Distribution Planning Technical Workshop

August 7, 2018

7109 W. Saginaw Lansing, MI

MPSC
Michigan Public Service Commission
Consumers Energy
Electric Distribution Infrastructure Investment Plan (EDIIP)

MPSC Technical Conference
August 7, 2018
In our EDIIP, we presented our five objectives for the electric distribution system:

- **Safety & Security**
  - Improve overall **safety for our customers and employees**, including physical and cyber security.

- **Control**
  - Provide customers with the **data, technology, and tools** to take greater control over their energy supply and consumption.

- **Reliability**
  - Improve **reliability & resiliency** via hardening and investments to more proactively manage the system.

- **Sustainability**
  - Continue to look for opportunities to **reduce waste** in the system and explore more sustainable options where economical.

- **System Cost**
  - **Optimize system cost** over the long-term with an equitable focus across the entire customer base.
We measure ourselves against these objectives with 14 key metrics that may evolve over time.

**Improve overall safety for our customers and employees, including physical and cyber security**
- Recordable Incident Rate
- Wiredown Relief Factor

**Provide customers with the data, technology, and tools to take greater control over their energy supply and consumption**
- Number of residential customers enrolled in peak reduction programs
- % rating 9/10 on CE’s efforts to help control usage (JDP)

**Improve reliability & resiliency via hardening and investments to more proactively manage the system**
- SAIDI (excl. MED)
- SAIFI (excl. MED)
- % of cust. with ≥3 interruption
- % of cust. with ≥ 1 5hr interruption
- % of cust. restored within 24hrs after MED interruption

**Continue to look for opportunities to reduce waste in the system and explore more sustainable options where economical**
- Energy savings through energy efficiency programs
- Annual distribution system load factor
- % distribution energy loss

**Optimize system cost over the long-term with an equitable focus across the entire customer base**
- Service restoration O&M cost per incident
- Forestry cost per line-mile trimmed

**System cost**

**Customer Focus**

**Safety & Security**

**Control**

**Reliability**

**Sustainability**
Over the next 5 years we plan to invest $\sim$3B of capital in our infrastructure, and $\sim$200M annually in O&M.

**Capital investment Programs**

2018-2022 Plan

Electric distribution, capital spend
By program 2018-2022

**O&M Spending Programs**

2018-2022 Plan

Electric distribution, O&M spend
By program, 2018-2022

Note: Other O&M Programs includes Engineering Ops Support, Ops Performance, and Joint Pole Rental Costs
We are targeting a 35% SAIDI improvement by 2022, to reach the best SAIDI in our company’s history...

SAIDI Minutes (Excluding MED)

<table>
<thead>
<tr>
<th></th>
<th>2022 SAIDI Target</th>
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</thead>
<tbody>
<tr>
<td>Baseline SAIDI (MED Adjusted 3-Yr Avg)</td>
<td>175</td>
</tr>
<tr>
<td>Traditional Infrastructure Investments (Net)</td>
<td>120</td>
</tr>
<tr>
<td>Grid Modernization Investments</td>
<td>120</td>
</tr>
<tr>
<td>Operational Improvements</td>
<td>120</td>
</tr>
</tbody>
</table>

Note: The Traditional Infrastructure Investments bar includes the CAIDI impact from a new HQ, reduced primary outages, and tree trimming; Grid Mod benefit includes ~9 minutes from SAIFI based impact, and ~7 minutes from CAIDI based impact. Source: Grid MD; EDIIP Budget; Grid Mod reliability assessment
...as well as many other benefits to customers

**SAFETY & SECURITY**

Electric Operation Recordable Incident Rate

- 2017: 1.0
- Target: 0.6
- Reduction: 40%

**COST**

Service restoration O&M cost per incident (3-year rolling avg.)

- 2017: 519
- Target: 475
- Reduction: 8%

**SUSTAINABILITY**

Energy savings through Energy Efficiency programs (GWh)

- 2013-17 Avg.: 430
- Target: 536
- Increase: 25%

**CONTROL**

Number of res. customers enrolled in the Peak Power Savers® programs

- 2017: 48
- Target: 225
- Increase: 3.5x

Note: Service restoration metric includes major event days (MED)
EDIIP represents a step in the journey towards achieving our broader set of customer-focused objectives.

**Key themes and focus areas:**
- Objectives and metrics
- Distributed Energy Resources (DER) and Non-Wires Alternatives (NWA)
- Multi-dimensional data and analytics
- Alternative rate recovery mechanisms

**Evolution through:**
- Advanced technology investments
- Pilots and early, smaller-scale demonstration projects
- Organizational and cross-functional integration
- Multi-year investment recovery mechanism (IRM) and shared savings mechanisms
We are increasing cross-functional inputs to planning and prioritization of grid investments

<table>
<thead>
<tr>
<th>CUSTOMER</th>
<th>OPERATIONS</th>
<th>ENGINEERING</th>
<th>FINANCE</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Number and type of customers (Residential, C&amp;I)</td>
<td>• Operational centers and zones of control</td>
<td>• Asset age and history</td>
<td>• Investment history</td>
<td>• Regulatory direction</td>
</tr>
<tr>
<td>• Customer characteristics</td>
<td>• Crew scheduling</td>
<td>• Reliability performance</td>
<td>• Short- and long-range budgets and forecasts</td>
<td>• Community and stakeholder feedback</td>
</tr>
<tr>
<td>• Local work execution considerations</td>
<td>• SAIDI contribution of a repair or replacement</td>
<td></td>
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</tbody>
</table>

**Example data for determining investment priorities**

Building an *integrated view of the system*, based on *multi-dimensional data* and inputs to better prioritize investments across a broader set of *customer-focused objectives* and over a multi-year period
On March 1, 2018 we filed the Electric Distribution Infrastructure Investment Plan (EDIIP) with the MPSC

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<th>CONTENT</th>
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<td>Executive Summary</td>
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<td>II</td>
<td>Vision for the CE Electric Distribution System</td>
</tr>
<tr>
<td>III</td>
<td>Description of CE Distribution System</td>
</tr>
<tr>
<td>IV</td>
<td>Overview of System Performance</td>
</tr>
<tr>
<td>V</td>
<td>Grid Capabilities</td>
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<td>VI</td>
<td>Approach to Investment Planning</td>
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<td>VII</td>
<td>Summary of Plan and Projected Impact</td>
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<td>Capital Programs</td>
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<td>IX</td>
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</tr>
<tr>
<td>X</td>
<td>Conclusion</td>
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</tbody>
</table>

- Summary of the report
- Our vision for the distribution grid based on the five objectives of reliability, safety/security, control, sustainability, and system costs. Includes metrics that we will use to measure success.
- Overview of the current state of the system and current state of assets
- Our historical performance across critical metrics and how we benchmark against our peers; broken out system-wide, by HQ, and by circuit
- The vision for the future state modernized grid, as well as our current progress and summary of future plan to build advanced grid capabilities
- High level overview of our current investment and engineering planning process and design standards (planning detail specific to programs is in Sections VIII and IX)
- Overview of current financial plan and impact on our 5-objectives
- Detailed program narratives and financial plan for each capital investment program; includes discussion on investment and prioritization logic as well as individual program processes
- Detailed program narratives and financial plan for each O&M program.
- Closing comments
# Grid Modernization Capability Schematic

<table>
<thead>
<tr>
<th>Grid Capabilities</th>
<th>Fault Location Isolation, and Service Restoration (FLISR)</th>
<th>Energy Efficiency &amp; System Optimization (Volt-Var)</th>
<th>Distributed Energy Resource Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advanced Applications</strong></td>
<td>Electric System Connectivity Model</td>
<td>Data Lake</td>
<td>ADMS</td>
</tr>
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<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Grid Devices and DERs</strong></td>
<td>Distribution Line Automation (Automatic Transfer Reclosers)</td>
<td>Capacitor Bank &amp; Regulator Controllers</td>
<td>Pilot Projects</td>
</tr>
<tr>
<td></td>
<td>Substation Automation (SCADA and DSCADA)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Line Sensors</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Telecommunications</strong></td>
<td>Substation and Field Network Solution Deployments (WAN &amp; FAN)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Physical Security (Internet Protocol phone, camera)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Investment in Grid Infrastructure</strong> (Substations, Poles, Wires, Hardware, etc.)</td>
<td></td>
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</tbody>
</table>

Source: Figure 25, Consumers Energy Electric Distribution Infrastructure Investment Plan (EDIIP), page 46.
Distribution Planning Technical Workshop

August 7, 2018

7109 W. Saginaw Lansing, MI
Building a 21st Century Electric Grid

MPSC Distribution Planning Stakeholder Meeting
August 7, 2018
Executive Summary

- We have reviewed the stakeholder comments after the final submission of DTE Electric’s 5-year distribution investment and maintenance plan and appreciate the inputs.

- DTE, like many other electric utilities, is at the very first stage of the grid evolution, where aging infrastructure and advanced grid technology for reliability, resiliency and operational efficiency are the key focus of near-term grid investments.
  - DTE has a process in place to identify distribution system needs and drive system improvements.
  - DTE’s Global Prioritization Model ensures that distribution investments maximize customer benefits.

- DTE is actively preparing for the next stage in grid evolution, recognizing that the role of distributed energy resources may increase in the future.
DTE, like many other electric utilities, is at the very first stage of distribution grid evolution.

Evolution of Distribution Grid

- **Stage 1:** Reliability & Operational Efficiency
  - Very High DER Adoption
  - Moderate to High Level of DER Adoption
  - Low DER Adoption

- **Stage 2:** DER Operational Integration

- **Stage 3:** DER Value Add to Grid

“Most distribution systems in the U.S. are currently at Stage 1”

DTE has a process in place to identify distribution system needs and drive system improvements.

**DTE Electric Distribution Planning Process**

**Asset and System Assessments**
- Annual Load Analysis
- Asset Health Assessment
- Reliability Analysis
- Trouble/Storm Event Analysis

**Project Development**
- System Upgrade
- DER Options

**Prioritization**
- Global Prioritization Model
  - Desired Outcomes
    - Reduce Risk
    - Improve Reliability
    - Manage Cost

**Execution**
- Capital Plan and Construction

- Since last year’s stakeholder meeting, DTE has continued to assess the opportunity to deploy DER and other non-wire alternatives.

- Desired Outcomes
  - Reduce Risk
  - Improve Reliability
  - Manage Cost
DTE’s Global Prioritization Model ensures that distribution investments maximize customer benefits

**Top Five Programs**

- Tree Trimming
- CODI Program Charlotte Network Conversion
- 4.8 kV System Hardening
- CEMI Program
- Pole Top Maintenance

<table>
<thead>
<tr>
<th>Impact Dimension</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>10</td>
</tr>
<tr>
<td>Load Relief</td>
<td>4</td>
</tr>
<tr>
<td>Regulatory Compliance</td>
<td>4</td>
</tr>
<tr>
<td>Substation Outage Risk</td>
<td>4</td>
</tr>
<tr>
<td>Reliability</td>
<td>3</td>
</tr>
<tr>
<td>O&amp;M Cost</td>
<td>3</td>
</tr>
<tr>
<td>Reactive Capital</td>
<td>3</td>
</tr>
</tbody>
</table>
As a result, DTE’s near term investment plan is built around four pillars, which are aimed at reducing risk, improving reliability and managing costs.

**Tree Trimming**
- Trimming trees to enhanced specification to minimize tree interference, improve reliability and reduce trouble and wire down events

**Infrastructure Resilience**
- Overhead circuit improvements
- Targeted asset replacements
- Preventive Maintenance Programs

**Infrastructure Redesign**
- Substation outage risk reduction
- 4.8kV / 8.3kV consolidation and conversion

**Technology & Automation**
- ADMS/SOC modernization
- Line sensors, SCADA monitoring and system automation
- DER integration and non-wires alternatives
- Cybersecurity

**Electric Distribution Objectives**

- Cost
- Reliability
- Risk
DTE is actively preparing for the next stage in grid evolution, recognizing the role of distributed energy resources may increase in the future

<table>
<thead>
<tr>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>ADMS</td>
</tr>
<tr>
<td>EWR Non-wire Alternative Pilot</td>
</tr>
<tr>
<td>Battery Storage (utility and customer sites)</td>
</tr>
<tr>
<td>Electric Vehicles</td>
</tr>
</tbody>
</table>

- Implement Advanced Distribution Management System (ADMS), a technology platform to transform the way we monitor and control our electrical grid to meet our customer needs

- Conduct pilots that utilize energy waste reduction to provide load relief in lieu of conventional system upgrade

- Install battery storage units at both utility and customer sites to gain experience, test application and use cases, and determine long-term value for the grid

- Increase customer awareness and support charging infrastructure deployment to ensure benefits of EVs accrue to all customers
The ADMS transforms the way we monitor and control our electrical grid and is the foundation for future grid evolution.

Advanced Distribution Management System (ADMS)

- Geographic Information System
- Mobile Application
- AMI
- Grid Devices
- C360 - Customer Information System
- High Quality Data

Reporting
A non-wire alternative pilot utilizing energy waste reduction measures is underway

<table>
<thead>
<tr>
<th>EWR Non-Wire Alternative Pilot</th>
<th>Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project:</strong></td>
<td>• Establish economic framework and analytical methodology for the evaluation of the cost-effectiveness of energy waste reduction as a non-wire alternative for deferring, reducing the need for, or narrowing the scope of distribution system capital investment projects</td>
</tr>
<tr>
<td>• DTE is working with key stakeholders to utilize geographically targeted energy waste reduction (EWR) to provide load relief as non-wire alternatives, which may include other components such as demand response (DR) and distributed energy resources (DER)</td>
<td></td>
</tr>
<tr>
<td><strong>Status:</strong></td>
<td></td>
</tr>
<tr>
<td>• The first substation has been selected as the initial substation for field testing; A second substation will be added, based on preliminary results and learnings</td>
<td></td>
</tr>
<tr>
<td>• Initial planning, analysis and program design are in progress, with field testing scheduled to begin in September</td>
<td></td>
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</table>

[Graph showing NPV $ with labeled sections for Benefits of NWA Pilot and Costs of NWA Pilot]
DTE is investing in a battery storage unit at the O’Shea solar site to obtain learning and assist standards development

<table>
<thead>
<tr>
<th>O’Shea Park Battery Project</th>
<th>Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project:</strong></td>
<td>• Assist development of engineering and design standards for battery</td>
</tr>
<tr>
<td>• Install approximately 1 MW battery unit at the O’Shea park solar site (2MW solar array)</td>
<td></td>
</tr>
<tr>
<td><strong>Status:</strong></td>
<td>• Gain experience running EPC process for energy storage project</td>
</tr>
<tr>
<td>• Completed feasibility study</td>
<td>• Test daily operation of battery, including developing processes for management and operations</td>
</tr>
<tr>
<td>• Conceptual engineering design underway</td>
<td>• Verify impact of battery storage on power quality metrics such as voltage flicker and voltage swell related to areas with a high penetration of distributed resources</td>
</tr>
<tr>
<td>• Prepare to submit RFP for detailed engineering by end of 2018 and proceed to construction in 2019</td>
<td>• Evaluate ability of the battery system to participate in multiple use cases, including providing distribution level benefits and participating in wholesale markets (real-time energy, frequency regulation)</td>
</tr>
<tr>
<td></td>
<td>• Determine value from storage for future applications</td>
</tr>
</tbody>
</table>
DTE is in the process of selecting commercial and industrial customer sites for behind-the-meter battery pilots

<table>
<thead>
<tr>
<th>Battery @ Customer Sites</th>
<th>Goals</th>
</tr>
</thead>
</table>
| • Install battery units at a customer site to offset manufacturing class peak hours between 11 AM and 3 PM  
  – A site is selected to install 100 kW / 400 kWh battery coupled with 1.3 MW distributed solar and EV charging stations  
  – Second life EV battery could also be tested for energy storage units  
  – Expected in-service dates by summer 2020 |
| • Install battery units at a customer site to offset overall system peak hours between 3 PM and 7 PM |
| • Install utility controlled battery units at a customer site to test non-wires solutions |
| • Test actual operation and performance of batteries in the field and the impact on customer load |
| • Test use of battery for peak reduction and energy abatement |
| • Assess options to use storage plus renewables to provide non-wire alternatives |
A “Charging Forward” program is in place to bring the benefits of increased electric vehicle adoption to DTE customers

<table>
<thead>
<tr>
<th>Charging Forward Program</th>
<th>Goals</th>
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</thead>
<tbody>
<tr>
<td>• Deploy ~32 direct current fast charging stations and ~1,000 level 2 charging ports through Make Ready Model</td>
<td>• Mitigate unnecessary grid investments caused by ad-hoc fast charging station deployment</td>
</tr>
<tr>
<td>• Support charging infrastructure for electrified fleets</td>
<td>• Improve our understanding of EV load and its impact on the grid</td>
</tr>
<tr>
<td>• Provide up to $500 rebates to support installation of up to 2,800 smart chargers for residential customers</td>
<td>• Provide opportunity to pilot managed charging programs and integration with new technologies</td>
</tr>
<tr>
<td>• Increase EV awareness, engage current EV drivers, inform and recruit potential site hosts</td>
<td>• Gauge market interests from customers and site hosts</td>
</tr>
<tr>
<td>• Executing five pilot projects in 2018-2019</td>
<td>• Develop process guidelines and cost estimates for future deployments</td>
</tr>
</tbody>
</table>
The electric power sector is undergoing transformational change, much of which is driven by new technology.

To serve our customers with safe, reliable and affordable electricity and to be prepared to integrate new technologies, we must ensure that the underlying infrastructure is hardened and resilient.

We will continue to refine our investment and maintenance plan that will build an electric grid to serve customer needs for the 21st century.
Distribution Planning Stakeholder Meeting

Michigan Public Service Commission
August 7, 2018
Future of Distribution

- Smart Grid – Interactive
- Digital Hub – Idea / Tech Scouting
- Center of Excellence

Foundational / Exploratory

- Technology BETA testing – across 11 states
e.g., utility scale batteries, solar, local microgrid relationships, EV charging, self-healing grids, etc.
- Focused on evolving technology and customer desires
- AEP’s Smart City Pilot
Transforming Distribution Planning

The “Art Of The Possible” For A “Utility Of The Future”
The expected end result was a ‘radical’ redefinition of the utility operating model

- Electric Utility Value Chain
- Generation → Transmission & Distribution → Customer Management → Corporate Services

Today:
- Smart generation with advanced monitoring and controls
- Smart transmission and distribution

Tomorrow:
- Advanced interconnected solutions and self-service
- Automation of manual functions and activities

Sensor and data communication network

- Generation will evolve towards:
  - More diverse and decentralized network of lower capacity
  - More flexible units with intelligence
  - Comprehensive monitoring
  - Diverse demand responsiveness

- The future grid will be:
  - Communications-enabled self-healing network
  - Able to increasingly act as a balancing entity
  - Two way power flow
  - Greater asset management

- Utilities will enhance the:
  - Relationship and knowledge of their customers
  - Analytically driven offerings
  - Diverse contact capabilities
  - Energy management solutions

- The utility will be:
  - Digitally-enabled shared services organization
  - Fully automated and integrated corporate services
  - Predictive analytics and forecasting
  - Robotic automation
Internet of Things (IoT)
Connected Home
Electric-IoT Integrator

Channel Provider
- Provides the customer interface platform (Speaker / App)
- Sells Communication & Energy Devices

Utility
- Aggregates & manages customer energy devices to optimize operation of the grid network
- Manipulate energy & communication devices
- Provides Customer Energy Management Services

Diagram:
- HVAC System
- EV Charger
- Home Speaker/AMI/Channel
- Water Heater
- Battery
- Network
- Utility Grid Integrator/Energy Management
I&M Distribution Planning

Distribution Digital Strategy

- Smart Sensors
- Distributed Automation Schemes
- SCADA Penetration
- VVO
- AMI Deployment
- Industry Scale batteries
- Micro grid opportunities

Deliberate Focus on our Customer Experience

- Vegetation Management
- Storm hardening
- Reliability Enhancement (aging infrastructure)
Questions/Comments

Distribution Planning Stakeholder Meeting
Stakeholder Concerns

- Non-Wire Alternatives
- Hosting Capacity
- Interoperability
- Coordination
- Data Access
- Interconnections
Non-Wire Alternatives

“There are ample opportunities now to start the process of better utilizing DERs, particularly in the context of non-wires alternatives” - NRDC

“Utility projects across the country which have also found geotargeted efficiency, either alone or in combination with demand response, distributed generation and/or other distributed resources, to be very cost-effective” - NRDC

To achieve this vision, we encourage DTEE to continue learning from industry experts and other utilities with more experience utilizing DER and NWA to cost-effectively provide valuable grid services. - ELPC/Vote Solar

Non-wires alternatives is another example of where there are potential benefits to equalizing earning opportunities between utility capital investments and services. - AEE/EIBC
They provide valuable information to determine not only the capabilities of the distribution system, but also to identify optimal locations for solar, as well as to identify areas where non-wires alternatives may be deployed to defer or replace more costly capital investments.” -NRDC

Each Company should develop the capability to conduct a system-wide hosting capacity analysis (“HCA”), to update the HCA regularly as system conditions change, and to publish the HCA results using publicly available on-line maps with downloadable data. -ELPC/Vote Solar

Hosting capacity information must be sufficiently granular to invite stakeholder solutions. This information must be nodal, and indicate where hosting capacity is available - AEE/EIBC

A Hosting Capacity Analysis (HCA) has emerged as a critical capability for proactively managing increased adoption of DER while maintaining grid reliability and safety. -ELPC/Vote Solar
Stakeholder Comments

Load Forecasting

With the completion (or near completion) of AMI installation in Michigan, DTE and Consumers have a substantial amount of information available to them to better understand customer demand, and to do better forecasting and modeling of customer demand. However, the utilities’ five-year plans do not discuss how they plan to use this information to better run and manage their distribution systems. Customers paid for these investments and should thus expect that the utilities make the most out of them, including to use advanced meter-generated data to more efficiently plan their system. ” -NRDC

Include local system load forecasts, as required by the Initial Order, and the development of advanced load and DER forecasting capabilities utilizing AMI data.
-ELPC/Vote Solar

Forecasting within 5-Year Plans should include more granular projections of DER potential and likely customer adoption. Forecasts should include robust scenario analysis and probabilistic planning of DER penetration. Stakeholders should be allowed to provide sufficient input to ensure a thorough understanding of future risks and opportunities. Further, we recommend developing assumptions about explorations of scenarios, and making all resources available for inclusion in the scenarios, as opposed to including technology-specific scenarios- AEE/EIBC

longer term forecasts and analysis of electric distribution system needs in the future can be notoriously unreliable when done by utilities who have a self-serving interest. –RCG
Interoperability

“a robust distribution system planning exercise should collect information about the capabilities of the distribution system, as well as seek to integrate utility systems that may have traditionally been siloed.” -NRDC

Interoperability crosses jurisdictional, operational, and supply/demand boundaries. It is important that operators of generation, transmission, distribution, and customers all connect in a way that ensures a safe, secure, and reliable grid. -AEE/EIBC

As customers adopt DER with new “smart” inverters, regulators and distribution utilities must modify interconnection requirements and develop the modeling capabilities for these advanced functions to fully utilize these new grid resources -ELPC/Vote Solar
We also encourage MPSC staff to consider if state statutes require some level of integrated planning between existing regulatory processes. Such integration would enable more efficient use of limited MPSC staff resources, limited capabilities of many stakeholder groups, and resources of regulated utilities. – AEE/EIBC

These approaches open planning and decision-making processes to meaningful stakeholder engagement, while ensuring strengthened public oversight over significant distribution system expenditures. Such an approach encourages longer-term planning, ensures that planning processes have the most up to date information on DER cost, performance and functionality and brings visibility and accountability to decisionmaking around infrastructure – AEE/EIBC

As the physical host of the infrastructure, municipalities have many additional legal, planning, community, and economic development, road and easement maintenance, financial and aesthetic interests in location, maintenance, appearance, environmental and social impacts and other aspects of electric distribution systems. The advent of five year distribution system planning represents an opportunity for municipalities and utilities to coordinate better on plans and projects an thereby reduce conflict, delay and unnecessary expense.

a better approach would be for DTEE to, with specificity, communicate to those governments on a regular, ongoing basis – proving up that it does take “proactive measures” (p. 20) – what is its multi-year strategy for their communities. The Commission obligates utilities to serve a copy of notices for various types of cases and proceedings on local governments, which typically have no resources to participate in such cases. Much more beneficial would be for the Commission to encourage or mandate, and then monitor, an ongoing exchange of information between DTEE and those local governments that have a stake in how the utility maintains. - John Dempsey

-MI-MAUI
Stakeholder Comments

Data Access

Benchmarking other aspects of customer experiences, such as customer satisfaction with specific utility programs and customer data access and empowerment and application efforts, could provide very useful information to stakeholders. – AEE/EIBC

Opening up data access to allow third-parties to make use of such an evaluation is a critical component in streamlining interconnection – AEE/EIBC

Regulators will benefit from increased transparency and data access for optimal solution identification, more efficient regulatory proceedings, and opportunities for more meaningful engagement with utilities and other stakeholders. – Vote Solar/ELPC

Creating a common process, based on open standards, for all customers to access their usage data should be a consideration in this discussion. Customer access to their information, and having the ability to provide that information to a third party, can assist in understanding the impacts of customer investments in energy efficiency or in understanding the cost-benefit of investing in (for example)_rooftop solar. – NRDC/PIS
Benchmarking other aspects of customer experiences, such as customer satisfaction with specific utility programs and customer data access and empowerment and application efforts, could provide very useful information to stakeholders. – AEE/EIBC

Opening up data access to allow third-parties to make use of such an evaluation is a critical component in streamlining interconnection – AEE/EIBC

Regulators will benefit from increased transparency and data access for optimal solution identification, more efficient regulatory proceedings, and opportunities for more meaningful engagement with utilities and other stakeholders. – Vote Solar/ELPC

What is missing from these plans, however, are the distribution engineering analyses and interconnection process components reflected in Figure 1. Incorporating these elements into distribution planning would enable the state to build a stronger foundation for accommodating DERs in the coming years and ensuring that their benefits accrue to the distribution system and to consumers – NRDC/PIS
Distribution Planning
Technical Workshop
Rate Case Applications
Performance Based Ratemaking

Moreover, a performance-based regulatory approach should substitute performance incentives for returns on investments, effectively freeing utilities from the perverse incentive to expand capital expenditures even when they are not the lowest-cost approach to resolving system needs.

– ABATE

Both Michigan EIBC and AEE Institute support the use of PBR in Michigan……..

Future 5-Year Plan processes should ensure stakeholders are part of establishing the critical aspects of PBR plans – such as setting performance targets and incentives.

– AEE/EIBC

plans include forward looking measurable performance targets with a clear linkage between the planned system investments

Vote Solar/ELPC
Performance Based Ratemaking Metrics

Metrics should come from experience, be transparent, clear and measurable, be evaluable and verifiable, and offer all stakeholders opportunities to learn from experience as goals and performance outputs evolve. Metrics must also ensure public and utility value are fully considered.

– AEE/EIBC

The beneficiary of a hurried process is the utility, not ratepayers.

– ABATE
tracking mechanisms are redundant in a regulatory environment where utilities file annual rate cases. For all of these reasons, ABATE opposes the creation of any new tracking mechanisms.

– ABATE

This docket should not become yet another avenue to provide electric utilities increased rates based upon minimal self-serving projections of future upgrade electric distribution system needs, under perhaps an outdated paradigm of monopoly centralized utility services.

– RCG

In the long run, the 5-Year Plans may be approached much like an IRP or a renewable energy plan. In this scenario, a 5-Year Plan must be subject to a contested proceeding, but once that proceeding is completed and the plan is approved or approved as modified, then cost recovery should be assumed and “flow-through” to general rate cases. However, the current plans were not intended for contested cases and should not be used as a basis for cost recovery in upcoming rate cases, except to the extent that any implementation costs are subject to full review in those rate cases.

– AEE/EIBC
Stakeholder Comments

Interactions Between Cases

• Both Company’s currently seeking recovery of investments outside the test year associated with 5 Year Distribution Plans

• DTE has included its approved CON cost into its proposed IRM.

• Both Company’s currently piloting NWA’s as part of Energy Waste Reduction Programs.

• Future opportunities…….?
We believe cost/benefit analysis plays a critical role in transparent DSP discussions and decision-making. Future plans should provide stakeholders and the MPSC with more explicit information on cost/benefit methodologies and calculations. Further, the MPSC and stakeholders can work with Consumers to provide cost/benefit quantification and analysis related to important policy outcomes. The current filing could be improved by adding explicit calculations related to the Commission’s DSP objectives.

-AEE/EIBC

Most notably, the plan lacks any benefit/cost analyses as required by the Initial Order

-Vote Solar

when assessing the cost-effectiveness of efficiency investments, the study compared the full cost of efficiency to just the benefit of deferring the distribution system investment; it completely ignored the avoided energy costs, avoided capacity costs and other electric system benefits that the efficiency investments would also provide

-NRDC
Distribution Planning
Technical Workshop

Future Iterations
Future Iteration Considerations

Timing of Updates… (2 Years, 5 Years, Etc.)

Stakeholder Workgroup
- Performance Based Regulation
- PBR Objectives
- PBR metrics
- Cost/Benefit framework