



Capacity auctions and trading platforms



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Future capacity access markets



| Capacity | Role | Value | Reforms |
|----------------------|--|----------|--|
| Primary | <ul style="list-style-type: none">• Security• Certainty | High | Transparency Arbitration |
| Secondary | <ul style="list-style-type: none">• Competition• Liquidity | Variable | Enhanced trading platforms Contract standardisation |
| Day-ahead auction | <ul style="list-style-type: none">• Incentivise trade• Contractual congestion | Low | Develop and introduce auction |



Key design issues for auction



- Priority of service to be auctioned
- Application of auction to pipelines that are not fully contracted
- Contingent bidding across pipelines
- Operator of auction



Priority of service



- Existing firm rights must not be impacted
 - Cannot guarantee firm auction service for contracted but un-nominated capacity
- Incentives focused on enhancing trade
 - Incentives apply to capacity sellers and buyers
 - Auction product should not be equal to or superior to traded product
- Should not diminish value of firm capacity

Auctioning an interruptible service seems to be a simple solution

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Application of capacity auctions



- Should the auction apply to pipelines that do not experience contractual congestion?
- Gaming concerns have been raised
 - If auction works as advertised, there is little/no downside for pipeline operators. Incentives for firm remain, auction presents opportunity for upside.
- Little (no?) danger of interruption if pipeline is not contractually congested
 - Wouldn't be auctioning the same service
 - Auction service competing with primary firm on pipelines not contractually congested
- Auction floor price = SRMC = Approaching zero + Compressor Gas
 - Rationale: Fully contracted pipelines largely recover capital costs through contracted revenues. Having received those, auction floor can be SRMC.
 - **Doesn't apply to pipelines not fully contracted** and perhaps increasingly for some fully contracted expansions
 - Modern contracting environment sees investment is occurring on 3-5 year contracts

Application of capacity auctions



Auction of capacity in the absence of scarcity will:

- Remove market for secondary capacity
- Displace firm capacity contracting
- Removes incentives for further investment



Contingent bidding across pipelines



- Introduces new service not available through not available from single source in primary markets
 - Diminishes value of primary markets
- Flexible arrangements across multiple pipelines available through secondary markets
- Claim: needed for to avoid risk of stranding
 - How much is at risk when bidding is likely to be reflective of SRMC?
- Utility may be overestimated
 - Firm capacity holders will (rightly) be best placed to take advantage of arbitrage opportunities
 - In peak times pipelines are highly utilised
- Step-change increase in complexity to solve auction – impedes rapid resolution

Operation of auctions



1. Auctions run by PO on an asset-by-asset basis

- Industry standards developed to ensure consistent detailed design; user interface; data/comms protocols
- Leverages pipeline systems and expertise

2. Centralised auctions

- Centralised platform provides common user experience
- Requires development of centralised capacity model for each pipeline
- Does not remove need for agreements and real-time comms between shippers and pipelines
- Large data transfers required to ensure platform operator has information to conduct auctions



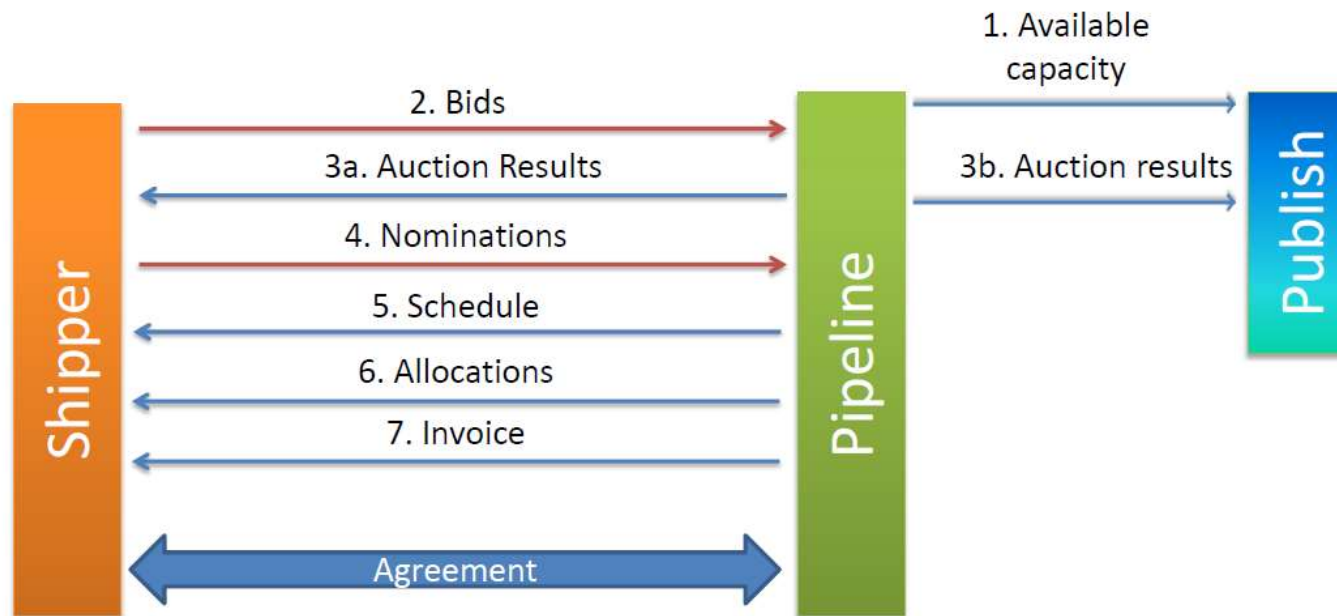
Issues with centralised auction



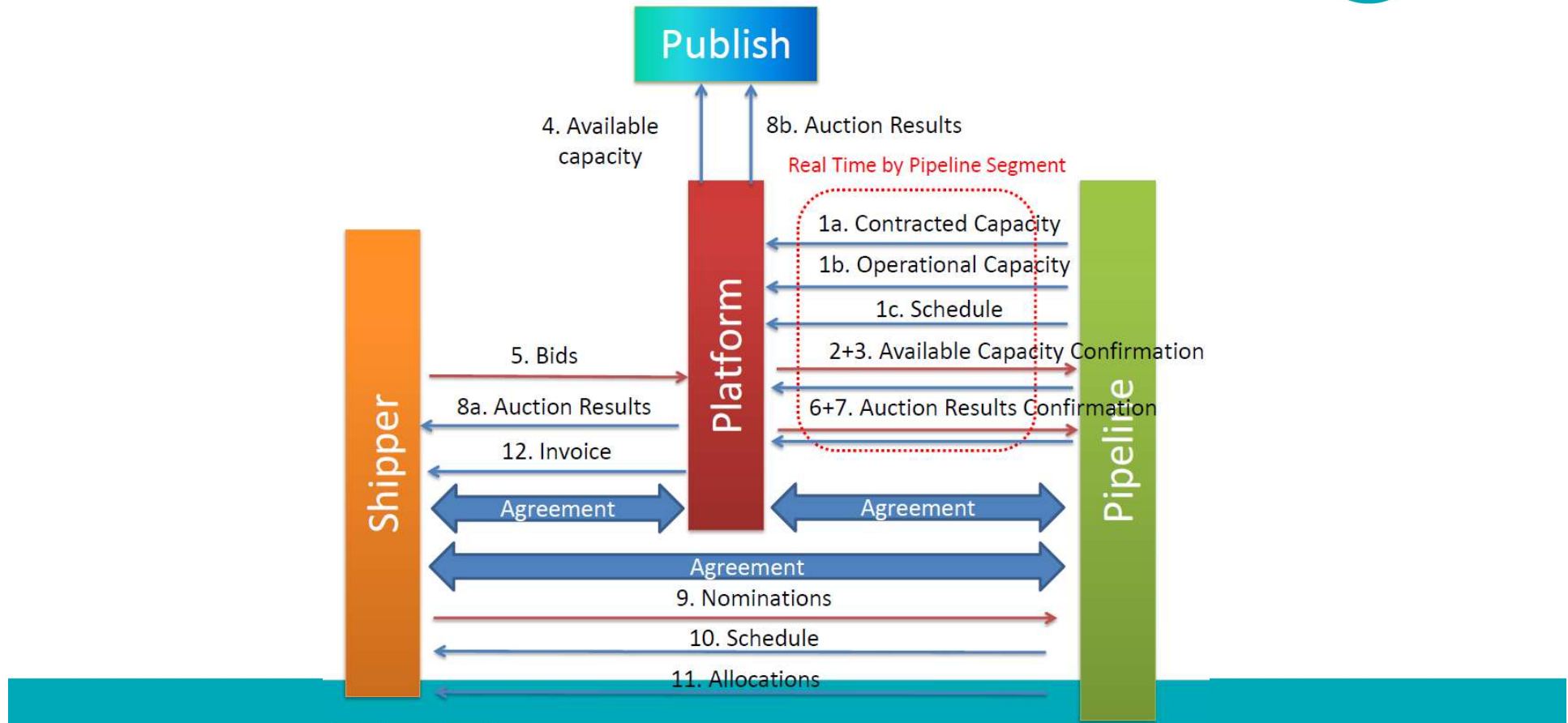
- Information interface required to transfer significant volume of operational data between POs and platform
- Optimising auction results requires sophisticated capacity models and understanding of individual pipeline operational requirements
- Duplication of operational expertise and systems
- Confirmations required to prevent mis-match and confirm deliverability
- Shippers still required to have agreements with PO and communicate with PO systems



Data transfer – PO run auction



Data transfer – Centralised auction



Relative costs



- Can't do a bottom-up analysis at this time
- Centralised platform must:
 - Duplicate pipeline capacity models
 - Manage more data transfers
- Establishment and operating costs at least comparable to STTM
 - \$17 million capex, \$5.4 million opex (not including capital recovery)
 - STTM solving bid stack at a single point.....
- What is the revenue potential?
 - How much capacity to be acquired through auction?

Revenue potential



Annual east coast gas demand ~ 600 PJ/annum
BB Pipeline Capacity ~ 2400 TJ/day (No exclusions)

| % Utilisation | Total annual demand (PJ/year) | Daily (TJ/day) | Daily capacity (TJ/day) | Annual Revenue - 7c/GJ | |
|---------------|-------------------------------|----------------|-------------------------|------------------------|-------------|
| | | | | Gas Demand | Capacity |
| 1 | 6 | 16.4 | 24 | \$419,020 | \$613,200 |
| 2 | 12 | 32.9 | 48 | \$840,595 | \$1,226,400 |
| 3 | 18 | 49.3 | 72 | \$1,259,615 | \$1,839,600 |
| 4 | 24 | 65.7 | 96 | \$1,678,635 | \$2,452,800 |
| 5 | 30 | 82.1 | 120 | \$2,097,655 | \$3,066,000 |

Trading platforms



- Different service
- Not time sensitive
- POs have built capacity listing services
- Overseas experience – POs run trading platforms

