Interruption arrangements: Regulatory impact assessment

CIWG presentation, 7 July 2004

Outline of presentation

1. Objectives and key issues
2. Options for the interruptions arrangements
   a. Allocation of firm capacity product
   b. Mechanism for entering into interruptible contracts
   c. Transitional arrangements
3. Cost benefit analysis
4. Way forward

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Ofgem's duties

Protect customers
Promote competition
Section 4AA of Gas Act

The Authority is "to protect the interests of consumers in relation to gas conveyed through pipes, wherever appropriate by promoting effective competition between persons engaged in, or in commercial activities connected with, the shipping, transportation or supply of gas".

Licence and Gas Act obligations of licensee

Economic and efficient
Gas Act 9(1)(a)
and
Special Licence condition 27 (1)

- ".. duty of the gas transporter.... to develop and maintain an efficient and economical pipe-line system."
- "The licensee shall operate the NTS in an efficient, economic and co-ordinated manner"

Non discrimination
Gas Act 9(2)(b)
and
Standard licence condition 4D(1)

- "...the duty of a gas transporter to avoid any undue preference or undue discrimination ..."
- "The licensee shall conduct its transportation business ... to secure that neither ... any gas shipper or gas supplier obtains any unfair commercial advantage including....from a preferential or discriminatory arrangement, ..."

Cost reflective charging
Standard licence condition
4A(5)(a)

- " ..the charging methodology results in charges which reflect the costs incurred by the licensee in its transportation business"

Key issues for interruption

1. No undue discrimination
2. Freedom to contract on market based terms
3. Efficient investment signals
4. Efficient operating decisions
5. Low implementation & administration costs
6. Security of supply
7. Impact on customers
8. Effect on competition

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Allocation of firm capacity product

Option 1: Status quo

Capacity allocated to existing users at regulated prices and on first come first served basis to new users

Option 2: Unconstrained

Network owners provide capacity to existing and new users as requested

Option 3: Constrained

Capacity made available to all users at levels that reflects physical availability

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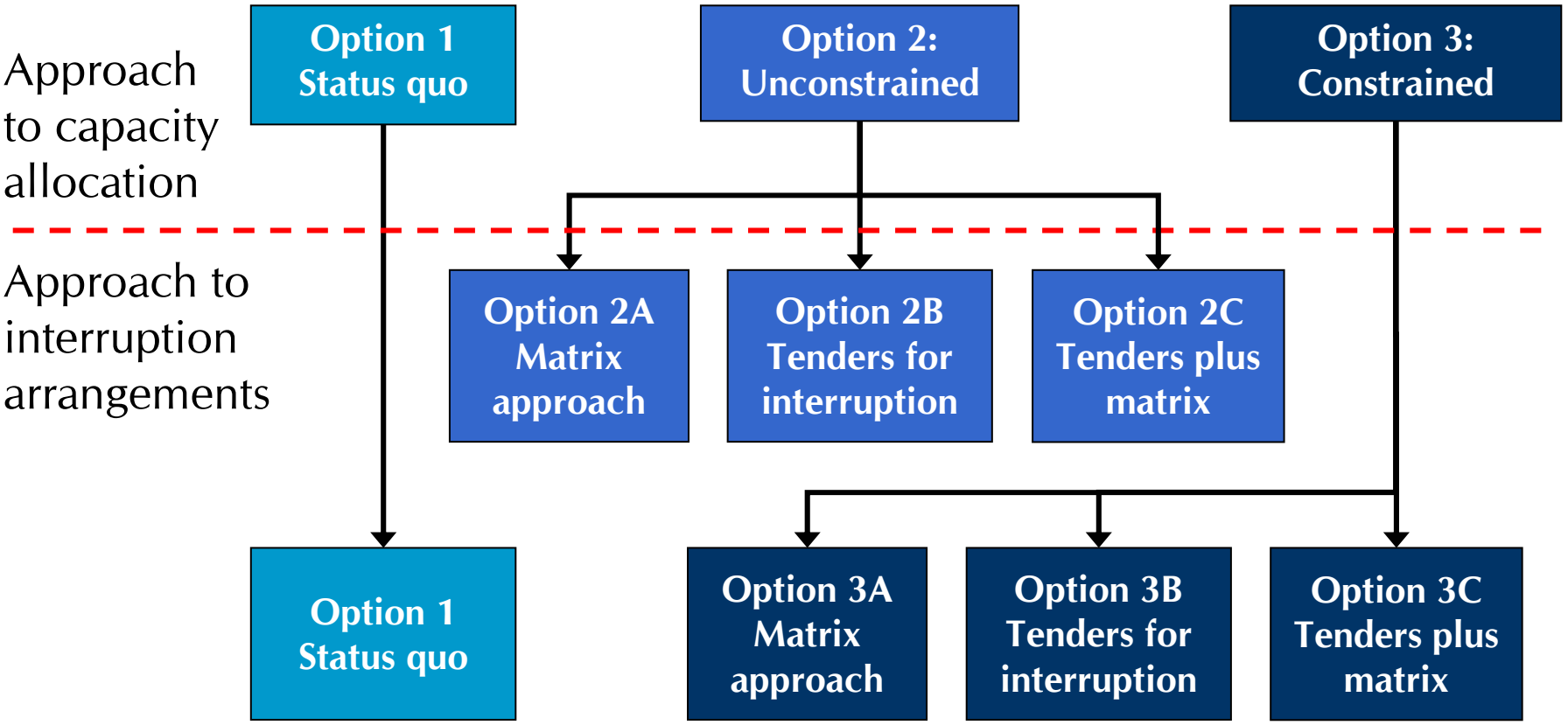
Mechanism for entering into interruptible contracts



Option 1 - Status quo

Key features:

- Shipper elects for sites to become interruptible
- Interruptible sites can elect to become firm unless Transco determine that the interruptible site is a network sensitive load (NSL)
- Most interruption contracts for 45 days of interruption in any one year (although some variants)
- Price for interruption set on an administered basis – equivalent to foregone capacity charge for first 15 days of interruption

Option 2A – Matrix Approach

- Network operator publishes matrix of interruptible contracts specifying variety of prices and number of days interruption for one year
- Participants select cell (or cells) in matrix they are willing to sign up to
- Transco selects only those offers it requires
- Participants with offers not accepted by Transco become firm

Option 2B – Tenders for interruption

Network owner would:

- hold tender for interruptible contracts
- vary price, duration and number of days of contract depending on characteristics of the interruptible site
- strike interruption contracts with customers where required

Sites not required for interruption would pay firm charges

Option 2C – Tenders plus matrix

- Combines 2A and 2B
- Participants can opt whether to enter into tender for interruption or submit offers to be interruptible through matrix
- Participants that have their offers rejected by Transco pay firm charges

Option 3 – Constrained allocation of firm capacity

Key elements of regime:

- Network operators are required to sell baseline level of exit capacity
- Baseline capacity determined for short term in manner consistent with physical characteristics of network
- Participants can purchase long term capacity rights against a schedule of prices
- Interruption arrangements required to extent network owner unable to deliver on sold capacity

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Transitional arrangements

- Transitional arrangements to address distributional impacts:
  - Grandfathering or glide path
- Transitional arrangements to address market power (instead of Competition Act):
  - cap the maximum price that network operators could pay for interruption for the first three years of the reformed interruptions regime (the investment lead time)

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Qualitative analysis

	2A	2A*	2B	2C	3
No undue discrimination	✓✓	✓	✓✓✓	✓✓✓	✓✓✓✓
Efficient investment signals	✓✓	✓	✓✓	✓✓	✓✓✓✓
Efficient system operation decisions	✓✓	✓	✓✓✓✓	✓✓✓	✓✓✓✓
Implementation & admin costs	✗ ✗	✗ ✗	✗ ✗	✗ ✗ ✗	✗ ✗ ✗ ✗
Short term security of supply	✓ ✓	✓	✓✓✓✓	✓✓✓	✓✓✓✓
Long term security of supply	✓	✓	✓✓	✓✓	✓✓✓✓
Customer choice	✓✓	✓	✓✓✓	✓✓✓✓	✓✓✓✓
Complexity for customers	✗ ✗	✗	✗ ✗ ✗	✗ ✗	✗ ✗ ✗ ✗
Distributional effects & fuel poverty	✓✓	✓	✓✓✓	✓✓✓	✓✓✓✓
Effect on competition	✓✓	✓	✓✓✓✓	✓✓✓	✓✓✓✓

Quantitative analysis

Option:	**2A**	**2A***	**2B**	**2C**	**3**
Efficient investment signals	34	17	34	34	50
Efficient system operation decisions	9	2	12	11	12
Implementation and admin costs	31	31	28	33	40
Total NPV relative to Option 1	£12m	£-12m	£18m	£12m	£22m

Obviously dependent on the assumptions .....

Quantitative assumptions – SO efficiency (1)

- Currently participants unable to signal cost of interruption to NGT
- NGT therefore uses equitability algorithm and the "equal misery" principle to decide which customers to interrupt when there is choice
- Would be more efficient if network owner interrupted those customers that incur least cost in being interrupted.

Quantitative assumptions – SO efficiency (2)

Valued this by:

1. Assuming 3 classes of customers with varying costs of interruption (15p, 25p and 50p per therm – based on analysis of spark spread, costs of fuel oil, and implied cost of ceasing to produce respectively) and assumed proportion of split (20%, 60% and 20% respectively)
2. Assuming volume of non-NSL interruption required calculated for each DN for different types of winter conditions
3. Calculated average economic cost of interruption when interruption sites selected by equitability algorithm
4. Calculated average economic cost of interruption when interruption sites selected on basis of least cost
5. Difference between 3. and 4. is the benefit of being able to signal costs of interruption.
6. Assumed benefits greatest when participants can specify exactly the terms of interruption. Hence tender approach benefits higher than matrix type approach.

Quantitative assumptions – Investment efficiency

- Currently potential investment inefficiencies arise due to:
  - Current inflexibility of interruption arrangements means Transco has little choices with interruption arrangements which will impact upon investment decisions
  - Lack of long term commitment from end users means investment decision based on planning estimates – likely to lead to some inaccuracy of investment
- Valued by:
  - Estimated annual relevant capex on networks to be c £158m
  - Assumed efficiency improvement will allow a small percentage reduction in capital expenditure on DNs and NTS. Assumed that this was greatest under Option 3 and small under Option 2 (as less long term commitment)

Quantitative assumptions: Costs

- Central systems costs provided by Transco
- Assumed market participant costs would, in aggregate, be not more than twice Transco costs
- Assumed ongoing costs would be higher in Option 3 than Option 2 as requires longer term commitments

Transitional arrangements

- Benefits of transitional arrangements:
  - Grandfathering/ glide path – offers certain customers relief
- Costs of transitional arrangements:
  - Grandfathering/ glide path – persistence of identified inefficiencies
  - Price caps could:
    - encourage network overinvestment; and
    - inhibit innovation in network development

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Way forward

- Submissions due 28 July
- Decision due early August
- If Authority decides in favour of reform, detailed model will need to be developed
    - further consultation on more detailed model

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Promoting choice and value for all gas and electricity customers