

# New Jersey Energy Master Plan

Presentation to Reducing Environmental Footprint Workgroup  
October 29, 2008

Delaware Division of the Public Advocate

Sarah Buttner  
Energy Transition Consulting



# Energy Master Plan

- Modeled:
  - Business as Usual
  - Alternative Scenario
- Transportation sector report to be released separately
- Study for applicability to Delaware

# Stakeholder Process

- Began in October 2006
- BPU, DEP, Department of Transportation, Office of Economic Growth, Governor's Office
  - Engaged more than 500 stakeholders
- After draft released in April 2008
  - More than 15 public meetings over 100 day period
  - Changes to Master Plan reflect comments and additional analysis
- Energy Master Plan includes Energy Master Plan Implementation Strategies

# Business as Usual

## Challenge 1

- Growth in supply not keeping up with growth in demand
  - Larger homes...
  - Peak expected to keep growing faster than supply
  - Competitive pressures
    - Generation companies sell into most lucrative markets

# BAU Challenge 2

- Price has increased substantially
  - Increasingly volatile
  - Trends expected to continue
  - 2002 – 2007
    - 5.06 cents per KWH to 9.94 cents
  - 2008: 11.33 cents per KWH
- 2020: Energy consumption cost to consumers 96% more than 2005 totals

# BAU Challenge 3

- Global warming contributions would continue to increase
- 2020: Greenhouse gas emissions 27% more than 2005
  - 2020 greenhouse gas emissions requirement:
    - 1990 levels by 2020
    - 80% below 2006 levels by 2050

# BAU Challenge 4

- New Jersey has less authority over supply
- Before 1999:
  - Board of Public Utilities (BPU) oversight
- Restructuring: no single entity
  - Power plant owners
  - PJM
  - FERC
  - Electric utilities
  - BPU
  - New Jersey Department of Environmental Protection

# Alternative Scenario Goal 1

## Maximize energy conservation and energy efficiency

- Reduce energy consumption by 20%
  - \$30 billion in energy savings between 2010 and 2020

# Goal 2

## Reduce peak electricity demand

- Aggressive targets: by 2020
  - Reduce peak demand for electricity by 5,700 MW
    - PJM projected peak demand 2008: 20,709 MW
    - So target peak reduction is 28%
      - Includes energy efficiency and demand response

# Goal 3

## Strive to exceed current RPS

- 30% of State's electricity from renewables by 2020
- Will require some financial help
- By 2020:
  - 900 MW biomass
  - At least 3,000 MW offshore wind
  - 200 MW onshore wind
  - 2,120 GWH (approximately 1,800 MW) solar

# Goal 4

## Develop a 21<sup>st</sup> Century Energy Infrastructure

- Work with utilities to develop master plans
  - Include examination of Smart Grid
- Foster development of cogeneration capacity
  - 1500 MW new cogen by 2020
- Ensure balance supply and demand
  - Consistent with greenhouse gas targets and
  - Reasonable price

# Goal 5

## Invest in innovative clean energy

- Continue and expand investment in innovative technology businesses
- Support to business incubators supporting clean energy development
- Job training
- Establish Energy Institute of New Jersey
  - Support basic and applied energy research, colleges and universities in NJ

# Alternative Scenario

- Savings to consumers
  - \$6.4 billion in 2020
  - \$30 billion 2010 to 2020
- Investment into energy infrastructure
  - \$33 billion by 2020
  - 20,000 new jobs by 2015
- By 2020, 23% reduction in CO<sub>2</sub> versus 1990

- Questions?