



Integrated Resource Planning and Energy Efficiency Issues

Oregon Public Utility Commission

OPUC/WUTC/Thailand ERC
Conference



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Three Issues

1. OPUC response to utility resource plans (IRPs)
2. Key IRP guidelines
3. Promoting energy efficiency (EE) and demand response (DR): utilities or independent organizations?



1. Response to IRP

Short answer:

OPUC decides whether planned resource actions appear to be reasonable, based on information available at the time of review, and subsequently uses plan to help judge prudence of utility actions



1. Response to IRP

Commission authority determines how IRP is used

- PUC ensures safe and reliable service is provided at fair and reasonable rates, balancing the interests of investors and consumers
 - Set rates to provide opportunity to recover prudently incurred costs
 - A resource decision is prudent if it is the best choice at the time a resource commitment needs to be made
- Cannot require the utility to take particular resource actions



1. Response to IRP

- Commission leverage over resource decisions is its ability to allow cost recovery when a resource goes into service
- Use IRP decision to signal what the Commission believes is prudent to do
- Utility make its own resource choices but knows it is more likely to get cost recovery in the future if it is consistent with IRP results and principles



1. Response to IRP

- Commission gets the information it needs for deciding what resource decisions would be reasonable by:
 - Setting guidelines for how IRP analysis should be done
 - Encouraging public participation in preparation and review of the plan
 - Requesting further information and analysis from the utility during the review process



1. Response to IRP

- Commission decides whether to acknowledge plan
- Acknowledgement means that the proposed resource actions appear reasonable, based on information available at the time of review
- Commission can request more information or send the plan back for more work
- Commission can acknowledge some portions of the plan and not others
- Commission often directs specific improvements in the utility's next plan



1. Response to IRP

- Commission uses results of acknowledged plan in other proceedings, such as:
 - Setting energy efficiency funding levels
 - Evaluating competitive bidding RFPs and results
 - Reviewing plans to meet Renewable Portfolio Standards
 - Determining whether resource acquisitions were prudent and should be included in rates



2. Key IRP Guidelines

- Commission first adopted IRP requirements in 1989
- New guidelines issued in 2007 in Docket UM 1056
- Revised guideline on treatment of environmental costs issued in 2008



2. Key IRP Guidelines

- Principles and assumptions
 - All resource options – demand-side and supply-side – should be evaluated on the same basis (Guideline 1a)
 - Discount rate tied to utility financing costs (1a)
 - Goal is portfolio with best combination of expected costs and associated risks/uncertainties for the utility and its customers (1c)
 - Key cost metric is present value of revenue requirement (PVRR), but customer cost of DSM is considered (1c)
 - 20-year planning horizon, with end effects considered (1c)



2. Key IRP Guidelines

- Public participation (2)
- Plan filing and review
 - Plan due within 2 years of decision on previous plan (3a)
 - 6-month review period (3c)
 - At least 2 Commission public meetings on the plan (3b, 3d)
 - Annual update on progress in implementing the plan and on any changes in the plan (3f, 3g)



2. Key IRP Guidelines

- DSM
 - Utility should conduct a conservation potential study periodically for its entire service territory (6a)
 - Include in action plan all conservation included in best cost/risk portfolio and specify annual targets (6b)
 - Treat DR like other resource options (7)



2. Key IRP Guidelines

- Risk analysis
 - Plan must evaluate performance of different resource portfolios over the range of identified risks and uncertainties (4i)
 - Plan must compare portfolios by cost and risk metric and explain how utility interprets results (4j)
 - At least 2 risk metrics: one that measures variability of costs and one that measures severity of bad outcomes (1c)
 - Risks include: loads, hydro generation, plant forced outages, fuel prices, and wholesale electricity prices (1b1)



2. Key IRP Guidelines

- Environmental costs
 - Compliance costs to the utility treated as a risk (1b1)
 - Commission focuses on costs that could be included in rates
 - Utilities identify base-case and credible alternative scenarios for compliance with regulation of emissions of CO₂, nitrogen oxides, sulfur oxides, and mercury (8a)
 - Utilities identify trigger point for CO₂ costs that would substantially change the preferred portfolio (8c)
 - Utilities identify best portfolio for complying with state goals for reducing greenhouse gas emissions (8d)



3. Promoting EE and DR

- Key decision is whether the utility or an independent organization should administer (design and run) programs
- 1999 law established public purpose charge for two largest electric utilities (PGE and Pacific) and authorized OPUC to direct conservation funds to be invested by a non-governmental entity
- Energy Trust of Oregon (ETO) was created for this purpose and now also contracts with 2 Oregon gas companies to administer EE programs



3. Promoting EE and DR

- Pros and cons of public purpose charge and 3rd party approach
 - Stable base of funding
 - Before public purpose charge, EE funding fluctuated with perceived cost-effectiveness, leading to “boom and bust”
 - PGE and Pacific provide additional EE funding to ETO, causing some variability in program activity
 - More consistency in program offerings in areas served by different utilities
 - More openness and creativity in designing programs

3. Promoting EE and DR

- Pros and cons of 3rd party approach (continued)
 - Still need to address utility incentives to promote EE
 - OPUC tried several incentive mechanisms when utilities ran programs:
 - Cost recovery (including return on investment) for utility expenditures
 - Lost revenue recovery and decoupling to remove disincentive from lost sales
 - Share-the-savings to provide positive incentives
 - Utilities still influence participation in ETO programs
→ lost revenue recovery or decoupling still in effect



3. Promoting EE and DR

- Promoting demand response (DR)
 - Since many DR options are pricing options (e.g., critical peak pricing), the utilities are responsible, not ETO
 - OPUC has encouraged utilities to run pilot programs
 - Programs have been optional, and there will be opposition to making them mandatory