



# Definition of Capacity Product

## *Framework for Discussion*

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Historically, objectives of PJM RPM have focused on:

## **Reliability**

Ensure adequate supply & demand response to meet the resource adequacy target

## **Efficiency**

Embrace competitive principles, and send transparent price signals for efficient entry and exit

**Without a capacity market,** the remaining PJM markets would send incomplete and insufficient signals for investment in new capacity and retention of existing capacity, putting reliability at risk.

### **WHY:**

Energy prices are capped; incomplete scarcity signals

Emergency conditions & high prices are rare and occur with uncertain frequency; may not be “investable”

- Remaining E&AS prices are not high enough, often enough, to provide expected economic profits needed to attract & retain sufficient capacity (especially given substantial fixed costs)
- This is the “missing money” problem

Most fundamentally, the PJM RPM is a market where a product is transacted between buyers and sellers. What is that product?

**The product is defined by several complementary design elements**

Qualification

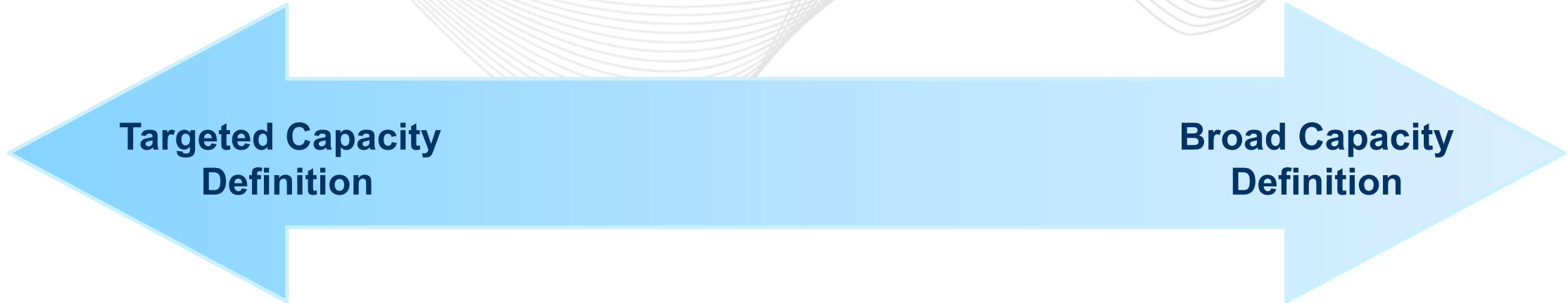
Accreditation

Obligations

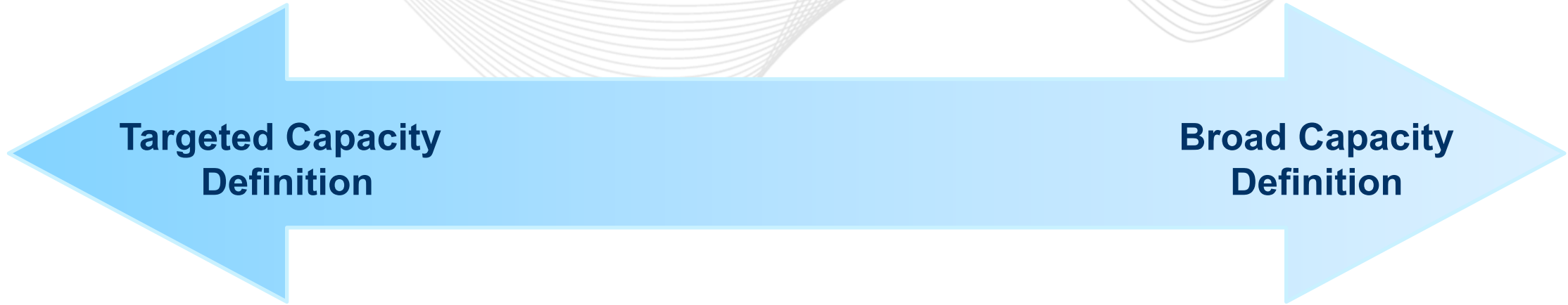
Performance  
Incentives

Thinking about the definition of the capacity product can help inform design choices for each of the other elements.

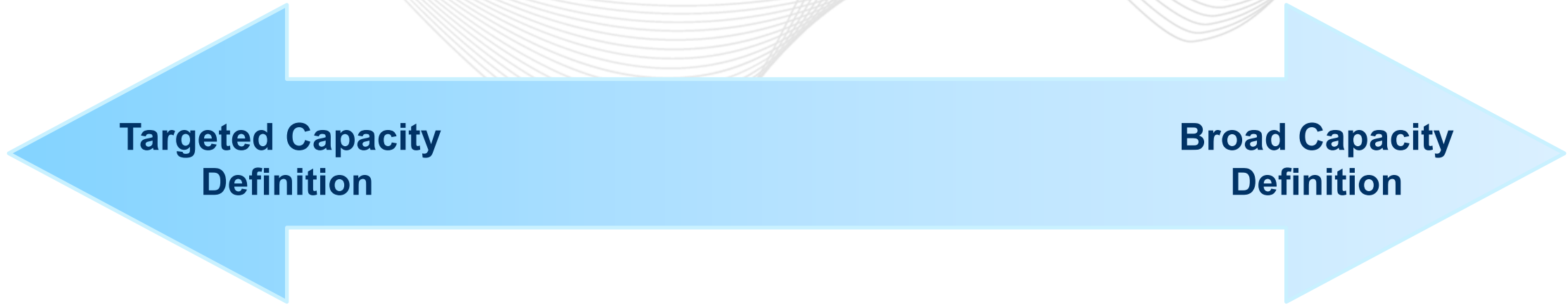
# Spectrum of Design Options for Capacity Definition



Definition of Capacity Product	Targeted Capacity Definition	Broad Capacity Definition
	Forward sale of energy/reserves during hours of reliability risk & commitment to be available during those hours, whenever they may occur	Commitment to be available to provide energy or reserves at any time during the year, whenever the resource may be needed for any reason



<b>Qualification</b>	Qualify resources if expected to provide some value during hours of risk	Qualify resources only if expected to be available to perform at any time
<b>Accreditation</b>	Reflects resources' expected value in supporting system reliability; heavily weights resource availability & performance during hours with expected reliability risks	Reflects resources' availability & unavailability (including forced, maintenance and planned outages); evenly weights availability across many or all hours, even those with negligible risk



<p><b>Obligations</b></p>	<p>Resources must make themselves available to PJM during hours with reliability risks up to the level assumed during accreditation</p>	<p>All resources must offer energy &amp; reserves; all resources must follow PJM dispatch to extent capable; PLS applicability 8760</p>
<p><b>Performance Incentives</b></p>	<p>High penalties/bonuses reflecting performance during limited hours with reliability risks</p>	<p>Lower penalties/bonuses reflecting performance or availability during a broader set of hours, including those with negligible or no risk</p>

## **Must capacity be an annual product, or can it be seasonal?**

Could a seasonal product allow for better alignment between which resources are qualified, how we accredit them, what obligations they have and when, and how they are incentivized to perform?

**How to strike a balance between relying on financial incentives vs. physical requirements for qualification to firm up product definition?**



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## Definition of a Capacity Product



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