

# Comparability of Capacity Obligations

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# FCA Currently Clears “Apples” & “Oranges”

	“Apples”	“Oranges”	“Grapefruit”
	Generators	Demand Resources	Real Time Emergency Generators
Physical Obligations	<ul style="list-style-type: none"> <li>• Must offer available MWs in Day Ahead and Real Time</li> <li>• Must report changes in availability status</li> <li>• Bids subject to mitigation</li> </ul>	<ul style="list-style-type: none"> <li>• Day Ahead – <b>none</b></li> <li>• Real Time – <b>limited</b> &lt;1% hours (when shortage event forecasted or realized)</li> </ul>	<ul style="list-style-type: none"> <li>• Day Ahead – <b>none</b></li> <li>• Real Time – <b>very limited</b> (deep OP4 just prior to load shedding)</li> </ul>
Financial Obligations	<ul style="list-style-type: none"> <li>• Loss of Forward Capacity Market (FCM) revenue when unavailable during shortage events</li> <li>• <b>Loss of energy margin through Peak Energy Rent deductions</b></li> </ul>	<ul style="list-style-type: none"> <li>• Loss of FCM revenue when unavailable during shortage events</li> <li>• <b>No PER deduction</b></li> </ul>	<ul style="list-style-type: none"> <li>• Loss of FCM revenue when unavailable during extreme shortage events (voltage reductions)</li> <li>• <b>No PER deduction</b></li> </ul>
Consequences of Failing to Respond	<ul style="list-style-type: none"> <li>• Physical withholding subject to sanction</li> <li>• Financial withholding subject to mitigation</li> </ul>	<p><b>None</b> (<i>election</i> not to interrupt service only decreases FCM revenue)</p>	<p><b>None</b></p>

# Either Clear “Apples” & “Oranges” Separately or Require Everyone to be “Apples”

- In order for the Forward Capacity Auction (FCA) clearing price to provide a fair and efficient price signal, all resources purchased at the same price need to supply the same capacity product.
- If there are reasons that some resources cannot provide the same capacity product (e.g., RTEG), then separate FCA clearing prices need to be determined through tiered FCA purchases.

# Option 1: Require All Resources to Be “Apples”

- ISO recommended changes:
  - Peak Energy Rent deduction (PER) applied to all resources,
  - Reconstitution of customer loads.
- Additional necessary requirements:
  - Offer into the Day Ahead Energy Market\*,
  - Offer into the Real Time Energy Market,
  - Mitigation for operational characteristics (e.g., start up time, minimum duration, maximum dispatches per day),
  - Provide availability status updates,
  - Sanctions for election to continue uninterrupted consumption.

\* - Excluding Intermittent Resources and Passive Demand Resources.

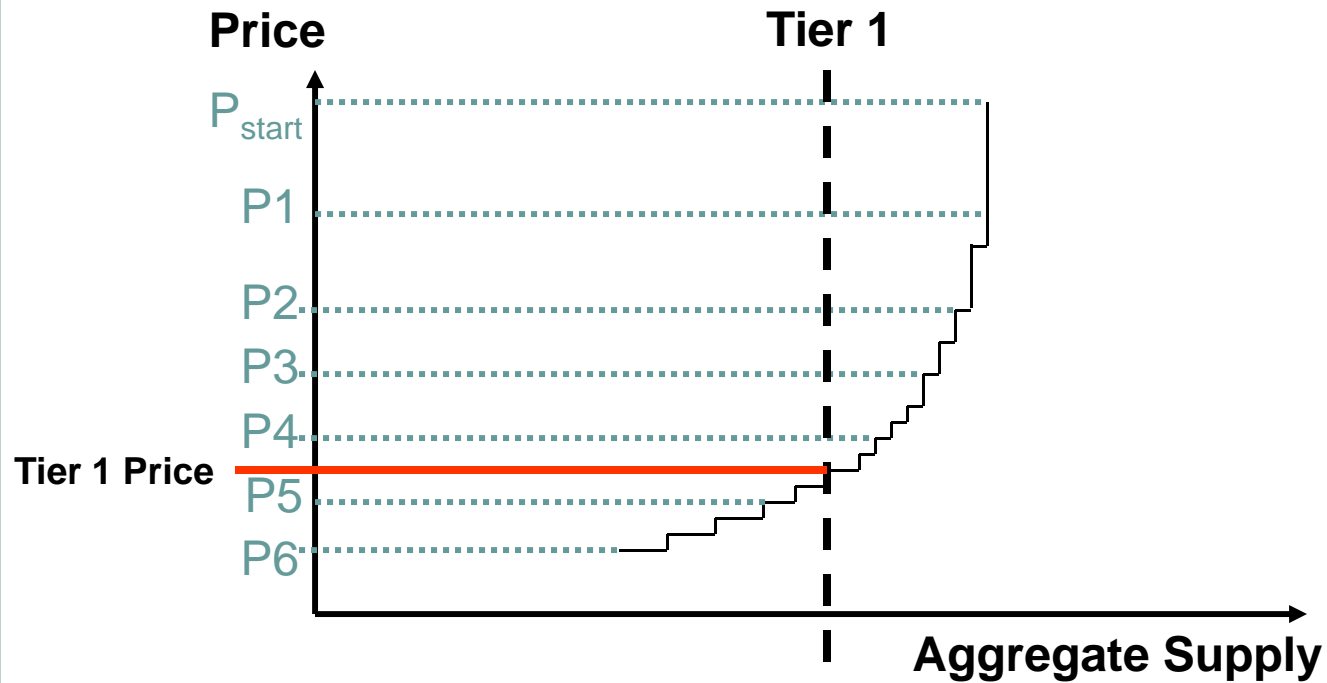
# Sanctioning for Withholding Capacity

- Withholding protections exist for generator megawatts with a Capacity Supply Obligation (CSO):
  - Financial withholding prevented by mitigation
  - Physical withholding subject to sanctions
- Failure of DR megawatts with a CSO to interrupt consumption could degrade reliability, increase energy prices and result in increased capacity requirements.
- DR sold as capacity which elects not to interrupt should be subject to an unauthorized capacity use sanction (similar to treatment of unauthorized use under transmission tariff).

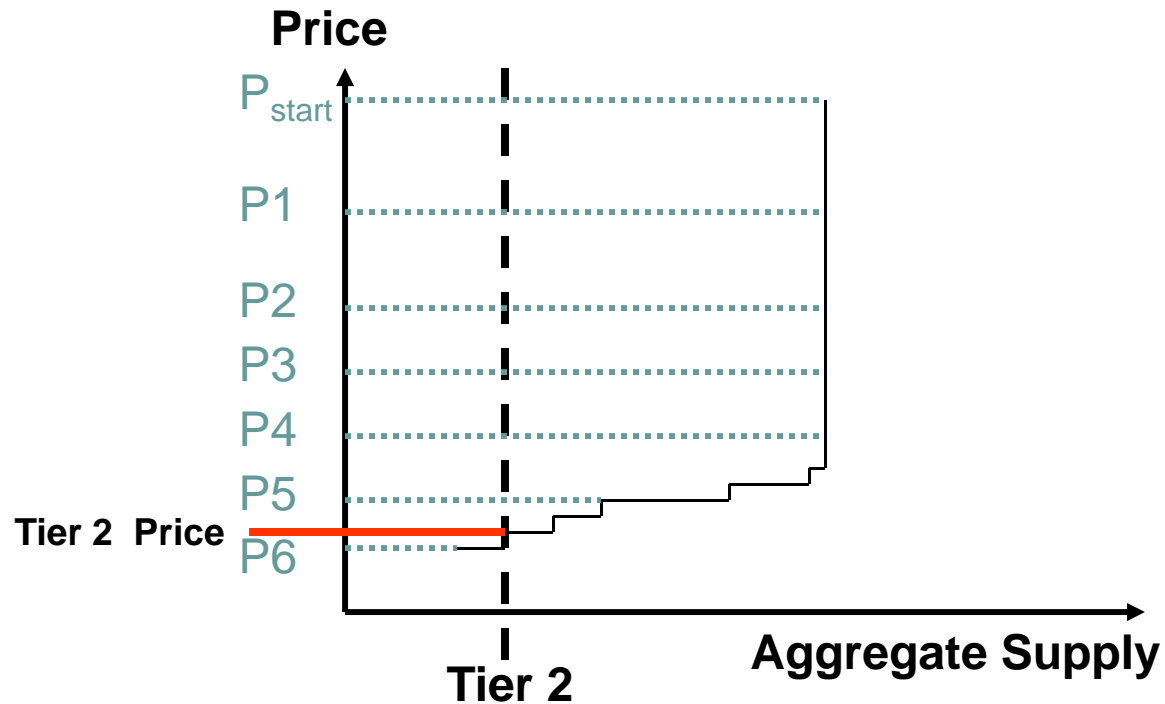
## Option 2: Clearing “Apples” & “Oranges”

- Where it is necessary to have separately defined capacity products, then changes to the auction process are needed:
  - Different capacity products purchased in separate auctions.
  - Amount of lesser product which can be supplied (Tier 2 MWs) must be defined before the auction.
  - First auction round would purchase more obligated capacity (Tier 1) product where only resources acquiring those obligations are cleared to meet the Installed Capacity Requirement (ICR) less “Tier 2 MWs”.
  - Second auction step would permit all qualified, unobligated capacity to sell Tier 2 service (at lesser capacity obligations) for the residual ICR. All resources procured in this step subject to same lesser capacity obligations.

# Option 2: Example – Tier 1 Purchase



# Option 2: Example – Tier 2 Purchase



# Questions

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