

# SUCCESS AND FUTURE POTENTIAL OF OREGON'S SOLAR PILOT PROGRAM

“ The Commission found no fundamental difference in system cost trends between programs, with one exception: the reverse auction mechanism for large systems under the VIR pilot has consistently provided the lowest energy and installation costs among the programs.”

*Solar Photovoltaic Volumetric Incentive Program –  
2015 Report to the Legislative Assembly, p. 4*

# How Big is 100kW?

REI stores – **29kW** to **130kW**

Gladstone – 3 schools @ **100kW** each

Walmart stores average **342kW** per store

Intel, Hillsboro – 2 carport projects @ **400kW** each plus **100kW** on roof

Ikea stores vary from **250kW** to **540kW** to **5MW** for MD dist. center

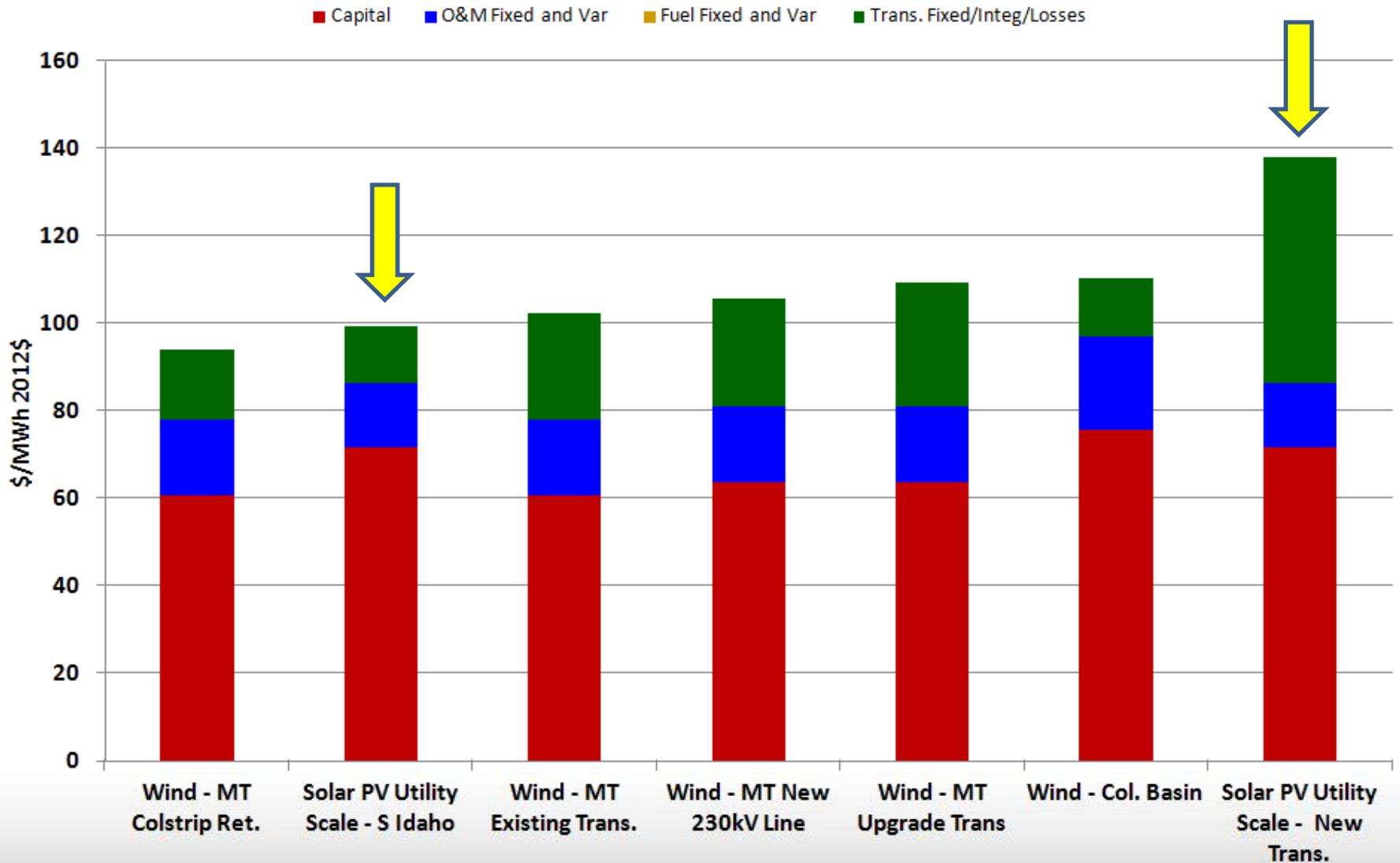
Toys R US, NJ – **5.4MW**

Las Vegas Mandalay Bay Resort Convention Center – **6.4MW**



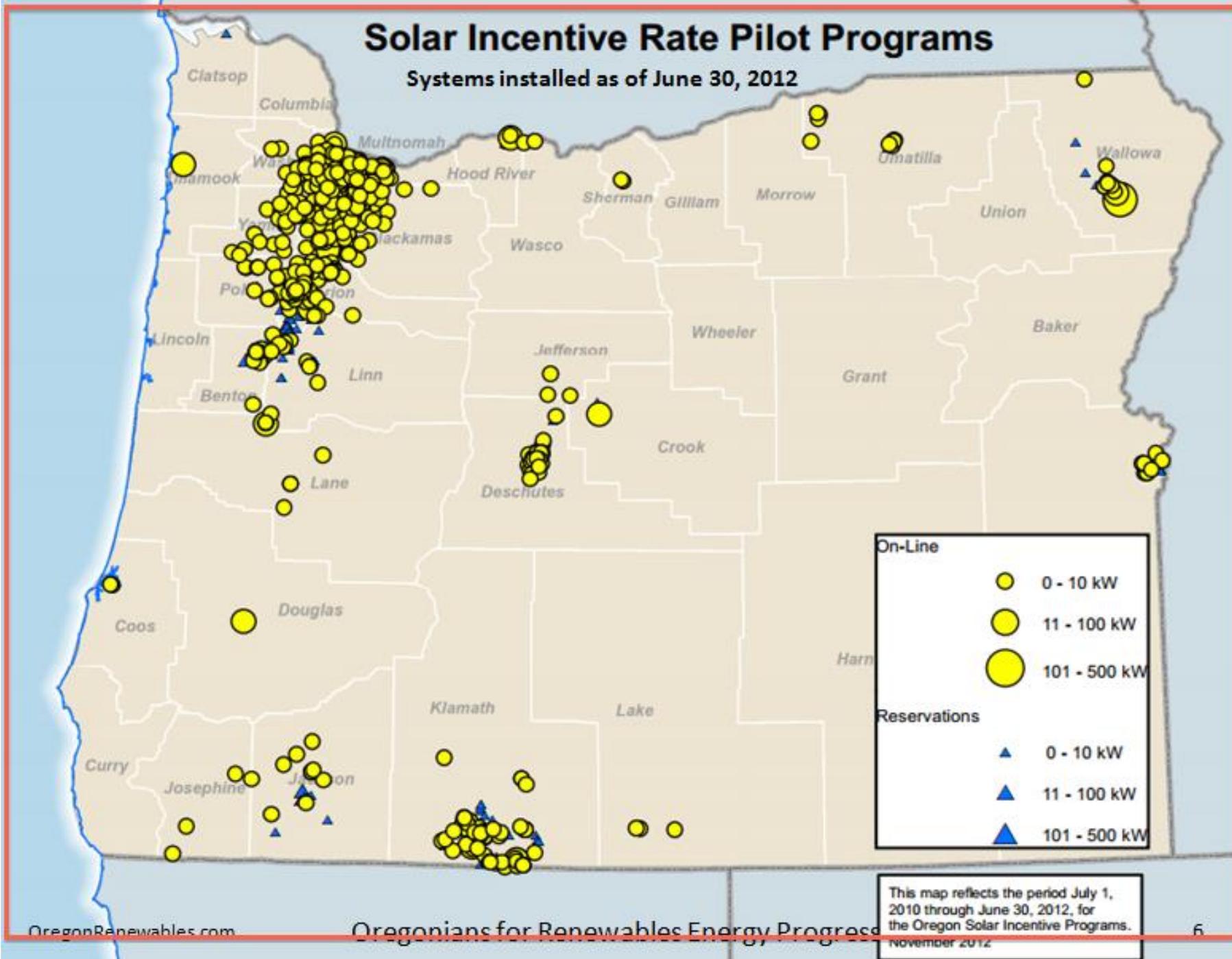
# Levelized Cost of Energy - Wind & Solar Generating Resources In Service 2020

Add 4 cent/kWh for  
new transmission



# Solar Incentive Rate Pilot Programs

Systems installed as of June 30, 2012



This map reflects the period July 1, 2010 through June 30, 2012, for the Oregon Solar Incentive Programs.  
November 2012

## **2015 PORTLAND GENERAL ELECTRIC (PGE) RATE CHANGE REQUEST UE 294**

Portland General Electric (PGE) filed a general rate case with the Commission on February 13, 2015 requesting an overall price increase of 3.7 percent effective in 2016, primarily to recover the costs associated with the Carty Generating Station. The Carty Generating Station is expected to begin serving customers in the second quarter of 2016. With the filing, the Commission will begin a review of the company's request to change customer rates.

The filing also proposes:

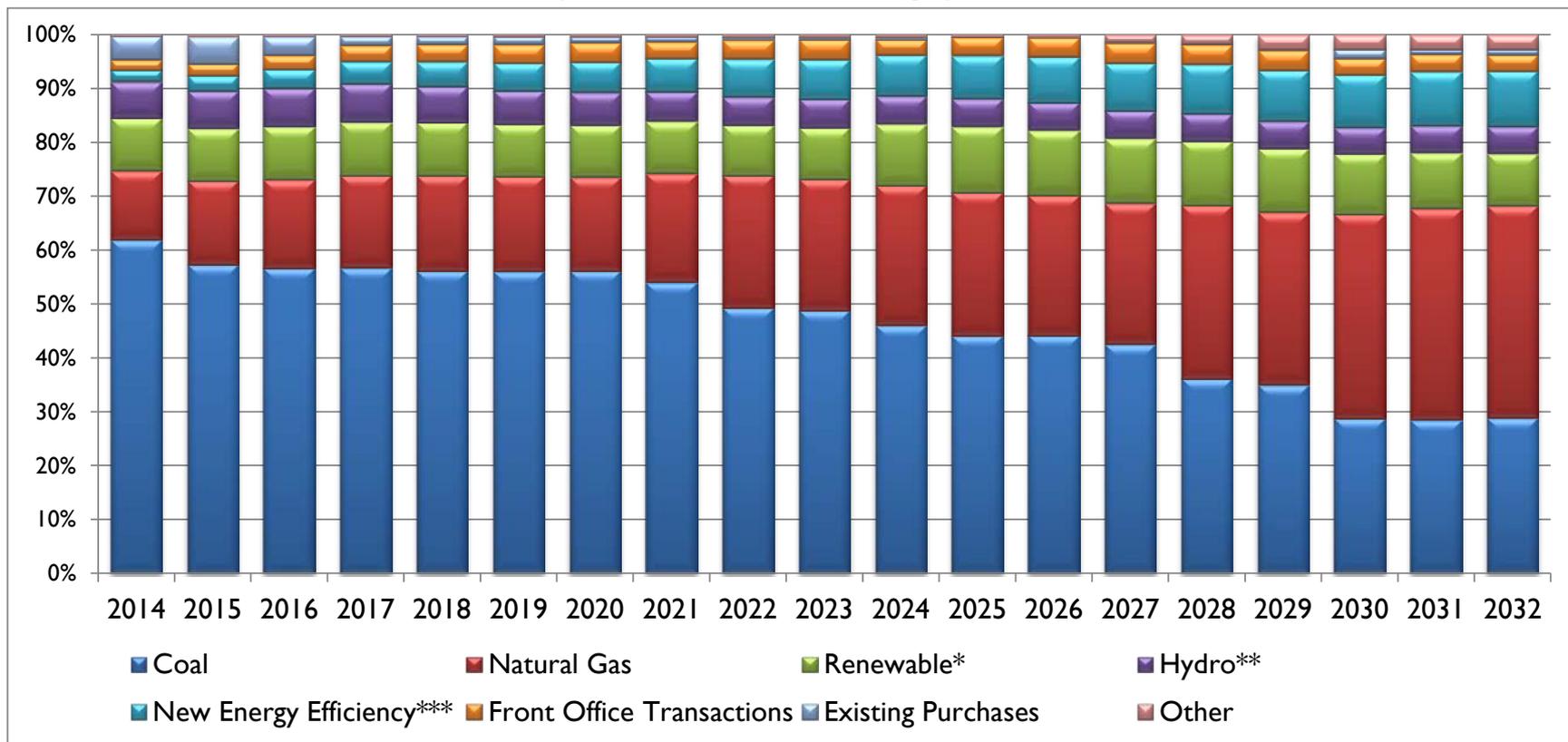
- Return on equity of 9.90 percent;
- Capital structure of 50 percent debt and 50 percent equity;
- Cost of capital of 7.67 percent;
- Rate base of \$4.5 billion;
- Annual revenue increase of \$66 million, net of customer credits and supplemental tariff updates.

The Commission may issue a final order by the end of 2015. It is proposed that new customer prices take effect in two stages. A price reduction of approximately 1.0 percent is expected on Jan. 1, 2016 reflecting an increase in base business costs more than offset by the amortization of customer credits and supplemental tariff updates, and a price increase of approximately 4.7 percent for the Carty Generating Station is expected to be effective when the plant is placed into service in the second quarter of 2016.

The specific impact on individual customers' bills will vary depending on usage and customer class. If the OPUC approves PGE's request as submitted, a typical residential customer using a monthly average of 840 kilowatt-hours of power would see their bill increase by about three dollars per month when Carty goes into service.

[Official Filing](#) (Docket UE 294)

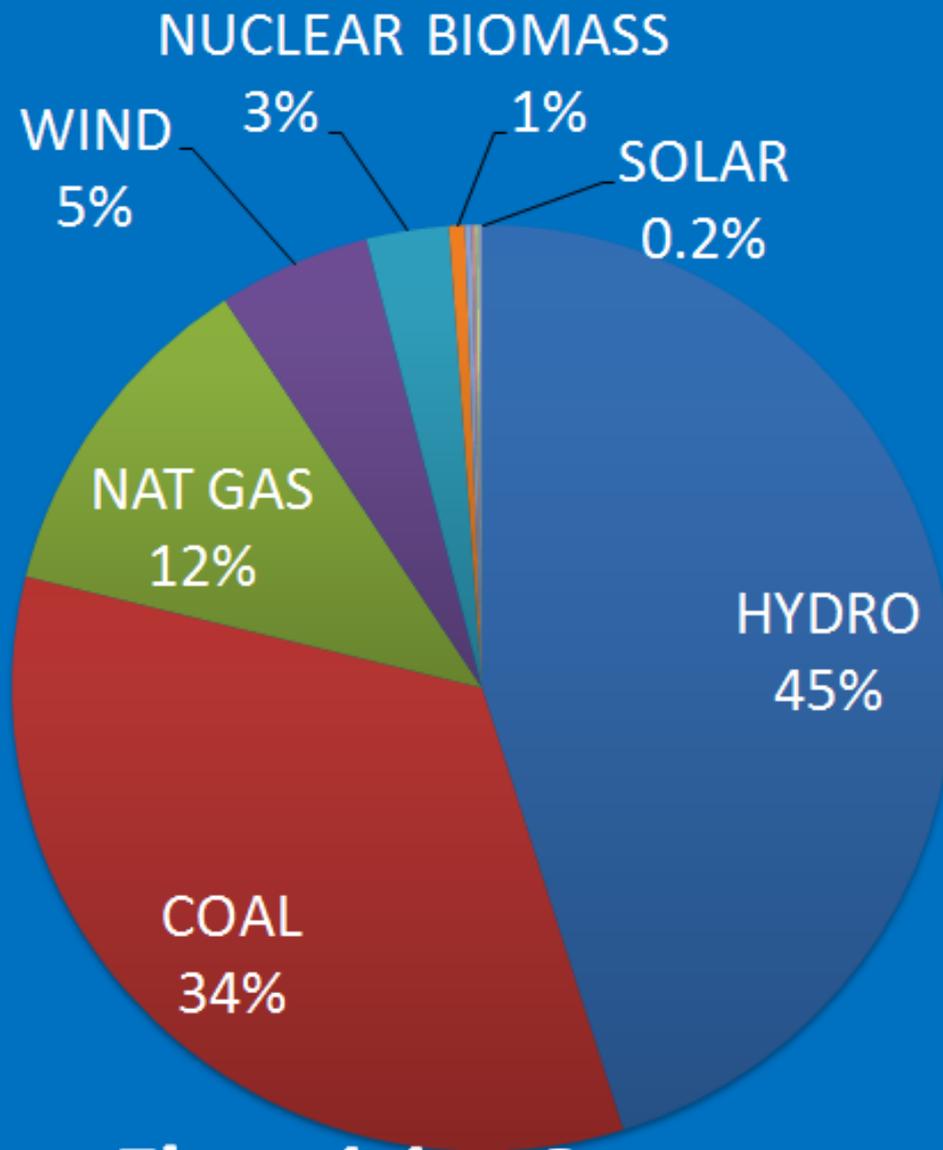
# 2013 IRP Update Energy Mix Outlook



\* Renewable resources include wind, solar, and geothermal.

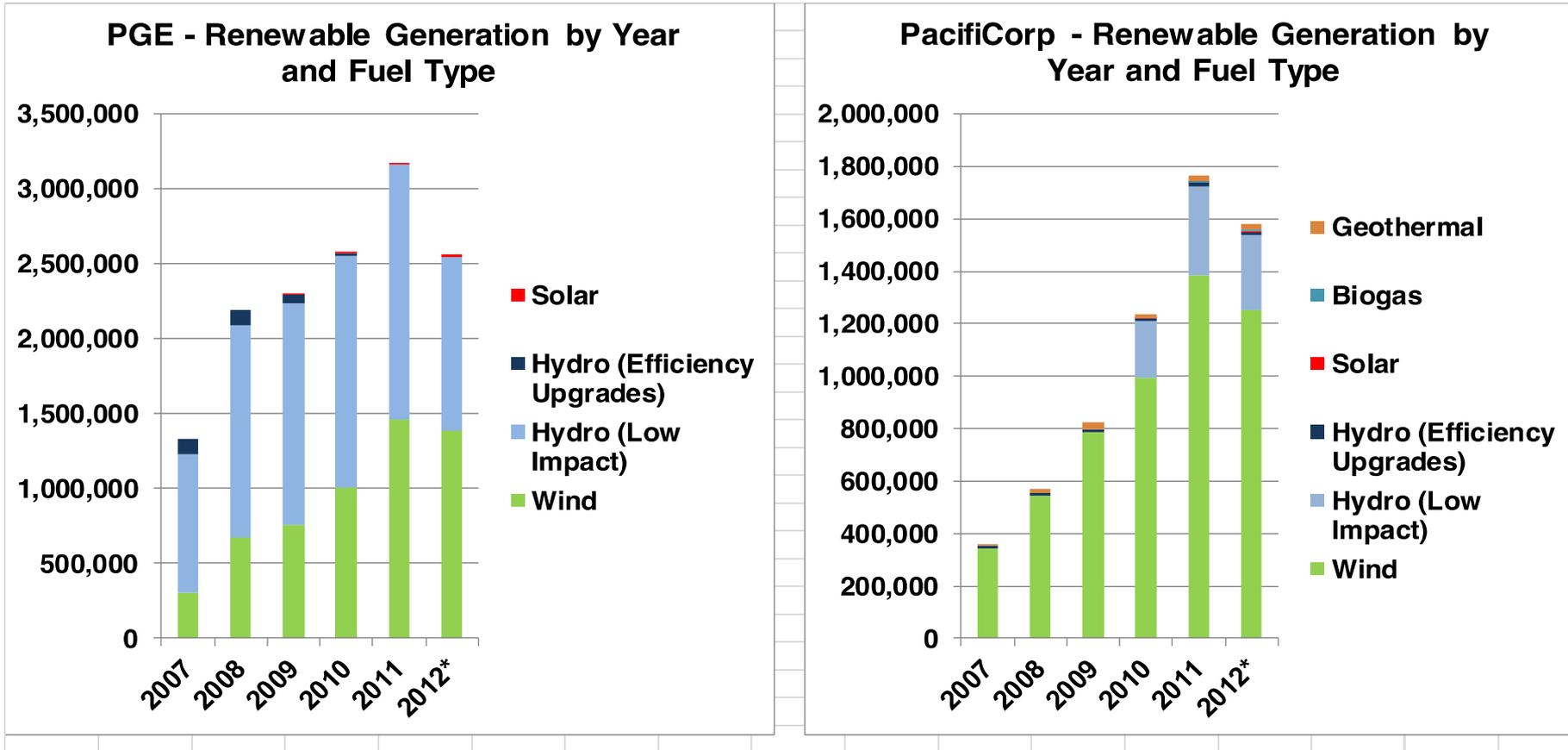
\*\* Hydro resources included owned, qualifying facilities and contract purchases.

\*\*\* The contribution of Energy Efficiency represents incremental acquisition efficiency resources over the planning period.

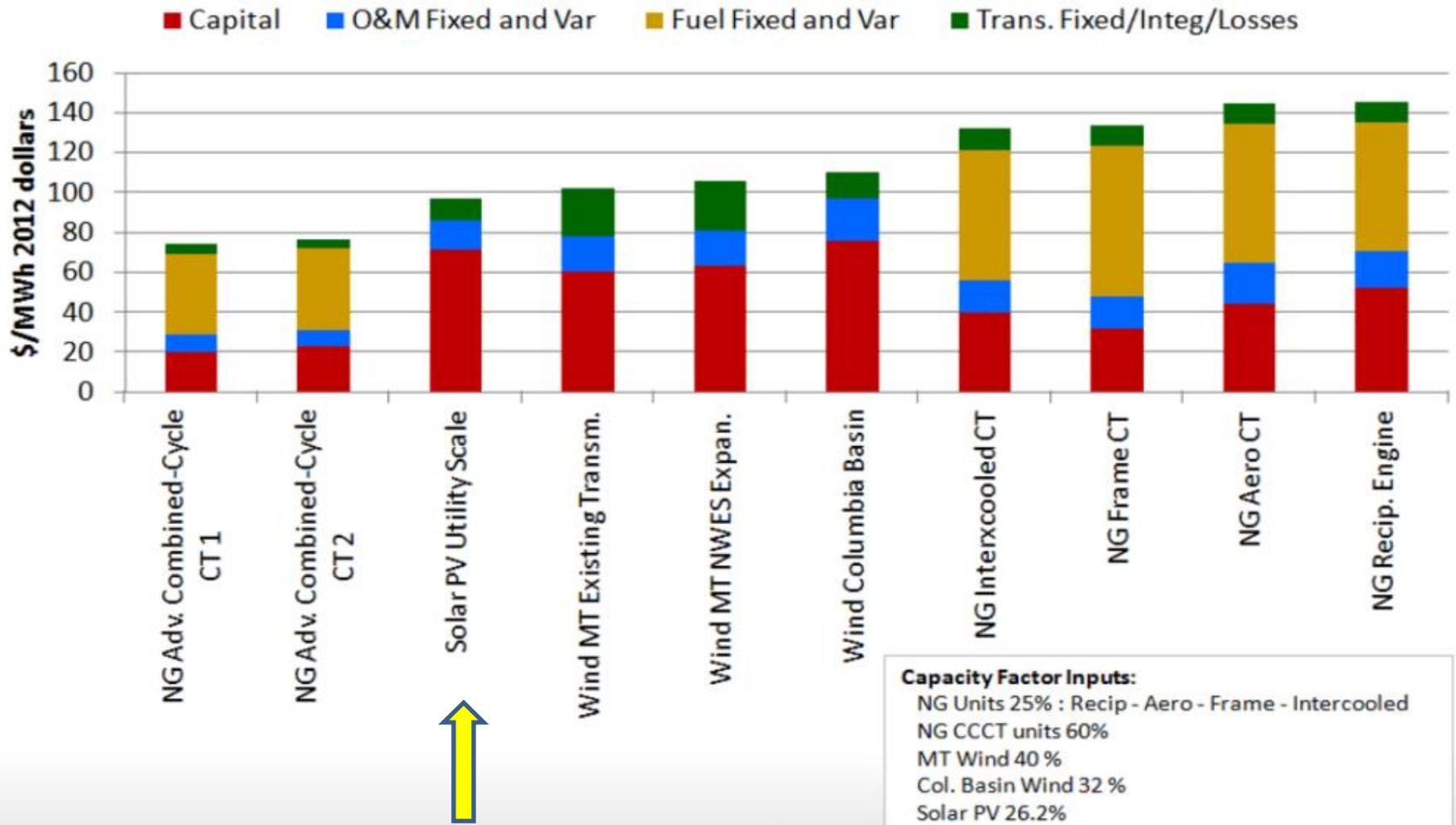


# Oregon Electricity Consumption

### Figure 3 – PGE and PacifiCorp RPS Compliance by Year and Generation Type



## Levelized Cost of Energy - Generating Resources In Service 2020



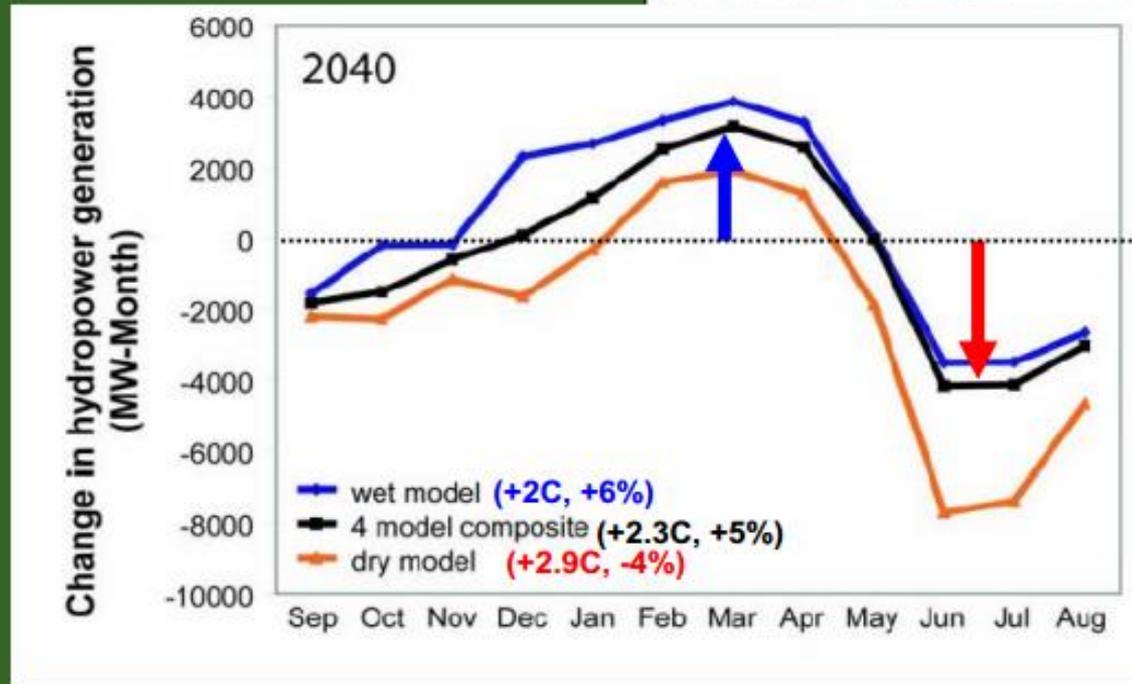
**Capacity Factor Inputs:**  
 NG Units 25% : Recip - Aero - Frame - Intercooled  
 NG CCCT units 60%  
 MT Wind 40%  
 Col. Basin Wind 32%  
 Solar PV 26.2%

**Fuel Price:** Medium Natural Gas Price Forecast

# Impacts on Columbia Basin hydropower supplies



- **Winter and Spring:** increased generation
- **Summer:** decreased generation
- **Annual:** total production will depend primarily on annual precipitation



NWPCC (2005)

Over time fixed rate tariffs become a benefit to rate payers

