Wind Energy Policy: A View From Political Science

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June 14, 2012
• Policy history
• National policy
• State/regional policy
Why Support Wind?

Meets several political goals:

1. Domestic energy production
2. Environmental concerns
3. Economic development
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But it involves government intervention into the market.
Motivated by energy prices, but not cost competitive. Focuses on 4 keys areas:

1. Tax Policy
2. Renewable Energy Standards (RES)
3. Transmission
4. Siting
Policy History

- Energy Policy and Conservation Act of 1975
- Public Utility Regulatory Policies Act of 1978
  - Renewable Electricity Production Tax Credit
  - Renewable Energy Production Incentive
- Energy Policy Act of 2005
- American Reinvestment and Recovery Act of 2009
The problem is that wind energy is too expensive
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Two solutions: mandates or lower costs.
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Two solutions: mandates or lower costs

- Tax incentives for development
- Tax credits for production
Success of PTC

Creates strong incentives for development of wind power

- Makes wind cost competitive
- Lead to massive increases
- Capacity increased 45 percent in 2007
Problems

Predictability of PTC:

• Created in 1992
• Lapsed from June to December 1999
• Lapsed from December 2001 to March 2002
• Lapsed from December 2003 to October 2004
• Expires December 2012

Wind energy has doubled during this time
Result of uncertainty

Annual Wind Capacity Installed (MW)

- 93% Drop 1999-2000
- 73% Drop 2001-2002
- 77% Drop 2003-2004
- 100% Drop 2005-2006
- Forecast: 2007-2013e

DOE EIA
PTC will expire

- Set to expire at end of year
- Will make wind competitive only in the best locations
- Already developed
Why is it unpredictable?

Public opinion matters

- Members of Congress fear for reelection
- Public opinion matters for voting (sometimes)
- MC’s pay attention to opinion when it matters for elections
Opinion about wind energy:

- Popular: 87 percent support
Why is it unpredictable?

Opinion about wind energy:
- Popular: 87 percent support
- Shallow support
- 18 percent know that it costs more
- Information matters for opinion

MC’s aren’t afraid of opposing wind energy
The nature of our political institutions.
Why is it unpredictable?

The nature of our political institutions.

- Unitary president
- Majoritarian House
- Supermajoritarian Senate
Why is it unpredictable?

- Each player get a veto
- Policy is gridlocked if any prefers the status quo
Think of policy along a single left right dimension. Everyone has a preferred location on this dimension.
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Think of policy along a single left right dimension. Everyone has a preferred location on this dimension. Actor votes for a policy if it is closer to his or her ideal point than the status quo. Institution passes if veto player approves.
Spatial model of Congress

ML: Median legislator
FP: Filibuster pivot
P: President
VP: Veto pivot
SQ: Status quo

ML

SQ
FP

Ideal point

Mount filibuster

Let bill pass

P

VetoSign

VP

Sustain Override

SQ

Proposed policy change

Proposed policy change
Spatial model of Congress
When have we seen policy activity?

- 1975: Ford and post Watergate
- 1978: Carter and Democratic Congress
- 1989: Bush I and Democratic Congress
- 1992: Bush I and Democratic Congress
- 2005: Bush II and Republican Congress
- 2009: Obama and Democratic supermajority.
Why not now?

Congress is more polarized than ever:
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Opposition:

- Heritage Foundation action
- Wind is now competing
- Gas and coal
- Less support for all “subsidies”

Action often linked to external events (oil embargo, Exxon Valdez)
Not just national policy

Energy policy is federal–state, local, and regional matter too

1. Tax Policy
2. Renewable Energy Standards (RES)
3. Transmission
4. Siting
Key State Policies

- Greenhouse gas emission targets (22 states)
- Tax policy
- Regional initiatives
- Renewable Portfolio Standards
Tax Credits

Corporate tax credit(s) only
Personal + corporate tax credit(s)

Notes: This map does not include corporate or personal tax deductions or exemptions; or tax incentives for geothermal heat pumps.
Regional initiatives

- Cap and trade based
- Politically unstable
Renewable Portfolio Standards

Mandate a minimum of renewable energy from utilities

Federal Energy Regulatory Commission • Market Oversight @ FERC.gov

Renewable Energy Portfolio Standards (RPS)

29 States including D.C. have an RPS

- WA: 15% by 2020
- OR: 26% by 2015, small utilities 5-10%
- ID: Priority to OR, E.A. and in-state RE
- CA: 20% by 2010, goal: 33% by 2020
- NV: 20% by 2015, solar 5% per year
- UT: 20% by 2025
- CO: 20% by 2020, co-ops & munis 10% includes 5% solar
- AZ: 15% by 2025, includes 30% DG
- NM: 20% by 2020, co-ops 10%
- TX: 5,880 MW by 2016, goal: 10,000 MW by 2025
- HI: 20% by 2020; proposed increase to 40% by 2015 agreed to for 2009 session
- MT: 15% by 2015
- ND: 10% by 2015
- SD: 15% by 2015
- NE: studying RPS
- KS: goal: 20% wind by 2020
- WI: 10% by 2015
- IL: 25% by 2025
- MI: 10% by 2015, and new RE capacity: 1,103 MW by 2015, at least 2% solar
- OH: 12.8% by 2025; 5.6% solar
- IN: 2 bills introduced
- KY: Report recommends RPS
- ME: 40% by 2017, goal: 3 GW wind by 2020
- NH: 23.3% by 2025
- VT: 25% by 2025
- MA: 15% by 2026, two goals: 250 MW solar 2017, 7 GW wind 2020
- RI: 34% by 2019
- CT: 23% Class III by 2020, 4% Class II by 2010
- NY: 25% by 2013
- PA: 4% Tier I, 10% Tier II by 2020, 0.5% solar set-asides
- NJ: 22.5% by 2020, 2% solar
- DE: 20% by 2019, with 2% solar
- DC: 20% by 2020, with 0.4% solar
- MD: 20% by 2022, with 2% solar
- VA: 12% by 2022
- WV: 50% of generation from zero- or low-carbon sources by 2020
- NC: 12.5% by 2021, co-ops & munis: 10% by 2018
- FL: draft RPS to legislature: 20% by 2023

Updates at: http://www.ferc.gov/marketoversight/electric/overview/els-cvr-rps.pdf

Notes: An RPS requires a percent of an electric provider's energy sales (MWh) or installed capacity (MW) to come from renewable resources. Most specify sales (MWh). Map percent are final years' targets. Details, including timelines, are in the Database of State Incentives for Renewables and Energy Efficiency: http://www.dsireusa.org/. Alaska has no RPS; TVA's goal is not a state policy; the Public Power Authority called for 50% of generation from zero- or low-carbon sources by 2020.

Abbreviations: DG: distributed generation, DR: demand response, EI: energy efficiency, IRP: integrated resource plan, RE: renewable energy

Sources: Derived from data in: EEI, EIA, LBNL, FUCs, State legislative tracking services, DSRJUS, Pew Center, and the Union of Concerned Scientists.

Updated February 6, 2009
Renewable Portfolio Standards

- Rapidly expanding (Iowa first)
- Vary on what “counts”
- Encouraging federal action
- Several need to be updated
What explains state policy?

- Problem severity
- Capacity
- Politics
Capacity

• Fiscal status
• Institutional
  1 Legislation
  2 Gubernatorial
  3 Bureaucratic
Politics

- Citizenry
- Interest groups (on both sides)
- Political control over institutions
- Diffusion
  1. Learning
  2. Competition
  3. Internal pressures
  4. Federal involvement