

# Renewable Energy Working Group

---

## Status of the Oregon Renewable Portfolio Standard



**Kip Pheil**

**Oregon Department of Energy**

**April 29, 2008**



## Agenda

---

- A. SB 838 Review (RPS)
- B. World of WREGIS
- C. Drivers & Riders
- D. Resources & Contact Details
- ... Nominations from the Floor



## A. SB 838 Review

### RPS Elements

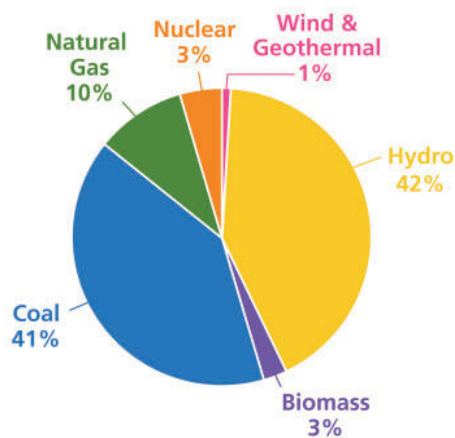
- SB 838 (RPS) Obligations
- Eligible Resources
- Conditional Standards
- Near Term Activity

### Non-RPS Elements

- Embedded Legislation



## Electricity Sources



Oregon's  
Electricity  
Resource  
Mix, 2005.\*

\* State of Oregon Energy Plan 2007-2009



# Oregon RPS Obligations

RPS Class	Share of Sales	Affected Utilities and Electricity Service Suppliers	Standard as of Year			
			2011	2015	2020	2025
Large Utilities	≥ 3%	Eugene Water & Elec. Board PacifiCorp (Pacific Power) Portland General Electric	5%	15%	20%	25%
Smaller Utilities	< 3% but ≥ 1.5%	Central Lincoln PUD Clatskanie PUD Idaho Power Co. McMinnville Water & Light Springfield Utility Board Umatilla Electric Coop	No Interim Obligations			10%
Smallest Utilities	< 1.5%	All other utilities, i.e. 31 consumer-owned utilities				5%
ESS	Any	Any Electricity Service Supplier (ESS)	An aggregate obligation as if each of the customers served by the ESS were served by that customer's usual host utility.			



# Eligible Resources

I	BPA designated environmentally-preferred power (or any equivalent future BPA product)	
II	In Operation before January 1, 1995	
	Hydro	Up to 50 average megawatts (aMW) may be credited each compliance year if owned by an Oregon utility and certified low-impact.
	Hydro	Incremental output due to efficiency upgrades on or after 1-1-95 (if a federally-owned BPA dam only Oregon's allocated share is eligible).
	Other	Incremental output due to capacity or efficiency upgrades on or after 1-1-95.
III	In Operation on or after January 1, 1995	
	Geothermal	Biomass (and byproducts)
	Hydroelectric *	organic waste      spent pulping liquor
	Solar, PV and Thermal	dedicated energy crops      woody debris, hardwoods ^
	Wave, Tidal, Ocean Thermal	digester biogas      agricultural wastes
	Wind	Other sources defined by ODOE rulemaking.
	* - Facilities located outside of certain protected areas.	
	^ - Defined by harvesting criteria.	
IV	Electricity produced from hydrogen derived from any of the above resources.	

Note: Nuclear fission and fossil fuel sources are prohibited in all cases as resources to meet the RPS.



# Conditional Standards

Action	Set	Causes Smaller or Smallest Utility to be subject to Large Utility Standard	Standard as of Year			
			2011	2015	2020	2025
Acquire New Coal Resource	< 3%	A utility that buys into a new coal plant or signs a new contract specifically for new coal power.	5%	15%	20%	25%
COU Annex IOU	< 3%	Consumer-Owned Utility that annexes investor-owned utility territory without consent.				

Conditions under which utilities do not have to meet full RPS obligation		
RPS Cost > 4% of Rev.	All	No utility is required to spend more than 4% of their electricity-related annual revenue requirement for RPS compliance.
Preference Power Rights	COU	No consumer-owned utility is required to displace firm Federal Base System (FBS) preference power rights (“cheap hydro”) from the Bonneville Power Administration (BPA) for RPS compliance.
Resource Exceed Load	All	No utility is required to acquire resources in excess of their load requirements in a given year for RPS compliance.
Existing Renewables	All	No utility is required to displace a non fossil-fueled power resource in their portfolio to achieve RPS compliance.
WA POU Hydro	All	No utility is required to displace low-price hydropower from contracts with Mid-Columbia River dams until those contracts can't be renewed or replaced.



# One and Done

- Petition for Judicial Review
- Retro REC Process
- Small Producers
- Low-impact Hydro
- REC Shortage of '08



## To Be Continued ...

---

- Alternative Compliance Payment (ACP)
- 4% off-ramp
- 
- Oregon-certified Generators
- Post 1994 Upgrades
- Other Renewable Resources



## Embedded SB 838

---

- Extend Public Purpose Charge - 2025
  - renewable  $\leq 20$  MW projects only
  - 8% target (soft) for 2025
- End ban on IOU rate-based conservation investments above PPC
- Add Green Power option - all utilities
  - voluntary purchases do not satisfy RPS



## B. World of WREGIS\*

---

- WREGIS Background
- Oregon RPS <=> WREGIS
- Anatomy of a REC

(\* western renewable energy generation information system)



## WREGIS – Role

---

- Serves generators, load serving entities, retail sellers, brokers, and others
- Compliance (RPS) and Voluntary Markets



**Renewable Energy Certificates**

Green attributes from renewable energy are verified, tracked and sold in today's markets.

The graphic consists of a blue-bordered box. On the left is an illustration of three wind turbines on a green hill under a blue sky with a yellow sun. On the right, the text "Renewable Energy Certificates" is written in white, followed by a horizontal line and the text "Green attributes from renewable energy are verified, tracked and sold in today's markets." in white.

[www.wregis.org](http://www.wregis.org)



## **WREGIS GU Statistics\***

---

- 4,560 MW (nameplate output)
  - 115 facilities
  - PacifiCorp  
1540 MW (34%), 51 facilities (44%)
  - Geysers Power Company  
1030 MW (23%), 11 facilities (10%)
  - PPM  
1000 MW (22%), 9 facilities (8%)
- (\* Generating Units as of April 22, 2008)



## **REC\* Basics**

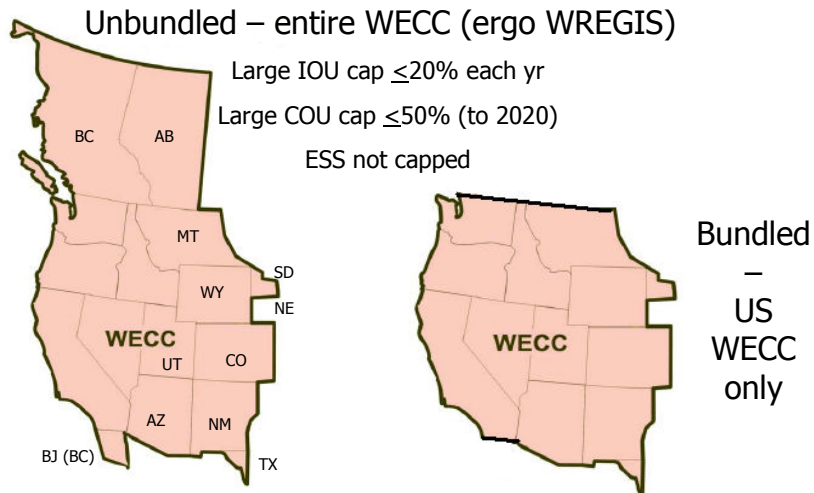
---

- RPS Compliance proved by REC tracking
- 1 MWh, qualified electricity => 1 REC
- Bundled REC = REC w/ energy
- Unbundled REC = REC w/o energy
- Oregon RPS - Jan '07 banking start
- No "use it or lose it" provision

(\* Renewable Energy Certificate)



## RPS - REC Geography



BPA renewable product – no site constraint



## An Oregon Certified REC

- Oregon Utilities need Oregon-certified, WREGIS-issued REC for RPS compliance.
- To Earn an Oregon Qualified REC
  1. Become an Account Holder
  2. Register Generating Unit (GU)
  3. Have GU Certified for Oregon
  4. Report Generation (MWh)
- Current vs Prior Period Issue



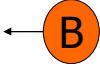


# WREGIS REC - sample

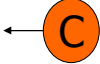
**Certificate Data**  
 WREGIS Generating Unit ID: **W12**  
 Generating Unit Name: **CPS Unit 1**  
 Primary Facility Name: **KG**  
 Vintage Year/Month: **2007/7**  
 Certificate Serial Numbers: **12-ID-52-211 to 215**  
 Total Certificates: **5**  
 Generation Period Start Date: **NA**  
 Generation Period End Date: **NA**  
 Certificate Creation Date: **10/15/2007**



**Basic Generating Unit Data**  
 Facility County: **Boise**  
 Facility State or Province ID: **US**  
 Facility Country: **US**  
 Multi-Fuel Generator Indicator: **No**  
 Generation Technology/Prime Mover: **Solar Thermal**  
 Fuel Type/Energy Source: **Solar**  
 Full Search/Other Criteria or Eligibility Characteristics:  
**Solar-Solar-Solar**  
 Date when Generating Unit first commenced operation: **07/17/2001**  
 Nameplate Capacity: **0.875**  
 Facility Operator (Name, Company or Organization Name): **CPS**  
 Customer (Short Distributed Generation (Y/N)): **Yes**  
 Reporting Entity Complete or Organization Name: **ORE Test1**  
 Reporting Entity Type:  
**Balancing Authority**  
**Non-Balancing Authority Reporting Entity**  
 Generating Unit in WECC Region Declaration Indicator (Y/N): **Yes**  
 Utility to which the Generating Unit is interconnected: **Moho Power Company**  
 Qualifying Facility Indicator (Y/N): **No**  
 Facility Ownership type:  
**Other Non-Utility**  
 California Supplemental Payment Received (Y/N): **No**  
 Facility receives state/provincial public benefit fund support indicator (Y/N): **No**  
 Federal Tax Credits received indicator (Y/N): **No**  
 Most recent FERC Hydro license date, or **NA**  
 One of the following from the following valid values: Non-jurisdictional, application pending, or not applicable: **NA**  
 Recaptured indicator (Y/N): **No**  
 Repower date: **NA**



**State/Provincial/Voluntary RPS Selections**  
 State Eligible Certification Number  
 Arizona **No NA**  
 British Columbia **No NA**  
 California **No NA**  
 Colorado **No NA**  
 Nevada **No NA**  
 New Mexico **No NA**  
 Montana **No NA**  
 Texas **No NA**  
 Washington **No NA**  
 Oregon **No NA**  
 Alberta **No NA**  
 California SEP Eligibility **No**  
 California Qualifying Facility Qualified to Claim Non-Renewable: **No**  
 Green-e Eligible: **No** Certification Number: **NA**  
 Ecotric Certified: **No** Certification Number: **NA**  
 Low Impact Hydro Certification: **No** Certification Number: **NA**



A REC is too large for this view!



# WREGIS REC - cont.

**Certificate Data**



WREGIS Generating Unit ID: **W12**  
 Generating Unit Name: **CPS Unit 1**  
 Primary Facility Name: **KG**  
 Vintage Year/Month: **2007/7**  
 Certificate Serial Numbers: **12-ID-52-211 to 215**  
 Total Certificates: **5**  
 Generation Period Start Date: **NA**  
 Generation Period End Date: **NA**  
 Certificate Creation Date: **10/15/2007**

Q: Does the 2007/7 REC exist?  
 A: Not yet.



## WREGIS REC – cont.

### Static Generating Unit Data

Facility County: **Boise**  
Facility State or Province: **ID**  
Facility Country: **US**  
Multi-Fuel Generator Indicator: **No**  
Generation Technology/Prime Mover: **Solar Thermal**  
Fuel Type/Energy Source:  
**Solar**  
Fuel Source/Other Criteria or Eligibility Characteristics:  
**Solar-Solar\*-Solar\***  
Date when Generating Unit first commenced operation: **07/17/2001**  
Nameplate Capacity: **0.875**  
Facility Operator Info: Company or Organization Name: **CPS**  
Customer Sited Distributed Generation (Y/N): **Yes**  
Reporting Entity Company or Organization Name: **QRE Test1**  
Reporting Entity Type:  
**Balancing Authority**  
**Non-Balancing Authority Reporting Entity**

B<sub>1</sub>



## WREGIS REC – cont.

Generating Unit in WECC Region Declaration Indicator (Y/N): **Yes**  
Utility to which the Generating Unit is interconnected: **Idaho Power Company**  
Qualifying Facility Indicator (Y/N): **No**  
Facility Ownership type:  
**Other Non-Utility**  
California Supplemental Payment Received (Y/N): **No**  
Facility receives state/provincial public benefit fund support indicator (Y/N): **No**  
Federal Tax Credits received indicator (Y/N): **No**  
Most recent FERC Hydro license date, or: **NA**  
One of the following from the following valid values: Non-jurisdictional, application pending, or not applicable.: **NA**  
Repowered Indicator (Y/N): **No**  
Repower date: **NA**

B<sub>2</sub>



# WREGIS REC – cont.

## State/Provincial/Voluntary RPS Selections

State	Eligible	Certification Number
Arizona	No	NA
British Columbia	No	NA
California	No	NA
Colorado	No	NA
Nevada	No	NA
New Mexico	No	NA
Montana	No	NA
Texas	No	NA
Washington	No	NA
Oregon	No	NA
Alberta	No	NA



Oregon Certification - sample  
08wnd003wy

California SEP Eligibility: **No**  
 California Qualifying Facility Qualified to Claim Non-Renewable: **No**  
 Green-e Eligible: **No** Certification Number: **NA**  
 Ecologo Certified, **No** Certification Number: **NA**  
 Low Impact Hydro Certification: **No** Certification Number: **NA**



## C. Movers & Shakers

### Subduction Zone Events

- California RPS – import potential
- Carbon Cap & Trade
- Federal RPS
- Production Tax Credit

### Life w/ Rattling Teacups

- Compliance Forecast
- New Investment in Renewable Resources



## Crystal Ball & Concrete

- Compliance Year Forecasts (2011 – 2025)
- Oregon Certified Projects (2008)
  - Jan '08      zero
  - Feb '08      +7 (all wind, Pac & IPCo)
  - Apr '08      +2 (geothermal, Pac & US Geo)
  - Queue        +9 (all wind, PPM)
- RFP, IRP, Designs, Construction



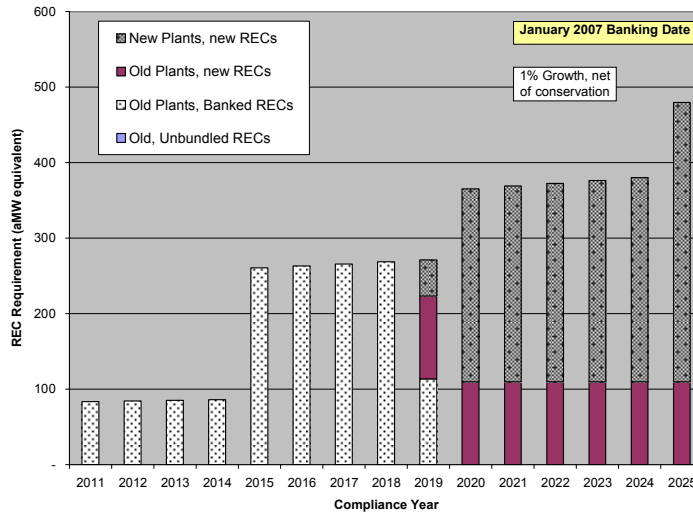
## Oregon PUC Estimate

Year	Oregon RPS Target	Oregon Allocated Share of Eligible Renewable Resources as % of Sales	
		PacifiCorp - Oregon	PGE
2008		6.0%	5.6%
2011	5%	9.1%	9.9%
2015	15%	10.4%	16.8%

Source: Renewable Resource Development & Implementation of Senate Bill 838; Lee Beyer, Chairman, Oregon Public Utility Commission. November 30, 2007.



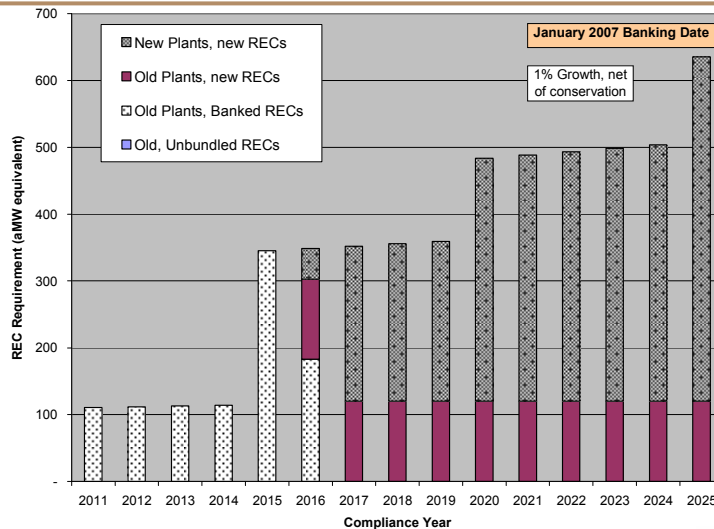
# PacifiCorp – ODOE est.



Old  
is  
1995  
to  
2007



# PGE – ODOE est.



Old  
is  
1995  
to  
2007



## Development Activity

- Renewable Request For Proposals
- Integrated Resource Plans
- Generators



## Oregon Dept. of Energy Contact Information

- More on the Oregon RPS (w/ links to OPUC):  
[www.oregon-RPS.org](http://www.oregon-RPS.org)
- WREGIS:  
[www.wregis.org](http://www.wregis.org)
- ODOE homepage:  
<http://www.energy.state.or.us>
- Kip Pheil:  
kip.pheil@state.or.us  
503-378-4442

