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# **Gas Market Options Cost Benefit Analysis**

**Industry Forums 10 and 11 April 2006**

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# Presentation Overview

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1. CBA objectives
2. CBA process and methodology
3. Impacts of the market options
4. Potential costs & benefits of the options
5. Stakeholder input
6. Next

# 1) CBA study objectives

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- **To assess costs and benefits of:**
  - Bulletin Board
  - Short Term Trading Market
  - Relative to the status quo, Organic Development
- **“Order of Magnitude” assessment**
  - Quantified to maximum possible extent
  - Market design to date is conceptual, but adequate to allow costs and benefits to be estimated
- **Draft Report due 10 May 2006**
- **To assist GMLG in preparing recommendations on a National Gas Market Development Plan**

## 2) CBA study process

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- **Liaison with GMOWG**
  - Confirm options for CBA
  - Guidance on costs and benefits
- **Industry consultation**
  - Discussion paper
  - Forums
  - MMA meetings with stakeholders
- **Analysis**
  - Desktop research
  - Benefit modeling
  - Cost estimation

## 2) CBA study methodology

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- **Emphasis on transparency**
  - Report analysis of each component
  - No large scale black-box model
  - Avoid double counting
- **Desktop research**
  - Other energy market CBAs
  - Mostly electricity
- **Impact assessment**
  - Broader impacts - qualitative

## 2) CBA study methodology (contd)

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- **Benefit modelling**
  - Assess benefits of an ideal market
    - Eg more efficient use of infrastructure
  - Limitations of BB and STTM
- **Cost estimation**
  - Largely based on recent experience
  - NSW, SA and WA FRC implementation
  - Victorian Gas Market Project
  - Participant inputs
- **Economy-wide impact**
  - Estimated using COPS' MMRF model

### 3) Impacts of the market options

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- Gas demand and supply
- Gas wholesale and retail prices
- Number of market participants
- Security of supply
- Consumer information and transaction costs
- Externalities
- Other industries
- Employment impacts
- Regional impacts

## 4) Potential costs of the options

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- **Costs of completing option development and establishing its regulatory and governance structure**
  - Incurred by government and participants
- **Direct costs of implementing and operating the options**
  - Incurred by the operator and participants, but
  - should be able to modify existing systems, with limited requirement for “greenfield” development
  - Bulletin Board will have synergies with NGERAC needs

## 4) Potential costs of the options (contd)

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- **Sunk costs in the existing gas balancing arrangements**
  - May be largely written off by the time of implementation
  - Existing systems currently under review and may require change regardless
- **Most costs expected to be recovered from gas end-users and taxpayers**

## 4) Potential benefits of the options

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- **Benefits will be created by increased information availability and trading opportunities**
  - More effective risk management
  - Effective access to demand side management
  - More efficient use of gas supply portfolios and supply infrastructure

## 4) Potential benefits of the options (contd)

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- Clearer and more transparent market signals for investment in infrastructure
- Lower risks/costs in dependent markets such as gas-fired electricity generation;
- Increased market effectiveness during gas supply shortages and emergencies, forestalling Government intervention
- Improved system reliability
- Economy-wide benefits flowing from gas market efficiency gains

## 5) Stakeholder input - Bulletin Board impacts

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- **Which of the Bulletin Board activities does your organisation already carry out?**
  - Including information gathering and/or provision
- **What incremental impacts do you foresee the Bulletin Board having on your operations?**
  - Can you provide any concrete examples of such impacts?
- **Do you believe that your organisation would find the voluntary buy/sell part of the Bulletin Board useful?**

## 5) Stakeholder input - Bulletin Board costs

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- **Do you have any experience with the costs associated with Bulletin Board activities, such as providing information to a market operator?**
- **Can you comment on the costs or similar costs in analogous areas of:**
  - Preliminary costs
  - System establishment
  - System operations
  - Costs to Government
  - Costs to industry
  - Indirect costs
- **What incremental costs do you see the Bulletin Board resulting in for:**
  - Your organisation
  - Other organisations
  - The industry as a whole

## 5) Stakeholder input - Bulletin Board benefits

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- **What benefits do you see the Bulletin Board providing to:**
  - Your organisation
  - Other organisations
  - The industry as a whole?
- **Can you provide examples of these benefits?**
- **Can you think of any way to place a value on these benefits?**
- **Do you see the Bulletin Board contributing to the requirements set out by NGERAC? If so, to what extent?**

# 5) Stakeholder input – STTM impacts

- **What impacts do you think the STTM will have on your:**
  - Daily operations
  - Short-term risk management – eg handling of take or pay, imbalances, maximum daily quantities (MDQ) requirements;
  - Long-term risk management – eg contracting for supply and transportation;
  - Investment decisions;
  - Generation;
  - Demand side management. How would you see this working in practice for direct contract users and users supplied through a retailer?
  - Response during an emergency. For example, in which ways would your organisation have behaved differently if the STTM had been in place at the time of the Moomba Incident on 1 January 2004?

## 5) Stakeholder input – STTM impacts (contd)

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- Are there any analogies with the implementation of other markets that can be carried over to the STTM? Can you think of any concrete changes on your operations resulting from these?
  - Eg the current gas arrangements in NSW/ACT, SA/WA and Victoria or the NEM

## 5) Stakeholder input – STTM impacts (contd)

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- **Impacts of shortcomings of the proposed model**
  - If you consider that the model as described will not fully allow the potential benefits of a STTM to be realised, please describe the areas of shortcomings or barriers and the resultant impact on costs and benefits.
  - Is there a real risk of “getting it wrong”? If so, what do you assess these risks to be and what impact would they have on the benefits and costs? How can these risks be minimised?

## 5) Stakeholder input – STTM costs

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- Do you have any experience with the costs associated with activities such as a STTM?
  - Eg the current gas arrangements in NSW/ACT, SA/WA and Victoria or the NEM

## 5) Stakeholder input – STTM costs (contd)

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- **Can you provide indicative costs or similar costs in analogous areas for:**
  - Preliminary costs
  - System establishment and a substantial degree of testing, especially for the Market Settlement systems.
  - Costs to extend functionality to (say) additional hubs.
  - Market system operations
  - Costs to industry for providing inputs.
  - Costs to Government
  - Indirect costs.
- **What costs do you see the STTM resulting in for:**
  - Your organisation
  - Other organisations
  - The industry as a whole?
- **Are there any other costs that we have not covered here?**

## 5) Stakeholder input – STTM benefits

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- **Considering the potential benefits listed previously, which of these do you consider will apply to your organisation if a STTM is introduced?**
  - Are there further benefits to you that are not included here?
- **Can you think of any way to place a value on these benefits?**
- **Are there any analogies about the benefits of a STTM that can be drawn from the Victorian gas market? Can you think of a way to place a value on such benefits?**
- **Are there benefits you can think of to other organisations or the industry as a whole?**
  - Considering the potential benefits listed previously, which of these do you consider will apply to other organisations if a STTM is introduced?
  - Are there further benefits to others that are not included here?

## 5) Stakeholder input – STTM benefits (contd)

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- **To what extent, if any, do you think the benefits discussed above will be reduced or enhanced by the existence of the Victorian gas market?**
  - For example, it may be that the existence of the Victorian gas market already reduces your risk exposure (say through take or pay) in NSW, SA and Tasmania.
- **Are there other factors which will enhance or reduce the benefits otherwise attributable to a STTM?**
  - For example, greater consistency of operations across the pipeline grid

## 5) Stakeholder input – STTM benefits (contd)

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- To what extent do you believe the NGERAC requirement will be met if a STTM as discussed is introduced? What other alternatives would there be?
- Can you comment on potentially avoided costs such as the costs of GMCo and REMCo and any avoided costs for NGERAC? What do you believe to be the avoided activities and associated avoided costs? Are there any practical difficulties in avoiding such costs?
- How do you believe “sunk costs” should be handled?

## 6) Next

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- Thank you for attending this Forum
- MMA will contact you shortly to discuss your input to the CBA
- But please contact us first if you wish:
  - Richard Lewis      03 9674 4714
  - Michael Goldman    03 9674 4708