



Advanced Energy Conference 2018

March 28, 2018



DTE Energy®

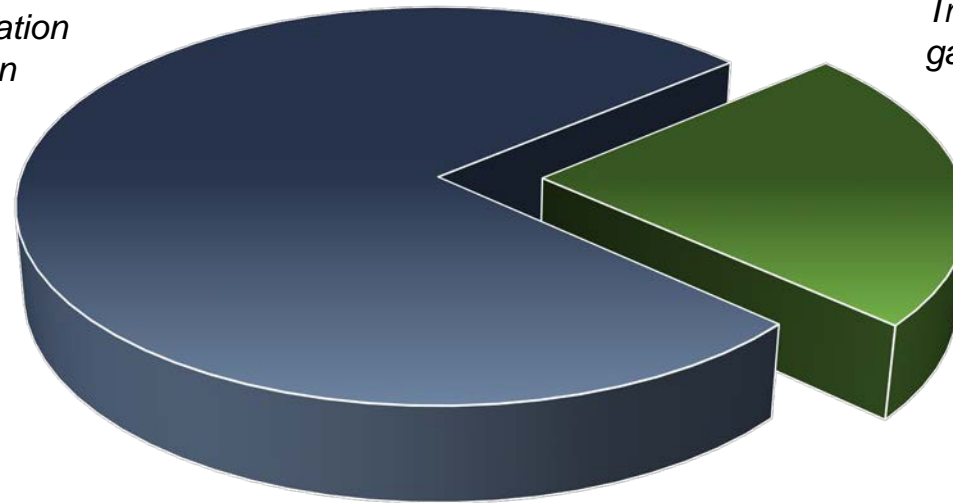


75% - 80% Utility
Growth driven by investments aimed at improving reliability

20% - 25% Non-utility
Growth driven by strategic opportunities

DTE Electric
Electric generation and distribution

DTE Gas
Natural gas transmission, storage and distribution



Gas Storage & Pipelines (GSP)
Transport, store and gather natural gas

Power & Industrial Projects (P&I)
Own and operate energy related assets

Energy Trading
Gas and power marketing

Generation Portfolio Transition

CO₂
reduction
plan*



**Planned
Retirements****



River
Rouge



St.
Clair



Trenton
Channel



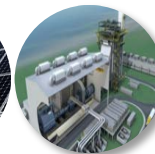
Belle
River



Monroe



**Planned
additions*****



A steady march toward zero-emitting and low-emitting resources

* CO₂ percentage reductions from 2005 levels
 ** ~3,300 MW retired between 2020-2030 and ~3,100 MW retired by 2040
 *** ~4,000 MW of renewable and ~3,500 MW of natural gas capacity

Strategic Pillars

Desired Outcomes

Tree Trimming



Infrastructure Redesign



Infrastructure Resilience and Hardening



Technology and Automation



Mitigate Risk



Improve Reliability



Reduce Cost

Technology & Automation



Installation of Remote Monitoring and Control Devices

- Continue to install field devices, providing an enhanced view of the ***real time state of the system***
- Upgrade equipment to allow ***remote monitoring and control***



Modernization of the Electric System Operations Center

- Upgrade System Operations Center to meet industry best practices and ***enhance the ability to respond to significant disruptions***



Implementation of an Advanced Distribution Management System

- Improve real-time operating decisions based on ***integrated data and models***
- Facilitate the ***integration of distributed resources***

Utility-Scale Energy Storage



- **Paired storage with solar array and deployed distributed storage** as part of community energy storage demonstration project in Monroe
- **Evaluating additional pilot opportunities** arising from decline in battery costs – projects could help integrate distributed generation and EV charging, improve reliability and power quality, or defer high cost distribution investments

Electric Vehicles (EVs)



- Implementing near-term pilots:
 - **Load management demonstrations** to study the opportunity to shift charging away from peak hours, or integrate storage with EV charging
 - **Downtown charging showcases** with fast charging capabilities in Detroit and/or Ann Arbor
 - **Fast charging** along a highway corridor