The Brattle Group

International Experience in Pipeline Capacity Trading

Presented to:
AEMO

Presented by:
Dan Harris

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Capacity and Commodity Trading

- To execute a gas trade, the seller must have gas transport capacity rights to the point of sale, and the buyer must have gas transport capacity rights away from the point of sale.
- This is particularly important for a physical hub – like the proposed Wallumbilla hub.
- A physical hub could limit the pool of potential buyers and sellers, Making the market less liquid, if capacity cannot be freely traded.

The Development of capacity trading in the EU

- Initially EU TSOs (transmission system operators) were often resistant to cooperating with capacity trading.
  - TSOs had little motivation to provide capacity transfer services;
  - Most networks were vertically integrated with gas supply affiliates (and obstructing secondary capacity trading would make life more difficult for new entrants),
- Two things made TSO more cooperative:
  - The EU imposed stricter ‘unbundling’ requirements
  - Legislation mainly aimed at freeing up unused capacity also required that TSOs develop capacity trading platforms.

The Development of capacity trading in the EU (continued)

- In the early days of market liberalisation formal mechanisms for capacity trading were rare. This changed in 2005 when the TRAC-X platform was founded as a means to facilitate capacity trading in Germany.
- Capacity trading arrangements in the EU are currently undergoing significant consolidation, with separate mechanisms now being combined in a single capacity trading platform called PRISMA, which went live on 1 April 2013.

The Development of Capacity Trading in the US

- Prior to the 1980s there was no third-party access, therefore no secondary capacity market
- FERC has since adopted a series of orders to establish and regulate third-party access and the secondary capacity market
  - Centre-piece is that pipelines must operate an "electronic bulletin board" (EBB)
  - EBB lets market participants view proposed capacity transactions, giving all entities the ability to beat proposed transaction prices
- Other key reforms to shape capacity trading as it appears today
  - All transactions published
  - Ban on discriminatory practices, especially with pipeline marketing affiliates
  - General prohibition against market manipulation (could cover capacity hoarding)
  - Removal of price caps on short-term transactions

What is traded – rights, obligations or both?

- A capacity contract essentially consists of
  - A ***right*** to nominate/use capacity and
  - An ***obligation*** to pay the pipeline for the capacity
- Three models of capacity trading are possible:

	What is Traded?	
Trading Model	Right to Nominate	Obligation to Pay
Complete	✓	✓
Operator	✓	✗
Sub-let	✗	✗

What is traded – rights, obligations or both? (cont.)

- Approaches vary:
  - EU Platforms offer a mix of operational and complete transfers; capacity sub-lets happen on a shipper-to-shipper basis;
  - In the US transfers are operational; complete transfers at the pipeline's discretion, but usually allowed.
  - Sub-letting of capacity is banned in the US (so that pipeline can publish all transactions).

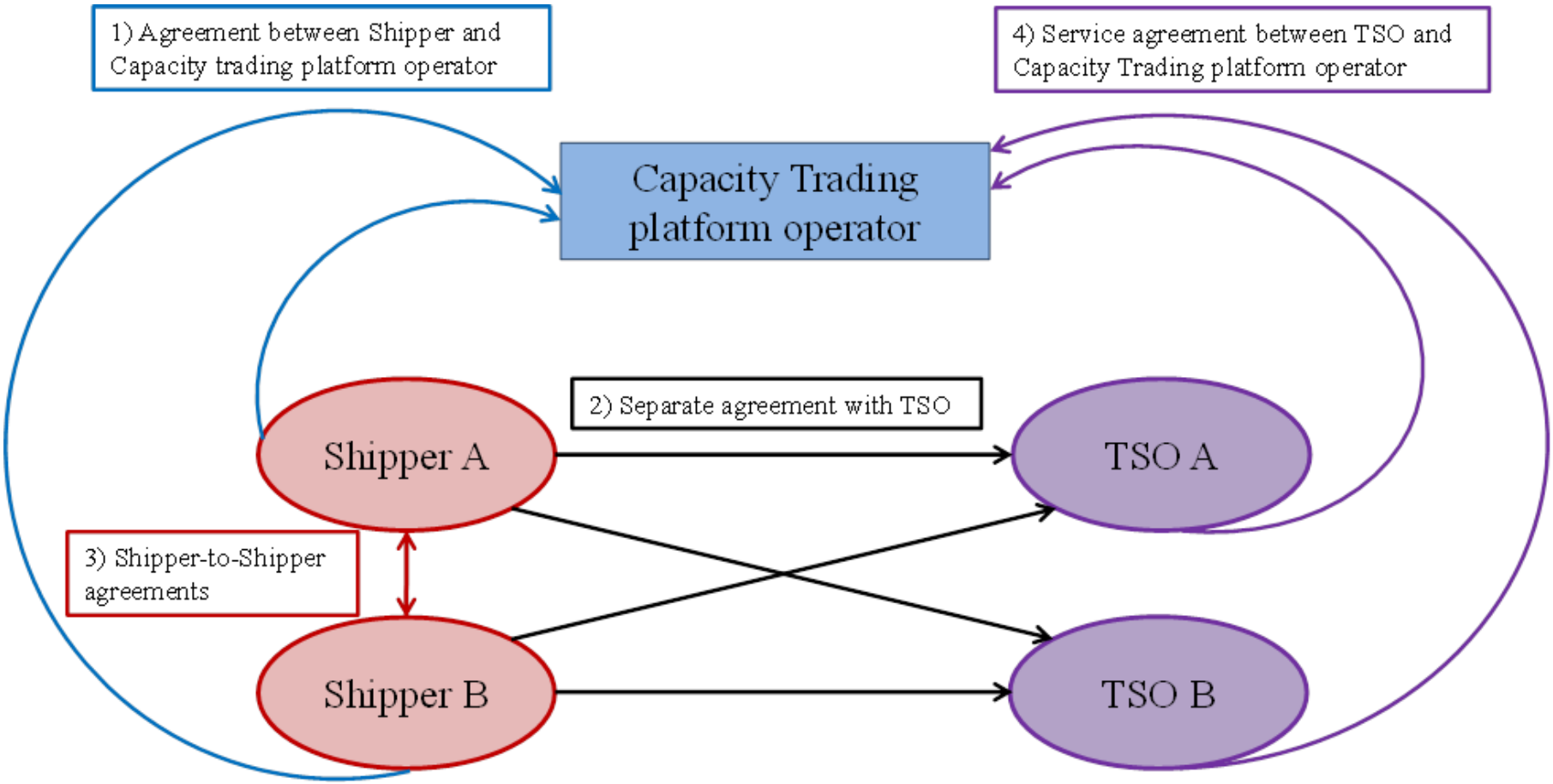
- Should capacity sub-letting also be banned in Australia?
  - We think not – better to widen the pool of potential commodity traders as wide as possible;

- Traders stress that exact model is less important than the attitude of the pipelines to accepting changes in the nomination rights;

Forums for Capacity Trading

- Two types of capacity trading mechanisms: bilateral and cleared through an exchange.
- Bilateral trading, facilitated by a 'bulletin board' run by the pipeline, is the default method of capacity trading in the EU.
  - However, platforms can allow shippers to pre-select a limited group of counter-parties;
  - Trading can be anonymous until the bid/offer is matched;
- Cleared trading, whereby the exchange is the counter party to the trade; we are not aware of any cleared capacity changes operating in Europe.
  - Why not? Likely because number of participants is quite small. Traders prefer flexible credit arrangements even if it means having multiple trading partners and agreements.
- In the US, the pipeline is an intermediary, but the original shipper bears credit risk

Trading Processes – Multi-TSO Platform



Trading Processes – single TSO

- Trading processes with a single pipeline or TSO are much simpler;
  - Both shippers will have a contract with the TSO
  - There may be a separate agreements for abiding by the rules of the capacity bulletin board, or this could be covered in the general contract;
  - Shippers will arrange a bilateral shipper-to-shipper contract for capacity trades.
- One difference between the US and EU is the role of the pipeline;
  - In the US the pipeline receives payments from the capacity buyer, and credits these against obligations from the capacity seller.
  - Hence a more active role than in the EU, where (under operational transfer) the capacity seller continues to make payments, and no payments are recived from the capacity buyer.
  - We recommend the EU model for Australia.

Standardisation of Capacity Products

- The standardization of products allows the trade to be undertaken very quickly, eventually leading to be an important ingredient of liquid markets.
- Standardization creates a large pool of buyers and sellers selling the same product, which helps liquidity;
- In the EU, capacity products have been partly standardised:
  - Mainly the term of the products;
- In the US, products are largely standardised
  - Set out in the pipeline standard contract
  - Releasing shippers can add conditions;
- To encourage liquid trading in Australia, it should be investigated if key terms and conditions for capacity on the same route could be standardized, and capacity products harmonized with commodity products.

Payment for Capacity Trading Services

- In the EU there are no charges to shippers for use of the PRISMA trading platforms.
  - The costs of the platform is divided between the participating TSOs, and then recovered from all shippers via regulated capacity charges.
- No charges in GB, but the Dutch TSO does apply a charge.
- In the US, pipeline may take a fee for actively marketing capacity.

Regulation to force capacity sales in the EU

- Capacity allocation and management of scarce capacity resources – 'congestion management' –has continued to present challenges throughout the EU liberalization process.
- In the EU, the 2007 sector inquiry recognized a number of problems with:
  - Inefficient allocation of primary capacity, in particular the use of First-Come-First-Served allocation methods;
  - Capacity hoarding by incumbents trying to block market entry;

Regulation to force capacity sales in the EU (continued)

- In response to the problems identified for pipeline capacity access in the 2007 sector inquiry, the EU revised the key legislation for the gas market, including the Gas Regulation.
- One of the key new prices of legislation to improve access to capacity in the EU is the Congestion Management Procedures (CMP), which were amended to the 2009 Gas Regulation in August 2012.
- CMP introduces four rules:
  1. 'Firm' use-it-or-lose-it (UIOLI) policy
  2. Capacity surrender
  3. Long-term (UIOLI)
  4. Overcapacity and buyback.

Regulation to force capacity sales in the EU (continued)

- In response to a frequent complaint about lack of information regarding available pipeline capacity, the revised 2009 Gas Regulation states that TSOs must publish information regarding:
  - the maximum technical capacity for flows in both directions
  - the total contracted and interruptible capacity and
  - the available capacity.

- As well as publishing forward-looking data, TSOs have to publish historical maximum and minimum monthly capacity utilization rates and annual average flows at all relevant points for the past three years on a rolling basis.

Regulations in the US

- No explicit “use it or lose it” rule
  - Hoarding has been addressed through market manipulation enforcement proceedings
- Pipelines must sell interruptible capacity
- Transparency (eg, of physical flows relative to physical capacity)

Summary (1)

- There should be natural incentives to sell unused capacity, as failing to do so sacrifices revenues.
- Capacity holders may fail to sell capacity either because
  1. The transactions costs are too high or
  2. Because the capacity holder wants to restrict access to the end user markets so as to increase gas commodity prices.
- Efficient capacity trading mechanisms reduce transaction costs and overcome the first reason for not selling unused capacity.
- Regulations to strengthen UIOLI rules can address the second issue;

Summary (2)

- The ingredients to successful capacity trading are
  - Ensure fair primary allocation
  - have effective capacity release mechanisms in place
  - Make it easy for shippers to trade capacity.
- As long as the pipelines are actively co-operating in capacity trading and looking to find solutions to issues that arise, then capacity trading should go smoothly.

Possible Future steps (1)

- Standardise terms and conditions for capacity products, especially on the same route. The pipelines could also work to harmonise credit requirements and other conditions required to enter into a capacity agreement with the pipeline;
- Harmonise the length of the secondary capacity contracts to the gas commodity contracts traded on the new hub, as well as the key terms and conditions of the secondary capacity contracts;
- Create a capacity trading platform, and develop agreements with the relevant pipelines that they will respect changes in nomination rights that take place as a result of trading, and allow the new users to make direct nominations to the pipelines;
- Transactions involving the sub-letting of capacity should be allowed in Australia, at least until liquidity on the commodity trading hub is established;

Possible Future steps (2)

- Ensure that the pipelines provide information on parameters such as the historic price of recent trades, forecast capacity demand, aggregated nominations, amount of capacity sold and physical gas flows on the key pipeline routes;
- The pipelines should be closely involved in the development of a trading platform and ensure operational 'buy in' by the pipelines;
- Assuming that trades would be settled bilaterally, the relevant parties could develop a standard contract for shipper-to-shipper capacity settlement;
- Investigate if stricter UIOLI rules could be developed, that would force re-sale of unused capacity.