# Capacity Market Power Mitigation

**Design Work Group**

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# Market Power Mitigation

- What did the Market Mechanics work group recommend through SAM 3.0
- What does the consolidated market design

- Intent for today
  - Review intent for capacity market market power mitigation
  - Review alignment with intent
  - Discuss other issues brought forward by the DWG

# SAM3.0 - CMD comparison

| | SAM 3.0 | CMD 1 |
|---|---|---|
| Mitigate? | Directional alignment: yes | |
| Who to mitigate | Suppliers with portfolios large enough to profitably exert market power | Suppliers with supply portfolios large enough to profitably exert market power |
| How to mitigate | Ex Ante and consider<br>- No look basis x% of net Cone<br>- No look basis $X/ kW-mo<br>- $X kW-mo applied to all market participants | Ex Ante<br>- No look basis at 50% of net CONE |
| Background context | - All resources must offer into the capacity market | All resources must offer into the capacity market |

- **Intent of capacity market market power mitigation**
  - Limit the ability of a supplier to withhold capacity from the market to increase prices to the benefit of their remaining resources

# Identifying suppliers subject to mitigation

- Suppliers subject to mitigation will be identified by
  - Using the auction demand curve: suppliers with portfolios large enough to profitably withhold supply will be identified
  - Suppliers will be notified prior to the auction that they are subject to mitigation
  - Mitigated offer price thresholds will be published
  - Suppliers will have the ability to demonstrate and seek approval for offers higher than mitigation level
- Preliminary market power incentive test show that base on the 'Middle Alberta Curve', a firm with 1,290 MW of UCAP could profitably withhold 110 MW and would cause the capacity clearing price to increase by $13/kWyear

| | 550 MW Withheld | 225 MW Withheld | 110 MW Withheld |
|---|---|---|---|
| **Flattest Alberta Curve** *400E 1.6x Net CONE Cap* | 2,090 MW *$50/kW-yr* | 1,770 MW *$20/kW-yr* | 1,630 MW *$10/kW-yr* |
| **Middle Alberta Curve** *400E 1.75x Net CONE Cap* | 1,760 MW *$63/kW-yr* | 1,420 MW *$26/kW-yr* | 1,290 MW *$13/kW-yr* |
| **Steepest Alberta Curve** *400E 1.9x Net CONE Cap* | 1,550 MW *$77/kW-yr* | 1,210 MW *$32/kW-yr* | 1,080 MW *$16/kW-yr* |

Demand curves are for illustration purposes only

# Operationalizing Supply Side Market Power Mitigation

- Market power screen
  - Sellers who control 15% of the UCAP requirement are deemed to have a seller side market power
    - An offer cap threshold of 50% of Net CONE will be applied to existing resources owned by suppliers who are deemed to have a market power.
    - Offers above the threshold will be subject to review and unit-specific offer cap will be based on the unit's going-forward costs

# Testing Against the Intent: 15%

- Why 15%
  - A method to operationalize the market power screen
  - Will need to be established with certainty once the final demand curve is known
  - Will be re-evaluated during regular capacity market reviews to determine appropriateness

- Does *the approach* of setting a fixed percentage of capacity market resource meet the intent?
  - Recognizing that the exact percentage to be determined as the demand curve is finalized

# Testing against the intent: 50% net CONE

- Why 50% net CONE
  - Administratively easy to implement: applying only to resources of suppliers subject to mitigation is administratively easy to implement
  - In line with net go forward fixed costs: AESO's analysis suggests that this level would allow existing resources to competitively offer in the capacity market
    - New unit offers from suppliers subject to mitigation would be exempt
  - Other approaches considered? (SAM3.0)
    - No look at a fixed $/kW-mo: this is largely similar to the X% of net CONE
    - Mitigate all resources to a $/kW-mo regardless of pivotal ownership: not considered with focus on suppliers subject to mitigation

- Does the proposed approach meet the intent

# Testing against the intent: reviewing offers above the cap

- Offers above the threshold will be subject to review and a unit-specific offer cap will be based on that unit's going-forward costs
- Approach for this test is being developed and will be discussed in future consolidated market design documents and is expected to include
  - Going forward investment and fixed costs, a return on those costs
  - Expected capacity market performance assessment payment adjustments
  - Opportunity costs
  - Less: any expected energy and ancillary services market revenues

- Does this approach meet the intent?

# Buyer Side Market Power

- What is supply side market power
  - Buyer side market power is the ability of a supplier with a net short position (a need to buy capacity) to offer capacity below cost in order to depress price and benefit its net short position.
- The AESO approach
  - Initially no mitigation applied to buyer side market power.
  - Mitigation will be implemented if the incentive to uneconomically suppress prices is identified.
- Rationale
  - A preliminary analysis by the AESO and Brattle Group found that a firm would need to have at least a net-short capacity position of 370 MW to have an incentive to offer capacity below cost.
  - Market participants in Alberta currently do not carry net short capacity positions large enough to cause a market power concern.
  - This will be re-evaluated during regular capacity market reviews to determine appropriateness
- Does this meet the intent?

# Appendix

# Buyer Side Market Power

- Preliminary net short capacity position incentive test show that a firm would need to have at least a net-short capacity position of 370 MW to have an incentive to offer 110 MW below cost.

| | 550 MW Net Short | 225 MW Net Short | 110 MW Net Short |
|---|---|---|---|
| **Flattest Alberta Curve** *400E 1.6x Net CONE Cap* | 1,200 MW *$31/kW-yr* | 770 MW *$14/kW-yr* | 640 MW *$7/kW-yr* |
| **Middle Alberta Curve** *400E 1.75x Net CONE Cap* | 1,150 MW *$33/kW-yr* | 640 MW *$18/kW-yr* | 520 MW *$9/kW-yr* |
| **Steepest Alberta Curve** *400E 1.9x Net CONE Cap* | 1,100 MW *$35/kW-yr* | 650 MW *$17/kW-yr* | 480 MW *$9/kW-yr* |
| **Flattest Alberta Curve** 100E 1.6x Net CONE Cap | 1,050 MW $38/kW-yr | 570 MW $21/kW-yr | 460 MW $10/kW-yr |
| **Middle Alberta Curve** 100E 1.75x Net CONE Cap | 990 MW $42/kW-yr | 530 MW $24/kW-yr | 380 MW $12/kW-yr |
| **Steepest Alberta Curve** 100E 1.9x Net CONE Cap | 950 MW $46/kW-yr | 500 MW $25/kW-yr | 370 MW $13/kW-yr |