



# Potential Market Alternatives to the CRR Auction

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# Why discuss market alternatives?

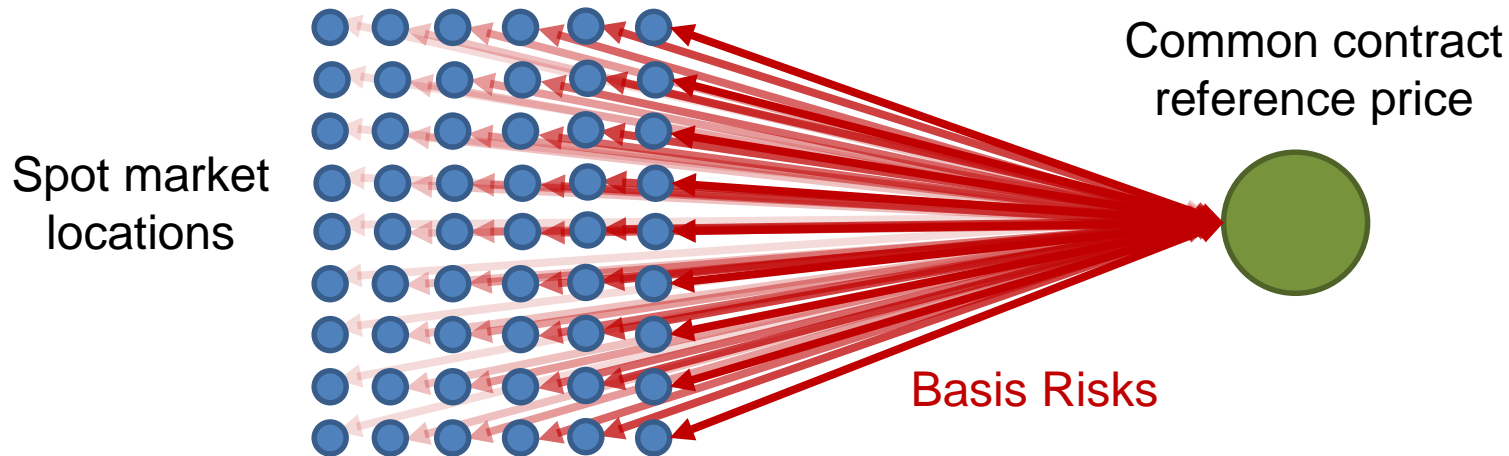
- CRR auction has fundamental design flaws
- Many of the rule/process changes the ISO is considering do not address these underlying design flaws
- Potential market alternatives can address underlying flaws while maintaining a market for hedging basis risk

## Goal is to support forward contracting

- Locational marginal price markets:
  - Efficiently dispatch energy given scarce transmission
  - Provide open access market
- But locational markets affect forward contract market:
  - Many locations can reduce liquidity for forward contracts at any specific location
  - Can trade forward contracts at liquid reference prices
  - But trading at liquid reference prices introduces basis risk, increasing trading costs

Hedging basis risk could reduce forward contract costs

# Common reference price, many different basis risks



Concerns a market may not form because:

- Many basis risk combinations reduce sell side liquidity
- Will have to pay a lot for someone to “take” the risk

# CRR auction does not confront underlying concerns

- Instead, volunteers transmission ratepayers to be financial intermediary
  - Turns lack sell side liquidity into lack of buy side liquidity
  - Moves risks to transmission ratepayers
- Plus the auction design:
  - Has no regard for the costs of selling contracts
  - Introduces inconsistently defined products
  - Adds complexity that further increases transaction costs and dissipates liquidity

## Desirable characteristics of a workable financial market

- Natural buyers *and* natural sellers
- Voluntary trading
- Well-defined products/property rights
- Incentives for financial traders to help connect willing buyers and sellers rather than rent seek
- Limits unnecessary complexity that increases transaction costs and dissipates liquidity

The CRR auction does not have these characteristics

## Trade hubs could offer the core of a potential market for hedging basis risk

- Trade Hub = weighted average of supply location prices
- Sum of differences between a Trade Hub and individual locations within the Trade Hub is zero
  - Basis risks between Trade Hub and locations within trade hub can offset/hedge each other
- A product that pays the price difference between the Trade Hub and an individual location is a simple locational price swap

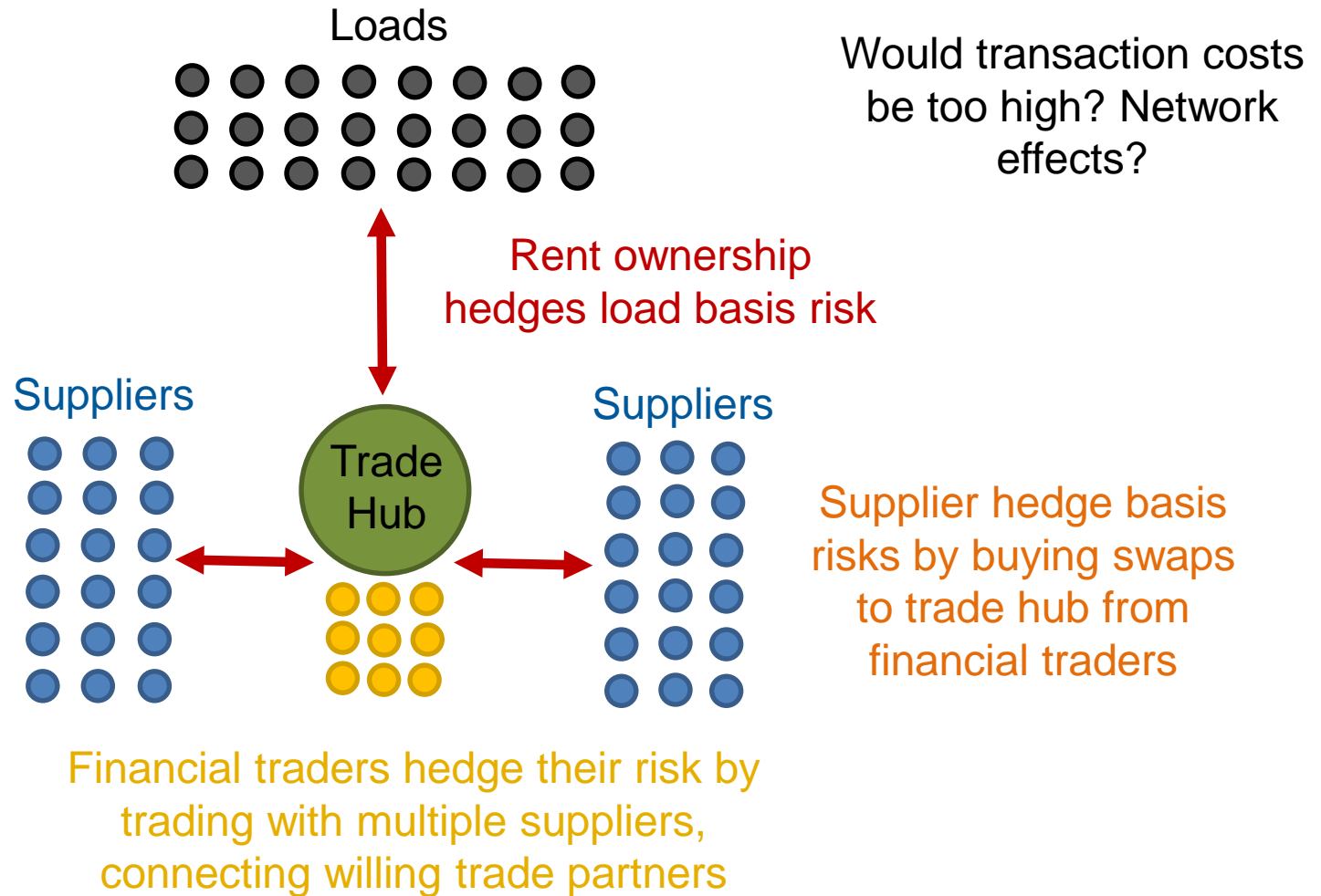
A trade hub is a common reference price that creates potential natural buyers and sellers for contracts to hedge basis risk

## ...but a market needs to connect buyers and sellers

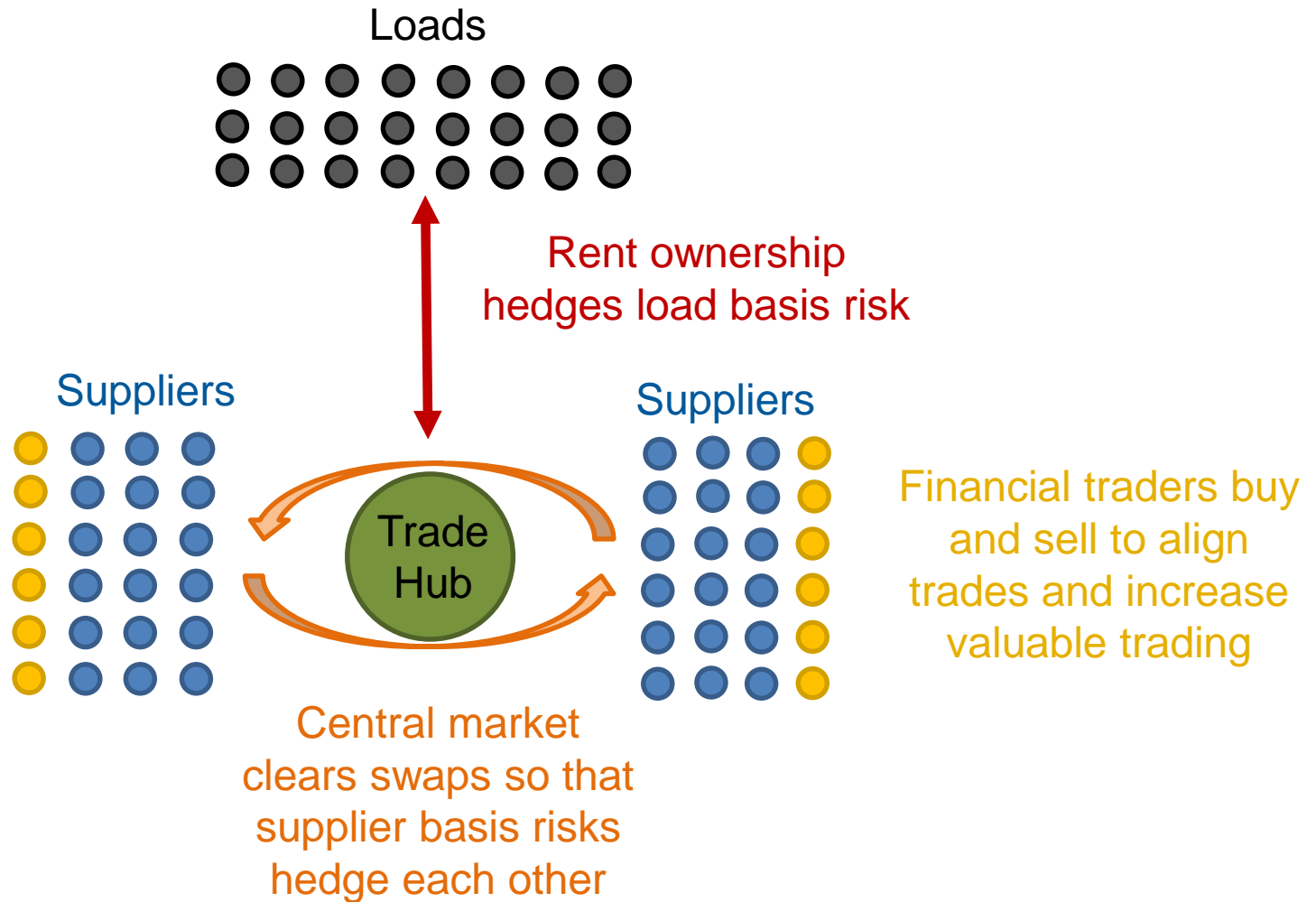
- Although supplier basis risks can offset each other, no particular supplier would want the exact opposite trade as another supplier
- A de-centralized or centralized market could connect willing trade partners
- In a decentralized market, financial traders would need to connect willing buyers and sellers
  - Their traditional role in financial markets
- A centralized market could also match willing trade partners



# Alternative voluntary price swap market - decentralized



# Alternative voluntary price swap market - centralized



# These potential markets have desirable characteristics

- Natural buyers and natural sellers
- Voluntary trading
- Well-defined property rights
- Incentives for financial participants to help connect willing buyers and sellers rather than rent seek
- Limit unnecessary complexity

## Other considerations *if* using centralized market

- Depend only on financial traders to match trades diffs?
- Or allow central market to relax balance constraints?
- Should ratepayers back relaxation service?
  - Or should participants in the market pool the risk?
  - Should ratepayers subsidize relaxation service?
- *If* want ratepayers to back and/or subsidize market, risks of doing so can be managed and subsidies targeted
  - Unlike CRR auction which intervenes in the market with uncontrolled risks and non-targeted subsidies
- Should ISO administer the centralized market?