and \$2.36/Dth, respectively. However, actual 2020 MichCon CityGate and Dawn gas prices were \$1.84/Dth and \$1.87/Dth, respectively. (2 TR 325.)

Because of the lower commodity price of natural gas, DTE Electric’s gas-fired units generated economically to cover more than just peaking system loads while many typical baseload plants were offline in economic reserve.

According to the Company’s Exhibit A-24, the actual total generation of the Greenwood unit, Dearborn unit and the peakers (i.e., natural gas fired units), was more than double compared with the forecast. (2 TR 196.) Therefore, DTE Electric incurred 58% more in natural gas fuel costs to achieve 104% more power generated. For these reasons, Staff believes the Company’s natural gas cost is reasonable and prudent.

During 2020, DTE Electric experienced a near 100% utilization rate of the TEAL capacity. (2 TR 592.) There were only three months with less than a 100% utilization rate at 97%, 86%, and 81%. Staff concludes that the utilization rate of the TEAL capacity during 2020 met the Commission’s requirements in its Order in Case No. U-20203. Therefore, Staff supports the Company receiving full recovery of the incremental TEAL transportation cost of \$823,500 for 2020. (*Id.*)

Fourth, the Company’s coke oven gas (COG) cost was \$1.0 million, which is 58% lower than the forecasted amount of \$2.4 million. However, the unit price of the COG was \$1.40/MBtu, which is 16% higher than the projected unit price of

\$1.20/MBtu. (2 TR 593.) The actual blast furnace gas (BFG) expense was \$64,000 and lower than the forecasted amount of \$1.3 million. This represents a 95% decrease; nevertheless, the unit price of the BFG was \$1.64/MBtu, which is 44% higher than the projected unit price of \$1.14/MBtu.

The higher unit cost of COG and BFG is primarily due to the timing of consumption. Because of the lower generation at the River Rouge Power Plant, where COG and BFG are primarily used, and that the costs of COG and BFG were offset some by the lower usage, Staff concludes the expenses related to COG and BFG are reasonable. (2 TR 593-594.)

Fifth, the Company spent \$13 million on petroleum coke, or “petcoke,” compared with \$19.2 million projected for 2020. The decreased amount represents a 32% reduction. The actual unit cost of petcoke was \$1.30/MBtu, which represents a 20% decline from the forecasted unit cost of \$1.63/MBtu. (2 TR 595-596.) Staff has reviewed the cost of petcoke and submits that the Company’s expense is reasonable and prudent because the lower generation at the Monroe Plant led to the lower consumption of petcoke.

Sixth, with respect to nuclear, DTE Electric incurred \$37.5 million in nuclear fuel expense compared with the forecasted \$45.1 million, which is a 17% decrease in cost. The generated nuclear output of 6,071 GWh is also 17% lower than the projected amount of 7,335 GWh. The lower generation output is mainly because of the extended Fermi 2 Refueling Outage 20 (RF20) during 2020. The RF20 actual duration was 137.8 days compared to the 2020 PSCR Plan projected duration of 70 days. Staff finds DTE Electric’s nuclear fuel expense to be generally reasonable and

prudent because of the lower-than-projected cost is in line with the lower-than-projected generation output. (2 TR 596.) Staff will discuss further the extended RF20 issue and disallowance in the outage section of this Brief.

Seventh, the Company used urea, limestone, powdered activated carbon (PAC), trona and calcium bromide (CaBr) as chemicals to meet environmental requirements at their power plants. The actual urea expense was \$6.8 million with actual usage of 21,467 tons, compared with the projection of \$9.0 million and 26,319 tons. This represents a 24% $((\$9.0 - \$6.8) / \$9.0)$ cost decline and an 18% $(26,319 - 21,467) / 26,319$ usage reduction. Staff's review determined the urea expense was reasonable because urea was mainly used in the Company's Monroe Power Plant, which had lower generation than projected during 2020. Therefore, urea consumption was also lower than the forecasted amount. (2 TR 599-600.)

PAC, trona and CaBr are sorbents used to control emissions of mercury and acid gases to meet emission limits set forth by the EPA Mercury and Air Toxics Standards (MATS). DTE Electric is utilizing ACI technology at the Company's Belle River, St. Clair, River Rouge and Trenton Channel Power Plants for the control of mercury emissions as required by the MATS regulation. (*Id.*) Because the energy output at the Company's Belle River, St. Clair, River Rouge and Trenton Channel Power Plants was lower than the projected amount during 2020, the usage of PAC and CaBr was in line with the lower energy output. Therefore, the expenses of these two chemicals were reasonable and prudent.

In addition, Staff submits that the Company's use of trona at the Belle River Power Plant was reasonable. Trona is the chemical used to ensure sulfur dioxide

does not exceed the emission limits at coal power plants. The Company did not plan on using trona at the Belle River Power Plant in 2020, however, due to increased emissions of sulfur dioxide at the plant, it had to change plans. As Witness Marietta explained in his testimony:

The increased SO₂ emissions started in September and were caused by higher than normal levels of sulfur in the plant's coal supply. Sulfur levels in coal varies naturally as different areas and levels of the mine are mined. Additionally, changes in operation due to COVID-19 at one of the mines that supplies coal to Belle River impacted the areas of the mine being mined in 2020. Between September and December, the plant used 3,024 tons of trona to reduce emissions. (2 TR 307.)

The Company further explained the reason for the high sulfur content coal in its discovery response STDE- 1.28:

More specifically, the mine limited operation to mining one area of the mine primarily due to the decrease in coal demand as a result of COVID-19 impacts throughout the nation. The coal being mined from this area of the mine had higher sulfur content than the coal typically mined and sent to Belle River Power Plant. Normally, the mine would extract coal from different areas of the mine and then blend the coal before shipping, which would at least partially negate any higher sulfur seen in just one area. However, due to the low coal demand, this blending did not take place. This unexpected increase in sulfur content of the coal delivered to the plant led to the need to inject Trona to comply with sulfur dioxide (SO₂) emission limits. (2 TR 579.)

Staff believes the response from the Company supporting the higher-than-projected trona usage is reasonable due to the fact that higher-than-normal levels of sulfur content coal were used in the Belle River coal fired unit.

The actual limestone expense at Monroe Power Plant was \$4.5 million with an average cost of \$16.58/ton (\$4,482,626 / 270,395), as compared to a planned limestone expense of \$3.6 million and a planned average cost of \$16.03/ton (\$3,615,949/225,574 tons) as shown in Exhibit A-26. (2 TR 253.) The volume of

limestone consumed was 270,395 tons compared to a forecast of 225,574 tons. The limestone cost increase was in line with the usage and unit cost increase.

Therefore, Staff concluded the limestone expense, as well as all of the Company's chemical costs, were reasonable and prudent. (2 TR 601-602.)

Eighth, the Company's Net System Output (NSO) expense, which is the sum of the Generation & Fuel costs, Net Wholesale Power Purchase/Sale, and chemical costs, was reasonable. The Company incurred \$1,131 million in Net System Output expense, as compared with the projected amount of \$1,098 million. The increase represents a 3% difference from the forecasted amount. (2 TR 302.) The higher-than-projected NSO is reasonable because the 3% increase in expense was largely due to unforeseen events. For example, the COVID-19 pandemic made the Company's outages extend into the summer peak season. (2 TR 303.)

Ninth, the Company's PSCR transmission expense was reasonable. This expense was \$332.2 million for 2020, which was approximately \$32.4 million lower than the amount projected in the Company's 2020 PSCR Plan Case. As the Company explained in its discovery response STDE-2.2:

The main reasons that the transmission expense was lower than the projected amount are primarily due to Schedule 9 and Schedule 26-A expenses. For Schedule 9 expenses, the forecasted monthly peak load volumes were higher than the actual monthly peak load volumes. Also, the forecasted rate for Schedule 9 was higher than the monthly actual rate. For Schedule 26-A expenses, the forecasted monthly withdrawal volumes were higher than the actual monthly withdrawal volumes. (2 TR 603-604.)

Staff accepted the Company's explanation and the lower-than-projected transmission expenses as reasonable due to the fact that the generated energy was also lower than the projected amount during 2020.

The Company also incurred \$38.6 million for non-PSCR sales and transmission expense during 2020, as compared with a projected amount of \$66 million. The Company explained in its discovery response, STDE-2.3:

Non-PSCR Customers Sales Adjustment and the corresponding Non PSCR Customer Transmission Adjustment on Exhibit A-16, lines 35 and 39, respectively, were lower than the projected amounts primarily due to lower sales to the Company's Rate Schedule Rider 10 customers (R10). As a result of the COVID-19 pandemic, industrial sales, which includes R10 customers, declined starting in the last half of March 2020 and did not return to pre-pandemic volumes for the remainder of 2020. Due to the lower sales volumes, the associated costs of the Non-PSCR Customers Sales Adjustment and the Non-PSCR Customer Transmission Adjustment were lower than projected. (2 TR 604.)

Staff accepted the Company's response and found the lower non-PSCR sales figure reasonable largely due to R10 customers' shut down for unforeseeable events.

Tenth, the Company's 2020 PSCR Fuel & Purchase Power Expense was \$1,425 million, or an average of \$33.91/MWh, as compared with projected amount of \$1,396 million, or \$32.58 /MWh. There are two main reasons for this outcome: lower customer demand during the winter/spring of 2020 when the COVID-19 pandemic emerged and the reduction in purchases during a lower market price period. The Company had to make more purchases during the summer season when energy prices were higher, according to the Company's discovery response of STDE-2.4. (2 TR 604-605.)

Staff concludes that the Total PSCR Fuel and Purchased Power cost was reasonable and prudent with the exception of replacement power costs related to two outages which Staff will discuss further. During the pandemic, sales levels and timing were beyond the control of the Company. Large industrial customers' sales were down dramatically during the whole year of 2020, and extended outages also

played a major role in the Company purchasing more power during the summer peak season.

In sum, Staff recommends that the ALJ and Commission deem DTE Electric's 2020 expenses as reasonable and prudent with the exception of two disallowances discussed below.

2. DTE Electric's Outages during 2020.

DTE Electric had five major outages that lasted more than 90 days during 2020, according to the Company's Exhibit A-3. (2 TR 605.) A summary of each of these outages is followed by a discussion of the two recommended disallowances in section C.2.a. The outages were:

- Belle River unit 1 outage for 125 days with 105 days in excess of the planned outage.
- Belle River Unit 2 outage for 195 days with 50 days in excess of the shorter outage estimate.
- Fermi outage for 138 days with 68 days more than the planned outage.
- Greenwood outage that lasted for 96 days.
- Ludington Unit 3 outage which began on May 13, 2019, and was scheduled to be completed on March 1, 2020. The Company stated that additional work has now extended the end of the outage to January 2022

Belle River Unit 1 experienced an outage that lasted for 125 days, from October 31, 2019, to March 4, 2020, of which 64 days were in 2020. Therefore, the

extra 64 days was the extension of the outage which began in 2019. In Case No. U-20222 (DTE Electric's 2019 PSCR reconciliation), DTE Electric explained that the Belle River Unit 1 fall outage was initially only for two 9-day furnace cleanings (i.e., 18 days total); however, on-line testing prior to the outage indicated the unit was limited in generation output and reactive power capability. (2 TR 606.)

Witness Dugan explained this limitation of generation in his testimony from Case No. U-20222, and in the current case:

On-line testing prior to the outage indicated the unit was limited in generation output and reactive power capability, until repaired. During peak summer demand periods, reactive power capability is critical to system voltage regulation and generation output capability is critical to meeting peak system loads. Continued operation of Belle River Unit 1 without resolving the generator vibration could have resulted in generator damage with the potential for catastrophic failure. A generator failure would have required an outage more than a year to complete repairs. (2 TR 265.)

DTE Electric decided to repair the generator's vibration problem by shipping the generator rotor to the original equipment manufacturers (OEM) facility in Charlotte, North Carolina (Siemens). The Company secured an around-the-clock shop time with the vendor to minimize the outage duration. Meanwhile, DTE Electric used the extension time to schedule other item repairs to avoid a future multiple-week outage.

Staff reviewed the vibration problem in prior and current PSCR cases and determined it was nonexistent when the spring outage happened and could only be detected during the summer when the generator needed to be at its peak output. In addition, the vibration happened in a key element of the generator. If the rotor had crashed, the consequence of that failure would have been catastrophic, potentially causing a failure beyond repair. (2 TR 607.)

As discussed above, during the period when the generator rotor was shipped and refurbished at the OEM's facility in Charlotte, North Carolina, the Company secured around-the-clock shop time with the vendor to minimize the outage. At the same time, the Company scheduled a repair of the East Boiler Feed Pump to avoid a future outage. During that same outage, before the 2020 summer peak load session, DTE Electric timed all of the essential outage work, such as Generator Rotor inspection and repair, Boiler High Energy Clearing, Generator Z-phase Bushing replacement, Reheater Boiler Tube repairs, West Heater Feed Pump Discharge Check Valve replacement, East Boiler Feed Pump Volute replacement, as well as Makeup Air Fan Motor replacement, to ensure the unit was returned to service with full capability. (2 TR 607-608.) Staff believes the Company's Belle River Unit 1 outage that started in October of 2019 and ended in March of 2020 was reasonable and that the Company efficiently utilized the additional outage time. (2 TR 608.)

The Belle River Unit 2 outage was planned for 145 days due to the extent of the work scope, which was detailed on pages 12 and 13 of witness Dugan's testimony. (2 TR 266-267.) These activities were planned to maintain critical safety and sustain the unit's reliability. However, there was a 50-day extension from the 145-day outage because the LP turbine rotors had significant and unanticipated stress corrosion cracking on the L-2 blade row anchoring slots.

After the inspection of the stress corrosion crack on the LP turbine rotor at the vendor's shop, the Company and the manufacture technical teams decided to remove the L-2 row steeples on the LP-B turbine rotor. They then designed,

engineered, manufactured, and finally installed baffle plates to replace the turbine blade in order to save time and lower the costs. (2 TR 268.)

Unforeseen equipment problems that are unaccounted for when the utility is planning its outages are very common and inevitable. The presence of COVID-19 at the repair and outage sites also contributed to the duration of the extension because DTE Electric and the manufacturer were required to maintain safety controls to reduce the possibility of on-site transmission and initiated sequestering protocols for personnel assigned. Staff believes that the outage extension for the Belle River Unit 2 is acceptable for these very reasons. The stress corrosion cracking was not accounted for in the original outage plan, and neither was the pandemic and associated protocols affecting operations during the outage/rebuild/repair of the turbine steeple. (2 TR 609.)

Fermi 2's refueling outages are complex and require an integrated work plan to execute thousands of activities in a relatively short period. Staff has witnessed refueling in the past and fully understands the intricate scope of the work. (*Id.*) The initial plan included 70 days to finish the refueling and the replace the torus structure coating. The replacement of torus structure coating was confirmed by the Nuclear Regulatory Commission (NRC) following the Inspection Report. The specialized coating protects the interior steel of the torus structure from corrosion and serves a nuclear-safety function as the coating must remain adhered to the torus shell during all design-basis operation parameters to allow emergency water transfer from the torus to the reactor core. (2 TR 609-610.)

However, DTE Electric experienced a 68-day extension for refueling and replacing the torus structure coating. There were many reasons for this extension. First, 21 days of the 68-day extension can be explained by COVID-19. The refueling outage began on March 21, 2020, at the start of the COVID-19 global pandemic and cases began to appear in the United States. Even though DTE Electric made extraordinary efforts to ensure the health and safety of its workers and manage the risks of COVID-19, the rapid transmission of COVID-19 impacted many outage workers, particularly those who worked on the torus structure coating replacement project. The Company also made extra effort to manage outage performance, such as activating a COVID-19 command center to comply with the policies of the Centers for Disease Control and Prevention (CDC) including contact tracing and quarantine protocols, providing and mandating face covering, rearranging workspaces and behaviors to promote proper social distancing, and enhancing the workspace sanitation. (2 TR 611.)

Despite these efforts, the Fermi 2 plant experienced a disruptive outbreak of COVID-19 in early May 2020. The rapid transmission of COVID-19 impacted approximately 400 outage workers, particularly those working the torus structure coating replacement project because the work environment consists of a confined space. In addition, the Company lost half of its projected team of approximately 400 members and ended up only having a sufficient workforce to safely work one shift and not the two shifts required to maintain the original schedule. (*Id.*) This 21-day period is therefore justified.

Second, 16 days of the 68-day extension can be attributed to the torus vent header restoration. During the RF19 in 2018, DTE Electric inspected the torus vent header piping and determined the light rust found inside the torus vent header had met its safety standard and was acceptable. Therefore, the Company did not make any plans to work on the torus vent header for this refueling cycle in its projection. However, during the RF20, DTE Electric found that the torus vent header needed to be repaired in order to comply with Fermi 2's operating license. The restoration extended RF20 for another 16 days.

Third, 13 days of the 68-day extension can be attributed to the emergent conditions of the torus structure. With that said, six days can be accounted for and justified, whereas the remaining seven days cannot. This 7-day period will be addressed in the disallowance section. In order to restore the coating of the torus structure, the water from inside had to be drained, and the old coating had to be removed. After that, DTE Electric inspected the uncoated portions of the torus structure and discovered that portions of the torus structure shell and components needed repair and restoration to comply with NRC standards for safety and reliable operation. (2 TR 612.) Consistent with the Company's contingency planning, DTE Electric created an inspection regime and flaw handbook that outlined acceptable inspection criteria and pre-established remediation plans.

Lastly, due to the torus vent header restoration and other extra work around the torus structure, DTE Electric had to take action to improve the known radiological conditions at the Fermi 2 plant to ensure a safe environment for outage workers. That activity was attributed to the extension of 11 days. The final seven

days of the 68-day extended outage was used to replace the integrated plant computer system, the Leading-Edge Flowmeter and others.

In sum, Staff views 61 days of the extended outage at Fermi 2 as reasonable and justified. The COVID-19 pandemic was a once-in-a-lifetime situation, and it was beyond the Company's control. DTE Electric has used its best inspection practices and judgement to ensure that safety and reliability in operation of its nuclear facilities. The Company encountered an unforeseen crack in the structure that required repair. Therefore, Staff finds that 61 days out of the 68-day extension to be acceptable. The other seven days will be discussed in the following section.

The Greenwood outage was similar to other major fossil fuel generator outages because the outage was carried out to maintain critical safety systems and sustain unit reliability. The outage activities were listed in witness Dugan's testimony. (2 TR 163.)

The outage was planned for 67 days; however, it was extended by 27 days after inspections of the South Boiler Feed Pump Turbine Turning Gear identified numerous cracks requiring the turning gear to be replaced. The Company did not plan to do the crack fixing because it was an unknown condition of the South ID Fan hub. Staff accepted the Company's explanation and found that the Greenwood Unit 1 outage was reasonable.

Based on this information related to certain outages, Staff makes the following recommendations for disallowances related to those outages.

a. Fermi 2's seven days of the extended outage

According to Company witness Davis, the Company projected the RF20 duration at 70 days to account for an emerging obligation to completely replace the submerged portions of the Fermi 2 torus structure coating. (2 TR 203.)

DTE Electric had a plan in place for the contingent remediation of the torus structure coating and used equipment to keep air humidity low in its projection. Nevertheless, the restoration happened inside of the torus structure where it was hot and humid during early summer. A waxy biproduct called amine blush developed on the coating surface when the specialized coating came into contact with moisture from the air. This is a known phenomenon to the Company.

As a result, the Company had to extend the outage by approximately seven days to restore the finish of the torus structure coating by removing the amine blush and recoating the inside surface of the torus. (2 TR 214.) Staff acknowledges that the coating restoration is complex and necessary, and the Company is obligated to comply with NRC standards to ensure the safe operation of the Fermi Plant.

There were only two major projects DTE Electric projected to do during the RF 20, one was refueling, another is to replace the torus structure coating. Staff believes that the Company should have been well-prepared for every possible scenario and circumstance ahead of time, to be equipped for RF20 and for replacing the torus structure coating efficiently. That DTE Electric had successfully operated Fermi 2 for 444 consecutive days should not be a justification for the seven-day outage extension. On the contrary, it ought to be seen as proof that the Company has the ability to be well-prepared. Regardless of what the Company claimed by

referencing different technique teams and reactive procedures in rebuttal, the fact is that the Company had to use an avoidable extra seven days to finish the initial planned Fermi 2 torus structure coating project due to a foreseeable and avoidable phenomenon.

Staff is aware the Company was subject to rare circumstances during the RF20, that is the main reason that Staff has deemed 61 days out of the 68-day extension as reasonable and prudent. The unanticipated need for additional repair was beyond the Company's control. Nevertheless, DTE Electric had a plan in place for the replacement of the torus structure coating, yet still failed to anticipate and plan for the humidity factor and its repercussions during the replacement process. It then had to accomplish the task on its second try. The successful second attempt also demonstrates that the Company should have had the ability to do it correctly from the beginning.

Staff's position is that the seven days of purchased power expenses for rehabilitating the torus structure coating should not be borne by the ratepayer. Therefore, the Company ought to be disallowed the collection of the \$2.1 million in replacement purchased power costs.

b. Extended outage of Ludington Unit 3

The Ludington Unit 3 outage began May 13, 2019, for an overhaul and upgrade, which was originally planned to be completed on March 1, 2020. However, the outage was extended, and the unit remained out of service for the rest of the year of 2020. (2 TR 270-271.)

The main reason for the delay is due to defects in the discharge ring extension (DRE), which was solely the failure of the fabricator and vendor of the part. AG witness Coppola and ABATE witness Dauphinais estimated the replacement power cost around \$1.141 million. Staff agrees with ABATE and the AG on this issue, and therefore supports the disallowance of \$1.141 million in replacement energy costs simply because the ratepayers should not bear the financial responsibility when they had already paid in full for the Ludington 3 upgrade, including all the parts and equipment that went along with the upgrade. Staff notes that the Commission has approved a similar disallowance relating to the faulty DRE part in MPSC Case No. U-20220.

III. Conclusion

For the reasons stated in Staff's direct and rebuttal testimony, exhibits, and in this initial brief, Staff respectfully requests that the Commission approve DTE's under-recovery at Staff's calculated amount of \$93,217,903.

Respectfully submitted,

**MICHIGAN PUBLIC SERVICE
COMMISSION STAFF**

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DATED: March 25, 2022

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of **DTE Electric Company** for reconciliation of its power supply cost recovery plan (Case No. U-20527) for the twelve months ended December 31, 2020.

Case No. **U-20528**
(e-file paperless)

PROOF OF SERVICE

STATE OF MICHIGAN)
) ss
COUNTY OF EATON)

De Ann Payne, being first duly sworn, deposes and says that on **March 25, 2022**, she served a true copy of **Staff's Initial Brief** upon the following parties **via email only**:

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Administrative Law Judge

Hon. Sharon Feldman
Administrative Law Judge
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De Ann M. Payne

Subscribed and sworn to before me
this **25th** day of **March, 2022**.

Cherie A. R. Shea, Notary Public
State of Michigan, County of Jackson
Acting in the County of Eaton
My Commission Expires April 13, 2022