

Wind Energy Policy: A View From Political Science

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- 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

- Energy Policy and Conservation Act of 1975
- Public Utility Regulatory Policies Act of 1978
- Renewable Energy and Energy Efficiency Technology Competitiveness Act of 1989
- Energy Policy Act (EPACT) of 1992
 - 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

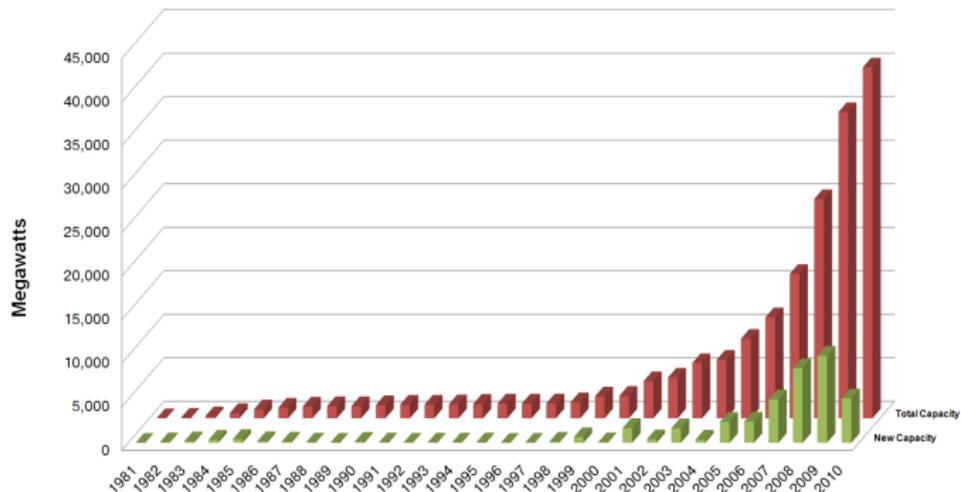
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Two solutions: mandates or lower costs

- Tax incentives for development
- Tax credits for production

Success of PTC

United States Wind Power Capacity



Creates strong incentives for development of wind power

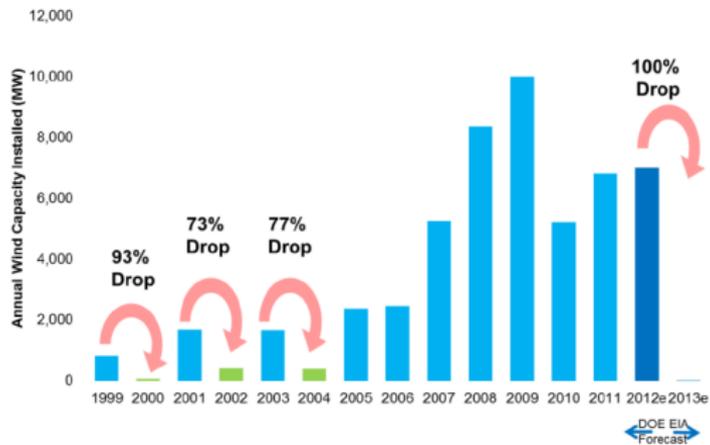
- Makes wind cost competitive
- Lead to massive increases
- Capacity increased 45 percent in 2007

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



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

Why is it unpredictable?

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

Why is it unpredictable?

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

Spatial model of Congress

Think of policy along a single left right dimension. Everyone has a preferred location on this dimension.

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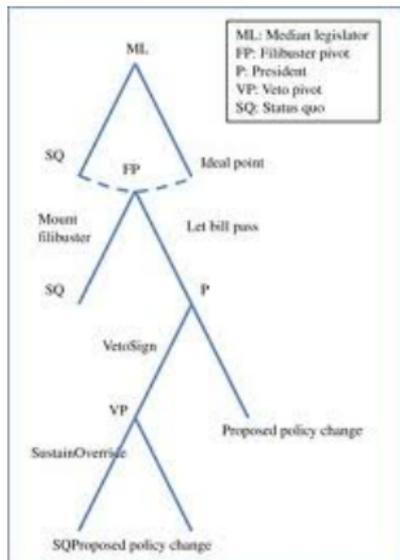
Spatial model of Congress

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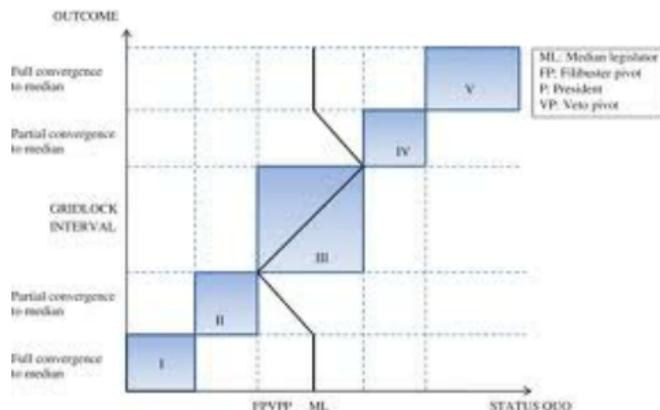
Actor votes for a policy if it is closer to his or her ideal point than the status quo.

Institution passes if veto player approves.

Spatial model of Congress



Spatial model of Congress

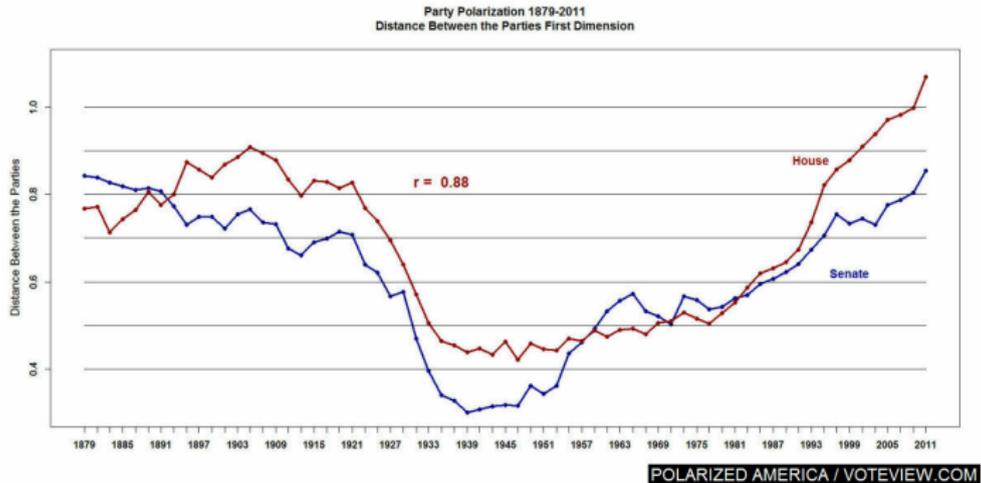


When have we seen policy activity?

- 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.

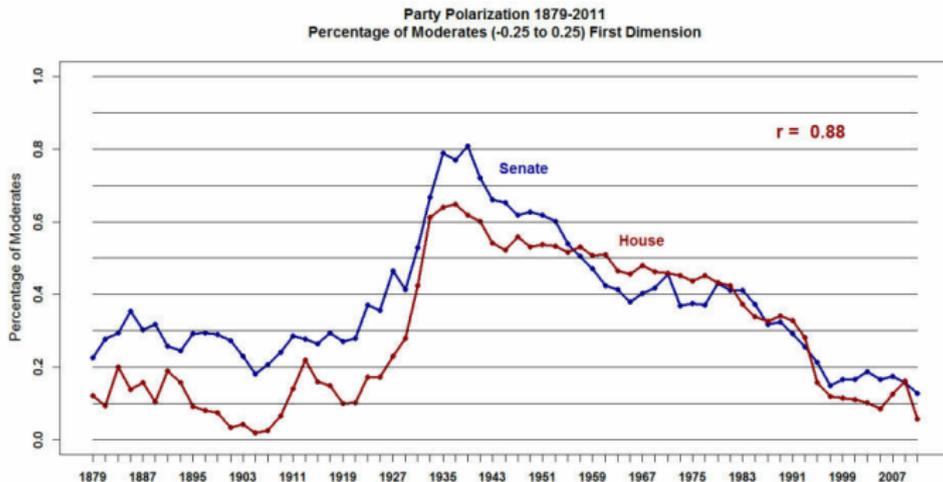
Why not now?

Congress is more polarized than ever:



Why not now?

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POLARIZED AMERICA / VOTEVIEW.COM

Why not now?

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

DSIRETM

Database of State Incentives for Renewables & Efficiency

U.S. DEPARTMENT OF
ENERGY

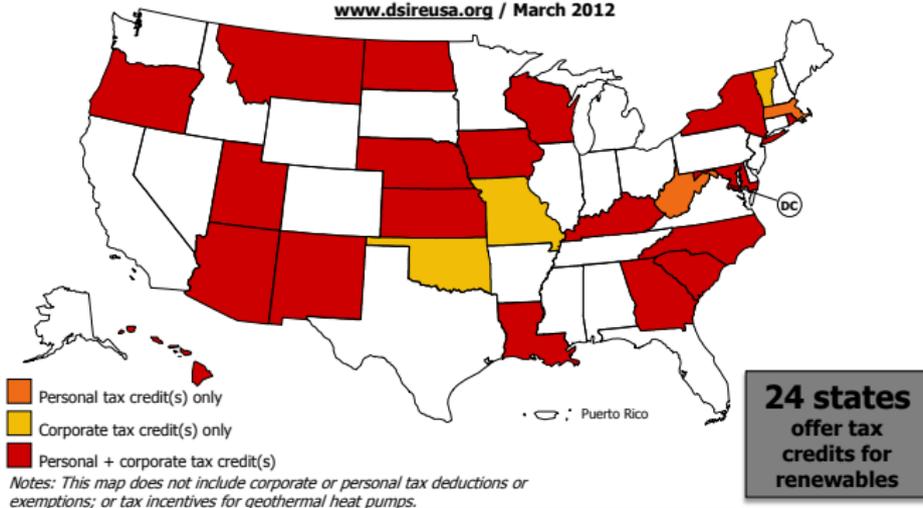
Energy Efficiency &
Renewable Energy

IREC
INDEPENDENT RENEWABLES & ENERGY COUNCIL

**NORTH CAROLINA
SOLAR CENTER**

Tax Credits for Renewables

www.dsireusa.org / March 2012



Renewable Portfolio Standards

Mandate a minimum of renewable energy from utilities

Electric Market Overview: Renewables

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: 25% by 2025;

small utilities 5-10%

SD: 10% by 2015

ID: Priority to DR, EE, and

in-state RE

CA: 20% by 2010;

solar 5% per year

NV: 20% by 2015;

solar 5% per year

UT: 20% by 2025

CO: 20% by 2020;

co-ops & munis 10%;

includes 4% solar

AZ: 15% by 2025;

includes 30% DG

NM: 20% by 2020, co-ops 10%

TX: 5,880 MW by 2015;

goal: 10,000 MW by 2025

HI: 20% by 2020; proposed

increase to 40% by 2030

agreed to for 2009 session

MN: 25% by 2025

MT: 15% by 2015

ND: 10% by 2015

SD: 10% by 2015

NE: studying RPS

KS: goal - 20% wind by 2020

AR: Utility IRPs to include RE

IA: 105 MW in RPS

IL: 25% by 2025

IN: 2 bills introduced

OH: 12.5% by 2025; 0.5% solar

MI: 10% by 2015, and new RE

capacity: 1,100 MW by 2015

MO: 15% by 2021;

at least 2% solar

OK: Studying an RPS

WY: Report recommends RPS

ME: 40% by 2017

VT: 25% by 2025

NH: 23.8% BY 2025

MA: 15% by 2020; two goals: 250 MW

solar 2017; 2 GW wind 2020

RI: 16% by 2019

CT: 23% Class III by 2020

4% Class III by 2010

NY: 25% by 2013

PA: 8% Tier I, 10% Tier II by

2020; 0.5% solar set-aside

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

TVA: 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 2020



Updates at: <http://www.ferc.gov/market-oversight/mkt-electric/overview/elec-cwr-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; EE: energy efficiency; IRP: integrated resource plan; RE: renewable energy.

Sources: Derived from data in: EEF, EIA, LBNL, PUCs, State legislative tracking services, DSIREUSA, Pew Center, and the Union of Concerned Scientists.

- RPS
- Strengthened/amended RPS
- Voluntary standards or goals
- Proposed RPS or studying RPS
- Other renewable energy goal

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

- Fiscal status
- Institutional
 - ① Legislative
 - ② Gubernatorial
 - ③ Bureaucratic

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