S T A T E O F M I C H I G A N

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * * *

In the matter, on the Commission's own motion, to implement the provisions of Section 6s of 2016 PA 341.	)	Case No. U-15896
In the matter, on the Commission's own motion, to implement the provisions of Section 6t of 2016 PA 341.	)	Case No. U-18461

At the December 20, 2017 meeting of the Michigan Public Service Commission in Lansing, Michigan.

PRESENT: Hon. Sally A. Talberg, Chairman
Hon. Norman J. Saari, Commissioner
Hon. Rachael A. Eubanks, Commissioner

OPINION AND ORDER

On December 21, 2016, Public Act 341 of 2016 (Act 341), an amendment to Public Act 3 of 1939 and Public Act 286 of 2008, was signed into law and became effective on April 20, 2017. Section 6t(3) of Act 341, MCL 460.6t(3), requires that each electric utility, whose rates are regulated by the Commission, file an integrated resource plan (IRP) within two years from the effective date of Act 341. Section 6t(3) states that the Commission "shall issue an order establishing filing requirements, including application forms and instructions, and filing deadlines for an integrated resource plan filed by an electric utility whose rates are regulated by the commission." And, Section 6t(6) provides, in part, that:

> An existing supplier of electric generation capacity currently producing at least 200 megawatts of firm electric generation capacity resources located in the independent system operator's zone in which the utility's load is served that seeks to provide electric generation capacity resources to the utility may submit a written proposal directly to the commission as an alternative to any supply-side generation capacity resource included in the electric utility's integrated resource plan submitted under this section . . . .

In addition, pursuant to Section 6s(4)(a), the Commission must grant a certificate of necessity (CON) to an electric utility if it finds, among other determinations, that "the electric utility has demonstrated a need for the power that would be supplied by the existing or proposed electric generation facility or pursuant to the proposed power purchase agreement through its approved integrated resource plan under section 6t or subsection (11)."

The Commission Staff (Staff) worked with various stakeholders to prepare draft Application Instructions for Integrated Resource Plan Filings (IRP filing instructions) and draft Instructions for Certificate of Necessity Alternative Proposals for Electric Generation Capacity Resources (alternative proposals) pursuant to Sections 6s and 6t of Act 341.

In the October 11, 2017 order in Case No. U-18461, the Commission requested comments on the proposed IRP filing requirements and alternative proposals from all interested persons. The Commission received comments from nine organizations, which are discussed pursuant to the applicable headings set forth in the IRP filing requirements and alternative proposals and are addressed *ad seriatim*. Sections of the IRP filing requirements and alternative proposals for which no comments were received are undisputed and have been omitted from the following discussion. Although no comments were received on this issue, the Commission notes that for purposes of clarity, several minor grammatical and stylistic amendments were made to the IRP filing requirements and alternative proposals.

Application Instructions for Integrated Resource Plan Filings

The Commission notes that the Application Instructions for IRP filings also apply to an IRP filed with a CON application and that the correlating statute was inadvertently omitted from the instructions. In addition, the Commission concludes that footnote 2 is overly specific for general IRP application instructions. Therefore, the Commission amends the first paragraph as follows:

> These application instructions apply to a standard electric utility application for Michigan Public Service Commission (~~MPSC or~~ Commission) approval of an Integrated Resource Plan (IRP) under the provisions of MCL 460.6t**, as well as an IRP that may be filed under the provisions of MCL 460.6s**.[1] The application shall be consistent with these instructions, with each item labeled as set forth below.~~[2]~~ Any additional information considered relevant by the utility may also be included in the application.
>
> ~~[2] Indiana Michigan Power Company (I&M) plans to file a single, total company IRP covering all of its customers in Indiana and Michigan with both the IURC and MPSC. Consistent with MCL 460.6t (4) for purposes in Michigan, I&M will prepare its 2018 IRP and subsequent IRPs in accordance with the requirements of the Indiana IRP Rules.~~

Schedule

Section 6t(3) of Act 341 requires, in part, that the Commission "issue an order establishing the filing requirements . . . and filing deadlines for an integrated resource plan filed by an electric utility whose rates are regulated by the commission." In compliance with Act 341, the Commission finds that the IRP application filing deadlines are more appropriately set forth in this order, rather than the IRP filing requirements. Therefore, the IRP application filing deadlines are removed from the IRP filing requirements and set forth below. Additionally, in order to more efficiently balance its workload, the Commission has slightly adjusted the IRP application filing deadlines that were set forth in the previous draft of the IRP filing requirements.

In response to an undisputed request by DTE Electric Company (DTE Electric), to the currently-noted schedule, the Commission adds the words, “or earlier date if requested and spaced at least 21 days from other IRP filings.” The updated schedule is as follows:

1. Consumers Energy Company: June 15, 2018 (or earlier date if requested and spaced at least 21 days from other IRP filings)

2. Upper Peninsula Power Company: October 1, 2018 (or earlier as requested)

3. Indiana Michigan Power Company: within forty-five (45) days of submission in its Indiana jurisdiction to align with the Indiana filing schedule (Indiana jurisdiction filing is due November 1, 2018)

4. Northern States Power Company-Wisconsin (Xcel): January 25, 2019 (or to align with Minnesota)

5. Alpena Power Company: February 15, 2019

6. Upper Michigan Energy Resources Corporation: March 8, 2019

7. DTE Electric Company: March 29, 2019 **(or earlier date if requested and spaced at least 21 days from other IRP filings)**

8. Wisconsin Electric Power Company: April 19, 2019

Pre-Filing Request for Proposals

DTE Electric comments that requests for proposals (RFPs) for small capacity resources and renewable energy (RE) resources governed by 2008 PA 295 (Act 295) should be exempt from the IRP filing requirements. The company requests that the following language be added to this section: “Each electric utility whose rates are regulated by the Commission shall issue a request for proposals (RFP) to provide any new **greater than 50 MW [megawatts], non-renewable** supply-side capacity resources . . . .” DTE Electric’s initial comments, p. 1 (emphasis in original).

The Commission declines to adopt DTE Electric’s proposed language because Act 341 does not set forth an exemption for small capacity and RE resources governed by Act 295. In addition, it is beneficial for a utility to receive updated costs for RE, including solar and battery storage that may be less than 50 MW, and issuing an RFP is a useful way for a utility to garner this information.

The Commission notes that, under the current language of this section, a utility has the ability to exclude a long-term power purchase agreement (PPA) from the RFP process. To avoid this type of restriction, the Commission adds the following language to the end of the section:

> e) The RFP shall allow for proposals to provide new supply-side capacity in the form of a purchase power agreement for a period that is the lesser of the study period or of the useful life of the resource type proposed.

Public Outreach Process

DTE Electric and Consumers Energy Company (Consumers) request that the words "including senior executives" be removed from the first paragraph. DTE Electric argues that utilities "should have the flexibility to determine the appropriate internal company employees to engage in the stakeholder processes based on the expertise and specific analysis involved in a particular IRP filing." DTE Electric's comments, p. 1. This recommendation is undisputed, and therefore, the Commission adopts the proposed amendment.

The Association of Businesses Advocating Tariff Equity (ABATE) comments that the IRP filing requirements, as written, "encourage" utilities to engage participants early in the IRP process. ABATE's initial comments, p. 1. However, ABATE recommends that the Commission *require* participant engagement prior to the filing of the IRP. ABATE explains that "Additional perspectives, coupled with the free-flow of information, only serve to amplify the benefits of an IRP. The Commission can ensure an open and transparent process by using mandatory language throughout this section." *Id.* The Union of Concerned Scientists (UCS) agrees, and asserts that the Commission should permit public comments on a proposed IRP without having to establish formal intervenor status.

DTE Electric and Consumers respond that requiring public outreach and analysis of every potential scenario and input could result in a lengthy and costly process of analytical runs. They request that the stakeholder input process remain flexible in its scope and implementation, asserting that Commission encouragement of public outreach is sufficient to ensure open and transparent communication with the public. In addition, DTE Electric contends that "there are mandatory processes for input associated with the contested IRP and CON cases that will be required in the future." DTE Electric's reply comments, p. 1.

The Commission notes that there is no requirement in Act 341 mandating that the utilities host stakeholder and public outreach workshops. However, the Commission believes that stakeholder and public engagement are critically important to the IRP process in order to provide stakeholders and the public an opportunity to supply input regarding the utility's assumptions, inputs, and modeling methodologies. The Commission amends the language of this section as follows:

> Participant engagement early in the development of the IRP is **strongly** encouraged~~,~~ to**:** (1) educate potential participants on utility plans; (2) utilize a transparent decision making process for resource planning; (3) create opportunity to provide feedback to the utility~~, including senior executives,~~ on its resource plan; (4) encourage robust and informed dialogue on resource decisions; and (5) reduce utility regulatory risk by building understanding and support for utility resource decisions. The utility may choose to incorporate some, or all, of the participant input in its analysis and decision-making for the IRP filing.
>
> In the **12 months** ~~365 days~~ prior to the IRP filing, each electric utility **is encouraged** ~~shall consider~~ **to** host~~ing~~ update workshops with interested participants. The purpose of the pre-filing workshop(s) is to ensure that participants have the opportunity to provide input and stay informed regarding**:** **(**1) the assumptions, scenarios, and sensitivities~~,~~**;** **(**2) the progress of the utility's IRP process~~,~~**;** and **(**3) plans for the implementation of the proposed IRP. Documentation may include:
>
> a) Workshop dates and times, including times outside of the workday;
> b) Evidence that notice of the workshops was provided to the public;
> c) Meeting minutes;
> d) Meeting or workshop attendance lists;

e) Participant comments on the last approved IRP and/or inputs into the proposed IRP application; and
f) Discussion indicating if or how the public outreach process influenced the IRP.

A minimum of two stakeholder engagement workshops are recommended. A stakeholder engagement workshop will provide stakeholders with an opportunity to provide input regarding the utility's assumptions, inputs, and modeling methodologies employed during the development of the IRP. The utility is encouraged to invite stakeholders, including expected intervenors and the Staff, to its stakeholder engagement workshops.

If the stakeholder engagement workshops are not open to the public, two additional public meetings are recommended. The public meetings are intended to educate the public on the utility's planning process as well as provide an opportunity for the public to comment. The public meetings should be offered in the utility's service territory in geographic locations convenient to customers, with advance notice provided to customers in the utility's service territory. The utility is encouraged to consider holding public meetings after normal business hours to encourage attendance.

Risk Assessment Methodology

In the November 21, 2017 order in Case No. U-18418, the Commission stated that it would address the issue of risk assessment in the immediate case. To ensure that risk assessment scenarios are consistent between CON and IRP filings, the Commission amends the language in this section as follows:

> ~~Each~~ **The** utility's IRP filing shall include a thorough risk analysis of the preferred plan and the **optimal plans for each of the scenarios specified in the Michigan Integrated Resource Planning Parameters (MIRPP), as well as all additional scenarios and sensitivities filed with the** ~~alternatives considered in the~~ IRP **application**. **The plans should be feasible and differ in generation mix from the preferred plan and MIRPP plans. The intent of the risk assessment is to test the optimized resource strategies for each scenario to determine how each strategy would perform in an unexpected range of possible futures.** The IRP shall include a discussion of the methodology used for risk analysis including the utility's justification for the chosen methodology over other alternatives. Acceptable forms of risk analysis include, but are not limited to, the following: scenario analysis, global sensitivity analysis, stochastic optimization, generating near-optimal solutions, agent-based stochastic optimization, mean-variance portfolio analysis, and Monte Carlo simulation.

Without setting any further parameters, the Commission strongly recommends that the utilities perform robust risk analysis.

<u>Approval of Costs</u>

DTE Electric notes that there are separate filing and approval processes for RE and energy waste reduction (EWR) plans. The company argues that it is duplicative to approve these plans in the IRP as well. DTE Electric recommends a separate proceeding for the filing and approval of the initial plans and utilizing the IRP for approval of amendments to the plans.

ABATE does not oppose DTE Electric's recommendation; however, it requests that the Commission ensure congruency between known/approved costs and the costs for which a utility is seeking approval. "In other words, the inputs from a utility's IRP model(s) should align with the information provided in the Rate Impact and Financial Information section." ABATE's reply comments, p. 1. ABATE states that if the Commission removes the references to RE and EWR programs, the Commission should ensure that utilities provide "real-world costs" when available. *Id.*

Regarding the total demand reduction potential, including hourly shape of load reduction by program, Consumers notes that load reduction caused by demand response (DR) programs occurs on a daily four-hour peak. The company argues that running an hourly load shape would not be beneficial because the load reduction would be zero until the four-hour peak window is realized. According to Consumers, the DR hourly load shape is not similar to an energy efficiency hourly load shape because energy efficiency offsets sales throughout the day rather than reducing load during peak demand hours. Consumers' initial comments, p. 2.

The Commission declines to adopt DTE Electric's recommendation to utilize the "Renewable Resources" and "Demand Response and Energy Waste Reduction" subsections of the Approval of

Costs section for the limited purpose of approving RE and EWR plan amendments. The Commission finds that the purpose of the IRP is to determine the optimal future combination of RE, EWR, and DR, and should not be limited to what is already approved in RE, EWR, and DR plans. If a utility does not include RE and EWR as part of its IRP, the utility will not have the ability to select additional RE and EWR over and above what is already included in its approved plans. The Commission notes that separate RE and EWR plan cases may continue to be necessary to implement the specific RE and EWR programs and, if amendments to the plans are required, separate cases requesting Commission approval may need to be filed between utility IRPs.

In addition, the Commission finds that section II) Renewable Resources does not accurately reflect the language of 2016 PA 342. Therefore, it is amended as follows:

> II) Renewable Resources: **The utility shall file data consistent with its renewable energy plan. (For incremental renewable energy beyond the 15% requirement in 2021 and any renewable energy to be constructed or purchased after the conclusion of the 20-year renewable planning period ending in 2029, the utility shall file as set forth below.)** Revenue requirement and incremental costs of compliance shall be calculated to include the following:

In response to ABATE's concerns regarding congruency and "real-world costs," the Commission notes that the above-amended language addresses ABATE's concerns and that real-world costs are covered in the MIRPP.

The Commission agrees with Consumers and adopts the company's recommendation that the requirement for DR hourly load shapes should be removed from subsection b) in section III) Demand Response and Energy Waste Reduction. However, the Commission finds that utilities shall continue to provide the amount of load reduction and operational parameters. The Commission amends subsection b) as follows:

> Total demand reduction potential (MW), including **the amount of load reduction and the expected hours of interruption per day, month, and year for each program,** ~~including hourly shape of load reduction (MWh)~~ if applicable;

Waivers and Process for Smaller and Multistate Utilities

Michigan Electric and Gas Association (MEGA) affirms that the proposed language in the "Waivers and Process for Smaller and Multistate Utilities" section is authorized by MCL 460.6t(4). According to MEGA, the flexibility provided by the IRP filing requirements appropriately allows each utility to specifically tailor its initial IRP, and it avoids "unnecessary and duplicative administrative, legal and processing costs which must be borne by relatively few customers, compared to the major electric utilities." MEGA's initial comments, p. 2.

In its reply comments, Upper Peninsula Power Company (UPPCo) agrees with MEGA and expresses support for the language in this section.

After a review of UPPCo's reply comments, it occurs to the Commission that there is no deadline for a waiver application. If a utility requests a waiver in conjunction with the filing of its application, the Commission may be placed in the problematic position of either granting a waiver or rejecting the IRP. Therefore, the Commission amends the first paragraph as follows:

> **An** ~~E~~**e**lectric utilit**y**~~ies~~ with fewer than 1,000,000 customers in this state may request a waiver to any portion of these IRP filing requirements ~~with its IRP application~~. Any request for a waiver shall include a discussion and justification outlining why the waiver is warranted and in the best interest of its customers. Discussion and justification for the requested waiver shall include a description of the utility's current and forecasted energy and capacity needs, and its plan for meeting those needs over the upcoming ten years.
>
> **If the utility requires resolution of a waiver request prior to filing an IRP application, the utility shall file the waiver request no less than 60 days prior to the filing of the IRP application.**

UCS requests specific language stating that the Commission has the authority to request additional or supplemental information to facilitate the review of the utility's IRP as it relates to Michigan. There are no reply comments. The Commission agrees that additional information may be beneficial for the review of a multistate IRP. Therefore, the Commission adopts the following language:

> ~~Staff notes that~~ Northern States Power Company-Wisconsin and Indiana Michigan Power Company are utilities located in Michigan that already file multistate IRPs in other jurisdictions. Due to the provisions in MCL 460.6t(4) regarding multistate IRPs, Northern States Power Company-Wisconsin and Indiana Michigan Power Company may utilize the IRP filing requirements of another state in accordance with those provisions. **However, the Commission reserves the right to request additional information to facilitate its review of the IRP as it relates to Michigan.**

<u>IRP Report and Documentation</u>

In general, DTE Electric states, there are various requirements that involve providing the utility's revenue requirement, existing resource revenue requirements, and revenue requirements by rate design. The company, however, opines that these requirements are more suitable for a rate case. DTE Electric believes that the IRP is "intended to focus on additions to the generation scope and revenue requirements should properly only reflect on the incremental costs of the new proposed generation resources." DTE Electric's initial comments, p. 1.

The Commission agrees that providing revenue requirements by rate design or by rate class is not appropriate in an IRP and is more suitable in a rate case. The Commission notes that all references to rate design and rate class have therefore been removed. However, the Commission finds that existing resources should be included in the revenue requirements because the types, sizes, and timing of proposed new generators may impact the dispatch of existing units, thereby impacting the revenue requirement in ways other than the added revenue requirement associated with the new resources.

1. Executive Summary

UCS comments that section I) Executive Summary should specifically include a description of the utility's anticipated changes in resource mix and corresponding changes in emissions of carbon dioxide, sulfur oxides, nitrogen oxides, particulate matter, mercury, and lead, as well as anticipated production of hazardous solid waste and wastewater discharges.

On page 4 of its reply comments, Consumers states that the Executive Summary is "intended to provide a high-level overview of the IRP analysis and proposed course of action, which considers environmental impacts. It is not necessary to overly prescribe the level of detail."

The Commission agrees with Consumers that the Executive Summary is intended to be just that: a summary. Details regarding the anticipated changes in resource mix and corresponding changes in environmental pollutants are covered in section XVIII) Environmental of the IRP filing requirements.

2. Introduction

Regarding section IV) Introduction, DTE Electric requests that the Commission amend the third sentence to read: "The utility shall describe and document its additional planning objectives and its guiding principles to design alternative resource plans that ~~satisfy all of~~ **consider** the planning objectives and priorities." DTE Electric's initial comments, p. 1. There are no reply comments. The Commission adopts the proposed amendment because it more adequately demonstrates that the utility considered the planning objectives pursuant to Section 6t of Act 341.

In addition, DTE Electric notes that there is a requirement for annual levelized cost of generation portfolio. The company argues that the requirement is unclear in its intent and scope, and it may be burdensome to analyze. There are no reply comments. The Commission agrees with DTE Electric and removes this requirement.

3. Analytical Approach

Regarding section V) Analytical Approach, DTE Electric comments that if the risk evaluation must be measured in net present value of revenue requirements (NPVRR), it will limit the type of risk analysis methodology that a utility may select. The company contends that not all of the "methodologies listed in the Risk Assessment section will have results stated in terms of a revenue requirement." DTE Electric's initial comments, p. 1.

ABATE responds that although a robust risk analysis is beneficial, some risk evaluations many not produce a result in terms of an NPVRR. Therefore, ABATE supports DTE Electric's recommendation "so long as (1) annual revenue requirements, (2) present value of annual revenue requirements, and (3) net present value of revenue requirements are developed and reported for each scenario and sensitivity, the method by which risk is analyzed and reported need not be in net present value of revenue requirements." ABATE's reply comments, p. 2.

The Commission prefers that utilities retain flexibility in selecting the type of risk analysis methodology performed and therefore adopts DTE Electric's recommendation, albeit with the stipulations suggested by ABATE. The Commission amends section XV) Modeling Results accordingly:

> An analysis of the capital costs, energy production, energy production costs, fuel costs, energy served, capacity factor, emissions (levels and costs), and viability of all reasonable options available to meet projected energy and capacity needs, including, but not limited to, existing electric generation facilities in this state. The following suggest several elements that address the specific items to be included. They are not necessarily exhaustive.
>
> a) Description of IRP portfolio design strategy (portfolio optimized for least cost, value maximization, reliability, risk minimization, environmental specification etc., or a particular combination);
> b) Scenario and sensitivity results, including **annual revenue requirements, present value of annual revenue requirements and net present value of** revenue requirements ~~and financial impacts (NPV)~~, **and** portfolio capacity including additions and retirements. Include monthly and annual energy pricing, and resource capacity and load factors;
> c) Business as usual/reference case portfolios options to be selected from;
> d) Analysis of IRP results;
> e) Risk assessment of each scenario.

4. Demand-Side Resources

ABATE requests that the Commission amend the IRP filing requirements to facilitate an on-going dialogue between utilities and customers interested in participating in DR programs. ABATE recommends that, whenever feasible, the Commission should require the utilities to augment their projections with customer feedback. ABATE contends, however, that it is not suggesting that utilities invest resources or survey every class of customer; rather, utilities should be required "to contact their accounts with an average demand of 1 MW or greater to gauge their appetite for demand response." ABATE's initial comments, p. 2.

Advanced Energy Management Alliance (AEMA) maintains that, pursuant to the IRP filing requirements, utilities are only required to file summary information about existing DR programs and potential expansion plans, which denies the utilities the opportunity to make holistic and informed decisions. AEMA recommends that utilities should "include new and existing DR resources in their resource screen and portfolio modeling process, as well as in their ultimate preferred course of action if DR is found to maximize the portfolio's objectives." AEMA's initial comments, p. 2.

AEMA argues that for utilities to broadly pursue and consider DR resources in their IRP, the utilities must make DR capacity available to alternative electric suppliers (AESs). According to AEMA, if the AESs do not already offer DR to retail open access (ROA) customers, the utilities risk being locked out of the market. AEMA's initial comments, pp. 2-3.

In addition, AEMA comments that utilities could pursue DR through bilateral programs with third-party aggregators or by developing a model tariff for DR that allows customers to voluntarily enroll in the program, either directly or through an aggregator. AEMA notes that Indiana Michigan Power Company has a similar tariff.

DTE Electric comments that the requirement to provide data on the previous five years' load management programs is burdensome and not relevant to an IRP, but rather more appropriate for a reconciliation case.

Both DTE Electric and Consumers responded to ABATE's suggestion that the utilities be required to contact accounts with an average demand of 1 MW or greater. DTE Electric argues that IRP proceedings are not the appropriate forum to comment on the DR process or customer interest in DR programs. The company notes that it is addressing customer interest in DR programs in Case No. U-18255 and the Statewide DR Potential Study. Consumers avers that it "discussed the DR Program with 66% of its eligible large customers. The Company has successfully enrolled 17% of those customers in its DR Program resulting in a fully subscribed (50.1 MW) 2017 DR Program and (60 MW) 2018 DR Program." Consumers' reply comments, p. 2. According to Consumers, some large customers chose not to participate because they did not have enough non-essential load to curtail or the customers' high demand was outside of the program hours.

In response to AEMA's recommendation for third-party aggregation for DR programs, Consumers notes that it has already provided numerous comments opposing third-party aggregation and requests that the Commission refer to its reply comments in Case No. U-18418.

Acknowledging DTE Electric's claim that it may be too burdensome to provide the previous five-years' load management programs, ABATE requests that the Commission should, at a minimum, require the utilities to provide the historical data by class and program on an annual energy and peak reduction basis. ABATE asserts that utilities will have already "developed the hourly (or typical week) load shapes for the programs going forward to use as inputs for its IRP, so no additional work would be required." ABATE's reply comments, p. 2.

In response to ABATE's request that the Commission ensure that there is an on-going dialogue between utilities and their customers regarding DR programs, the Commission finds that this is a process more appropriately managed by the utilities and their customers. In addition, the Commission's recently completed DR potential study specifically targeted large customers to gauge their interest in DR and the preferred program design features. *See,* September 15, 2017 order in Case No. U-18369 (September 15 order).

Regarding AEMA's suggestion that utilities should include new DR resources in their IRP, the Commission notes that the IRP filing requirements do not preclude the utilities from including new DR resources in their resource screen and portfolio modeling process and do not prevent the utilities from providing their ultimate preferred course of action if DR is found to maximize the portfolio's objectives.

The Commission agrees with AEMA that the utilities should expansively pursue and consider DR in their IRPs. However, the Commission does not agree that the DR potential associated with AES customers will be locked out of the market if the customer's current AES is not actively pursuing DR with its customers, because aggregation of AES customer DR is not currently prohibited in Michigan. *See,* September 15 order and November 21, 2017 order in Case No. U-18197, pp. 12-14.

ABATE agrees with DTE Electric that it is irrelevant and too burdensome to provide data on the previous five years' load management programs, but requests that the Commission require historical data by class and program on an annual energy and peak reduction basis. The Commission agrees with DTE Electric and removes the requirement. The Commission declines to adopt ABATE's recommendation, noting that this information is available in other cases filed with the Commission.

5. Renewables and Renewable Portfolio Standards Goals

UCS requests that utilities be required to show more than economic justification for a potential reduction in RE. According to UCS, the justification for reducing RE should include a discussion of any increase in emissions, communities most affected by the increase in emissions, and the utility's response to these impacts on public health, the environment, and the economy.

There are no reply comments. Language has been added to section XVIII) Environmental to require significantly more emissions reporting.

The Commission notes that, in April 2017, Governor Rick Snyder created the Environmental Justice Work Group that is developing recommendations to improve environmental justice awareness and engagement in state and local agencies and recommendations for the implementation of environmental justice guidance, training, curriculum, and policy that further increases the quality of life for all Michiganders. Regarding discussions before the Commission addressing communities most affected by the increase in emissions and the utility's response to these impacts on public health, the environment, and the economy, the Commission finds that these issues are more appropriately addressed in a CON proceeding, rather than an IRP proceeding, when the siting for new proposed generating units is known.

6. Transmission Analysis

DTE Electric requests that the following footnote be added to subsections d) and e) of section XII) Transmission Analysis: "Information provided by the transmission owner should be related to proposed projects in an RTO [regional transmission operator] planning process and include a technical feasibility assessment. Any proposed projects should ultimately be approved through an RTO planning process." DTE Electric's initial comments, p. 2. The company believes that this additional information is required to support an informed IRP process. In addition, DTE Electric comments that any transmission project opportunities identified in the IRP will require RTO review, support, and approval.

DTE Electric also recommends removing subsection e) 2) because transmission owners do not facilitate PPAs and any PPAs made outside of the Midcontinent Independent System Operator, Inc., zone would require a specific point-to-point transmission study. The company is concerned that because there are a vast number of possible scenarios, the expansive language in this subsection may be interpreted as a mandate to study all options. *Id.*

As an initial matter, International Transmission Company d/b/a ITC*Transmission* and Michigan Electric Transmission Company, LLC (ITC) notes that the IRP and RTO planning processes are independent of each other, driven by different considerations, and operate on different calendar cycles. According to ITC, the utility may provide information during the IRP process that was previously unknown to the transmission owner, and it may affect the transmission owner's assessment of the transmission system's requirements. Because the transmission owner "is in the best position to determine the relevance and effects on the transmission system of the . . . IRP," ITC argues that it is not logical to limit the information provided by the transmission owner to projects proposed in the RTO planning process. ITC's initial comments, p. 2. ITC contends that DTE Electric's proposed footnote contains arbitrary limitations and that, therefore, it should be rejected.

Although ITC admits that transmission owners are not parties to PPAs, it maintains that the transmission system is utilized by parties to PPAs. As a result, ITC argues, PPAs impact the transmission system, and the transmission owners are in a unique position to analyze and address these issues. ITC explains that, for example, the transmission owner may conduct a feasibility analysis to ensure that the system can support the desired import; if the necessary infrastructure does not exist, the transmission owner may modify the transmission system to support the PPA. ITC concludes, "Therefore, the transmission owner may have information about the transmission system related to power purchase agreements that should be shared with the utility through the IRP process, and subsection (e)(2) of Section (XII) should not be deleted from the Integrated Resource Plan Filing Requirements." *Id.*

The Commission agrees with ITC and rejects DTE Electric's proposed footnote. Sections 6t(h) and (j) require that, in its IRP, the utility shall include an "analysis of potential new or upgraded electric transmission options for the electric utility" and "[p]lans for meeting current and future capacity needs with the cost estimates for all proposed construction and major investments, including any transmission or distribution infrastructure that would be required to support the proposed construction or investment, and power purchase agreements." As asserted by ITC, due to its position, the transmission owner has the unique ability to determine whether and how the IRP will potentially affect the transmission system. Therefore, a thorough transmission analysis would not be possible if the analysis was limited to projects proposed in the RTO planning process. For the same reason, the Commission believes that it is appropriate to retain the portion of subsection e) that requires transmission owners to consider PPAs as potential transmission options that could impact the utility's IRP.

7. Modeling Results

DTE Electric comments that the last requirement of section XV) Modeling Analysis includes a risk assessment of each scenario that is overly detailed in scope and fails to add value. The company opines that the "risk analysis should be all encompassing, capturing the appropriate level of risk." DTE Electric's initial comments, p. 2.

In response, ABATE argues that the scenarios reflect future forecasts of the world and, therefore, each scenario should require a risk assessment. ABATE states that a sensitivity analysis is one of the recognized methods to assess risk, and sensitivities are required, thus running sensitivities should be an unavoidable conclusion.

The Commission disagrees with DTE Electric that a risk assessment for each scenario is excessive and valueless; rather, a scenario is not useful if not accompanied by a sensitivity analysis. The Commission also determines that it is not overly burdensome for a utility to perform one sensitivity for each scenario.

8. Proposed Course of Action

On page 2 of its initial comments, DTE Electric comments that, in section XVI) Proposed Course of Action, the "revenue requirement comparison and Rate Impact/Financial Information section under the Proposed Course of Action is redundant. The data will be captured under the Modeling Results section." The Commission agrees and removes these sections.

9. Rate Impact and Financial Information

Consumers comments that subsections g) emissions cost and h) effluent additive costs of section XVII) Rate Impact and Financial Information are already embedded in subsections a) through e) and, therefore, additional breakout of these costs is unnecessary. In addition, Consumers states that "the proposed IRP Filing Requirements include a requirement to provide an exhibit and/or workpaper presenting an environmental compliance strategy demonstrating how the utility will comply with all applicable federal and state environmental regulations, laws, and rules, including cost analysis of compliance on existing generation fleet going forward." Consumers' initial comments, p. 2. In the company's opinion, this exhibit and/or workpaper addresses the information sought through the emissions and effluent additive costs subsections.

Regarding subsection i) non-reoccurring expedited capital expenditures, Consumers asserts that the intent is unclear, and it is ambiguous what should be included. The company argues that the costs associated with a new build of a generating resource to fill a capacity need earlier than expected could be interpreted as a "non-reoccurring expedited capital expenditure." Consumers' initial comments, p. 2. And, Consumers opines, capital investments related to maintaining existing generators could be considered "non-reoccurring expedited capital expenditures." *Id.*, pp. 2-3. As a result, the company argues that "It is not necessary to evaluate non-reoccurring expedited capital expenditures in isolation because the analysis conducted through the IRP holistically evaluates the cost risks and benefits of a generating portfolio, whether a particular generating resource requires capital expenditures occurring in earlier years or not." *Id.*, p. 3.

ABATE disagrees, maintaining that utilities should be required to break out emissions costs from effluent additive costs because not all scenarios and sensitivities will contain both. In response to Consumers' comments regarding non-reoccurring expedited capital expenditures, ABATE recommends that the Commission retain this requirement and provide additional clarity, because "separating these costs is critical to accurately assessing the economics associated with existing assets or proposed acquisitions of existing assets." ABATE's reply comments, p. 3.

ABATE asserts that the information provided by the utilities in this section should correspond with the information provided in the Approval of Costs section because it will improve the accuracy of the IRP. ABATE reasons that if a utility is seeking cost recovery through its IRP, there is no logical reason to use anything other than the actual costs for those specific projects; departing from the costs provided in the Approval of Costs section is counterproductive. ABATE's initial comments, p. 2. Additionally, ABATE recommends that the utilities provide both nominal and net present values whenever possible.

In its reply comments, Consumers states that the purpose of section XVII) Rate Impact and Financial Information is to evaluate the reasonableness and prudency of the proposed course of action set forth in the modeling results, not to approve recovery of costs. Therefore, the company recommends that the Commission reject ABATE's proposal.

The Commission finds that subsections g) emissions cost and h) effluent additive costs should be specifically identified for each scenario because without detailed costs, it is difficult, if not impossible, to perform an accurate environmental assessment. As ABATE suggests, the Commission will be examining costs for purposes of cost recovery under this new IRP framework. *See*, MCL 460.6t(11) and (17). However, the Commission agrees with Consumers that subsection i) non-reoccurring expedited capital expenditures should be excluded because it may be characterized as more of an emergency expenditure rather than an expense set forth in a long-term resource plan such as an IRP.

10. Environmental

UCS recommends that a utility's IRP include the estimated annual emissions of carbon dioxide and greenhouse gases, particulates, sulfur dioxides, oxides of nitrogen, and mercury per year and for the facility's lifetime. UCS requests that the emissions reporting be required for the utility's proposed plan and the reasonable alternatives that were considered. In UCS's opinion:

> Additional pollutants should also be reported to facilitate a comprehensive review of the potential environmental and public health impacts of a utility's proposed plan and its alternatives, including the additional pollutants of methane, fine particulate matter, lead, volatile organic compounds, heat and other constituents discharged to public waters, and production of ash and other potentially harmful solid-waste materials.

UCS's initial comments, pp. 1-2.

UCS also recommends that the Commission require utilities to provide, at a minimum, a discussion of the equity impacts of the preferred IRP and reasonable alternatives, including identification of communities that will bear a disproportionate share of the environmental and/or public health impacts of the utility's proposed IRP and options for mitigating, remedying, or eliminating these impacts. *Id.*, p. 2.

Consumers replies that "emissions levels and costs" are already included in the "Modeling Results" section of the IRP filing requirements, and, therefore, UCS's recommendation is redundant. Regarding UCS's proposed discussion of equity impacts, Consumers claims that such a discussion is not required by Act 341, and it would be challenging and burdensome for the company to analyze and include an equity discussion in the IRP filing.

The Commission agrees with UCS that additional reporting for emissions should be required to provide a more accurate assessment for the alternative plans. However, the Commission declines to increase reporting requirements for pollutants because the Michigan Department of Environmental Quality manages this type of reporting and it would be duplicative. And, as discussed above, the Commission finds that equity analyses are more appropriately performed in a CON proceeding.

11. Exhibits and Work Papers

ABATE notes that, in Case No. U-18419, it was "forced to file a motion to compel DTE Electric ("DTE") to provide access to the Strategist and PROMOD software, including all of the working models in electronic format." ABATE's initial comments, p. 3. ABATE claims that the purpose of the motion was to gain access to information that was fundamental to DTE Electric's case. According to ABATE, the company objected and argued that ABATE should purchase the software for its own use. The administrative law judge (ALJ) in Case No. U-18419 ruled that DTE Electric must provide ABATE access to the software without ABATE having to purchase it. October 10, 2017 Ruling Granting Joint Motion to Compel Discovery in Case No. U-18419, p. 21.

To avoid a similar dispute in each IRP proceeding, ABATE recommends that the Commission add language to the IRP filing requirements requiring that the utility provide: (1) all input/output data in Excel format; (2) access to the modeling software; (3) modeling files used to generate the outputs; and (4) an index of the options selected within the model. *Id.*, p. 4.

Similarly, Energy Michigan, Inc., comments that section XIX) Exhibits and Work Papers should be amended to include third-party reasonable access to software the utility uses in performing its IRP. According to Energy Michigan, access should be granted to third parties pursuant to a protective order consistent with those issued in Case Nos. U-18419 and U-17429.

Consumers recommends that the Commission reject ABATE's and Energy Michigan's proposal, asserting that the ALJ's ruling in Case No. U-18419 was based on the facts and circumstances specific to that case, Case No. U-18419 is a CON proceeding and not an IRP case, and the proposal improperly generalizes information which may differ between utilities. In addition, Consumers argues that intervenors should not be provided access "to confidential and proprietary modeling information without any mechanisms which would prevent the public disclosure of such information, like a protective order." Consumers' reply comments, p. 3. In the event the Commission requires that the utilities provide access to modeling software, the company requests that the Commission require the intervening parties to negotiate confidentiality agreements with model vendors so that the intervening parties, not the utility, are liable for any improper public disclosure of confidential information caused by the intervening parties.

DTE Electric argues that requiring the company to share its software license with intervenors at no cost is contrary to well-established law. The company maintains that a license is granted by a licensor to a licensee, and DTE Electric, as the licensee, does not have the authority to share the license with intervenors. In addition, DTE Electric asserts that Case No. U-18419 may be distinguished from the present case because, in Case No. U-18419, the intervenors were informed at the outset that specific software was used in the company's IRP filing and the intervenors chose to hire consultants who did not possess the requisite license to access the software used by DTE Electric. According to the company, the intervenors in Case No. U-18419 could have avoided the need to file a motion to compel but chose not to.

DTE Electric proposes that, for future IRP cases, third parties should hire consultants who are trained in and licensed to use the software utilized for the company's IRP. Or, the company recommends that third parties petition the utility consumer representation fund to recover costs to acquire such licenses. DTE Electric's reply comments, p. 2.

The Commission agrees with DTE Electric that a utility should not be required to share its software license or to purchase a license for the use of the intervening parties. The Commission notes that funding for an intervening party's software license may be available from other sources, including the Utility Consumer Representation Fund. However, the Commission finds that utilities must supply to the intervening parties all input assumptions that are not included in the modeling software program and output modeling data in Excel format. To subsection b), the Commission adds the following language: "Modeling inputs and outputs in the model-dependent binary format should be made available to parties that obtain a license."

<u>Filing Requirements and Instructions for Certificate of Necessity Alternative Proposals for Electric Generation Capacity Resources</u>

<u>Filing Announcement</u>

Energy Michigan requests that the Commission amend this section to allow an AES seeking to submit an alternative proposal the opportunity to engage in a public meeting with the Staff and interested parties to provide an overview of the proposed alternative resource. According to

Energy Michigan, this is especially important for an AES that is currently producing at least 200 MW of firm electric generation capacity resources and that is submitting the proposal directly to the Commission pursuant to Section 6s(13) of Act 341. There are no reply comments. The Commission amends the alternative proposals to include an additional section prior to the Filing Announcement section as follows:

> Pre-Filing Consultation
>
> At any time prior to filing an alternative proposal, a supplier may request a pre-filing consultation meeting with the Commission Staff (Staff). The purpose of the pre-filing consultation meeting is to assist the supplier in refining the alternative proposal filing, and to facilitate efficient regulatory review. The Staff recognizes that all projects are not the same and that the information needed for one project will not necessarily be appropriate for the next. For some projects, a complete application may require less information than for others. For this reason, a pre-filing consultation is important and highly encouraged.

Contents of the Alternative Proposal

Energy Michigan recommends that the sentence in subsection c) which requires a "description of significant contract provisions that could result in early termination of the contract" be deleted because it is vague and overreaching. According to Energy Michigan, other controlling statutes do not require a description of utility PPAs, and it creates a disadvantage for independent power producers. There are no reply comments. The Commission disagrees with Energy Michigan and finds that significant provisions in PPAs that could result in early termination are critical to understanding whether the PPA will be expected to reliably supply energy.

Case No. U-18461

Case No. U-18461 was opened for the limited purpose of receiving comments on the IRP filing requirements and alternative proposals. Therefore, this docket shall be closed.

THEREFORE, IT IS ORDERED that:

A. The Application Instructions for Integrated Resource Plan Filings and Filing Requirements and Instructions for Certificate of Necessity Alternative Proposals for Electric Generation Capacity Resources, attached as Exhibits A and B, respectively, are approved as amended.

B. Case No. U-18461 is closed.

The Commission reserves jurisdiction and may issue further orders as necessary.

Any party desiring to appeal this order must do so by the filing of a claim of appeal in the Michigan Court of Appeals within 30 days of the issuance of this order, under MCL 462.26. To comply with the Michigan Rules of Court's requirement to notify the Commission of an appeal, appellants shall send required notices to both the Commission's Executive Secretary and to the Commission's Legal Counsel. Electronic notifications should be sent to the Executive Secretary at mpscedockets@michigan.gov and to the Michigan Department of the Attorney General - Public Service Division at pungp1@michigan.gov. In lieu of electronic submissions, paper copies of such notifications may be sent to the Executive Secretary and the Attorney General - Public Service Division at 7109 W. Saginaw Hwy., Lansing, MI 48917.

MICHIGAN PUBLIC SERVICE COMMISSION

Sally A. Talberg, Chairman

Norman J. Saari, Commissioner

Rachael A. Eubanks, Commissioner

By its action of December 20, 2017.

Kavita Kale, Executive Secretary

Integrated Resource Plan

Filing Requirements

Pursuant to Public Act 341 of 2016, Section 6t

Application Instructions for Integrated Resource Plan Filings

These application instructions apply to a standard electric utility application for Michigan Public Service Commission (Commission) approval of an Integrated Resource Plan (IRP) under the provisions of MCL 460.6t, as well as an IRP that may be filed under the provisions of MCL 460.6s.[1] The application shall be consistent with these instructions, with each item labeled as set forth below. Any additional information considered relevant by the utility may also be included in the application.

Schedule

A utility shall coordinate with the Commission Staff (Staff) in advance of filing its application to avoid resource challenges with IRP applications being filed at the same time as IRP applications filed by other utilities. A utility may be requested to delay its IRP application to preserve a 21-day spacing between IRP applications.

Following the initial IRP applications, the utilities shall comply with all future filing deadlines directed by the Commission and shall continue to coordinate with the Staff to schedule future IRP application filing dates.

Filing Announcement

To facilitate the scheduling and preparation of IRP proceedings, a utility, who intends to file an IRP on a date other than its scheduled filing date, shall file a filing announcement, in a new docket, at least 30 calendar days prior to the proposed filing. The filing announcement, along with a proof of service, shall be served on all parties granted intervention in the utility's last IRP case and the utility's last electric rate case. If the IRP described in the filing announcement is not filed within 120 days after filing of the announcement, the filing announcement will be considered withdrawn. If a

[1]Variations from the standard instructions may occur as allowed by MCL 460.6t(4) for multistate utilities and those serving fewer than 1 million Michigan customers.

certificate of necessity (CON) is also being filed, the same filing announcement would serve as the filing announcement required for the CON.

The filing announcement shall include:

a) Statement of intent to file an IRP;
b) Estimated date of filing;
c) Information related to any stakeholder engagement meetings that have already taken place or are scheduled to take place; and
d) Information related to any CON application that would be filed with the utility's IRP.

The Commission may, if necessary, order a delay in filing an application to establish a 21-day spacing between filings. The filing announcement shall be submitted at least 30 calendar days prior to the IRP application, thus providing the Commission with sufficient time to issue an order regarding the 21-day spacing if it so chooses.

Pre-Filing Request for Proposals

Each electric utility whose rates are regulated by the Commission shall issue a request for proposals (RFP) to provide any new supply-side capacity resources needed to serve the utility's reasonably projected electric load, applicable planning reserve margin, and local clearing requirement for its customers in this state, as well as customers located in other states but served by the utility, during the initial three-year planning period to be considered in each IRP to be filed, as outlined in MCL 460.6t. The utility shall comply with the following:

a) The utility shall include with the IRP application documentation demonstrating that the RFP process was completed;
b) The utility's RFP process is subject to audit by the Staff;
c) The IRP filing shall include evidence that the pre-filing RFP process was conducted in a manner consistent with the Commission's code of conduct, and applicable state, federal, and Commission rules;

d) The RFP shall allow for proposals to provide new supply-side capacity resources to partially meet the requirement, pursuant to MCL 460.6t(6); and
e) The RFP shall allow for proposals to provide new supply-side capacity in the form of a purchase power agreement for a period that is the lesser of the study period or of the useful life of the resource type proposed.

Stakeholder Engagement and Public Outreach Process

Participant engagement early in the development of the IRP is strongly encouraged to: (1) educate potential participants on utility plans; (2) utilize a transparent decision-making process for resource planning; (3) create opportunity to provide feedback to the utility on its resource plan; (4) encourage robust and informed dialogue on resource decisions; and (5) reduce utility regulatory risk by building understanding and support for utility resource decisions. The utility may choose to incorporate some, or all, of the participant input in its analysis and decision-making for the IRP filing.

In the 12 months prior to the IRP filing, each utility is encouraged to host update workshops with interested participants. The purpose of the pre-filing workshop(s) is to ensure that participants have the opportunity to provide input and stay informed regarding: (1) the assumptions, scenarios, and sensitivities; (2) the progress of the utility's IRP process; and (3) plans for the implementation of the proposed IRP. Documentation demonstrating the public outreach process undertaken by the utility shall be included with the IRP filing. Documentation may include:

a) Workshop dates and times, including times outside of the workday;
b) Evidence that notice of the workshops was provided to the public;
c) Meeting minutes;
d) Meeting or workshop attendance lists;
e) Participant comments on the last approved IRP and/or inputs into the proposed IRP application; and

f) Discussion indicating if or how the public outreach process influenced the IRP.

A minimum of two stakeholder engagement workshops are recommended. A stakeholder engagement workshop will provide stakeholders with an opportunity to provide input regarding the utility's assumptions, inputs, and modeling methodologies employed during the development of the IRP. The utility is encouraged to invite stakeholders, including expected intervenors and the Staff, to its stakeholder engagement workshops.

If the stakeholder engagement workshops are not open to the public, two additional public meetings are recommended. The public meetings are intended to educate the public on the utility's planning process as well as provide an opportunity for the public to comment. The public meetings should be offered in the utility's service territory in geographic locations convenient to customers, with advanced notice provided to customers in the utility's service territory. The utility is encouraged to consider holding public meetings after normal business hours to encourage attendance.

If the utility chooses to hold pre-filing workshops, including stakeholder engagement workshops or public meetings, the utility shall prepare a public outreach report to document the outcomes of any pre-filing workshops, and shall file the report with the IRP application.

Risk Assessment Methodology

The utility's IRP filing shall include a thorough risk analysis of the preferred plan and the optimal plans for each of the scenarios specified in the Michigan Integrated Resource Planning Parameters (MIRPP), as well as all additional scenarios and sensitivities filed with the IRP application. The plans should be feasible and differ in generation mix from the preferred plan and MIRPP plans. The intent of the risk assessment is to test the optimized resource strategies for each scenario to determine how each strategy would perform in an unexpected range of possible futures. The IRP shall include a discussion of the methodology used for risk analysis including the utility's justification for the chosen methodology over other alternatives. Acceptable forms of risk analysis include, but are not limited to, the following: scenario analysis, global sensitivity analysis, stochastic optimization, generating near-optimal solutions, agent-based stochastic optimization, mean-variance portfolio analysis, and Monte Carlo simulation.

Confidential Information

Transparency and the use of data that can be shared with the Commission, the Staff, and intervenors is encouraged. Proprietary, confidential, and other nonpublic materials used in the development of the forecasts, scenarios, or other aspects of the IRP shall be presented in such a way that the proprietary and confidential nature of the materials is preserved. The use of publicly available data and materials is encouraged in lieu of proprietary and confidential materials, and claims that information is proprietary or confidential should be justified by the utility.

Inclusion of specific materials in the IRP filing may be contingent upon appropriate confidentiality agreements and protective orders. Proprietary, confidential, and other nonpublic materials filed as part of the IRP shall be clearly designated by the utility as confidential.

Approval of Costs

For the Commission to specify the costs to be approved for the construction of or significant investment in supply or demand-side facilities, or contractual agreements, excluding short-term market capacity purchases to meet state reliability mechanism capacity requirements, in accordance with MCL 460.6t(11) through (12), the following information, data, and documents shall be provided:

I) For specific supply-side resources (inclusive of storage technologies such as battery storage) of less than 225 megawatt (MW) (this threshold shall be applied to the nameplate capacity of a project, not individual generators, storage facilities, etc.), that are planned to go into service within three years following the approval of the IRP, the following evidence (covering the lifespan of the project) shall be provided:

a) A description of the plant size, type, and summary of engineering/design specifications. The description shall also include the following:
    i. Description of fuel use, both primary and back-up, and provisions for transporting and storing fuel;
    ii. Projected annual costs, in accordance with the breakdown specified in the Federal Energy Regulatory Commission Uniform System of Accounts; and
    iii. Annual depreciation on the capital investment;
b) Projected annual return and income taxes on capital investment;
c) The operation and maintenance (O&M) costs over the life of the facility described as costs which are variable, in current dollars per kilowatt-hour (kWh), with expenses for fuel and non-fuel items indicated separately; and costs which are fixed, in current dollars per kilowatt;
d) Projected property taxes;
e) The rates of escalation of cost, including:
    i. Capital costs;
    ii. O&M costs which are variable and related to fuel;
    iii. O&M costs which are variable and unrelated to fuel; and
    iv. O&M costs which are fixed;
f) The total annual average cost per kWh at projected loads in current dollars for each year of the plan for the proposed facility;
g) Equivalent availability factors, including both scheduled and forced outage rates;
h) Capacity factors for each year in the planning period;
i) Operation cycle (i.e., baseload, intermediate, or peaking), identifying expected hours per year of operation, number of starts per year, and

cycling conditions for each year in the planning period;

j) Heat rates (efficiency) for various levels of operation;

k) Unit lifetime, both for accounting book purposes and engineering design purposes, with explanations of differences;

l) Lead time, separately identifying the estimated time required for engineering, permitting and licensing, design, construction and pre-commercial operation date testing;

m) Potential socioeconomic impacts, such as employment, for the local region of the proposed supply-side resource, construction of or significant investment in an electric generation facility, or the purchase of an existing electric generation facility.

II) Renewable Resources: The utility shall file data consistent with its renewable energy plan. (For incremental renewable energy beyond the 15% requirement in 2021 and any renewable energy to be constructed or purchased after the conclusion of the 20-year renewable planning period ending in 2029, the utility shall file as set forth below.) Revenue requirement and incremental costs of compliance shall be calculated to include the following:

a) Capital, operating and maintenance costs for renewable energy systems (including property taxes and insurance for renewable energy systems);

b) Financing costs;

c) Costs that are not otherwise recoverable in base rates including interconnection and substation costs;

d) Ancillary service costs;

e) Cost of purchased renewable energy credits (RECs) other than those purchased for non-compliance;

f) Cost of contracts;

g) Expenses incurred as a result of governmental action including changes in tax or other laws;

h) Subtract revenues (i.e., transfer price, environmental attributes, interest on regulatory liability, etc.) through 2029;

i) Recovery to include the authorized rate of return on equity, which will remain fixed at the rate of return and debt to equity ratio that was in effect in base rates when the renewable plan was approved (only through 2029); and

j) Provide the following information in relation to renewable resource cost recovery:

   i. Forecast through the end of the renewable plan period of the non-volumetric surcharge; and

   ii. Forecast through the end of the renewable plan period of the regulatory liability balance.

III) Demand Response and Energy Waste Reduction: The utility shall provide the following information in relation to demand response programs, energy waste reduction programs, and distributed generation programs cost approval and recovery. For each individual program or group of programs, provide:

a) Total annual cost including:

   i. Annual O&M cost for each individual portfolio of energy waste reduction, demand response, and distributed generation programs;

   ii. Annual capital cost for each individual portfolio of energy waste reduction, demand response, and distributed generation programs; and

   iii. Expected cost-sharing or financial incentive granted to the utility by the Commission;

b) Total demand reduction potential (MW), including the amount of load reduction and the expected hours of interruption per day, month, and year for each program, if applicable;

c) Maximum single event demand reduction;

d) Total resource capacity (MW) and type (load modifying resource, emergency demand response, etc.) reported to the applicable regional transmission organization (RTO)/independent system operator (ISO);

e) Total energy reduction achieved (megawatt-hours (MWh)); and
f) Description of program, including customer enrollment, technology used, and marketing plan.

Waivers and Process for Smaller and Multistate Utilities

An electric utility with fewer than 1,000,000 customers in this state may request a waiver to any portion of these IRP filing requirements. Any request for a waiver shall include a discussion and justification outlining why the waiver is warranted and in the best interest of its customers. Discussion and justification for the requested waiver shall include a description of the utility's current and forecasted energy and capacity needs, and its plan for meeting those needs over the upcoming ten years.

If the utility requires resolution of a waiver request prior to filing an IRP application, the utility shall file the waiver request no less than 60 days prior to the filing of the IRP application.

An electric utility with fewer than 1,000,000 customers in this state may request approval from the Commission to file an IRP jointly with other smaller utilities. Commission approval is required prior to filing a joint IRP.

A non-multistate Michigan electric utility serving fewer than 1,000,000 customers may elect to file an IRP, based on its specific circumstances, that deviates from these requirements, but that is subject to the Staff's ability to request supplemental information. The filing shall include an explanation of why the deviations are reasonable under its circumstances. The Commission shall review any such filings under the traditional "just and reasonable" standard.

Northern States Power Company-Wisconsin and Indiana Michigan Power Company are utilities located in Michigan that already file multistate IRPs in other jurisdictions. Due to the provisions in MCL 460.6t(4) regarding multistate IRPs, Northern States Power Company-Wisconsin and Indiana Michigan Power Company may utilize the IRP filing requirements of another state in accordance with those provisions. However, the Commission reserves the right to request additional information to facilitate its review of the IRP as it relates to Michigan.

IRP Report and Documentation

The utility's IRP filing shall demonstrate compliance with MCL 460.6t and include the following items:

a) Letter of transmittal expressing commitment to the approved preferred resource plan and resource acquisition strategy and signed by an officer of the utility having the authority to commit the utility to the resource acquisition strategy, acknowledging that the utility reserves the right to make changes to its resource acquisition strategies as appropriate due to changing circumstances;
b) Technical volume(s) that fully describe and document the utility's analysis and decisions in selecting its preferred resource plan and resource acquisition strategy;
c) The data and information requested in the Commission's IRP filing requirements included herein; and
d) Any other information deemed relevant by the utility.

The utility's IRP filing shall include an IRP document(s) that fully describes and documents the utility's analysis and decisions in selecting its preferred resource plan and resource acquisition strategy. To facilitate a similar format for each utility's application, the utility is encouraged to align its report with this provided outline and include at least the following items:

I) Executive Summary:

An IRP shall include an executive summary, suitable for distribution to the public. The executive summary shall be an informative non-technical description of the preferred resource plan and resource acquisition strategy. The executive summary shall summarize the contents of the IRP document and shall include the following:

a) An overview of the planning period examined in the IRP analysis and application; and
b) A brief introduction describing the utility, its existing facilities, existing purchase power arrangements, existing demand-side programs, existing demand-side rates, and the goal to be achieved by its proposed course of action and implementation strategy.

II) Table of Contents: Shall be provided.

III) Table of Figures: Shall be provided.

IV) Introduction:

The utility shall describe resource plans to satisfy at least the objectives and priorities identified in MCL 460.6t. The utility may identify and/or describe additional planning objectives that the resource plan will be designed to meet. The utility shall describe and document its additional planning objectives and its guiding principles to design alternative resource plans that consider the planning objectives and priorities. The introduction shall include the following:

a) General description of the utility's existing energy system, including:
   i. Net present value of utility revenue requirements,[2] with and without any financial performance incentives for demand-side resources;
   ii. Revenue requirement of existing generation and power

[2]The assumed discount rate shall be included along with a justification for the assumed discount rate. Results should be presented in nominal dollars.

purchase agreements;

iii. Summary of existing generation and power purchase agreements by fuel type;

iv. Utility's existing capacity resource mix;

v. Utility's service territory and breakdown of customer class composition; and

vi. Description of planning period analyzed;

b) Statement of power need;

c) Identify and explain the basis for the forecasted price of energy, capacity, and fuels, and of peak demand and energy requirements, for each year of the analysis used in each scenario and sensitivity evaluated by the utility as part of the IRP process;

d) Market and regulatory environment influencing resource planning decisions:

i. RTO market and state regulation structure if a multistate utility;

ii. Potential changes to RTO capacity market;

iii. Electric customer choice;

iv. Transmission expansion;

v. Environmental;

vi. Renewable portfolio standards; and

vii. Other;

e) IRP planning process; and

f) Stakeholder report.

V) Analytical Approach:

a) Describe the modeling process, including the duration of the study;

b) Describe and provide a justification for the risk analysis approach adopted from the Risk Assessment Methodology section:

i. The utility shall describe and document its quantification of the risk that affects the evaluation of the various preferred resource plan options;

ii. The utility shall provide a tabulation of the key quantitative results of that analysis and a discussion of how those findings affected its decision on a resource plan;

c) The utility shall describe and document the identification of risk variables and/or combinations of risk variables selected, their ranges, probabilities, ranking, and/or weighting that defines the risk quantification which the various preferred resource plan options were judged; describe how these risk variables were judged to be appropriate and explain how these were determined; and describe the modeling tools and data sources employed during the capacity expansion, and other modeling processes.

VI) Integrated Resource Plan Scenarios and Sensitivities:

a) Include a detailed description of all scenarios and sensitivities;
b) In addition to the utility's own scenarios and assumptions, the inclusion of the established modeling scenarios and assumptions in the MIRPP approved by the Commission in Case No. U-18418, or as revised by subsequent Commission orders related to IRP modeling parameters and requirements.

VII) Existing Supply-Side (Generation) Resources:

Detailed account of projected energy and capacity purchased or produced by the utility's owned and contracted resources, including cogeneration resources. Include data regarding the utility's current generation portfolio, including the age, capacity factor, licensing status, and remaining estimated time of operation for each facility in the portfolio:

a) Overview;
b) Fossil-fueled generating units;
c) Nuclear generating units;
d) Hydroelectric generating units;

e) Renewable generating units;

f) Energy storage facilities;

g) Power purchase agreements: energy and capacity purchased or produced by the utility from a contracted resource, including any cogeneration resource;

h) RTO capacity credits and modeling of existing units (such as capacity factor, heat rate, outage rate, in-service and retirement dates, operating costs, etc.);

i) Spot market purchases and off-system sales.

VIII) Demand-Side Resources:

Historical and projected load management and demand response programs for the utility in terms of MW and Midcontinent Independent System Operator, Inc., Zonal Resource Credits (ZRCs) and the projected costs for those programs.

a) Provide data on projected enrolled capacity and demand response events for each program. The following items are to be included:

   i. Description of current demand response and load management programs for the IRP study horizon, including the amount of load reductions and the expected hours of interruption per day, month, and year for each program;

   ii. Describe the utility's method for determining whether to purchase energy rather than relying on demand response;

   iii. A description of any other programs the utility is considering that could potentially expand demand response resources, including expected load reductions and operating parameters.

IX) Renewables and Renewable Portfolio Standards Goals:

Projected energy purchased or produced by the utility from a renewable energy resource.

a) Describe how the electric provider will meet existing renewable energy standards. If the level of renewable energy purchased or produced is projected to drop over the planning periods, the utility must demonstrate why the reduction is in the best interest of ratepayers;

b) Specify whether the number of MWh of electricity used in the calculation of the renewable energy credit portfolio will be the previous 12-month period of weather-normalized retail sales or based on the average number of MWh of electricity sold by the electric provider annually during the previous three years to retail customers in this state;
c) Include the expected incremental cost of compliance with existing renewable energy standards for the required compliance period;
d) A description of how the electric provider's plan is consistent with the renewable energy goals required by the Michigan Legislature (e.g. 35% combined renewable energy and energy waste reduction goal by 2025);
e) Describe the options for customer-initiated renewable energy that will be offered by the electric provider and forecast sales of customer-initiated renewable energy;
f) Describe how the electric provider will meet the demand for customer-initiated renewable energy.

The following non-exhaustive list suggests several elements that may be included:

a) Sales forecast through 2021 for compliance with the renewable energy standard, through 2025 toward meeting the 35% goal, and through the study period;
b) Detailed resource plan:
    i. Describe the utility's planned renewable energy credit portfolio;
    ii. Forecast RECs obtained via Michigan incentive RECs;
    iii. Forecast expected compliance levels by year to meet the renewable portfolio targets;

- iv. Identify key assumptions used in developing these forecasts and the proposed resource portfolio;
- v. Identify risks which may drive performance to vary.

X) Peak Demand and Energy Forecasts:

A long-term forecast of the utility's sales and peak demand under various reasonable scenarios. Include details regarding the utility's plan to eliminate energy waste, including the total amount of energy waste reduction expected to be achieved annually, and the cost of the plan:

- a) A forecast of the utility's peak demand and details regarding the amount of peak demand reduction the utility expects to achieve, and the actions the utility proposes to take in order to achieve that peak demand reduction;
- b) Subsections:
  - i. Key variables used to develop forecast;
  - ii. Long-term forecasting methodology;
  - iii. Forecasting uncertainty and risks;
  - iv. Historical growth in electric sales for the previous five years, including a record of its previous load forecasts (can be supplied in workpapers);
  - v. Business as usual deliveries and demand forecast;
  - vi. Alternative forecast scenarios and sensitivities in accordance with the Commission's final order in Case No. U-18418, or subsequent Commission orders relating to IRP modeling parameters and requirements.

XI) Capacity and Reliability Requirements:

The utility shall indicate how it complies, and will comply, with all applicable state, federal, ISO, RTO capacity and reliability regulations, laws, rules and requirements, (such as planning reserve margins, system reliability and ancillary service requirements) including the projected costs/revenues of complying with those regulations, laws, and rules. The utility shall include data regarding the utility's current generation portfolio, including the age, capacity factor, licensing status, and remaining estimated time of operation for each facility in the portfolio.

XII) Transmission Analysis:

In accordance with MCL 460.6t(5)(h), the utility shall include an analysis of potential new or upgraded electric transmission options for the utility. The utility's analysis shall include the following information:

a) The utility shall assess the need to construct new, or modify existing transmission facilities to interconnect any new generation and shall reflect the estimated costs of those transmission facilities in the analyses of the resource options;
b) A detailed description of the utility's efforts to engage local transmission owners in the utility's IRP process in an effort to inform the IRP process and assumptions, including a summary of meetings that have taken place;
c) Current transmission system import and export limits as most recently documented by the RTO and any local area constraints or congestion concerns;
d) Any information provided by the transmission owner(s) indicating the anticipated effects of fleet changes proposed in the IRP on the transmission system, including both generation retirements and new generation, subject to confidentiality provisions;
e) Any information provided by the transmission owner(s), including cost and timing, indicating potential transmission options that could impact the utility's IRP by: (1) increasing import or export capability; (2) facilitating power purchase agreements or sales of energy and capacity both within or outside the planning zone or from neighboring RTOs; (3) transmission upgrades resulting in increasing system efficiency and reducing line loss allowing for greater energy delivery

and reduced capacity need; and (4) advanced transmission and distribution network technologies affecting supply-side resources or demand-side resources.

XIII) Fuel

The utility shall include the following:

a) Overview;
b) Natural gas price forecasts under the various scenarios;
c) Oil price forecasts under the various scenarios;
d) Coal price forecasts under the various scenarios;
e) Delivered natural gas prices to existing and new utility-owned generating plants;
f) Delivered oil prices to existing and new utility-owned generating plants;
g) Delivered coal prices to existing and new utility-owned generating plants;
h) Projected annual fuel costs under the various scenarios; and
i) The projected long-term firm gas transportation contracts or natural gas storage the utility will hold to provide an adequate supply of natural gas to any new and existing generation facility.

XIV) Resource Screen:

Describe the utility's options of resources, including combinations of resources, to serve future electric load such as utilizing existing and planned generation resources, build a new facility, purchasing capacity from the market on a short-term basis, and purchasing capacity through a power purchase agreement. The following sections shall discuss each option in detail and options shall be considered in combination to serve future electric load. As described below, workpapers with information on the costs of each resource option and combination of resource options shall be provided with the utility's filing:

a) Existing and planned generation;

b) New build:

   i. New generation technology and operating assumptions;

   ii. New generation development costs;

   iii. New energy integration of storage technology and operating assumptions;

   iv. New energy storage development costs;

c) Distributed generation:

   i. Solar photovoltaic (including solar plus storage);

   ii. Biogas;

   iii. Energy storage;

   iv. Other distributed generation;

d) Market capacity purchases:

   i. Regional market supply outlook;

   ii. Availability of market capacity;

   iii. Market capacity price assumptions;

e) Long-term power purchase agreements;

f) Transmission resources:

   i. Overview;

   ii. Existing import and export capability;

   iii. Transmission network upgrade assumptions for the IRP; and

   iv. Import and export impact on resource strategy.

XV) Modeling Results:

An analysis of the capital costs, energy production, energy production costs, fuel costs, energy served, capacity factor, emissions (levels and costs), and viability of all reasonable options available to meet projected energy and capacity needs, including, but not limited to, existing electric generation facilities in this state. The following suggest specific items to be included. They are not necessarily exhaustive.

a) Description of IRP portfolio design strategy (portfolio optimized for least cost, value maximization, reliability, risk minimization, environmental specification etc., or a particular combination);

b) Scenario and sensitivity results, including annual revenue requirements, present value of annual revenue requirements and net present value of revenue requirements, and portfolio capacity including additions and retirements. Include monthly and annual energy pricing, and resource capacity and load factors;
c) Business as usual/reference case portfolios options to be selected from;
d) Analysis of IRP results; and
e) Risk assessment of each scenario.

XVI) Proposed Course of Action:

Include a detailed description of:

a) The type of generation technology proposed for a generation facility contained in the plan and the proposed capacity of the generation facility, including projected fuel costs under various reasonable scenarios;
b) Plans for meeting current and future capacity needs with the cost estimates for all proposed construction and major investments, including any transmission or distribution infrastructure that would be required to support the proposed construction or investment, and power purchase agreements;
c) The projected long-term firm gas transportation contracts or natural gas storage the utility will hold to provide an adequate supply of natural gas to any new generation facility; and
d) How the utility will meet local, state, and federal laws, rules, and regulations under the proposed course of action.

The utility shall describe the process used to select the preferred resource plan, including the planning principles used by the utility to judge the appropriate tradeoffs between competing planning objectives and between expected performance and risk. The utility shall describe how its preferred resource plan satisfies the following:

a) Strike an appropriate balance between the various planning objectives specified;
b) Utilize renewable and demand-side resources to comply with existing laws and goals and, in the judgment of the utility, are consistent with the public interest and achieve state energy policies; and
c) In the judgment of the utility, the preferred plan, in conjunction with the deployment of demand response measures, has sufficient resources to serve load forecasted for the implementation period.

The utility shall develop an implementation plan that specifies the major tasks, schedules, and milestones necessary to implement the preferred resource plan over the implementation period. The utility shall describe and document its implementation plan, which shall contain:

a) A schedule to report the status of an approved plan in accordance with MCL 460.6t(14);
b) A schedule and description of actions to implement ongoing and planned demand-side programs and demand-side rates;
c) A schedule and description of relevant supply-side resource research, engineering, retirement, acquisition, and construction;
d) A net present value revenue requirement comparison of its proposal and reasonable alternatives over the planning period utilized in the analysis. It shall also include the calculation and comparison of the net present value revenue requirement of the utility's proposed plan and alternative resource plans including the alternative resource plans resulting from the Commission-approved modeling scenarios. In addition, the utility shall provide support for its chosen discount rate and discuss how the results of its analysis would change with different discount rate assumptions.

XVII) Rate Impact and Financial Information:

Projected year-on-year impact of the proposed course of action (and other feasible options) for the periods covered by the plan, covering the following accounts:

a) Revenue requirement;
b) Rate base;
c) Plant-in-service capital accounts;
d) Non-fuel, fixed operations and maintenance accounts;
e) Non-fuel, variable operations and maintenance accounts;
f) Fuel accounts;
g) Emissions cost;
h) Effluent additive costs; and
i) Projected change in generation plant-in-service.

The utility shall describe the financial assumptions and models used in the plan. The plan shall include, at a minimum, the following financial information, together with supporting documentation and justification:

a) The general rate of inflation;
b) The allowance for funds used during construction rates used in the plan;
c) The cost of capital rates used in the plan (debt, equity, and weighted) and the assumed capital structure;
d) The discount rates used in the calculations to determine present worth;
e) The tax rates used in the plan;
f) Net present value of revenue requirements for the plan;
g) Nominal revenue requirements by year; and
h) Average system rates per kWh by year.

XVIII) Environmental:

Describe how the utility's proposed IRP will comply with all applicable local, state, and federal environmental regulations, laws, and rules:

a) Include a list of all environmental regulations that are applicable to the utility fleet. Identify which regulations apply to which resources;
b) Include all capital costs for compliance with new and reasonably expected environmental regulations for existing fleet assets in the utility IRP;
c) Provide an annual projection of the following emissions for the study period differentiating between existing and new resources within the proposed IRP:
    i. Tons of sulfur oxides;
    ii. Tons of oxides of nitrogen;
    iii. Tons of carbon dioxide;
    iv. Tons of particulate matter; and
    v. Pounds of mercury.
d) Provide the total projected emissions of the items listed below through the study period for the utility's proposed plan, as well as the scenarios identified in the MIRPP as approved in Case No. U-18418, or modified by Commission order:
    i. Tons of sulfur oxides;
    ii. Tons of oxides of nitrogen;
    iii. Tons of carbon dioxide;
    iv. Tons of particulate matter; and
    v. Pounds of mercury.

XIX) Exhibits and Workpapers:

The filing shall include exhibits and workpapers as outlined below, subject to any license or other confidentiality restrictions that are unable to be resolved by issuance of a protective order.

a) Any workpapers used in developing the application, supporting testimony, and IRP. Such workpapers shall, when possible, be provided in electronic format with formulas intact;
b) Any modeling input and output files used in developing the application,

supporting testimony, and IRP. Such modeling input and output files shall, when possible, be provided in electronic format with formulas intact. The utility shall also identify each modeling program used, and provide information for how interested parties can obtain access to such modeling program. Modeling inputs and outputs in the model-dependent binary format should be made available to parties that obtain a license;

c) Cost data and estimates that were used in the resource screening process to evaluate each electric resource that was considered either individually or in combination with other resources, including renewable alternatives, such as solar, wind, or solar plus battery storage;

d) A description, including estimated costs of each alternative proposal received by the utility;

e) A discussion of any differences between its short-term fuel price forecasts and capacity price curve in the IRP filing, and the short-term fuel price forecasts and capacity price curve in its last power supply cost recovery proceeding;

f) Identification and justification of the forecasted price of energy, capacity, and fuels, and of peak demand and energy requirements used in the IRP. The utility shall identify its base case forecasts and a range of sensitivities for each such factor, and explain how those sensitivities were identified. If the base case forecast(s) differs from recent previous forecasts submitted by the utility to the Commission in other cases, the utility shall provide an explanation for such differences;

g) Present an environmental compliance strategy which demonstrates how the utility will comply with all applicable federal and state environmental regulations, laws and rules. Included with this information, the utility shall analyze the cost of compliance on its existing generation fleet going forward, including existing projects being undertaken on the utilities generation fleet;

h) Estimated annual emissions of carbon dioxide and greenhouse gases, particulates, sulfur dioxides, oxides of nitrogen, and mercury per year and over the life of the facilities included in their IRP;

i) A comparison of total projected carbon emissions under each scenario and sensitivity analyzed, including quantifying the carbon emissions projected in each sensitivity as a percentage of the carbon emissions presented in the business as usual case;

j) The assumed retirement dates of the facilities included in the IRP, with justification provided for the assumed retirement dates;

k) An analysis that contains an individualized cost estimate for electric resources that were considered, including renewable alternatives, such as solar, wind, or solar plus battery storage, and such cost estimates for all alternative proposals, solicited or unsolicited, received by the utility;

l) Electricity market forecasts utilized; and

m) Other documents and data underlying the IRP analysis.

Certificate of Necessity

and

Integrated Resource Plan

Alternative Filing Requirements

Pursuant to Public Act 341 of 2016

Section 6s and 6t

Application Instructions for Alternative Proposals

These filing instructions apply to any supplier of electric generation capacity seeking to provide electric generation capacity resources to a utility submitting an integrated resource plan (IRP) under MCL 460.6t or a certificate of necessity (CON) application under the provisions of MCL 460.6s. The proposal shall be consistent with these instructions, MCL 460.6s(13), and MCL 460.6t(6), with each item labeled as set forth below. Any additional information considered relevant by the applicant may also be included in the application.

Pre-Filing Consultation

At any time prior to filing an alternative proposal, a supplier may request a pre-filing consultation meeting with the Commission Staff (Staff). The purpose of the pre-filing consultation meeting is to assist the supplier in refining the alternative proposal filing and to facilitate efficient regulatory review. The Staff recognizes that all projects are not the same and that the information needed for one project will not necessarily be appropriate for the next. For some projects, a complete application may require less information than for others. For this reason, a pre-filing consultation is important and highly encouraged.

Filing Announcement

Notice that a supplier of electric generation capacity intends to file an alternative proposal shall be filed at least 30 days prior to filing a detailed alternative proposal that meets the requirements of this document. The 30-day notice shall be filed in the docket in which the utility filed the initial application. The notice shall include a description of the proposal and proof of service to all parties in the case.

Intervention Status

A supplier of electric generation capacity that intends to file an alternate proposal must request and be granted intervention in the contested case for which the utility has filed its IRP and/or CON application, pursuant to MCL 460.6s(13) and MCL 460.6t(6).

Filing the Alternative Proposal

A supplier of electric generation capacity that intends to file an alternative proposal must file the proposal in the contested case, and the proposal shall be sponsored by a witness for the supplier who will be subject to appropriate discovery and cross examination. All alternative proposals shall be filled within 90 days of the date the application was filed by the utility initiating the contested case for a CON, an IRP, or a contested case containing both a CON and an IRP.

Alternative Proposal Information

All alternative proposals shall contain the following information about the supplier:

a) A description of the developer's/supplier's qualifications including a description of the developer's/supplier's experience in constructing or operating similar facilities;
b) A description of financial standing and credit worthiness;
c) The name, title, and business address of a person to whom correspondence should be directed; and
d) An estimate of capital and operational costs associated with the alternative proposal.

Confidential Information

Proprietary, confidential, and other nonpublic materials filed as part of the application shall be clearly identified and marked accordingly and presented in such a way that the proprietary and confidential nature of the materials is preserved pending the execution of any confidentiality agreements and issuance of protective orders. Availability of specific materials in the application may be contingent upon appropriate confidentiality agreements and protective orders.

Detailed Cost Information

The supplier is not required to disclose detailed cost information provided in response to requests for quotes from potential project contractors any sooner than 120 days after the filing of the utility application and then only after appropriate protective orders and non-disclosure certificates/agreements have been executed.

The supplier filing the alternative proposal may provide a cost update on or before 150 days from the date the utility's application was filed.

Contents of the Alternative Proposal

A utility seeking to construct a new electric generation facility or to make a significant investment in an existing facility, or enter into a power purchase agreement (PPA) shall include the following information:

I) New or Existing Electric Generation Facility (excluding a power purchase agreement):
   a) If applicable, a written description of the proposed or existing site, including identification of the municipality in which the facility will be constructed and the current use of that site;

b) If applicable, the age of the existing facility or facilities to be purchased or modified;
c) Expected generating technology and major systems (including major pollution control systems);
d) Expected nameplate capacity, availability, heat rates, expected life, and other significant operational characteristics;
e) Fuel type and sources, including the identification and justification of fuel price forecasts used over the study period;
f) The expected annual emissions of carbon dioxide and greenhouse gases, particulates, sulfur dioxides, volatile organic compounds, oxides of nitrogen, mercury, and other hazardous air pollutants over the life of the facility or contract, and an assessment of whether some or all anticipated emissions and any anticipated health impacts could be eliminated or reduced through the use of feasible and prudent alternatives;
g) Discussion of the rationale behind facility or investment technology, fuel, capacity, and other significant design characteristics;
h) A description of all major state, federal, and local permits required to construct and operate the proposed generation facility or the proposed facility upgrades in compliance with state and federal environmental standards, laws, and rules;
i) If applicable, the status of any transmission interconnection study and identification of any expected or required transmission system modifications;
j) If applicable, natural gas infrastructure required for plant construction and operation not located on the proposed site but required for plant construction and operation;
k) If applicable, a description of modifications to existing road, rail, or waterway transportation facilities not located on the proposed site but required for plant construction and operation;
l) If applicable, water and sewer infrastructure required for

construction and operation not located on the proposed site but required for plant construction and operation;

m) A basic schedule for development and construction, which includes an estimated time between the start of construction, major milestones, and commercial operation of the facility or facility upgrades;

n) An estimate of the proportion of the construction workforce that will be composed of residents of the state of Michigan;

o) For new construction and investment in an existing facility, the proposal shall include the expected typical annual costs associated with operating the facility including fuel, operations and maintenance, and environmental compliance;

p) Describe the effect of the proposed project on wholesale market competition;

q) Any workpapers used in developing the proposal; such workpapers shall, whenever possible, be provided in electronic format with formulas intact;

r) Any modeling input or output files used in developing the proposal; such modeling input and output files shall, whenever possible, be provided in electronic format with formulas intact. The applicant shall also identify each modeling program used, and provide information for how interested parties can obtain access to such modeling program; and

s) Any other information that the applicant considers relevant.

II) Purchase of Existing Facility:

a) As applicable, the estimated costs associated with purchasing the existing facility assets including the price to be paid for the assets, acquisition and transition costs, financing costs, and any significant financial liabilities that will accompany the asset transfer; and

b) The expected typical annual costs associated with operating the generation facility including fuel, operations and maintenance, and environmental compliance.

III) Power Purchase Agreement:

a) If applicable, a written description of generation facilities covered by the PPA, the size of each facility, generator technology, expected nameplate capacity, availability, heat rates, expected life, fuel type, other significant operational characteristics and the location of the generation facilities, including identification of the municipalities in which the facilities are located;
b) The name and address of the power provider supplying contract products and services under the PPA;
c) The date the resources covered by the PPA will be available, the proposed term of the PPA, and a description of significant contract provisions that could result in early termination of the contract;
d) The proposed price to be paid for capacity and energy contract products and services delivered under the PPA;
e) If the contract includes provisions which may result in an increase in cost due to the price of fuel, the fuel type and sources, including the identification and justification of fuel price forecasts used over the study period;
f) The annual expected emissions of carbon dioxide and greenhouse gases, particulates, sulfur dioxides, volatile organic compounds, oxides of nitrogen, mercury, and other hazardous air pollutants over the life of the facility or contract and a demonstration that regulated emissions from the facility will comply with applicable federal and state regulations;
g) Any workpapers used in developing the proposal. Such workpapers shall, whenever possible, be provided in electronic format with formulas intact;
h) If available, any modeling input or output files used in developing the proposal. Such modeling input and output files shall, whenever

possible, be provided in electronic format with formulas intact. The applicant shall also identify each modeling program used, and provide information for how interested parties can obtain access to such modeling program; and

i) A copy of the PPA, including an estimate of the capacity and energy payments to be made for contract products and services pursuant to the agreement. The estimated payments shall be presented on a yearly basis in nominal dollars over the primary term of the contract.