

Conservation Potential Assessment Comparisons

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Utilities to Compare

- Snohomish PUD
- PacifiCorp
- EWEB
- Clark PUD
- Seattle City Light
- Energy Trust
- Puget Sound Energy
- Tacoma Power

Thank You!



Total Technical Achievable Potential

Utility	% of 10-year Load	% of 20-year Load	20 th year Date
7 th Plan	14%	22%	2035
SCL*	20%	31%	2033
SnoPUD	11%	20%	2033
PacifiCorp (WA)	13%	20%	2034
Clark PUD	11%	22%	2033
EWEB*	24%	33%	2030
Energy Trust	15%	15%	2035
Puget Sound Energy	13%	16%	2035
Tacoma Power	11%	17%	2035

SCL-Technical, not achievable
 EWEB – 2020 and 2030
 PSE – based on Dec IRP presentation



Residential Technical Achievable Potential

Utility	% of 10-year Load	% of 20-year Load	Savings (kWh) Per Capita
7 th Plan	15%	27%	1,723
SCL*	26%	38%	1,530
SnoPUD	14%	25%	1,827
PacifiCorp (WA)	15%	21%	1,385
Clark PUD	14%	28%	1,572
EWEB*	40%	48%	2,920
Energy Trust	20%	20%	870
Puget Sound Energy	12%	15%	519
Tacoma Power	12%	20%	2,477

SCL-Technical, not achievable
 EWEB – 2020 and 2030



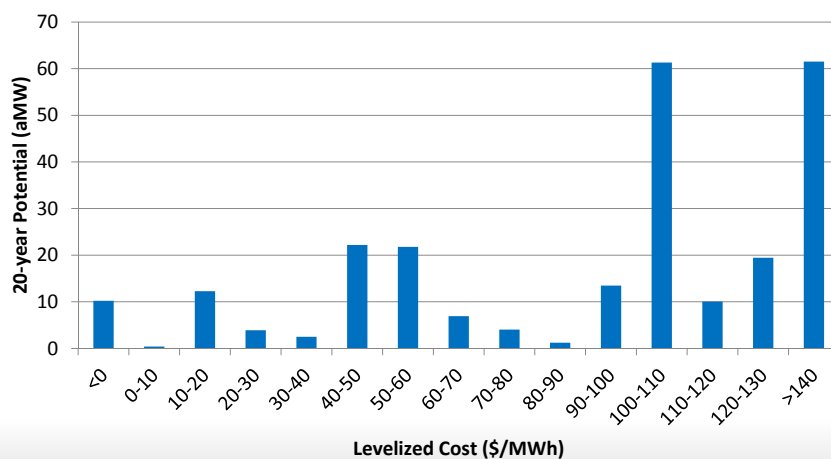
Residential Top-10 Measures (yr10)

Measure	7 th Plan	Sno PUD	PC (WA)	ETO	EWEB	Clark PUD	SCL*	PSE	TPU
Lighting	O	O	O	O	O	O	O	O	*
Wx	O,X	O	O,X		X	O		O,X	*
Advanced Power Strips	O							O	*
Showerhead	O		O	O	O		O	O	
DHP Ducted	O								
HPWH	X	X	O	O	O		O	O,X	*
DHP	X	O	X	X	O	X	O	X	*
Behavior	O						O		
ASHP	X	O	O		O	X		X	
Solar Water Heater	X	X	X		X				

Red "X" indicates weighted average levelized cost >\$100/MWh
 Green "O" indicates weighted average levelized cost <\$100/MWh



Spread of Levelized Costs – Weatherization 7P



Other Top 10 Res Measures

- TVs/Set-top boxes
- Clothes Washers
- Computers & Monitors
- Duct sealing
- Refrigerator/freezer recycling

Commercial Technical Achievable Potential

Utility	% of 10-year Load	% of 20-year Load	Savings Per SF
7 th Plan	15%	20%	3.9
SCL*	20%	30%	6.2
SnoPUD	11%	18%	4.2
PacifiCorp (WA)	17%	26%	3.9
Clark PUD	10%	18%	2.9
EWEB*	11%	19%	2.7
Energy Trust	13%	14%	2.4
Puget Sound Energy	14%	16%	1.5*
Tacoma Power	12%	18%	

SCL-Technical, not achievable

EWEB – 2020 and 2030

PSE – does not have a sqft forecast, estimated from employment

Commercial Top-10 Measures (yr10)

Measure	7 th Plan	Sno PUD	PC (WA)	ETO	EWEB	Clark PUD	SCL*	PSE	TPU
Interior Lighting	O	O	O	O	O	O	O	O	*
Data Centers	O				O		O		
Exterior Building Lighting	O				O	O			*
Advanced Rooftop Controller	O			O	O		O		
Commercial EM	O	O	O, X	O	O	O		O	
Grocery Refrigeration Bundle	O	O		O	O	O			*
Street and Roadway Lighting	O	X				O			
Smart Plug Power Strips	O								
DHP	O								
VRF	O								

Red "X" indicates weighted average levelized cost >\$100/MWh
 Green "O" indicates weighted average levelized cost <\$100/MWh



Other Top 10 Com Measures

- Lighting controls
- Demand controlled ventilation
- Economizers
- Integrated design
- Variable speed drives
- Many lighting options...



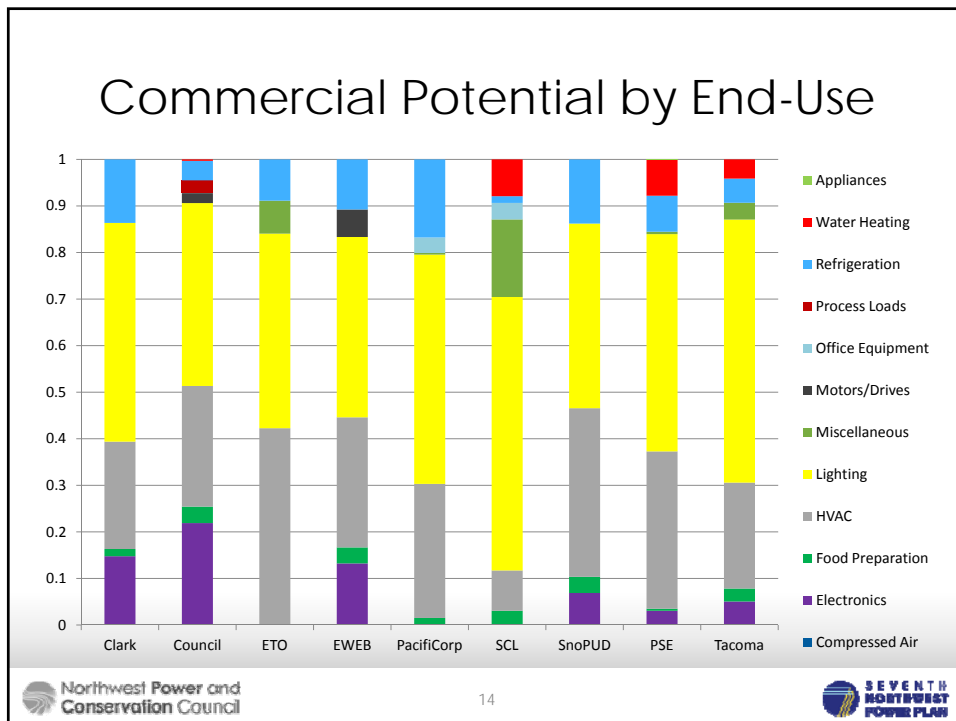
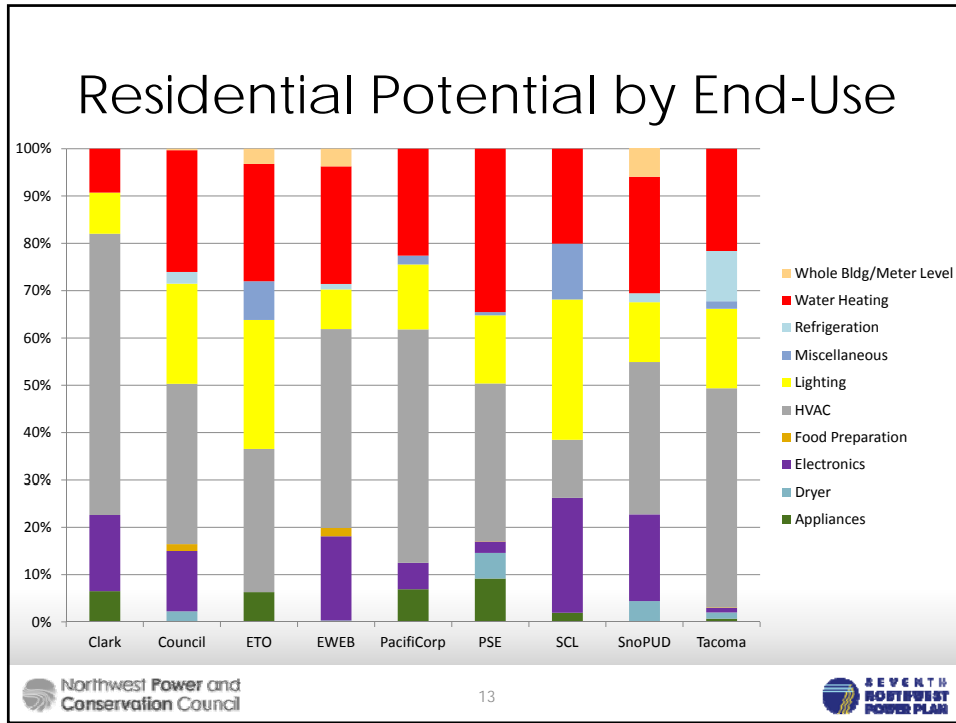
Industrial Technical Achievable Potential

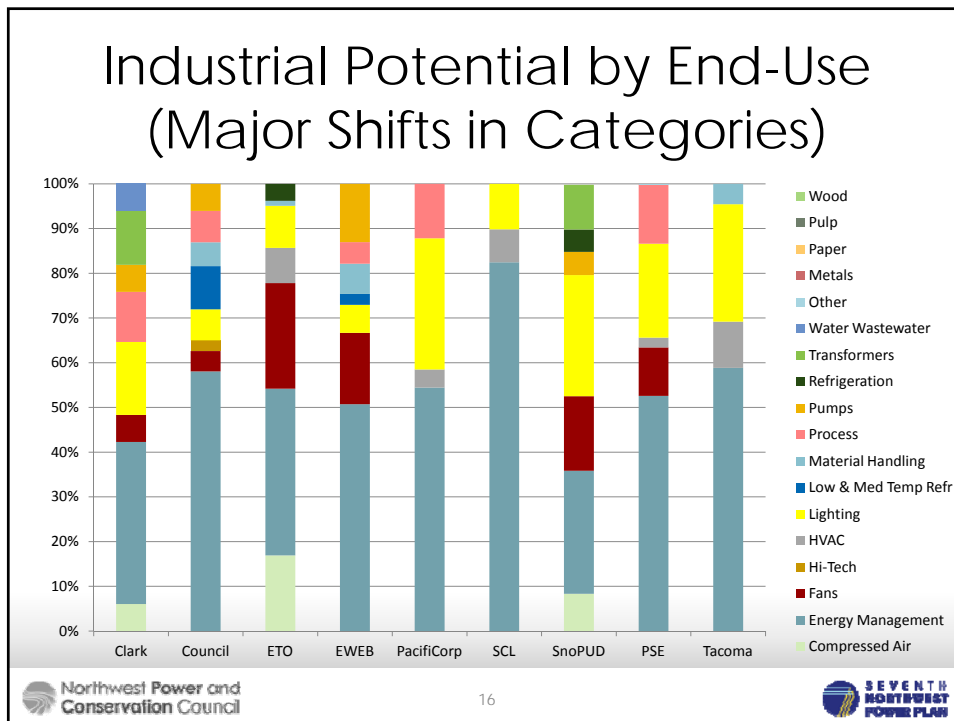
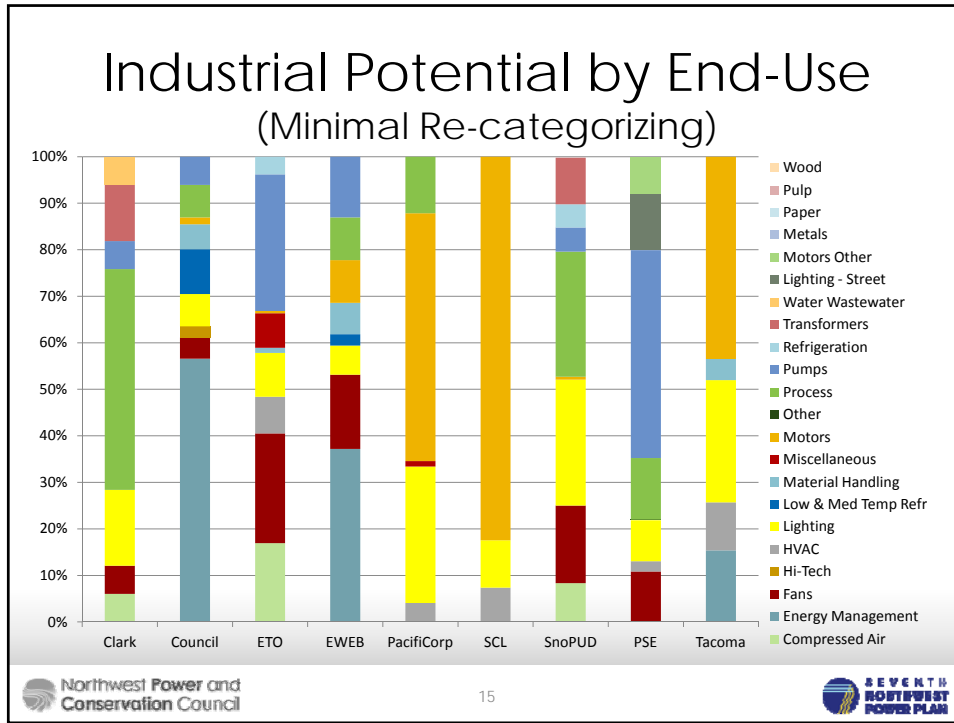
Utility	% of 10-year Load	% of 20-year Load
7 th Plan	11%	12%
SCL*	11%	15%
SnoPUD	4%	7%
PacifiCorp (WA)*	9%	13%
Clark PUD	2%	4%
EWEB*	15%	26%
Energy Trust	13%	12%
Puget Sound Energy	17%	18%
Tacoma Power	7%	10%

SCL-Technical, not achievable
 EWEB – 2020 and 2030
 PacifiCorp – includes street lighting

Comparison of Potential by End-Use Category

- The following slides show a comparison of potential by sector and end-use
- A few caveats:
 - Some of the data are Technical-Achievable, some are Economic
 - We combined some of the categories, e.g.
 - Heating, Cooling, Ventilation → HVAC
 - Outdoor Lighting, Indoor lighting → Lighting
 - Industrial:
 - Too much variation in the categories
 - Will show two different options





Conclusions

- **Similar total potential as fraction of load**
- **Vintage of CPA matters**
- **Significant share 'new' measures in 7p**
- **Lighting opportunities abound**
- **Many low-cost measures**
- **But, economic screens matter**
- **Low hanging fruit continues to appear**