

Outcomes from Stakeholder Meeting to Discuss Energy Trust Energy Efficiency Resource Assessment Overview and Considerations for Improvements September 22nd, 2017

December 20, 2017

Themes

- Energy Trust achievements are exceeding IRP targets
- Utilities and stakeholders are interested in receiving a forecast based on more than just “firm” resources.
- Utilities are interested in the best projection we can provide. Achievements should fluctuate on both sides of the forecast over time.
- Short-term forecasts are most important to utilities and the OPUC in the following order.
 - 1-2 year
 - 3-5
 - 6-10
 - 11-20
- Advocates still interested in long-term forecasts in context with the rest of the IRP process.
- Bottom-up approach is the correct approach
- Forecast has been missing some estimation of the resources that we can't readily see
 - New loads
 - Emerging Technology of the future that has not yet been developed
- Advocates request a standardized approach across utilities
- Savings with capacity benefits have a different value to the utilities than savings with lesser capacity benefits.
- There is an issue with utility IRP schedules not aligning with with Energy Trust's budgeting process.

Follow-up Questions

- Question: Do we differentiate EUI for new buildings vs. existing building stock?
 - Answer: We use EUIs from CBSA for market sectors regardless of whether they are new or existing. As new sources become available we will incorporate them if they are more reliable.
- Question: Does our model's levelized cost calculation back out the cost of NEBs? Are these the levelized costs that we send to PacifiCorp for their multistate modeling?
 - Answer: The levelized costs that we provide to PacifiCorp are calculated using total measure cost minus NEBs. This can result in negative levelized costs. PacifiCorp increases savings by 10% in the levelized cost calculation to account for the 10% adder given to efficiency in the region.

Potential Solutions That Were Discussed in Stakeholder Meeting

- Provide a high, medium and low forecast with consideration of following factors:
 - Include all emerging tech in the high case without risk adjustments.
 - For high case, accelerate projected rate of acquisition of all emerging tech to be available and cost-effective sooner.

- What does forecast look like if we capture all cost-effective or cost-effective override savings? I.e. no deployment.
 - Issue: It is not realistic to capture all lost opportunity projects.
- What if we accelerate deployment for retrofits and assume that we capture more lost opportunity measures in the form of replace on burnout and new construction?
- Include adder for unforeseen large loads
- Include adder for unanticipated sources of savings.
 - Possibly base this on Fred, Lakin, Charlie and Tom study which identified savings in five-year period from resources that were “non-firm” before that period. Issue: Most of the savings that resulted from “non-firm resources” were lighting savings that are now in the forecast or already achieved.
- Forecast for 10 and 20 year periods and compare results.
 - For 10 year scenario, possibly extrapolate for years 11-20
- Don't apply 85% to convert technical to achievable savings
- Energy Trust to employ a contractor to QC and/or update model
- For future – Put together an emerging tech realization curve.
- Get together with programs to identify which measures are missing from the model.
- Check with utilities to verify whether the load forecasts given to us are frozen baselines.
 - For PGE this may be an issue of how they are seeing 1149 vs. 838
- Compare results with past IRP targets in order to inform future projections.
- Consider setting ramp rates by measure.
- Change how we are categorizing renovations and new construction.
- Use blended avoided costs to be inclusive of the measures that programs are offering.

Potential Methods to Improve Forecast Accuracy

Energy Trust will provide a 20-year energy efficiency forecast for utilities that includes the following:

- Deployment for the first 5 years based on conversations with programs.
- Savings from measures where we have applied cost-effective override
 - To measures that have existing exceptions
 - Measures that are cost-effective with blended avoided costs
- Emerging tech with risk factors (based on Emerging Tech we can describe today)
- Include an adder for savings from large unanticipated projects tuned to specific utility service territory:
 - Will not include in years where we have already forecasted very large projects
 - Will look at historical large project averages in a specific utility territory and include an adder to reflect the average large project

Sensitivity Analysis for Future Consideration

- More aggressive deployment
 - Condense forecast for first 10 years for retrofit and trend retrofit for years 11-20
 - Assume that all lost opportunity measures are 100% achievable in years 11-20 for things that we can realistically accelerate (e.g. New residential construction)
- Emerging Tech
 - Less or No risk factor
- Compare Energy Trust results with IRP targets for last 3-4 years and make adjustments to IRP forecast account for discrepancies
- Condense deployment to 10 years