

The New Jersey Energy Master Plan

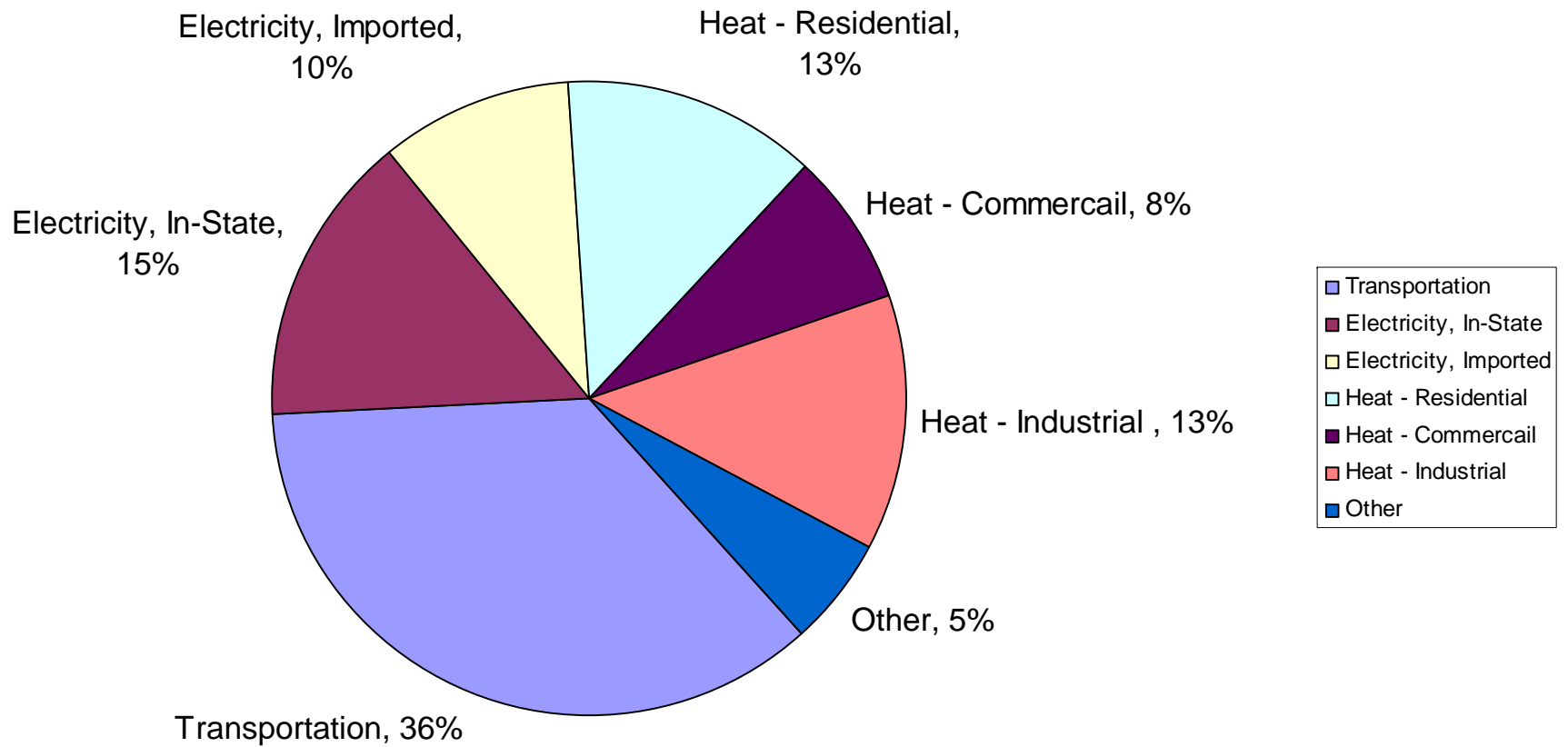
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NJ's GHG Emissions

- 1990 = 120 MMT
- 2005 = 138 MMT
- 2006 = TBD (assume 140 MMT)
- 2020 = 158 MMT – based on BAU
- 2020 = 120 MMT – GWRA
- 2050 = 20% of 2006 (assume 28 MMT)

NJ's Emissions, in CO2 equivalent



Electricity GHGs

- 1990 – 26.5 MMT (12.4 instate + 14.1 imports)
- 2005 – 35.1 MMT (20.3 instate + 14.8 imports)
- 2020 BAU – 43.1 MMT (22.8 instate + 20.3 imports)
- 2020 EMP – 25.9 MMT (21.1 instate + 4.8 imports)
- 2% below 1990 target

Heat GHGs

- 1990 – 46.3 MMT (20.5 NG + 25 Oil + 0.8 other)
- 2005 – 46.1 MMT (26.4 NG + 19.6 Oil + 0.1 other)
- 2020 BAU – 44.1 MMT (27.4 NG + 16.7 Oil + 0.1 other)
- 2020 EMP – 37.1 MMT
- 20% below 1990 target

NJ's Goals and Objectives: Energy Efficiency, Renewable Energy & Demand Response

- Reduce projected energy usage by 20%
 - Electricity – 80,000 GWh to 100,000 GWh by 2020
 - Heat – 602 TBtus to 593 TBtus by 2020
- 22.5% Renewable Energy by 2020 Wind
 - 17.88% Class I – Wind, Sustainable Biomass, Tidal
 - 2.12% Solar
 - 2.5% Class II - Refuse Derived Fuel Plants
- 5,700 MW of Peak Load Reduction
 - 3,500 MW from EE and CHP
 - 2,200 MW from DR initiatives

How to Achieve EE Targets

- Building Codes
- Appliance Standards
- Appliance Replacement
- Existing Buildings

Demand Response

- Expand RTP for C&I Customers
- Expand Incentives
- Consider an Inverted Tariff for Residential Customers
- Move to ‘Smart Grid’ Infrastructure

Distributed Generation

- 1500 MW of CHP – producing ~10,000 GWh
- RE - ~16,000 GWh from
 - 1000 MW Offshore wind
 - 200 MW Onshore wind
 - 900 MW Biomass
 - 1500 MW Solar
 - Almost 90% from NJ sources

Conventional Generation

- Aggressive EE & RE still require 54,000 GWh of electricity from nuclear, coal, natural gas
- Today's choices will have implications for 2050 GHG target

Energy Cost Implications

- 2005 - ~ \$17 B for electricity and heating
- 2020 BAU - ~ \$27 B
- 2020 EMP - ~ \$22 B
- 17% lower under EMP

Summary

- EMP action items can achieve 2020 GHG target
- Put us on a path that will help achieve 2050 GHG Target
- The real test will be in implementation
 - Annual reviews and updates every 3 years
 - We have to be successful – future generations are depending on us

EMP Information

- Draft EMP, Implementation Strategies & Modeling Report on EMP website

www.nj.gov/emp

- Stakeholder Meetings 4/28 & 5/1 – War Memorial – Trenton
- Roundtable Meetings – June
- Public Hearings - July