

# Reviewing Utility Distribution Plans

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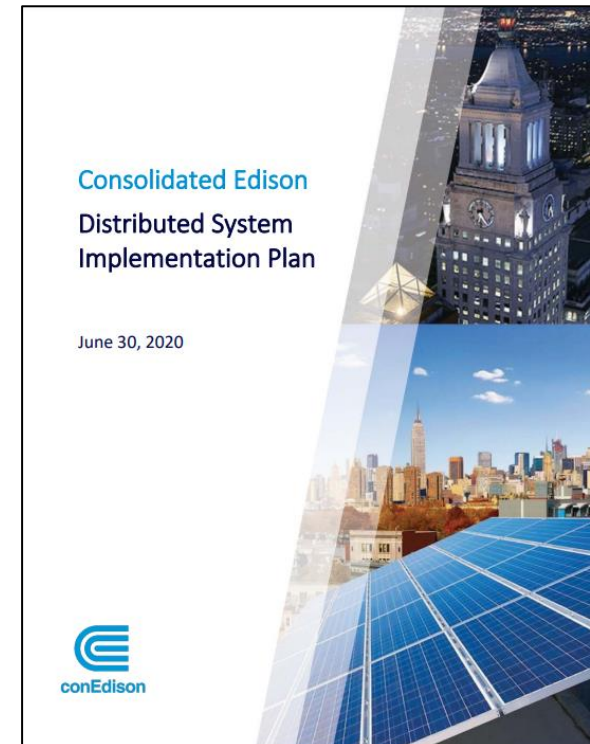
**National Association of Regulatory Utility Commissioners  
Peer-Sharing Series on Integrated Distribution System Planning**

**April 10, 2022**

- ▶ Integrated distribution planning (IDP) is an evolving practice because it accounts for new and emerging grid technologies and processes:
  - For example, distributed energy resources (DERs), analysis of non-wires alternatives (NWA), layering core components and applications for grid modernization
- ▶ States take different approaches to IDP, and there are many options for how to review IDPs.
  - Sometimes the options are dictated by statutes or regulations.
  - Typically, commissions have a lot of discretion.
- ▶ For a comprehensive overview of state IDP activities, see:
  - Lawrence Berkeley National Laboratory, *State Regulatory Approaches for Distribution Planning*, Schwartz and Mims Frick, Training webinar on electricity system planning, New England Conference of Public Utilities Commissioners, June 16, 2022. [Link](#)
- ▶ This presentation will walk through the key elements of IDPs and offer suggestions for the types of questions to ask when reviewing IDPs.

# Filing Requirements

- ▶ Commissions can establish IDP filing requirements upfront – to encourage complete filings and expedited review.
- ▶ As Commission expectations for IDP evolve, it is especially important to establish and update filing requirements.
- ▶ Outline of filing requirements
  - Overall IDP strategy and objectives
  - Description of the current distribution system
  - Planned retirements and committed additions
  - Advanced load forecasting
  - Assessment of grid needs
  - Identification of new options for meeting needs
  - Economic analysis of those options
  - Action plan for implementing chosen options



# Load and DER Forecasting

## ► Forecasting methods and inputs

- Does the forecast use probabilistic analyses to account for uncertainties?
- Does the forecast use multiple scenarios to account for unknowns?
- Does the forecast include feedback iterations based on other elements of the IDP?
- Is there consistency between forecasts for IDP and other utility planning processes (e.g., resource planning, energy efficiency planning)?

## ► Locational details

- Does the load forecast include peak demands at the circuit or substation level?

## ► Temporal details

- Is the peak load forecast sufficiently granular?
  - Hourly, daily, weekly, monthly, annual?

## ► DER forecasts

- Does the load forecast account for all types of future DERs and both naturally-occurring and utility-sponsored future DERs?

# Assessment of Grid Needs

## ► Assessment of current system

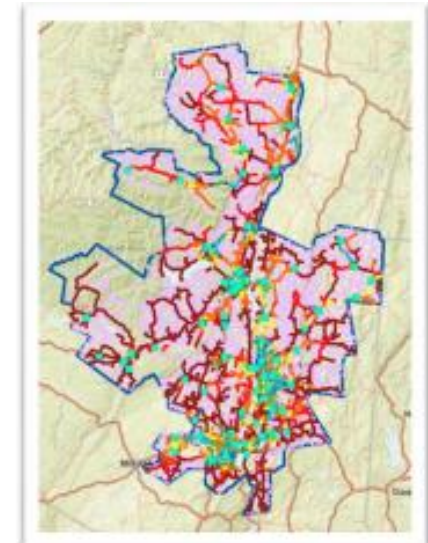
- Does the IDP include an assessment of existing equipment condition, reliability performance, resilience performance, historical spending, and DER interconnection needs?

## ► Ensure safety, reliability, security

- Does the IDP identify where upgrades are needed for safety, reliability, and resilience?
- Does the IDP identify storm hardening needs?

## ► Optimization of DERs

- Does the IDP identify where the grid would benefit from DER?
- Does the IDP include a sound DER hosting capacity analysis?
- Does the IDP provide detailed “value of DER” estimates for different parts of the distribution system?
- Does the IDP address the interconnection of DERs?

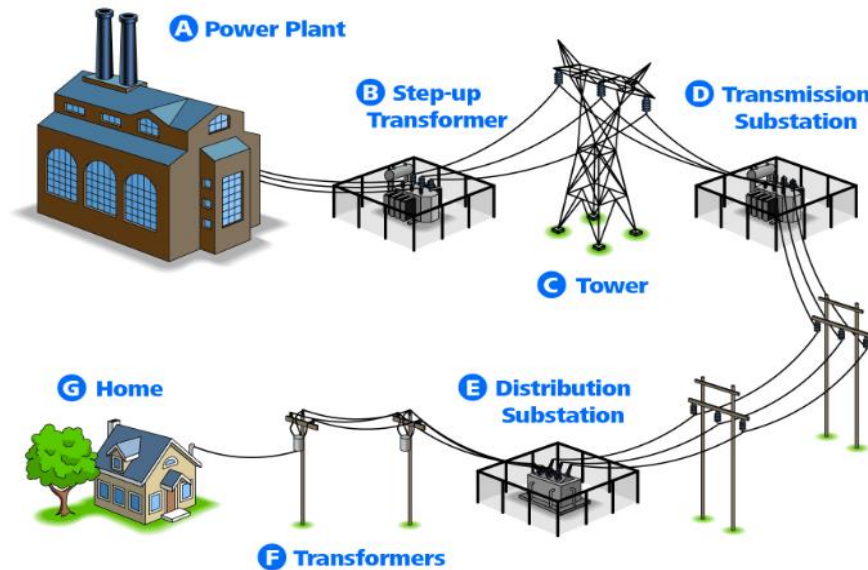


Source for hosting capacity graphic: *Central Hudson 2020 DSIP General Information Session*, September 21, 2020

# Identification of New Options: Traditional Options

## ► Traditional distribution options

- Does the IDP include all traditional options?
  - Substations, transformers, feeders, new poles, distribution line extensions?



# Identification of New Options: NWAs

- ▶ Does the NWA analysis consider all options?
  - Customer-owned DERs at the location of need?
    - Energy efficiency, demand response, distributed generation, distributed storage?
  - Utility-owned resources at the location of need?
    - For example, storage (large or small)
- ▶ Does the NWA analysis consider all options for obtaining DERs?
  - Procurement, programs, pricing?
- ▶ Does the NWA analysis use appropriate economic analysis techniques?
  - Are the methods and assumptions consistent with those used for other options?
- ▶ Does the NWA analysis properly account for potential distribution investment deferral?
  - Does it use appropriate thresholds for identifying candidates?
    - Thresholds for the magnitude of distribution investment to be deferred?
    - Thresholds for the time to develop the NWA?

# Identification of New Options: Grid Modernization

- ▶ Are grid modernization goals and objectives clearly articulated?
  - Are these goals consistent with state policy and regulatory guidance?
  - Are the grid modernization investments proposed consistent with state objectives?
- ▶ Are the grid modernization proposals consistent with the utility's distribution, transmission, and resource plans (if relevant)?
- ▶ Does the IDP apply appropriate economic analysis techniques?
  - To what extent are grid modernization components evaluated together or separately?
  - Does the economic analysis properly address interrelated grid mod components?
  - Does the economic analysis properly account for non-monetary impacts?
- ▶ Does the IDP present options for phasing in grid mod components?
  - Phasing in grid mod components over time can reduce risks.
- ▶ How will the utility report on performance of grid mod projects?
  - Does the IDP include metrics with concrete measurable outcomes?



# Economic Analyses: Principles

- ▶ With so many options for meeting distribution needs, IDPs should prioritize and justify which options are in the best interest of customers.
- ▶ Does the economic analysis:
  - Account for the state's energy policy goals?
  - Compare new resource options consistently with traditional options?
  - Account for all relevant costs and benefits, including those difficult to monetize?
  - Include an appropriate study period, including the full life-cycle of options?
  - Properly address locational impacts?
  - Properly address temporal impacts?
  - Address relevant costs and benefits symmetrically?
  - Consider customer equity issues?
  - Use the appropriate discount rate, reflecting regulatory goals?
  - Include a separate assessment of rates, bills, and participation?
  - Document assumptions, methods, and results transparently?

# Economic Analysis: Least-Cost/Best-Fit vs. BCA

Two primary techniques for economic assessments for IDP

Technique	Need	Purpose	Costs	Benefits	Example Applications
<b>Least-Cost/ Best-Fit</b>	Need for the investment has been established	To identify the investment that meets the need at lowest cost	<u>Included</u> Typically includes only utility system costs	<u>Not Required</u> Benefits are not necessarily accounted for; presumed to exceed the costs	Constructing a new distribution line to serve a new residential development
<b>Benefit-Cost Analysis</b>	Need for the investment has <u>not</u> been established	To determine whether to make the proposed investment	<u>Included</u> Extent of costs depends upon BCA test chosen	<u>Included</u> Extent of benefits depends upon BCA test chosen	Investments in NWA's and advanced meters (often but not always)

# Stakeholder Engagement

## ► Breadth of stakeholders

- Did the stakeholders include all groups that might be affected by the IDP?

## ► Meaningful engagement throughout

- Were stakeholders meaningfully engaged?
  - Before the IDP was developed?
  - During IDP development?
  - During commission review of the IDP?



## ► Technical working groups

- Were technical working groups used to facilitate stakeholder engagement?

## ► Independent experts

- Were independent experts used to support stakeholders in their review and input?



# Action Plans

## ► Timeline

- Does the Action Plan address short- to medium-term actions, e.g., 3-5 years?

## ► Capital investment plans

- Does the Action Plan articulate where and when capital investments will be made?
  - Replacement of aging infrastructure? Distribution system upgrades? Grid mod elements, storm hardening infrastructure, others?

## ► Procurement of NWAs

- Does the Action Plan describe when and how NWAs will be procured?

## ► Hosting capacity analyses

- Does the Action Plan describe when the results will be provided and updated?
- Does the Action Plan describe who will have access to the analyses and how (e.g., standardized maps and data)?

## ► DER interconnection practices

- Does the Action Plan describe the steps the utility will take to ensure streamlined interconnection of the DERs forecasted and included in the IDP?

## ► Traditional distribution investments

- Regulatory review begins in an IDP
- Cost recovery decision typically occurs in rate cases
- Costs typically recovered through base rates
- Some states use riders to allow for some distribution expenditures

It is important to ensure the different cost recovery approaches do not provide utilities with inconsistent incentives.

## ► Non-traditional distribution investments

*For example:*

- Cost recovery might depend on type of commission action on the plan.
  - Acceptance (informational filing only) or limited preapproval
- Ultimate approval of cost recovery typically occurs in rate cases.
- In some cases, grid modernization costs can be recovered through riders.

# Cost Recovery: Customer Protection

Regulators can use cost recovery approaches to ensure that customers experience net benefits from large distribution investments (e.g., grid mod).

## ► Incentive for maintaining low costs

- Limit the amount of costs that the utility can recover to the costs assumed in the IDP
  - Require the utility to absorb cost overruns
  - With allowances for contingencies

## ► Incentive for achieving benefits

- Limit the amount of future costs that the utility can recover based on achievement of benefits assumed in the IDP
  - Require utilities to absorb a portion of costs if benefits are not achieved
  - Use metrics to assess achievement of benefits
  - With allowances for contingencies

# Commission Actions

## ► Commission options

- Accept the IDP as meeting filing requirements; no approval process
- Approve the IDP as filed
- Require utility to modify IDP to address issues raised in review
- Reject portions of the IDP and accept other portions
- Reject the IDP

Commission options might be limited by statutes, regulations, or precedent.

## ► Implications of Commission acceptance or approval

- Informational filing only
  - Commission is not bound by the IDP in future rate cases
- Limited “pre-approval” of investments
  - Approve the *need* identified in the distribution plan
  - Approve the *solutions and technologies* proposed in the plan
  - Approve the *economic assessment* of the costs and benefits
- Prudence
  - Prudence is rarely, if ever, established as a result of the IDP review

# Useful Resources



GridLab, *Integrated Distribution Planning: A Path Forward*, prepared by Kurt Volkmann, 2018. [Link](#)

Grid Modernization Laboratory Consortium, *Benefit-Cost Analysis for Utility-Facing Grid Modernization Investments: Trends, Challenges, and Considerations*, prepared by Synapse Energy Economics, 2021. [Link](#)

ICF, *Integrated Distribution Planning*, prepared for the Minnesota Public Utility Commission, August 2016. [Link](#)

Lawrence Berkeley National Laboratory, *State Regulatory Approaches for Distribution Planning*, Schwartz and Mims Frick, Training webinar on electricity system planning, New England Conference of Public Utilities Commissioners, June 16, 2022. [Link](#)

Minnesota Department of Commerce, *Review and Assessment of Grid Modernization Plans: Guidance for Regulators, Utilities, and Other Stakeholders*, Docket No. E002/M-21-814, 2022. [Link](#)

New York Public Service Commission, *Order Adopting Distributed System Implementation Plan Guidance*, Case 14-M-0101, Proceeding on motion of the Commission in Regard to Reforming the Energy Vision, April 2016. [Link](#)

National Association of Regulatory Commissioners & National Association of State Energy Offices, *Task Force on Comprehensive Electricity Planning*. [Link](#)

National Energy Screening Project, *National Standard Practice Manual for Benefit-Cost Analysis of Distributed Energy Resources*, August 2020. [Link](#)

Regulatory Assistance Project, *Integrated Distribution Planning for Electric Utilities: Guidance for Public Utility Commissions*, October 2019. [Link](#)

Smart Electric Power Alliance, *Integrated Distribution Planning: A Framework for the Future*, September 2020. [Link](#)

US DOE, *Modern Distribution Grid: Strategy & Implementation Guidebook*, Volume IV, 2020. [Link](#)



# Contact



## **Synapse Energy Economics**

is a research and consulting firm specializing in technical analyses of energy, economic, and environmental topics. Since 1996 Synapse been a leader in providing rigorous analysis of the electric power and natural gas sectors for public interest and governmental clients.

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# Indiana Utility Regulatory Commission





# Reviewing Utility Distribution Plans

Bradley Borum – Director of RPP Division

*April 10, 2023*







# Statutory Framework

Ind. Code § 8-1-39-10 permits a public utility to petition the Commission for approval of the public utility's plan for eligible transmission, distribution, and storage improvements. The Commission's order must include the following:

(1) A finding of the best estimate of the cost of the eligible improvements included in the plan.

A determination whether public convenience and necessity require or will require the eligible improvements included in the plan.

(1) A determination whether the estimated costs of the eligible improvements included in the plan are justified by incremental benefits attributable to the plan.

# Statutory Framework - Continued



"Eligible transmission, distribution, and storage system improvements" means new or replacement electric or gas transmission, distribution, or storage utility projects that: (1) a public utility undertakes for purposes of safety, reliability, system modernization, or economic development, including the extension of gas to rural areas; (2) were not included in the public utility's rate base in its most recent general rate case; and (3) ... were [among other things] described in the public utility's TDSIC plan and approved by the commission under [Ind. Code§ 8-1-39-10] ....

Ind. Code§ 8-1-39-2(a).

# Statutory Framework - Continued



A 2019 amendment to the TDSIC Statute clarified that the term "eligible transmission, distribution, and storage system improvements" includes the following:

- (1) projects that do not include specific locations or an exact number of inspections, repairs, or replacements, including inspection based projects such as pole or pipe inspection projects; and
- (2) projects involving advanced technology investments to support the modernization of a transmission, distribution, or storage system, such as advanced metering infrastructure, information technology systems, or distributed energy resource management systems.

Ind. Code§ 8-1-39-2(b).

# Statutory Framework - Continued



Ind. Code § 8-1-39-7.8 requires that a TDSIC Plan cover a period of at least five years and not more than seven years.



# Best Cost Estimate

A TDSIC Plan must include "[a] finding of the best estimate of the cost of the eligible improvements included in the plan."

Generally, the utility develops cost estimates for the projects included in the TDSIC plan using the Association for the Advancement of Cost Engineering ("AACE") methodology.





# Best Cost Estimate - Continued

Class 2 cost estimates are presented for many of the projects for Plan Years 1 and 2.

Class 3 and 4 estimates are common for Plan Years 3 – 7.

- Class 2 Estimates have a range of -5% to -15% on the low side and +5% to +20% on the high side.
- Class 3 Estimates have a range of -10% to -20% on the low side and +10% to +30% on the high side.
- Class 4 Estimates have a range of -15% to -30% on the low side and +20% to +50% on the high side.

# Best Cost Estimate



The utility contracts with an expert organization for an independent review of the cost estimates and the process used to develop the estimates.

The independent expert (1) reviews the cost estimate documentation and the processes used by the utility; (2) develops independent cost estimates for a sample of projects using the expert's own cost-estimating tools, databases, and expertise.



# Cost Estimation Material

Information provided includes:

1. Detailed cost estimates for specific projects
2. The Third Party Cost Estimate Review and Validation Report.
3. Cost estimates, year by year project detail in a sortable spreadsheet format and plan projects by FERC account
4. Examples are often provided of Class 2, Class 3, and Class 4 cost estimates to clarify the different information used in each class.
5. TDSIC Plan estimated annual revenue requirement for each year of the plan.



# Periodic Update Process

It is regular practice for the utility on an annual basis to provide the actual costs for projects completed in the prior year and update cost estimates of the projects for the following year. The ongoing, updated cost estimates refine the cost estimates of future projects as the engineering is completed.

Particular attention is on those projects that experienced significant variances between projected and actual costs and understanding the drivers. Also, to determine whether this information causes other parts of the plan to be reevaluated.

The annual update also provides an opportunity for the utility to propose modifications to the TDSIC Plan based on new information subject to Commission review and approval.



# Public Convenience and Necessity

TDSIC projects are designed to improve the safe and reliable functioning through the planned replacement and modernization of the aging T&D system components. If not done, would likely result in more frequent or extended outages.

The goal is not necessarily to improve reliability so much as the use of sound asset management to reduce risks to customer service and utility operations.

Parts of the plans also are designed to harden the energy delivery infrastructure and minimize system restoration.



The TDSIC statute requires for approval of a plan that incremental benefits attributable to the plan exceed the estimated costs of the eligible improvements.





# Incremental Benefits Estimation

A risk-based assessment of the T&D system helps identify high-risk assets and identify projects to be included in the TDSIC Plan.

First, the risk model is used to identify high-risk assets and help develop a plan that mitigates this risk.

Second, the model helps to prioritize where to invest capital.



# Incremental Benefits

The risk model estimates for each asset the likelihood of failure (LOF) and consequence of failure (COF).

Asset LOF is based on an asset class survivor curve, age, and an asset health index, derived from asset condition information, inspection information, and service history.





# Incremental Benefits

An asset's COF is derived from a number of categories that consider the impact to retail customers or the system in the event of an asset failure.

These categories include safety, customer, environmental, restoration, system operations/production, and regulatory/public.

The risk model uses this information to calculate the risk for all assets before and after replacement.



# Incremental Benefits

The Model is used to evaluate 3 or 4 investment scenarios and the resulting reduction in risk which helps to inform the final TDSIC Plan.

One is a “Do Nothing” scenario that represents the increase in risk for the assets if no assets are replaced during the 7 year planning period. This provides a baseline to compare other investment scenarios.



# Incremental Benefits

The model provides a prioritized list of assets for replacement that targets high-risk assets.

The output is used to develop projects included in the TDSIC Plan.



# Monetization of Risk Reduction

Monetization is limited to a subset of projects and benefits. For example, customer reliability and failure repair cost of restoration.

Failure repair costs include:

1. Overtime
2. Premiums for last minute purchase of equipment and materials.
3. Mobilization and rework related to making temporary fixes.
4. Scheduling disruption to reassigning crews.



# Monetization of Risk Reduction

Customer outages are monetized using something like the DOE's Interruption Cost Estimate (ICE) Calculator for various asset failure scenarios.



# Incremental Benefits

A third-party expert reviews the risk model which includes:

- (1) Inspecting model structure;
- (2) Inspecting formulas in the model;
- (3) Inspect some data sets used in the model;
- (4) Review model input assumptions; and
- (5) Inspecting model results.



# TDSIC Plan Update Process

Updates are normally provided on an annual basis.

Provides actual costs for projects completed in the previous year and updates cost estimates for future projects.

Projects with actual or projected costs higher than the previous estimate, company provides an explanation.



# TDSIC Plan Update Process



The utility normally meets with other stakeholders on the format and content of the update prior to its initial filing and works with stakeholders to refine the contents of the update filing.





# Lessons Learned

TDSIC Plans cover a period of 5 – 7 years.

Emphasis is placed on the cost estimates and benefits of utility investments for the first two years given the engineering is much more complete.

The annual update is key because actual results for the previous year are available to inform plan modifications, if any, proposed for the next couple of years.

The TDSIC process recognizes that a five or seven year plan has to be flexible and adapt as new information develops.



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# Reviewing Utility Distribution Plans

A Michigan Perspective

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Michigan Public Service Commission

April 10, 2023





# Disclaimer

- All views expressed are solely my own and do not express the views of the Michigan Public Service Commission.
- The Commission speaks through its orders.



# Agenda

- Background
- Reviewing distribution plans
  - Staff reports
  - Challenges
  - Alignment with rate cases
- Current and Next Steps



Mackinac Bridge  
connecting the lower  
and upper peninsulas.

# The Start of Distribution Plans

- To provide better visibility into:
  - Investments long into the future
  - Strategies to address aging infrastructure
- First ordered 5 year investment and maintenance distribution plans in rate case orders for:
  - U-18014 DTE Electric January 31, 2017
  - U-17990 Consumers Energy February 28, 2017
- Rate case dockets had:
  - Draft plans filed in June and August 2017
  - Stakeholder comments
  - Final plans
    - DTE Electric January 31, 2018
    - Consumers Energy March 1, 2018

# Rate Case Dockets to Dedicated Docket

- Guiding principles in Oct. 11, 2017, order in Case No. U-17990 and U-18014:
  - Safety
  - Reliability and resiliency
  - Cost effectiveness and affordability
  - Accessibility
- Commission order on April 12, 2018, in Case No. U-20147.
  - Created single repository for distribution plans
    - Indiana Michigan Power ordered to file distribution plans in rate case (U-18370), but to file to Case No. U-20147 docket.
    - Prior plans from DTE Electric and Consumers Energy also refiled to the Case No. U-20147 docket
  - Solicited stakeholder comments on final DTE Electric and Consumers Energy distribution plans
  - Ordered staff led technical conference on distribution planning



# Stakeholder Informed Improvements

- Stakeholder comments received on rough drafts of distribution plans
- Technical conference held on August 7, 2018
  - Focused on stakeholder concerns regarding first set of plans
- MI Power Grid [Electric Distribution Planning workgroup](#)
  - Five stakeholder sessions from June-November 2019
  - One Benefit-Cost Analysis focused session in November 2021
- Staff report and recommendations after each



# 1st Staff Report and Recommendations

- Michigan Distribution Planning Framework (Sept 2018)
  - Review after first distribution plans, stakeholder comments, and technical conference
  - Recommended path forward for open, transparent, and integrated electric distribution system process
    - Reduce uncertainty:
      - In future distribution plans, include workforce adequacy and development plan
        - Ensure proposed spending plans feasible
      - Dynamic load forecasting approach due to distributed energy resource (DER) penetration uncertainty
    - Improve data access
      - Develop with stakeholders a cost-effective approach to public hosting capacity information
      - Provide customer and 3<sup>rd</sup> party access to customer usage data (utilities with AMI)
    - Improve data and information in future distribution plans
      - Develop with Staff a common cost-benefit methodology
      - Provide suitable criteria for non-wires alternatives
      - Provide clear cost information for nontraditional approaches to capacity investments

# 2<sup>nd</sup> Staff Report and Recommendations

- [Electric Distribution Planning Stakeholder Process](#) (April 2020)
  - Staff recommendations based on stakeholder & utility feedback
    - Provide clarity to distribution planning process
      - Reiterate distribution planning objectives
      - Define terms for common understanding:
        - DERs, Hosting Capacity Analysis (HCA), Non-Wires Alternatives (NWA), and Locational Value Assessment
      - Standardize components for future distribution plans
      - Recommend Commission identify resiliency events electric system should handle instead of definition
    - Improve data access
      - Adopt phased implementation of HCA, with zonal go/no-go map, at DTE Electric and Consumers Energy
    - Improve data and information in future distribution plans
      - Utilities articulate vision/roadmap with measurable goals and objectives
      - Stakeholder process to explore and propose specific BCA criteria for Commission consideration and adoption
      - Recommend questions utilities should answer prior to refining and implementing additional NWA pilots
      - Assessment of energy waste reduction (EWR) options
        - Evaluate EWR forecasts and NWA analyses

# 2<sup>nd</sup> Staff Report and Recommendations

- [Electric Distribution Planning Stakeholder Process](#) (April 2020), cont.
  - Staff recommendations based on stakeholder & utility feedback, cont.
    - Recommend exploring alternative regulatory approaches, like emerging alternatives to cost of service regulation
      - MI Power Grid Financial Incentives/Disincentives workgroup
    - Coordinate distribution planning efforts with the Michigan Infrastructure Council for more efficient and effective planning



Tahquamenon Falls  
Upper Peninsula



# 3<sup>rd</sup> Staff Report and Recommendations

- Brief comments filed October 2021
  - Observations regarding each of the three distribution plans
    - Items covered
    - Challenges (abbreviations and terms)
- Request more time to review and comment on distribution plans
- Request more time to file responses to Commission's questions
  - Are the measures focused on improving distribution system reliability identified in the respective distribution plans commensurate with the scale of the challenge?
  - Are the metrics identified by the utilities to reduce the number and duration of outages and the number of customers experiencing multiple outages appropriate?
  - Do the financial incentives and penalties identified by the utilities align the respective utility's financial goals with the goals of this Commission in reducing outages and improving distribution performance?
  - Do the distribution plans filed reflect the appropriate balance between needed investments and customer affordability? Are there alternatives that would better strike this balance?
  - Do the distribution plans sufficiently incorporate considerations involving equity, including efforts to avoid further marginalization of vulnerable customers and communities?
  - Are there potential utility pilots or industry best practices that can improve customer safety and reliability by moving overhead lines on specific circuits or in segments of the electric distribution system underground at reasonable costs?

# 4th Staff Report and Recommendations

- Staff comments on 2<sup>nd</sup> distribution plans and response to Commission questions (May 2022 )
  - Responds to Commission questions
  - General comments on:
    - Measures to improve reliability and scale of challenge
    - Reliability metrics, storm events, and proactive asset management
    - Financial incentives and penalties
    - Balance between needed investments and affordability
    - Equity and environmental justice
    - Community engagement



Detroit

# 4th Staff Report and Recommendations, cont.

- Recommendations
  - Improve data and information in future distribution plans
    - Request problem description, goals, and possible solutions determined through community and 3<sup>rd</sup> party engagement
    - Summarize full set of alternatives before determining selected solution
    - Relay desired utility learnings or system outcomes
    - Discuss process to identify/utilize market-based solutions and/or external funding to reduce ratepayer impacts
    - Identify investment locations overlaid with:
      - Socioeconomic context, like MiEJScreen
      - Electric distribution system information
    - Identify asset management approaches applied
    - Detail efforts to proactively reduce risk and prevent outages from occurring
    - Go beyond asset age by providing condition-based assessments via monitoring and inspections
  - Encourage utility learning in quantifying reductions in ratepayer burdens with technology deployment for grid reliability, resiliency, and customer safety



# Longer Time Frame & More Required Plans

- Time horizon: 5, 10, and 15 year horizons
- Filed in MPSC Case No. [U-20147](#) by three IOUs
  - Consumers Energy [Mar 1, 2018](#) [June 30, 2021](#) by Sept 29, 2023
  - DTE Electric [Jan 31, 2018](#) [Sept 30, 2021](#) by Sept 29, 2023
  - Indiana Michigan Power [Apr 3, 2019](#) [Sept 30, 2021](#) by Sept 29, 2023
- Future distribution plans to be filed by:
  - Alpena Power Company by Sept 30, 2024
  - Northern States Power Company by Sept 30, 2024
  - Upper Peninsula Power Company by January 31, 2025

# Challenges of Reviewing Distribution Plans

- Distribution plans can be lengthy

Utility	1 <sup>st</sup> Plan Page #	2 <sup>nd</sup> Plan Page #
Consumers Energy	317	373
DTE Electric	232	734
Indiana Michigan Power	141	171

- Data provided may be limited or not formatted for ease
- No uniform benefit cost analysis guidance
- Understanding holistic impacts is difficult
  - Description of individual projects/programs
  - Limited socioeconomic data or analyses currently
- Staff bandwidth
  - Juggle with other workload, like ongoing rate cases and integrated resource plans, with legislative deadlines

# Cost Recovery Decisions in Rate Cases

- Distribution plans are informational only
  - Reasonableness and prudence review in rate cases which have:
    - Forecasted costs
    - Short outlook (~12 month test year)
  - Utilities with distribution plans largely file distribution plan as rate case exhibit
    - Reference distribution plan as further motivation for proposed investments
- Seek alignment between distribution plan and rate cases



Mackinac Island

# Current & Next Steps

- Distribution Planning section established in Commission reorganization in summer 2022
  - Distribution planning responsibilities
  - Close coordination with Electric Operations section
- Commission requested improved analyses in future rate cases and distribution plans (U-20836):
  - “overlay maps, charts, graphs, and other displays, that provide a visual or data informed understanding of more holistic impacts of electric infrastructure investments on customer communities”
- Meeting with utilities to understand and improve next distribution plans
- Requested utility proposals on Michigan-specific uniform benefit-cost analysis requirements (including societal cost test) for evaluating pilot proposals ([U-20898](#))

# Current & Next Steps

- Better understand current system limitations and solutions
  - DTE Electric 4.8kV Technical Conference on March 22, 2023
  - Seek analyses and data to inform better decisions
- Distribution Planning section to comment on planning related issues in rate cases, where necessary
  - Electric Operations reviewing cost prudence
- Work towards integrated distribution planning
  - Understand holistic impacts of electric distribution infrastructure in the near and long term
  - Seek alignment between rate cases, forecasting and distribution system limitations, and integrated resource plans



# Questions?

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Big Sable Point  
Lighthouse in  
Ludington State Park