



Energy Trust Avoided Cost Capacity Value and Impact of Proposed Sufficiency/Deficiency Calculation

April 30th, 2021

Agenda

- Background on Energy Trust
- Overview of Energy Trust Avoided Cost Process
- Energy Trust electric capacity value calculation
- Impact of proposed sufficiency/deficiency calculation on Energy Trust electric capacity value

About us

Independent
nonprofit

Serving 1.6 million customers of
Portland General Electric,
Pacific Power, NW Natural,
Cascade Natural Gas and Avista

Providing access
to affordable
energy

Generating
homegrown,
renewable power

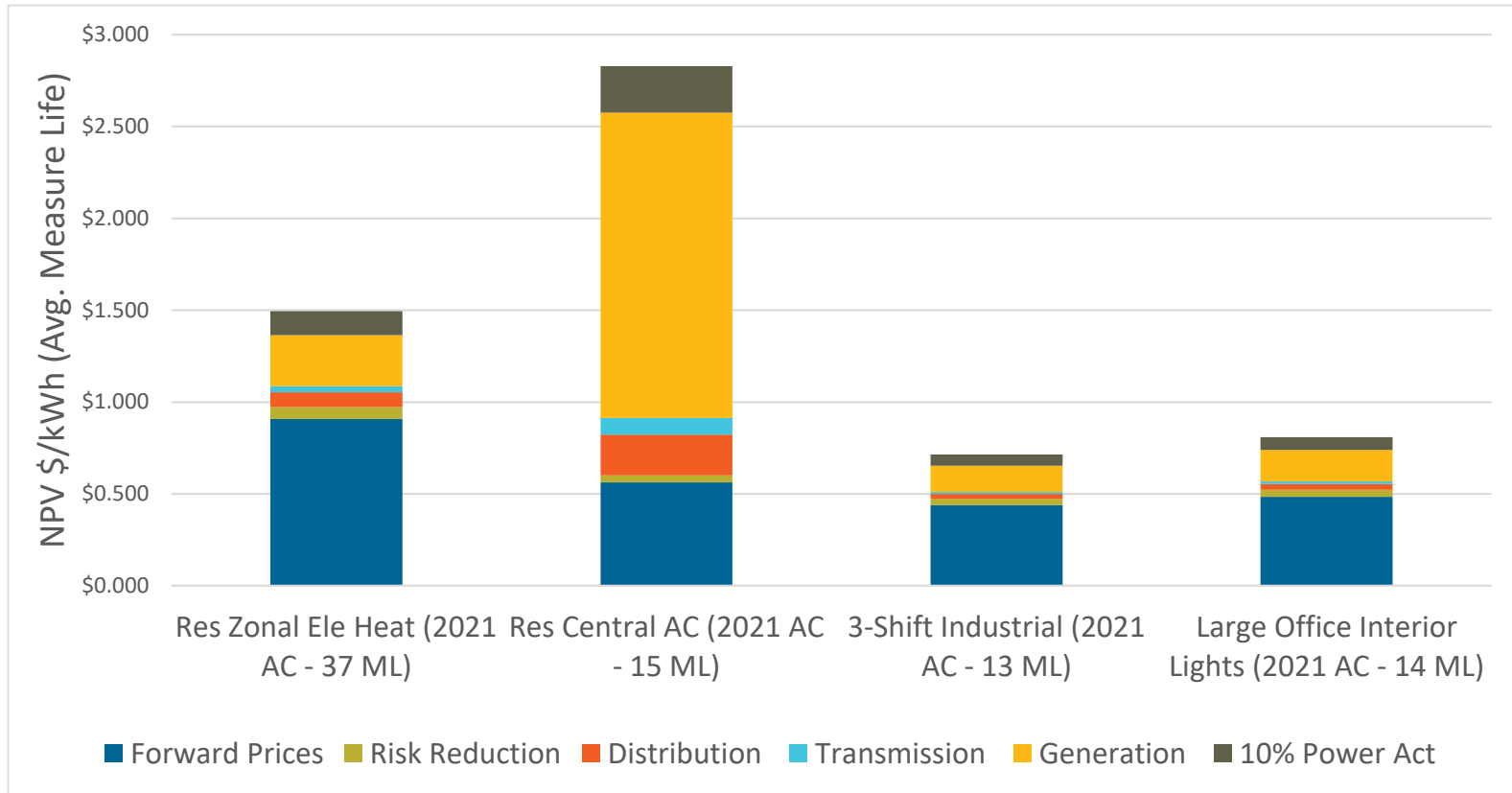
Building a
stronger Oregon
and SW
Washington

Avoided Cost Background

Key Components of Electric Avoided Costs

1. Energy Price Forecasts
 - includes embedded carbon value
2. Avoided Transmission & Distribution (T&D) capacity deferral value
- 3. Avoided generation capacity deferral value**
4. Regional 10% conservation credit
5. Utility risk reduction value

Components of Example Measures



Calculating Avoided Generation Capacity Deferral Value

Components of Avoided Generation Capacity Deferral Value Calculation

Via UM1893 the following happens:

- PGE and Pacific Power provide a stream of annual generation capacity deferral values in \$/kW-yr
- PGE and Pacific Power provide seasonal capacity splits for summer and winter
- Summer and Winter Peak hours are identified for each utility based on LOLP matrices provided by PGE and Pacific Power
- Generation Capacity Deficiency Start Year is identified
- OPUC staff approve all Generation Capacity Deferral Calculation Inputs

Impact on Energy Trust Avoided Costs
to Move to Proposed UM2011 Capacity
Deficiency Valuation Methodology

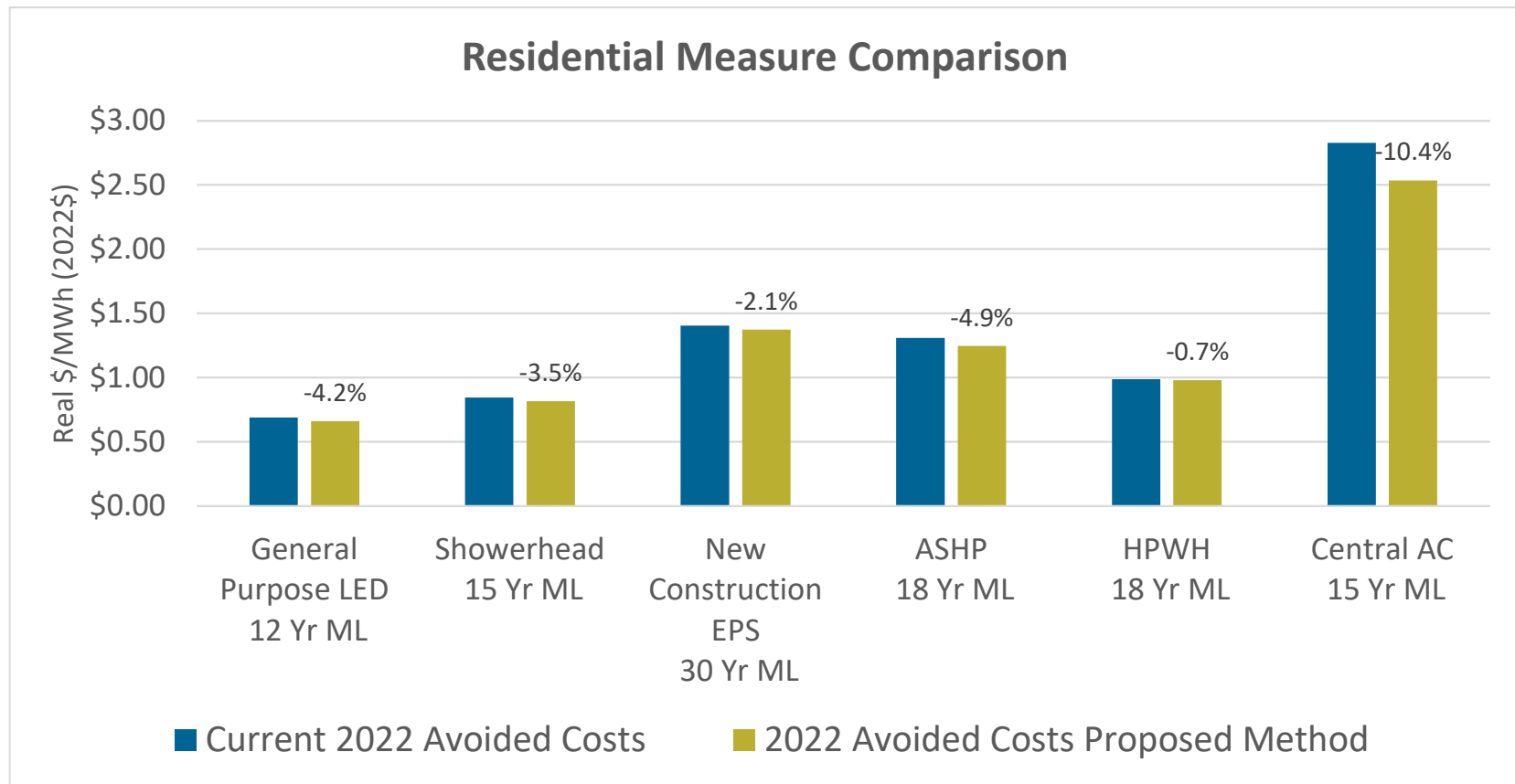
Current Energy Trust Practice Compared to Proposed UM 2011 Deficiency Start Year Methodology

- The current set of avoided costs that Energy Trust is using for 2022 planning and budgeting assume that the deficiency start year is 2022
- UM 2011 Sufficiency/Deficiency Calculation Proposal
 - Year 1: Resource Sufficient (receives O&M of SCCT)
 - Year 2: 1/3 of deficiency period capacity value
 - Year 3: 2/3 of deficiency period capacity value
 - Year 4: full deficiency period capacity value

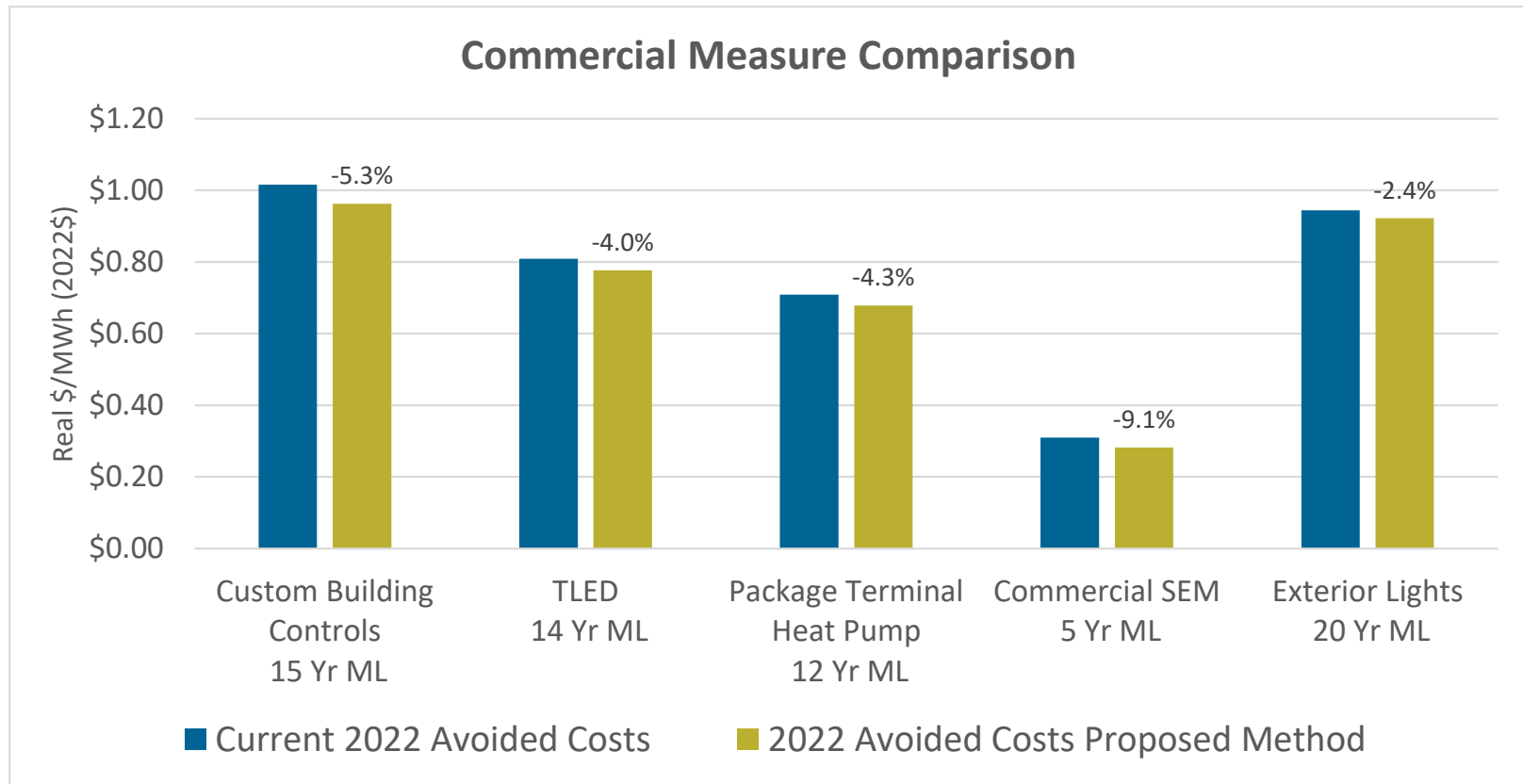
Current Energy Trust Practice Compared to Proposed UM 2011 Deficiency Start Year Methodology

- Impact
 - Based on a past measure mix Overall Avoided Costs Fall by 3.9%
 - Decrease is more significant for
 - Short lived measures
 - Measures with profiles that are strongly correlated with peak

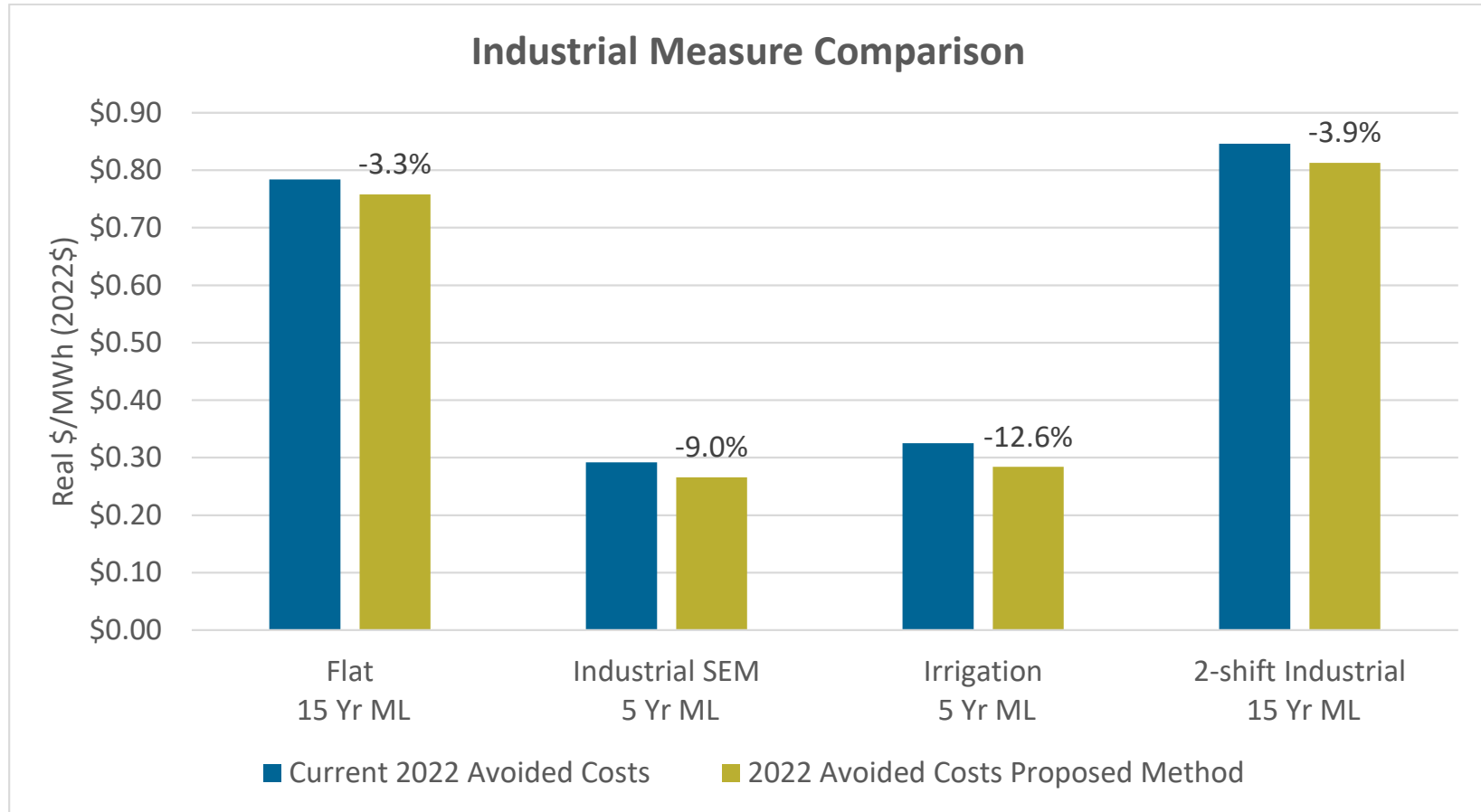
Estimated Impact on Representative Residential Measures



Estimated Impact on Representative Commercial Measures



Estimated Impact on Representative Industrial Measures





Questions?

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Appendix

Avoided Costs Definition

- The costs a utility would have otherwise had to pay to provide energy through utility supply side resources and delivery infrastructure if demand side energy resources, such as energy efficiency, had not been brought into implementation.

What Are Avoided Costs?

- As an outcome of UM1893, Energy Trust calculates blended avoided costs for gas and for electric to apply for cost-effectiveness screening throughout our territory
- Stream of forecasted values over the next 20 years extended to cover the measure with lifetimes greater than 20 years.
- They are the primary component of value in the numerator of the Benefit/Cost ratio we use to screen measures and programs for cost-effectiveness
- End uses (e.g.: space heat) have different values based on whether they save during utility peak periods

Calculating Avoided Generation Capacity Deferral Value

- Capacity deferral contributions of energy efficiency measures are determined based on the estimated coincident load factor, which is determined using load/savings profiles of the measure and utility defined peak periods per previous slide
- A blended stream of Generation Capacity Deferral Values is calculated for each end use in \$/kWh
 - This value is applied as a first year NPV \$/kWh for each individual measure based on the assumed life of the measure