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October 5, 2018

Kavita Kale
Executive Secretary
Michigan Public Service Commission
7109 West Saginaw Highway
Lansing, MI 48917

RE: In the matter, on the Commission's own motion, to open a docket for certain regulated electric utilities to file their five-year distribution investment and maintenance plans and for other related, uncontested matters.

MPSC Case No. U-20147

Dear Ms. Kale:

Pursuant to the Commission's order in the above referenced case, please find attached DTE Electric Company's Distribution Operations Five-Year (2018-2022) Investment and Maintenance Plan. If you have any questions, please feel free to contact me.

Very truly yours,

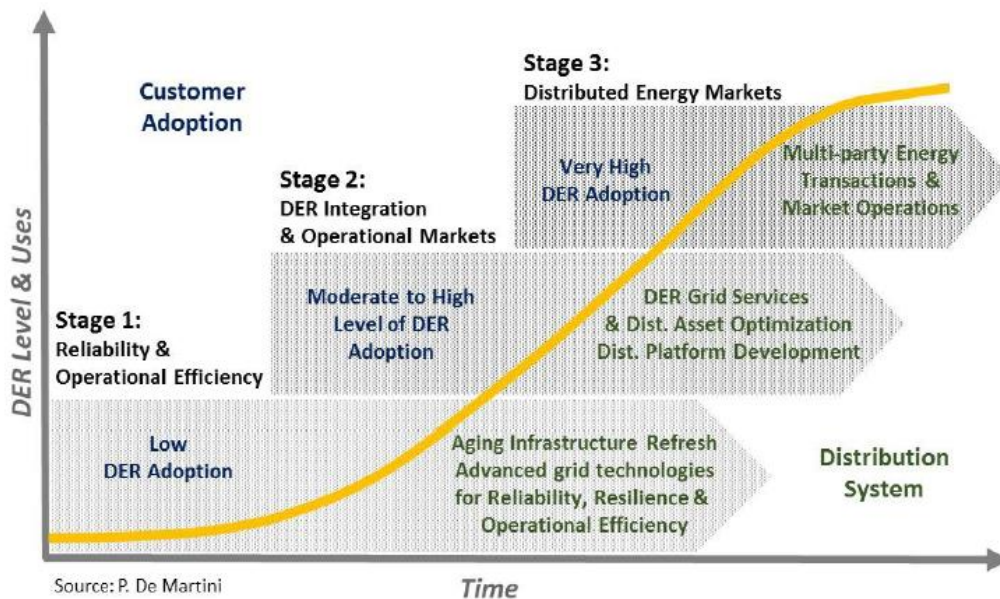
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I. INTRODUCTION

On June 28, 2017, the US Department of Energy (DOE) published “Modern Distribution Grid Decision Guide Volume III”. In this report, the DOE concluded that a more dynamic, flexible, and resilient electric distribution system is required to enable customer options for new technologies and services, and to manage multi-directional flows from a variety of generation and consumption patterns. The report goes on to state that to achieve greater reliability and operational efficiencies, as well to support increasing customer adoption of Distributed Energy Resources (DER), a three-stage evolution of existing distribution grids is needed. The first stage of evolution is grid modernization, where the focus is on enhancing reliability, resiliency, and operational efficiencies while addressing aging infrastructure replacement and advanced grid technologies. The second and third stages of evolution involve higher levels of DER integration and the potential introduction of bilateral energy transactions across a distribution system. The DOE report further states “Most distribution systems in the U.S. are currently at Stage 1”. DTE Electric is no exception.

Distribution System Evolution¹



¹ Page 15, Modern Distribution Grid, Decision Guide, Volume III, U.S. Department of Energy, Office of Electricity Delivery & Energy Reliability, June 28, 2017

The MPSC Staff report “Michigan Distribution Planning Framework,” September 1, 2018, states that: “Based upon the review of the draft plans by the Staff and the Commission ... the most pressing concerns in the near term are the risks presented by aging infrastructure and reliability/resiliency issues caused by vegetation and equipment failure. Failure to address these concerns in the near term will inevitably lead to declining service quality, cost escalation through the need for emergency repairs and replacements, and other inefficiencies. There may also be increased safety risks for employees and the public if the Company does not proactively address these known concerns.” DTE Electric agrees with the Staff’s assessment, which confirms that DTE Electric’s distribution falls in Stage 1 of the grid evolution described in the DOE’s report.

DTE Electric is focused on ensuring that the distribution system is safe, reliable, resilient and affordable. DTE Electric’s “Distribution Operations Five-Year Investment and Maintenance Plan” submitted in January 2018 (Five-Year Plan) details actions DTE Electric is taking to achieve these goals. Significant investments are needed to mitigate safety risk, replace aging infrastructure, address reliability and power quality issues, and meet distribution capacity expansion needs. In parallel to these investments, DTE Electric is focused on increasing the deployment of advanced grid technologies, particularly ADMS, that will not only provide many operational and reliability benefits, but will also be essential for the effective integration of Distributed Energy Resources (DER).

II. DTE ELECTRIC COMMENTS

The Staff’s report provides an excellent starting point for further discussion, investigation and collaboration regarding distribution planning. The best way to approach distribution planning in the future will likely evolve from past practices because of the emergence of new technologies. At the same time, there is no consensus on which distribution planning framework will best serve changing customer needs while also allowing public utilities to execute their responsibilities of managing grid operations in a way that ensures safe, reliable service to its customer. Planning and operating a distribution network is complex and highly dynamic, requiring decision around system repairs and upgrades that must be made very quickly. Any changes to distribution planning activities must recognize these operational realities.

Given the highly complex nature of distribution planning and the myriad of differences amongst Michigan’s utilities, it would be beneficial to all utilities for the Commission to issue guidelines for the utilities to follow. DTE Electric does not believe that the Five-Year Plan should be subject to hard rules

that will mandate corporate behaviors for several reasons. First, there does not appear to be a statutory mandate to the Commission requiring it to set rules for this process, so it will be necessary for the Commission to set rules via the lengthy Michigan APA procedures, which will require a somewhat duplicative process to this stakeholder process. Second, distribution planning is utility-specific, and it will be difficult for the utilities to comply with one-size-fits-all rules that do not take into account differences among utilities. Finally, most aspects of distribution planning are management decisions that are in the exclusive purview of the utility, and as such rules dictating management decisions are inappropriate. Commission guidelines, on the other hand, avoid the pitfalls of rules and provide the utilities with recommended practices after which to model the program.

In further support of the creation of transparent and inclusive distribution planning processes and recognizing the highly dynamic and complex nature of distribution planning, DTE Electric's high-level perspectives on some of the specific recommendations contained in the Staff's report are below.

Dynamic Load Forecasting

Staff Recommendation 1:

“Staff recommends that the Commission should require a dynamic approach to load forecasting for the purpose of distribution planning which consider multiple scenarios and probabilistic planning to properly accommodate uncertainty around DER penetrations.”

DTE Electric Comments:

The viability of scenario-based forecasting approach that incorporates DER should be explored. Some of the areas that will need to be understood in detail include:

- The impact of the uncertainty that will exist, particularly for long-range planning around the level of adoption, the location and the operational impact of DERs
- The limited amount of knowledge, tools and processes that currently exist in the utility industry for how to effectively plan for the adoption of new technologies
- The cost and lead times to establish new processes that will be needed to incorporate scenario and probabilistic planning
- The lack of well-defined risk mitigation approaches for the level of variability in the actual operation of DERs (i.e., uncertainty in the operations of power generation

facilities is managed by requiring very specific reserve margins based on detailed knowledge of past plant performance – a similar approach would be needed in distribution planning)

Staff Recommendation 2:

“Staff recommends the Commission require utilities to work with stakeholders to develop a cost-effective approach to providing publicly available hosting capacity information in the near term.”

DTE Electric Comments:

DTE Electric believes that any benefits of a hosting capacity analysis must be evaluated against the costs of collecting and providing such information, which could be significant (estimated at \$10 million or more). Today, the value of a hosting capacity analysis to customers with small DER interconnections would be very limited due to the current or proposed Distributed Generation (DG) tariff rules. Based on current rules, small DER interconnections (less than 20 kW) are not required to pay for studies or upgrades, regardless of location. Therefore, a hosting capacity map would not provide value for these customers. For larger DER interconnections, there would be little benefit from publicly available hosting capacity information because a full engineering study would still be necessary and DTE Electric would need to work directly with large DER interconnections (generally greater than 150 kW) in approving their interconnection requests. Furthermore, DTE Electric does not believe that the existence of hosting capacity analysis is a significant factor in increasing DER adoption and questions the value it can provide at Michigan’s current DER adoption levels. Utilities in California and New York had more than ten times the adoption of solar at the time of publishing their hosting capacity maps, and currently only one of the top ten states for solar generation requires hosting capacity maps (California). Thus, while some organizations have recently urged hosting capacity studies to enable greater DER adoption, due to the high cost of the studies and the lack of appreciable benefits to DTE Electric’s customers, DTE electric does not favor hosting capacity studies at this time. If the commission concludes DTE Electric should still conduct a hosting capacity analysis for stakeholders despite the challenges and costs discussed above, then the costs should be borne by those stakeholders requesting the analysis to prevent undue cost burdens on the remaining customers.

Should DER adoption rapidly increase and a hosting capacity map becomes of value, DTE Electric believes the Commission should consider the current state of grid technology when setting the scope and timeline

of the compliance. DTE Electric does not have high SCADA penetration and currently lacks an integrated ADMS, which makes a hosting capacity analysis much more expensive and time consuming. As DTE Electric continues to improve its grid technology and completes the implementation of ADMS, the costs of performing hosting capacity analysis is expected to decrease.

Customer Data Access and Enablement

Staff Recommendation 3:

“Staff recommends that utilities with AMI utilize the Green Button Download my Data and Green Button Connect standards developed by the Green Button Alliance to provide customers and third-party service providers access to customer usage data.”

DTE Electric Comments:

DTE Electric believes that customers should have access to their usage information and provides customers several ways to view and interact with their data. Customers can download the DTE Insight App and receive information on their daily and hourly usage, including visualization tools and weather data. Furthermore, if customers have the DTE Energy Bridge device, they can view real-time data of their usage. These services allow customers to interact with their energy usage data and understand how their behavior impacts their bills. Residential customers can also request their hourly usage data for the past 12 months in a downloadable data file. Upon such request, DTE Electric provides customers an Excel file within 30 business days.

DTE Electric is currently examining enhancements to the DTE website with respect to billing practice rule R460.153 (g), which requires clear instructions regarding how customers may obtain usage data. DTE Electric filed an insert to its current privacy tariff:

The Company’s website will provide clear instructions for customers on how to access up to 12 months of customer usage data as well as instructions on how to share their usage data with third parties. Customer usage data will be delivered in comma delimited, or csv, format.

DTE Electric is in the early stages of developing a portal for customers to download their usage data from the Company’s website as well as to share their data with authorized third parties. As part of the

development of this portal, we will review the Green Button Standards to assess the associated costs and benefits.

The Green Button Connect My Data option has features that go beyond providing customers usage data and would require research and discussions with other utilities to understand the data security and customer privacy implications before DTE Electric could take a position on this option. While more research is needed related to Connect My Data, it is important to note again that customers can already choose to share their data with third parties via the Excel file they can currently obtain.

Non-Wires Alternatives

Staff Recommendation 4:

“Staff recommends that future distribution plans provide detailed information regarding suitable criteria for NWA projects and clear cost information for nontraditional approaches to capacity investments.”

DTE Electric Comments:

Through 2016, only 313 MW of NWA projects have been implemented nationwide, and 85% of these are energy efficiency or demand response programs, based on GTM Research’s June 2017 report². Due to limited deployments and industry experience, it is critical to conduct pilots to validate the technologies and engineering assumptions before undertaking any large-scale NWA deployments. As discussed in the MPSC’s Technical Stakeholder Conference on August 7, 2018, DTE Electric is working with key stakeholders to utilize geographically targeted energy waste reduction (EWR) to provide load relief as non-wire alternatives; DTE Electric is investing in battery storage units at the O’Shea solar site and a number of customer sites to obtain operation and performance data of batteries and test potential use cases for peak reduction, energy abatement and power quality improvements. Through these pilots, DTE Electric will gain critical and necessary information to properly analyze and value NWA projects.

In benchmarking other utilities’ NWA implementation, DTE Electric has been collecting information that will help establish a robust framework for NWA evaluation. For example, energy efficiency and demand response programs may be applicable in high load growth areas to temporarily defer or delay investments.

² Munoz-Alvarez, Daniel. “Non-Wires Alternatives Project: Emerging Utility Revenue Sources for the Distributed Energy Market.” GTM Research June 2017

Some utilities require performance contracts for firm scheduling because they have experienced customer-side failures to perform, making it challenging to rely on NWAs without firm scheduling as reliable grid resources.

Cost-Benefit Analysis

Staff Recommendation 5:

“Staff recommends that the Commission requires the Companies to work with Staff and the stakeholders in the development of a common cost-benefit methodology that can be applied in developing future distribution plans”

DTE Electric Comments:

DTE Electric has developed its comprehensive Global Prioritization Model (GPM) as the basis for its investment and maintenance plan. The model assesses the impacts of strategic investment programs and projects on seven impact dimensions: safety, load relief, regulatory compliance, substation outage risk, reliability, O&M and reactive capital, relative to three key objectives: risk mitigation, reliability improvement and cost management. The benefit-cost scores of each program and project are used to develop a prioritization ranking so that capital investments can be evaluated against each other. Finally, execution factors, such as system operational constraints or project development milestones, are considered in the development of a detailed investment plan.

DTE Electric’s GPM utilizes historical reliability and trouble data and evaluates benefits that may be unique to the Company’s system (e.g., the 4.8 kV system in the City of Detroit). DTE Electric is uncertain whether it is feasible to develop a common cost-benefit methodology that can be applied across all the utilities in Michigan.

While DTE Electric is willing to engage in stakeholder dialogue regarding the viability of bringing some level of commonality to cost-benefit evaluation methodologies, given the dynamic and complex nature of distribution planning, where benefits can be valued differently among utilities, DTE Electric has concerns regarding the feasibility, time and resources needed to develop and maintain a common cost-benefit methodology.

Replacement/Upgrade Criteria

Staff Recommendation 6:

“Staff recommends the Commission work with the companies outside of the rate case process to develop replacement/upgrade criteria for aging assets to ensure accountability during the infrastructure refresh efforts.”

DTE Electric Comments:

DTE Electric is supportive of working with the Commission to develop replacement/upgrade criteria for aging assets, particularly in support of the implementation of the Investment Recovery Mechanism (IRM). DTE Electric’s Five-Year Plan details asset condition assessments for 19 asset classes that represent approximately 80% of the distribution system plant asset base. These assessments are the basis for determining maintenance and/or replacement strategies for aging infrastructure.

Workforce Adequacy Plans

Staff Recommendation 7:

“Staff recommends future iterations contain a workforce adequacy and development plan to outline steps being taken to assure the proposed spending plans are feasible.”

DTE Electric Comments:

DTE Electric has taken active steps to address workforce adequacy to support distribution system investment and maintenance as laid out in its Five-Year Plan to assure that the proposed spending plans are feasible. DTE Electric is open to sharing workforce adequacy information with the Staff in closed sessions but declines to share written details due to the potential negative implications of this information becoming public, as it could have negative consequences on its ability to secure resources at the most competitive price.

Draft Framework for Future Iterations of Distribution Plans

In its report, the Staff recognized ***“inefficiencies in the drafting process and ultimately lead to two very different filings in terms of presentation and content”*** during the initial distribution planning process.

Consequently, the Staff recommended “a draft framework that outlines Staff’s vision for future distribution plans inclusive of the Commission’s original requests and Staff incremental components outlined previously in this document”.

DTE Electric Comments:

DTE Electric supports the concept of a common framework for future reporting and is willing to work with the Staff in its development. The Staff’s framework provides an excellent starting point for further discussion, clarification, and collaboration for future iterations of distribution plans. With that said, some aspects of distribution planning are unique to each utility. Many of the items in Staff’s framework are reasonable, though some items require clarification. There are also some items that DTE Electric is not positioned to provide. In addition, DTE Electric has established its four-pillar strategic investment framework (Tree Trimming, Infrastructure Resilience & Hardening, Infrastructure Redesign, and Technology & Automation) and has been using this for internal execution, rate case and stakeholder communications, and would find it overly burdensome to alter this framework. DTE Electric will work with the Staff to harmonize the Staff’s proposed framework with DTE’s four-pillar framework as much as possible. Below are some initial observations and comments regarding portions of the Staff’s proposed framework. DTE Electric welcomes the opportunity to meet with Staff to discuss how to refine a framework that best meets the needs of all stakeholders.

- Load Forecast:
 - It is challenging to provide “hosting capacity analysis” due to reasons discussed in DTE Electric’s Comments to “Staff Recommendation 2”.
 - Confidentiality agreements between DTE Electric and DTE Electric’s customers need to be considered regarding information on “known industrial/commercial customer additions”.
- Resiliency:
 - DTE Electric does not have a separate capital program for NERC/NESC compliance. NERC and NESC compliance is core to DTE Electric operations and standards. NERC and NESC compliance is incorporated into programs and projects across the entire investment and maintenance portfolio.
- Non-Wire Alternatives:
 - DTE Electric is currently in the pilot stage for non-wire alternative projects. Many non-wire alternative proposals such as battery storage, energy efficiency and demand

response programs need further economic evaluation, field testing and operational history to justify use cases and prove technology applications. DTE Electric can discuss the criteria and rationale of approach for developing the projects; however, the Company will not be able to provide qualifying substations and feeders at this pilot stage of the program.

- DTE Electric may be able to discuss high-level procurement processes as long as the discussion does not affect competitive open bidding and confidentiality agreements with bidders.
- Cost Benefit Analysis:
 - DTE Electric has developed a Global Prioritization Model (GPM) that evaluates benefit-cost scores for strategic programs and projects and believes that creating a common methodology across all utilities will be overly time consuming and costly. DTE Electric proposes that as an alternative it engage with Staff to obtain their input on potential refinements to the methodology currently used in the GPM.
 - DTE recommends that cost curves for DER and technologies be considered as part of non-wire alternatives.
- O&M
 - Further clarification is needed on “internal/third party audits and reports” and “uncollectable accounts”.
 - O&M spending related to community outreach and public awareness currently resides in other corporate support functions. DTE Electric has an extensive cross-organizational process to reach out and communicate with customers, organizations, municipalities, and key stakeholders. The Company continues to refine the process to create a more integrated and coordinated approach for community outreach and public awareness to support the need for future distribution planning.

Stakeholder Process

In its report, Staff noted that from its point of view ***“the plans that have been submitted in this first iteration advocating support for investments in reliability, capacity, and grid modernization could benefit from more openness and transparency for regulators and stakeholders to independently analyze the reasonableness, prudence and cost-effectiveness of the distribution plans... Staff***

recommends the Commission establish a formal stakeholder group for discussing and informing Staff's proposed framework. This group can also weigh in on forecasting assumptions and other foundational aspects of utility plans that materially impact the outputs of the spending plans."

DTE Electric Comments:

DTE Electric maintains that the Five-Year Plan provides the necessary details for regulators and stakeholders to ascertain the reasonableness, prudence and cost-effectiveness for the investment and maintenance of the distribution system. During development of the Five-Year Plan, DTE Electric also held numerous meetings with Staff to explain key assumptions, benefit-cost analysis and the scope of strategic programs and projects. DTE Electric has also participated in stakeholder technical conferences to receive comments and feedback.

DTE Electric is open to participating in a stakeholder discussion group regarding the Staff's proposed framework and the opportunity to hear stakeholder comments. However, the scope and objectives of the stakeholder discussion need to be carefully structured to prevent any hindering of management's ability and discretion to adapt to changing circumstances. The participants to the stakeholder discussion should also meet certain qualifications agreed by all participants to ensure constructive dialogue. Given the dynamic and complex nature of distribution planning, it would be impractical for stakeholders to be actively involved in the development of the distribution plan or daily planning decisions. It is more realistic and beneficial to hold stakeholder discussions regarding key objectives and assumptions, particularly around DER and non-wire alternatives to be included in the plan, and then for DTE Electric to produce the plan.

Investment Recovery Mechanism

In its report, Staff stated "it is in the public interest to consider programs aimed at addressing clearly identified safety and reliability concerns for investment recovery mechanisms (IRMs)"

DTE Electric Comments:

DTE Electric agrees that it is in the public best interest to develop an Investment Recovery Mechanism (IRM) to address aging infrastructure and improve the safety and reliability of the distribution grid. DTE Electric welcomes the opportunity to work with the Commission Staff on this issue.

Co-filing of Distribution Plans and Integrated Resource Plans

In its report, the Staff does not recommend a static timeframe for future plan updates. The Staff recommended “*the Commission should consider requiring the distribution plans be submitted alongside future IRP filings...This type of approach may also help the Commission realize the goal of a more integrated system planning approach that can improve regulatory operations in Michigan.*”

DTE Electric Comments:

The co-filing of distribution plans and Integrated Resource Plans (IRP) should be investigated, though the value of co-filing is not clear. DTE Electric notes several concerns with co-filing. First, the IRP is a statutorily required contested case process with very specific statutory requirements. Distribution planning is not. Second, there is a much shorter planning cycle for distribution planning than for generation or transmission planning. IRPs are required every five years and must remain so to be compliant with the governing statute. DTE Electric supports continuing to update five-year distribution plans more often than once every five years. Third, both IRP and distribution planning updates are complex processes on their own, and DTE Electric fears combining them could be overly burdensome for the Company, the Commission and Staff, and the Administrative Law Judges (ALJs). Combining them may also cause confusion among stakeholders because of their complexity. Finally, the cost and complexity of the co-filing needs to be evaluated alongside a clear description of the benefits that would accrue to customers to determine if the expense associated with a co-filing is offset by customer benefits.

III. CONCLUSION

The DTE Electric distribution system is in the first stage of grid evolution, as described by the DOE. The Company’s primary focus is on enhancing the safety, reliability, and resiliency of its system by addressing

aging infrastructure. At the same time, DTE is actively implementing advanced grid technology to improve operations and prepare for increased penetration of DERs.

The Staff's report provides an excellent starting point for further discussion regarding a possible evolution of distribution planning. At the same time, given the dynamic and complex nature of distribution planning, and the need to make rapid decisions around the scope, timing and priority of a very broad range of projects, DTE Electric requests that throughout the stakeholder engagement process the practicality of any changes to the distribution planning approach be carefully weighed against the benefits that may accrue to customers to ensure that the trade-offs are worthwhile. DTE Electric welcomes the opportunity to continue working with regulators in making the best energy decisions for all Michigan customers.