

BPA Summary of 6th Plan Supply Curves and 5 Year Targets

August 5, 2009



Agenda

- Overview of BPA Efforts
- Overview of the 6th Power Plan
- BPA Program Updates



Overview

- The Council is expected to adopt the Sixth Power Plan by no later than December 31, 2009
- Implications of plan will remain uncertain until the final plan is adopted.
- Preliminary insights:
 - Targets likely to double
 - Working with utilities and stakeholders to minimize operational disruption
 - Due to an increase in avoided costs, more measures are likely to be cost effective (expanded measure set).
 - Some current measures will be excluded
 - Some technologies will require research prior to approval by the Regional Technical Forum (RTF).



Timeline

- The Council has provided following tentative schedule :
 - Draft plan released (August 2009)
 - Public comment period (60 days)
 - Revised draft plan based on public comment released (October or November 2009)
 - Final plan adopted (November or December 2009)



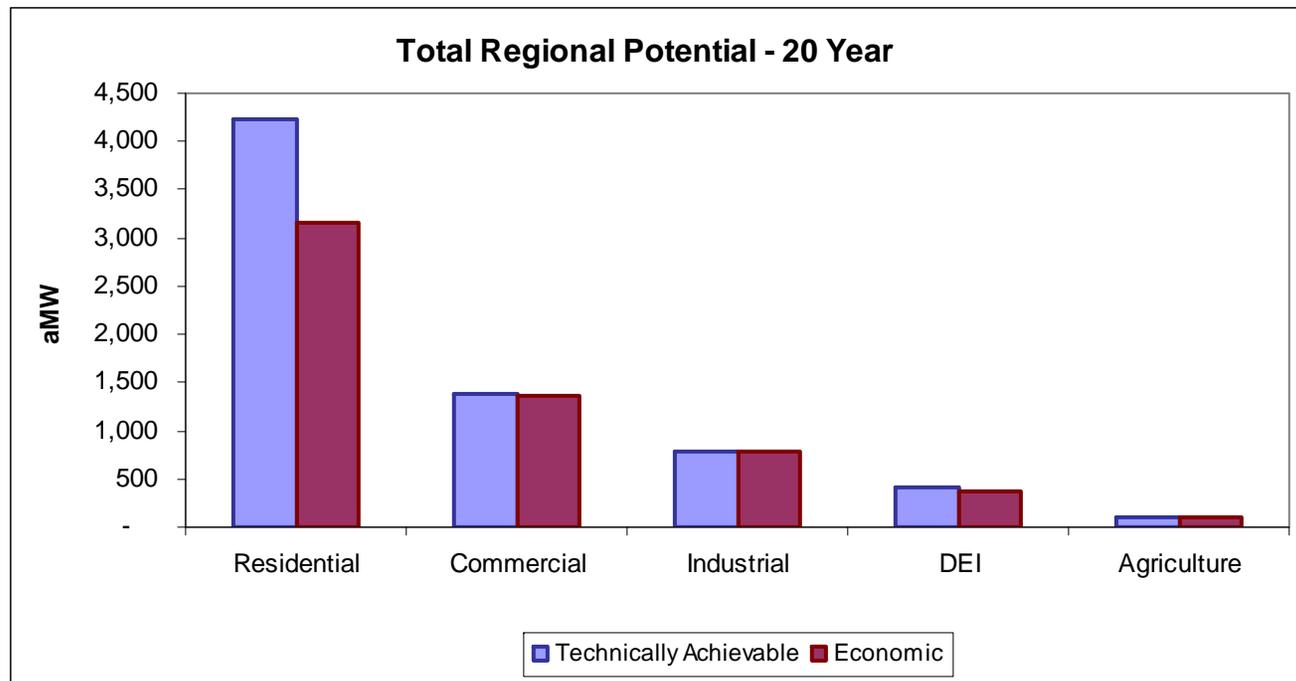
BPA Analytical Efforts

- Review/analyze
 - Understand detailed technical inputs, summarize for high-level understanding
- Regional collaboration: BPA staff worked with a group of regional utilities to:
 - Understand the details of the energy efficiency supply curves, characterize the “readiness” of each technology
 - Begin discussions of appropriate implementation strategy
- Feedback to Council
 - Technical comments, CRAC advisory feedback, action plan feedback
- Strategize
 - Research agenda, program implementation strategy
- Tools for Utilities
 - Utilities can request the detailed measure file
 - Soon: “Handbook for Potential Studies in the NW”
 - Maybe: Model with Sixth Plan measure assumptions with change in number units



6th Plan Energy Efficiency Potentials

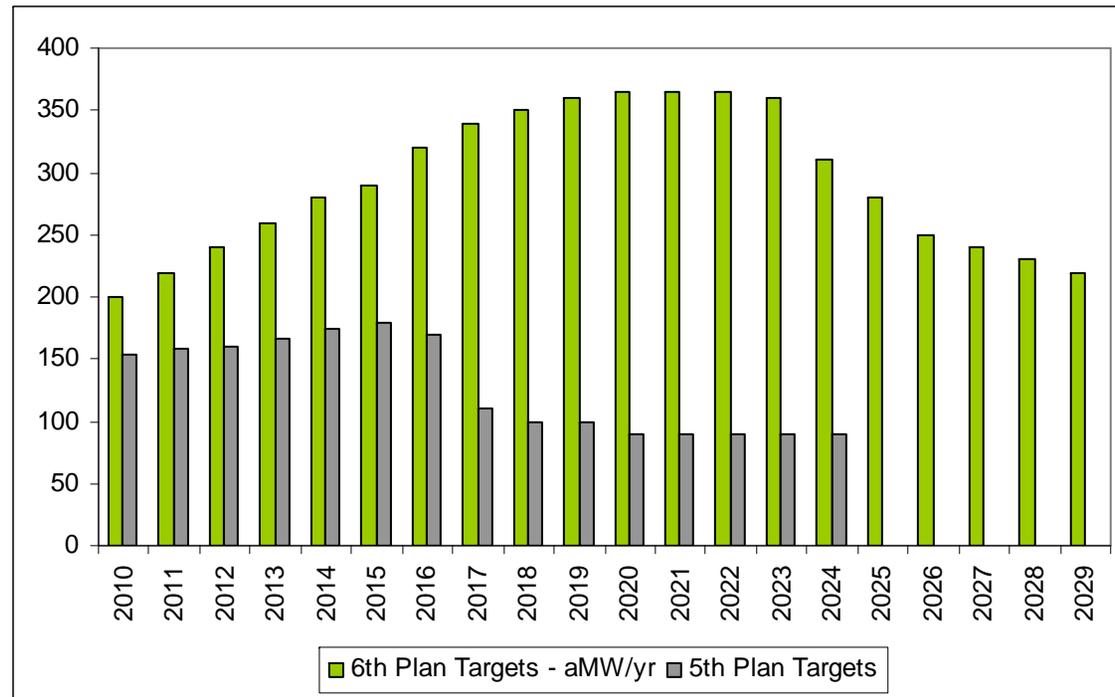
- Total regional “technically achievable” potential estimated at nearly 7,000 aMW over 20 years
- Economic Potential* *is expected to be* 5,800 aMW (5th Plan total was 2,500 aMW)



* Assuming \$70/MWh for retrofit and \$120/MWh for Lost opportunity.
 Avoided costs will be determined in draft Plan

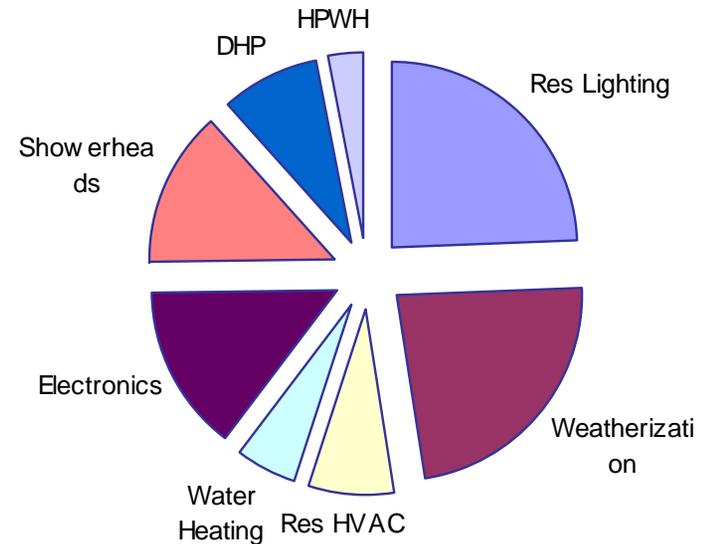
Regional Targets

- Council members to vote conservation targets for 2010-2014 - current proposal is 1,200 aMW.
- Council is discussing the impact on the targets by including CFLs (raise the targets?)
- The Action Plan currently references some uncertainty in energy efficiency and therefore specifies a range around the targets (high of 1,400, low still under discussion)



Residential 20 Year Economic Potential

- Residential sector makes up approximately half of the 5-year potential.
- Residential sector is modeled as 533 measures in the plan
- Status of non-EISA covered bulbs (standard twister CFLs) is unknown
- Some residential appliance baselines increased (MEF on clothes washers)

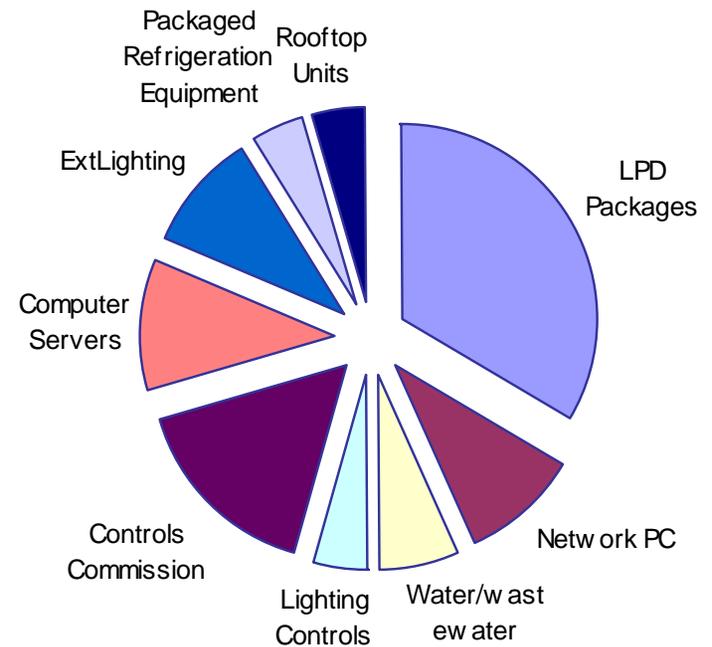


Initiative	Regional Potential - 20-year	20 yr - Public Power Share - aMW	5 yr - Public Power Share - aMW	Public Power Share - Units to get to Target - 5 year	Research Efforts
Res Lighting	152	64	64	8,012,738	Technology and Program Work
Weatherization	508	213	61	880,963	no
Res HVAC	485	204	20	65,516	no
Water Heating	260	109	14	1,528,118	no
Electronics	954	401	38	1,893,915	Technology and Program Work
Showerheads	86	36	36	2,483,010	Program/Market Work
DHP	162	68	23	45,710	Technology and Program Work
HPWH	500	210	8	31,614	Technology and Program Work



Commercial Potential

- Commercial sector is 18% of 5-year targets
- Many different types of technologies
- 80% of potential is in measures on right

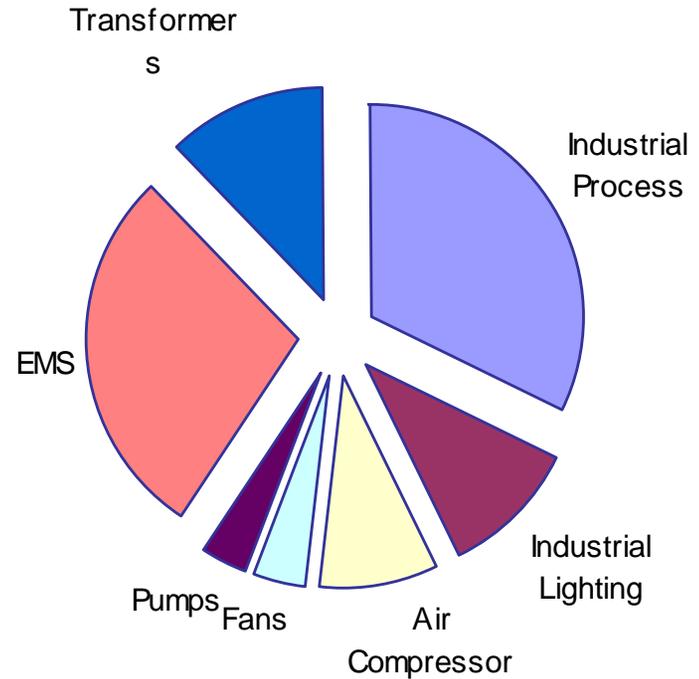


Initiative	Regional Potential - 20-year	20 yr - Public Power Share - aMW	5 yr - Public Power Share - aMW	Research Efforts
LPD Packages	365	153	28	Program/Market Work
Network PC	78	33	8	Program/Market Work
Water/wastewater	49	21	5	no
Lighting Controls	64	27	4	Program/Market Work
Controls Commission	129	54	13	Technology and Program Work
Computer Servers	88	37	9	Technology and Program Work
ExtLighting	140	59	8	Technology and Program Work
Packaged Refrigeration	49	21	4	Program/Market Work
Rooftop Units	26	11	4	Technology and Program Work



Industrial Sector

- Industrial sector also is 18% of 5-year targets
- Detailed modeling conducted by Strategic Energy Group
- ~25% of potential is in energy management practices

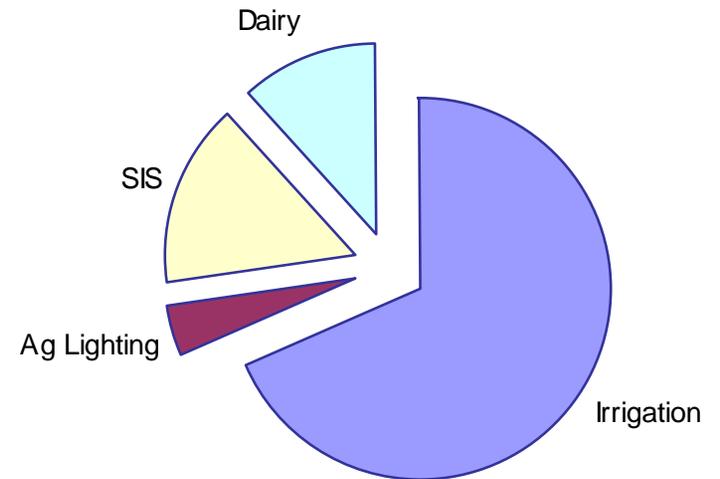


Initiative	Regional Potential - 20-year	20 yr - Public Power Share - aMW	5 yr - Public Power Share - aMW	Research Efforts
Industrial Process	186	78	30	no
Industrial Lighting	78	33	10	no
Air Compressor	44	18	9	Program/Market Work
Fans	32	13	4	no
Pumps	33	14	3	no
EMS	362	152	27	Technology and Program Work
Transformers	54	23	11	Technology and Program Work



Agriculture Sector

- Ag represents 6% of the 5-year potential
- Hardware is largest share of potential

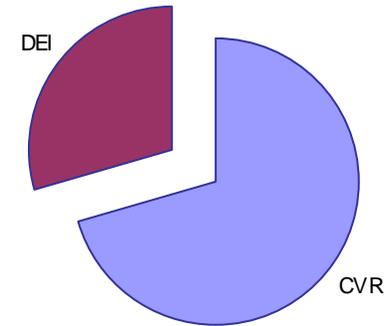


Initiative	Regional Potential - 20-year	20 yr - Public Power Share - aMW	5 yr - Public Power Share - aMW	Research Efforts
Irrigation	68	28	14	no
Ag Lighting	4	2	1	no
SIS	16	7	3	no
Dairy	12	5		2 Technology and Program Work



Distribution Efficiency

- DEI represents 9% of the 5-year potential
- DEI has 5 measures:
 - Reduce system voltage w/ LDC voltage control method
 - Light system improvements (var. mgmt., phase load balancing and feeder load balancing)
 - Major system improvements (voltage regulators on 1 of 4 substations, and select reconductoring on 1 of every 2 substations)
 - EOL voltage control method
 - SCL implement EOL w/ major system improvements



Initiative	Regional Potential - 20-year	20 yr - Public Power Share - aMW	5 yr - Public Power Share - aMW	Research Efforts
CVR	164	69	21	Program/Market Work
DEI	212	89	9	Technology and Program Work

