



Generic Capacity Investigation

**Phase III Workshop – How Utilities
Acquire Capacity**

December 2, 2019



Introduction



Team for Today's Workshop

- *Nicholas Colombo and Caroline Moore, Oregon Public Utility Commission*
- *Carl Linvill and Jessica Shipley, Regulatory Assistance Project (RAP)*

Agenda for Today



- | | |
|---------------|--|
| 9:00 – 9:05 | Welcome and Introductions |
| 9:05 – 9:15 | Staff Presentation on Other Programs Proposing a Capacity Value |
| 9:15 – 9:45 | RAP Presentation <ul style="list-style-type: none">• Conceptual framework• Examples of types of capacity value from elsewhere in the U.S. |
| 9:55 – 10:15 | Questions for RAP |
| 10:15 – 10:30 | Break |

Agenda for Today



- | | |
|---------------|------------------------------------|
| 10:30 – 11:00 | Group Exercise #1 |
| 11:00 – 11:05 | Break |
| 11:05 – 11:35 | Group Exercise #2 |
| 11:35 – 11:45 | Q & A for Participants, Staff, RAP |
| 11:45 – 11:50 | Staff Discusses Next Steps |
| 11:50 | Adjourn |

Purpose of Investigation



Answer three central questions:

- What is capacity?
- How is capacity acquired?
- How should capacity be valued?

Desired Result

- Methodology or methodologies that better calculates a value for capacity.

Phases of Investigation



Phase I

- Define capacity

Phase II

- Understand how utilities acquire capacity

Phase III

- Develop a methodology or methodologies to calculate a value for capacity

OPUC Programs - Summary



OPUC program that propose or draw upon a capacity value:

- RVOS: UM 1716, UM 1910, 1911, and 1912
- Renewable Generators' Contribution to Capacity: UM 1719
- PURPA QF Avoided Costs: UM 1728 and 1729
- Energy Efficiency Cost Effectiveness: UM 1893

RVOS – UM 1716



Generation Capacity Value as an Element of Avoided Costs

- Utilities determine the capacity value consistent with the PUC's standard nonrenewable QF avoided cost guidelines.
- When utility is resource sufficient, value is based on the market energy price.
- When utility is resource deficient, the value is based on the contribution to peak of solar PV, multiplied by the cost of a utility's avoided proxy resource.

RVOS – UM 1910, 1911, 1912



Modifications:

- Deficiency date for use in calculating Generation Capacity Value
- For T&D Capacity Deferral, develop rudimentary locational pricing for areas of high / avg. / low deferral value relative to system-wide average

UM 1719 – Renewable Gen. Contribution to Capacity



Stipulation – for IRPs, utilities would use one of two methods to calculate contributions from wind & solar generation:

- Effective Load Carrying Capability (ELCC), or
- A Capacity Factor (CF) approximation.
- Based on all hours in a year (not just peak)
- Once high penetrations of renewables reached, utilities benchmark CF against ELCC
- Capacity contribution value from IRP feeds into PURPA avoided costs

UM 1728 and 1729 – QF Avoided Cost Updates



PURPA QF avoided costs based on IRP values, with updates specified in Commission orders from May and July 2018

UM 1893 – Energy Efficiency



Electric Avoided Cost elements include IRP-derived values for:

- Generation Capacity Deferral
- T&D Deferral

Gas Avoided Cost Elements include IRP-derived values for:

- Supply & Distribution Deferral
- Avoided Interstate Gas Pipeline Charges

Thank you!!



Nicholas Colombo

(503) 373-1016

Nicholas.colombo@state.or.us

OPUC Docket: UM 2011

Examples & Concepts



RAP will present some concepts and examples from other jurisdictions

Group Exercise #1



Objectives:

- Identify types / characteristics of capacity
- Identify the most relevant examples

Group Exercise #1



Objectives:

- Identify types / characteristics of capacity
- Identify the most relevant examples

Question:

- In five years' time, what will be the most important **capabilities** of resources that are serving load in Oregon?

Group Exercise #1



Objectives:

- Identify types / characteristics of capacity
- Identify the most relevant examples

Question:

- In five years' time, what will be the biggest **needs** that system operators will face?

Group Exercise #1



Objectives:

- Identify types / characteristics of capacity
- Identify the most relevant examples

Question:

- In five years' time, what will be the most important types of capacity value?

Group Exercises



Break

Group Exercise #2



Objectives:

- Discuss options for valuing capacity
- Hone responses to questions for the docket

Group Exercise #2



Objectives:

- Discuss options for valuing capacity
- Hone responses to questions for the docket

Questions:

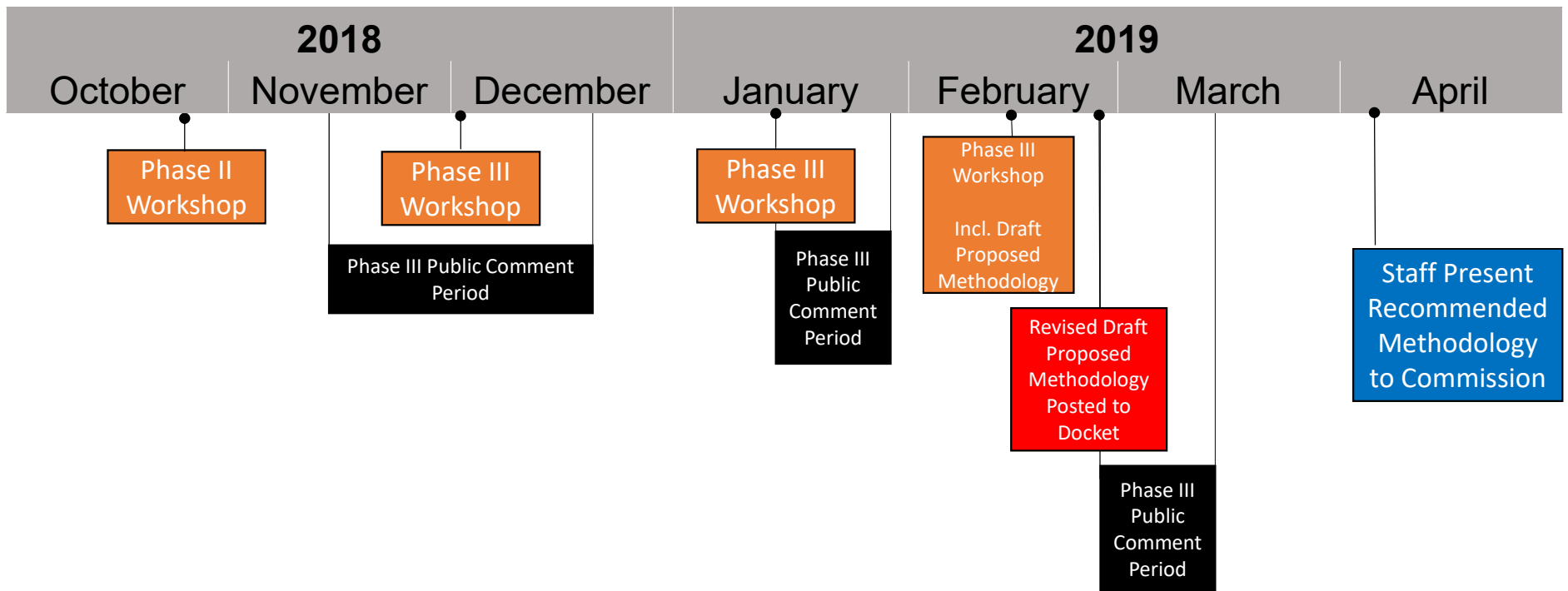
- What is the value of having this kind of capacity?
- How is this value currently compensated?
- What other considerations should be incorporated as we think about valuing it in the future?

Next Steps



- Please file comments and responses to the questions by December 16, 2019.
- Staff will post notes from this workshop to the UM 2011 docket.
- Next workshop January 13, 2019
 - Same time & location
 - Discuss potential options for how methodology could develop, based on comments received
 - Utilities and stakeholders identify preferences to help develop a proposed methodology (or methodologies)

UM 2011 Remaining Timeline



Thank you!!



Nicholas Colombo

(503) 373-1016

Nicholas.colombo@state.or.us

OPUC Docket: UM 2011

