

Integrated Resource Planning

2019 IRP Update

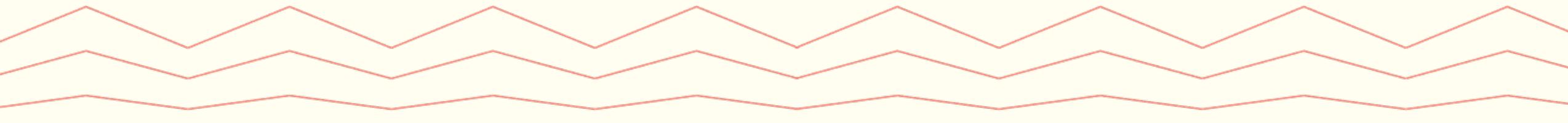
OPUC Regular Public Meeting, February 11, 2021





AGENDA

- Introduction
- Actions, Enabling Analysis, Other Requirements
- Load Forecast
- Need and Position Assessments
- Sequoia
- Market Prices
- Capacity Contribution
- Resource Economics
- Portfolio Analysis
- Conclusion





OUR ROLE

Reliability

Affordability, fairness and access for all

Decarbonization

Cost-effective
customer choices

Electrification

We're in a unique position to **optimize the system for customers' benefit** and offer cost-effective solutions to customers





2019 IRP Update – Status Updates

**Customer
Actions**

**Capacity and
Renewable Actions**

**Studies and Other
Requirements**

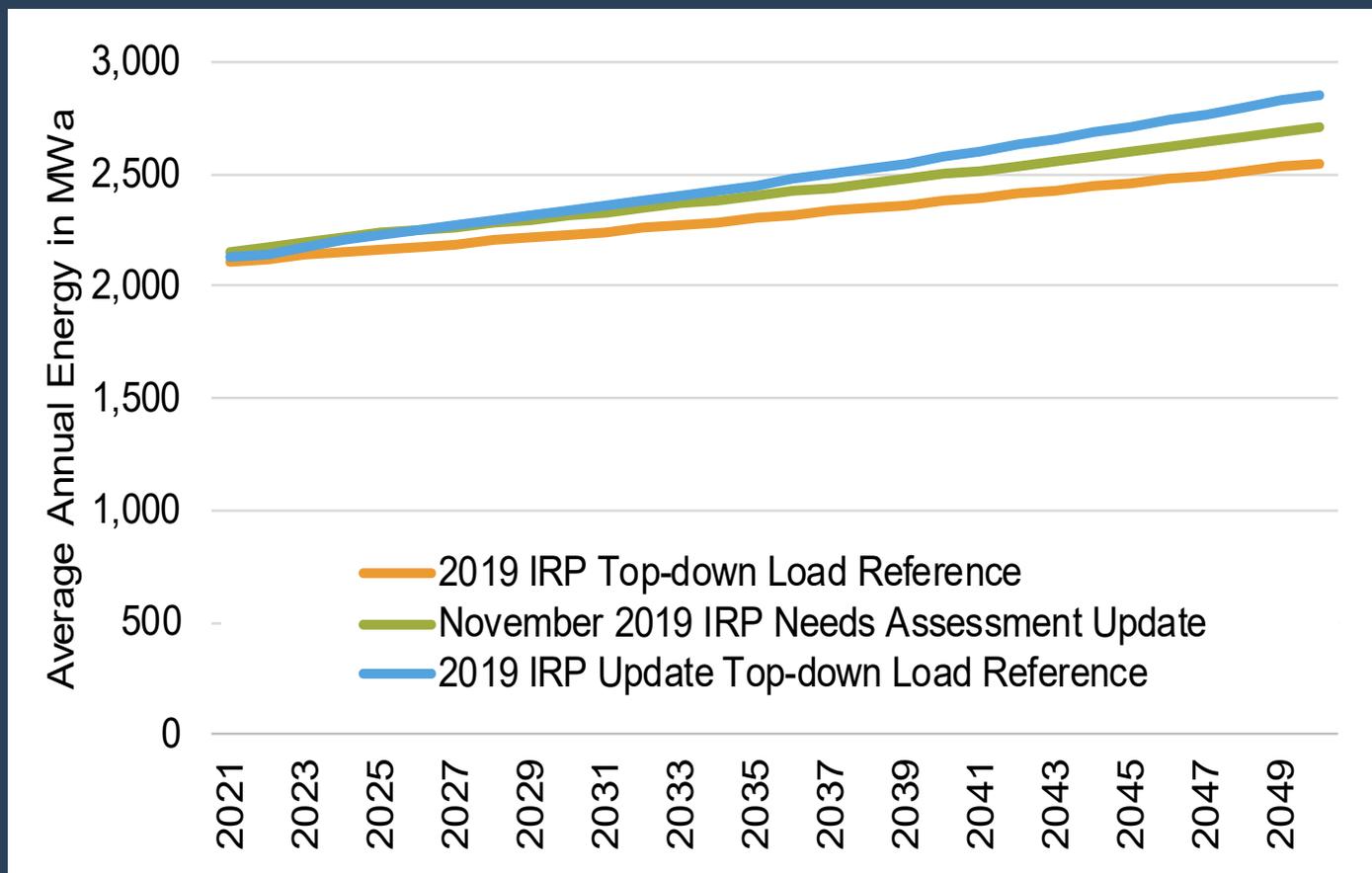
**Additional
Items**





Top-down Load Forecast Comparison

Average energy in MWa





Need and Position Assessments

- Refreshed inputs for the 2019 IRP Update
 - ✓ The top-down econometric load forecast
 - ✓ Voluntary Renewable Programs
 - ✓ Contracts
 - ✓ Regional Capacity

Reference Case Comparison	Nov 2019 Needs Assessment Update	2019 IRP Update
Capacity Need in 2025 ¹	697 MW	511 MW
Net Energy Shortage to Market in 2025	527 MWa	595 MWa
RPS Physical Shortage in 2030	190 MWa	210 MWa

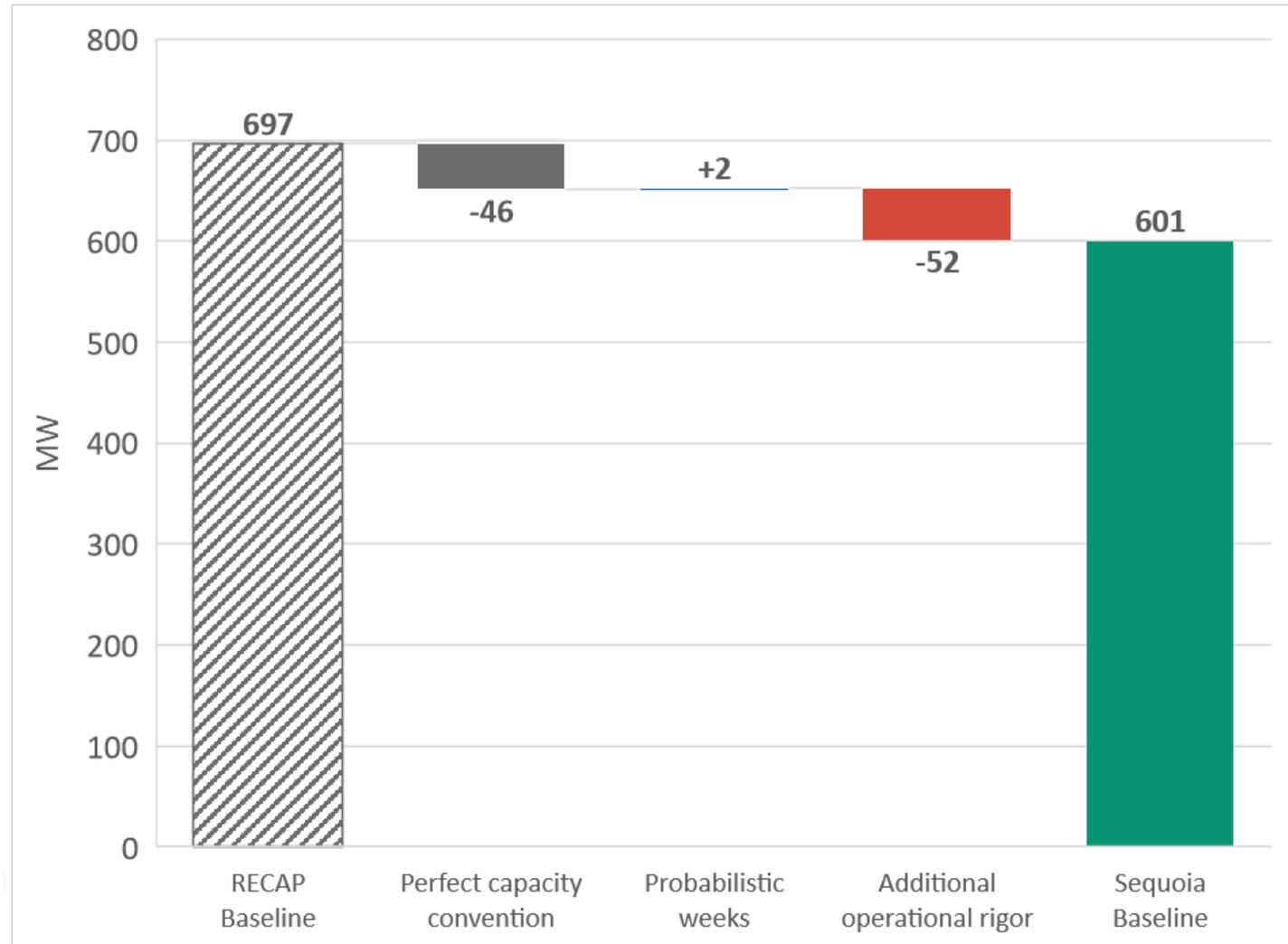
1. November 2019 Needs Assessment capacity need expressed in MW of conventional units and 2019 IRP Update capacity need expressed in MW of perfect capacity



Sequoia

- Improved treatment of energy-limited resources
- Improved process efficiency

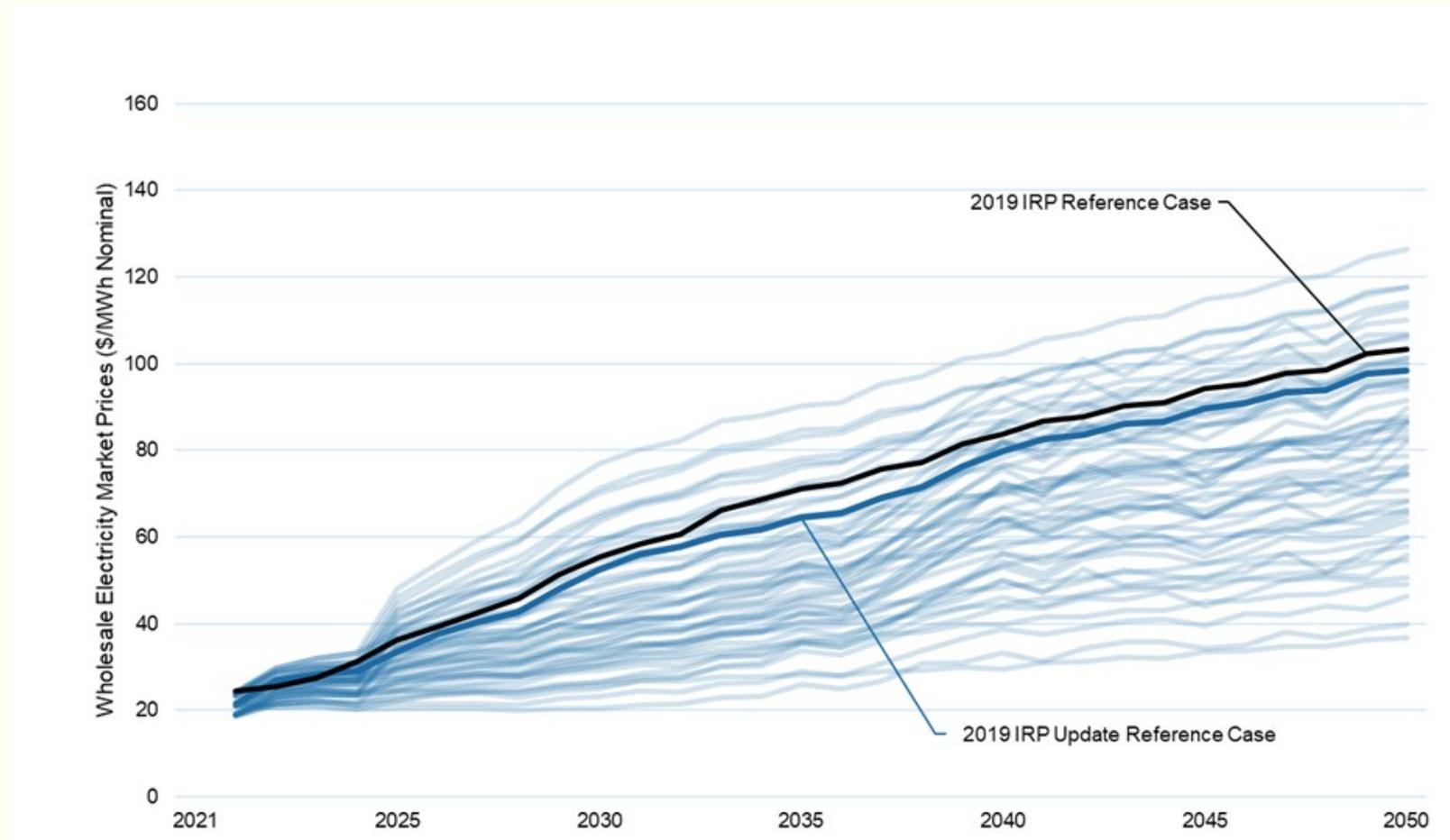
Summary of Baseline Exercise



The baselining exercise was based on the November 2019 Needs Assessment snapshot of loads and resources. See description in Appendix K.

Wholesale Market Prices Across Futures

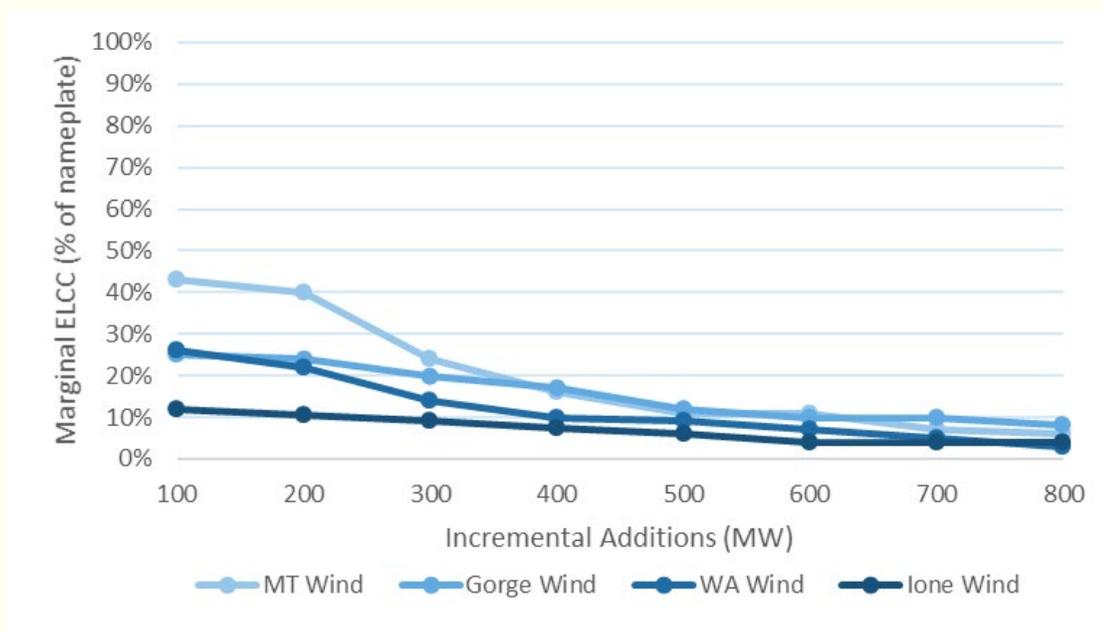
- 2019 IRP methodology with updated natural gas prices and carbon prices
- Electricity prices generally declined, due primarily to low natural gas prices



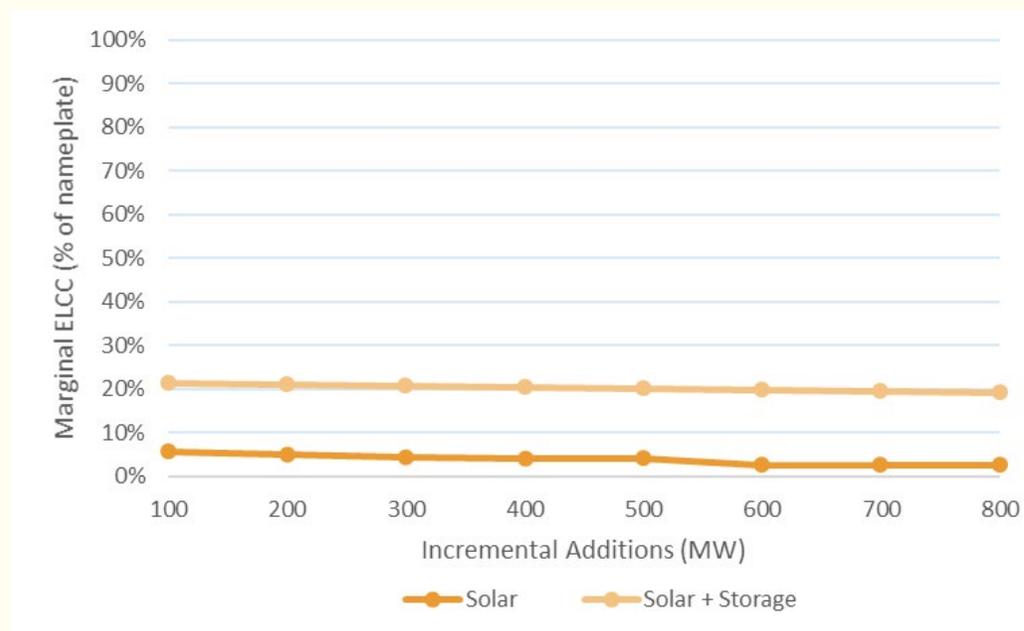
Capacity Contribution Values (ELCC)

- Updated ELCC values provided in 2019 IRP Update Section 5 and Roundtable 20-7

MARGINAL ELCC - WIND RESOURCES



MARGINAL ELCC - SOLAR RESOURCES



Resource Economics Additional Updates

Interconnection Costs

- Estimated costs for interconnection facilities, network upgrades, and associated network upgrade credits

Federal Tax Credits

- May 2020 Update
- December 2020 Update

Cost of Capacity

- Updated from \$103/kW-yr to \$110/kW-yr (2020\$)
- Updates: Interconnection costs, net energy revenue, ELCC

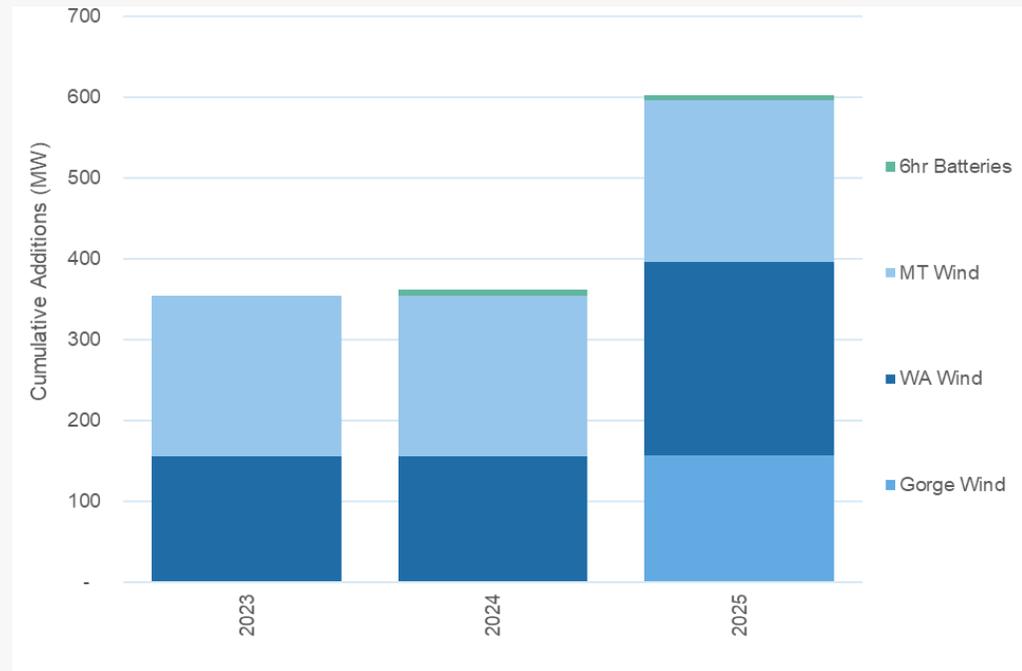
Updated Portfolio Analysis

We refreshed the following inputs:

- Load forecast, resource snapshot
- Capacity need, energy and RPS positions
- Market price forecasts
- Resource economics:
 - Interconnection costs
 - PTC/ITC extensions
 - ELCCs
 - Cost of Capacity

Preferred Portfolio - Mixed Full Clean

- Relative to a portfolio with no renewable additions through 2025, the Preferred Portfolio is lower-cost, lower-risk
 - RPS need is not driving resource decisions
- **Updated portfolio analysis supports no change to the action plan**





2019 IRP Update

Acknowledged actions continue to be in the best interest of customers: selecting low-cost, clean technology and mitigating risk





April 20 OPUC Decision at Special Public Meeting

Acknowledgment Request

PGE requests acknowledgment of the 2019 IRP Update in order to update IRP inputs in the May 1 avoided cost update filing

Items for May 1 Update

1. ELCC values for wind, solar, and SCCT
2. SCCT net energy value
3. Interest rate and CPI information for Interconnection Cost calculations
4. CCCT annual starts and generation (used in standard avoided cost calculations)

The May 1 Update will include the standard annual updates to natural gas prices, on- and off-peak forward-looking electricity market prices, and changes to PTCs

The IRP Update does not propose any changes to the acknowledged 2019 IRP actions

**Thank you
to OPUC, Staff, and
participants for
support of the
schedule and process**

2019 IRP Update Docket Schedule

Date	Item
January 29	PGE filed IRP Update
As soon as practicable	PGE makes Supplemental Filing
February 11	PGE presents IRP Update at Regular Public Meeting
March 4	Participant Comments Due
March 18	PGE Reply Comments Due
March 31	Staff Report Posted
April 6	Participant Comments on Staff Report Due
April 20	Commission Decision at Special Public Meeting



THANK YOU

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