

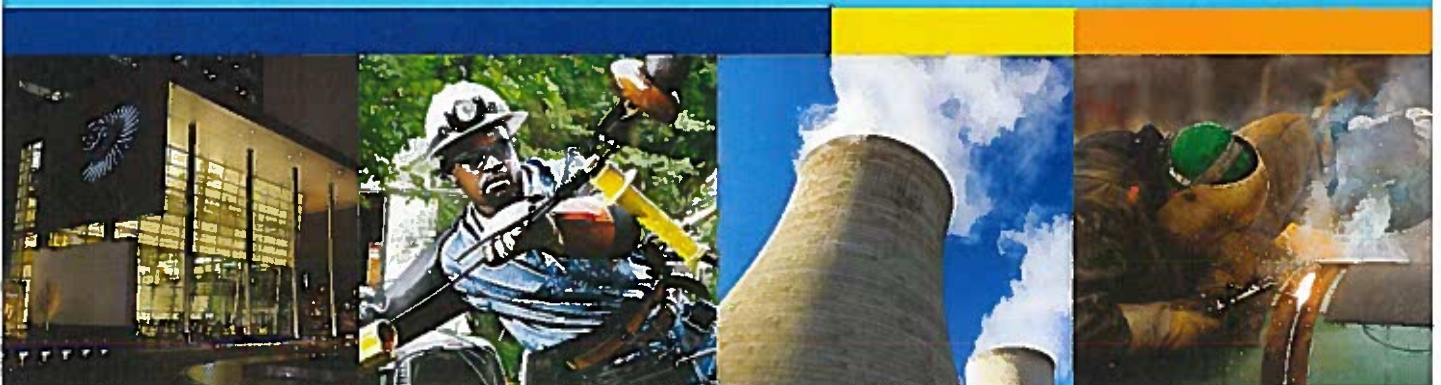


Overview of DTE Energy

House Energy Committee

February 6, 2019

Jerry Norcia, President and Chief Operating Officer of DTE Energy



Good morning Chairman Bellino, Vice Chair Wendzel, Vice Chair Lasinski, and members of the House Energy Committee. My name is Jerry Norcia. I am the President and Chief Operating Officer of DTE Energy. Thank you for providing the opportunity to share an overview of our company, our deep Michigan roots, and the transformation of the energy infrastructure that serves your constituents.

DTE has powered Michigan’s homes and businesses for 170 years. Once a small utility operation servicing the city of Detroit, today DTE is the largest energy company in Michigan with utility and non-utility subsidiaries. We have more than 10,000 employees, primarily in Michigan, and provide services here in Michigan and across the country. We aspire to be the best-operated energy company in North America and a force for growth and prosperity in the communities where we live and serve. That’s why we’re committed to providing affordable, reliable and safe power to our customers.

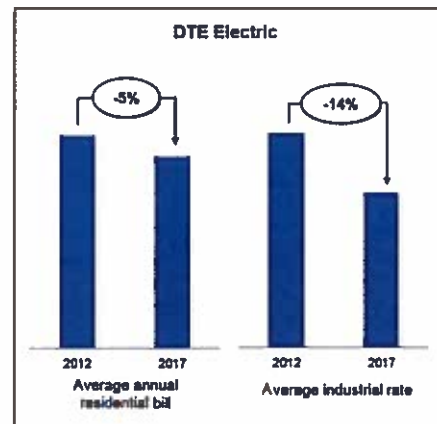
Like most utilities in the US, DTE’s electric and gas services are regulated by the state to ensure that Michigan’s families and businesses have safe, stable, and reliable access to affordable energy. DTE serves 2.2 million electric customers in Southeast Michigan, and we provide heat to 1.3 million homes and businesses across the Upper and Lower Peninsulas through our natural gas utility.

In addition to our statewide regulated electric and gas utilities, DTE also operates several non-utility services. These businesses are regulated by federal entities and operate both inside Michigan and in 20 states. DTE Gas Storage & Pipelines, or GSP, operates midstream natural gas assets, such as storage facilities and interstate pipeline infrastructure.

DTE Power & Industrial and DTE Trading provide a host of energy services to both manufacturers and energy providers. Power and Industrial services include on-site energy generation for large commercial or industrial customers and environmental protection controls. DTE Trading operations include the procurement of wholesale market energy to support utility planning across the country.

I will focus most of my comments today on our electric and gas utilities, as that is how we interact directly with your constituents on a more regular basis.

Affordability is top of mind for us as we replace and update our infrastructure. I want to raise that as the backdrop of how we operate as I share information with you this morning. Today, our average residential bills for electricity are 13 percent below the national average. Industrial customers have seen a decrease in their electricity rates amounting to 14 percent since 2012. Next year, residential gas customers will see a 31 percent decrease in their bills compared to 2010.¹ But our work to



¹ Assumes normal weather, excluding taxes; new rates to reflect \$9 million revenue deficiency rate request increase from October 2018; 2010-2015 assumes average annual usage of 95 Mcf (U-16999) and 2016-2017 assumes average annual usage of 93 Mcf (U-17999); 2018-2019 assumes 91 Mcf (U-18999)

ensure affordability isn't done, especially as we continue to make significant updates to our electric and gas infrastructure. I'm proud to say that both our electric and gas utilities lead the industry in controlling operation and maintenance, or O&M, costs. From 2007 to 2017, our industry peers increased their O&M costs, while DTE held flat for both electric and gas utilities.

We are also focused on providing best-in-class service to our customers. In 2018, DTE ranked highest in customer satisfaction with gas business customers in J.D. Power,² and second among our Midwest peers in residential customer satisfaction in both gas and electric service.³ While our electric utility previously ranked highest in customer satisfaction with business customers, we fell to 8th place in 2018.⁴ Customer satisfaction is something we are deeply focused on continuing to improve, as changes in energy infrastructure, like system construction, become more visible to customers.

Our employees' pride and passion for the work they do demonstrates their commitment to DTE's aspiration to become a force for growth and prosperity in the communities where we live and serve. The commitment of our workforce is reflected in our focus on safety, placing DTE in the National Safety Council's top 2 percent of companies for safety culture. Our dedicated team is ranked in the top three percent of the world in employee engagement and has earned six consecutive Gallup Great Workplace Awards. We remain the only energy company to ever win this award. In 2018, we were the first company in Michigan to receive the Civic 50 award for corporate citizenship. We were the highest-ranking energy company and the only Michigan-based company honored.⁵

Having a healthy company and a strong workforce means that we can invest in Michigan businesses and engage with local communities to create jobs and support the state's economy. Since 2010, DTE has invested more than \$9 billion with thousands of local businesses through the Pure Michigan Business Connect program. In 2018 alone, we spent \$1.73 billion with businesses across 76 counties. Our on-going investment has helped to create and support more than 16,000 Michigan jobs. We also partner with 38 economic development organizations across the state to support projects that bring new business to the communities we serve.



We at DTE know that Michigan's energy systems have a profound impact on our quality of life and the economy. The state has embarked on the most fundamental transformation of energy infrastructure since World War II. The way energy is generated, the systems that deliver and receive power, and characteristics of service are being

² J.D. Power 2018 Gas Utility Business Customer Satisfaction Study.

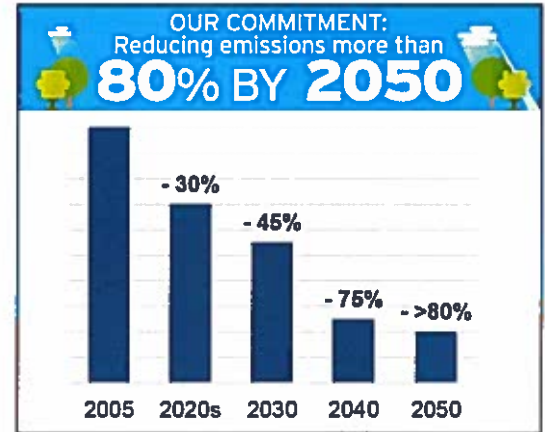
³ J.D. Power 2018 Electric and Gas Utility Residential Midwest Customer Satisfaction Study.

⁴ J.D. Power 2017 and 2018 Electric Utility Business Customer Satisfaction Study.

⁵ Points of Light's Civic 50 award recognizes the top 50 corporate citizens in the U.S., based on a structured and quantitative set of criteria.

modernized in ways that will increase value to customers and produce substantial environmental benefits.

Fortunately, Michigan has a strong reputation of thoughtful, collaborative leadership in energy policy. The bipartisan 2016 energy law, supported by a super majority in both the House and Senate,⁶ established a policy framework for this transformation in electric generation infrastructure.⁷ Because Michigan set a stable framework for energy, just five months after the energy law passed, DTE was able to announce our commitment to reduce carbon emissions by more than 80 percent by 2050, consistent with the range of pathways that climate scientists have identified as needed to mitigate climate change.⁸ The 2016 energy law underpins the ability to make that transition thoughtfully, and in a manner that protects affordability and reliability.



A key component of this law is the Integrated Resource Plan, which creates a competitive, holistic framework and process for generation planning through collaborative energy resource planning. As DTE prepares to file our first Integrated Resource Plan under the provisions of the new law in March,⁹ we are focused on meeting our environmental commitments in alignment with our core principles of reliability, affordability, and community impact.

While 2050 may seem far away, there are very deliberate and thoughtful actions along the way to make progress:

- We will achieve a 50 percent Clean Energy Goal by 2030 through a combination of renewables and energy waste reduction. At least half of this will be from renewable energy.
- We are doubling our renewable energy capacity by investing \$1.7 billion in renewables between 2018 and 2022 alone, and we won't stop there.
- We will retire an additional three coal-fired power plants by 2023.
- We are growing our voluntary renewable energy programs for our 2.2 million residential and business customers who are interested in enrolling in an easy, affordable way to reduce their CO₂ footprint.¹⁰

⁶ Voting record outcome for PA 341: House of Representatives 79-28, Senate 33-4. Voting record outcome for PA 342: House of Representatives 76-31, Senate 33-4.

⁷ This comprehensive law is still in the process of being fully implemented through the Michigan Public Service Commission (MPSC).

⁸ Rose, SK, M Scott, 2018. "Grounding Decisions: A Scientific Foundation for Companies Considering Global Climate Scenarios and Greenhouse Gas Goals." EPRI. October 2018.

⁹ DTE hosted three public open houses and four technical workshops to share information and obtain feedback from stakeholders.

¹⁰ In April 2017, we launched MIGreenPower for our residential customers who wish to increase the percentage of their energy usage coming from our Lapeer Solar Project and the Pinnebog Wind Park. The renewable power supporting MIGreenPower customers is incremental to the Renewable Portfolio Standard. Today we have over 5,000 customers enrolled, and we expect the program to double in 2019. Building on the success of MIGreenPower, we will

- We are investing nearly \$1 billion in St. Clair County to construct the Blue Water Energy Center. This 24/7 state of the art, highly efficient resource, fueled by natural gas, represents a 70 percent reduction in CO₂ compared the three coal-fired plants it is replacing.¹¹ The technology is dispatchable, meaning it is there when you need it, and is the most efficient, cost effective technology available today. Michigan's weather is variable; the sun does not always shine, and the wind doesn't always blow. This efficient, flexible plant will balance the variability of renewables, and along with our share of the Ludington pumped hydro plant, will complement the continued expansion of renewables, and support Michigan's 24/7 economy.

Now, before I pivot to distribution infrastructure, I want to address the events of last week. The events around the Polar Vortex were experienced by all of us. And it put a spotlight on the importance of infrastructure to gas and electric reliability.

I want to focus for a moment on electric supply reliability and what it means for long-term planning, but then I will speak briefly to what occurred with our natural gas operations for home heating.

When I say electric supply reliability, I mean specifically how much energy is actually available in a region. The Integrated Resource Planning process prioritizes reliability to ensure customers have reliable power every hour of the year, that includes during periods of stress. Many people think we only hit peak demand in the hot summer months, but demand also spikes in the winter as we saw last week. The grid operator (Midcontinent Independent System Operator or MISO), who oversees the transmission system reliability across a multistate region, declared a maximum generation event as the extreme cold spurred increased demand. This means that every available resource that we had was running at full capacity to meet demand. DTE's customers were covered and our operations were running well, but our energy infrastructure is connected to grids in other states and Canada that were experiencing issues due to the extreme weather. The need for additional power across the region reached the level where we had to appeal to customers to reduce demand and even interrupt those on interruptible rates for the first time in almost two decades. Taking these actions ensured that the excess power from our footprint could flow to other areas in need, and thus maintain grid reliability for everyone within MISO. We take the responsibility to plan for and serve our customers for every hour of every day very seriously. And last week, our planning and our assets delivered – not only for DTE customers but for customers across the state and across MISO.

Now, we also had a considerable call placed on our natural gas utility. And we all witnessed the critical nature of this infrastructure. During the event last week, additional gas supply was needed to support customers in the region. DTE and Consumers Energy natural gas systems in Southeast

begin offering a business customer voluntary renewable program in 2021. We will build an additional 600 MW of renewables to support customer demand under this program and will add more as customer demand dictates.

¹¹ In addition to significant reductions in CO₂ emissions, the Blue Water Energy Center will reduce SO₂ and NO_x emissions more than 95 percent compared to the coal units planned for retirement. Particulate matter and mercury emissions will be reduced substantially as well.

Michigan fortunately do have the ability to be interconnected. We worked with Consumers to help supply them with natural gas. We provided as much support as possible, while also maintaining safe and reliable service to our own customers during this extreme cold weather.

Now looking to the future, I want to focus on the improvements being made to our electric and gas distribution systems.

DTE isn't just investing in cleaner generation sources- we are in a period of significant investment to harden, modernize, and automate our electrical distribution system to improve reliability for customers. With nearly \$4.6 billion of distribution infrastructure investments planned over 5 years, our plan calls for: infrastructure resilience and hardening, infrastructure redesign, technology and automation, and tree trimming. We will upgrade and replace equipment throughout our service territory, including 27,000 poles, 1,500 miles of overhead lines, 450 miles of underground cable, and 25 substations. We are on a 20-year journey to upgrade our distribution system and these actions are just the beginning. In areas where infrastructure work has already been completed, DTE's customers have seen up to a 70 percent improvement in reliability.

DTE's commitment to the environment extends beyond electric generation. As part of our environmental commitments, our natural gas utility will reduce methane emissions by more than 80 percent by 2040 through significant infrastructure investments. We have replaced 688 miles of metallic gas lines¹² with safer plastic, minimizing leaks, and are expanding our efforts, with a plan to spend \$3.3 billion to replace all our remaining metallic mileage by 2035.

As we make significant investments in our electric and gas infrastructure, we will continue to prioritize customer affordability. For low-income customers where affordability is a real issue, DTE partners with human service agencies to protect and support our most vulnerable customers, including fixed-income seniors, veterans, and people with disabilities, from shutoffs. This initiative, called the Low-Income Self-Sufficiency Program, or LSP, receives funding from the Michigan Energy Assistance Program¹³ which is funded by participating utilities' monthly per-meter surcharges. LSP provides energy and payment assistance before customers reach a crisis state. Participants have obligations to pay an affordable amount towards their energy bill and stay current on bill payments. During the 2017-18 heating season, 99 percent of households enrolled in LSP stayed current on their energy bills. Unfortunately, there are more families in need than those currently enrolled in LSP. The Michigan Energy Assistance Program is up for reauthorization this year and DTE is working with other energy companies, DHHS, the MPSC, and human service agencies on reforms that will allow us to enroll more customers so more Michigan families can benefit from these successful programs. We believe what is needed is not necessarily more money but efficiencies and reform in the current system.

This transformation in energy infrastructure is only made possible by a strong Michigan workforce. Like many businesses in Michigan, DTE is anticipating significant talent shortages in Science, Technology, Engineering and Math (STEM) and skilled trades. We project that approximately 50 percent of our workforce is eligible for retirement or will exit the workforce over the next 10 years.

¹² Includes cast iron, wrought iron, and certain steel gas lines

¹³ Authorized under Public Act 615

We are focused on addressing the challenges posed by this projected talent shortage, both to support Michigan's economic vitality and because this projected attrition coincides with the energy infrastructure transformation that I spoke of earlier. DTE is leveraging its partnerships with other business leaders to revitalize Career and Technical Centers. Furthermore, we are working with community partners to both improve educational outcomes for students and create employment pipelines to good paying jobs. These efforts are focused on at-risk communities in Detroit and across Michigan and include minorities, differently-abled populations, veterans, and returning citizens.

Our commitment to Michigan and the people of this state is deeply rooted in our 170-year history, and while I'm incredibly proud of all that we have been able to accomplish, we are not done. Michigan's success is DTE's success by the nature of our business, our responsibility to our customers, and our commitment to be a force for growth and prosperity within the communities we serve. Going forward, we will continue to embody this commitment as we lead Michigan through its energy infrastructure transformation.

I hope this will open up additional opportunities in the future for the Committee to learn more about the energy industry, our company, and how DTE provides power to Michigan's families and businesses. I welcome a discussion regarding any questions you may have about my testimony or other aspects of DTE. Thank you.



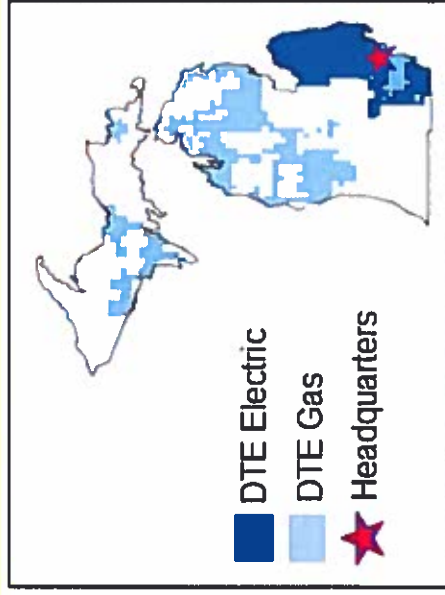
DTE Energy®

Introduction to DTE Energy & Michigan's Energy Policy

February 2019

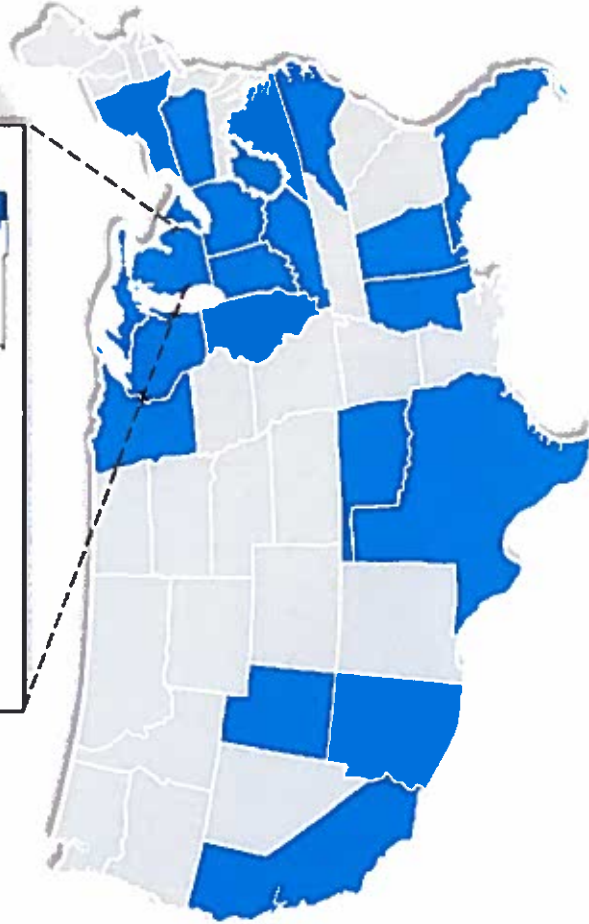


DTE Energy aspires to be the best-operated energy company in North America and a force for growth in the communities where we live and serve



DTE Energy

- Fortune 300 company headquartered in Detroit, MI
- Approximately 10,000 employees
- Industry leader in controlling operational costs¹
- Two regulated utilities serving Michigan
 - DTE Electric: founded in 1886 and currently serving 2.2 million electric customers
 - DTE Gas: founded in 1849 and currently serving 1.3 million gas customers
- Non-utility businesses with operations in 20 states:
 - Gas Storage & Pipeline (Midstream)
 - Power & Industrial
 - Energy Trading



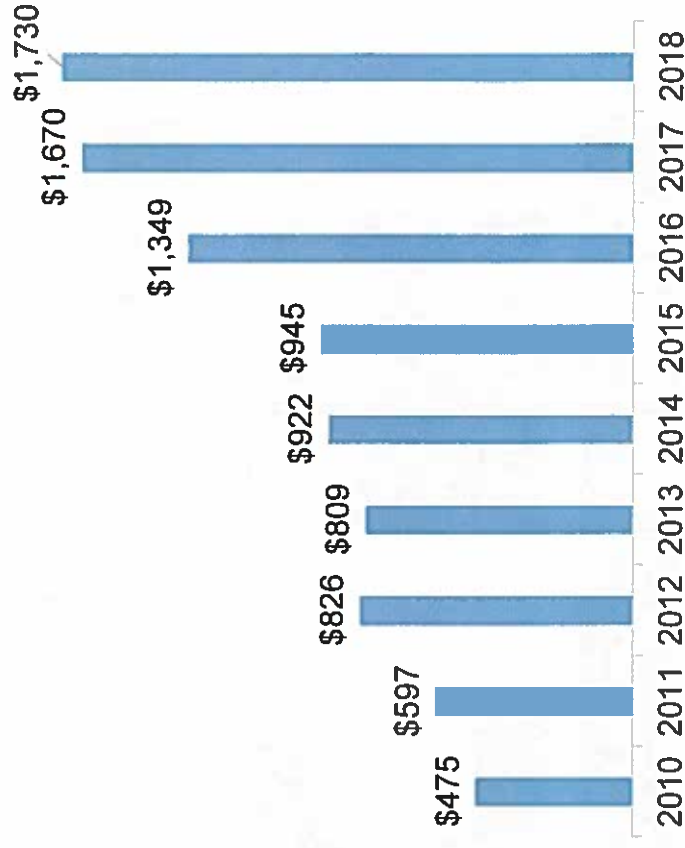
1. According to SNL Financial, Operations & Maintenance levels have been flat at our utilities over the past 10 years, whereas our peer group, on average, has seen annual cost increases of 2.5% over the same time frame.

DTE is committed to supporting Michigan's economy. Since 2010, we have spent more than \$9 billion with thousands of local businesses



- In 2018 alone, DTE spent **\$1.73 billion** with **2,500** Michigan businesses across **76** counties
- DTE's ongoing investment has helped to create and support more than **16,000** Michigan jobs
- Michigan communities directly benefit from payroll and taxes associated with **10,000** DTE employees
- Partnerships with **38** economic development organizations across the state to support projects that bring new business to the communities we serve

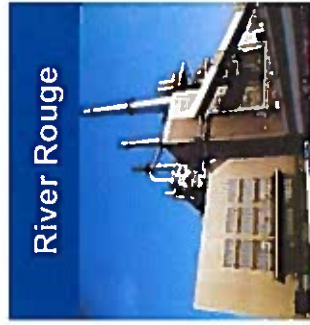
Michigan-Based Supplier Spend
(Millions)



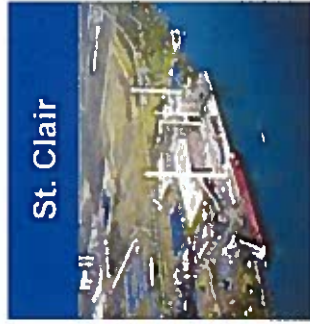
DTE is in the process of reducing CO₂ emissions by 80% while balancing affordability and reliability for customers



2017 - 2023 Retirements¹ 2024 - 2030²



River Rouge



St. Clair



Trenton



Belle River

Additions¹



Natural Gas



Wind



Solar



Energy Waste Reduction

1. Timing and mix subject to change. More details will be shared in the March 2019 Integrated Resource Plan filing with the Michigan Public Service Commission

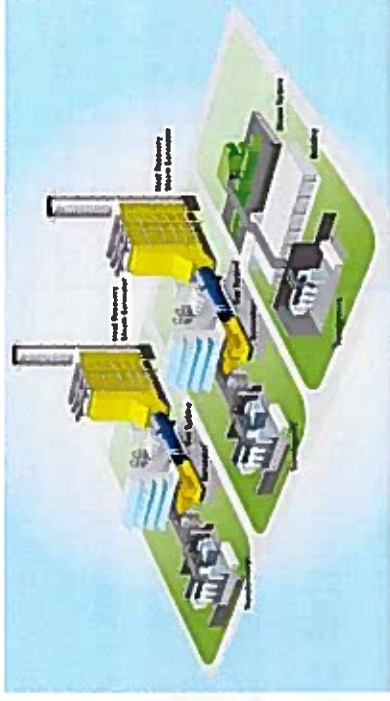
2. DTE will end the use of coal-fired generation by 2040

In the next 5 years, DTE will retire 3 coal-fired power plants, double its renewable capacity, and add a critical 24/7 power source



Wind and Solar

- DTE drove more than \$2.5 billion in renewable investments in Michigan since 2009
- In the next five years DTE will invest an additional \$1.7 billion in renewable energy and technology, doubling our renewable energy capacity. This includes:
 - Three new wind parks
 - 25% increase in solar
- We will achieve a 50% Clean Energy Goal by 2030 through a combination of at least 25% renewable power and the remaining through energy efficiency¹



Blue Water Energy Center

- Provides 1,100 MW of critical, on-demand 24/7 power
- Approximately \$1 billion investment in Michigan
- Creates 500 construction jobs and 35 permanent jobs at the plant upon completion
- Expected to be operational in 2022 in East China Township
- Will be the most efficient power plant in Michigan
- Represents a 70% decrease in CO₂ emissions when compared with neighboring St. Clair coal-fired plant

1. In the past year, both DTE and Consumers have announced plans to reduce CO₂ emissions by 80% in the coming decades. Leveraging the already aggressive framework established in Michigan's 2016 bipartisan energy law, the state's largest two energy companies are advancing their plans to invest in Michigan. Both DTE and Consumers will demonstrate how they will achieve a 50% Clean Energy Goal by 2030 in their respective Integrated Resource Plans.

In addition to renewables and energy efficiency, natural gas will play a critical role across the region as the Midwest retires coal-fired generation



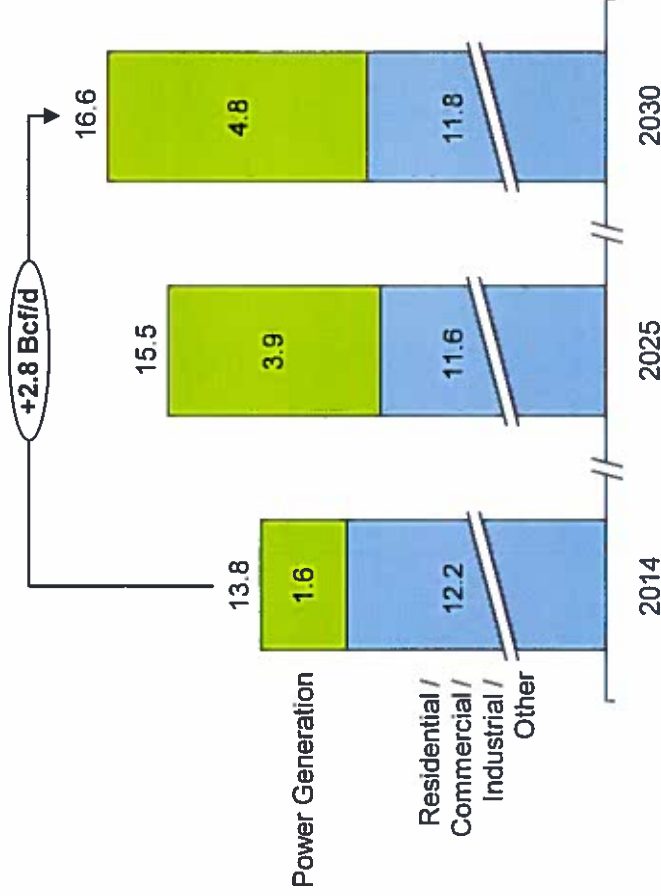
Natural Gas
Midstream
Infrastructure



Michigan is uniquely positioned to support the region's growing demand for resources

DTE oversaw the construction and completion of the NEXUS Pipeline

Great Lakes demand for gas used for electricity will triple by 2030



- **\$2.5 billion** in infrastructure investment to provide low cost, clean burning natural gas to Michigan and Ohio businesses, utilities and customers
- In Michigan, NEXUS delivered **1,533** jobs
- Will generate **\$97 million** in wages, **\$22 million** in local tax revenues¹ and **\$9.8 million** to local school districts
- Significantly contributes to meeting the company's CO₂ reduction goal of **80% by 2050**



1. Estimated cumulative tax revenue of the first five years.

In January 2018, DTE filed our 5-year distribution investment and maintenance plan to ensure safe, reliable, and affordable access to the energy grid



Strategic Pillars

Tree Trimming



Infrastructure Redesign



Infrastructure Resilience & Hardening



Technology and Automation



Desired Outcomes



Mitigate Risk



Improve Reliability



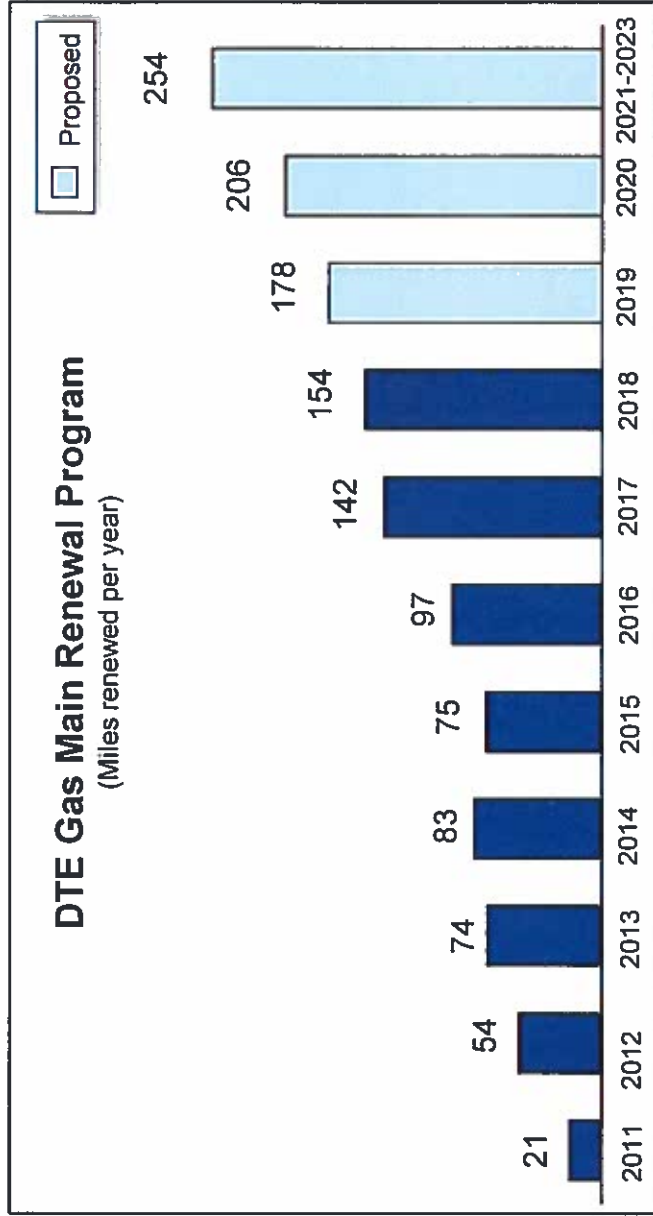
Reduce Cost

These investments will directly benefit our customers. For example, in areas where tree trimming has already been completed, customers have experienced a 70% improvement in reliability.

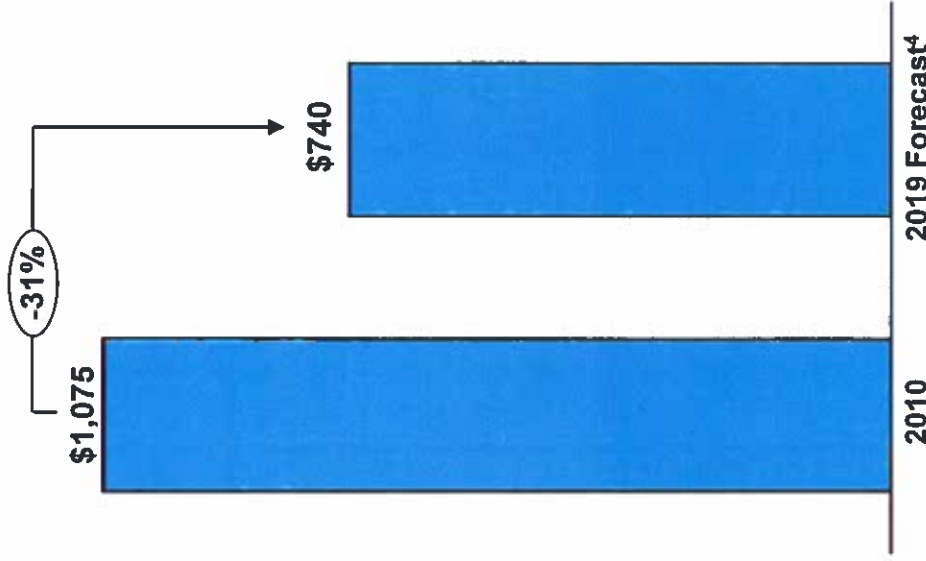
DTE Gas is upgrading infrastructure to improve customer reliability and safety while prioritizing affordability and methane emissions reductions



- DTE Gas has invested almost \$400 million in our main renewal program since 2011
- We have replaced 688 miles of metallic gas lines¹ with safer plastic – minimizing leaks, reducing methane emissions, and improving customer satisfaction
- We are proposing to expand our efforts, spending \$3.3 billion to replace all of our remaining metallic mileage,¹ approximately 3,500 miles, by 2035
- These upgrades will reduce methane emissions by more than 80% by 2040

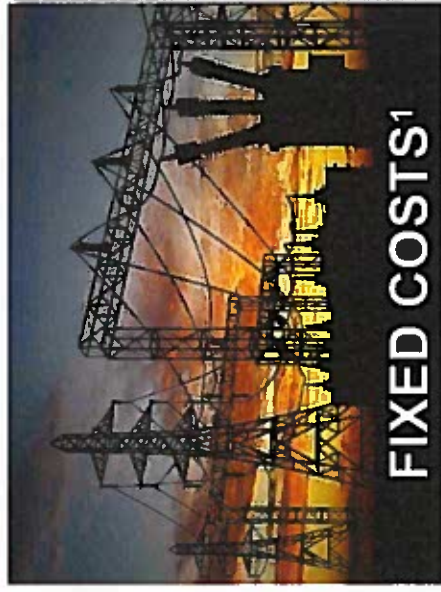


Average Annual Residential Gas Bill^{2,3}

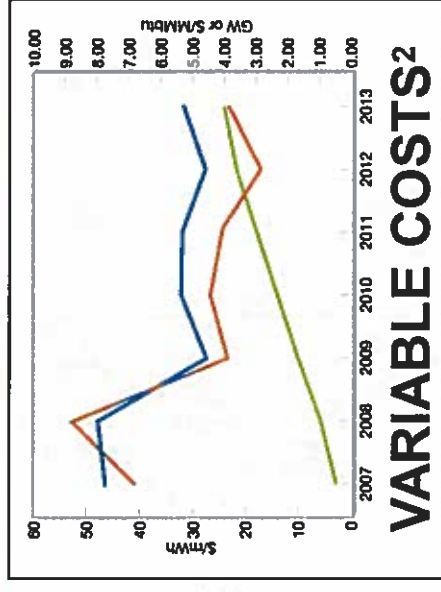


1. Includes cast iron, wrought iron, and certain steel gas lines
 2. Assumes normal weather, excluding taxes; new rates to reflect \$9 million revenue deficiency rate request increase from October 2018
 3. 2010-2015 assumes average annual usage of 95 Mcf (U-16999) and 2016-2017 assumes average annual usage of 93 Mcf (U-17999); 2018-2019 assumes 91 Mcf (U-18999)
 4. Preliminary

Customer rates are established using “cost-of-service” principles, which divide total costs by the load served

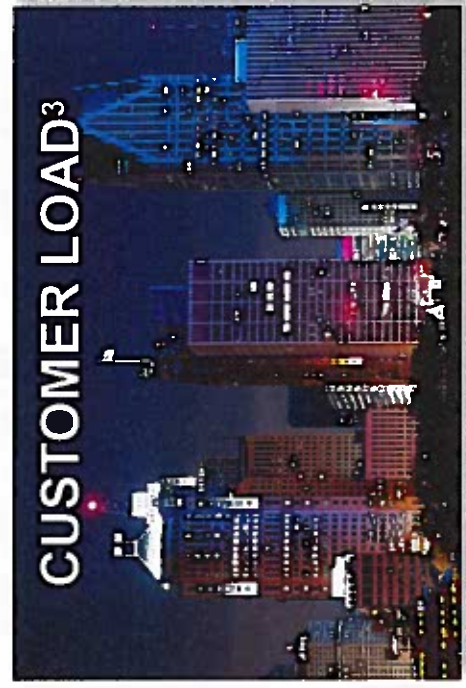


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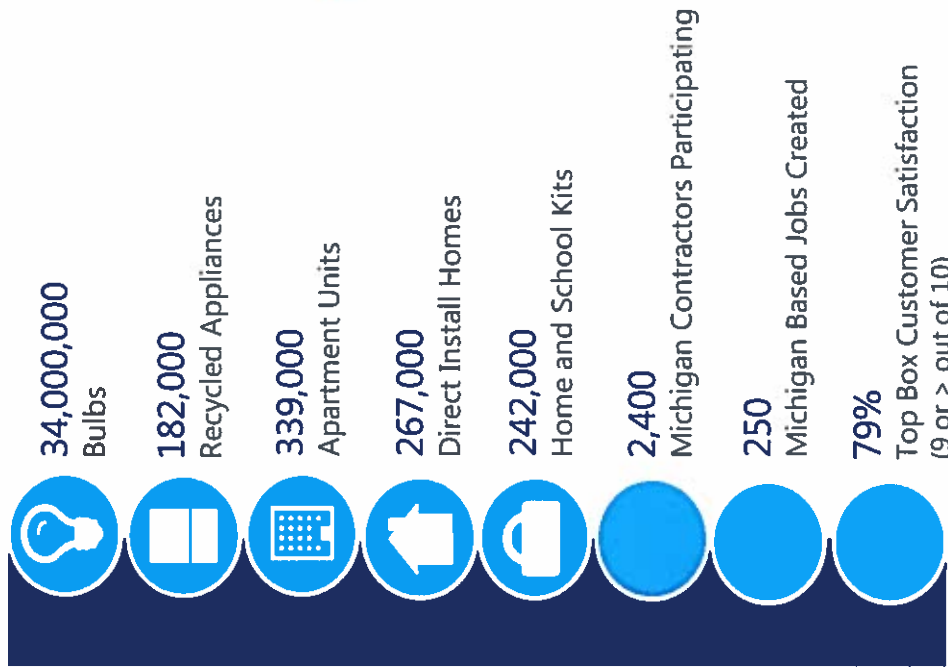
Regulated Rates

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1. Includes: generation infrastructure, transmission and distribution poles and wires, and administrative costs
 2. Includes: market price, fuel costs
 3. Also known as customer demand or usage

For every \$1 spent on DTE Electric energy efficiency, or energy waste reduction programs, customers can realize benefits of \$5¹



1. Source: DTE Electric 2017 Electric Waste Reduction Reconciliation

The comprehensive, bipartisan 2016 energy law (PA341-342)¹ supports a reliable, affordable, and clean energy future for Michigan



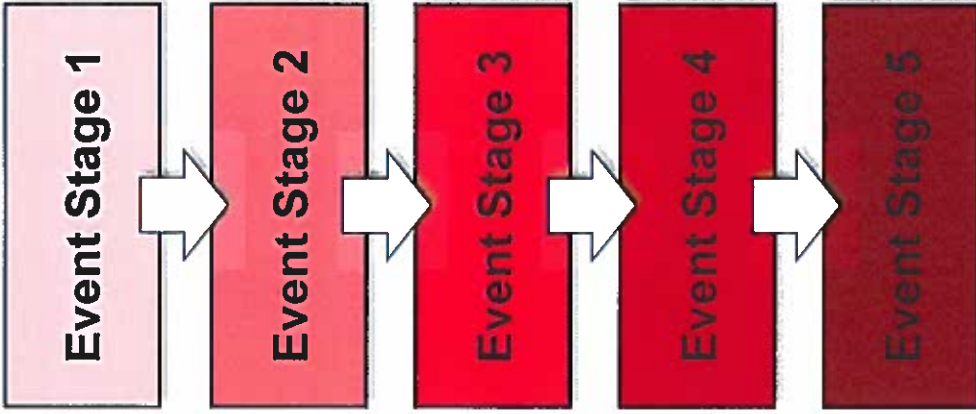
<p>Reliability</p>	<p>Challenge</p> <p>Prior to the 2016 energy law, 10% of Michigan's demand represented by Alternative Energy Suppliers (AES), or retail energy marketers, was not required to demonstrate reliability planning</p>	<p>Solution</p> <p>Maintains the current 10% cap on Michigan's deregulated market, or Retail Open Access (ROA). This cap protects reliability planning for the majority of Michigan's electric customers</p>
<p>Holistic Generation Planning</p>	<p>While single, large projects had a path for regulatory approval through the Certificate of Necessity (CON) process, prior to the 2016 energy law, there was no centralized, streamlined process for holistic electric generation planning</p>	<p>Authorizes the Michigan Public Service Commission (MPSC) to set reliability standards for customers served by retail energy marketers. This authorization allows MPSC to hold all energy providers accountable for their customers.</p> <p>Retains the CON to evaluate and approve single generation projects, but adds provisions to ensure process is competitive, transparent, and rigorous</p> <p>Establishes a competitive, transparent Integrated Resource Planning (IRP) process for holistic generation portfolio</p>
<p>Clean Energy</p>	<p>The 2008 energy law established Michigan's first Renewable Portfolio Standard and created net metering, the initial billing mechanism for distributed generation. Since then, renewable energy has become cost competitive, and distributed generation policies and tariffs were set to evolve</p>	<p>Establishes a new goal of 35% combined renewable energy and energy waste reduction by 2025</p> <p>Raises the Renewable Portfolio Standard from 10% to 15% by 2021. After 2021, renewable planning transitions to the IRP</p> <p>Increases maximum incentives for energy waste reduction programs to reduce overall demand and offset the need for more generation construction in the long term</p> <p>Authorizes MPSC to study the costs of distributed generation and establish a fair and equitable billing construct to replace net metering</p>

1. Voting record outcome for PA 341: House of Representatives 79-28, Senate 33-4. Voting record outcome for PA 342: House of Representatives 76-31, Senate 33-4.

During a Maximum Generation event, the grid operator steps through stages to protect grid reliability. On January 30, MISO Zone 7 declared Event Step 2



MISO Event Stages



MISO Actions **DTE Actions**

<ul style="list-style-type: none"> • Commit Emergency Generation Resources • Implement Emergency Max Limits 	<ul style="list-style-type: none"> ✓ Start Emergency Generation Resources ✓ Ensure generation emergency ranges offered
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<ul style="list-style-type: none"> • Implement Demand Response • Implement Emergency Energy Purchases from other Independent System Operators 	<ul style="list-style-type: none"> ✓ Reduce demand in DTE buildings ✓ Interrupt Demand Response ✓ Issue Public Appeal
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<ul style="list-style-type: none"> • Utilize Operating Reserves 	<ul style="list-style-type: none"> • Make "environmentally de-rated capacity" available within government regulations
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<ul style="list-style-type: none"> • Purchase Reserves (if available) 	<ul style="list-style-type: none"> • Ensure generation emergency ranges offered
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<ul style="list-style-type: none"> • Direct Firm Load Shed by Load Balancing Area 	<ul style="list-style-type: none"> • Shed Firm Load
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