Diurnal storage: definition of product

Overview

- Background and objectives
- Basic definition
- Allocation
- Overruns
- Physical constraints
- Next steps

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Diurnal storage: background

- At DISG16, Ofgem outlined the Authority's indicative conclusions on Offtake Arrangements
- Key conclusions on diurnal storage were:
  - the Authority has granted 4 weeks to develop new "Option A*"
  - diurnal storage allocated to DNs and NTS direct connects only
  - allocation of flexibility to NTS connectees will be commercial, and not unduly discriminatory

Diurnal storage: objectives

- The objectives of this presentation are:
  - outline work to date on definition of diurnal storage
  - describe a number of key issues
  - solicit views on the proposals from DISG attendees for incorporation into their further development

- Note that the proposals outlined in this presentation have been developed jointly with Transco

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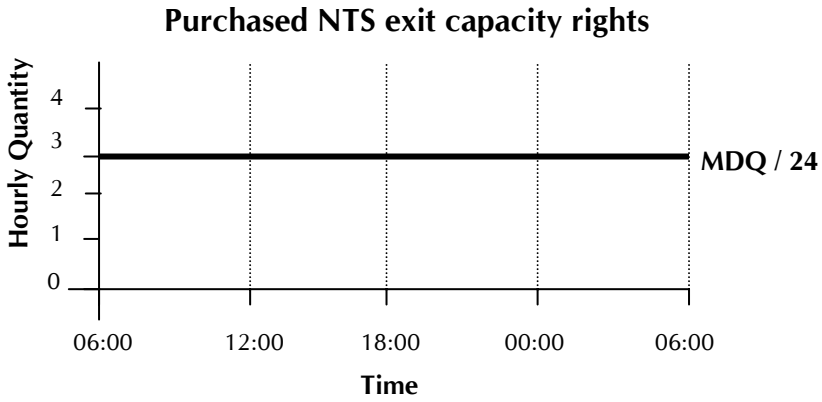
NTS exit capacity: proposed definition

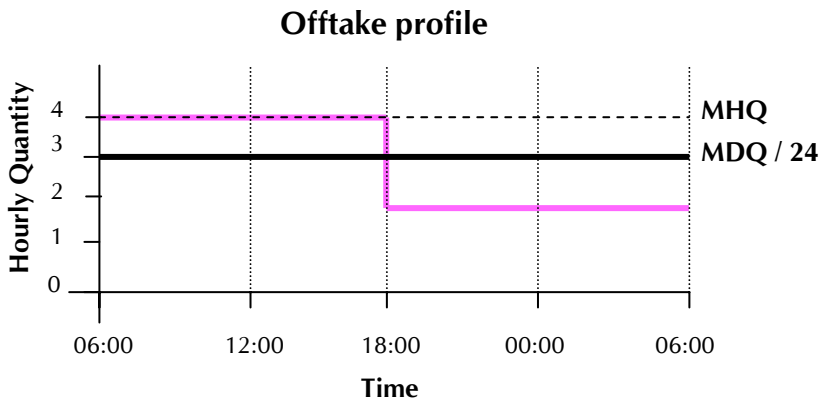
- Under the new arrangements, NTS exit capacity purchased for each day equals the Maximum Daily Quantity (MDQ) of offtake permitted
- NTS exit capacity rights allow the holder to offtake at a **maximum MDQ/24 hourly rate** in any hour during the day



- In this example – for a given day – an NTS connectee has bought 72 units of NTS exit capacity
- This entitles the holder to offtake gas at a maximum flat profile of 3 units per hour (MDQ/24 = 3)

Further flexibility: proposed definition (1)

- Diurnal storage is a form of "further flexibility" made available by the NTS, above the provision of primary NTS exit capacity
- Further flexibility rights are required by NTS connectees when their **hourly offtake rate at any time in the day exceeds MDQ/24** - i.e. their Maximum Hourly Quantity (MHQ) exceeds MDQ/24 at any time

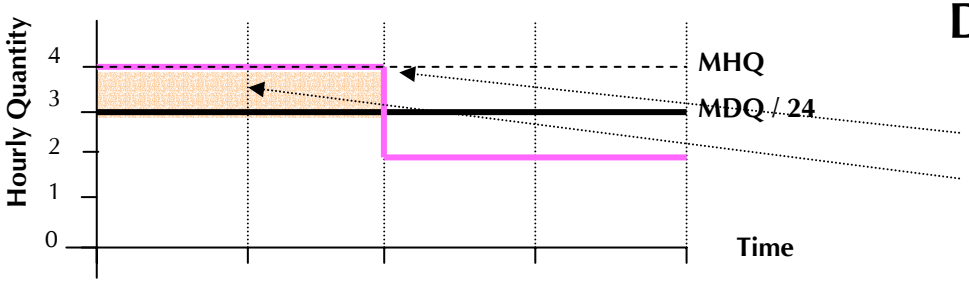


In this example, offtake:

- exceeds MDQ/24 by 1 unit/hour for 12 hours; then
- falls below MDQ/24 by 1 unit/hour for 12 hours
- there is no end-of-day impact on linepack levels

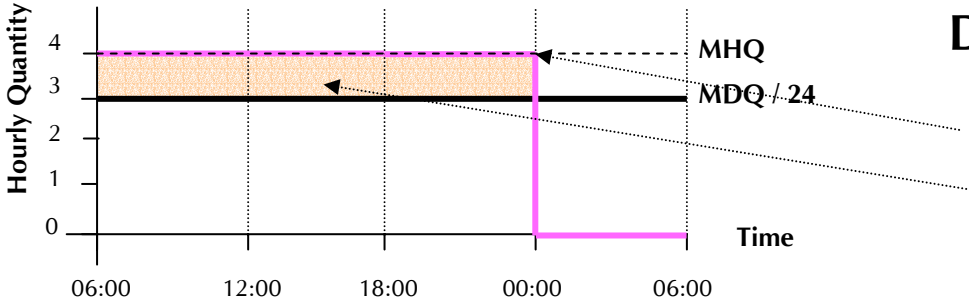
Further flexibility: proposed definition (2)

- Further flexibility is therefore defined by two parameters:
  - **Incremental Flow** (i.e. additional flow rate required above MDQ/24)
  - **Volume of Flexible Offtake** (i.e. incremental flow rate*time used)



Desired offtake profile 1:

- MDQ = 72
- Incremental Flow = 1
- Volume of Flexible Offtake = 12 (1*12)



Desired offtake profile 2:

- MDQ = 72
- Incremental Flow = 1
- Volume of Flexible Offtake = 18 (1*18)

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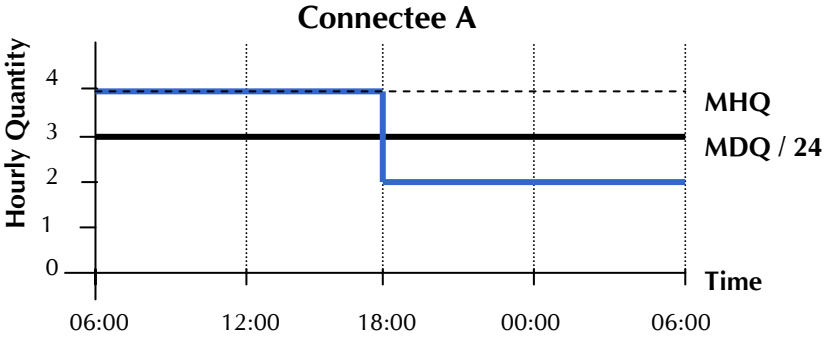
Allocation of further flexibility

- The working assumption is that the allocation process will be the same as the allocation of primary NTS exit capacity rights. Hence:
  - initial (unconstrained) allocation three years ahead;
  - constrained allocation at year ahead; and
  - day ahead allocation.
- Zonal boundaries for further flexibility are likely to be defined on same basis as NTS exit capacity rights
- Potentially, incentives placed on NTS to provide additional further flexibility at year-ahead / day-ahead stage

Allocation of further flexibility: example (1)

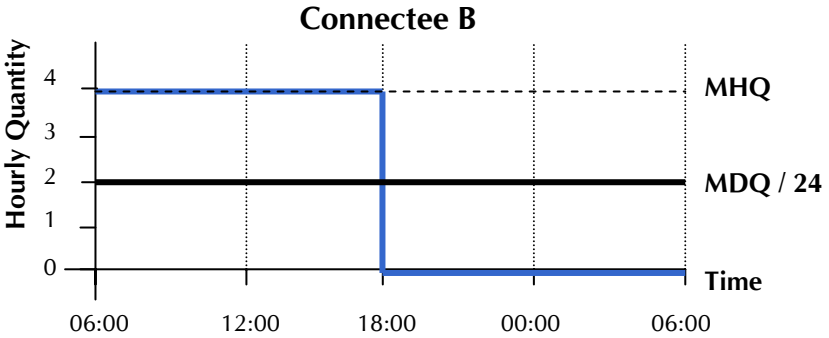
Offtake zone example:

- Assume two NTS connectees (A and B) are in a single offtake zone
- Assume the two connectees have the following desired offtake profiles



Connectee A:

- 72 units of NTS exit capacity (MDQ)
- 1 unit of Incremental Flow
- 12 units of Flexible Offtake



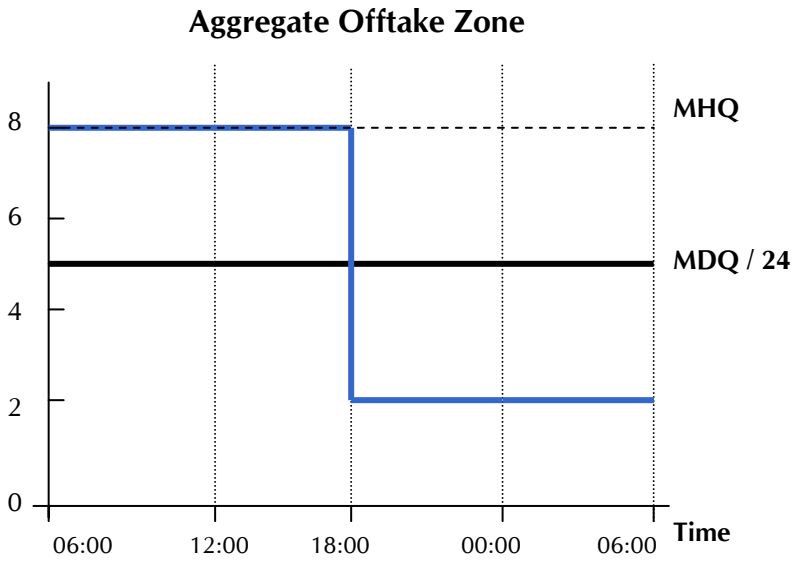
Connectee B:

- 48 units of NTS exit capacity (MDQ)
- 2 units of Incremental Flow
- 24 units of Flexible Offtake

Allocation of further flexibility: example (2)

Example (continued):

- The initial allocation is firm, and provides investment signals to the NTS



Aggregate investment signals for the NTS are:

- Total NTS exit capacity = 120 units (72 units + 48 units)
- Incremental Flow = 3 units (1 units + 2 units)
- Volume of Flexible Offtake = 36 units (12 units + 24 units)

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Overruns

- Offtake arrangements will require NTS connectees to make overrun payments, in the event that either NTS exit capacity or further flexibility rights are breached
- Overrun payments therefore to be designed for:
  - NTS exit capacity purchased;
  - Incremental flow; and
  - Volume of Flexibility Offtake.
- Level of overruns set at a level to ensure NTS connectees purchase NTS exit capacity and further flexibility rights ahead of gas day, and keep within purchased volumes
- Nature of overrun payments (i.e. volume, number of breaches, size of breaches) to be determined

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Physical constraints

- Recognise that, due to the physical constraints of the system, it may not be possible for the NTS to deliver all points in purchased envelope at all times
- In coming weeks, we will look at ways in which this can be handled (in a not unduly discriminatory way)
- This work will consider ways to handle:
  - Ramp rates
  - Notice periods
  - Pressure rates

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Next steps

- Views of DISG attendees required on all of these issues by Tuesday 31 August
- Work continuing on development of proposals by Transco and Ofgem
- Revised proposals to be presented by Transco to DISG on Tuesday 7 September
- Position paper published by Ofgem in mid-September

Appendix

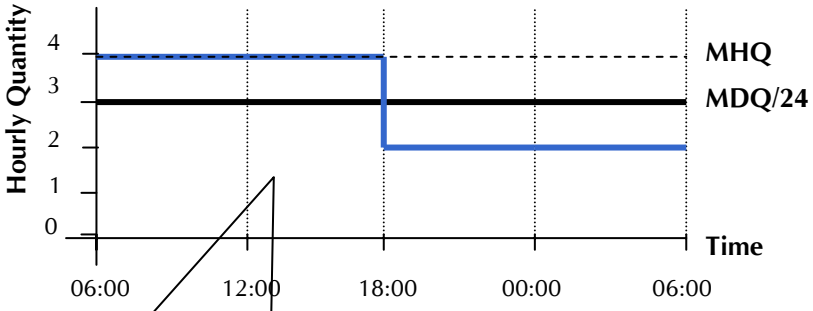
- Extra material
  - Example of secondary trading

Secondary trading: example (1)

Example:

- Using the previous example, assume Connectee A requires different diurnal storage than that purchased in the initial allocation, and Connectee B willing to sell the rights required
- Incremental Flow and Volume of Flexible Offtake are both tradeable

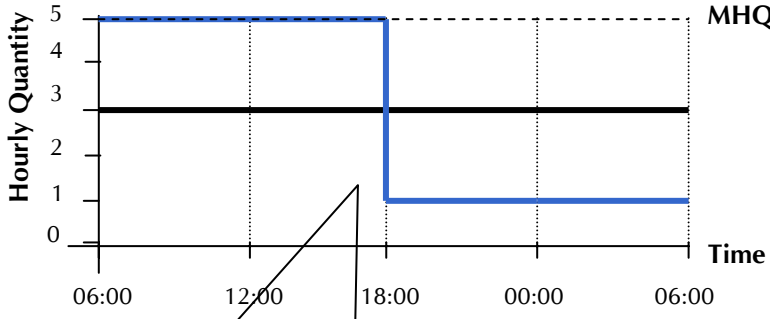
Connectee A (before trading)



Original allocation:
- MDQ = 72 units
- Incremental Flow = 1 unit
- Volume of Flexible Offtake = 12 units

Purchases:
- 1 unit incremental flow
- 12 units volume of flexible offtake

Connectee A (after trading)



Final holding after trading:
- MDQ = 72 units
- Incremental Flow = 2 units
- Volume of Flexible Offtake = 24 units

Secondary trading: example (2)

Example:

- After secondary trading, Connectee B reduces use of further flexibility
- Aggregate position for Offtake Point remains constant