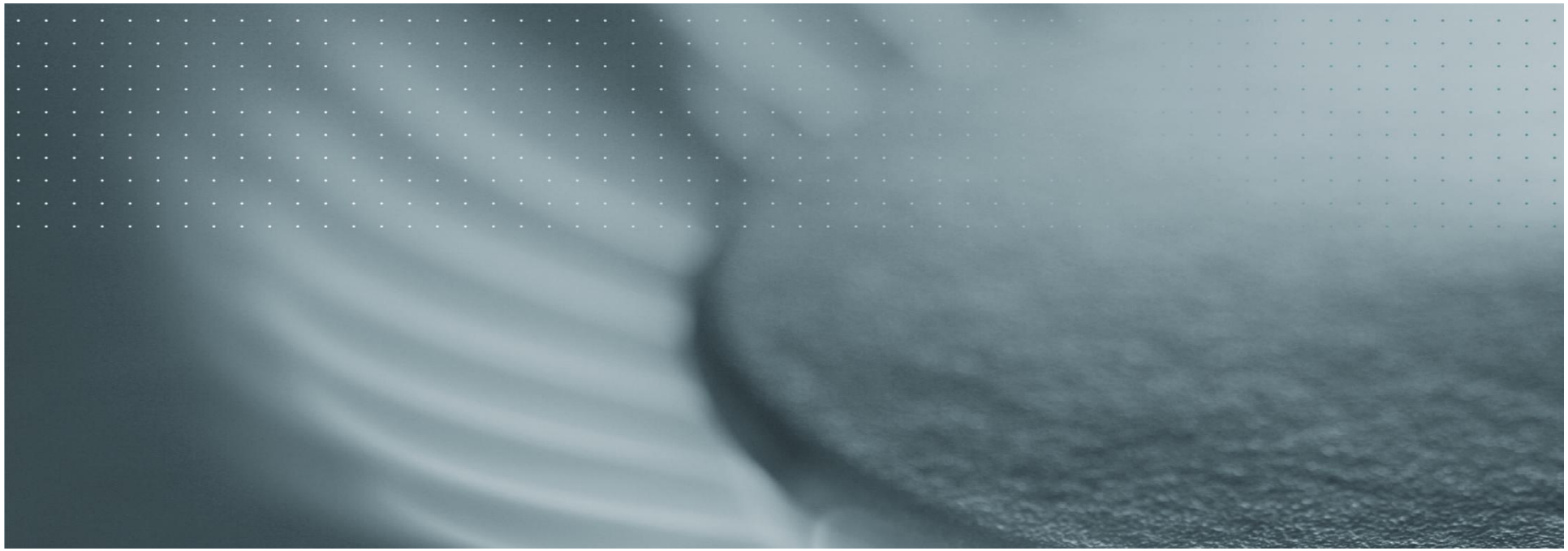

# SCOP2 OPTIONS WORKSHOP: INTRODUCTION AND GAS INDUSTRY CO INITIAL THOUGHTS

DATE:

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# SCOP2 – another significant step

- **24 August 2016:** Single Code Development Process workshop
- **13 September:** SCOP1 issued
- **20 September:** SCOP1 workshop
- **9 November:** SCOP1 submissions workshop
- **23 November:** Analysis of Submissions on SCOP1 issued
- **28 November:** SCOP2 issued
- **5 December:** SCOP2 workshop
- **23 December:** SCOP2 submissions due

# Good process & good progress

- We believe First Gas:
  - Has clearly set out its programme of work
  - Is following a good process
  - Is engaging widely with stakeholders (one-on-one and at workshops)
  - Is open to considering all reasonable reforms
  - Is aiming for improvements that will support the long-term health of the gas market

# Workshop programme

- First Gas to present SCOP2
- Gas Industry Co to give initial thoughts
- Everyone to discuss

# Initial thoughts

| | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| **Access arrangements** | • Priority right<br>• Day ahead<br>• On the day adjustment | • Day ahead<br>• On the day adjustment | • Flow to demand |
| | • *Option 1 – priority rights available well in advance of usage date*<br>  • *Would users place value on such priority rights?*<br>• *Option 2 – day ahead service, with dynamic pricing if scarcity expected*<br>  • *Users who value firmness bid for day ahead capacity*<br>  • *Provides for certainty for following day – is that sufficient?*<br>• *Option 3 – flow to demand, with forecasts as required by TSP* | | |

| | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| **Reservation/ nomination** | • Point (or zone) to point (or zone) capacity | | N.A. |
| | • *Options 1 & 2 are flexible on:*<br>  • *Number of points/zones*<br>  • *Form of reservation/noms regime*<br>  • *In any case, single pipeline Code will simplify some requirements (no need to nominate to TPWPs)*<br>• *Option 3 – no reservations or noms (between users and TSP)* | | |

| | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| **Constraint management** | • Curtailment of day-ahead noms<br>• Curtailment of on-the-day re-noms | | • On the day adjustment |
| | • *Option 1 & 2 – curtailment algorithms need to be defined:*<br>  • *Holders of priority rights would be last to be curtailed*<br>• *Option 3 – congestion management contracts would be negotiated if required*<br>• *All – price-based rationing may be employed, and Operational Flow Orders (OFOs) may be necessary* | | |

| | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| **Transmission pricing** | Could include:<br>• Point (or zone) to point (or zone)<br>• Entry-exit<br>• Postage stamp* | | Postage stamp* |
| | • *Options 1 & 2 are flexible on transmission pricing*<br>• *Option 3 – since there is no concept of nominating capacity, prices may be $/GJ of delivered energy for each postage stamp zone… but could be more complex if needed* | | |

* - uniform price for offtake across a defined area

| | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| **Allocation (upstream)** | • Could retain existing arrangements or vary | | • New arrangements required |
| | *Options 1 & 2 - flexible on allocation: could be OBA, pro-rata on noms etc.*<br><br>*Option 3 - will require some changes since the 'deemed title on approved nomination' feature of OBAs requires nominations* | | |

| | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| **Allocation (downstream)** | • Could continue with current arrangements or vary | | |
| | *Options 1, 2 & 3 – all compatible with current downstream allocation Rules*<br><br>*Options 3 - may (depending on how balancing arrangements are structured) allow for a more relaxed approach to downstream reconciliation – monthly reconciliation may be adequate* | | |

| | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| **Wholesale contracts (Gas Supply Agreements)** | • Quantities could be calculated in current or different manner | | • Where GSA reference transmission noms, changes would be required |
| | • *Options 1-2 flexible on receipt quantity calculation – allows decisions down the track*<br>  • *If receipts calculated differently, may need to amend GSAs*<br>• *Any GSA that references transmission noms would need to change* | | |

| | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| **Treatment of wholesale market** | • Could continue with current arrangements or alter them | | • New arrangements required for title tracking etc. |
| | • *Options 1 & 2 – some adjustment to current arrangement may be required if the market is within a receipt point zone*<br>• *Option 3 - In the absence of nominations, new arrangements would be required to enable trading on the wholesale market* | | |

| | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| **Balancing** | • Could continue with MBB or modify<br>• Could introduce 'park and loan' service | | • New arrangements required to identify causers of balancing actions, and apportion costs |
| | • *Options 1 & 2 - allow decisions on any changes to MBB down the track*<br>  • *Single pipeline Code should simplify some requirements (the two-step allocation to TPWPs and then to ex-Vector shippers is no longer required)*<br>• *Option 3 – access to balancing gas will depend on treatment of wholesale market and whether costs will be socilalised or not*<br>• *If balancing is to be be incentivised – how would line pack management costs be determined and apportioned?*<br>• *If costs are targeted to causers, unclear whether balancing in Option 3 would be inherently any simpler than under Options 1 or 2* | | |

| | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| **Examples from other jurisdictions with similar access arrangements** | • VTC like (ie point-to-point with advance reservations)<br>• Australia (except Victoria)<br>• Great Britain and EU (except that their capacity model is entry-exit)<br>• US | • A little like MPOC (but without the priority rights AQ provides) | • NZ electricity grid<br>• Similar to gas distribution systems |

# Back-up slides

# Overseas comparisons

- Regimes often described in terms of:
  - How capacity is sold
  - How prices are set

| | Capacity | Price |
|---|---|---|
| **Point-to-point (PP)** | Along a specified path | Generally related to distance along contractual path |
| **Entry-exit (EE)** | Separately for entry and exit points | Separate entry and exit prices, independent of distance |
| **Postage stamp (PS)** | At an exit point zone | Single price for all deliveries to a zone |

# Overseas comparisons (continued)

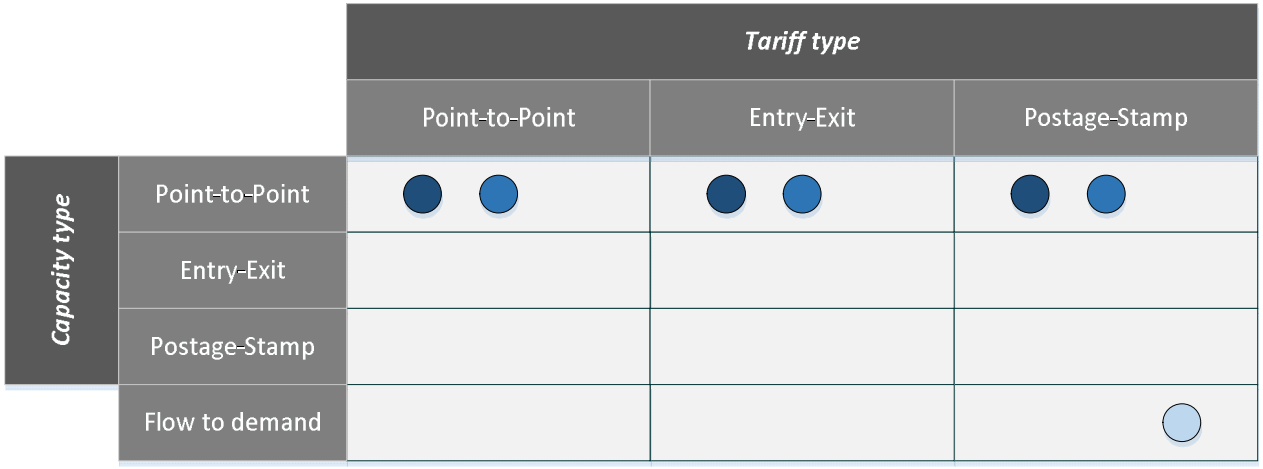
- In its 2002 paper[1] recommending an Entry-Exit capacity regime for the EU, the Brattle Group provided some comparisons:

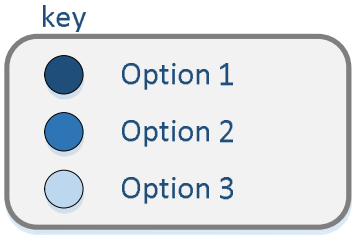
**Table 1: Examples of Different Combinations of Capacity and Tariff Types**

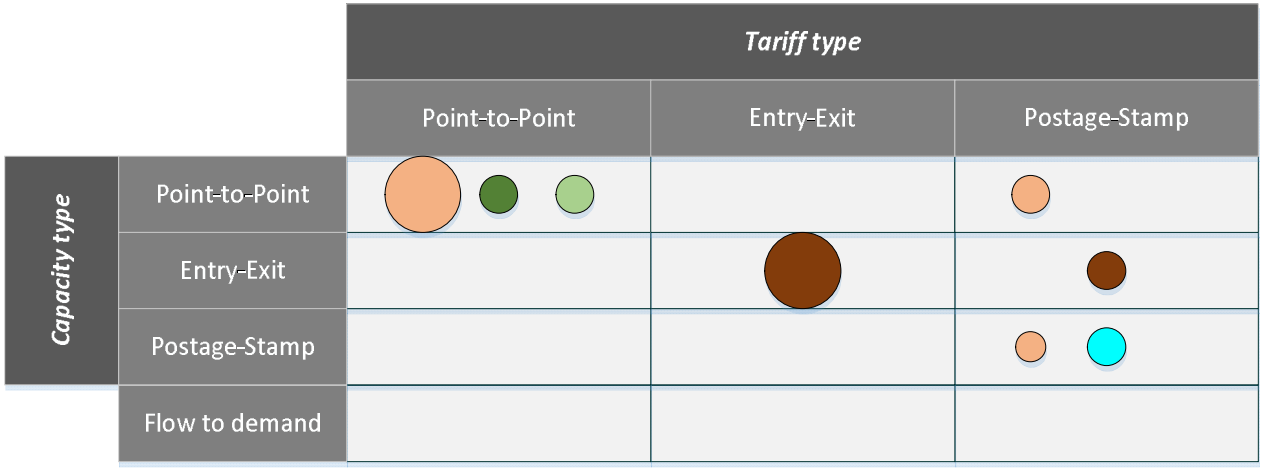
| | | *Tariff type* | | |
|---|---|---|---|---|
| | | Distance-based | Entry-Exit | Postal |
| *Capacity type* | Point-to-Point | Germany | Ireland | Spain |
| | Entry-Exit | | UK | For electricity, most EU TSOs |
| | Postal | | | Some US pipelines |

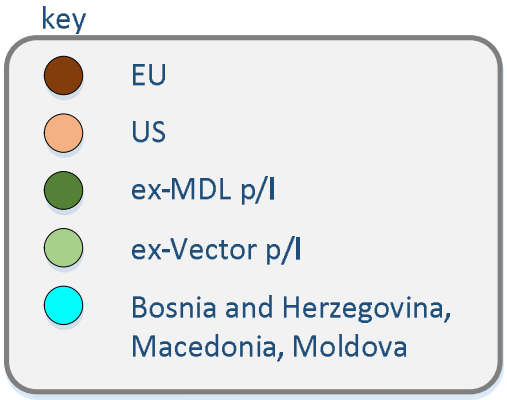
[1] Convergence of non-discriminatory tariff and congestion management systems in the European Gas Sector, September 2002

# Overall comparisons



# Some other point of interest

- In relation to US tariffs:
  - FERC encourages pipelines to charge mileage-based rates rather than postage-stamp rates to facilitate the development of market centers.
  - However, some companies have argued for postage-stamp rates, eg Tallgrass Interstate Gas Transmission, that operates 4,645 miles of pipeline in Colorado, Kansas, Nebraska, Missouri and Wyoming, is asking FERC for postage-stamp rates because receipts and deliveries are widely dispersed across its system, allowing gas to travel on more than one path.
  - Also, some intrastate pipelines may operate postage-stamp capacity models, but we have yet to find one.
- In relation to EU tariffs:
  - Article 13 of Third Energy Package requires that 'tariffs shall be set separately for every entry point into or exit point out of the transmission system' and 'network charges shall not be calculated on the basis of contract paths'
  - However, some regulators have approved alternatives. For example E-Control has set postage-stamp tariffs for each of the 9 regions in Austria.

# Is an entry-exit capacity option worth considering?

- Entry-exit is mandated in Europe and being considered for Victoria:

> To address the emerging challenges, the Commission is recommending substantial reforms to the DWGM to introduce new arrangements based on an entry-exit model that is applied widely across Europe.

Australian Energy Market Commission
Review of the Victorian Declared Wholesale Gas Market
DRAFT FINAL REPORT
14 October 2016

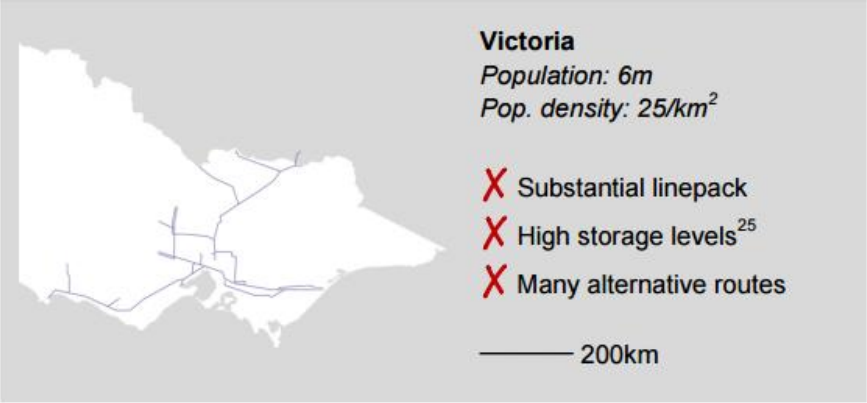
# What is the essence of entry-exit

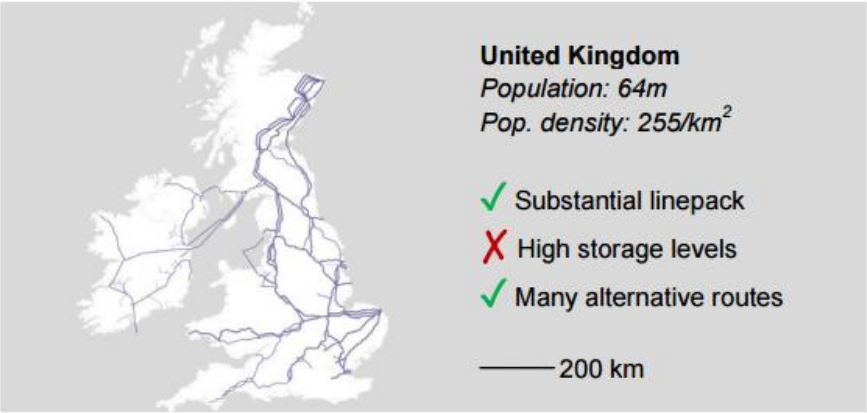
- According to the KEMA[1], characteristics of a 'full' entry-exit system are:
  - **Entry and exit capacities:**
    - can be contracted separately
    - each exit point can (contractually) be supplied from any entry point
  - **Virtual trading point:**
    - offering bilateral trading of gas independently of where it enters or exits the system
  - **Distribution level included:**
    - Shipper imbalance between injections and end-user withdrawals are aggregated across all its entry and exit points

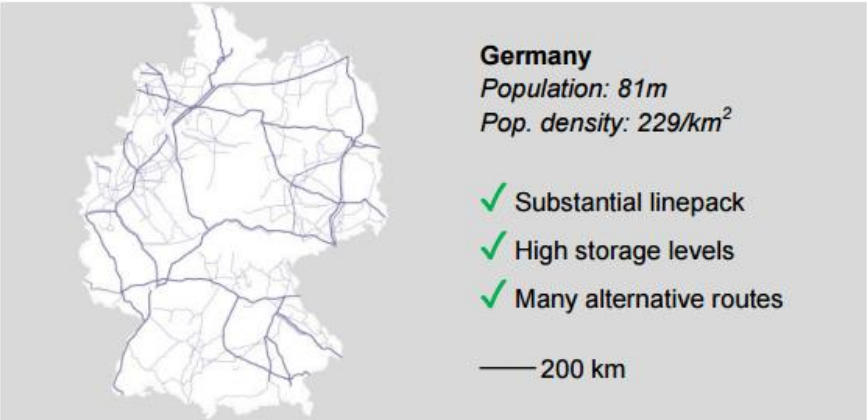
[1] Study on Entry-Exit Regimes in Gas Part A: Implementation of Entry-Exit Systems

# Entry-exit not always a good fit

- Victorian system owner, APA Group, says successful entry-exit systems in Europe have at least two main sources of flexibility (linepack, storage or alternative routes), but Victoria has small diameter pipelines, few alternative routes, and a high residential market, sensitive to cold snaps



# Other comparators[1]...

| | Length | Cross-border entry-exit points | Demand | Imports | Exports | Storage | Balancing period |
|---|---|---|---|---|---|---|---|
| | Km | # | PJ/year | PJ/year | PJ/year | PJ | |
| **NZ** | **2,523** | **-** | **229** | **-** | **-** | **-** | **Daily** |
| Victoria | 2,000 | 5 | 200 | - | 50 | 20 | 4 hours |
| UK | 7,600 | 9 | 3,270 | 2,100 | 70 | 150 | Daily |
| Germany | 112,000 | 37 | 3,060 | 3,410 | 770 | 700 | Daily |
| Netherlands | 11,900 | 17 | 1,600 | 770 | 1860 | 180 | Hourly |
| Belgium | 4,100 | 11 | 710 | 870 | 160 | 30 | Daily |
| France | 38,000 | 11 | 1,720 | 1,940 | 160 | 490 | Daily |

[1] Except for red, table is derived from APA Submission to AEMC Draft Report: Review of the Victorian Declared Wholesale Gas Market February 2016

# What other factors might be relevant?

- In recommending entry-exit for the EU, the Brattle Group said:

> The choice between different capacity types entails a fundamental trade-off between allowing shippers greater flexibility in system use and maximising the amount of firm capacity that can be sold.
> – Less flexible systems such as point-to-point capacity in some circumstances allows the TSO to sell more firm capacity.
> – More flexible systems such as entry-exit foster efficient trade, market liquidity and gas-to-gas competition, as well as secondary trading of capacity.

Convergence of non-discriminatory tariff and congestion management systems in the European Gas Sector, September 2002