Renewable Portfolio Standards Update

2012’s Compliance Modifications, Progress, & Prognostications

March 6, 2012

Produced by
The Renewable Energy Markets Association (REMA)
Washington, DC
Joseph Seymour - Moderator

- Program Coordinator – Policy and Government Affairs
  Renewable Energy Markets Association

- Program Manager, Technology Transition Corporation
  (www.ttcorp.com)
Quick Notes

- Two Audio Options: Streaming Audio and Dial-In.
  1. Streaming Audio/Computer Speakers (Default)
  2. Dial-In: Use the Audio Panel (right side of screen) to see dial-in instructions. Call-in separately from your telephone.

- Ask questions using the Questions Panel on the right side of your screen.

- The recording of the webinar and the slides will be available after the event. Registrants will be notified by email.
I. Event Introduction - Seymour

Speakers

- Justin Barnes, Senior Policy Analyst - North Carolina Solar Center (NCSC), DSIRE
- George ‘Chip’ Cannon, Partner - Patton Boggs, LLP

Moderator

- Joseph Seymour, Program Coordinator – Policy and Government Affairs, Renewable Energy Markets Association
Presentation Outline

I. Introduction – Joseph Seymour
II. RPS Update – Justin Barnes
III. Trends and National Implications – Chip Cannon
IV. Q & A, Next Events – Joseph Seymour

[Full presentation will be available online, www.renewablemarkets.org/webinar]
Dedicated to maintaining and growing strong markets for renewable energy in the United States.

Advocacy and education at federal, state, and regional levels

www.renewablemarketers.org
Justin Barnes

- Senior Policy Analyst - North Carolina Solar Center

Update on 2012 Compliance Modifications, Trends, & Items of Interest
Renewable Portfolio Standards Update: 2012’s Compliance Modifications, Progress and Prognostications

Renewable Energy Markets Association Webinar
March 6, 2012

Justin Barnes
North Carolina Solar Center
Justin_barnes@ncsu.edu
RPS Policies
www.dsireusa.org / February 2012

29 states + DC and PR have an RPS
(8 states have goals)

 Renewable portfolio standard
 Renewable portfolio goal
 Solar water heating eligible

Extra credit for solar or customer-sited renewables
† Includes non-renewable alternative resources

WA: 15% x 2020*
MD: 20% x 2022
ME: 30% x 2000
New RE: 10% x 2017
CA: 33% x 2020
CT: 27% x 2020
NH: 23.8% x 2025
NV: 25% x 2025*
PA: ~18% x 2021†
OR: 25% x 2025 (large utilities)*
RI: 16% x 2020
5% - 10% x 2025 (smaller utilities)
MI: 10% & 1,100 MW x 2015*
CT: 27% x 2020
CA: 33% x 2020
NJ: 20.38% RE x 2021
CO: 30% by 2020 (IOUs) 10% by 2020 (co-ops & large munis)*
OH: 25% x 2025†
NW: 25% x 2025†
CO: 30% by 2020 (IOUs) 10% by 2020 (co-ops & large munis)*
IN: 15% x 2025†
OH: 25% x 2025†
IN: 15% x 2025†
OK: 15% x 2015
TX: 5,880 MW x 2015
HI: 40% x 2030
WA: 15% x 2020*
MT: 15% x 2015
MN: 25% x 2025 (Xcel: 30% x 2020)
ND: 10% x 2015
SD: 10% x 2015
VT: (1) RE meets any increase in retail sales x 2012; (2) 20% RE & CHP x 2017
CO: 30% by 2020 (IOUs) 10% by 2020 (co-ops & large munis)*
IA: 105 MW
WI: Varies by utility; ≥10% x 2015 statewide
IL: 25% x 2025
IA: 105 MW
MN: 25% x 2025 (Xcel: 30% x 2020)
MT: 15% x 2015
NV: 25% x 2025*
WA: 15% x 2020*
OR: 25% x 2025 (large utilities)*
5% - 10% x 2025 (smaller utilities)
CA: 33% x 2020
TX: 5,880 MW x 2015
HI: 40% x 2030
WA: 15% x 2020*
MD: 20% x 2022
ME: 30% x 2000
New RE: 10% x 2017
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CA: 33% x 2020
OR: 25% x 2025 (large utilities)*
5% - 10% x 2025 (smaller utilities)
CO: 30% by 2020 (IOUs) 10% by 2020 (co-ops & large munis)*
NW: 25% x 2025†
IN: 15% x 2025†
OK: 15% x 2015
TX: 5,880 MW x 2015
HI: 40% x 2030

Minimum solar or customer-sited requirement
* Extra credit for solar or customer-sited renewables
† Includes non-renewable alternative resources

29 states + DC and PR have an RPS
(8 states have goals)
<table>
<thead>
<tr>
<th>State</th>
<th>2009 MWh Obligation</th>
<th>2010 MWh Obligation</th>
<th>2009 (% Comp)</th>
<th>2010 (% Comp)</th>
<th>2012 % Obligation</th>
<th>2013 % Obligation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AZ</td>
<td>824,430</td>
<td>1,015,858</td>
<td>90%</td>
<td>93%</td>
<td>3.50%</td>
<td>4.00%</td>
</tr>
<tr>
<td>CA</td>
<td>29,537,501</td>
<td>34,116,201</td>
<td>89%</td>
<td>86%</td>
<td>20.00%</td>
<td>20.00%</td>
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<td>CO</td>
<td>1,646,899</td>
<td>1,520,066</td>
<td>100%</td>
<td>99%</td>
<td>15.00% (IOUs)</td>
<td>15.00% (IOUs)</td>
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<tr>
<td>CT</td>
<td>no data</td>
<td>no data</td>
<td>100%</td>
<td>100%</td>
<td>16.00%</td>
<td>17.00%</td>
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<tr>
<td>DC</td>
<td>591,576</td>
<td>699,887</td>
<td>100%</td>
<td>100%</td>
<td>7.50%</td>
<td>9.00%</td>
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<tr>
<td>DE</td>
<td>291,451</td>
<td>410,618</td>
<td>100%</td>
<td>100%</td>
<td>105 MW</td>
<td>105 MW</td>
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<tr>
<td>HI</td>
<td>0</td>
<td>957,857</td>
<td>n/a</td>
<td>105%</td>
<td>10.00%</td>
<td>10.00%</td>
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<tr>
<td>IA</td>
<td>295,800</td>
<td>295,800</td>
<td>100%</td>
<td>100%</td>
<td>35.00%</td>
<td>36.00%</td>
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<tr>
<td>IL</td>
<td>2,283,383</td>
<td>2,747,874</td>
<td>100%</td>
<td>100%</td>
<td>10.00%</td>
<td>10.00%</td>
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<tr>
<td>KS</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>10.00%</td>
<td>10.00%</td>
<td>10.00%</td>
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<tr>
<td>MA</td>
<td>3,096,274</td>
<td>5,468,563</td>
<td>82%</td>
<td>74%</td>
<td>14.10%</td>
<td>15.10%</td>
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<tr>
<td>MD</td>
<td>2,770,353</td>
<td>3,539,778</td>
<td>100%</td>
<td>100%</td>
<td>9.00%</td>
<td>10.70%</td>
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<tr>
<td>ME</td>
<td>3,514,043</td>
<td>3,832,365</td>
<td>100%</td>
<td>100%</td>
<td>3.56%</td>
<td>6.80%</td>
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<tr>
<td>MI</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>2.00%</td>
<td>2.00%</td>
<td>2.00%</td>
</tr>
<tr>
<td>MN</td>
<td>3,860,255</td>
<td>7,093,647</td>
<td>100%</td>
<td>100%</td>
<td>18% (Xcel); 12%</td>
<td>18% (Xcel); 12%</td>
</tr>
<tr>
<td>MO</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>1.00%</td>
<td>1.00%</td>
<td>1.00%</td>
</tr>
<tr>
<td>MT</td>
<td>346,261</td>
<td>692,167</td>
<td>100%</td>
<td>98%</td>
<td>1.00%</td>
<td>1.00%</td>
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<tr>
<td>NC</td>
<td>0</td>
<td>24,867</td>
<td>n/a</td>
<td>100%</td>
<td>3.00% (IOUs)</td>
<td>3.00% (IOUs)</td>
</tr>
<tr>
<td>NH</td>
<td>608,000</td>
<td>830,347</td>
<td>93%</td>
<td>90%</td>
<td>10.65%</td>
<td>17.07%</td>
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<tr>
<td>NJ</td>
<td>5,733,633</td>
<td>6,841,213</td>
<td>99%</td>
<td>100%</td>
<td>9.64% (non-solar)</td>
<td>10.48% (non-solar)</td>
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<tr>
<td>NM</td>
<td>852,285</td>
<td>858,705</td>
<td>100%</td>
<td>100%</td>
<td>10.00%</td>
<td>10.00%</td>
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<tr>
<td>NV</td>
<td>3,551,815</td>
<td>3,493,644</td>
<td>100%</td>
<td>100%</td>
<td>15.00%</td>
<td>18.00%</td>
</tr>
<tr>
<td>NY</td>
<td>4,868,849</td>
<td>3,061,948</td>
<td>61%</td>
<td>96%</td>
<td>4.54% (new)</td>
<td>5.60% (new)</td>
</tr>
<tr>
<td>OH</td>
<td>333,809</td>
<td>602,196</td>
<td>100%</td>
<td>100%</td>
<td>1.50%</td>
<td>2.00%</td>
</tr>
<tr>
<td>OR</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>5.00%</td>
<td>5.00%</td>
<td>5.00%</td>
</tr>
<tr>
<td>PA</td>
<td>829,374</td>
<td>no data</td>
<td>100%</td>
<td>no data</td>
<td>10.22%</td>
<td>10.72%</td>
</tr>
<tr>
<td>RI</td>
<td>316,424</td>
<td>no data</td>
<td>100%</td>
<td>no data</td>
<td>6.50%</td>
<td>7.50%</td>
</tr>
<tr>
<td>TX</td>
<td>6,799,347</td>
<td>9,053,544</td>
<td>100%</td>
<td>100%</td>
<td>3,384 MW</td>
<td>3,384 MW</td>
</tr>
<tr>
<td>WA</td>
<td>0</td>
<td>0</td>
<td>n/a</td>
<td>3.00%</td>
<td>3.00%</td>
<td>3.00%</td>
</tr>
<tr>
<td>WI</td>
<td>2,501,915</td>
<td>3,850,101</td>
<td>100%</td>
<td>100%</td>
<td>5.55%</td>
<td>5.55%</td>
</tr>
</tbody>
</table>
Items of Interest in 2012

- CA – adding publicly-owned utilities increases the load covered substantially (~75% to 98%); additional REC sale opportunities
- NM – Current rulemaking could revise the resource “diversity” requirements within the RPS, revise cost calculations
- MA – Biomass regulations/adjustments for facility efficiency...replication in other states?
- IL – Implementation of DG carve-out; IPA stakeholder proceedings established
- MO – PSC has established working group for rule clarifications
- OH – Analysis of cost-cap compliance for FirstEnergy
Trends and Issues

• Policy scrutiny/review and analysis (CT, ME, MN, MI)
• Influence of established cost caps on achievement of standard (OH, NM, CO, AZ)
• Role of long-term contracts in REC procurement (NJ, CT, RI, IL, OH, PA, NH)
• Renewable resource definitions (many)
• Interest in offshore wind (NJ, DE, MA, RI, ME, MD?)
Want Updates?

Monthly RPS quasi-newsletter
Email: justin_barnes@ncsu.edu
George ‘Chip’ Cannon

- Partner, Patton Boggs, LLP

RPS Rollbacks, National Energy Policy Implications, and the CES
Renewable Portfolio Standards Update
2012’s Compliance Modifications, Progress and Prognostications

Renewable Energy Markets Association Webinar
March 6, 2012

Chip Cannon
Patton Boggs LLP
Washington, DC
ccannon@pattonboggs.com
Overview

State RPS Set-Backs
– Current political and economic climate

Federal Clean Energy Standard
– Background
– Sen. Bingaman’s recent proposal
Efforts to Repeal/Roll-Back State RPS

Full Repeal:
– Florida
– North Carolina
– Ohio

Roll Back:
– Washington (linked directly to unemployment rate)
– Colorado
– Maine
– New Mexico
Efforts to Water Down State RPS

Expands definitions of eligible resources:

– Heat from wastewater treatment plant (CT)
– Includes bio-solids in Class I (CT)
– Includes plasma gasification (IA)
– Includes synthetic gas (IL)
– Moves waste-to-energy in Tier I (MD)
– Includes hydro expansions (MT)
– Includes demand reduction via Smart Grid technology (NC)
Efforts to Water Down State RPS

Expands eligible resources, cont’d:

– Includes geothermal heat pumps in Class I (NJ)
– Includes nuclear (OR)
– Includes pre-1995 small hydro (OR)
– Includes all hydro (OR)
– Adds natural gas as Tier I/Tier II (PA)
– Includes municipal solid waste facilities (WA)
Efforts to Water Down State RPS

Other approaches:

– Establishes multiplier for “efficient” resources (ME)
– Eliminates 100 MW size limit (ME)
– Removes community renewables requirements (MT)
– Allows utilities to obtain RPS waiver for up to 3 years (MT)
– Allows up to 25% compliance through efficiency (NC)
– Limits budget impact to 2% of a utility’s sales (MN)
– Allows RECs to be used after 4th year (WA)
History of Federal Clean Energy Standard

In the past, federal CES has had some bipartisan support.

Endorsed by Pres. Obama in 2011 State of the Union (80% by 2035).


Introduction of various Senate bills.
November 2011 US EIA Analysis

Requested by Chairman Bingaman.

Analysis of impacts of CES

– Bingaman proposal (Base CES case)
– Alternative proposals

Base CES would result in CO2 emissions 22% below reference in 2025, and 43% lower in 2035.
The Clean Energy Standard Act of 2012

Introduced by Sen. Bingaman on March 1, 2012


No chance of passages. Places a “marker” for continued discussion.
CES Act 2012

Facilities in-service after December 31, 1991:

- Renewables
- Qualified renewable biomass (produced and harvested in sustainable manner)
- Natural gas
- Hydropower
- Nuclear power
- Qualified waste-to-energy
Facilities in-service after enactment of CES:

- Qualified CHP
- Source (other than biomass) with lower annual carbon intensity than 0.82 metric tons of CO2e/MWhr
- Qualified efficiency improvements or capacity additions to existing nuclear and hydropower facilities
- Carbon capture and storage
CES Act 2012

Begins at 24% in 2015.

Increases 3% annually, until 84% in 2035.

Exempts smaller utilities, with threshold decreasing from 2 million MWhr/yr in 2015 to 1 million MWhr/yr in 2025.

Baseline deductions for pre-1992 hydro power and nuclear power.
CES Act 2012

Compliance by credits or Alternative Compliance Payment.

Credits based on carbon-intensity.
- Credits per MWh = 1.0 – (carbon intensity/0.82)
- Carbon intensity measured as metric tons of CO2 per MWh of electricity produced.

Unlimited banking.
CES Act 2012

DOE administers, or delegates authority to administer, federal credit trading program.

Alternative Compliance Payments.
- 3¢/kwh
- Ability to increase 5%/yr plus inflation.
- Payments distributed proportionally to States to fund energy efficiency programs.
CES Act 2012

Requires DOE to submit reports to Congress:

- Integration of clean energy resources that do not produce electricity.
- Natural gas conservation measures.
Q & A

Ask questions using the **Questions Panel** on the right side of your screen.

**All questions and comments will be recorded and incorporated in the webinar summary report.**

Also, please take a few moments to answer the survey questions.
Upcoming Events

- Distributed Solar East 2012
  - April 25-27, Somerset, NJ

- Defense Renewable Energy & Military Microgrids
  - May 30 – June 1, Arlington, VA

- Argus Renewables Trading Summit Americas
  - June 7-8, NYC
  - [argusrenewables.com/](http://argusrenewables.com/)

- REFF Wall Street
  - June 19-20, NYC
  - [http://www.reffwallstreet.com/](http://www.reffwallstreet.com/)
More Information

- **This Webinar will be available** by Thursday, March 7
- **Sign up** to receive REMA news at on our website.
- **Consider Joining REMA**
  --Receive regulatory and policy intelligence
  --Connect with other renewable energy leaders
  --Support the market’s growth and outreach
Thank You

Josh Lieberman, REMA General Manager
jlieberman@ttcorp.com
(202) 640-6597

www.renewablemarketers.org