Transitioning Michigan to a Clean Energy Economy

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Goals of Michigan Energy Plan

- Control Costs
- Minimize Risk
- Fair Rates for Customers
- Promote Economic Development
- Protect Public Health and Natural Resources
- Preserve Excellent Reliability

Utility Energy Planning

- Utility goals should be the same as the six Michigan Energy Plan goals.
- Future utility investments should be tied to achieving those goals.
  - Includes reducing return on investment if utilities do not meet those goals.
- Long-term community energy plans are key to charting Michigan's clean energy future.
  - Working with municipal utilities to lead the way
    - Holland
    - Lansing
  - Investor –owned utilities (IOU)

Energy Efficiency: Control Costs

Cheapest form of energy

•Feb. 15, 2013 MPSC Report on Implementation of PA 295:

"For every dollar spent on energy optimization, ratepayers see a return of over $3.55 in avoided energy costs."

•Also lowers customers' monthly energy bills.

Delays the need for new generation

- Keeps down energy demand.
- Other states have "efficiency first" requirements.
  - Energy Efficiency costs $20/MWh versus $133 per MWh for new coal.

Renewable Energy:

Minimize Risks

Wind **has "levelized costs in the $52 per MWh range which is about 10 percent less than the cheapest levelized contract prices from a year ago and half of the levelized cost of the first renewable energy contracts approved in 2009 and 2010. "**

-MPSC Report

February, 2013

Renewable Energy= No Regrets

- Michigan sends $1.7 billion a year to other states to buy coal.
  - Coal saw double-digit rate increases last year alone.
- Cost of renewables is trending downward significantly.
  - Renewables are now:
    - below the cost of existing non-renewable resources sources;
    - half the price of new coal-fired power; and
    - approximately equal to a new natural gas plant.
- Zero fuel costs means predictability for businesses.

Volatility of gas prices

- November 2012 Congressional Research Service report "Natural Gas in the U.S. Economy: Opportunities for Growth"
  - 1995 to 1999 the spot price of natural gas averaged $2.23 per MBtu, but increased to an average price of $4.68/MBtu during the 2000 to 2004 period, an almost 110% rise.
  - From 2005 to 2009 the spot price averaged $7.23/MBtu hitting a **peak of $15.38/MBtu in December 2005**.
- April 2012 Ceres report "Practicing Risk-Aware Electricity Regulation: What Every State Regulator Needs to Know-- How State Regulatory Policies Can Recognize and Address the Risk in Electric Utility Resource Selection"
  - "Fossil-fueled and nuclear generation is assigned 'medium risk' for the potential upward trend of costs and the volatility familiar to natural gas supply. Efficiency and renewable generation have no 'fuel' risk."
  - New fracking regulations on the horizon
    - Federal Clean Air Act requirements to capture escaping gas.
    - New state laws and regulations being debated right now.

Recent Cost of Natural Gas

Data Source: U.S. Energy Information Administration

Fair Rates for Customers

- Right now, the cost of renewable energy is unfairly distributed across electric customer classes.
  - Remove per meter change
    - DTE residential customers are currently paying $3 a month for renewable energy surcharge, but should only be paying $1.60 a month based on how much power they use (36% of the power, and paying 69% of the surcharge).
    - Consumers Energy residential customers only pay 52 cents a month.
- Energy rates should be based on concepts that reward conservation and other environmental decision-making:
  - Time of use rates based on the cost of using off-peak energy.
  - Rates should be based on volume of energy being used.
- Equity
  - Solution to shut-offs is income-based utility rates

Promote Economic Development

- Michigan's clean energy sector supports 20,500 jobs and $5 billion in annual economic activity and is poised to grow.
- 2013 MPSC report:
  - "Mason County and the state of Michigan received an economic boost of nearly **$10 million** from the development of Consumers Energy's first wind farm, the Lake Winds Energy Park."
  - The MPSC report also noted DTE's three wind parks in Gratiot, Huron and Sanilac Counties, will contribute **$150 million** in economic benefits to Michigan.
- Research shows that increasing Michigan's renewable energy standard could create 74,000 Michigan jobs that can't be outsourced. And, when manufacturing jobs are included in that number, potential jobs grows to 94,000.

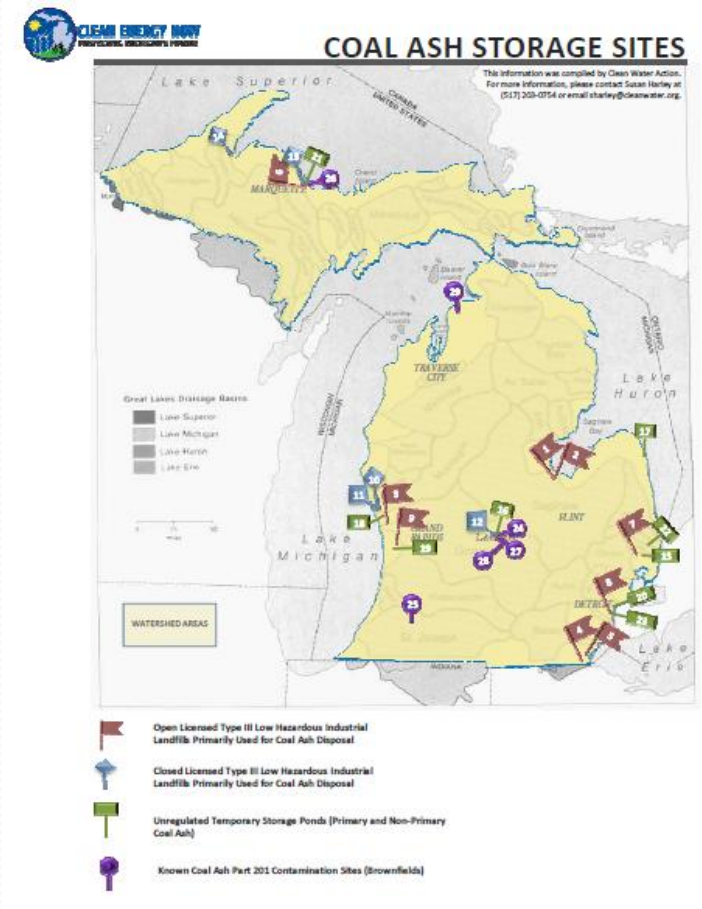
Protect Public Health and Natural Resources

- Legacy of health impacts
  - Dirty coal plants provide 60 percent of Michigan's electricity
  - Coal creates dangerous levels of pollution like mercury, sulfur dioxide and arsenic, which are linked to cancer, heart disease, childhood asthma, lung disease and premature death.
  - These health costs add up to over $1.5 billion for just the 9 dirtiest coal plants in the state.
- Legacy of air pollution
  - Carbon dioxide leads to extreme weather and climate change
    - 90% loss of cherry and apple harvests
  - Fine particulate pollution, or soot, from coal plants kills over 678 Michigan residents a year.
- Legacy of water pollution
  - Toxic Release Inventory
    - Karn /Weadock plant releases 7245.22 total pounds of contaminants like barium, copper, and mercury into surface water every year.

U.S. Environmental Protection Agency (EPA) Rules

- New EPA rules
  - Clean Water Act
    - Effluent standards– toxics have not been addressed for the past 30 years
    - Cooling water requirements
  - Clean Air Act
    - Hazardous Air Pollutants-- Mercury MATS
    - Carbon rule
    - Soot rule
  - Coal ash rule
    - Legal suit brought to compel issuance of rules
- Enforcement of existing law
  - Clean Air Act violations lawsuits filed

Coal ash pollution



- 11 known cases of contamination in Michigan
  - including Karn and Weadock coal ash sites on the Saginaw Bay.
  - Toxic contaminants include: arsenic, boron, lithium, mercury, and phosphorus.

Retire or Retrofit: *The Expense of Pollution Controls*

Retrofit

- DTE and Consumers Energy testified in front of the Michigan Senate in 2012 that they will need to spend **between $4 billion and $5.5 billion** to meet the new requirements.
- Holland Board of Public Works estimates that it would need to invest $28 million in air pollution control equipment to meet new EPA guidelines for one plant.

Retire/Mothball

- Consumers 2011 decision to mothball seven units at:
  - Karn/Weadock (Bay County)
  - JR Whiting (Luna Pier)
  - BC Cobb (Muskegon)
- Detroit Edison
  - Harbor Beach
  - Others?
- Municipal utilities
  - Holland
  - Lansing

Preserve Excellent Reliability

- Hawaii, Colorado, Iowa, South Dakota and North Dakota that are already producing more than 20% renewable energy.
- Distributed renewables
  - increase reliability
  - Germany leads the nation in solar even with more clouds than Michigan
  - Advanced batteries as energy storage
- Access to the MISO grid provides reliability
- Energy independence important for our state

Pulling it all together: Integrated Resource Planning

Public Act 286 of 2008

- Established integrated resource planning for projects seeking a Certificate of Necessity (CON).
  - Consumers Energy proposed new gas plant first test of CON IRP
- Most reasonable and prudent standard
- IRP required to look at: long-term demand forecast; projected costs; alternative sources; efficiency savings; load management; transmission.
  - "The commission **may consider any other costs** or information related to the costs associated with the power that would be supplied by the existing or proposed electric generation facility or pursuant to the proposed purchase agreement or alternatives to the proposal raised by intervening parties."

Conclusion: in order to meet the goals of the Michigan Energy Plan, Require Integrated Resource Planning (IRP)

- **No IRP requirement for retrofit decisions.**
- Community Energy Planning is needed to ensure a just transition:
  - Tax replacement,
  - Job training,
  - Remediation of retired plant sites,
  - and other concerns must be addressed.

Get involved!

CLEAN ENERGY NOW
PROTECTING MICHIGAN'S FUTURE

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