



# Quantifying Emission Impacts

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# Evolution of Energy Efficiency

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- Advance Plan – Wisconsin’s integrated resource planning process
- Focus pilot
- 1999 Wisconsin Act 9
  - Full third-party delivery
  - DOA oversight
- 2005 Wisconsin Act 141
  - Change in funding source
  - Increased funding
  - PSC oversight



# Environmental Value of Energy Efficiency



- Advance Plan

- Monetization of greenhouse gases
- Values used to compare resource options

- Act 9

Proposals for providing energy conservation or efficiency services shall give priority to proposals directed at the sectors of energy conservation or efficiency markets that are least competitive and at promoting **environmental protection**, electric system reliability or rural economic development

- Act 141

The purpose of the programs should be to help achieve **environmentally sound** and adequate energy supplies at reasonable cost.

# Why Determine AQ Benefits?

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- Document objective of statute is met
- Reflect environmental benefits in the valuation of energy efficiency programs
  - Use of Expanded Resource Cost Test began under DOA oversight
  - Continued and later reaffirmed by the Commission in its Quadrennial Planning process

# Development of approach



- DOA requested LBNL to develop method for the Focus pilot
- Enhancements under Act 9
  - Development of multiple load duration curves
  - Identification of marginal generators during different periods (peak and off-peak for each season)
  - Use of additional plant-specific data for heat rates and NO<sub>x</sub> emissions
  - Use of a subset of power plants that more closely models only Wisconsin generation sources
- Enhancements under Act 141
  - Apportion savings over each hour of year
  - Base on data specific to plants estimated to be operating on the margin

# Key approach considerations

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- Data availability
- Cost of obtaining/developing data
- Realism/accuracy in the estimation of avoided emissions
- Alignment with the Greenhouse Gas Protocol Initiative
  - Broadly accepted
  - Lends credibility to results



# Contact Information

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