

WIND POWER IN RHODE ISLAND

**Presentation to:
The Rhode Island Wind Alliance**

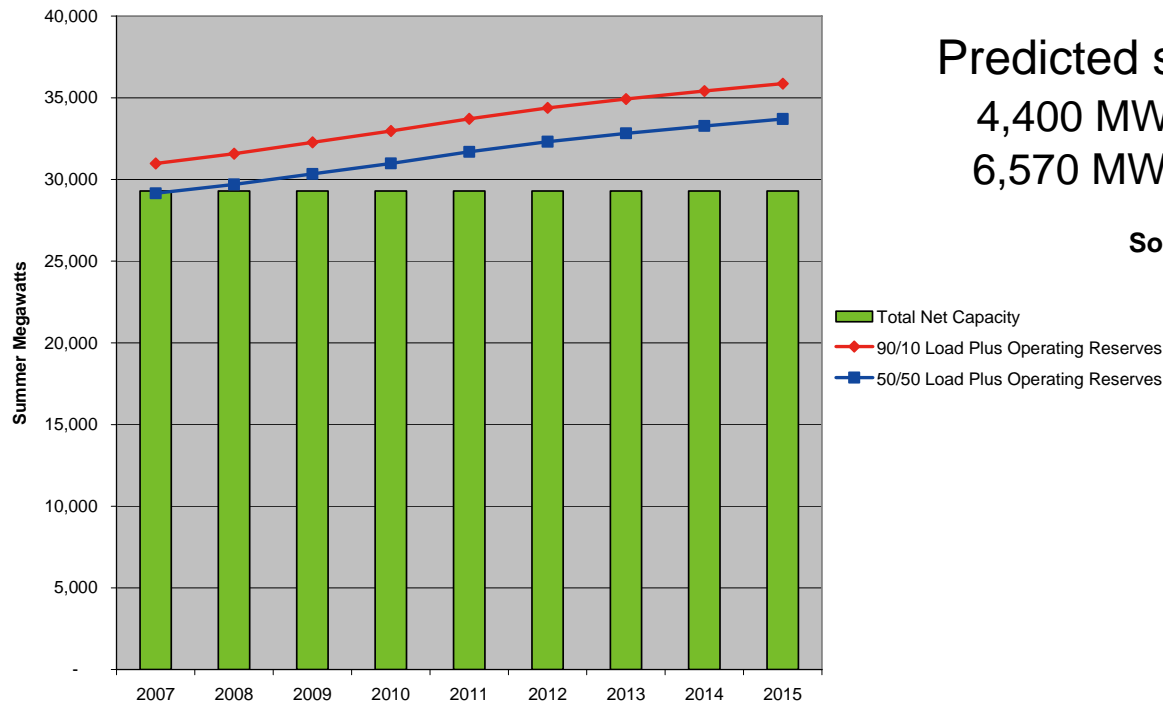
**by
Andrew C. Dzykewicz
Chief Advisor to the Governor on Energy**

December 9, 2006



WIND POWER IN RHODE ISLAND

Why Add Generation ???



Predicted shortfall by 2015
4,400 MW “Expected” Case
6,570 MW “Extreme” Case

Source: ISO New England

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Why Wind Power ???

- Obvious environmental benefits
- Rhode Island has a good wind regime
- The fuel cost does not go up over time
- Commercial wind power is competitive with the market
- Wind power can displace the highest priced conventional sources

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Obvious environmental benefits



PICK ONE

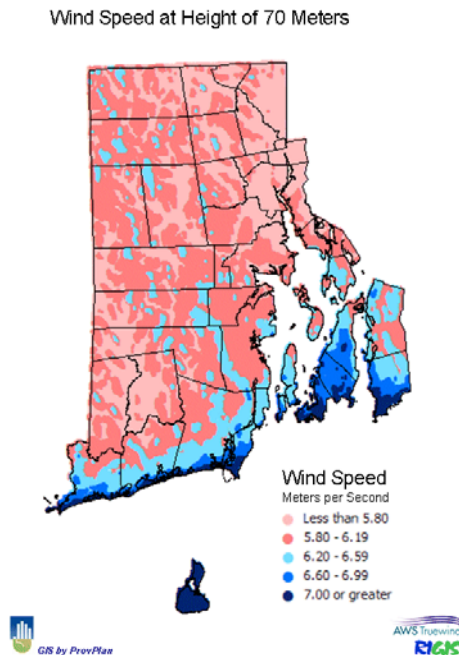
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Rhode Island has a good wind regime



- A little on-shore potential
- Good coastal potential
- Best potential offshore

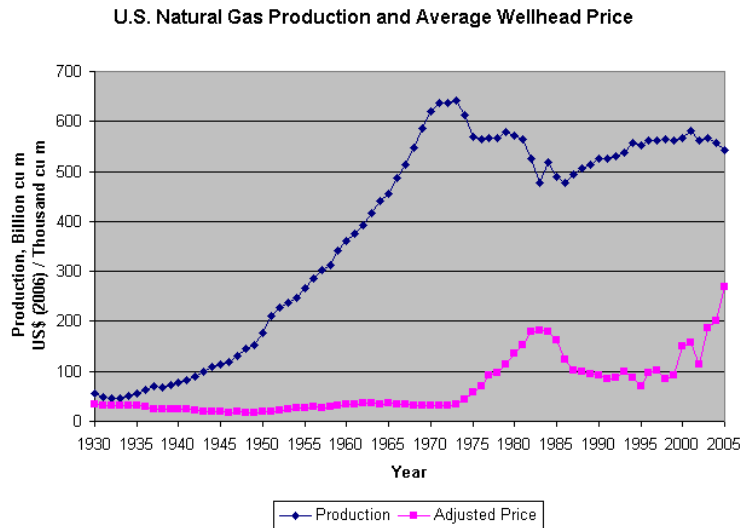
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The fuel cost does not go up over time



- Natural gas makes 30% of New England's electricity
- Natural gas sets the price 85% of the time

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Energy Rate – Generation costs



Nuclear Plant – 2 ¢ to 3 ¢ power - **Escalating**



Coal Plant – 3 ½ ¢ to 5 ¢ power - **Escalating**



Natural Gas Plant – 10 ¢ to 12 ¢ power - **Escalating**



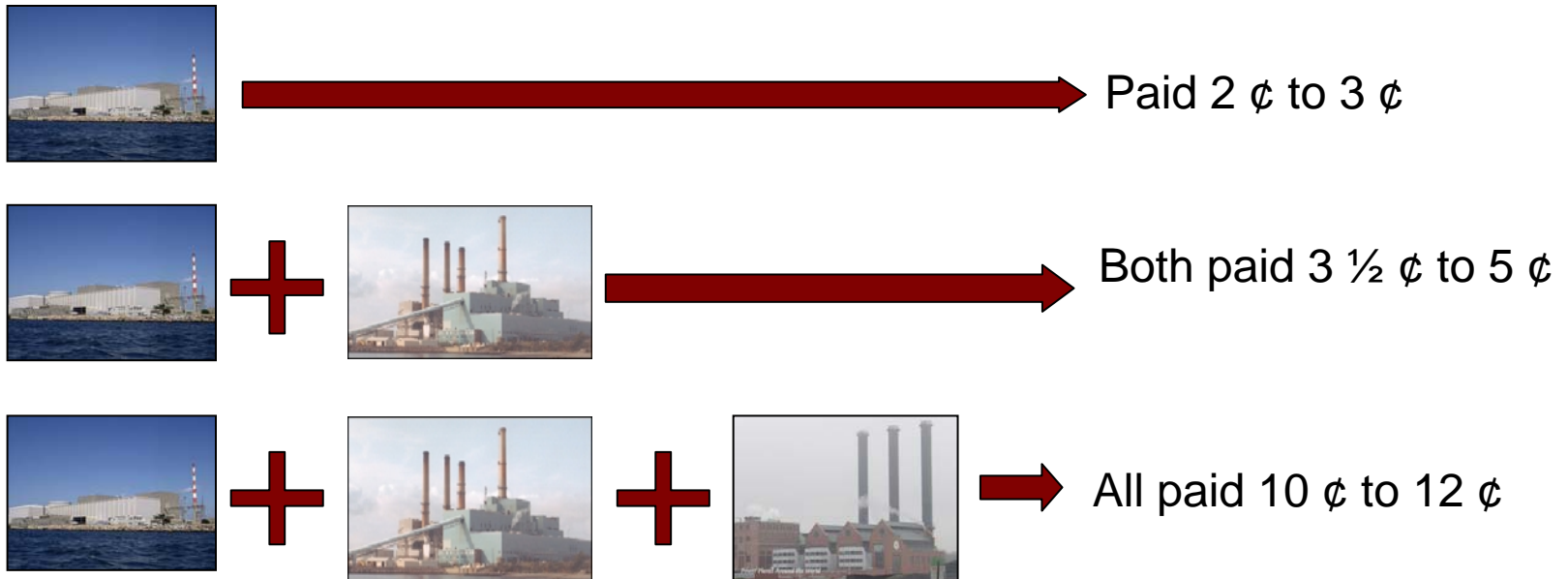
Wind – 7 ¢ to 11 ¢ power – ***Almost forever***



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Energy Rate – Market Clearing Price Rule

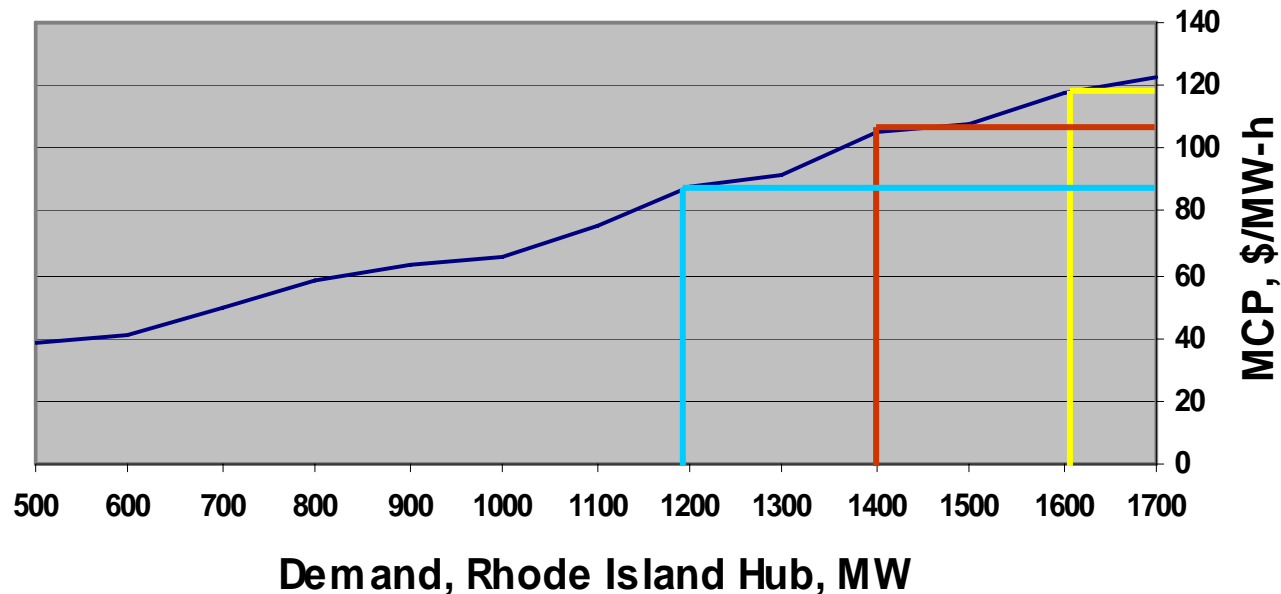
For plant dispatch scenarios:



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Electric Energy Price vs. Demand

Market Clearing Price Vs. Demand



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GOVERNOR CARCIERI'S WIND AGENDA

Objective

Provide enough wind generation to supply 15% of Rhode Island's native demand from wind powered generation in Rhode Island, for Rhode Island consumers.



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RIWINDS – Phase 1

- Identify all technically feasible sites
- Cull out sites with permitting problems
- Force-rank remaining sites on production cost

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RIWINDS – Phase 1a

- Identify one promising site
- Carry design to 90% level
- Determine production cost
- Validate Phase 1 results

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RIWINDS – Subsequent Phases

- **Select appropriate business model**
 - Put data on street – welcome developers
 - State pursues permits, auctions off to developers
 - State forms power authority – selects design/build/operate contractor

- ***Get it built***

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Status

- Results of RIWINDS study due by end of year
- One turbine operational
- Developers working to aggregate locations

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Summary

1. Displace high priced sources
2. Displace more polluting sources
3. Find out what and where
4. Get it done

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