Wind Energy and the States

State Wind Summit
June 6, 2002

Presentation by:

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American Wind Energy Association

2001: A Record Year for the U.S. Wind Industry

- 1,696 new MW in 2001
- Over 4,265 MW now installed

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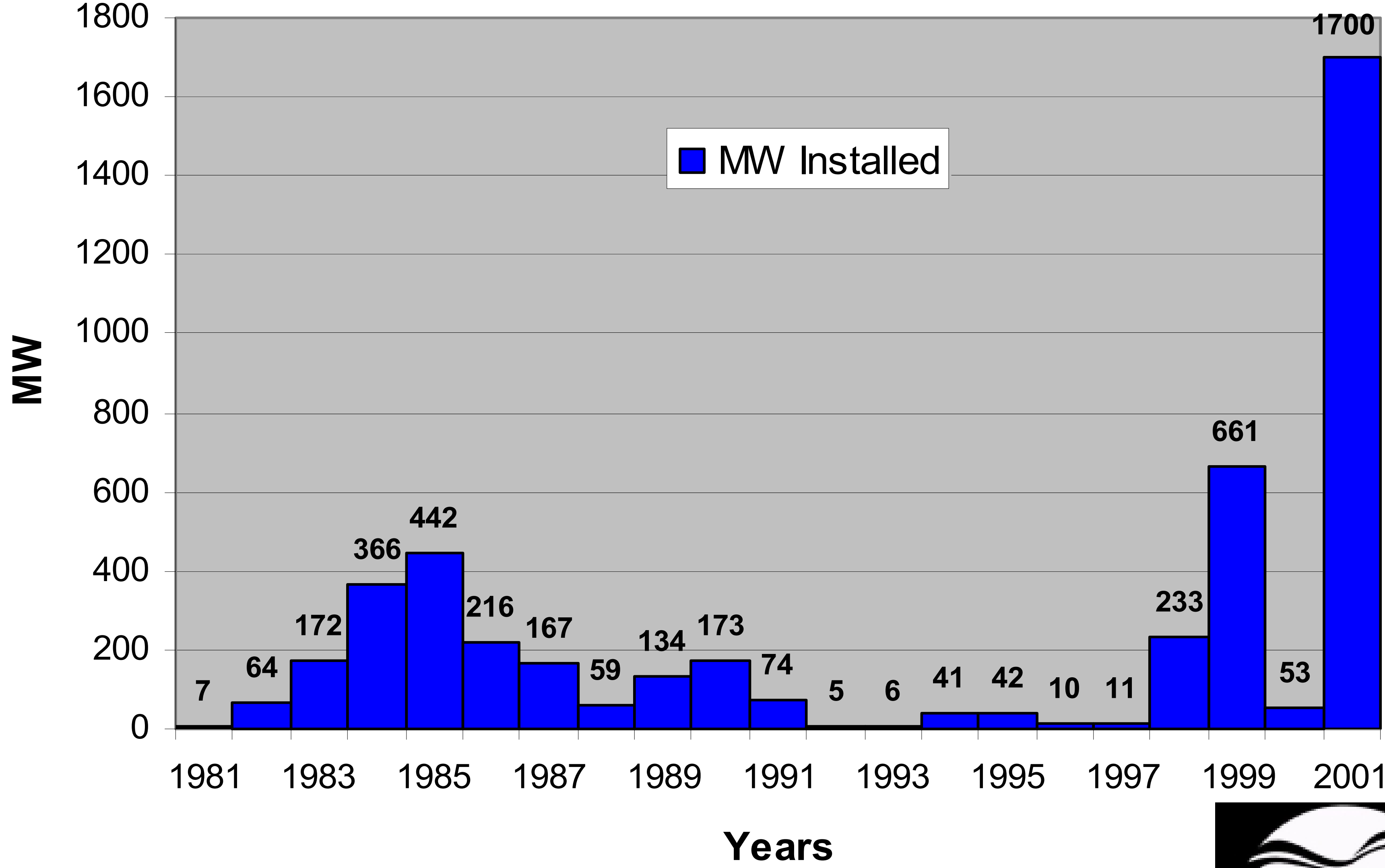
U.S. Annual Capacity Additions



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Policy Opens the Market

PTC + RPS = MW's

Driving Forces Behind the Rebirth

- State Policy
- Electric Industry Competition
- Wind's Steadily Improving Economics
- Gas Price Volatility
- Utility Experience and Perspective
- Production Tax Credit

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Three Primary Markets for Wind Today

- State Policy Driven Markets
- Green Market
- Commodity Electricity

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Customer Choice

Customer Choice and Green Pricing are Raising the Visibility of Renewable Resources

Wind Energy is the Star of the Green Market

- Environmental Benefit
- Popular
- Visual Appeal
- Hydro and Gas Resources Complementary
- Modular
- Cost-Competitive

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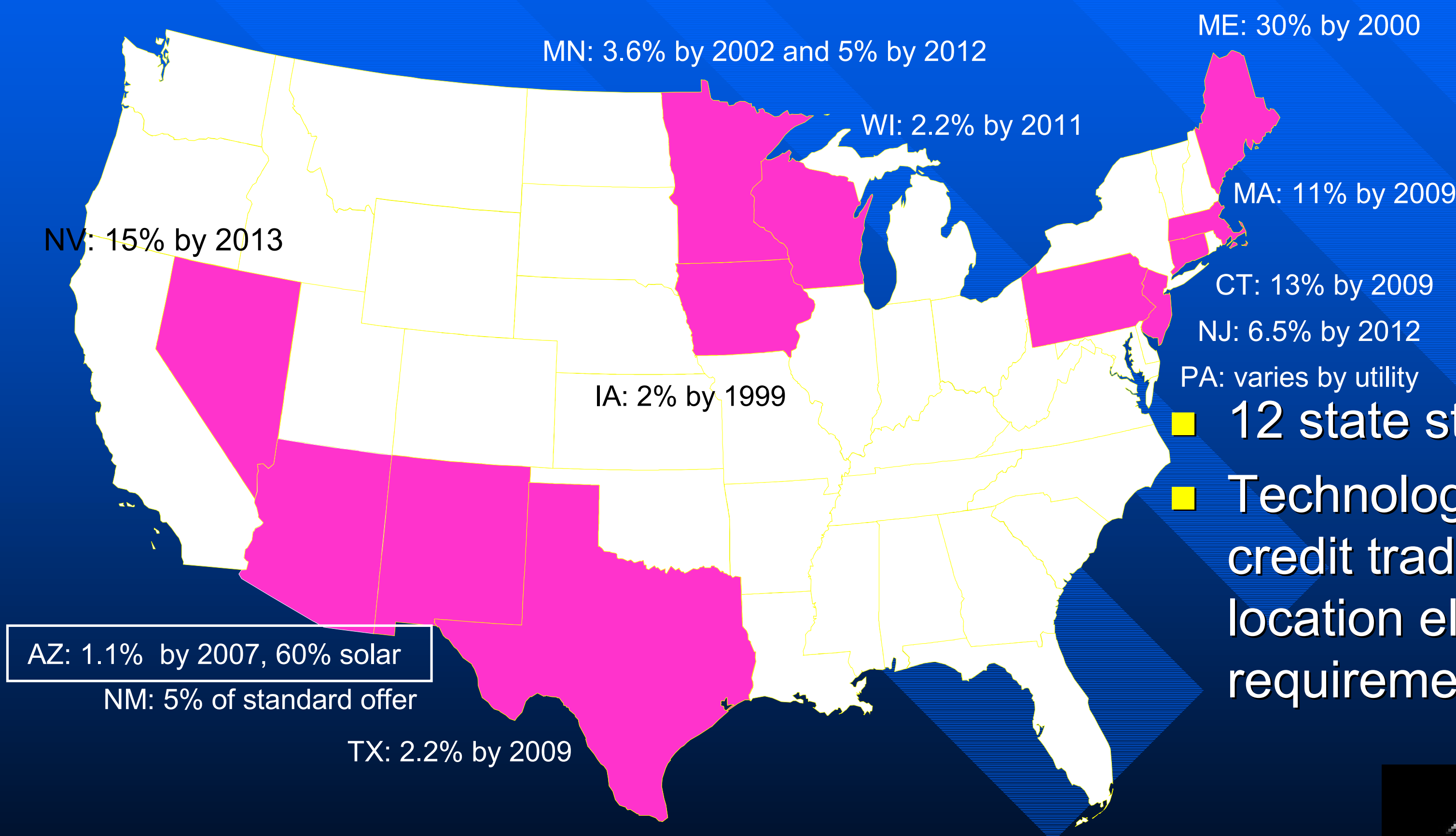
Green Market

- Dependent Upon "Volunteers"
- Small Scale, Short-term contracts
- Premium Prices

State Policy Driven Market

- Best Examples: Minnesota, Iowa, Texas
- Relatively Large Projects
- Long-term Contracts
- Costs Competitive with New Fossil Generation

Renewable Energy Standards



- 12 state standards
- Technology, vintage, credit trading, sunset, location eligibility requirements differ

Texas RPS—Initial Results

- 2003 Requirement 400 MW
  - 915 MW of new wind installed in 2001
  - Numerous large projects
  - Low cost

Federal RPS

- Approved in Senate Energy Bill (Bingaman)
  – 10% Requirement on Retailers by 2020
- Not included in House Bill
  – RPS will be point of contention in negotiations

Federal Wind Production Tax Credit

- Extended until Dec. 31, 2003
- 5 year extension included in House and Senate energy bills

Transmission is Most Critical Long-term Issue Facing Wind

- 1. Transmission Constraints—Need more transmission capacity
- 2. Transmission Policy
  - Rules discriminate against variable generators.
  - Breakthrough FERC Order March 27

Utility-Scale Turbines Aren't the Only Story . . .

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A Domestic Market for Small Wind Turbines is Emerging

- Consumer Interest
- Cost-competitive with PV and Diesel
- State Policy has been Key—Cost-sharing to overcome high first costs

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Barriers to Small Turbines

- High First Costs
- No Federal Tax Credits Since 1985
- Local Permitting
- Utility Interconnection

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Programs for small wind development

- Buy-down programs
- Exemptions from sales, property tax
- Standardized zoning requirements

Property-Sales Tax

- Property or sales tax exemption offered in several states
- Programs to affect initial purchase price work best
- Net metering programs (equalizing kWh costs paid and received by residential generators) do not seem to drive purchasing decisions

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AWEA Projections for 2002

- “Recovery Year” After 2001 Blowout
- Some Loss of Momentum due to PTC Lapse
- AWEA Projects less than 600 MW for 2002

But 2003 Will be Another Record Year

- About 3,000 MW "in the pipeline"
- Project Timing Driven by Length of PTC Extension

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Trends are Positive . . .

- Need for Power
- Fuel Diversity
- Wind's Cost
- Environmental
  - Utility Regulatory Certainty

Let's Think Big!

Wind: 6% by 2020 = 100,000 MW in the U.S.

- Realistic
- Achievable
- Aggressive Policy could achieve much more

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Want to Know More About Wind Energy?

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