GCD05: SO Commodity at Storage Sites

Gas TCMF

3rd December 2007

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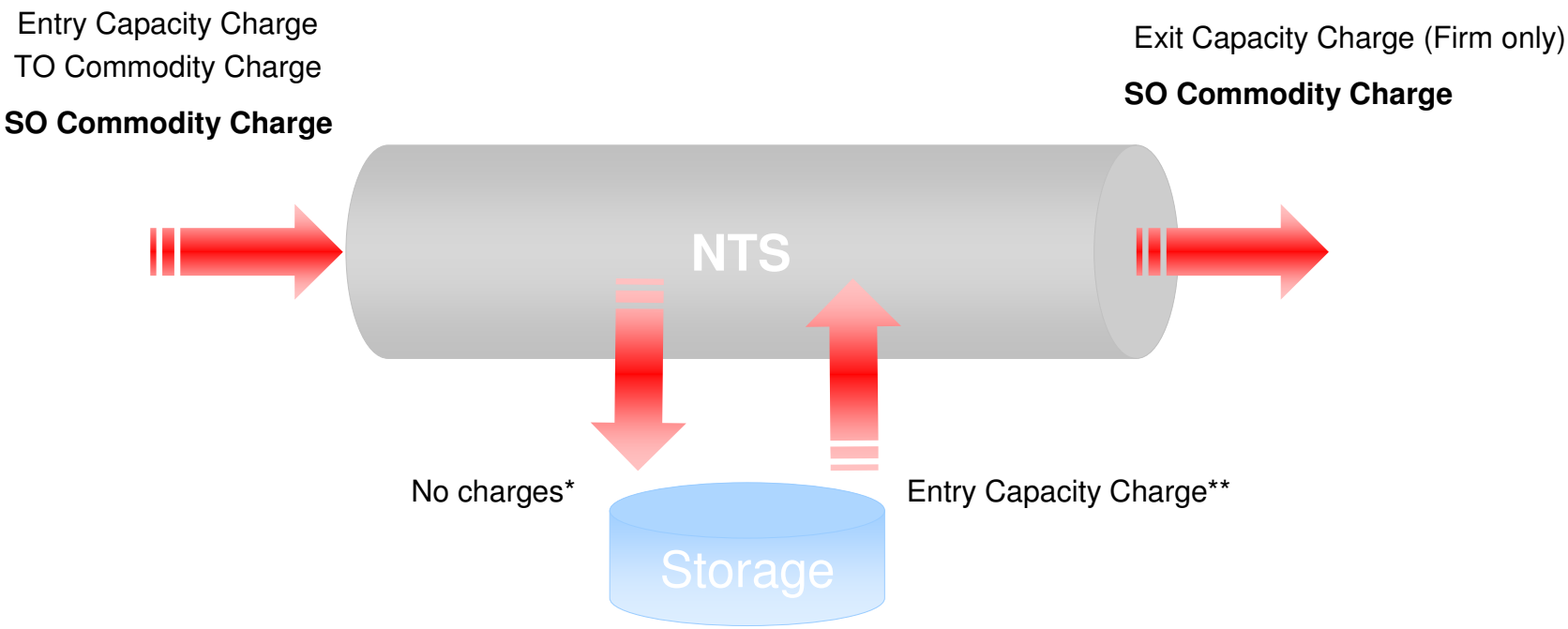
Background - Current Arrangements

- Capacity (*p/peak day kWh/day*)
- **Commodity** *(p/kWh)*



No SO Commodity Charge levied on Storage Users

** SO Commodity not applied, TO Commodity levied on SO Commodity charge base, therefore not applied

*Treated as Interruptible. Historically, SO Commodity not applied.

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Views sought

- Storage has been considered to be part of the wider system and has to date avoided charges that have been placed on ‘users’ of the system
- Views will be sought regarding
  - Should storage continue to be exempt from an SO commodity charge, or
  - does gas going in and out of storage result in additional costs for the System Operator above that for transportation from entry terminal to exit point?

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Way Forward

- Raise discussion Paper GCD05 “SO Commodity at Storage Sites”
  - Seek to overcome concerns regarding “Insufficient transparency of cost breakdown and proposed methodology”
- GCD05 will cover
  - SO Costs components
    - which costs should be included within a charge?
  - Physical v Commercial flows
    - Should the charge apply to “physical” or “commercial” flows?
    - There are many alternative options for allocating physical flows to Users (Covered at 14th December 2006 Gas TCMF)
  - Implementation
    - What are the costs on Users (IS etc) of introducing a charge?
    - What are the benefits of introducing a charge?

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GCD05: SO Commodity at Storage Sites

Milestone	Date
Charging Methodology Discussion Document issued	December 2007
Discussion Consultation Ends	January 2008
Discussion Report	February 2008
Raise Charging Proposals (as required)	tbc
Raise UNC Proposals (as required)	tbc
Implementation (as required)	1st April 2009

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SO Cost Components

- Daily costs – discussed at TCMF Nov 07
  - Shrinkage: Own Use Gas (OUG) =Compression
  - Shrinkage: Un-accounted for Gas (UAG)
- Annual costs
  - Operating Margins
  - Constrained LNG (CLNG)
  - Deemed Interruption.
  - Internal Costs

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SO Costs: Operating Margins & CLNG

- **Reasons to Include cost in an SO Storage Charge**
  - If storage facilities injected gas at times of high system demand then storage facilities could be said to benefit from these services.
- **Reasons to Exclude cost in an SO Storage Charge**
  - Storage withdrawal and injection is necessary to provide Ops margins and CLNG. Storage does not receive a benefit from these services which are used at times of high demand to support the system.

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SO Costs: Deemed Interruption

- **Reasons to Include cost in an SO Storage Charge**
  - These costs are linked to the exit charges that interruptible supply points would otherwise pay.
- **Reasons to Exclude cost in an SO Storage Charge**
  - Acknowledged that NTS Exit Reform will replace this term and associated foregone revenue.
  - This is the cost of having an interruptible service. At times of high demand (when interruption may be necessary) storage represents entry rather than exit and therefore doesn't benefit from the service.

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SO Costs: Internal Costs

- **Reasons to Include cost in an SO Storage Charge**
  - Administration of storage sites is comparable to other NTS supply points/CSEPs.
- **Reasons to Exclude cost in an SO Storage Charge**
  - The majority of System Operator costs are fixed and would not increase with either an increase in storage facility numbers or utilisation.

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Commercial flows v Physical flows

- If a charge was based on internal costs only (for example) these are not related to physical flows and so it may be more appropriate to charge on commercial flows
- Charging on commercial maintains consistency with other charges such as energy balancing, over runs etc
- Charging on physical is complex
  - See 14th December 2006 Gas TCMF Presentation (relevant slides appended)

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SO Storage Commodity Charge and "Physical Flows" (For Information)

(14th December 2006 Gas TCMF Presentation)

Gas TCMF

3rd December 2007

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Application of SO Storage Commodity Charge Rate – "Potential Alternative Proposal"

Default Arrangement

- User's Billable Quantity (BQ) for a Storage Facility determined based on deemed proportion of physical flow, by one of 3 options :
  - Option 1 – total BQ apportioned to each User according to their net "physical" flows
  - Option 2 – total BQ targeted to those Users whose net flow is in same direction as the storage site's net physical flow and apportioned according to their net physical flow
  - Option 3 – total BQ apportioned to each User according to their commercial flows (no "netting off")

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Example of “default arrangement Option 1”

Storage User	Storage Injection (UDQO)	Storage Withdrawal (UDQI)	Net Injection	Abs(Net Injection)	Proportion of Abs(Net Injection)	Billable Quantity
A	20	0	20	20	0.8	12
B	5	10	-5	5	0.2	3
C	5	5	0	0	0	0
Sum	30	15	15	25	1	15

Physical net flow of 15 units allocated to User A (12) and User B (3)

User’s BQ = Abs.(UDQI-UDQO) x User’s Abs (UDQI – UDQO) /
Agg [Abs (UDQI – UDQO)]

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Example of "default arrangement Option 2"

Storage User	Storage Injection (UDQO)	Storage Withdrawal (UDQI)	Net Injection	Net Flow in same direction as agg. net flow	Proportion of agg. Net flow	Billable Quantity
A	20	0	20	20	1	15
B	5	10	-5	0	0	0
C	5	5	0	0	0	0
Sum	30	15	15	20	1	15

Physical net flow of 15 units allocated to User A (15)

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Example of “default arrangement Option 3”

Storage User	Storage Injection (UDQO)	Storage Withdrawal (UDQI)	UQDI+UDQO	Proportion	Billable Quantity
A	20	0	20	20/45	6.67
B	5	10	15	15/45	5.0
C	5	5	10	10/45	3.33
Sum	30	15	45	1.0	15

Physical net flow of 15 units allocated to User A (6.67), User B (5) and User C (3.3).

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Application of SO Storage Commodity Charge Rate – alternatives to default arrangements

2 alternatives :

1. Agent to provide each User's allocation of physical flow

2. Invoice the aggregate daily storage charge to one party only (Storage Agent or Lead Shipper) – avoids systems complexity and Agent having to submit 2 sets of daily allocations

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