

# Integrated Resource Planning

Public Act 341

Michigan Public Service Commission



# Our Mission



Protect the public by ensuring **safe, reliable, and accessible energy** and telecommunications services **at reasonable rates** for Michigan's residents.

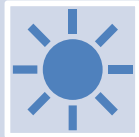
# Outline

- Introductions
- Purpose of Public Outreach Meeting
- MPSC Mission
- Integrated Resource Plans (IRPs)
  - Definition
  - Application Requirements
  - Modeling Scenarios
  - Case Process
  - Participation
- DTE Electric IRP filing
  - Intervention
  - Certificate of Necessity (CON)
  - Modeling Outcomes
  - Proposed Course of Action (PCA)
- MPSC Review Process
- Public Comments

# What is an Integrated Resource Plan?

An Integrated Resource Plan is a comprehensive plan developed by an electric utility which outlines its **future resource strategy** – how the electric utility will provide **reliable, cost effective** electric service to its customers while addressing the risks and uncertainties inherent in the utility industry.

# IRP Application Requirements



RENEWABLE  
ENERGY



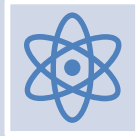
SALES  
FORECAST



ENERGY WASTE  
REDUCTION



ENVIRONMENTAL  
REGULATIONS



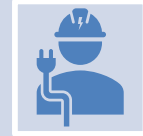
TRANSMISSION



EXISTING  
GENERATION

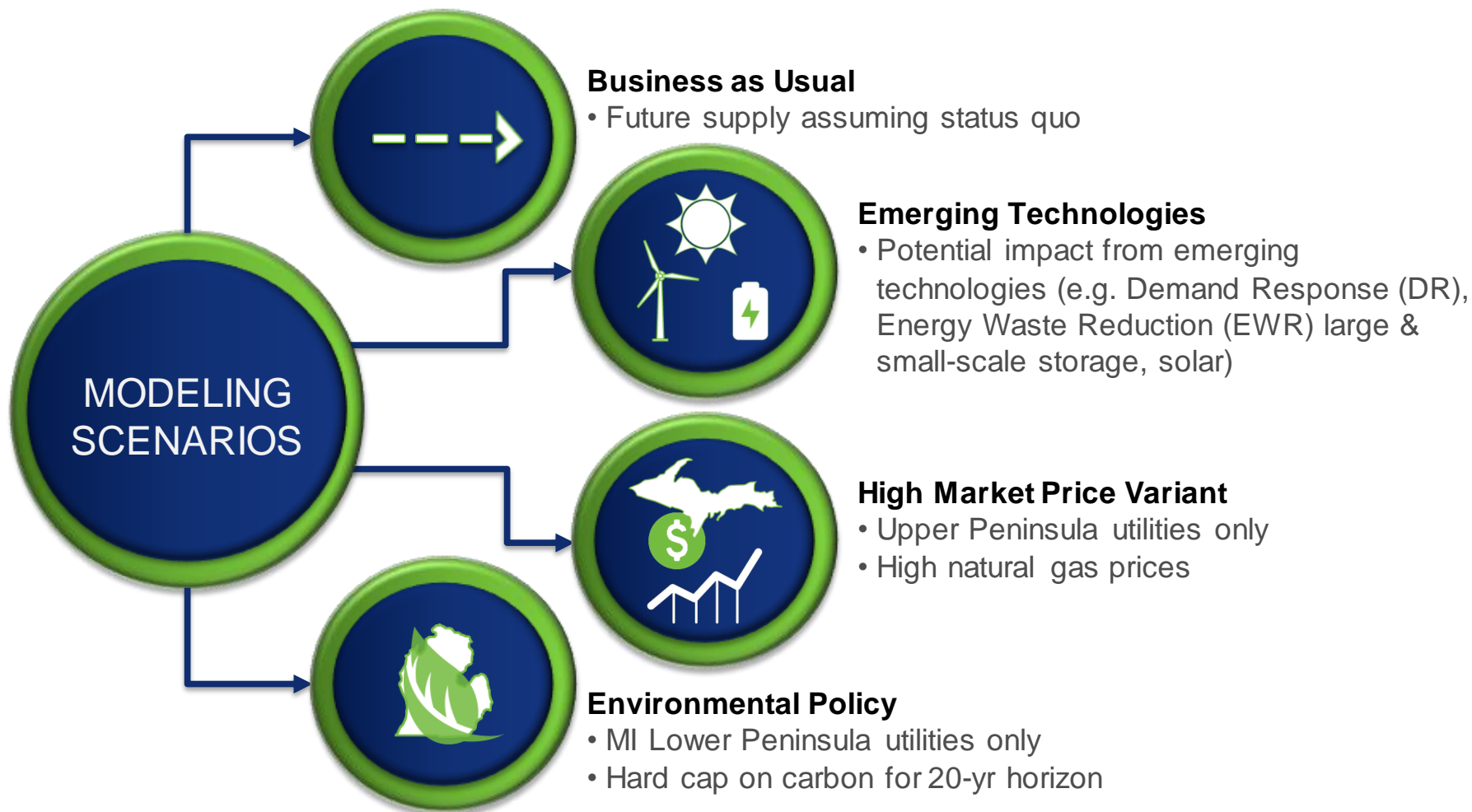


DEMAND  
RESPONSE



RELIABILITY

# IRP Modeling



# IRP Process

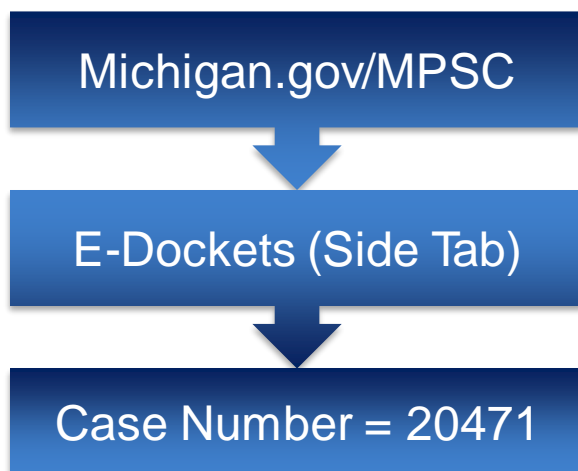


- The MPSC must determine whether an electric utility's IRP is the most reasonable and prudent means of meeting energy and capacity needs by considering whether the plan appropriately balances all of the following:
  - Resource adequacy
  - Compliance with applicable environmental regulations
  - Competitive pricing
  - Reliability
  - Commodity price risks
  - Diversity of generation supply
  - Whether the proposed levels of peak load reduction and energy waste reduction are reasonable and cost effective



# DTE IRP Filing at the MPSC

Case No. U-20471



[URL Link: U-20471 Docket](#)

Application Part One



Application Part Two



# Intervention



# Carbon Reduction Roadmap

30%  
Reduction  
2020s

50%  
Reduction  
2030

80%  
Reduction  
2040

## Coal Retirements

~ 2,000 MW by 2022

St. Clair Power Plant



1,260 MW

2022

River Rouge Power Plant



277 MW

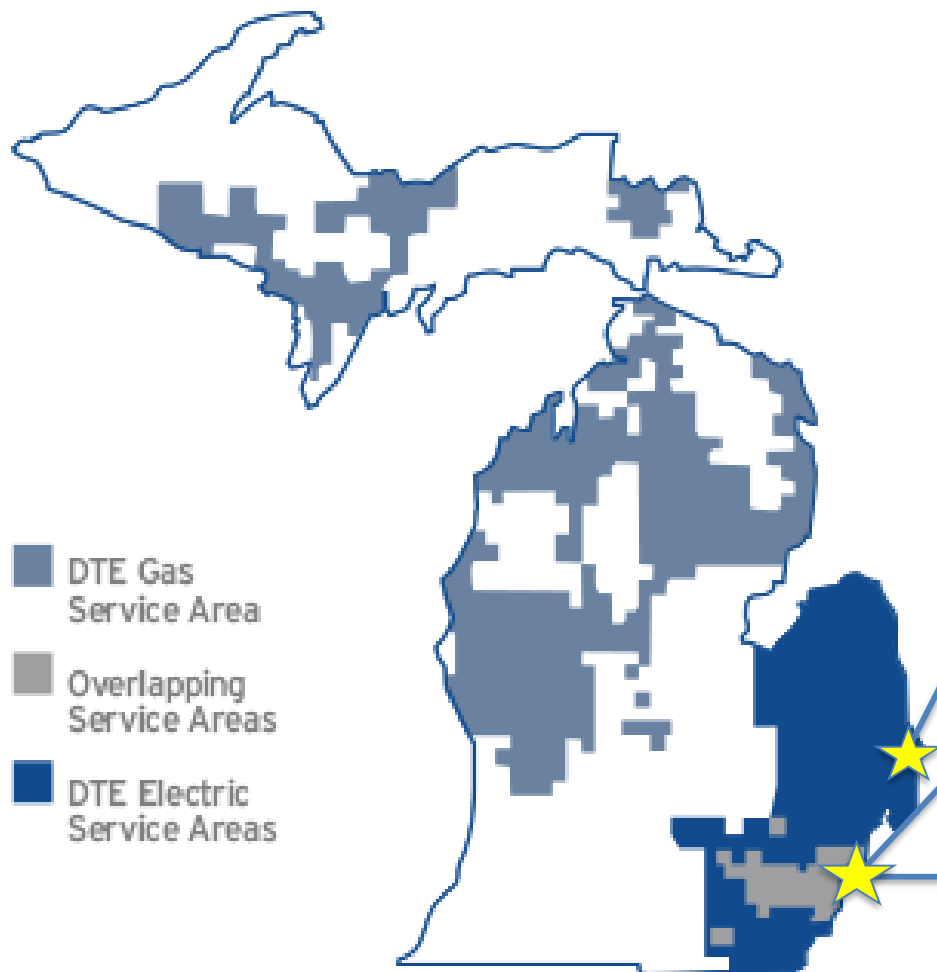
2020\*

Trenton Channel Power Plant



485 MW

2022



\* Will end coal use in 2020 and operate on natural and industrial gas until 2022.

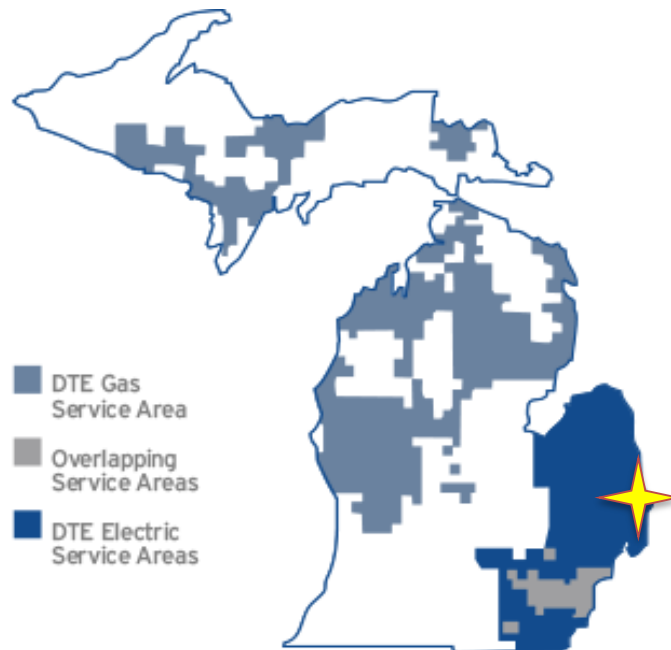
# Certificate of Necessity U-18419

## Blue Water Energy Center (BWEC)

- Approved April 2018
- 1,150 MW Natural Gas Combined Cycle Power Plant
- Located in St. Clair County
- Capacity to power 850,000 Michigan households.
- Construction began Spring 2019
- Operational Spring 2022



Source: DTE Energy



Source: DTE Energy

# Certificate of Necessity

## Commission Docket No. U-18419

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

\*\*\*\*\*

In the matter of the application of )  
**DTE ELECTRIC COMPANY** for approval of )  
certificates of necessity pursuant to MCL 460.6s, as ) Case No. U-18419  
amended, in connection with the addition of a natural )  
gas combined cycle generating facility to its )  
generation fleet and for related accounting and )  
ratemaking authorizations. )

At the April 27, 2018 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**

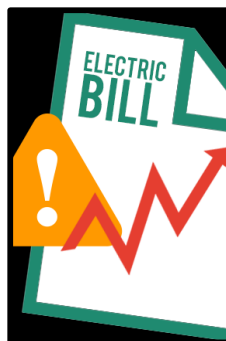
**I. HISTORY OF PROCEEDINGS**

On June 30, 2017, DTE Electric Company (DTE Electric) submitted a notice of intent to file an application requesting approval of certificates of necessity (CONs) pursuant to MCL 460.6s and the May 11, 2017 order in Case No. U-15896 (May 11 order). On July 12, 2017, the Commission issued an order in this case (July 12 order), providing guidance to the Administrative Law Judge because: "MCL 460.6s, as amended by Act 341, has not yet been subject to scrutiny or interpretation by the Commission . . . and because certain provisions of the amended version of MCL 460.6s involve novel procedural requirements." July 12 order, p. 2.

On July 31, 2017, DTE Electric filed an application, with supporting testimony and exhibits,



In DTE Electric Company's integrated resource plan, the Company shall include an additional scenario that evaluates a portfolio consisting of energy efficiency, renewable energy, demand response, storage, and other non-fossil fuel options, ramping up over the years preceding 2029



In DTE Electric Company's integrated resource plan filing on March 29, 2019, DTE Electric Company shall provide an updated rate impact analysis related to the approved project, consistent with the discussion in this order.



# DTE Modeling Scenarios

Scenario	Description
Business as Usual	<ul style="list-style-type: none"><li>Existing generation fleet largely unchanged</li><li>Units granted regulatory approval are modeled</li><li>Demand and energy remain at low loads</li><li>Thermal and nuclear generation retirements in the modeling footprint are driven by max age, public announcements, or economics</li></ul>
Emerging Technology	<ul style="list-style-type: none"><li>Technological advancement and economies of scale result in a 35% reduction in cost for demand response (DR), EWR, storage, and solar</li><li>Retirements of all coal units except the most efficient should be considered</li></ul>
Environmental Policy	<ul style="list-style-type: none"><li>Carbon regulations targeting a 30% reduction in 2030</li><li>Coal units primarily will retire based on carbon emissions, then economics</li><li>Lower renewable costs by 35%</li></ul>
DTE Reference	<ul style="list-style-type: none"><li>Utilize DTE gas forecast</li><li>Incorporate DTE CO<sub>2</sub> targets</li><li>Current retirement plan as starting point</li></ul>

# DTE Modeling Outcomes

Optimization modeling produced least-cost build plans across the four scenarios with differing energy waste reduction sensitivities.

## Business As Usual Case

### 2029-2030 Build Plans

Energy Waste Reduction	1.5%	1.75%	2.00%
Combined Cycle Gas Turbine	414 MW	414 MW	414 MW
Demand Response	167 MW	-	-
Wind	150 MW	-	-

## Emerging Technology Case

### 2029-2030 Build Plans

Energy Waste Reduction	1.5%	1.75%	2.00%
Combined Cycle Gas Turbine	414 MW	-	-
Demand Response	-	167 MW	-
Wind	1,500 MW	1,800 MW	1,050 MW

## Environmental Policy Case

### 2029-2030 Build Plans

Energy Waste Reduction	1.5%	1.75%	2.00%
Combined Cycle Gas Turbine	-	-	-
Demand Response	216 MW	167 MW	-
Wind	3,300 MW	3,150 MW	1,050 MW

## DTE Reference Case

### 2029-2030 Build Plans

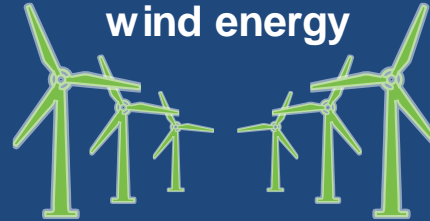
Energy Waste Reduction	1.5%	2.25%	2.5%
Combined Cycle Gas Turbine	414 MW	414 MW	414 MW
Demand Response	259 MW	-	-
Wind	-	-	-

# DTE's Proposed Course of Action (PCA)

Add 11 MW of  
solar plus storage



Add 693 MW of  
wind energy



Increase annual  
energy savings  
from EWR  
programs to 1.65%  
in 2020 and 1.75%  
in 2021

Conduct  
conservation voltage  
reduction and volt-var  
optimization pilot  
program  
by 2020

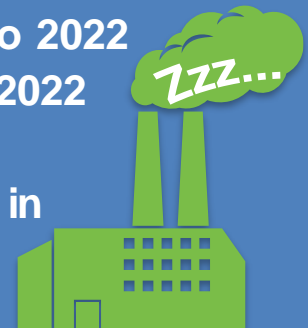


Increase demand  
response programs  
to 859 MW by 2024



## Coal Retirements

- Trenton Channel Power Plant accelerated to 2022
- St. Clair Power Plant Unit 7 accelerated to 2022
- St. Clair Unit 1 accelerated to 2019
- River Rouge Unit 3 will end the use of coal in 2020 and operate on recycled industrial gases and natural gas until 2022



Add VGP program  
renewables  
(MiGreenPower)  
between 465 MW and  
715 MW



# Public Comments

- Public Comments received today will be transcribed and included in the record for Commission consideration.
- Submit public comment via mail, e-mail or today
  - [https://www.Michigan.gov/MPSC/0,4639,7-159-16368\\_42136-151105--,00.html](https://www.Michigan.gov/MPSC/0,4639,7-159-16368_42136-151105--,00.html)
  - Mail (be sure to include case number):

Executive Secretary  
Michigan Public Service Commission  
P.O. Box 30221  
Lansing, Michigan 48909
  - E-mail: [mpscefilecases@michigan.gov](mailto:mpscefilecases@michigan.gov)
  - Statement at Public Hearing
  - Any written comments or e-mail sent to the Commission may be placed into the Commission's file on the case. As such, it will be available for public review and posted on the Commission's website within the docket, and it will be available for review by the Commission.
- Follow case development in docket number U-20471



# Thank you!

[Michigan.gov/MPSC](https://Michigan.gov/MPSC)

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# Appendix A

## U-20471 DTE IRP Case Schedule

Application Filed by Utility	March 29, 2019
Prehearing	April 26, 2019
Staff & Intervenor Filing	July 24, 2019
Rebuttal	August 22, 2019
Cost Estimate Update	August 26, 2019
Responses to Cost Update	August 30, 2019
Cross Examination	September 4-6 & 9-10, 2019
Initial Briefs	October 1, 2019
Reply Briefs	October 18, 2019
ALJ Proposal for Decision (PFD)	November 22, 2019
Exceptions to PFD	
Replies to Exceptions to PFD	
Commission Order	January 23, 2020
Recommended Changes to Order	
Utility Submits Revised IRP	
Order on Revised IRP	March 23, 2020