

# **21<sup>st</sup> Century Energy Plan Emerging Energy, Smart Grid & Smart Metering Sub-group**

**(part of the Alternative Technologies Workgroup)**

**Ryan Waddington, Sub-group Leader**

**Steve Kulesia, Chairman**

**May, 2006**

# 21<sup>st</sup> Century Energy Plan Schedule

- By mid-May – Finalize agenda, establish sub-groups
- Sub-groups work on specific projects, with deliverables between early August and mid-September
- Meetings:
  - Workgroup meetings monthly (June, July, August, September)
  - Joint 21<sup>st</sup> Century Energy Plan Meetings: June 22nd, July 18; August 28th
  - Early October – review & comment on WG Rpts

# Energy Plan Schedule(2)

- Draft project reports due by July workgroup meeting
- Second draft project reports due by August workgroup meeting
- Final sub-group reports due by early September\*
- Final Workgroup Report - September 29th
- Comments on Workgroup Reports - October 16<sup>th</sup>
- \* CHP sub-group Report due late-July

# 21<sup>st</sup> Century Energy Plan Workgroup Priorities

- Update Capacity Need Forum (CNF) data & modeling:
  - Confirm or modify, as needed
  - Further investigate resource options
- Develop Policy Recommendations:
  - Legislative & regulatory changes
  - Financial, funding, & incentive mechanisms

# Future AT Workgroup Meetings

- Tuesday, June 6th, 1:30 p.m.
- Tuesday, July 11th, 9:30 a.m.
- Wednesday, August 9th, 9:30 a.m.
- Tuesday, September 12th, 9:30 a.m.

\*Unless noted otherwise, all meetings will be held at MPSC offices @ Mercantile Building

# Emerging Technologies Subgroup

(part of the Alternative Technologies Workgroup)

Key objectives;

1. Identify emerging technologies that improve the reliability, safety, security, environment and efficiency of the electric generation, transmission and distribution system in Michigan
2. Perform characterization for each technology being considered

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Key objectives (cont.);

3. Identify barriers to adoption and implementation of technologies and marketability of various technologies
4. Industrial vs. Residential/Commercial and Light Industrial DG\*

\*Note: CHP Subgroup will handle all traditional co-generation technologies

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## Emerging Technologies for Transmission and Distribution Systems;

- Smart Grid Technologies
- IT & Communication Upgrades
- Remote Sensing and Telemetry Systems
- Grid Utilization Issues for Variable Renewable Energy Sources
- Transmission and Distribution Performance Standards
- Virtual Utility model

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Range of Emerging DG Technologies;

- Fuel Cells (high temp and low temp)
- Micro-turbines
- Advanced Engine types/fuels
- Low-flow turbines
- Others?\*

\*Renewable energy systems such as wind, solar, hydro, bio-gas and geo-thermal will be covered in the Renewable Energy Workgroup

# Subgroup Interface with Regulatory/Policy

Provide information on;

- Recommendations to advance application of emerging technologies
- Regulatory Barriers to Technologies
- Innovative Funding Approaches

# Next Steps

- Discuss & Refine Objectives and Goals
- Set future Subgroup meetings
  - Identify project research areas
  - Set schedule for subgroup work
- Begin work on researching specific technologies identified