

Consumers Energy Risk Analysis – What's in it for me.

CSVA 2009 Conference
Ottawa, Ontario
Nov 23, 24, 2009

John (Jack) Mahan

Consumers Energy
Count on Us

Topic Overview

- *Betting the company's future on this project*
- *World market conditions, regulatory and political uncertainty and labor productivity are major risks*
- *Majority of uncertainty is during development phase*
- *We plan to continue risk analysis process throughout the project*
- *Risk analysis and comprehensive mitigation plan provide confidence and prudence for the project*

Consumers Energy

Count on Us

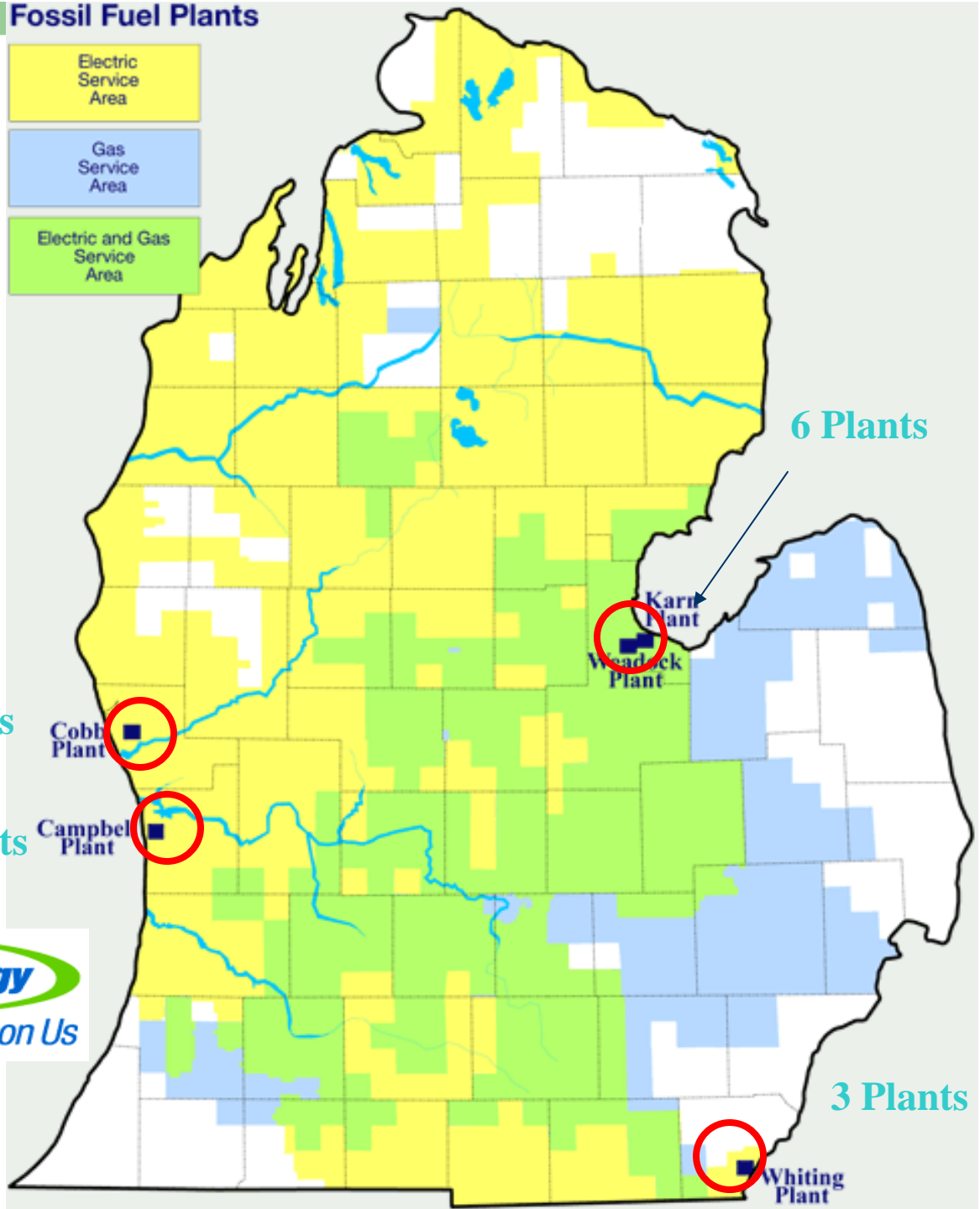
- Founded in 1886
- Combined Natural Gas and Electric Utility
- 8,000 employees



- Plan to invest more than \$6 billion in Michigan over the next five years with our Growing Forward strategy
- Includes a \$2 billion-plus clean coal plant

Fossil Fuel Plants

- Electric Service Area
- Gas Service Area
- Electric and Gas Service Area



Consumers Energy Generation

14 existing coal plants at 4 stations

Oldest Coal Fleet in U.S.

1948-1980

Consumers Energy
Count on Us

A New Day at Karn-Weadock



New Coal Project History

- Project began with Integrated Resource Plan (IRP) planning in 2005
- Site selection process began in fall of 2005
- Owners Engineer hired in January 2007
- Preliminary Design began in June 2007
 - 830 MWe, Advanced Supercritical 1,100°F, 3,800 PSI
 - Designed to be Carbon Capture Ready
 - PRB Coal with ability to blend up to 50% Eastern
 - Mechanical Draft Cooling Towers
 - New loop track for four – 150 coal car trains
 - Space for adjacent second unit

New Coal Project History

- Site selected and announced September 2007
- Air Permit filed in October 2007, Public Comment Period closed in May 2009
- Expect Final Air Permit by the end of 2009
- Air Permit expected to be appealed
- Certificate of Necessity (CON) required
- CON filing mid-2010
- Expect CON early 2011
- Commercial Operation Date early 2017

Why do a Risk Analysis

- Actual Project cost must be within +/- 10% of approved CON value
- World Market Conditions
- Regulatory uncertainty in Michigan and USA
- Craft Labor Productivity
- Escalation
- Recession

Risk Analysis Process & Results

- Engaged HDR Decision Economics Summer of 2008
- Initial Risk Analysis completed early 2009
- Provided cumulative probability distribution of project costs and schedule duration
- Results were “mitigated”
- Risk Analysis validated 2008 project base estimate
- Provided focus on project risk mitigation requirements

Risk Mitigation Measures

- Avoidance of risk until Regulatory certainty
 - Court upheld Permits
 - CON issued
- Contingency \$
 - Market Condition
 - Craft Labor
 - Estimate Uncertainty
- Escalation \$
- Schedule Float
 - Political Risk
 - Permits
 - Recession

Future Risk Analysis Plan

- Will update Risk Model prior to filing CON
- Periodic Risk Analysis updates through Execution Phase of Project

Last Slide

- Contact info:
 - John L. Mahan
 - Consumers Energy
 - Senior Project Controls Manager
 - 1945 W. Parnall Road
 - Jackson, Michigan 49201
 - Tel. (517) 788-0839
 - e-mail: jlmaahan@cmsenergy.com
- References for further help: John Parker,
HDR Decision Economics