

# Greenhouse Gas Regulations in MA

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the Regional Greenhouse Gas Initiative

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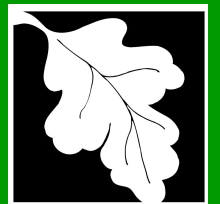


November 2007

MassDEP

# What is Cap-and-Trade?

- Market-based emission control program
- Implemented to control SO<sub>2</sub> and NO<sub>x</sub> emissions from large power plants since the 90s
- Process:
  - Establish emission level / state cap
  - Distribute allowances
  - Affected facilities surrender one allowance for every ton of pollutant emitted
- Facilities weigh costs of allowances with costs of control



# Regional Greenhouse Gas Initiative

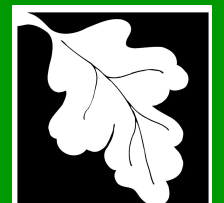
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- Pollutant – CO<sub>2</sub>
- Affected facilities – large fossil-fuel-fired electric generating units
  - Nameplate capacity of 25MWe
- Stabilize emissions 2009 – 2014  
Reduce cap 2.5% per year from 2015 –2018
- Participating states (10) – CT, DE, MA, ME, MD, NH, NJ, NY, RI, VT

# RGGI – Cost Control Mechanisms

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- 3 year compliance period
- Allows limited use of project-based emission reductions (offsets) for compliance
- Price triggers (\$7, \$10)
  - Lengthen compliance period
  - Expand use of offsets
  - Allow use of international credits and allowances



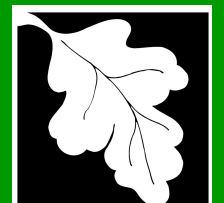
# RGGI – Cost Control Mechanisms

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- Offset categories include:
  - Afforestation;
  - Agricultural manure management
  - Landfill methane capture and destruction;
  - Reduction in emissions of sulfur hexafluoride ( $\text{SF}_6$ )
  - Natural gas, oil, or propane end use energy efficiency improvements
- Offset projects must be located in RGGI state, or state that has MOU with RGGI states.

# RGGI – Other Innovative Features

- Set-aside for voluntary renewable energy purchases.
- Auction
  - RGGI MOU commits states to allocating 25% of their allowances to consumer benefit or strategic energy purposes.
  - MA has proposed to auction 100% of its allowances.



# Auction Design Issues

- Auction frequency, and format
- Market players eligible to participate in auction
- How the proceeds from the auction will be used
  - Cost minimization to electricity customers
  - Energy efficiency
  - Reliability
  - Demand response
  - Peak shaving
  - Other strategic energy goals

# RGGI – Cost Modeling

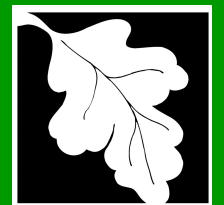
- Regional modeling using ICF Integrated Planning Model (IPM) and Regional Economic Models, Inc. (REMI)
- Macroeconomic impacts:
  - < 0.1% reduction in employment, income, & gross regional product
  - Positive impacts if US and Canadian carbon policy
- Retail electric price impacts (2015):
  - Residential and commercial bills rise 0.3%
  - Industrial bills 0.7%
  - Mitigate impacts by spending auction proceeds on energy efficiency
- Forward Capacity Market expected to have far greater impacts than RGGI



# MA GHG Rule Status

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- Final MA regulations expected in time for auction in 2<sup>nd</sup> quarter of 2008.



# Questions, Comments?

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Visit:

[www.mass.gov/dep/air/climate/index.htm](http://www.mass.gov/dep/air/climate/index.htm)

[www.mass.gov/doer/rggi](http://www.mass.gov/doer/rggi)

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