

State-Federal RPS Collaborative Webinar

Updates from Connecticut and Wisconsin

Hosted by
Warren Leon, Executive Director, CESA

Tuesday, May 5, 2015

Housekeeping



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Submit your questions at any time by typing in the Question Box and hitting Send.

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Clean Energy States Alliance (CESA) is a national nonprofit coalition of public agencies and organizations working together to advance clean energy.



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State-Federal RPS Collaborative

- With funding from the Energy Foundation and the US Department of Energy, CESA facilitates the **Collaborative**.
- Includes **state RPS administrators, federal agency representatives**, and other stakeholders.
- Advances dialogue and learning about RPS programs by **examining the challenges and potential solutions** for successful implementation of state RPS programs, including **identification of best practices**.
- To sign up for the Collaborative listserve to get the **monthly newsletter** and announcements of **upcoming events**, see: www.cesa.org/projects/state-federal-rps-collaborative

Today's Guest Speakers

Teddi Ezzo, Utilities Examiner 1, Connecticut Department of Energy and Environmental Protection

Andrew Kell, Program and Policy Analyst, Public Service Commission of Wisconsin





Connecticut Department of Energy and Environmental Protection



CT RPS Overview

May 5, 2015

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Connecticut Department of Energy and Environmental Protection

CT RPS

- 3 Classes of Renewable Sources
- First year of Compliance 2004
- The CT RPS has evolved thru the years and will continue to evolve as needed to accommodate the evolution of the renewable world

DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
PUBLIC UTILITIES REGULATORY AUTHORITY



Connecticut Department of Energy and Environmental Protection

Class I

Sources Include:

- Solar
- Wind
- Fuel Cell
- Run of River <30MW in operation after July 1, 2003
- Biomass emissions of ≤ 0.075 NO_x
- Geothermal
- Landfill Methane Gas
- Ocean Thermal Power
- Wave or Tidal Power
- Low emission advanced renewal energy conversion technologies



Class II and Class III

Class II Sources Include:

- Trash to Energy facilities
- Biomass constructed prior to 1998
- Run of River hydro <5 MW constructed prior to 2003



Class III Sources Include:

- Combined Heat & Power Systems
- Non-Utility conservation

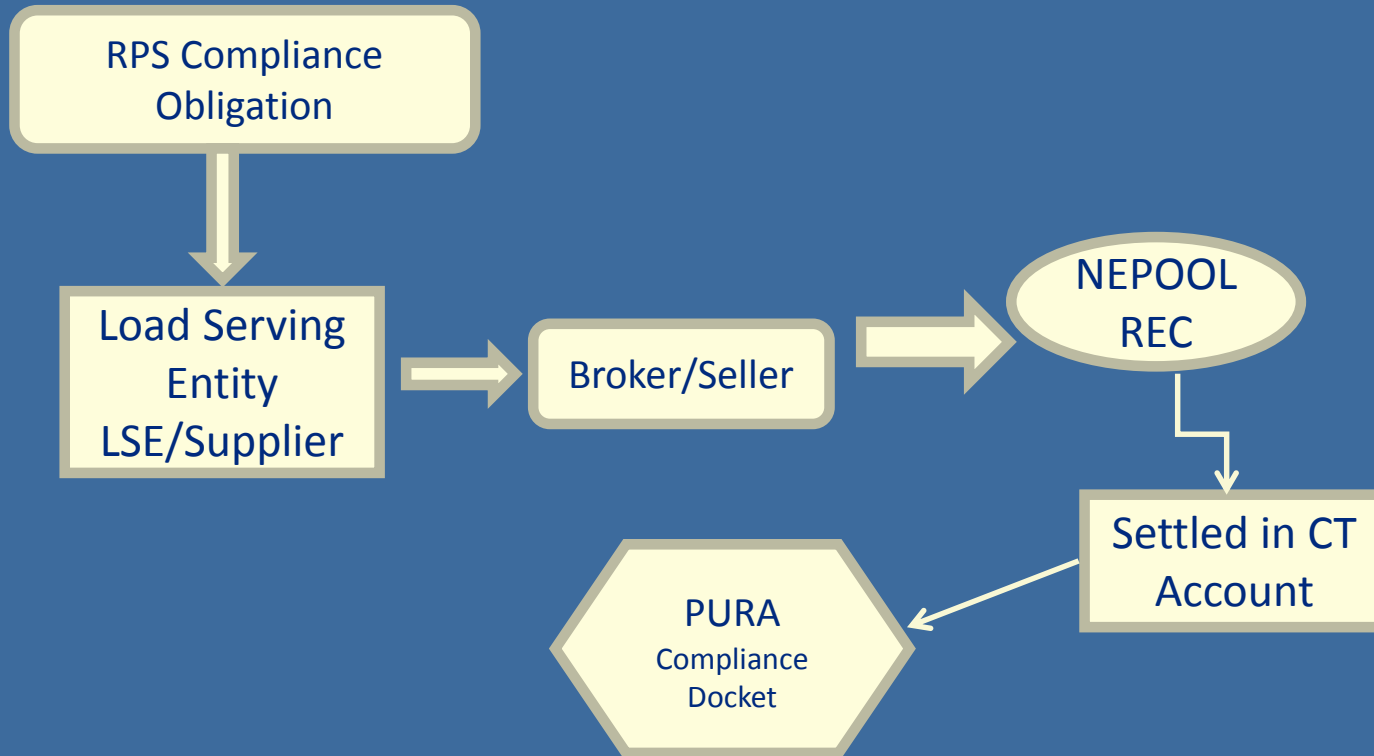


RPS Compliance Schedule

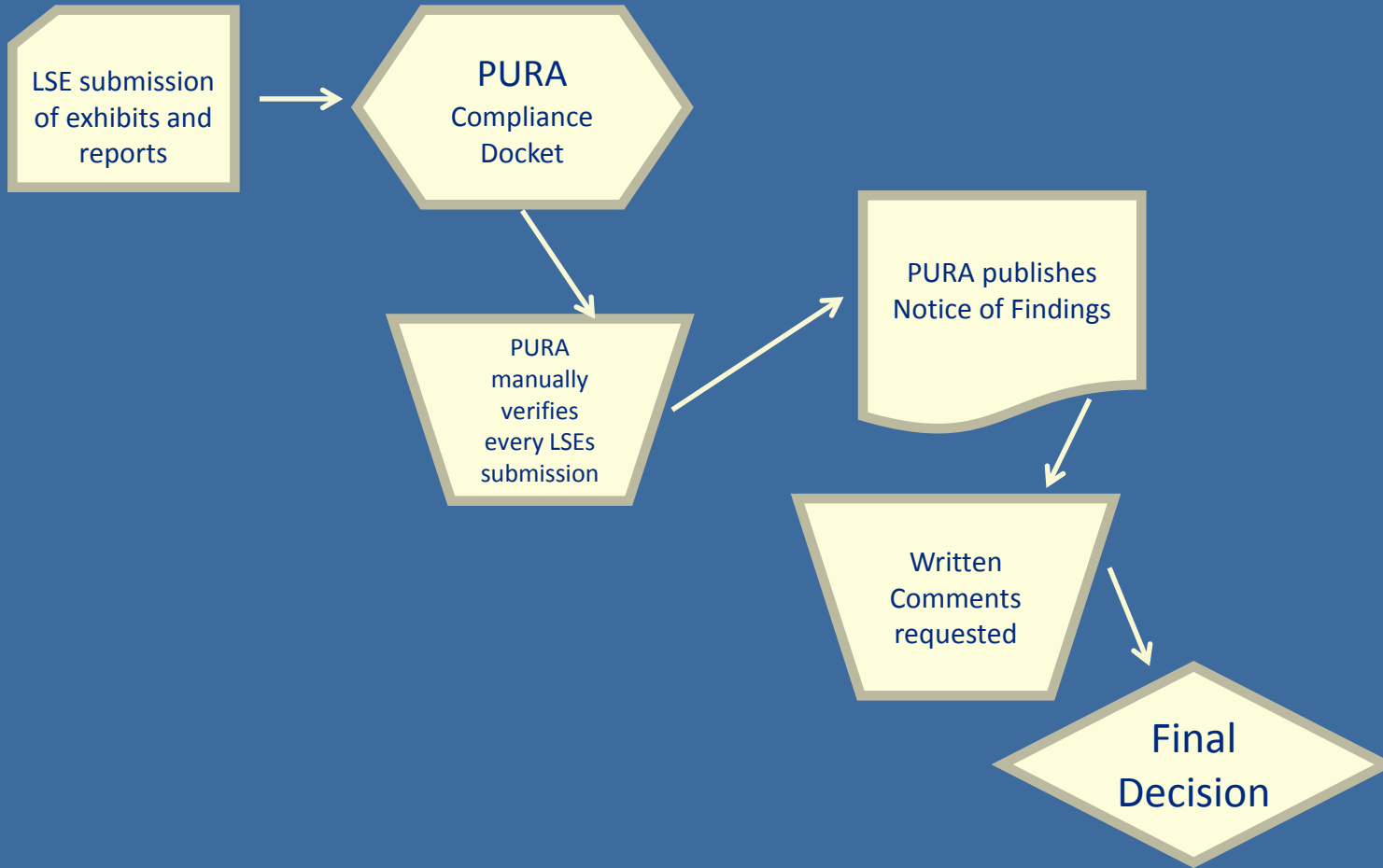
Year	Class I	Class II	Class III	Total
2005	1.5%	3.0%		4.5%
2006	2.0%	3.0%		5.0%
2007	3.5%	3.0%	1.0%	7.5%
2008	5.0%	3.0%	2.0%	10.0%
2009	6.0%	3.0%	3.0%	12.0%
2010	7.0%	3.0%	4.0%	14.0%
2011	8.0%	3.0%	4.0%	15.0%
2012	9.0%	3.0%	4.0%	16.0%
2013	10.0%	3.0%	4.0%	17.0%
2014	11.0%	3.0%	4.0%	18.0%
2015	12.5%	3.0%	4.0%	19.5%
2016	14.0%	3.0%	4.0%	21.0%
2017	15.5%	3.0%	4.0%	22.5%
2018	17.0%	3.0%	4.0%	24.0%
2019	19.5%	3.0%	4.0%	26.5%
2020	20.0%	3.0%	4.0%	27.0%



RPS Compliance-Supplier View



RPS Compliance-PURA View



CT RPS

- 5th quarter for compliance (Jan-Mar of following year)
- Allows for vintage biomass plants
- RECs that can be banked are limited to 30% of load
- 2 year limit on banked RECs
- Statute that disallows RECs used in another state's RPS or Goal
- The need for settled RECs in NEPOOL



Docket 15-01-36

- PA13-303 no double counting
- Vermont SPEED at first glance seemed like a goal
- PURA review showed SPEED is snapshot currently therefore no double counting
- 2017 if no RPS then PURA will review again



Solar Home Renewable Energy Credit (SHREC)

- Increase residential solar to 300MW by 2022
- Incentivize residential Solar
- Securitize/sell back RECs
- Currently being considered by the legislature





Overview of Wisconsin's Renewable Portfolio Standard

Andrew Kell – Program and Policy Analyst

5.5.15



Wisconsin RPS Legislation

- 1999 Wisconsin Act 9
 - Required all electric providers* (EP) to achieve 2.2% of WI retail electric sales from renewable energy (RE) by 2011
- 2005 Wisconsin Act 141
 - Statewide goal of 10% RE by 2015 with EP requirements
- Wisconsin State Statute 196.378
- Wisconsin Administrative Code PSC 118

*Electric Providers include all investor-owned, municipal, and electric cooperative utilities that serve WI customers

2 Main Components of WI RPS

- Statewide Goal: 10% RE by 2015
which is driven by ...
- EP individual RE requirements:
 - Maintain 2001-2003 average baseline RE levels: 2006-2009
 - Maintain 2% above baseline: 2010-2014
 - Maintain 6% above baseline: 2015 and beyond

Individual EP WI RPS Requirements

Electric Provider or Aggregator*	Baseline RPS (%)	2010 RPS (%)	2015 RPS (%)
Adams-Columbia Electric Coop	2.92	4.92	8.92
Bangor Municipal Utility	6.62	8.62	12.62
Barron Light & Water Utility	6.85	8.85	12.85
Belmont Mun Water & Elect Util	2.76	4.76	8.76
Benton Mun Elec & Water Util	2.86	4.86	8.86
Black Earth Electric Utility	3.23	5.23	9.23
Bloomer Electric Utility	6.47	8.47	12.47
Cadott Light & Water Mun Util	6.72	8.72	12.72
Central Wisconsin Elec Coop	2.94	4.94	8.94
Centuria Municipal Electric Util	12.37	14.37	14.37
Clintonville Water & Electric Util	1.44	3.44	7.44
Consolidated Water Power Co	16.47	18.47	18.47
Cornell Mun Water & Elec Util	6.65	8.65	12.65
Dahlberg Light & Power Co	1.37	3.37	7.37
Dairyland Power Cooperative*	2.44	4.44	8.44
East Central Energy	0.64	2.64	6.64
Elkhorn Light & Water	3.43	5.43	9.43
Gresham Mun Light & Pwr Util	2.43	4.43	8.43
Hazel Green Municipal Utility	2.87	4.87	8.87
Kiel (City of) Utilities	3.07	5.07	9.07
Madison Gas & Electric Co	1.73	3.73	7.73
Manitowoc Public Utilities	3.19	5.19	9.19
Marshfield Elec & Water Dept	2.91	4.91	8.91
Mazomanie Electric Utility	2.45	4.45	8.45
Medford Electric Utility	6.41	8.41	12.41
North Central Power Co Inc	33.11	35.11	35.11
Northern States Power Co WI	6.89	8.89	12.89
Northwestern WI Elec Co	12.48	14.48	14.48

Electric Provider or Aggregator*	Baseline RPS (%)	2010 RPS (%)	2015 RPS (%)
Oconto Electric Coop	4.71	6.71	10.71
Pardeeville (Village of) Elec Util	2.44	4.44	8.44
Pioneer Power & Light Co	2.71	4.71	8.71
Princeton Mun Wtr & Elec Util	2.21	4.21	8.21
Rice Lake Mun Wtr & Elec Util	6.53	8.53	12.53
Rock Energy Coop	2.93	4.93	8.93
Sauk City Mun Wtr & Light Util	2.82	4.82	8.82
Shawano Municipal Utilities	1.34	3.34	7.34
Sheboygan Falls Utilities	2.77	4.77	8.77
Shullsburg Electric Utility	2.82	4.82	8.82
Spooner Municipal Utilities	6.55	8.55	12.55
Stratford Mun Wtr & Elec Utility	3.31	5.31	9.31
Superior Wtr Light & Pwr Co	2.53	4.53	8.53
Trempealeau Mun Elc & Wtr Util	6.78	8.78	12.78
Washington Island Cooperative	3.35	5.35	9.35
Westfield Milling & Elec Co	2.81	4.81	8.81
Wisconsin Dells Mun Elec Util	2.89	4.89	8.89
Wisconsin Electric Power Co	2.27	4.27	8.27
Wisconsin Power & Light	3.28	5.28	9.28
WPPI Energy*	4.24	6.24	10.24
Wisconsin Public Service Corp	3.74	5.74	9.74
Wisconsin Rapids WW & Light	2.73	4.73	8.73
Wonewoc Electric & Water Util	2.69	4.69	8.69

Key Rules for the WI RPS

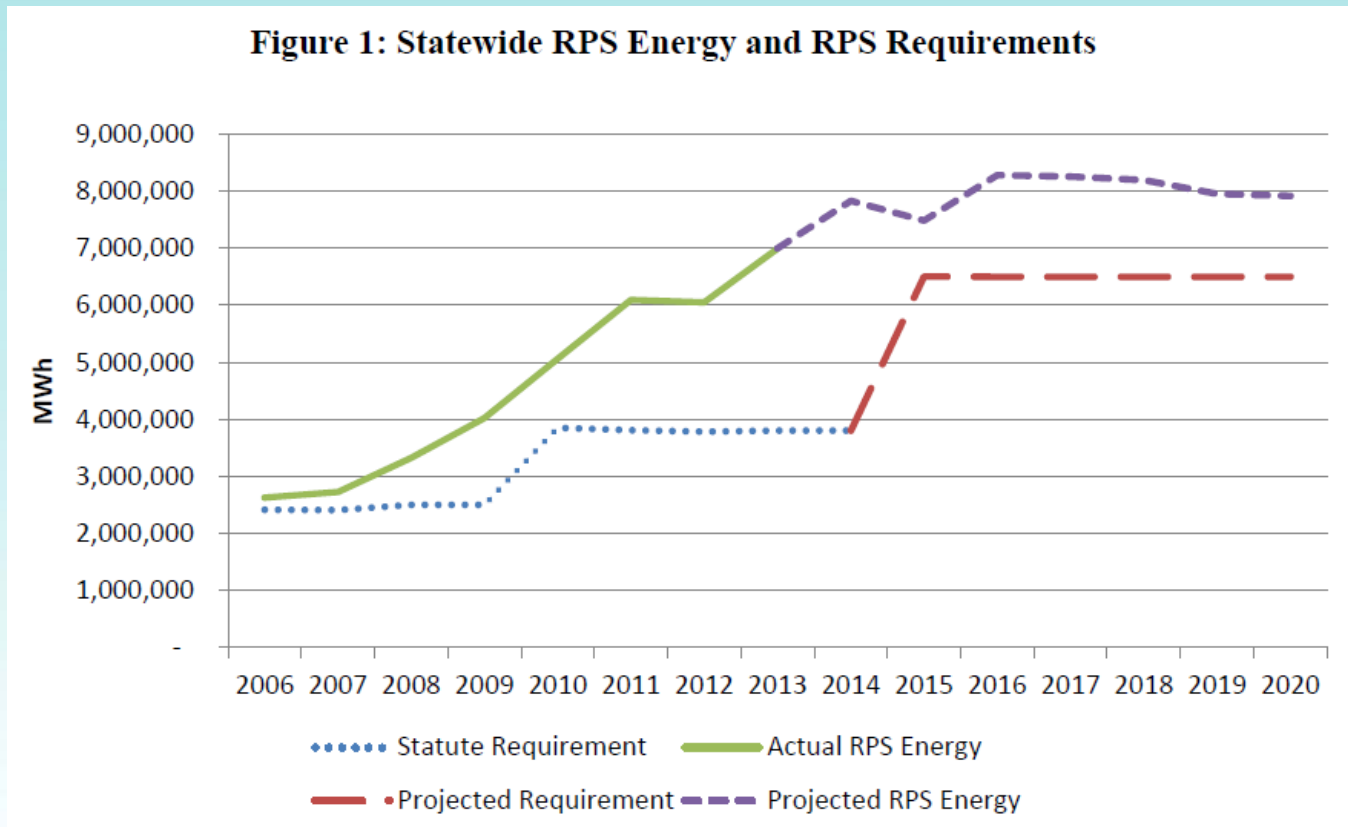
- RE must serve WI electric load
- RE facility must be certified by PSC of WI
- RE must be tracked following tracking system operating procedures to create Renewable Energy Certificates (REC)
 - Midwest Renewable Energy Tracking System was selected
- May only bank/trade RECs from post-2003 RE facilities
- Eligible RECs may be banked up to 4 years after creation
- Annual REC retirement formula for each EP:
 - $(\text{Relevant compliance \%}) * (\text{Previous 3-year average of annual total retail sales in MWh}) = \text{required REC value needed for retirement}$

1 Megawatt-hour = 1 REC for All RE Resources

- 2 exceptions:
 - Active baseline hydro facilities receive annual WI RPS REC value based on average baseline (2001-2003) production
 - Customer-sited “displacement facilities” only receive credit for avoiding use of electricity from conventional (non-RE) resources: right now 100 MWh = about 90 RECs

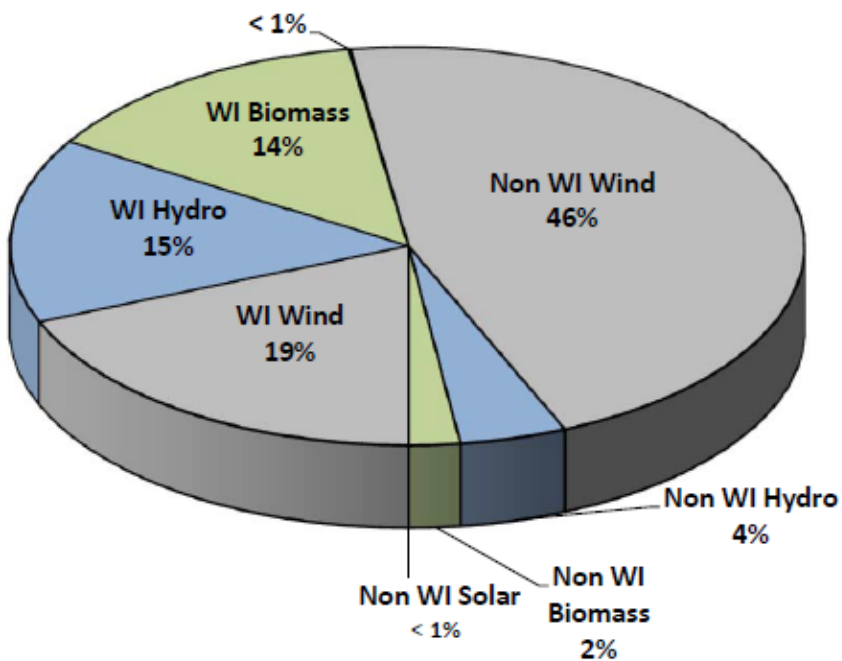
WI RPS Compliance and Statewide Goal Results through 2013

- All EPs have retired required RECs each year 2006-2013
- 10% statewide goal (about 7 million MWh of RE) was reached in 2013

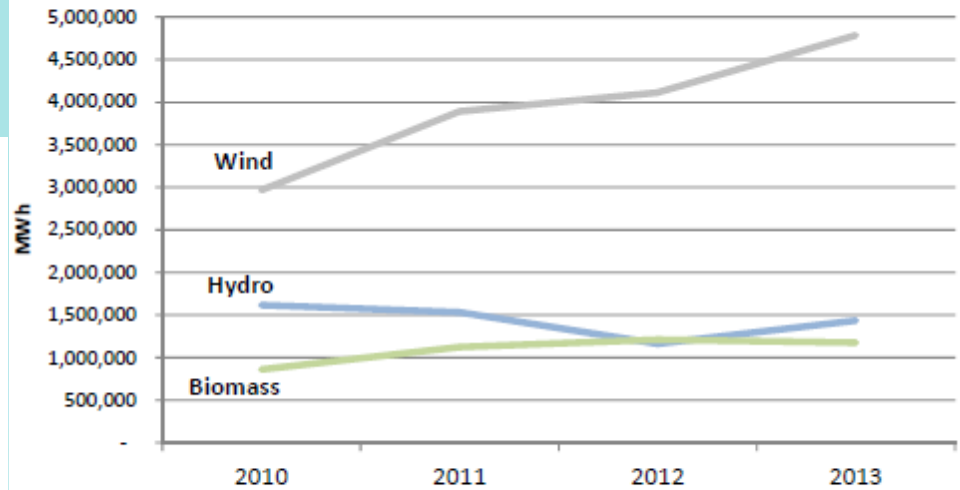


RE Statistics

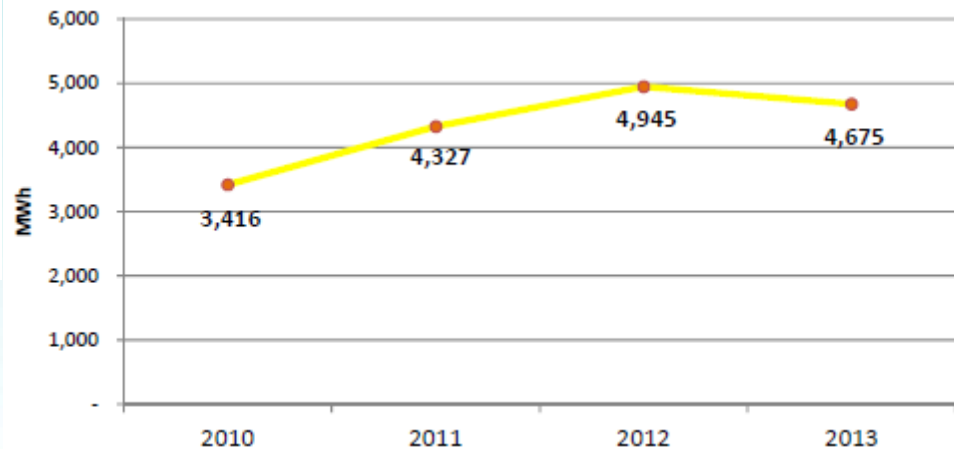
**2013 Renewable Energy
by State and Resource**



**Renewable Energy
by Renewable Resource (2010-2013)**

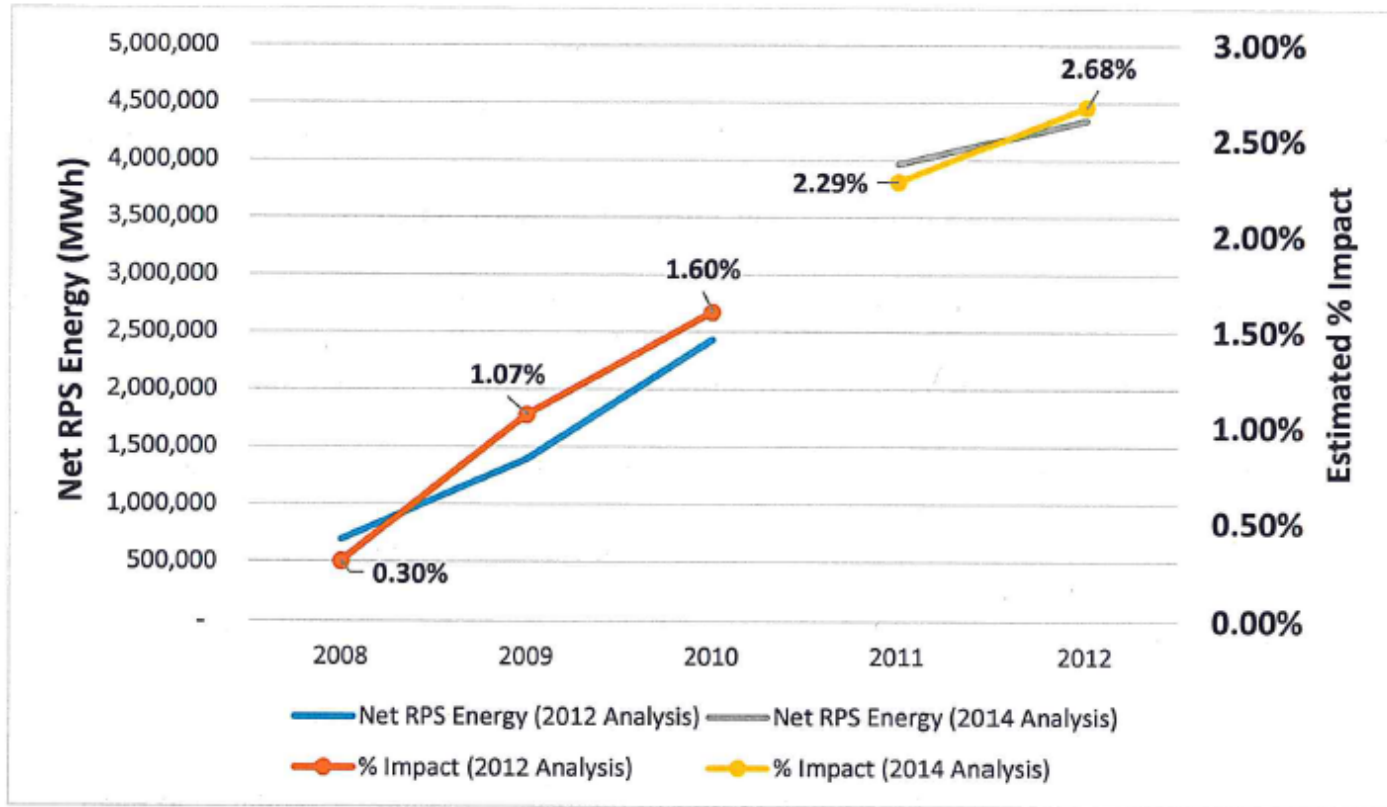


**Renewable Energy
from Solar Photovoltaic (2010-2013)**



PSC RPS Rate Impact Study Results

Figure 1: Net RPS Energy and % Impact (2008-2012)¹³



WI RPS Legislative Updates

- 2011 Act 34
 - Lifts 60 MW capacity cap on WI RPS eligible hydro facilities if first in service after 2010
 - Effective in 2016
- 2013 Act 290
 - Freezes RE requirements at 2010 levels for 4 small utilities (don't have 2015 jump like other EPs)
 - 4 utilities had 12% RE or higher in their 2001-2003 average baseline (high amounts of hydro)
- 2013 Act 300
 - Lifts in-service date requirement (on or after 6/3/2010) for WI RPS eligible displacement facilities

Thank you for attending our webinar

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<http://www.cesa.org/projects/state-federal-rps-collaborative/>

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