

Meeting Aggressive Resource Goals for Energy Efficiency in Oregon

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The Problem

- ETO is charged with getting energy savings.
 - We spend ratepayer dollars to get the resource for their utility.
 - We should get all that is cost effective (identified in IRP).
 - We should be equitable across customer types and geographies
 - We will accelerate acquisition of retrofit and go deeper in new construction.
- We develop resource assessments and supply curves to estimate how much potential savings is out there at a particular cost.
- We screen measures as cost effective with the utility test and the TRC.
- We set goals negotiated with the PUC and the Utilities. Goals are limited by
 - Resource potential – there is not an infinite amount and it changes yearly
 - Acceleration rates which are possible and prudent
 - Revenues provided by ratepayers.
- Planning uncertainties cause cash flow problems. How can we smooth out growth in revenue streams and expenses to meet aggressive savings goals?
- Need an adjustment process with Utilities, PUCs and ESCO's based on IRP.



What I Will Cover

- Background on Energy Trust of Oregon (ETO)
- Historic Growth and Expenses
- Goal Setting and Constraints to Growth
- IRP 20 year potential and the deployment scenarios for next five years growth.
- IRP – Achievable – with Current Funding or Accelerated
- Unfunded Mandates or does IRP trump IOU's discretion funding?
- What would be the cost of not doing the accelerated case?
- A case Study in natural gas aggressive resource acquisition.
- Innovation and procedural guidelines are being developed jointly with the OPUC, the IOU's and the ETO.
- If the funding for accelerated goals is provided, what might the new technologies and delivery mechanisms look like?



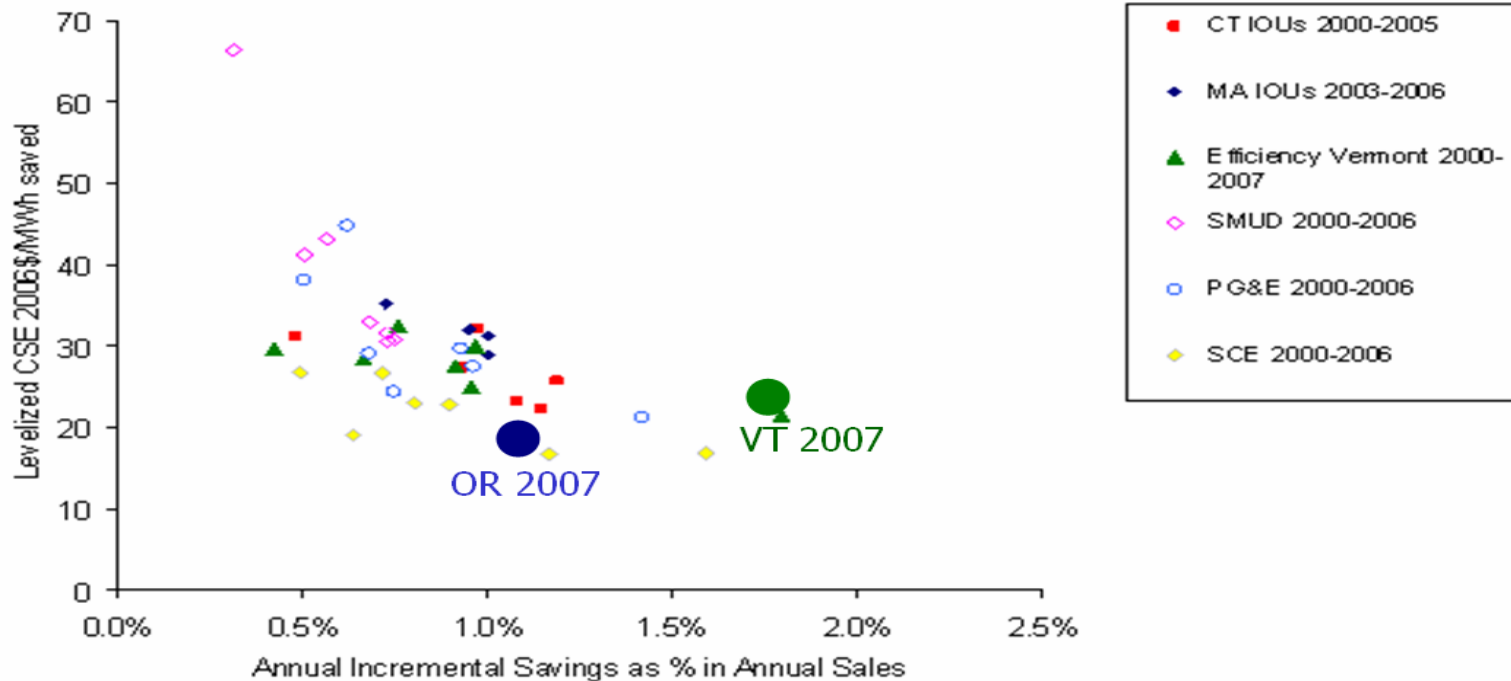
What is Energy Trust of Oregon?

- Nonprofit authorized under Oregon's restructuring legislation
- Delivers energy efficiency services for Portland General Electric and PacifiCorp' Oregon customers since 2002
- Gas programs for Northwest Natural and Cascade Natural Gas added
- Replaces prior utility programs
- Marketing and resource planning closely coordinated with utilities
- Also coordinates closely with state DOE (tax credits, loans)
- Overseen by a PUC-appointed board.
 - PUC provides minimum performance thresholds
 - Board sets goals
- 1.4 million households and business accounts
- \$97 M in efficiency programs, another \$23M in gas for 2009.

Here is how ETO compares, Cost Effectively, as of 2007 vs. Others – We are headed for 2%.

Slide is courtesy Blair Hamilton, VEIC

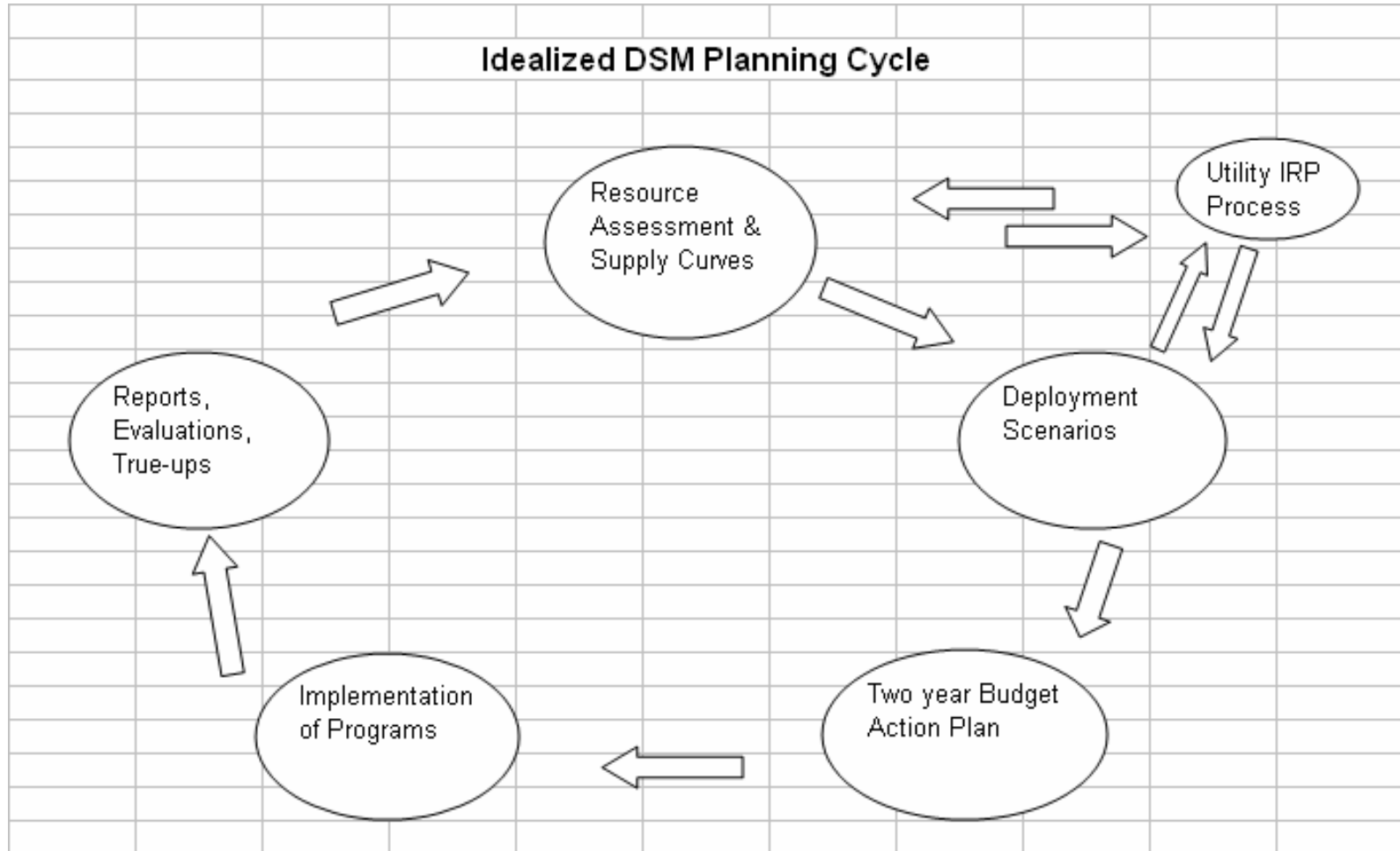
Cost and Savings Performance



BACKGROUND CHART COURTESY SYNAPSE ENERGY ECONOMICS



The Idealized Planning Cycle





Constraints & Assumptions

PUC Performance metrics

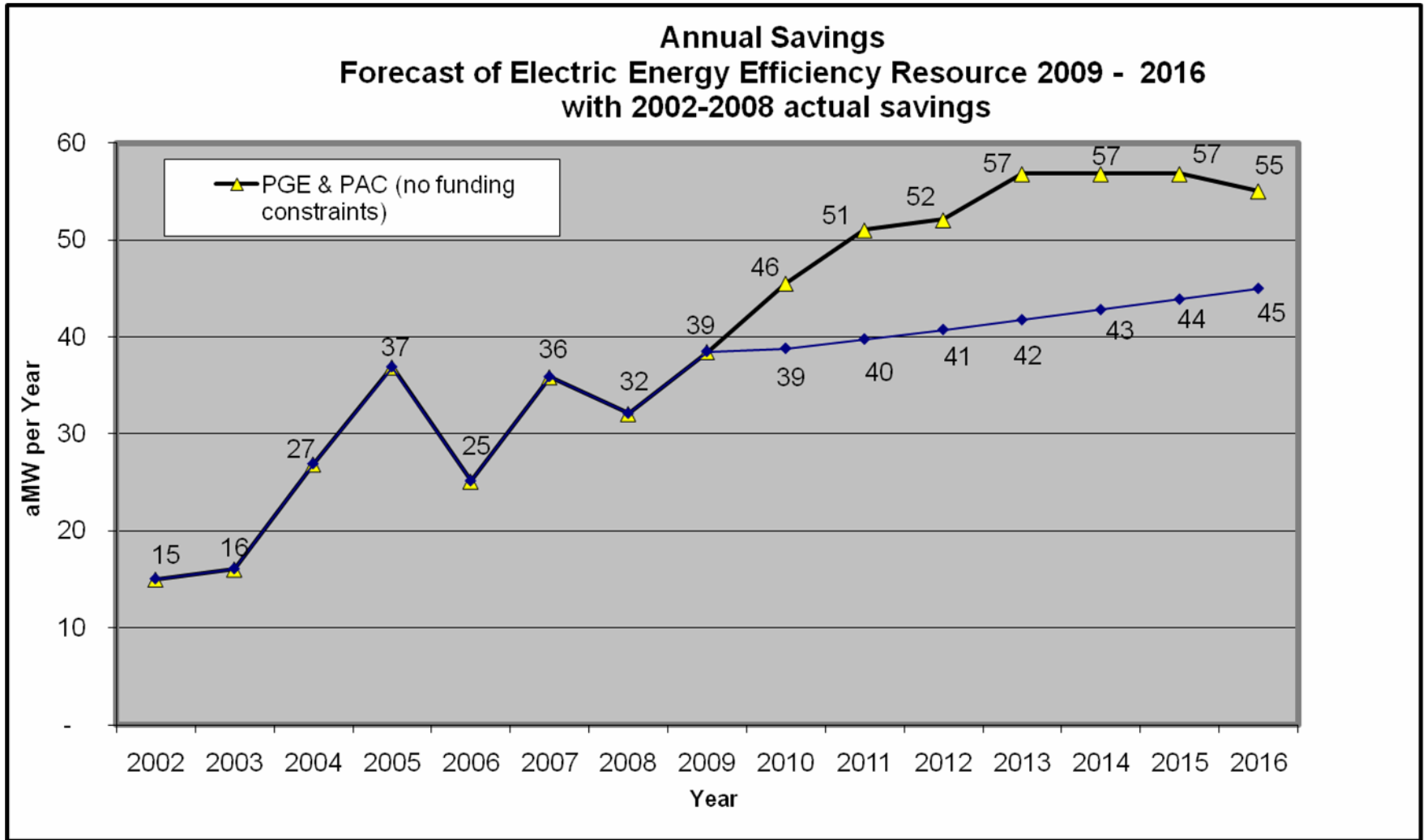
- Levelized Costs for Electric go from \$.02/kwh to \$.035/kwh
- Levelized Costs for Gas go from \$.40/therm to \$.60/therm.

Revenues from PPC increase with load growth and rate increases: base at approx. 3 % of utility retail sales revenues. Supplemental approx 1.5%

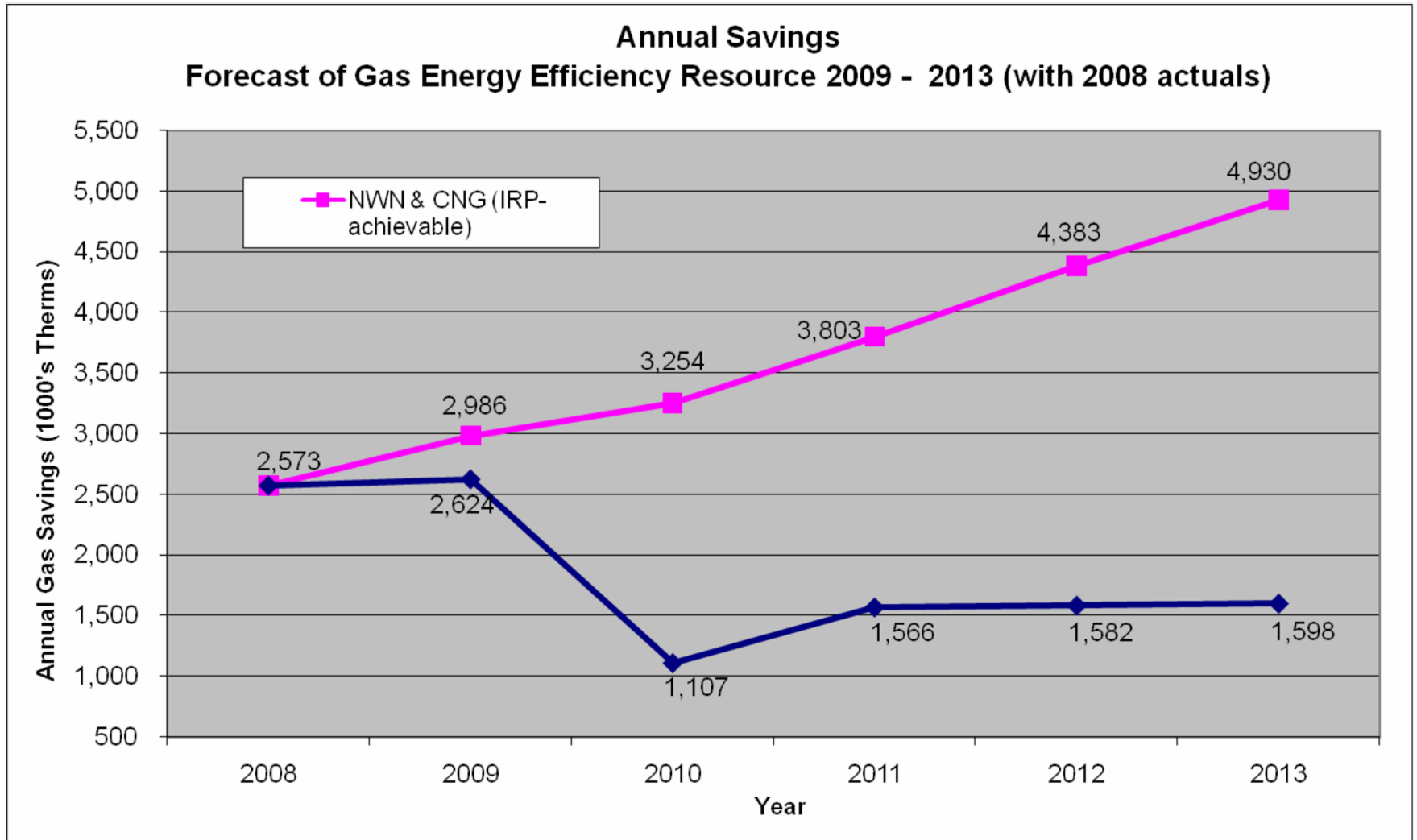
Assumptions:

- **Electric** savings as a percent of total sales, grows from 1% to 1.7% in the next 5 years. Levelized cost increases as well.
- We can get additional savings for the prior cost per unit. (\$1.80/aMW to \$3.60/aMW). Supplemental funding increases.
- Resource Assessment technical potential is under-estimated.
- Carbon legislation will eventually raise our avoided costs as the market clearing price rises.
- TRC may change, the free riders may change.
- The strategic plan and IRP's are not forever; they get updated periodically.

Strategic Plan Electric Savings Goals



Strategic Plan Gas Savings Goals





A Case In Point

- Energy Trust has been ramping up activity to spend 1.5% gas rate charge.
- Major marketing push in late 08 to ameliorate rate increase (which only partly occurred).
- That and a couple of sudden successes (dry cleaner steam traps) let to \$2.5 million overage by Jan 1 08
- Further overages in early 09 lead to a forecast 4.6M deficit.
- Decision to change course on revenue collection delayed to coincide with other regulatory issues.
- To continue to accelerate at 12% and recover deficit public purpose charge must go from approx 1.5% to approx 4%!



Cash Flow (1 year)

- We can ask for more money if we find more cost-effective efficiency.
 - But...it's not instant
- Principles for short-term (1 year) juggling:
 - No sudden shifts
 - What is really necessary vs nice?
 - You sure you can spend that?
 - What markets depend on heavy push marketing and will slow down without damage?
 - Nobody likes to be held back.
 - What activities are interdependent? E.G., gas and electric
 - Where is momentum and short-term opportunity?
 - Are we still serving all classes of customers?



Program and Marketing Control for Cash Flow Management

- Until our funding increased, we didn't push hard on commercial lighting retrofit. When we pushed, it was there for us.
 - But we didn't cut it off either.
- We considered slowing down growth in multifamily retrofit activity
 - Requires sustained push marketing
 - But current market economics may create a short-term opportunity
 - Vendor pressure
 - We scrambled and found the money



Employ Budget Management Tools

- Standardize planning and funding process with *all* utilities regarding IRP and OPUC tariff filings
- Use marketing activity as a lever to manage demand
- Require PMC and program staff to develop and use:
 - The existing early warning system, including monthly incentive variance reporting
 - Enforce contractual limits on incentive budget and commitments
- Employ reservation system for large projects
- Create budget caps for key vendors installing multiple projects and corresponding communication
- Perform frequent analysis using market indicators, specific program trend and other data



HOW TO GET MORE? Board Workshop: Candidate Areas for Program Innovation

- 1- Pay High Incentives if there are no more strategic options
2. Invest in Deeper Long-Term Strategies to Change the Way Businesses Invest in Efficiency
3. Research, Development, & Demonstration
4. Change How People Think About Energy Efficiency
5. Use Efficiency Funds to further Leverage Other Money
6. Leverage demand management/smart grid activities for efficiency



Some Candidate Criteria for Program Initiatives

- Significant potential savings
- Technically established, commercially available
- Infrastructure exists to sell, install, service
- It's coming too slow without innovation
- There are established program models we could follow, we know the cost.
- Or, we have a compelling idea-
 - Preferably a phased test (e.g., restaurant initiative built gradually over 3 years)
 - If compelling enough, or gradualism won't work, get radical (e.g., energy performance scoring)
- Positive Energy, Industrial Energy Managers, On-bill financing.



Some Candidate Criteria for New Roles/Initiatives

- Expand on current practices and competencies
- New roles, but within current mandate
- We could be asked if we define the opportunity (just buy it all, e.g. Hood River)
- How much savings? 2x, 3x
- How soon? How certain? How laborious?
- Could it happen without us? (codes, stds.)
- Is now the time? Loads are down, but need for infrastructure and carbon reduction argue to keep at it.



In Summary

- Get agreement on the stretch case deployment scenarios for all utilities to meet their IRP goals.
- Get agreement on the estimated funding needed.
- Set in place better cash flow management schemes.
- Set budget, goals to be within performance metrics.
- Check to see if resources identified in RA are also in the Budget plan, by utility.
- Check to see if we have missed any known or emerging technologies.
- Identify, quantify, potential of behavioral approaches.
- Launch both short and long term new initiatives
- Accelerate existing programs.
- Ask our selves: “have we set the bar high enough?”
- We need a national will to get to NetZero. An Apollo Project.