

DTE Energy®



**Value Received:
DTE Energy Success Story**

Paul Fessler

**EPRI Generation Council Meeting
March 11-12, 2010
Orlando, Florida**

Overview

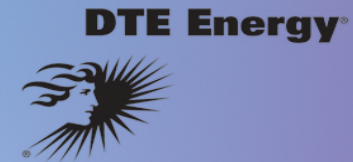


- DTE Energy Profile
- Technology Transfer Strategy
- Success Story
 - Boiler Tube Failure Reduction Program
- Success Story
 - Explosive Cleaning Project



DTE Energy Businesses

Currently operate in 26 states



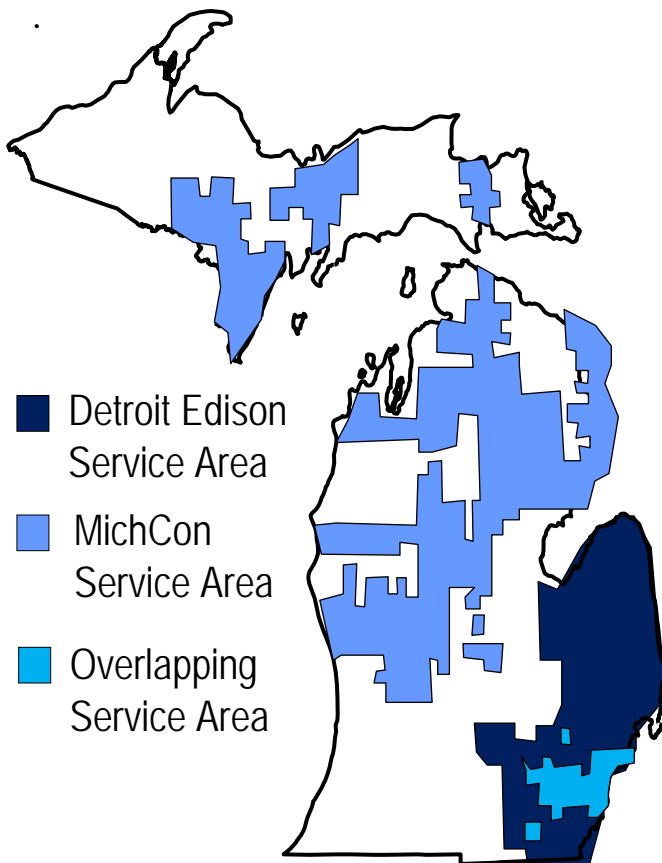
DTE Energy's Largest Operating Subsidiaries:

Detroit Edison

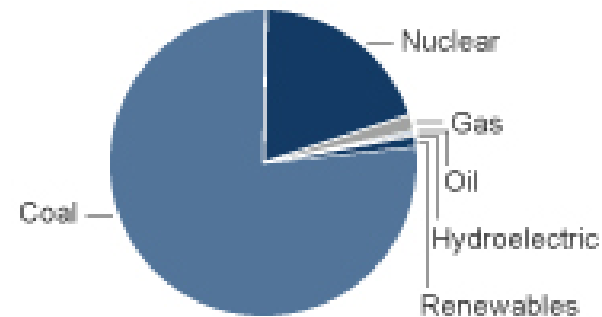
- Founded in 1903
- 2.2 million customers
- 11,094 MW of power generation, primarily coal fired
- 1.1 million kilowatts, Fermi 2 Nuclear

MichCon Gas

- Fifth largest natural gas utility in the U.S. with 1.3 million customers



Detroit Edison's Fuel Mix



DTE Energy Priorities



- Customer Service
- Employee Engagement
- Continuous Improvement
- Growth & Value Creation
- Political / Regulatory
- Financial Performance



Technology Transfer Strategy



- EPRI Engagement
 - Board of Directors
 - RAC
 - Council
 - Advisors
 - METT = TMC & TMC Exec Committee
- DTE EPRI web site
- Advisor Guide
- Project/Product Champions
- Pre- and Post- Advisor Meetings
- Tech Transfer Sharing Qtrly Meeting
- EPRI Program Value Form

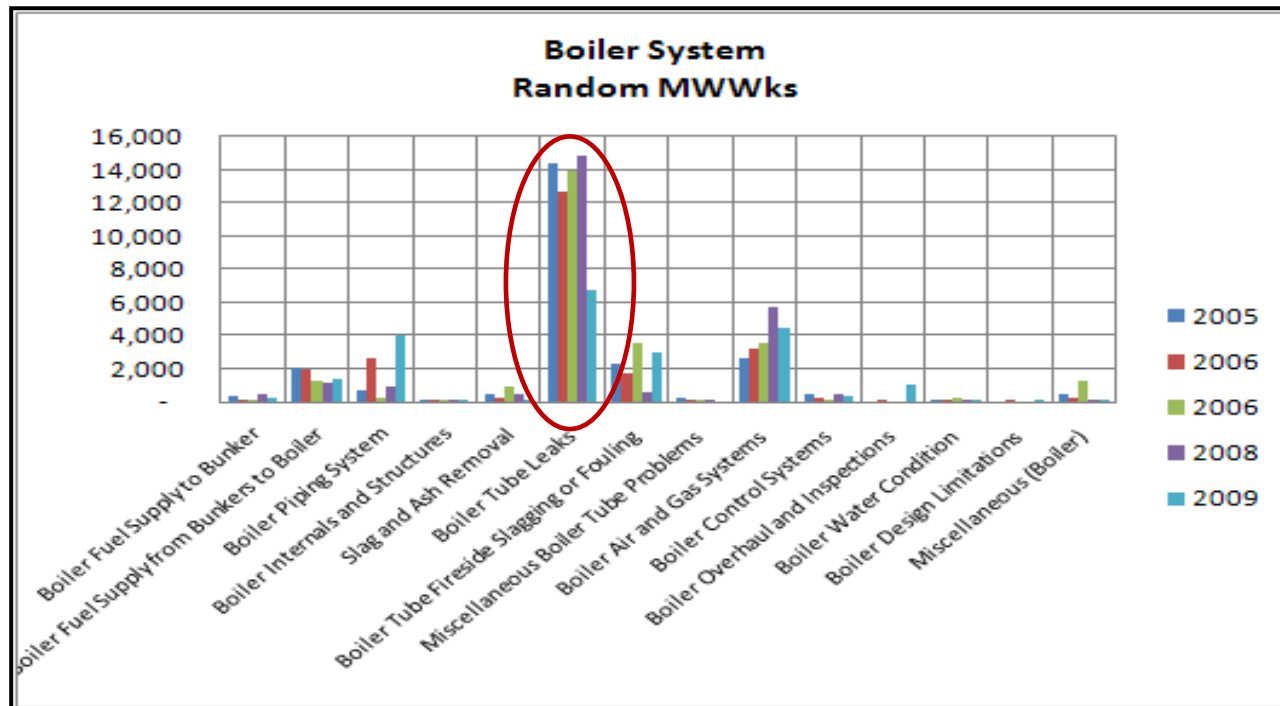


EPRI Boiler Tube Failure Reduction Program



Five Year Results, 2009 Results and Future Plans

Personnel getting more conscientious about BTFs, plants have their own BTFR team, there is a central BTFR support team.



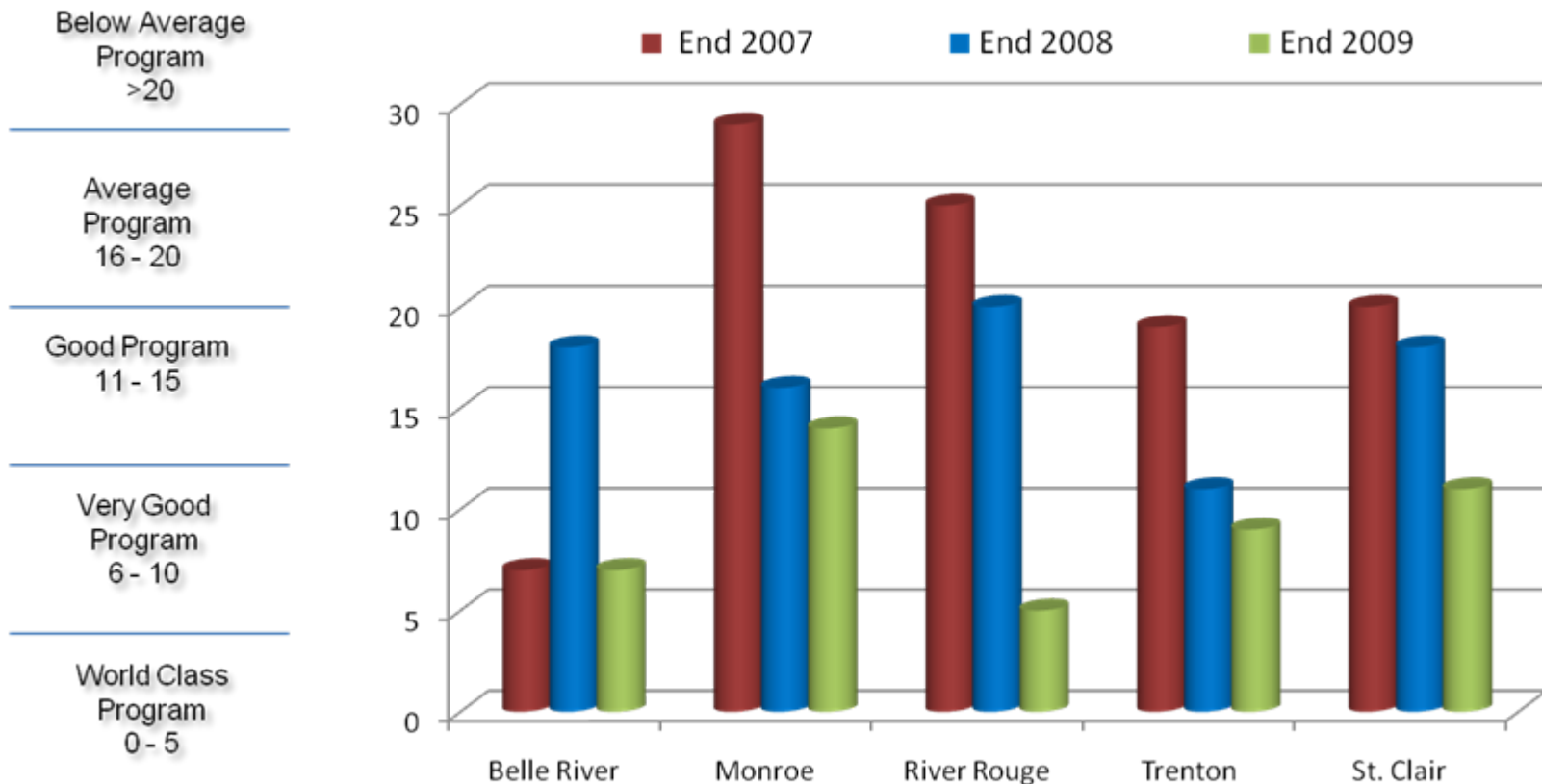
**Boiler Tube Leaks
decreased by
**7,600 MW/ Wks
in 2009****

Boiler Tube Failure Reduction Program Results



BTFR program evaluations are conducted on regular basis.

EPRI BTFR INDEX



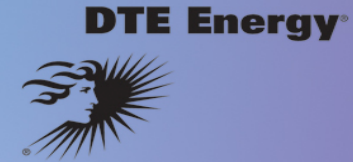
2010 BTFR Program Goals



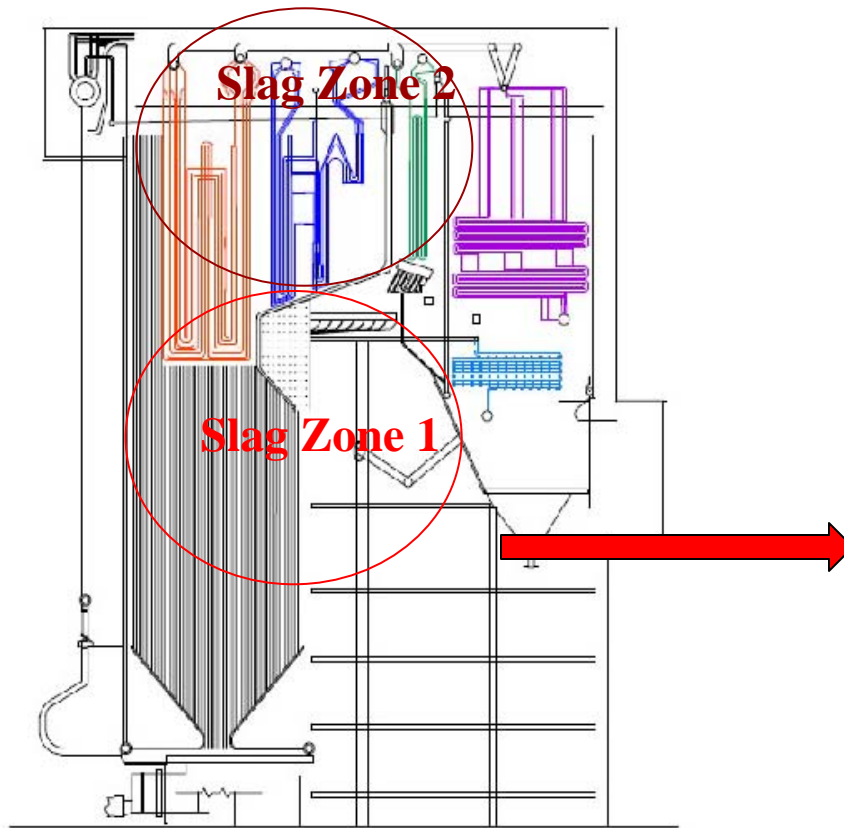
- Achieve a year end boiler tube unavailability due to BTF below 2% for the fleet. The long term goal is a sustainable 1.5% by 2011 and beyond.
- Achieve a score of 10 points or fewer (World Class or Very Good Program) in the BTFR EPRI Index Audit for all 5 plants.
- Update corporate directive and plant specific guideline on operation with a known boiler tube leak by June 2010.
- Complete condition assessment (ID oxide measurements) for all SH and RH ferritic (T22, T11, etc...) pendant circuits or have plans developed. For stainless steel circuits, take samples to be analyzed.
- New DTE Window Weld Policy
- BTF Seminars for DTE Personnel
- Develop a guideline on Explosive Cleaning



Explosive Cleaning – TC Project Advantages & Disadvantages



Typical Power Plant Layout



-  SUPERHEATER DIVISION PANELS FRONT & REAR
-  HORIZONTAL SUPERHEATER
-  SUPERHEATER PENDANT PLATEN
-  REHEATER PENDANT
-  ECONOMIZER

ADVANTAGES

- ✓ Quick way to clean the boiler
- ✓ Safest way to clean the boiler

DISADVANTAGES

- ✓ Cracking the tubes
- ✓ Denting the tube
- ✓ Cumulative Damage Develops



Detroit Edison Explosive Cleaning Failure Events



- BR2, Flattened Horizontal RH Tube
- SC7, SH Outlet Pendant (inlet leg) Tube
- BR2, RH Pendant Bend Failures (2)
- SC7, SH Division Panel, four tubes dented and cracked



Explosive Cleaning Project Action Plan



- Use the Results from the EPRI Project to develop standard work instructions (procedures) to be used by explosive cleaning vendors
 - Specify types of acceptable explosives
 - Maximum allowable charges
 - Stand-off distances
 - Proper positioning of explosives
- Meet with EC vendors to train them on new procedures
- Have BTFR members verify procedures are being followed
- Develop blast reports so each explosive cleaning is documented



Conclusion. . .



DTE Energy recognized value in EPRI is realized through engaged plant staff who realize reduced capital and O&M costs





Any Questions?

