Renewable Portfolio Standard

Experiences of One Utility

21st Century Energy Plan

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Geographic Scope

- RPSs in five of its eight operating jurisdictions
- Variety of Forms
  - Statewide capacity mandate in Texas
  - Energy based with a solar requirement in Colorado
  - Energy based with a biomass requirement in Minnesota
- Wisconsin
  - Two RPSs since Wisconsin Act 9 in 1999
    - One was energy based with a capacity exemption
    - The most recent is energy based, with no exemption and with no technology requirements (This will be our main focus today)
RPS History In Wisconsin

- 1999 Budget Bill Mandated an RPS
  - By 2001, 0.5% of retail sales must be from qualifying renewables – did not count all of the hydropower on the system or mandated renewables in other states
  - Increased to 2.2% of retail sales by 2011
  - Provided for a capacity exemption - 10% of peak summer demand
  - Allowed for a banking and trading system
  - No off-ramps for cost, permitting, or congestion issues
Minnesota RPS

- Known as a Renewable Energy Objective
  - Initially it was voluntary
  - Became a mandate for Xcel Energy due to dry cask storage at our Minnesota nuclear plants
  - Does not allow for mandated renewables to count towards the REO
Minnesota RPS Cont.

- Green pricing energy can count
- Community based energy development counts
- Allows for regional trading program
- Requires a certain amount of biomass
Wisconsin New RPS

- Result of Governor’s Task Force on Energy Efficiency and Renewables
- Xcel Energy was a member
- Xcel Energy co-chaired the Renewables Working Group
- Result was a carefully crafted compromise that resulted in a new RPS
Wisconsin New RPS Cont.

- What were the key issues?
  - Based on retail sales
  - No exemptions of any kind
  - Establishes a baseline
  - 3-year average
  - NO back sliding on baseline
  - Must increase existing renewables by 2% by 2010
  - NO back sliding on 2010 threshold
Wisconsin New RPS Cont.

- Must increase 2010 level by 4% by 2015
- NO backsliding from 2015 level
- Must account for customer growth between now and 2015
Wisconsin New RPS Cont.

- Off-ramps exist for
  - Excessive rate impacts (PSCW to determine);
  - Permitting issues
  - Siting issues
  - Lack of transmission access
- Counts all renewables regardless of location
- Counts all renewables regardless of vintage
Wisconsin New RPS Cont.

- Counts all hydro below 60 MW per facility
- Includes waste wood and refuse-derived fuel as biomass
- Allows for the allocation of renewables across utility’s multi-state system
- Allows for a statewide and regional banking and trading system
- Contains the flexibility to convert from a statewide to a regional system
- Guarantees Rate Recovery
How To Achieve Compliance

- Maintain what we have in a cost effective manner – biomass and hydropower
- Enhance what we have if cost effective – efficiency gains, increase use of available capacity
How To Achieve Compliance

- Invest in wind – use the best resource available regardless of location
- Use a variety of own, operate, and purchase options
Own, Operate, Purchase?

- Xcel Energy owns and operates a significant amount of hydropower and some biomass
- Xcel Energy purchases a large amount of wind and biomass and a small amount of hydro and landfill gas
- Xcel Energy owns and operates 25 MW of wind
- Corporately, Xcel Energy is the largest purchaser of wind in the country
Purchase Options

- Large developments - RFPs
- Community-based energy developments – 19 MW
- Small wind generator tariff < 2 MW
- Green Pricing – Allowed but not used
- Efficiency gains
What Are We Seeing?

- Increased pressure on rates
- Dispatch and load following issues related to wind
- System reliability issues due to uncertainty of wind generation
- Transmission availability issues – curtailment, siting and permitting
- Compliance!!!!
Suggestions for the 21st CEP

- Everyone plays!!! All utilities and AESs
- If possible, make renewable percentage voluntary – capitalize on green pricing program and future generation needs
- If a mandate, build in flexibility and off-ramps – ultimately the customer/user pays
- Count everything – alternatives lead to confusion
Suggestions for the 21st CEP

- Don’t create jurisdictional or vintage restrictions – confusing and inefficient
- Allow for trading and banking mechanism
- Guarantee rate recovery
- Simplify reporting requirements
- Formalize RPS review process – annually?
Questions???