A Look Behind the Texas Renewable Portfolio Standard

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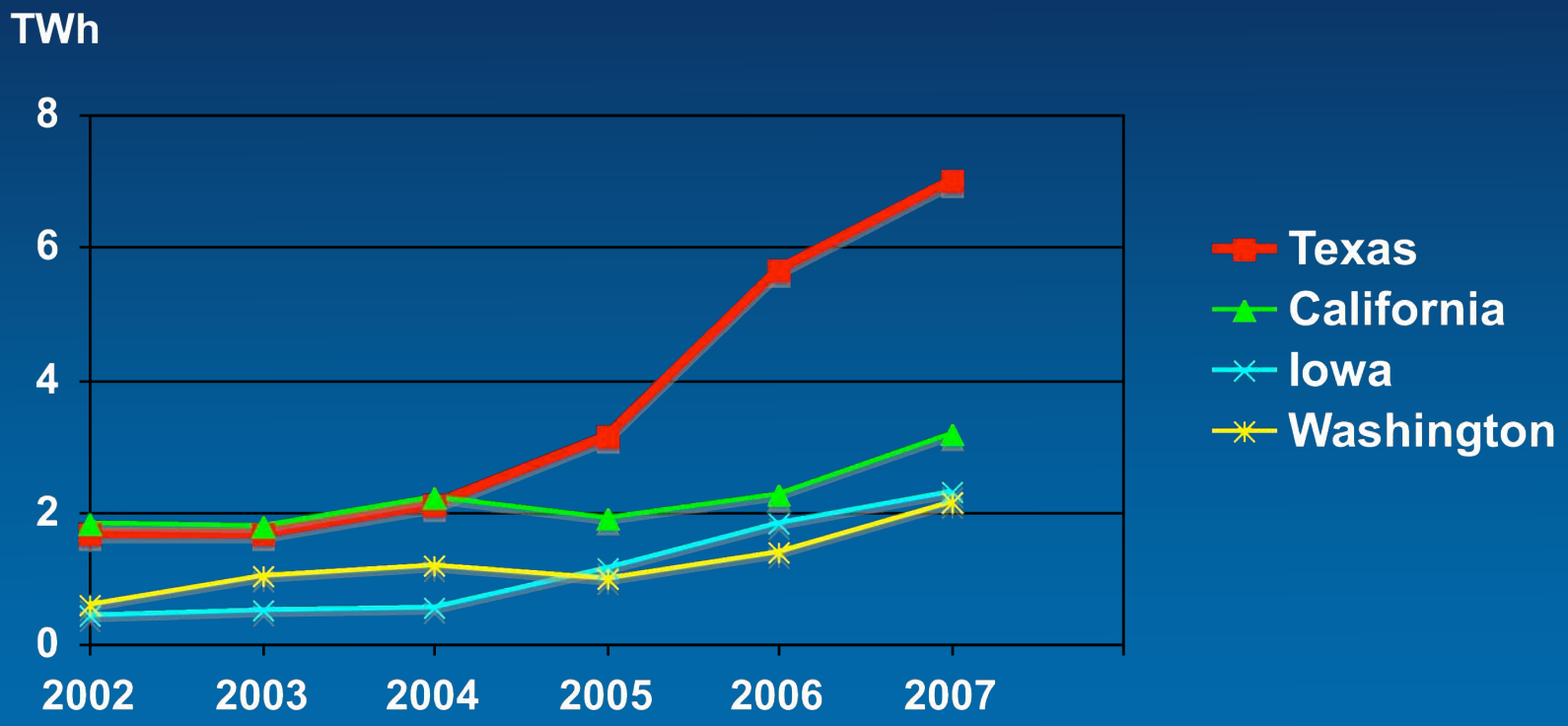
Session objectives

- Provide an insider's perspective on how the Texas RPS works
- Identify complementary policies that have helped
- Highlight the key insights that may be applicable to other states
- Open discussion

Why look at Texas?

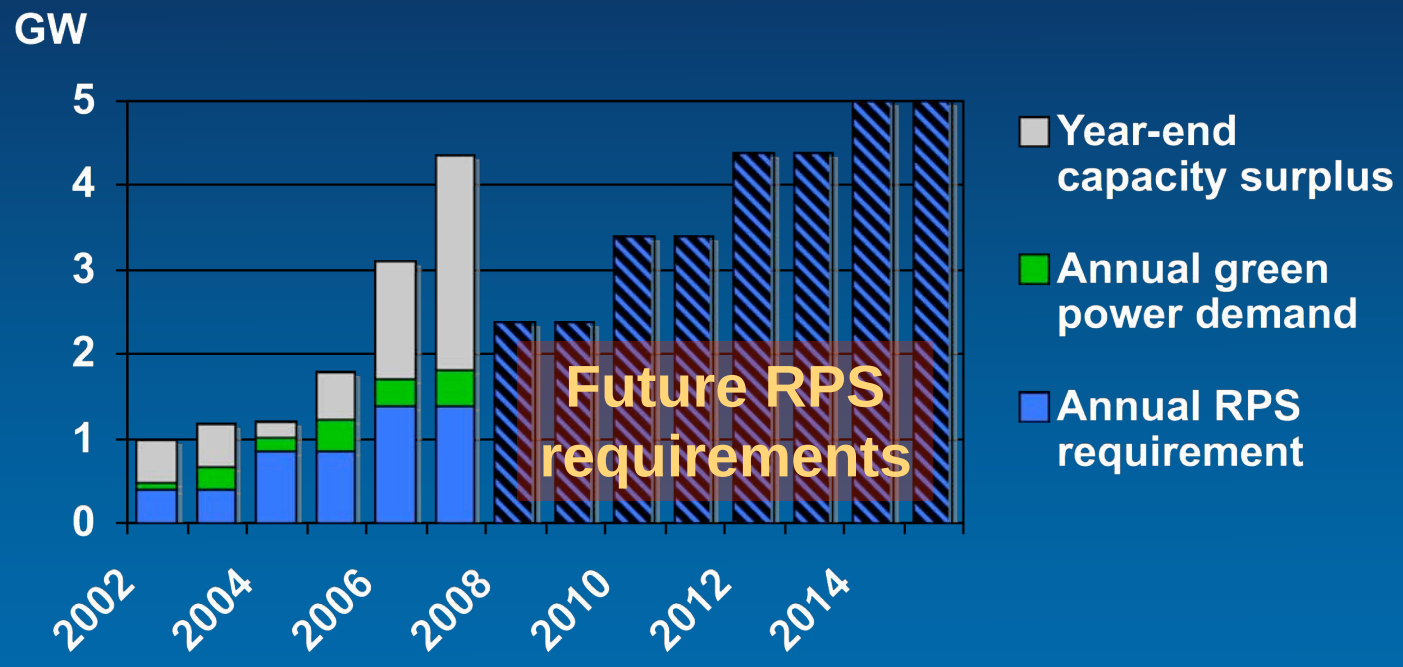
- One of the oldest RPS programs; it has a history of problems and solutions
- Less is known about it; key aspects of electricity in Texas are outside the federal sphere
- It works

Generation from renewable energy: greatest increases since 2001



Energy Information Administration

Growth and use of renewable generating capacity in Texas



Quick facts about Texas

- Restructured
  - 1995: Wholesale competition began
  - 2002: Retail competition began, with RPS
- Most of Texas is in ERCOT RTO
  - 2001: ERCOT became single power control area
  - No bundled IOUs in ERCOT; meaning of “utility” limited to transmission provider
  - ERCOT RTO is regulated by Texas PUC, not by FERC

Quick facts about Texas

- Retail electric providers (in ERCOT)
  - Serve retail customers, have RPS obligation
  - Do not own generation
  - Set their own rates, but no guaranteed customer base
- Power generating companies (in ERCOT)
  - Do not serve retail customers, have no RPS obligation,
  - Can earn RECs for eligible resources
  - Set their own wholesale prices, but no guaranteed sales
- Bundled utilities (outside ERCOT)
  - Have RPS obligation, can earn RECs for eligible resources
- Municipally owned utilities, electric cooperatives
  - No RPS obligation unless they opt into competition

Quick facts about Texas

- RPS began with modest goal of 2 GW of new capacity by 2009
- Texas reached 2009 goal in 2005, but transmission limitations reduced amount of electricity the grid could accommodate
- In 2005 the Legislature increased the RPS goal to 5 GW by 2015, created Competitive Renewable Energy Zones (CREZs)

Lessons learned

- Real goal is renewable energy that is economically sustainable
- Competition works
- An RPS, REC tracking, and green power are best implemented as package
- RPS goal should leave room for green power to grow
- Rules must be stable

How PUCT approached RPS implementation

- The RPS should not be “the whole enchilada” for Texas renewables
  - The RPS mandate was a social commitment made by the Legislature, to be applied equitably to everyone
  - Some consumers want to do more, and are entitled to do so through voluntary green power purchases

How PUCT approached RPS implementation

- Create a standard currency for renewable energy, applicable to any use
- Make renewable energy developers compete with each other
- Make it easy for retail customers to choose green power

Texas RECs

- Texas was the first RPS to incorporate a REC tracking system
- Nearly all REC activity is done via Internet web portal
- Turns renewable power into an easily traded commodity, reducing transaction costs
- RECs eliminate the need for an omnibus compliance docket; PUC checks for violations by REPs shortly after settlement deadline

Major REC design decisions

- How long should they be valid?
  - Long enough to enable risk management
  - Short enough to avoid clogging the market
  - Decision: three years
- How much information?
  - Should be commercially useful
  - Decision: date, unit, energy source

Competition among developers

- Nondiscriminatory access to ERCOT transmission system
- RPS was a guaranteed minimum demand, but no one was guaranteed a piece of the pie
- Green power could make the pie bigger as long as prices were reasonable

RPS and green power

- Need to ensure customers have quality information for making choices that satisfy their diverse preferences
- Need to protect customers against deceptive trade practices

Information for consumer choice

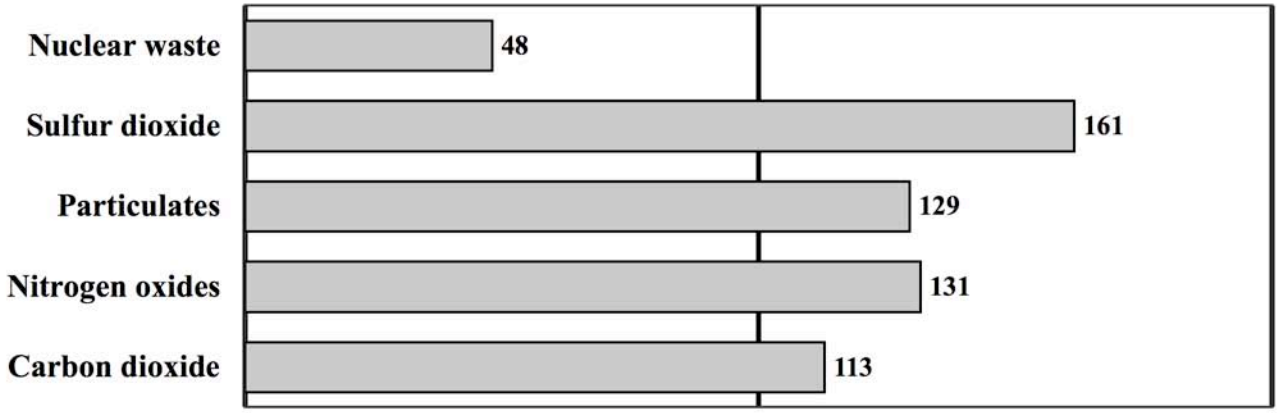
- All REPs are required to provide each residential and small commercial customer with an Electricity Facts Label (EFL) describing the service purchased
- Customers can find and compare all EFLs on the PUC web site
  - www.powertochose.org

EFL for typical service

Sources of power generation

	This product	*Texas (for comparison)*
Coal and lignite	49%	27%
Natural gas	25%	59%
Nuclear	23%	9%
Renewable energy	2%	2%
Other	1%	3%
Total	100%	100%

Emissions and waste per 1,000 kWh generated



(Indexed values; 100 = Texas average)

EFL for green power

Sources of power generation

	This product	*Texas (for comparison)*
Coal and lignite	0%	27%
Natural gas	0%	59%
Nuclear	0%	9%
Renewable energy	100%	2%
Other	0%	3%
Total	100%	100%

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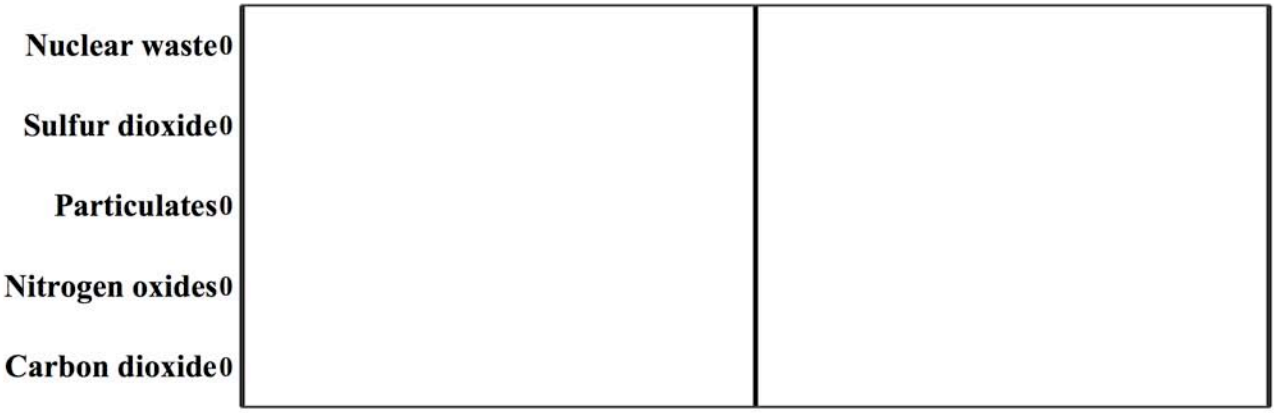

(Indexed values; 100 = Texas average)

Deceptive trade practices

- Problem of fraudulent double-counting
  - A REC is a private good (i.e., exclusive and rivalrous)
  - A customer buying a REC (or service backed by it) expects full and exclusive entitlement to the power it represents. That expectation is violated if another party appropriates value from that same REC. The customer is harmed because the premium paid no longer conveys exclusive value

Deterrents to deceptive practices

- Require RECs for green power
  - "[T]he retirement of RECs shall be the only method of authenticating generation for which a REC has been issued."
- Prohibit loading RPS onto one product and selling it as green power
  - Mandatory RECs must be applied pro rata to each EFL

Current issues: CREZs

- Current RPS contains both a mathematically allocated mandate (5 GW by 2015) and a target (10 GW by 2025)
- PUC has identified CREZs, which will expedite new transmission to connect wind power to load.
  - Scenarios under study will accommodate up to 25 GW of installed wind power

Current issues: non-wind target

- 2005 legislation increasing the RPS also set a target for non-wind renewables (500 MW)
  - Unclear whether law authorized non-wind mandate
  - Chosen strategy: provide RPS premiums in addition to RECs for eligible non-wind renewables

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Questions?

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