



Agenda

MEETING TITLE	Gas Advisory Board
MEETING NO	21
DATE	Wednesday, 15 July 2015
TIME	3:00 PM - 5:00 PM
LOCATION	IMO Boardroom, Level 17, 197 St Georges Terrace, Perth

Item	Responsibility	Duration
1. Welcome	Chair	2 min
2. Meeting apologies/attendance	Chair	2 min
3. Minutes of previous meeting	Chair	5 min
4. Actions arising	Chair	5 min
5. Overview of GSI Rule and Procedure Changes	IMO	5 min
6. Discussion: Electricity Market Review Update	PUO	10 min
7. Position Paper – A Proposed Design for the new Rule Change Assessment Panel	PUO	20 min
8. Presentation: GBB Zones Review	IMO	10 min
9. Discussion: GBB EMF test activation	IMO	10 min
10. Presentation: GBB data visualisations	IMO	20 min
11. Discussion: Opportunities to enhance the information published on the GBB	IMO	20 min
12. Discussion: Options for GSI Review	IMO	10 min
13. Other business	Chair	5 min
14. Next meeting: Tuesday 20 October 2015		

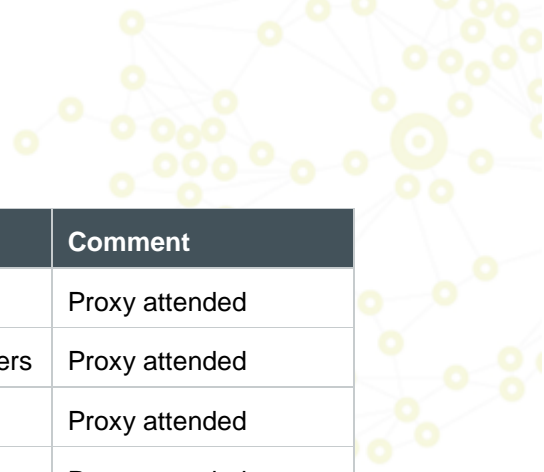
Please note this meeting will be recorded to assist with the preparation of minutes.



Minutes

MEETING TITLE	Gas Advisory Board
MEETING NO	20
DATE	Tuesday, 26 May 2015
TIME	1:05 PM – 2:05 PM
LOCATION	IMO Boardroom, Level 17, St Georges Tce Perth

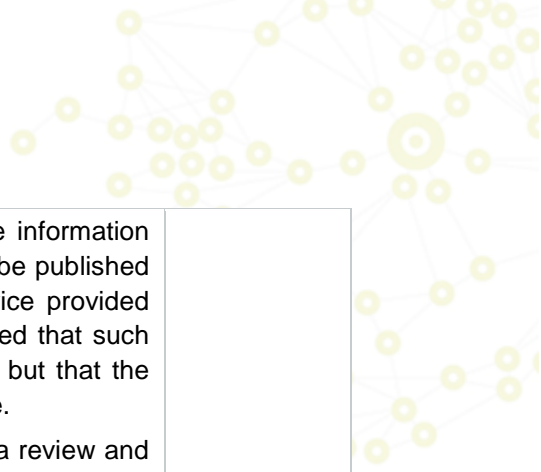
Attendees	Class	Comment
Allan Dawson	Chair	
Kate Ryan	IMO	
Stewart Gallagher	Gas Producer	
Pete DiBona	Gas Producer	
Mark Cooper	Pipeline Owner/Operator	
John Jamieson	Pipeline Owner/Operator	
Mike Lauer	Gas Shipper	
Andrew Sutherland	Gas Shipper	
Mike Shaw	Large Gas User	
Ian Mumford	Large Gas User	
Matthew Martin	Coordinator of Energy	Proxy
Natalia Kostecki	Minister's Appointee – Small End Users	Proxy
Natalie Jackson	Economic Regulation Authority (ERA) – Observer	Proxy
Bryon McLaughlin	Minister's Appointee – Observer	Proxy
Dave Rafferty	Santos	Observer
Don Bower	Energy Access Services	Observer
Hans Niklasson	Kleenheat Gas	Observer
Erin Stone	IMO	Presenter
Mark Katsikandarakis	IMO	Presenter
Marc Hettler	IMO	Observer
Peter Shardlow	IMO	Observer
Chris Wilson	IMO	Observer
Joachim Tan	IMO	Observer
Laura Koziol	IMO	Minutes



Apologies	Class	Comment
Ray Challen	Coordinator of Energy	Proxy attended
Aden Barker	Minister's Appointee – Small End Users	Proxy attended
Nerea Ugarte	Minister's Appointee – Observer	Proxy attended
Elizabeth Walters	ERA – Observer	Proxy attended

Item	Subject	Action
1.	<p>WELCOME</p> <p>The Chair opened the meeting at 1:05 PM and welcomed all members and observers to the 20th Gas Advisory Board (GAB) meeting.</p>	
2.	<p>MEETING APOLOGIES/ATTENDANCE</p> <p>The following proxies were noted:</p> <ul style="list-style-type: none"> Matthew Martin (proxy for Ray Challen) Natalia KostECKI (proxy for Aden Barker) Bryon McLaughlin (proxy for Nerea Ugarte) Natalie Jackson (proxy for Elizabeth Walters) <p>The following presenters/observers were noted:</p> <ul style="list-style-type: none"> Dave Rafferty (Santos) Hans Niklassen (Kleenheat Gas) Don Bower (Energy Access Services) Erin Stone (IMO) Mark Katsikandarakis (IMO) Marc Hettler (IMO) Peter Shardlow (IMO) Chris Wilson (IMO) Joachim Tan (IMO) Laura Koziol (IMO) <p>The Chair noted that Mr Andrew Sutherland had provided his apologies, noting that he had to leave at 2:00 PM and requested that agenda item 8 be covered earlier in the meeting. The Chair agreed and re-ordered the agenda.</p>	
3.	<p>MINUTES OF PREVIOUS MEETING</p> <p>The minutes of GAB Meeting No. 18, held on 16 December 2014 were circulated prior to the meeting. No further comments were raised and the minutes of the previous meeting were accepted as a true record.</p> <p><i>Action Point: The IMO to publish the minutes of Meeting No. 18 on the IMO's website as final.</i></p>	IMO
4.	<p>ACTIONS ARISING</p> <p>Ms Kate Ryan advised that all four action items had been completed. No GAB members had any questions or comments.</p>	

5.	<p>OVERVIEW OF GSI RULE AND PROCEDURE CHANGES</p> <p>Ms Ryan noted that the Rule Change Proposal: Amendments to Schedule 2 – GBB Zones (GRC_2015_01) commenced on 20 March 2015. No Rule Change Proposals or Procedure Change Proposals were currently being progressed.</p>	
6.	<p>REVIEW OF THE BENEFITS AND COSTS OF THE GAS SERVICES INFORMATION</p> <p>The Chair introduced Ms Erin Stone to provide an overview of the review of the benefits and costs of the Gas Services Information (GSI) which was scheduled for 2015. Ms Stone noted that during implementation of the GSI, the IMO had agreed to undertake this review once the GSI had been in operation for an appropriate period. Ms Stone summarised the planned scope of work for the review. GAB members discussed the following key points:</p> <ul style="list-style-type: none"> • Mr Sutherland asked whether it was the correct time to undertake such a review. Mr Pete DiBona noted that the context had changed since the request for the IMO to undertake this review was made and questioned whether there was still value in undertaking the cost-benefit study if the outcomes were obvious. The Chair clarified that the IMO had undertaken a forward looking cost-benefit study during the implementation of the GSI and as part of the project had agreed to undertake a post implementation review to reaffirm the costs and benefits. The Chair noted that this process was common and that the IMO had undertaken a similar exercise with the introduction of the Balancing Market in the Wholesale Electricity Market (WEM). Mr Sutherland noted that he did not think that such a review would provide value for money. • Mr Ian Mumford asked whether there would be an opportunity for input from third parties. Ms Stone noted that the scope was left open for the consultant to propose a consultation approach, but expected that there would also be a formal consultation document released for broader stakeholder comment. • Mr Mark Cooper noted that the IMO had not received any proposals from its recent request for quote and asked how the IMO would go about finding a consultant to undertake the review. Ms Ryan noted that the proposal was to undertake the review in a shortened timeframe but that later in the year there shouldn't be a problem finding suitable consultants. The Chair noted that many energy sector consultants were currently busy with work in the electricity sector. • Mr Stewart Gallagher asked whether the previous analysis had quantified the costs and benefits and whether the proposed review would do so. The Chair confirmed that both the previous review and the proposed review included quantification of the costs and benefits of the GSI. • The Chair noted that the IMO could circulate the cost-benefit study undertaken during the implementation of the GSI along with the associated cost to help GAB members decide whether there was value in undertaking this review. The Chair noted that the IMO considered that the review would be valuable but acknowledged GAB members' questions over value for money. 	



	<ul style="list-style-type: none"> Mr John Jamieson asked what would be done with the information produced as part of the review. The Chair said it would be published for stakeholders but that there may also be some advice provided regarding improvements to the GSI. Mr Mike Lauer noted that such recommendations would be a useful part of the review but that the reaffirmation of the costs and benefits in itself may not be. The Chair noted that the IMO had budget to undertake a review and suggested that if GAB members wanted to commission a different study the GAB could request the IMO to develop a scope of work for a different review. The Chair noted that the IMO would include further discussion on the need for a cost-benefit review, or other review of the GSI at an upcoming GAB meeting. <p><i>Action Point: The IMO to circulate the cost-benefit study undertaken during the implementation of the GSI along with the associated cost of the review to GAB members.</i></p> <p><i>Action Point: The IMO to include further discussion on the need for a cost-benefit review, or other review of the GSI at an upcoming meeting.</i></p>	<p>IMO</p> <p>IMO</p>
<p>7.</p>	<p>REVIEW OF GBB ZONES</p> <p>The Chair introduced Ms Ryan to provide an overview of the Gas Bulletin Board (GBB) Zones review. Ms Ryan noted that, in light of upcoming new facilities, the IMO had decided to undertake the first five yearly review of the GBB Zones early, to advise on the approach that should be taken to allocate upcoming pipelines to GBB Zones and identify any other changes to the Zones that may be beneficial. Ms Ryan further noted that the IMO had engaged Marsden Jacob Associates to assist with the review, which included both informal and formal consultation with gas industry stakeholders.</p> <p>The Chair encouraged members to provide feedback on the review and also noted that the IMO’s GBB system was able to be modified relatively easily to accommodate changes to the Zones if required.</p> <p>GAB members discussed the following key points:</p> <ul style="list-style-type: none"> Mr Lauer commented that it is inefficient to require a rule change to allocate a new pipeline to an existing Zone and that automatic allocation to a Zone with scope for review may be more appropriate. Ms Ryan responded that this issue would be considered in the review. The Chair noted that some governance of the Zones was appropriate, but agreed that the current approach may be an undue burden. The Chair sought clarification of whether there would be a stakeholder workshop. Ms Ryan clarified that no workshop was planned but that it could be arranged if stakeholders requested one. Mr Mumford queried whether the report would be provided to the Minister. Ms Ryan stated that the document will be published on the IMO’s website but that there is not a formal requirement to provide it to the Minister. Ms Ryan noted that the report may lead to a rule change and therefore may be required to be provided to the Minister as part of that process. 	
<p>8.</p>	<p>PRESENTATION: GBB – RECENT DISRUPTIONS TO PRODUCTION</p> <p>The Chair introduced Mr Mark Katsikandarakis to present an overview of the recent production disruption at the North West Shelf’s Karratha Gas</p>	

Plant on 13 May 2015 and how it was reflected by the information provided on the GBB. GAB members discussed the following key points:

- The Chair sought clarification of when the actual effect on gas flows was visible to the public. Mr Katsikandarakis confirmed that the impact on gas flows was seen two days after the Gas Day on which the incident occurred. Mr Mike Shaw queried whether the Daily Actual Flow data would have been made public sooner if the Emergency Management Facility (EMF) had been activated. Mr Katsikandarakis answered that in that case of the activation of the EMF, the Daily Actual Flow data is published on the EMF on the day after the Gas Day on which the incident occurred. Ms Ryan added that the Coordinator of Energy could request additional information which could be made available on the EMF sooner.
- The Chair noted that during the incident, electricity market participants were seeking guidance regarding the incident. The Chair also noted that although the incident was short-term, this would not have been known at the time of the incident. Mr Sutherland queried at what time participants could have become aware of the incident if it was expected to last longer. The Chair answered that the incident would have become public at the time the EMF was activated. Ms Ryan added that if the production disruption continued, the Capacity Outlook provided by 6:00 PM would have reflected the reduced capacity for the next Gas Day. Mr Gallagher noted that to do this, the operator would have needed to have completed an assessment indicating it would be a multi-day incident.
- Mr Lauer noted that all users on the Dampier to Bunbury Pipeline (DBP) were notified of the incident, but not the details. Mr Lauer also noted that there is no state for the Linepack Capacity Adequacy (LCA) that indicates that an incident had occurred, as the amber LCA flag indicates expected curtailment of interruptible gas flows.
- Mr Bryon McLaughlin noted that the Public Utilities Office (PUO) had engaged with North West Shelf and affected stakeholders during the incident and noted that the PUO assessed the alert level under the Westplan – Gas Supply Disruption to be ‘green’, which does not trigger activation of the EMF. Mr McLaughlin added that the activation of the EMF would not have provided any further value ~~as~~ due to the short-term nature of the incident. Mr Mumford sought clarification regarding the thresholds for assessing the incident. Mr McLaughlin responded that, if the information about the incident had indicated a more serious disruption, the PUO would have advised the Coordinator of Energy to raise the Westplan alert level to ‘amber’, which may have triggered EMF activation.
- The Chair acknowledged that the EMF was designed to support the PUO but asked GAB members whether the level of information provided through the GBB was sufficient and timely enough in cases of supply disruptions. The Chair noted that not all Gas Market Participants were DBP customers and asked if information regarding the disruption would have been valuable to other parties. Mr Dave Rafferty noted that gas producers were not informed but would have benefited from more information to help make decisions in response to the disruption. Mr Lauer noted that sharing information

through the GBB was valuable but it should not lead to an increase in costs for Gas Market Participants.

- The Chair noted that in the WEM, supply disruptions are made public as Forced Outages so other participants can take appropriate actions. The Chair suggested that a similar mechanism could be implemented for the GBB where a notice could be published to inform the industry of a disruption. Mr John Jamieson noted a suggestion that was being considered for the national GBB was to allow a participant to issue a notification of an incident even where it isn't expected to affect the LCA. Mr Mumford noted the value of more information, suggesting that the absence of information often leads to participants to expect the worst. Mr Rafferty noted that notice of a disruption would give participants the opportunity to prepare, including making any operational decisions to manage the risk or help alleviate the situation.
- Mr Cooper noted that, there was a trade-off between timeliness and accuracy of information and that specific information is often not available in real-time. Mr Gallagher noted that the principal concern would be that such an obligation could force the plant operator to make a statement on the status of a plant before the issue was sufficiently assessed [which could be misleading to the market](#). Mr McLaughlin noted that the information shared ~~at~~ by Operations Management Group established under the Westplan was as 'real-time' as possible and that it would not be possible for the GBB to be as up to date. Mr Cooper also noted that the information provided in this forum was used for operational decision-making and may not have the level of accuracy required for the GBB. The Chair clarified that simple information that a facility had tripped and that the operator was investigating the issue would have been available and valuable.
- The Chair reiterated his question of whether additional information regarding disruptions would be valuable from a commercial or operational perspective and, should an incident turn out to be prolonged, whether earlier notification would have assisted with managing and mitigating the effects. Mr Lauer noted concerns about information being misinterpreted, but suggested that a notice advising of a disruption could [be](#) published. Mr Mumford stated that information regarding a trip of a facility would be of value and noted that the threshold between a 'trip' and something more serious was a key issue. Mr Shaw noted different participants value and react to information according to their own business needs and impact. For example, Alcoa had a conservative approach regarding supply disruptions and would therefore place a great value on more timely information regarding such a supply disruption. Mr Jamieson stated that it would have been valuable for APA Group to have had more timely information and could have ramped up supply from the Mondarra Gas Storage Facility if ~~required~~[required](#).
- Mr Sutherland noted that the GBB responded as designed and questioned whether the design should be amended. The Chair reiterated that in the WEM, participants are required to notify the IMO of an outage of a Facility and asked GAB members to consider whether this should be implemented in the GSI Rules. The Chair noted that the IMO would include further discussion at an upcoming GAB



	<p>meeting on the options to provide information to Gas Market Participants where a facility is unavailable.</p> <p><i>Action Point: The IMO to include further discussion at an upcoming GAB meeting on the options to provide information to Gas Market Participants where a facility is unavailable.</i></p> <p><i>Action Point: The IMO to publish the presentation GBB Response to the Production Incident at the Karratha Gas Plant on the IMO website.</i></p>	<p>IMO</p> <p>IMO</p>
<p>9.</p>	<p>GENERAL BUSINESS</p> <p><i>Change in IMO GAB representative</i></p> <p>The Chair noted that this was Ms Ryan's last GAB meeting before taking extended leave and that Ms Stone would be the new IMO representative on the GAB.</p> <p><i>Rule change approval functions</i></p> <p>Mr DiBona sought clarification of whether the establishment of a new rule approval body, which is proposed as a part of the Electricity Market Review, is intended to also take over rule approval functions under the GSI Rules. The Chair noted that if the governance of the WEM Rules was changed, it was likely that the governance of the GSI Rules would also be changed.</p>	
<p>CLOSED: The Chair declared the meeting closed at 2:05 PM.</p>		

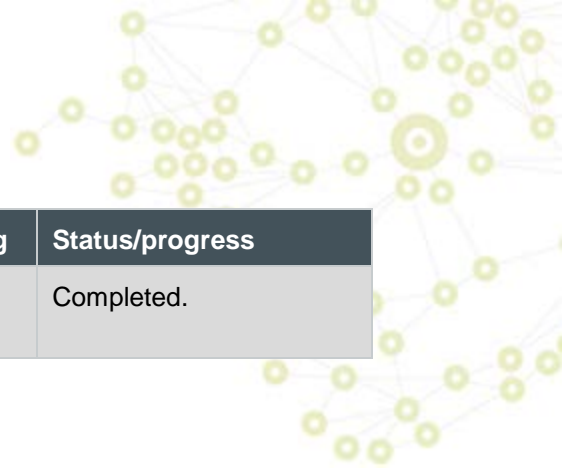


Agenda Item 4: GAB Action Items

GAB Meeting 15 July 2015

Shaded	Shaded action points are actions that have been completed since the last GAB meeting.
Unshaded	Unshaded action points are still being progressed.
Missing	Action items missing in sequence have been completed from previous meetings and subsequently removed from log.

#	Year	Action	Responsibility	Meeting arising	Status/progress
61	2015	The IMO to publish the minutes of Meeting No. 18 on the IMO website as final.	IMO	May	Completed.
62	2015	The IMO to circulate the cost-benefit study undertaken during the implementation of the GSI along with the associated cost of the review to GAB members.	IMO	May	Completed. Circulated with GAB Meeting No. 21 Papers for discussion under Agenda Item 12.
63	2015	The IMO to include further discussion on the need for a cost-benefit review, or other review of the GSI at an upcoming meeting.	IMO	May	To be discussed under Agenda Item 12.
64	2015	The IMO to include further discussion at an upcoming GAB meeting on the options to provide information to Gas Market Participants where a facility is unavailable.	IMO	May	To be discussed under Agenda Item 11.



#	Year	Action	Responsibility	Meeting arising	Status/progress
65	2015	The IMO to publish the presentation GBB Response to the Production Incident at the Karratha Gas Plant on the IMO website.	IMO	May	Completed.



Agenda Item 5: Overview of GSI Rule and Procedure Change Proposals

GAB Meeting 15 July 2015

1. Current progress

There are no Gas Services Information (GSI) Rule Change Proposals or Procedure Change Proposals currently being progressed.

2. Future developments

As part of Phase 2 of the Electricity Market Review, the rule approval function will be removed from the IMO and given to a new body.

Given the transfer of these functions and in response to a request from the Minister, the IMO Board has deferred the consideration of all Wholesale Electricity Market (WEM) Rule Change Proposals currently underway and does not propose to commence any new (WEM) Rule Change Proposals until the new rule approval body is established.

On 6 July 2015, the Public Utilities Office released a Position Paper on the proposed design for the new 'Rule Change Assessment Panel' for consultation (see Agenda Item 7). The position paper proposes to also apply the new arrangements to the GSI Rules.

The IMO therefore notes that the timing of any new GSI Rule Change Proposals are likely to be affected.



Electricity Market Review Phase 2

Position Paper – A Proposed Design for the New Rule Change Assessment Panel

Department of Finance | Public Utilities Office

6 July 2015

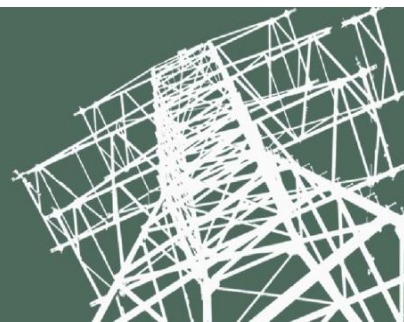


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Appendix 1

Overview of the existing Rule Change process

Appendix 2

Information, reporting and accountability requirements for the new Rule Change Assessment Panel

1. Introduction

The Minister for Energy launched Phase 2 of the Electricity Market Review (the Review) on 24 March 2015. One of the reform projects that constitute the Electricity Market Review is the creation of a new Rule Change Assessment Panel to enhance the governance of the Wholesale Electricity Market (the Market) Rule Change process.

Submissions from market participants, received as a part of Phase 1 of the Review, indicated a concern regarding Rule Change process governance, specifically the potential for a conflict of interest on the part of the Independent Market Operator in terms of its functions as the maker, approver, operator and enforcer of the Market Rules. Submissions supported a governance structure that was transparent, effective, and free of conflicts of interest and requested that some of these functions be separated.

Although any person can submit a Rule Change Proposal, the Independent Market Operator Board:

- administers the Rule Change Process; and
- has discretion in deciding which Rule Change Proposal will be:
 - progressed through the Rule Change process;
 - placed on the agenda for discussion at Market Advisory Committee meetings; and
 - ultimately accepted or rejected.

The principal outcome of reform to governance of the Market Rule Change process is to address the potential for a conflict of interest from the Independent Market Operator performing the tasks referred to above while also operating and enforcing compliance with the Market Rules. Reform will also remedy acknowledged deficiencies within the existing Rule Change process and improve transparency and accountability of decision-making.

The creation of a new Rule Change Assessment Panel will affect the relationship between the existing Wholesale Electricity Market governance bodies and also the new governance body, and how the new governance body interacts with the existing Rule Change process to acquit its responsibilities.

To progress the reform, the Steering Committee has developed this Position Paper which sets out:

- a proposed design for the Rule Change Assessment Panel to govern the Rule Change process;
- a proposed design for the Rule Change Assessment Panel Secretariat (the Secretariat) to support the Panel's functions; and
- the ways in which the Rule Change process might be improved as a consequence.

The Position Paper also indicates that reforms made to the Rule Change process will be mirrored for the Gas Services Information arrangement, to ensure consistency and harmonisation between the Rule Change regimes applicable to the gas information regime and the electricity market.

1.1. Criteria guiding this aspect of the Reforms

The Steering Committee took the following criteria into consideration when developing the proposed design for the new Rule Change Assessment Panel and the Rule Change process, as set out in this Position Paper:

- As an overarching goal, the new governance arrangement and process should:
 - be consistent with sound regulatory practice;
 - promote high quality decisions consistent with the defined market objectives;
 - be appropriately transparent; and
 - have an appropriate balance between accountability and certainty (discussed in greater detail in section 3.3).
- In terms of governance, the composition of the Rule Change Assessment Panel and the rules prescribing how it operates should address the potential for a conflict of interest and lack of transparency.
- In terms of process, changes should generally be limited to those necessary to accommodate the effective function of the Rule Change Assessment Panel and increase transparency.
- The new governance arrangement and process should be simple and cost-effective to implement and operate.
- The Rule Change Assessment Panel should have, or should have access to, adequate rule-making, technical and operational expertise.

1.2. Purpose of this Position Paper

The purpose of this Position Paper is to give market participants the opportunity to make submissions that will inform the detailed design for the new Rule Change Assessment Panel and the revised Rule Change process. Submissions by respondents will be assessed using the criteria stated above.

The Position Paper addresses the proposed design aspects, including:

1. composition of the new Rule Change Assessment Panel (section 2.1);
2. governance of the new Rule Change Assessment Panel (section 2.2);
3. options for the Secretariat (section 2.3);
4. the revised Rule Change process (section 3);
5. information, reporting and accountability of the new Rule Change Assessment Panel (section 4); and
6. proposed cost recovery arrangements (section 5).

The Position Paper also provides commentary on how reforms may be implemented through the legislative instruments (section 6).

The Steering Committee invites feedback on the proposed design aspects for the new Rule Change Assessment Panel and the revised Rule Change process.

2. New Rule Change Assessment Panel and Secretariat

2.1. Composition of the Rule Change Assessment Panel

The Steering Committee has assessed options for the characteristics and composition of the new (part-time) Rule Change Assessment Panel that will best promote transparency and efficiency while avoiding a conflict of interest as much as practicably possible.

Ideally, the Rule Change Assessment Panel will comprise individuals with a sound knowledge of market operations and functions, as well as a clear understanding of the Market Objectives (against which Rule Change Proposals are assessed).

This knowledge is necessary to enable the Rule Change Assessment Panel to undertake thorough consideration and a rigorous analysis of the effects of proposed changes to the Market Rules. As the Rule Change Assessment Panel will also consider changes to the Gas Services Information Rules, members of the Rule Change Assessment Panel should also have, or be able to access, adequate gas market knowledge.

A Rule Change Assessment Panel would meet these requirements if it includes at least:

- the Chair of the Economic Regulation Authority;
- the Chair of the Independent Market Operator; and
- the Coordinator of Energy.

These individuals would be ‘Standing Members’. This proposed membership has been chosen because it would bring a range of skills and perspectives to the role, and would have the requisite detailed understanding of the market, industry, and the regulatory and policy landscape. The Standing Members are already known to market participants, ensuring the Rule Change process is credible and respected.

A disadvantage of this proposed composition is that none of the three Standing Members is entirely free from conflicting or competing interests. The Steering Committee has considered this, and believes that conflict will be mitigated by the following.

- Three Standing Members will come from three different agencies with different roles and agenda, means that their positions will counter-balance each other.
- Although the three Standing Members will be appointed on the basis of the office they hold, they will not be expected to represent the interests of their home agencies. Rather, while serving on the Rule Change Assessment Panel, they will be required to advance the Market Objectives instead of the interests of their respective agencies.
- There will be an increased role for the Market Advisory Committee.

To allow for future flexibility, the Market Rules will also permit (but not require) the Minister to appoint up to two additional Rule Change Assessment Panel members (‘Additional Members’) with suitable skills and expertise. To preserve the balance of the Rule Change Assessment Panel, Additional Members will not come from the Independent Market Operator, Economic Regulation Authority, Public Utilities Office or be market participants.

It is envisaged that the high level criteria for appointment as an Additional Member will be set out in regulations. For example, the criteria could stipulate that appointees must, in the Minister's opinion, have knowledge or experience relevant to the Rule Change Assessment Panel's functions in the electricity industry, commerce, economics, law or public administration.

Respondents are invited to comment on the above proposed composition of the Rule Change Assessment Panel.

2.2. Governance of the Rule Change Assessment Panel

It is proposed the Rule Change Assessment Panel be subject to the same governance framework that currently applies to the Independent Market Operator Board,¹ with only those changes needed to accommodate the fact that the three Standing Members are appointed automatically by reason of the office they hold, and to address the potential for a conflict of interest. The framework will include prescriptions for:

- a constitution and proceedings;
- duties of members;
- the Minister's ability to direct the Rule Change Assessment Panel (as a body), with the requirement that the direction must be tabled before Parliament;
- periodic reporting, in the form of a statement of annual activities;
- reporting to the Minister and giving the Minister access to information (and management of confidential information in that process);
- members' immunity from liability;
- the Minister to appoint the Chair (who must not be the Chairman of the Independent Market Operator);
- the Minister may appoint any Additional Members after consulting with the Chair; and
- the Minister may remove a sitting Additional Member at any time and without giving any reason, or to create a vacancy (and may subsequently appoint a new Additional Member).

To ensure transparency, the Rule Change Assessment Panel's constitution, including its terms of reference, will be approved by the Minister and made publicly available.

In view of the Rule Change Assessment Panel's importance, it is intended that the members themselves will attend meetings; alternates will not be permitted.²

2.3. The Secretariat

2.3.1. Introduction

The Rule Change Assessment Panel will require a Secretariat that will play four important roles in regard to the Rule Change process:

- Administration:
 - administering the Rule Change process;
 - maintaining and publishing information and reports, including a statement of annual activities;

¹ Under the *Electricity Industry (Independent Market Operator) Regulations 2004*.

² The Rule Change Assessment Panel's constitution will accommodate meetings by telephone or other remote means.

- administer a public, separately-branded website to publish any information required by the Market Rules in regard to the progress of Rule Change Proposals;
- managing meetings and consultations including (where appropriate) producing agenda, papers and minutes; and
- providing a point of interface to the Rule Change Assessment Panel for market participants and the Minister for Energy.
- Assistance:
 - assisting Rule Change Proponents to develop and refine their Rule Change Proposals.
- Drafting:
 - to the extent that a Rule Change Proponent has not done so, draft the text of rule amendments.
- Assessment:
 - assessing Rule Change Proposals and preparing reports for the Rule Change Assessment Panel including summaries of consultation outcomes, to support the Rule Change Assessment Panel's decision to approve or reject the proposed changes to the Market Rules.

At present the Independent Market Operator performs these roles. There are clear benefits in this, the Independent Market Operator has detailed knowledge and substantial practical experience in both Rule Change and market operations. This can help Rule Change Proponents in regard to the 'assistance' role, and is used in the 'drafting' and 'assessment' roles.

However, this control of the secretariat function potentially affords the Independent Market Operator disproportionate influence (actual or perceived) over how, and whether, Rule Change Proposals are developed and progressed. The proposed reforms are intended to mitigate this influence in a cost-effective way.

2.3.2. Rejected design – Independent Market Operator as Secretariat

The Steering Committee considered a design option in which the Rule Change Assessment Panel had no independent Secretariat at all, with all the administration, assistance, drafting and assessment being performed by Independent Market Operator staff under the Rule Change Assessment Panel's direct supervision. The Independent Market Operator would need to enter into a Service Level Agreement with the Rule Change Assessment Panel to provide the various Rule Change services. This would likely be the cheapest approach, and the easiest to implement.

In practical terms, this design option would largely preserve the *status quo*, although it would also maximise the availability of the Independent Market Operator's expertise with respect to the Rule Change process.

The Steering Committee has rejected this design option, for the following reasons.

Administratively, the main disadvantage of this option is that the person who acts as 'executive officer' of the Secretariat (that is, the individual charged with managing provision of the secretariat services and liaising with market participants) would be an Independent Market Operator staff member. Consequently, this design option:

- does not address the current blurred boundaries between the Independent Market Operator's various roles to operate the market, to enforce compliance with the Market Rules, and to administer Rule Changes;

- does not provide any structural means to address the perception that the Independent Market Operator has disproportionate influence over the Rule Change process; and
- is likely to result in the Independent Market Operator's staff facing an actual or perceived conflict of duties.

Although the Independent Market Operator will technically be the service provider under the Service Level Agreement, in practice, individual Independent Market Operator staff members will liaise directly with the Rule Change Assessment Panel and take instructions from Panel members because there is no intermediary. This will likely give rise to an actual or perceived conflict of duties in which staff members feel they are being asked to serve both the Rule Change Assessment Panel and their employer.

An additional consideration is that, in practical terms, the part-time Rule Change Assessment Panel will need assistance to manage its side of the Service Level Agreement.

2.3.3. A new, independent Secretariat

The Steering Committee proposes to establish a Secretariat to support the Rule Change Assessment Panel as a separate legal entity, independent of the Independent Market Operator. The Secretariat will be created through regulations, funded through Market Fees, and will answer directly to the Rule Change Assessment Panel.

There are two ways in which the independent Secretariat can be implemented. This paper sets out a proposed option and an alternative option, and invites Respondents to comment on both.

2.3.3.1. Proposed Design – small Secretariat, relying on Independent Market Operator's staff under a Service Level Agreement

The Steering Committee's proposed design option is one in which the Secretariat comprises a single individual acting as the Executive Officer. This is likely to be the simplest and most cost-effective way to achieve reform objectives. The Executive Officer will be appointed by the Rule Change Assessment Panel.

The Executive Officer must not be a current or recent staff member of the Independent Market Operator. Most likely, to minimise cost, the Executive Officer will be a staff member from the Public Utilities Office.

Service Level Agreement with the Independent Market Operator

Through the Executive Officer, the Rule Change Assessment Panel will appoint the Independent Market Operator under a Service Level Agreement to provide secretariat services (administration, assistance, drafting and assessment) in support of the Rule Change process and Rule Change Assessment Panel. The Service Level Agreement will give the Rule Change Assessment Panel a formal instrument with which to assess and manage how the Independent Market Operator's staff provides the services, including lines of communication and transparency. The Executive Officer will manage the Service Level Agreement for the Rule Change Assessment Panel.

Some or all of the Service Level Agreement will likely be made public.

The cost of Independent Market Operator staff in providing secretariat services could continue to be paid via Market Fees, potentially at no, or marginal, additional cost to market participants. The additional cost of the new position of Executive Officer would be relatively modest, and may even be wholly absorbed by his or her home agency (most likely the Public Utilities Office).

Comparing this model with the present model and the rejected design

Under the proposed design option, most of the Secretariat's functions will be performed by Independent Market Operator staff, as is currently the case (and in the case of the rejected design, see section 2.3.2 above) only under a Service Level Agreement.

However, there are important structural differences between the proposed design option and the current situation:

- The presence of an independent Executive Officer, who is separate from the Independent Market Operator, will bring structural benefits:
 - The (part-time) Rule Change Assessment Panel has a resource with which to monitor and manage the Independent Market Operator's performance under the Service Level Agreement.
 - Market participants now have a non-Independent Market Operator person to deal with in regard to the Rule Change process, especially on any concerns they may have about the Independent Market Operator's performance of the secretariat services.
 - The Independent Market Operator staff's lines of reporting will be clearer and staff will be able to deal with the Executive Officer in a more normal service provider/client relationship.
- The fact that the Independent Market Operator's services are being provided to a separate legal entity will provide a point at which the passage of information and advice from the Independent Market Operator to the Rule Change Assessment Panel can be scrutinised or made transparent, if and when necessary.

Assessing the proposed design against the reform objectives

While a small independent Secretariat consisting only of an Executive Officer will likely be the most cost-effective design option, it does mean that almost all the secretariat services will still be carried out by Independent Market Operator staff. As a result, the Independent Market Operator's influence over the Rule Change process may still be a concern.

This influence will be mitigated by the following factors (see also discussion of Accountability in section 3.3 below):

- Unlike the current system, the Independent Market Operator will be acting under a formal Service Level Agreement which sets out its responsibilities, including a duty to perform secretariat services in accordance with the Rule Change Assessment Panel's directives and without regard to the Independent Market Operator's own interests. The Independent Market Operator's compliance with the Service Level Agreement will be monitored by the independent Executive Officer.
- As noted above, a Rule Change Proponent can raise with the independent Executive Officer any concerns over the Independent Market Operator's conduct in regard to the Rule Change process. The Executive Officer will not be a current or recent Independent Market Operator staff member, and will report to the Rule Change Assessment Panel.
- There may also be a formal complaints path for the proponent through the Chair of the Market Advisory Committee (who will not be an Independent Market Operator staff member) to the Rule Change Assessment Panel.

Respondents are invited to comment on this proposed design option for the Secretariat.

2.3.3.2. Alternative Design – fully resourced Secretariat

Where the Secretariat could draw on its own resources to provide the secretariat services (administration, assistance, drafting and assessment), or could obtain secretariat services

from parties other than the Independent Market Operator, it would be easier to demonstrate that the Rule Change process was fully independent of the Independent Market Operator's influence.

While this design option is likely to be best practice, and more closely aligned with the Australian Energy Market Commission model, the Steering Committee has identified two primary concerns.

- A fully resourced Secretariat would need a way to obtain the benefit of the Independent Market Operator's practical knowledge and experience. While the Market Rules could permit the Secretariat to seek technical and operational guidance from the Independent Market Operator whenever required,^{3,4} there will likely be a loss of efficiency as the result of information needing to be passed from one legal entity to another.

However, as this process could be formalised and made public, there may be a potential off-setting transparency benefit in this arrangement; market participants could be given the opportunity to comment on the Independent Market Operator's technical and operational advice.

- A fully resourced Secretariat would likely involve additional costs to market participants in order to establish and resource on an on-going basis.

Respondents are invited to comment on the alternative design option of a fully resourced Secretariat, and its value relative to the likely additional costs to be borne by market participants through Market Fees.

The Steering Committee observes that the proposed design option in section 2.3.3.1 and the alternative design described in this section 2.3.3.2 are not mutually exclusive. It would be possible to start with the proposed independent one-person Secretariat, and (if it was considered necessary) to migrate over time to a more fully-resourced Secretariat which does not depend so heavily on Independent Market Operator staff.

3. Revised Rule Change process

The existing Rule Change process will need to be changed to accommodate the new Rule Change Assessment Panel and Secretariat.

3.1. Introduction

3.1.1. Overview of the revised process

The Steering Committee's proposed design for a revised Rule Change process preserves two rounds of consultation. The Secretariat will administer the Rule Change process.

The revised Rule Change process will require all Rule Change Proposals to be submitted to the Rule Change Assessment Panel (instead of the Independent Market Operator, as is currently the case). The Rule Change Proposal will not be required to contain text for the amending rules.

The Rule Change Assessment Panel will refer the Rule Change Proposal to the Secretariat (which is the Executive Officer under the proposed design option) who will then apply a 'threshold test' to the Rule Change Proposal (a task currently undertaken by the

³ Initially, in addition to technical and operational expertise, the Secretariat's staff would likely also rely on IMO staff for their familiarity with the Rules themselves and their experience in rule-making. However, within a relatively short time it would be expected that Secretariat staff would develop their own expertise in this regard.

⁴ The IMO would be given a function of providing this assistance.

Independent Market Operator). All Rule Change Proposals will be progressed, unless the Rule Change Assessment Panel determines, on the advice of the Secretariat, that a Rule Change Proposal is, *prima facie*, not consistent with achieving the Market Objectives or is frivolous or vexatious (not made in good faith).

The Rule Change Proponent and/or body providing secretariat services (the Independent Market Operator under the proposed design option) may recommend to the Rule Change Assessment Panel that a Rule Change Proposal be progressed via the fast-track process. The default position will be that the standard process applies, unless the Rule Change Assessment Panel determines otherwise.

The Secretariat (the Executive Officer via the Service Level Agreement with the Independent Market Operator) will perform the Independent Market Operator's current function of assisting the Rule Change Proponent to develop a Rule Change Proposal, and to draft the text of the amending rules if the Rule Change Proponent requests this service as well.

All Rule Change Proposals will proceed to the Market Advisory Committee for discussion to refine concepts, and to assist with the development of the text for the amending rules. The Rule Change Proposal will be considered in at least one Market Advisory Committee meeting. The Chair of the Market Advisory Committee will decide whether the Rule Change Proposal needs to be discussed in a subsequent meeting or further meetings.

Once the text for the amending rules are finalised, the Rule Change Assessment Panel will determine whether the Rule Change Proposal requires changes to 'protected' provisions, so that the Minister for Energy can be given notice by the Secretariat. The latest time at which notice will be given to the Minister for Energy is the time at which the Draft Rule Change Report is published.

The Secretariat will then undertake a second round of public consultation on the Rule Change Proposal and develop a Final Rule Change Report at the conclusion of consultation. The Final Rule Change Report will contain a recommendation to the Rule Change Assessment Panel to accept or reject the Rule Change Proposal (and on what grounds).

The Rule Change Assessment Panel (instead of the Independent Market Operator Board) will subsequently make a Final Rule Change Decision, that is, decide whether to approve (or reject) a Rule Change Proposal after receipt of the Final Rule Change Report.

The Rule Change Assessment Panel would therefore make decisions on the viability of a Rule Change Proposal at two points in the Rule Change process:

- when first submitted into the Rule Change process (the threshold test); and
- following the second round of consultation (the Final Rule Change Decision on the amending rules in a Rule Change Proposal).

3.1.2. References to “the Secretariat”

In section 2.3 above, the Steering Committee set out a proposed design option for the Secretariat, and also invited comment on an alternative design option. Both models propose a new Secretariat that is separate from the Independent Market Operator and reports directly to the Rule Change Assessment Panel.

Under the proposed design option, the Secretariat will likely comprise a single person acting as Executive Officer, with the majority of secretariat services (administration, assistance, drafting and assessment) being provided by Independent Market Operator staff under a Service Level Agreement between the Independent Market Operator and the Rule Change Assessment Panel. In the alternative model, the Secretariat will be more fully resourced and less dependent on Independent Market Operator staff.

Whichever model is chosen, the Secretariat’s role in the below Rule Change process will be the same. Respondents are invited to consider and comment upon whether the choice of Secretariat model may influence how the Rule Change process as set out below might operate in practice.

3.1.3. Summary comparison between old and new processes

Table 1 compares the responsibilities of the Independent Market Operator under the existing Rule Change process with the proposed responsibilities of the Rule Change Assessment Panel and Secretariat in the proposed Rule Change process (under the proposed design option).

Table 1: The existing versus the revised Rule Change process

Activity		Responsibility	
		Current	Proposed
1	Market Rule approval body	Independent Market Operator Board	Rule Change Assessment Panel
2	Provides secretariat services	Independent Market Operator	Rule Change Assessment Panel Secretariat
3	Appointment of members of Market Rule approval body	Minister for Energy	Rule Change Assessment Panel members appointed by virtue of their office with the Chair appointed by the Minister for Energy
4	Appointment of Market Advisory Committee members	Independent Market Operator Board	Rule Change Assessment Panel
5	Chair of the Market Advisory Committee	CEO of Independent Market Operator	Executive Officer appointed by the Rule Change Assessment Panel
6	Propose a change to the Market Rules	Any person (the ‘Proponent’)	Any person (the ‘Proponent’)
7	Develops Rule Change Proposal containing amending rules	Proponent (in conjunction with Independent Market Operator)	Proponent (in conjunction with Rule Change Assessment Panel Secretariat)
8	Initial assessment of Rule Change Proposal	Independent Market Operator	No longer applicable
9	Refinement of Rule Change Proposal	Independent Market Operator and Proponent	No longer applicable
10	Decision on whether or not to progress Rule Change Proposal to submission	Independent Market Operator Board	No longer applicable
11	Submission of Rule Change Proposal into the Rule Change process	Proponent	Proponent
12	Receipt of Rule Change Proposal	Independent Market Operator	Rule Change Assessment Panel
13	Decision regarding ‘threshold test’ on a Rule Change Proposal	Not applicable	Rule Change Assessment Panel (on advice from Rule Change Assessment Panel Secretariat)
14	Gives notice to Minister of a Rule Change Proposal containing protected provisions	Independent Market Operator	Coincides with activity undertaken at step 21
15	Decision to fast-track a Rule Change Proposal	Independent Market Operator Board	Rule Change Assessment Panel (based on advice from the Rule Change Assessment Panel Secretariat and Proponent)
16	Referral of a Rule Change Proposal to the Market Advisory	Market Advisory Committee (as per the Rules) / Independent Market Operator	All Rule Change Proposals go to the Market Advisory Committee for consultation

Activity		Responsibility	
		Current	Proposed
	Committee for discussion	(in practice)	
17	Management of first round consultation process	Independent Market Operator	Rule Change Assessment Panel Secretariat
18	Production of Draft Rule Change Report	Independent Market Operator	Rule Change Assessment Panel Secretariat
19	Approval of Draft Rule Change Report	Independent Market Operator Board	Rule Change Assessment Panel
20	Gives notice to Minister of a Rule Change Proposal containing protected provisions	Coincides with activity undertaken at step 14	Rule Change Assessment Panel Secretariat
21	Production of Final Rule Change Report	Independent Market Operator	Rule Change Assessment Panel Secretariat (with a recommendation to Rule Change Assessment Panel)
22	Approval of Final Rule Change Report	Independent Market Operator Board	Rule Change Assessment Panel
23	Decision to approve / reject amending rules in Final Rule Change Report	Independent Market Operator Board	Rule Change Assessment Panel
24	Decision to approve / amend / reject amending rules containing protected provisions	Minister	Minister

3.2. Steps in the revised process

3.2.1. Submission of Rule Change Proposal

The Rule Change process commences when a Rule Change Proponent submits a Rule Change Proposal to the Rule Change Assessment Panel.

This is a change from the current arrangement where the Rule Change Proponent’s original submission (colloquially called a “concept paper”) is not treated as a formal submission until the Rule Change Proposal and the text of the amending rules has been developed to such a state that the Independent Market Operator considers the Rule Change Proposal is fit for formal submission.

Under the revised arrangement, the Rule Change Proponent will be required to provide (within the Rule Change Proposal) a justification for whether the Rule Change Proposal needs to be prioritised and/or progressed via the fast-track process. This is consistent with current practice.

Respondents are invited to comment on the revised arrangement for the submission of a Rule Change Proposal.

3.2.2. Who may propose a change to the Market Rules?

At present, anyone can propose changes to the Market Rules.⁵ This will remain the case.

Where a Rule Change Proposal is submitted by a Standing Member of the Rule Change Assessment Panel or by the organisation that the Standing Member represents,⁶ the Rule Change Proposal must be approved by a majority of the other members.

⁵ Rule 2.5.1.

This will ensure that a conflict of interest does not arise where a Rule Change Proposal is submitted by an organisation that has a member on the Rule Change Assessment Panel. In practical terms this means that, while the Rule Change Assessment Panel comprises the three Standing Members, the Rule Change Proposal must be supported by both of the other members.

Respondents are invited to comment on who may propose changes to the Market Rules.

3.2.3. Threshold test for a rule change proposal

At present, the Independent Market Operator has broad discretion (in practice) over whether a Rule Change Proposal is progressed by making an initial assessment of the Rule Change Proposal against the Market Objectives.⁷ In the revised process, the only grounds on which a proposal may be rejected (that is, precluded from being progressed) is that the Rule Change Proposal is:

- on the face of it, inconsistent with the Market Objectives; or
- is frivolous or vexatious (and not made in good faith).

The Secretariat (which is the Executive Officer under the proposed design option) will conduct a threshold test to assess whether the Rule Change Proposal should be rejected. However, if the Executive Officer proposes to reject a proposal, he or she must refer the question to the Rule Change Assessment Rule Change Assessment Panel. Only the Rule Change Assessment Panel will have the power to reject a proposal.

Respondents are invited to comment on the new threshold test process.

3.2.4. Fast-track or standard Rule Change process

Where the Rule Change Proponent or the Secretariat has requested that a Rule Change Proposal be progressed through the fast-track process, the decision to fast-track the Rule Change Proposal will be made by the Rule Change Assessment Panel.

The Steering Committee does not propose to change the criteria for assessing whether a Rule Change Proposal should be fast-tracked.⁸ Consequently, the fast-track process will be applied if the Rule Change Proposal is of a minor or procedural nature, is required to correct a manifest error or is urgent and essential.

Presently, the fast-track process involves only one round of consultation.⁹ In the revised Rule Change process, there will always be two rounds of consultation but the consultation timeframes will be shorter.

Respondents are invited to comment on the revised Rule Change process with regard to the fast-track process.

3.2.5. Development of a Rule Change Proposal

Preparing a detailed Rule Change Proposal requires a working knowledge of the Market Rules as a whole. At present, the Independent Market Operator may work with a Rule

⁶ At present, the IMO is exempt from submitting a completed Rule Change Proposal form: rule 2.5.1. In practice, the IMO completes a Rule Change Proposal form where it is seeking to make changes to the Market Rules.

⁷ Rule 2.5.6(c).

⁸ Rule 2.5.9.

⁹ Rule 2.6.

Change Proponent to refine and develop a Rule Change Proposal. The Steering Committee proposes that the Secretariat continue to perform this role via the Service Level Agreement with the Independent Market Operator.

Similarly, drafting the text for the amending rules requires close analysis and a deep understanding of the operating effect of the Market Rules to ensure changes are properly designed, address all necessary issues, and avoid unintended consequences. A Rule Change Proponent will be permitted (but not required) to include the text of the amending rules with its Rule Change Proposal. If the Rule Change Proponent does not include the proposed text of the amending rules, or the proposed text of amending rules need further refinement, the Secretariat will work with the Rule Change Proponent to develop them.

Respondents are invited to comment on the arrangements proposed above for development of Rule Change Proposals.

3.2.6. Role of the Market Advisory Committee

The Market Advisory Committee's role of advising on Rule Change Proposals will be expanded. The Independent Market Operator's function of appointing (or removing) Market Advisory Committee members will be undertaken by the Rule Change Assessment Panel under the revised arrangements.

The Executive Officer (of the Rule Change Assessment Panel Secretariat) will also chair the Market Advisory Committee. As the Executive Officer cannot be a present or recent Independent Market Operator staff member, this ensures the Market Advisory Committee will be chaired independently.

At present, the Market Rules require the Independent Market Operator to consult with Market Advisory Committee members where two members request the Market Advisory Committee be convened. In practice, the Independent Market Operator refers the vast majority of Rule Change Proposals to the Market Advisory Committee for discussion and refinement.

The revised Rule Change process would see all Rule Change Proposals referred to the Market Advisory Committee at an early point in the Rule Change process, removing any discretionary aspect and increasing transparency. The Secretariat will be required to ensure all views arising from the Market Advisory Committee's discussion(s) of the proposal are reflected in the Draft Rule Change Report.

The comparable body for the Gas Services Information Rule Change process is the Gas Advisory Board. This body will be dealt with in the same way as the Market Advisory Committee. The Chair of the Market Advisory Committee and the Chair of the Gas Advisory Board might be the same person, or the Rule Change Assessment Panel might appoint someone other than the Executive Officer if a different skill set is required.

Respondents are invited to comment on the role of the Market Advisory Committee and on the proposed Chair and composition of the Market Advisory Committee. In particular, Respondents are asked to consider whether the arrangements for appointing the Chair of the Market Advisory Committee and the Gas Advisory Board will permit those entities to effectively consider and discuss Rule Change Proposals as advisory bodies.

3.2.7. 'Protected' provisions requiring ministerial approval

The Steering Committee proposes that Rule Change Proposals containing protected provisions will continue to require final approval by the Minister.¹⁰ The Rule Change

¹⁰ Rule 2.8.3

Assessment Panel, assisted by the Secretariat, will identify whether a proposal involves change to any protected provisions. This will be done as early as possible in the process, and by no later than release of the Draft Rule Change Report.

There is currently a discrepancy between the Gas Services Information arrangement and the Wholesale Electricity Market which could be harmonised. Under the Gas Services Information Rules, all civil penalty provisions and reviewable decisions are protected provisions. Under the Wholesale Electricity Market Rules, the list of protected provisions includes some, but not all, of these provisions. Consequently, the Steering Committee proposes to review Market Rule clauses and develop a revised list of Market Rule clauses that should be afforded the status of protected provisions, as a reflection of the more robust Rule Change governance structure.

As a preliminary suggestion, Respondents are invited to comment on whether the list of protected provisions under the Wholesale Electricity Market should include:

- all civil penalty provisions;
- all provisions which can give rise to a reviewable decision (see section 3.3.2); and
- all rules dealing with the Rule Change process, as well as the functions and powers of the Rule Change Assessment Panel and Secretariat.

3.2.8. Consultation, Draft Rule Change Decision and Final Rule Change Decision

Following the first round of consultation, and such other investigations as the Rule Change Assessment Panel considers appropriate, the Secretariat will develop, and the Rule Change Assessment Panel will consider, a Draft Rule Change Report. The Rule Change Assessment Panel will not accept or reject proposed changes to the Market Rules at this stage.

After the second round of consultation, and such other investigations as the Rule Change Assessment Panel considers appropriate, the Secretariat will develop a Final Rule Change Report with a recommendation to the Rule Change Assessment Panel to either accept or reject a Rule Change (with reasons why). The Rule Change Assessment Panel will then make a Final Rule Change Decision indicating whether it approves or rejects the proposed changes to the Market Rules in the Rule Change Proposal.

The Draft Rule Change Report and Final Rule Change Report would include information as to whether a Rule Change Proposal:

- aligns with the Market Objectives;
- contains proposed changes to protected provisions, reviewable decisions or civil penalty provisions; and
- the indicative costs to implement the proposed changes to the Market Rules and/or likely on-going costs.

The Draft Rule Change Report could also include commentary on the nature of the Rule Change Proposal (potentially based on an assessment matrix). For example, the Rule Change Proposal may pose changes to the Market Rules that are largely:

- administrative (typographical errors, clarifications, procedural improvements);
- operational (may impose obligations onto market participants but not likely to bring about an incremental change that reforms the Market); or
- reformist (changes the market design and how market participants operate within the Market).

Respondents are invited to comment on the proposed contents of both the Draft and Final Rule Change Reports.

3.3. Accountability

The Steering Committee has considered options for accountability measures for the revised Rule Change process. Respondents are invited to comment on these options and also which accountability measures might be employed at which stages of the Rule Change process.

3.3.1. Policy context

The Rule Change process is a delegated exercise of Parliament's legislative power. Market participants make investment decisions based on the state of the Market Rules and expectations about how they might evolve. Every change to the Market Rules, to a greater or lesser extent, changes market participants' rights and obligations and therefore presents a level of sovereign risk.

Changes to the Market Rules may also impose costs onto market participants, such as costs for non-compliance, implementation and on-going costs, and increases in Market Fees.

Consequently, the Steering Committee considers the accountability regime will be a critical element of the new Rule Change process. In the final analysis, the accountability regime is market participants' protection against any arbitrary or unlawful exercise of the State's sovereign power.

In developing an accountability regime, it is necessary to balance two conflicting objectives:

- **Accountability:** market participants who may be adversely affected by change to the Market Rules want to know that decision-makers will be held accountable, to ensure that decisions are being made in accordance with the statutory framework, based on relevant information and having regard to the proper considerations.
- **Certainty:** market participants and administrators want to know that the Rule Change process can operate efficiently and in a timely fashion and not influenced by individual interests or by those with resources to disrupt the process by making vexatious appeals.

3.3.2. Accountability options

The Steering Committee is considering a range of accountability measures for the revised Rule Change process, including the following (in approximately escalating order of importance):

- Certain protected provisions of the Market Rules may only be changed with the Minister's approval. The existing protected provisions will be reviewed to ensure that the relevant Market Rules prescribing how the revised Rule Change process operates will be protected (so that the Rule Change Assessment Panel cannot change these Market Rules at will).
- Where a Rule Change Proponent is unhappy with the level of support it is receiving from the body providing secretariat services to develop a Rule Change Proposal, there may be a formal complaints path through the Chair of the Market Advisory Committee to the Rule Change Assessment Panel.
- Certain decisions of the Rule Change Assessment Panel will become reviewable decisions, that is, subject to formal 'procedural review' to confirm that the correct process was followed in making the decision.

The Steering Committee is also considering which accountability options should apply at specified points in the revised Rule Change Process. Respondents are invited to comment on whether some form of formal review will apply to the Rule Change Assessment Panel's decision to approve or reject the amending rules in a Rule Change Proposal (that is, the Final Rule Change Decision).

4. Information, reporting and accountability requirements of the Rule Change Assessment Panel

Under the Market Rules, the Independent Market Operator is required to give notice to the Minister of any Rule Change Proposal containing protected provisions at the point where it decides to progress a Rule Change Proposal. The Market Rules also require that specified information regarding the progress of a Rule Change Proposal, and of any decision by the Independent Market Operator Board or Minister, is published on the Independent Market Operator's website.

The same specific requirements will be transferred to the new Rule Change Assessment Panel so that the same information will continue to be published where the Rule Change Assessment Panel is performing the function of approving (or rejecting) the amending rules in a Rule Change Proposal. (See Appendix 2 for examples of information and decisions that could be published).

The regulations¹¹ impose specific reporting and accountability requirements on the Independent Market Operator Board that could be adopted (in some modified form) for the Rule Change Assessment Panel under regulations and the Market Rules. (See Appendix 2 for examples of reporting and accountability requirements).

Proposed changes to the Market Rules concerning the management of market information, which includes the management of confidential information, could be extended to include the management of information by the Rule Change Assessment Panel with respect to the revised Rule Change process.

In addition to this, the Steering Committee considers it preferable for the treatment of commercially sensitive information by the Rule Change Assessment Panel to be addressed by regulations (refer to section 6).

5. Recovery of Rule Change Assessment Panel function costs

The costs for administering the Rule Change process will, as now, be recovered via Market Fees. The Steering Committee's proposed model for the Rule Change Assessment Panel and revised Rule Change process is intended to result in no, or only marginal, additional costs to market participants.

The Rule Change Assessment Panel will be given a budget to engage a specialist consultant, from time to time, to assist with its consideration and approval (or rejection) of amending rules in a Rule Change Proposal. The budget will include the cost of the Secretariat (see section 2.3 above). The budget will be approved annually by the Minister and will be required to be included in the Independent Market Operator's annual budget. This means the Rule Change Assessment Panel's external costs will be drawn from the

¹¹ *Electricity Industry (Independent Market Operator) Regulations 2004*

Independent Market Operator's existing budget for the engagement of consultants to provide advice on changes to the Market Rules.

If Additional Members are appointed to the Rule Change Assessment Panel, their function costs will be recovered via the existing Market Fee structure. The costs of the Standing Members will be borne by the members' respective organisations instead of market participants.

Costs of secretariat services provided by the Independent Market Operator to the Rule Change Assessment Panel under the Service Level Agreement (see section 2.3.3.1 above) will continue to be recovered via the existing Market Fee structure.

As the Rule Change Assessment Panel will also consider Rule Changes under the Gas Services Information arrangement, the cost of the Rule Change Assessment Panel and the Secretariat will also be recovered (on a pro-rata basis) via the existing Gas Information Services Market Fee structure.

6. Implementation

The *Electricity Industry (Wholesale Electricity Market) Regulations 2004* will need to be amended to implement the above mentioned reforms.

The amendments will include, at least:

- creating the Rule Change Assessment Panel and Secretariat;
- conferring functions on the Rule Change Assessment Panel, Secretariat and panel members;
- moving the functions for making Rule Changes from the Independent Market Operator to the new Rule Change Assessment Panel;
- ensuring the Independent Market Operator's functions include the necessary provision of support to the Rule Change Assessment Panel; and
- empowering any necessary Market Rules.

As is presently the case, most of the detail regarding the Rule Change process will be contained in the Market Rules.

The Steering Committee is still considering where the 'boundary' should fall in respect of which matters will be dealt with in the Regulations, and which will be covered by the Market Rules. These matters are likely to include:

- governance of the Rule Change Assessment Panel;
- reporting and accountability requirements for the Rule Change Assessment Panel; and
- treatment of commercially sensitive information.

The choice between prescribing something in the Market Rules or in the Regulations is largely a choice between stability and flexibility. The Market Rules may be changed more easily and quickly, allowing flexibility but at the risk of decreased stability and policy certainty. Changes to the Regulations may take longer. The benefit of stability is off-set by the cost of adaptability.

At present, the Steering Committee proposes to deal with the following matters by amendment to the Market Rules:

- the Rule Change Assessment Panel’s information requirements, procedures and other administrative details;
- membership of the Market Advisory Committee (and the Gas Advisory Board) and their interaction with the Rule Change Assessment Panel;
- the Rule Change process and decision points; and
- identification of protected provisions.

Respondents are invited to comment on the allocation of reforms between the Regulations and the Market Rules.

6.1. Next steps

Interested parties will have six weeks to make submissions to this Position Paper (see section 7 for information on making submissions). After this period, feedback provided through submissions will be collated and considered by the Steering Committee.

The Steering Committee will re-examine and refine its policy position in the light of feedback received before providing advice to the Minister for Energy on a preferred design option for the new Rule Change Assessment Panel and revised Rule Change process. Once the design is finalised, drafting of the necessary amendments to the Regulations and Market Rules will commence.

It is intended that an exposure draft of the proposed amendments to regulations and the Market Rules will be released for public review.

7. Consultation timeframes and response process

Submissions are due by 14 August 2015 and must be sent to the following email address:

- electricitymarketreview@finance.wa.gov.au

Email submissions are to be titled “Rule Change Assessment Panel Position Paper response – [Name of the submitting company or individual]”.

Publication of submissions

Submissions will be available for public review at www.finance.wa.gov.au/publicutilitiesoffice, unless otherwise requested.

Please indicate clearly on the front of your submission if you wish all or part of it to be treated as confidential. Contact information, other than your name and organisation (where applicable) will not be published.

Requests may be made under the *Freedom of Information Act 1992 (WA)* for any submissions marked confidential to be made available. Requests made in this manner will be determined in accordance with the provisions under that Act.

Appendix 1

Overview of the existing Rule Change process

Under the existing Rule Change process, any person (including the Independent Market Operator or the Minister for Energy) can propose a change to the Market Rules. A Rule Change Proposal containing amending rules must be submitted to the Independent Market Operator in a prescribed form and must include reasons as to why the submitter believes changes to the Market Rules are necessary.

In most instances, a Rule Change Proposal undergoes scrutiny through an informal 'Pre-Rule Change Proposal' stage where it may be altered as the result of feedback from market participants or discussion undertaken by the Market Advisory Committee. The Market Advisory Committee consists of market participants and officers from the Independent Market Operator and Public Utilities Office. It convenes at least once every two months (it is required by the Market Rules to convene at least once every six months) to provide advice to the Independent Market Operator Board on proposed changes to the Market Rules (and Market Procedures).

Once a Rule Change Proposal is formally submitted, the Independent Market Operator conducts a preliminary assessment of the completeness and practicality of the Proposal and its consistency with the Market Objectives. The Independent Market Operator has five business days to decide whether to progress a Proposal and a further two business days to publish a notice of its intentions.

The Independent Market Operator also decides whether to enter the Rule Change Proposal into the 'standard' or 'fast-track' Rule Change process. The former requires two rounds of consultation and normally takes approximately five months while the latter, which may be used for urgent changes to the Market Rules, may include one round of consultation and normally takes five weeks or less.

A Final Rule Change Report is published by the Independent Market Operator following the conclusion of consultation and contains the Independent Market Operator Board's decision on whether the Rule Change Proposal has been accepted by the Independent Market Operator Board for implementation.

The Independent Market Operator Board can reject a Rule Change Proposal (containing amending rules), and only at three specified points within the existing Rule Change process:

- within five business days of the submission of the Rule Change Proposal (that is, where the Rule Change Proposal is clearly inconsistent with the Market Objectives); and
- within 20 business days:
 - after publishing a notice under the fast-track Rule Change Process; or
 - after the close of second round submissions under the standard Rule Change process.

A Final Rule Change Report containing amending rules that include protected provisions may be accepted by the Independent Market Operator Board but the amending rules cannot be implemented by the Independent Market Operator unless the amending rules contained in the Final Rule Change Report are also approved by the Minister for Energy.

Protected provisions are listed under the Rules and generally relate to matters where the Independent Market Operator (as an organisation) could be considered to have a conflict of interest, including matters relating to:

- the process for making and amending the Market Rules or the Market Procedures;
- the Independent Market Operator budget and Market Fees;

- monitoring and compliance with the Market Rules; and
- core functions and responsibilities of the Independent Market Operator, System Management or the Economic Regulation Authority.

Under the Market Rules, the Minister must consider whether the amending rules in a Rule Change Proposal would result in Market Rules that do not meet the Market Objectives. The Minister can approve, reject or send the amending rules back to the Independent Market Operator with revisions that the Minister considers are required to ensure the Market Rules as amended are consistent with the Market Objectives.

The Rule Change process under the Gas Services Information arrangement replicates the Wholesale Electricity Market's Rule Change process, with the exception that under the Gas Services Information arrangement, there is additional protection in that all civil penalty provisions (rules that when transgressed result in the application of a financial penalty) and reviewable decisions (decisions that are subject to review by the tribunal) are also afforded the status of protected provisions and must be approved by the Minister where amendment is sought.

Appendix 2

Information, reporting and accountability requirements for the Rule Change Assessment Panel

The matters discussed in this Appendix are still under development, and details may change in the final implementation. Respondents are invited to comment on these matters.

The amount of information published regarding Rule Changes will not be less than is currently published.

The Market Rules could require that specified information in regard to the progress of a Rule Change Proposal, and any decision by the new Rule Change Assessment Panel or Minister, is published on the Secretariat's separately branded, publicly available webpage.

To ensure that the interaction between the Rule Change Assessment Panel, the Market Advisory Committee, the Minister for Energy and the Secretariat is transparent, it is suggested that the following exchanges are also published at a minimum:

- formal directions made by the Minister or Energy to the Rule Change Assessment Panel (after they are tabled in Parliament);
- the Rule Change Assessment Panel's notice to the Minister on Rule Change Proposals involving amendments to protected provisions; and
- the Minister's decision on Rule Change Proposals involving amendments to protected provisions.

The existing reporting and accountability requirements on the Independent Market Operator Board which could be adopted for Rule Change Assessment Panel might include:

- A requirement on the Rule Change Assessment Panel to keep the Minister informed when a course of action is undertaken that amounts to a major initiative or is likely to be of significant public interest.
- Entitling the Minister to have access to information in the Rule Change Assessment Panel's possession.



Agenda Item 9: GBB EMF Test Activation

GAB Meeting 15 July 2015

1. Introduction

On 8 June 2015, in accordance with the State Emergency Management Policy, the Coordinator of Energy at the Public Utilities Office (PUO) initiated an emergency management exercise. The exercise introduced a dual gas and liquid fuel supply disruption and tested the arrangements under the relevant State Emergency Management Plans.

In accordance with the Westplan – Gas Supply Disruption, the PUO directed the IMO to activate Emergency Management Facility (EMF) on the Gas Bulletin Board (GBB).

The GBB and the EMF performed as designed and in compliance with the GSI Rules. All required Gas Market Participants engaged with the exercise and provided information as requested by the IMO.

The PUO also used this opportunity to test the effectiveness of their crisis information management system, OCA by Noggin. OCA provides the PUO with an information and communication management platform to manage emergencies across any industry.

2. Summary of events

During the exercise, information was disseminated by the PUO on an ad hoc basis to key stakeholders to simulate a real world incident. The following summarises the key events from the IMO's perspective.

Friday 5 June 2015

- The PUO issued a notice to all relevant stakeholders advising a Category 3 Tropical Cyclone was approaching the North West of Western Australia.

Monday 8 June 2015

- At 10:20 AM the PUO advised that the cyclone had intensified to Category 4 and impacted production at both the Karratha Gas Plant and Varanus Island Production Facility. Damage was also caused on the Goldfields Gas Pipeline (GGP) and Dampier to Bunbury Natural Gas Pipeline (DBNGP).
- At 1:14 PM the PUO escalated the incident to Green Alert Warning System indicating an *“increased risk (perceived or actual) of a significant gas supply disruption”*.

Tuesday 9 June 2015

- At 11:00 AM the PUO escalated the incident to Amber Alert status indicating “*limited curtailment of customers*”. The incident was escalated since APA Group advised that there was likely curtailment of customers due to damage on the GGP. Further, the PUO was aware of decreased production capacity at Karratha Gas Plant and the Varanus Island Production Facility as well as limited damage to the DBNGP.
- At 11:37 AM due to the Amber Alert status and in accordance with the Westplan, the PUO issued an EMF activation direction to the IMO as follows:

“The Coordinator of Energy is conducting an emergency management exercise of Westplan – Gas Supply Disruption. The exercise commenced on 05/06/2015 and will finish C.O.B. 09/06/2015. EMF has been activated in accordance with the processes and protocols established in the response plans.”

- At 11:44 AM the IMO activated the EMF and informed all Gas Market Participants of their obligations under the rules. These obligations included:

All GBB Facility Operators: *check that Facility Standing Data on GBB is up to date. If not, change Standing Data in GBB.*

Pipeline Operators: *provide Daily Actual Flow data for Gas Day D at 9:00 AM on Gas Day D+1 and updated at 12:00 PM on Gas Day D+1.*

Large Users capable of using alternative fuels: *provide by 9:00 AM quantity and type of alternative fuel(s), time required to commence using alternative fuel and period of time that the facility can operate using alternative fuel.*

- In accordance with the EMF activation, Large User Facilities provided the required information which was published on the EMF by the IMO. (Figure 2.1).
- At 1:30PM, in accordance with the Westplan – Gas Supply Disruption, the PUO convened the Operations Management Group (OMG). The IMO was represented by Martin Maticka, Group Manager, Operations and Technology and Mark Katsikandarakis, Acting Team Leader, Market Services and Operations Process.

The OMG discussed in detail the response of each of the key stakeholders. The IMO provided key information regarding the state of the WEM and the information available in the GBB.

- At 4:00 PM, in accordance with previous communications, the PUO advised that the exercise had concluded however, the PUO modified the EMF direction stating:

“The Coordinator of Energy has conducted an emergency management exercise of Westplan – Gas Supply Disruption. The physical component of the exercise has finished, but for the purposes of testing the EMF, the Coordinator of Energy will leave the EMF active until 10/06/2015.”

Figure 2.1: GBB EMF Alternate Fuel Declarations

The screenshot displays the GBB EMF Alternate Fuel Declarations web interface. At the top, there is a dark navigation bar with the GBB logo on the left and user information (USER: KATSIKANDARAKISM) on the right. A yellow button labeled 'EMF IS ACTIVE' with a 'GO TO EMF' link is also present. Below the navigation bar is a horizontal menu with colored buttons for HOME, NETWORK, PARTICIPANTS, STANDING DATA, REPORTS, and DOCUMENTS. The main content area is titled 'Emergency Management Facility' and includes a sub-menu with 'Alternate Fuels' selected. Below this, there are four entries for alternate fuel submissions, each with a PDF icon, a title, a description, a date, and a file size:

- Alcoa Alternate Fuel Submission - 09/06/2015**
This is a summary of the quantity of alternative fuel available.
09/06/2015
280.7 kb
- Gas Trading Alternative Fuel Submission - 09/06/2015**
This is a summary of the quantity of alternative fuel available.
09/06/2015
263.3 kb
- PILBARAIRN Alternative Fuel Submission - 09/06/2015**
This is the Summary of Alternative Fuel available.
09/06/2015
267.6 kb
- Synergy Alternate Fuel Submission - 09/06/2015**
This is a summary of the quantity of alternative fuel available.
09/06/2015
269.3 kb

Wednesday 10 June 2015

- At 9:00 AM, in accordance with the EMF direction and the GSI Rules, the IMO published interim Daily Actual Flow data for Gas Day 09/06/2015 in the EMF.
- At 11:52 AM the PUO issued an EMF direction requesting that the IMO deactivate the EMF. In accordance with the direction, the EMF was deactivated by the IMO at 12:00 PM.

3. EMF activation summary

The IMO's response to the EMF activation was swift and compliant with the GSI Rules. The EMF was activated within 10 minutes of receiving the direction from the Coordinator of Energy.

The following Gas Market Participants were engaged throughout the exercise, providing information for the EMF as required:

- Alcoa of Australia Ltd
- Alinta Energy Finance Pty Ltd
- Australian Pipeline Trust (T/A APA Group)
- DBNGP (WA) Transmission Pty Ltd
- EDL LNG (WA) Pty Ltd
- Electricity Generation and Retail Corporation (T/A Synergy)
- Gas Trading Australia Pty Ltd
- NewGen Power Kwinana Pty Ltd



- Pilbara Iron Company (Services) Pty Ltd
- Pilbara Iron Pty Ltd
- Wesfarmers Energy (Gas Sales) Ltd
- Wesfarmers Gas Ltd

4. Observations

As a result of the exercise, including discussions with key stakeholders at the OMG debriefing session, the following observations can be made about the EMF.

- GSI Rule 93(1) indicates that the Coordinator of Energy may activate the EMF at any time however, the State Emergency Management Plan Gas Supply Disruption states that “*the Coordinator of Energy can activate the EMF as required in an Amber level incident or above*”. This statement appears to be a barrier to earlier activation of the EMF by the PUO. Earlier activation of the EMF would provide the PUO with timely information to better inform emergency management decision making.
- There was general consensus amongst the key stakeholders that the similarities of the colour coding of the Alert Warning System and the Linepack Capacity Adequacy were confusing.
- The PUO managed the exercise within their OCA system, managing, disseminating and collecting relevant information. Relevant stakeholders, including the affected Production Facilities, Pipeline Operators and the IMO were given access to the system.

It is important to note that the OCA system and the EMF serve different purposes. The EMF on the GBB is designed as an emergency gas data collection system. OCA however, is an incident management system that can manage communications, documents and incident response at a high level.



Agenda Item 11: Opportunities to enhance the information published on the GBB

GAB Meeting 15 July 2015

1. Background

Under the Gas Information Services (GSI) Rules, Gas Market Participants submit data through the Gas Bulletin Board (GBB) to the IMO and this data is published on the GBB¹. The IMO collects a significant amount of data that falls into two categories:

- collected and published; and
- collected and published without disclosing confidential information (i.e. after a period of time or in an aggregated form).

At the May 2015 GAB meeting, members discussed the recent outage of the Karratha Gas Plant. GAB members discussed the costs and benefits of timely and transparent information in the gas industry and requested further discussion on the opportunities to enhance the provision of information on the GBB.

2. Current GBB information

The information that the IMO currently publishes on the GBB is primarily in the form of tables.

The IMO is currently developing visualisations of current published GBB data that will display data in a more user friendly way. An overview of the visualisations that the IMO is currently developing will be presented at the July 2015 GAB meeting as Agenda Item 10 and includes:

- updated network topology maps that allow the user to 'drill-down' into various sections to see more granular data to the extent that the IMO is able to publish that data; and
- a stylised mapping of actual gas flows from production, through each pipeline to the end-user aggregated by industry.

The IMO plans to progressively make data more user friendly by developing and publishing 'visualisations' of information from the GBB that it considers is important and/or useful for stakeholders.

The IMO could publish more of the information collected through the GBB in a more user friendly format without disclosing confidential information including for example:

¹ Note that this information relates to that data that is made public on the GBB and not that collected or disseminated as part of the Emergency Management Facility (EMF).

- consumption data could be presented to allow the comparison of two or more periods – an example of this functionality is in the weekly numbers page for the WEM available at: <http://www.imowa.com.au/#weekly-numbers-generation>;
- Production Facility output could be presented to show the contribution of each Facility to gas supply – an example of this functionality is in the current generation page for the WEM available at: <http://www.imowa.com.au/#generation-all>; and
- Pipeline utilisation could be calculated and presented on the GBB to remove the need for individual stakeholders to download multiple data sources and calculate themselves.

3. Future opportunities

Opportunities to enhance the information published on the GBB

It should be noted that the assessment of the treatment of confidential information, and the granularity of various data was undertaken when the GSI was developed, and in consultation with stakeholders that that time.

With two years of operation of the GBB, the IMO and various stakeholders have considered modifications to enhance the presentation of current information on the GBB, including:

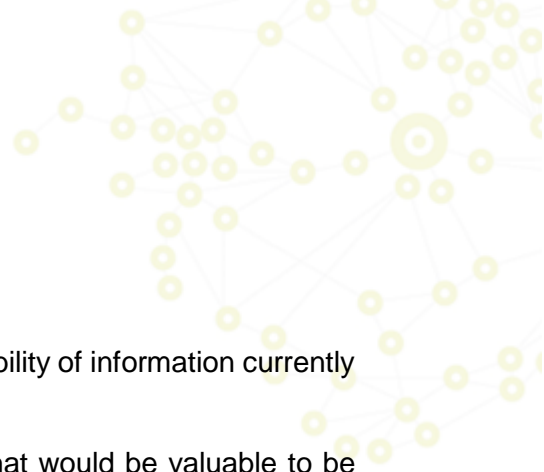
- changing the treatment of confidential information – for example:
 - changing the time lags currently applied to confidential information to improve the timeliness and therefore the relevance of that information; and
 - changing the confidentiality status of information, including Facility specific data for Nominated and Forecast Flows², Daily Actual Flow Data and Daily Actual Consumption Data; and
- publishing more granular information – for example removing the aggregation of consumption by GBB Zone which was considered to be a useful representation of information when the GBB was developed but the recent review has suggested that this is not as useful as envisaged.

Opportunities to collect additional information for publication on the GBB

Through its own internal analysis, the development of the GBB data visualisations and discussions with stakeholders, the IMO considers that there is an opportunity to enhance the GBB with the addition of new data. Examples of additional or modified data that could be collected and published by the IMO on the GBB are:

- supply disruption information – for example a notification of an outage of a Production facility, similar to an LCA flag;
- information related to the Westplan – Gas Supply Disruption – for example alerts and any necessary related information; and
- broader or different categories or sub-categories of users – for example LNG and CNG.

² It should be noted that Nominated and Forecast Flows are measured at the connection point. As some Large User Facilities share a connection point, additional information would need to be provided.



4. Recommendation

The IMO recommends that GAB members:

- **discuss and recommend** options to further enhance the usability of information currently published by the IMO; and
- **discuss and recommend** any additional or modified data that would be valuable to be collected and published on the GBB.



Agenda Item 12: Options for the Gas Services Information Review

GAB Meeting 15 July 2015

1. Background

During the implementation of the Gas Services Information (GSI), the IMO committed to undertake a review of the costs and benefits of the GSI regime after a period of operation. At the May GAB meeting, the IMO presented a scope of work for this work to be completed during 2015 on the basis that, with almost two years' of operating the Gas Bulletin Board (GGB) and after publishing three Gas Statement of Opportunities (GSOO) reports, there should be sufficient information available to inform the analysis.

At the May GAB meeting, members expressed the view that such a retrospective review of the costs and benefits of the GSI may not provide valuable information.

Members agreed to discuss the need for a review of the costs and benefits of the GSI and potential alternative options for undertaking a review of the GSI.

The IMO has attached the cost-benefit study that was undertaken during the implementation of the GSI (Attachment A) and notes that the review was undertaken by Sapere Research Group for \$50,000.

2. Recommendation

The IMO recommends that GAB members:

- **note** the cost-benefit study that was undertaken during the implementation of the GSI; and
 - **discuss** the necessity and value of a retrospective cost-benefit study; and
- if a retrospective cost-benefit study is agreed not to be undertaken,
- **discuss** whether an alternative post-implementation review would be valuable.

Report to the Independent Market Operator

Cost-benefit analysis of Gas Bulletin Board and Gas Statement of Opportunities

Preston Davies, Kieran Murray

18 December 2012

About the Authors

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About Sapere Research Group Limited

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Executive summary

The Independent Market Operator commissioned this cost-benefit analysis of the introduction of the Gas Bulletin Board (GBB) and Gas Statement of Opportunities (GSOO) in Western Australia. An economic cost-benefit analysis (CBA) is a well known and often used technique for assessing whether a particular proposal or set of actions results in the economy being “better off” than if the proposal/set of actions had not taken place. Net benefit (i.e. benefits that are greater than costs) is the usual measure of the degree to which an economy is “better off.”

The analysis considers, and quantifies where possible:

- The costs likely to be incurred by industry participants in meeting their obligations under the draft Gas Information Services (GIS) rules, including implementation costs.
- The cost to the IMO of implementing and operating the GIS (which are to be recovered from gas market participants).
- The net benefit to gas market participants, including gas consumers, due to improvements in the competitiveness and efficiency of the supply of natural gas flowing from the greater transparency provided by the GIS.

The costs and benefits relevant to this study are only those impacts additional to what would occur in the absence of the GBB and GSOO. The focus on additional costs and benefits means transfers between parties are excluded from the analysis (as a transfer from one party to another does not increase or decrease the total welfare of the economy). Importantly, an assessment of the costs and benefits of the GBB and GSOO means that the benefits and costs from establishing the Emergency Management Facility (EMF) should be excluded from the study, because those costs and benefits would arise in any event.

Separating the benefits of the GBB and GSOO from the EMF is conceptually reasonably straightforward as the purpose of the GBB and GSOO is to release information and it is this improved information in the market which is expected to lead to new and better processes and investment decisions. We are confident that our approach to estimating benefits focuses on the impacts of the GBB and GSOO, and not the EMF.

However, separating the costs of the EMF from the costs of the GBB and GSOO is very difficult at this time. Some costs will be incurred by the IMO and gas market participants to support the requirements of the EMF as well as the GBB and GSOO, and any method of allocating a common cost has an element of arbitrariness. More importantly, market participants generally provided us with estimates of their total costs for the EMF and GBB and GSOO. In the time available we were unable to ascertain from participants the costs of the EMF, which should be netted off these total cost estimate to give an accurate picture of the costs associated solely with the GBB/GSOO.

From examining some of the more detailed cost assumptions we concluded that, if the costs of the EMF were excluded, the major cost area (ongoing staffing) would be reduced by as much as half for most of the participants. We also gained the impression from stakeholder interviews that a cautious approach had been taken in estimating costs and stakeholders were mindful to allow for “contingencies” (including meeting requirements that are not included in the draft rules). For this reason we considered it appropriate to use the cost estimates

given to us by stakeholders as an upper bound, and adjusted this higher figure to arrive at a central scenario and an optimistic scenario.

While indicative in nature, our analysis suggests society will be better off as a result of the GBB and GSOO. In particular, the central (preferred scenario) shows benefits outweighing costs (over a ten-year period) by almost 20 per cent. This result is largely robust to changes in key input parameters. Moreover, the results are broadly in line with other studies of similar initiatives.

(\$000's)	Optimistic	Central	Pessimistic
Total benefits	\$100,254	\$30,076	\$8,020
Total costs	\$21,065	\$25,224	\$32,140
Net benefits	\$79,189	\$4,852	-\$24,119
Benefit-cost ratio	4.76	1.19	0.25

Our evaluation of the costings and comments provided to us by participants with the draft rules (which evolved over the same time period), suggests that the compliance burden may not be as onerous as stakeholders consider it might be; it seems to us that stakeholders are allowing for contingencies which are not part of the draft rules. As stakeholders insisted that the costing information provided to us remain confidential and not be disclosed to the IMO, we were not able to close this perceptions gap.

The ongoing discussion and deliberation between market participants and the IMO around the rules for the GBB and GSOO will likely reduce actual and perceived costs of compliance, including the degree and frequency of forecasting requirements. As a result, the benefit-cost ratio found in this study will strengthen.

Introduction

1. The Independent Market Operator (IMO) is responsible for operating the Gas Information Services (GIS), established in response to two major gas supply disruptions in 2008. The main elements of the GIS are:
 - A web-based near-term gas market information service - the Gas Bulletin Board (GBB);
 - An Emergency Management Facility (EMF), which will form part of the GBB and will be activated in the event of a gas supply disruption; and
 - A periodic longer-term supply and demand forecast across all stages of the gas market supply-demand chain - the Gas Statement of Opportunities (GSOO).
2. The IMO has commissioned us to undertake an analysis of the costs and benefits of the GBB and GSOO. The expectation is that the analysis will be quantitative in nature and consider the following costs and benefits:
 - The costs likely to be incurred by industry participants in meeting their obligations under the draft GIS rules, including implementation costs;
 - The cost to the IMO of implementing and operating the GIS (which are to be recovered from gas market participants); and
 - The net benefit to gas market participants, including gas consumers, due to improvements in the competitiveness and efficiency of the supply of natural gas flowing from the greater transparency provided by the GIS.
3. This report summarises the findings of the analysis. The next section details the approach taken and highlights relevant contextual issues, including a description of the various costs and benefits. Estimates of the magnitude of costs and benefits follows. Caveats, interpretation and sensitivity analysis are discussed in the penultimate section, while the report's conclusions are contained in the last section.

Approach

4. An economic cost-benefit analysis (CBA) is a well known and often used technique for assessing whether a particular proposal or set of actions results in the economy being “better off” than if the proposal/set of actions had not taken place. Net benefit (i.e. benefits that are greater than costs) is the usual measure of the degree to which an economy is “better off.” In some studies, it is helpful to decision-makers to know how the proposed actions contribute to non-economic objectives. In this study, we focus only on economic efficiency outcomes.
5. Rather than rehearse the elements of, or arguments for a CBA, we summarise the essential organising steps of a standard CBA framework used for Australian regulatory impact statements:¹
 - Problem definition
 - Options identification
 - Baseline forecast
 - Approach to quantifying costs and benefits
 - Estimate costs and benefits (key assumptions and data)
 - Assess non-quantifiable factors and uncertainty (sensitivity analysis)
 - Identify the impacts on stakeholders (i.e. distributional consequences)
6. Given the decisions already taken in respect of gas information, it makes most sense for this report to focus on the last four of the bullets.
7. There are some key characteristics of an economic CBA that are important to highlight. Firstly, economic CBA is concerned with additionality - the incremental effects of the GBB and GSOO over and above impacts that would otherwise have arisen. This is often referred to as the “base case” or counterfactual. It is important to distinguish between the counterfactual/base case and what might be termed a “do nothing” comparison, which assumes that in the absence of the proposal, a void exists. The risk in using a “do nothing” comparison is that the effects of the proposal are over-stated.
8. An economic CBA requires a means of attributing effects to the GBB and GSOO in a causal manner as well as illustrating the strength of those linkages in a numerical manner. Moreover, the focus on additionality means that transfers between parties are excluded. For example, if consumers are made better off by x and producers are made worse off by x, then there has been no gain to the economy/society, only a transfer between parties and the net efficiency benefit as a result of the action would be zero.

¹ <http://www.finance.gov.au/obpr/docs/handbook.pdf>

9. Similarly, in an economic CBA “costs are costs” regardless of who incurs them. The distribution of costs is not relevant to the analysis, only the total costs in resource terms. This means that distinctions between capital and operating costs are less relevant than might be the case in a financial analysis (though the time period over which costs are incurred remains relevant). In addition, charges such as depreciation and taxes are excluded from the analysis as they do not affect the level of resources available to the economy and are largely accounting costs (i.e. their economic effect is negligible). However, so-called deadweight costs that arise as a result of distortions to behaviour and other efficiency-limiting effects are routinely counted in the analysis.²

Relevant characteristics of market

10. As much as possible, the approach taken should be matched to the characteristics of the market or industry under study. The degree to which there are unique or idiosyncratic features of the Western Australian gas market that might impact on costs and benefits is important contextual information. To inform the study, we interviewed representatives from the following entities: Epic Energy, DBP, Apache Corporation, North-West Shelf Group, Alcoa, Verve Energy, Kleenheat/Wesfarmers, Synergy, Origin Energy, Horizon Power, Perth Energy, Alinta Energy, BHP Billiton, NewGen Power, REMCo, DomGas Alliance, APA Group.
11. Interviewees were asked to comment on specific characteristics as part of the consultation undertaken for this work. From those responses and a reading of available material we observe that the Western Australian gas market has:³
- A high proportion of gas sales in the industrial sector, predominantly for minerals processing and basic chemicals;
 - A high level of (non-LNG) gas use (both relatively and absolutely) in electricity generation;
 - A relatively small commercial/residential sector (due primarily to population and density characteristics);
 - Relatively highly concentrated consumption (i.e. five large customers account for around 90 per cent of consumption);

² For instance, KPMG (2011) estimate that the deadweight cost (average excess burden) associated with using public funding sourced from tax revenue is estimated to lie between 6 per cent and 70 per cent in Australia, depending on the type of tax. A figure of 20 per cent is usually used as an approximation in New Zealand Cost-Benefit analyses (NZ Treasury, 2008) and while there does not appear to be specific guidance in Australia around the precise figure to use in CBA, Campbell (1997, cited in Department of Finance and Deregulation 2006) suggested that around 25 per cent was a good approximation, noting that the excess burden appeared to be falling in Australia over time. Such costs arise because of behaviour changes observed as a result of taxation as well as the transactions/handling costs of raising tax revenue and then effectively returning that revenue to those who previously paid it in the form of government funding.

³ Material in this section has been drawn from ACIL Tasman (2010), Morton (2008) and DomGas Alliance (2012).

- Highly concentrated domestic gas supply (with the top two producers being responsible for around 98 per cent of supply);
 - The highest consumption of gas in comparison to other States in Australia (i.e. Western Australia is the most gas-dependent State in Australia);
 - Been dominated by long-term bilateral contracts, many of which are due for renewal;
 - Had a domestic reservation policy (of 15 per cent of supply) and permission for joint marketing/selling;
 - Two major (north-south) pipelines and a number of smaller (lateral) pipelines;
 - LNG responsible for around 70 per cent of production, and forecast to grow.
12. In terms of the relevance of these characteristics to our analysis, three observations are noteworthy. First, perceptions matter in respect of how “different” Western Australia (WA) actually is. As there are a small number of parties on the shipper/user side, essentially one pipeline and bilateral contracts dominate, issues around disclosure of information relevant to consumption/demand might have more prominence than elsewhere. However, the extent to which WA is actually much different is debateable, and at least one of the operators spoken to who has activities elsewhere in Australia was of the view that, besides Victoria, things are much the same county-wide (i.e. WA is not substantially different from other States and territories). While that might be the case, if the perception exists that WA is unique, then actions that are consistent with that view are more likely to be supported, even if they might result in additional cost.
13. The second observation is that “economically pure” or theoretically elegant solutions are likely to be problematic given the development of the gas industry and “market” to date. That is, history/path dependence also matters. A development path that might be described as pragmatic and based on incremental steps, compromise and longer-term objectives may not be amenable to short-term, “big-bang” actions of a revolutionary (as opposed to evolutionary) nature.
14. Finally, there are specific implications from the reservation policy and joint marketing arrangements that could be relevant to the CBA. A reservations policy that requires producers to set aside a certain proportion of supply for domestic use is likely to affect entry to the market. To the extent that the GBB and GSOO conveys information that increases the likelihood of new entry, this effect may be dampened by the reservation policy. On the other hand, a reservation policy is premised on, *inter alia*, looking to ensure that domestic gas supply is sufficient to meet WA’s needs, which could have the effect of restricting (domestic) prices from what they might otherwise have been.⁴

⁴ Of course, assessing the extent to which any of the predicted effects come to pass is an empirical issue. Material produced by the DomGas Alliance suggests that the reservation policy has been instrumental in the development of adequate domestic supply in WA (which might not have eventuated in the absence of the reservation policy) and the predicted negative effects (e.g. on entry/development of LNG facilities) has not occurred. DomGas Alliance (2012) “*Australia’s Domestic Gas Security- Report 2012.*”

Similarly, joint marketing arrangements may act to limit the degree of competition in the market and therefore the ability of any effects from the GBB and GSOO to manifest. The key consideration for both features (joint selling/marketing and reservation policy) is the balance between investment incentives and conduct once resources have been committed. Both incentives to invest and the behaviour of participants are important determinants of effects from the GBB and GSOO, and will be discussed further in the next section.

Identifying costs and benefits

15. Often it is easier to identify costs than benefits; costs are generally estimable, predictable and occur in a relatively limited number of categories. This study is no exception, though it has proved very difficult to separate the costs of the GBB and GSOO from the costs of the EMF. A combination of desk-top analysis and stakeholder consultation was used to identify both costs and benefits. Both methods yielded considerably more information on costs than benefits. The high-level categories of cost that appear most relevant to this study are summarised in the table below.

Table 1 Cost categories

Cost component	Description
Planning	Preparation required in understanding and complying with requirements including legal costs, project management and administrative and other personnel costs.
Implementation	Systems costs (including design and testing) to manage range of issues from interface to automation to reporting, as well as any personnel costs (both contract and FTE-based) incurred in the set-up phase.
Operational	Ongoing personnel and other related costs to operate the GBB/GSOO (on the IMO side) and to fulfil the requirements (on the participant side).

16. On the benefit side there is significantly more complexity. Not all benefits are derived from market interactions, and are therefore difficult to value (i.e. there is no market price). In addition, there are more categories of potential benefit and varying degrees of strength in terms of the degree to which quantitative estimates are accurate (i.e. not all benefits are tangible). In this section of the report we list the (potential) benefits.

Table 2 Benefit categories

Benefit component	Description
Efficient pricing	Information provided by the GBB may promote more efficient pricing decisions. The economic effect is captured by a reduction in distortions/deadweight loss. ⁵
Network management	Costs associated with outages/curtailment could be reduced as a result of improvements to gas supply capability from the GBB.
Regulatory certainty	With more information available, more (and more informed) debate around regulation and decision-making could result, reducing the resources dedicated to the regulatory process.
Entry of new participants	Information made available under the GBB and GSOO could act to induce new entry, with subsequent impacts on liquidity and ultimately price.
Signalling	The presence of a GBB and GSOO signals a form of maturation in the gas industry and an evolution towards a competitive and efficient market.
Volatility	More regular (and possibly more accurate) data provision could lead to a reduction in volatility as participants are able to react to data in a more timely fashion.
Transparency and confidence	The more stakeholders (both actual and potential) know about the market, the more likely they are to feel confident to invest and transact. Secrecy may mean stakeholders perceive they are not able to detect anti-competitive behaviour, a high level of uncertainty about how the market functions, and how stakeholders should interpret the signals the market sends.

17. Not all of the benefits listed above can be quantified and some may be less relevant to the introduction of the GBB and GSOO in Western Australia. A “bottom-up”

⁵ That is, the price change itself does not provide economic benefits as such, but the impact on distortions does.

approach would try to quantify values for each of these sub-components and aggregate the component to arrive at a total value, while avoiding double counting. Such an approach was not practical for this study.

18. For reasons of simplicity and clarity, we have applied a “top-down” approach in this study. By top-down we refer to a global or overall focus. For example, rather than looking to quantify each of the possible benefit streams in Table 2 above separately (or sequentially) we look to quantify the possible combined effects in more of a simultaneous fashion. In particular, we apply an “efficiency parameter” to a total value for the WA (domestic) gas market to derive likely benefits.
19. Similarly, costs are not delineated with respect to any particular dimensions or for individual organisations. Rather they are global in nature, and represent the costs to the economy.
20. Further discussion of the theory and practice underpinning our approach is contained in Appendix 1 to this report.

Cost and benefit estimates

21. This section presents our estimates of likely costs and benefits attributable to the GBB and GSOO. Stakeholder views were sought on both the costs and benefits. In addition, desktop research was undertaken to obtain further information on likely benefit magnitudes, as stakeholder views on benefits were less instructive than for costs. Both the costs and benefits should be considered indicative rather than definitive at this stage.

Costs

22. We focussed on the direct resource costs of the GBB and GSOO. For our purposes, there is no distinction between the costs of operating the GBB/GSOO and the costs of participating. As mentioned above, “costs are costs” no matter who bears them - the sum of which is the total foregone opportunity for the economy to use the dedicated resources elsewhere. Given the resources necessary for implementation and operation of the GBB and GSOO (i.e. personnel, systems, manuals, training and the like) are procured in competitive markets, we assumed that the price paid for such resources was an adequate representation of the opportunity cost of those resources.
23. Other general assumptions include:
- Only counting resource-based costs (i.e. accounting costs such as depreciation and interest are excluded).
 - A ten-year time frame for the study.
 - The price of labour remains the same throughout the study period.
 - No productivity or efficiency effects are included.
 - There is some degree of uniformity across groups of stakeholders (e.g. large shippers/users would have broadly similar costs).
 - A discount rate of eight per cent is applied.
 - Implementation costs are all largely incurred in “year zero” and operational costs are incurred from “year one” (beginning 1 July 2013).⁶

Direct costs

24. Table 3 shows the total estimated direct costs; these costs range in magnitude from around \$28 million in the low cost scenario to \$46 million in the high cost scenario.

⁶ There is one exception to this cost allocation, where a relatively small proportion of implementation costs (related to testing) extends into “year one.”

These totals represent ten years of operational costs (from 2013/14 to 2022/23) and six months of implementation costs in the remainder of 2012/13.⁷

25. The high cost scenario represents cost estimates as given to us by interviewees. Our impression from the interview process was that stakeholders had taken a cautious approach to estimating costs and were mindful to allow for “contingencies” (both in terms of the burden associated with information provision, and the dollar costs of such) as much as possible.
26. Separating the costs of the EMF from the costs of the GBB and GSOO proved to be very difficult, given the timing of this study. Some costs will be incurred by the IMO and gas market participants to support the requirements of the EMF as well as the GBB and GSOO, and any method of allocating a common cost has an element of arbitrariness. More importantly, market participants generally provided us with estimates of their total costs for the EMF and GBB and GSOO. In the time available we were unable to ascertain from participants the costs of the EMF, which should be netted off these total cost estimate to give an accurate picture of the costs associated solely with the GBB/GSOO.
27. For this reason we consider it appropriate to use the cost estimates given to us by stakeholders as an upper bound and drive other scenarios around this higher figure.
28. From examining some of the more detailed cost assumptions we concluded that, if the costs of the EMF were excluded, the major cost area (ongoing staffing) would be reduced by as much as half for most of the participants. To reflect the indicative nature of the cost estimates and that clarification around the intent of specific rules would lower the costs provided to us by participants, we calculated a “low” cost scenario using 50 per cent of the “high” scenario costs. We set the “medium” scenario at the midpoint (i.e. 75 per cent).
29. There was one major exception to this calculation - where we were informed that detailed costs had been estimated (as opposed to those that are more “ballpark” in nature) and the particular party was familiar with the informational requirements and intent behind the GBB and GSOO, we used a 75 per cent figure (i.e. the low and medium cost scenarios are the same for that party). Thus, the “low” scenario is not strictly half of the “high” scenario.

⁷ Strictly speaking any and all costs associated with the GBB and GSOO that have been incurred since the decision to implement them (including costs associated with this study) should be tallied and considered in the analysis. However, no estimates of time spent to date are available and so have not been included.

Table 3 Total costs (undiscounted, one year implementation, ten years operational)

Category	High (\$000's)	Medium (\$000's)	Low (\$000's)
Implementation	\$4,477	\$3,358	\$2,980
Operating	\$41,242	\$30,931	\$24,805
TOTAL	\$45,719	\$34,289	\$27,785

30. In terms of the composition of costs, shippers in particular mentioned that additional staff costs would occur to comply with particular rules. This concern is perhaps an example of the contingencies that are factored into the costs provided to us by participants as the concern underlying these additional staff costs is not clear as we understand that shippers would not be required to provide information to the GBB on a regular basis. The possibility of civil penalties from inaccurate or incomplete information means that additional (FTE) costs are incurred to minimise the possible liability and attendant reputation impacts. One-off costs involve system adaptations to support the provision of information. There are only a few participants for whom these costs have been identified.
31. The most popular view seemed to be that at least one additional FTE would be required for monitoring and compliance purposes and perhaps a further half an FTE for collection, collation and provision of information (to pipeline operators, storage facility operators and the IMO). Some stakeholders considered such costs as unnecessary and/or excessive.
32. Further information has become available since the interviews were undertaken which indicates that the compliance burden may not be as onerous as perhaps stakeholders considered it might be. In addition, the intent is not for collection of information to entail significant additional costs over and above the EMF requirements.
33. In the time available we were unable to ascertain from participants the extent to which the clarity around EMF requirements would reduce the costs that could be ascribed to the GBB and GSOO. Hence, the significant reduction in costs in the “medium” and “low” scenarios recognises that while total participant costs might be as estimated, the proportion that relates to EMF requirements needs to be netted off to give an accurate picture of the costs associated solely with the GBB/GSOO. Examination of some of the more detailed costing assumptions led us to believe that the major cost area (ongoing staffing) could be reduced by as much as half for most of the participants.

34. We make two further points of relevance to the issue of specific costs of compliance. The first is that they are probably best characterised as compliance risks rather than direct costs as such. There is no compulsion to incur such costs as a result of the GBB and GSOO; rather the additional costs reflect attitudes to risk and the management of such risks.
35. Second, it is not clear that there is no benefit at all from the move to greater consideration of compliance. Assuming that compliance activity as a result of the GBB and GSOO is “all cost and no benefit” implies that the existing level of compliance activity and risk management is somehow optimal (i.e. that the possibility of “spillover” benefits from such an approach to compliance and risk management is nil). That may well be the case, but no evidence was presented to support that view.

Indirect costs

36. A possible indirect cost mentioned frequently in stakeholder submissions and interviews was the potential for disclosure of commercially sensitive information as a result of the granularity of information requirements (i.e. at individual gate stations or outlet points). We have not allowed for such a cost in the analysis. The major reason is that we were not able to gather evidence of a “concrete” situation that would actually (and necessarily) give rise to what might be considered a detriment to the market or the economy as a whole.
37. For a “loss of competitive advantage” situation to result in detriment to the economy, the party who is able to see and act on information disclosed would need to be based off-shore. That is a possibility for some large users (e.g. Alumina production), but much less so for others (e.g. electricity generators). Competitive responses among domestic opponents would largely be a wealth transfer between the parties, which may end up as an economic benefit if it results in continuous lower prices to consumers that better reflect the efficient costs, than otherwise would have been the case.
38. We note that in the UK, a temporary informal derogation was put in place by Ofgem to protect gas market participants against the potential to reveal their commercial position with respect to field specific information. The derogation was at the behest of producers concerned about commercial confidentiality when Ofgem sought further gas production information disclosure to increase transparency, *inter alia*. The derogation was temporary to allow for concerns to be raised and analysed prior to phase two of the information disclosure regime, which was more detailed in nature.
39. In its final decision on regulatory options for further information disclosure, Ofgem decided against options to introduce a formal derogation power or modify licenses to strictly prescribe what information participants would be required to release to the market if required to by the new code. Instead it withdrew the informal derogation completely. The major reason was the potential for conflicting obligations of the gas transporter. On the one hand the terms of its licence require it to disclose

information while on the other, confidentiality agreements prevent it from doing so. Ofgem considered the costs and benefits of greater transparency and liquidity against the possible commercial consequences in its decision and considered that any confidentiality issues could be managed on a case-by-case basis.⁸

40. We also note that in a recent review of gas market information on Australia's eastern seaboard relatively little importance appeared to be placed on confidentiality concerns. While not dismissing outright the potential for certain types of information to give rise to confidentiality issues, in the context of information symmetry, adequacy and transparency being important to the successful performance of gas markets, the review did not place great weight on possible confidentiality concerns.
41. In summary, issues concerning commercial sensitivity and disclosure of confidential information may well arise as a result of the GBB and GSOO. We have not received sufficient evidence to establish that commercially sensitive information would be disclosed, and if it was, that it would result in an unambiguously negative effect such that this impact should be included as a cost (or disbenefit). More detailed analysis in light of experiences with the GBB and GSOO may be useful further down the track.

Benefits

42. In Appendix 1, we discuss the conceptual support for the benefits expected from the GBB and GSOO. These potential benefits result from a combination of improvements to allocative, productive and dynamic efficiency. Allocative efficiency gains arise when prices better match efficient costs, a productive efficiency gain is achieved by producing the same service or good with fewer inputs, and dynamic efficiency refers to the rate of innovation and adaptation to consumer preferences.
43. The primary driver of these gains is through improving the information and incentives affecting a myriad of decisions. Improved information and incentives will likely lead to new and better processes and investment decisions which in turn will raise the level and growth rate of the productivity of the sector in the long run; that is, an improvement in dynamic efficiency.
44. The approach we have taken to estimating (these largely dynamic efficiency) benefits was to estimate a value for gas market revenue and apply an "efficiency factor" to that number to give a high-level estimate of potential benefit.
45. The starting point for the analysis – estimating the value of gas market revenue - was the annual consumption in WA, and a "representative" wholesale price for gas consumed. We assumed the following:
 - Annual domestic gas consumption in WA of 566 PJ.⁹
 - LNG exports were not relevant to the analysis.

⁸ Ofgem (2005a) and (2005b).

⁹ DomGas Alliance (2012).

- A current price of \$4.50/GJ applied across the board in WA.¹⁰
 - Demand for gas is very price inelastic - a price elasticity of demand of -0.15 was applied.¹¹
 - Looking forward a “representative” price of \$6.50/GJ applies in WA.
46. Applying these assumptions we derive a value for the WA (domestic) gas market of around \$3.4 billion, calculated by multiplying the annual consumption (reduced in accordance with the increased price) by the “new price” of \$6.50/GJ.
47. Next we use existing information from CBA studies on the benefits arising from information disclosure in various gas markets to derive a range of plausible efficiency factors that could be applied to estimate the benefits of the GBB and GSOO (see Table 4) under each scenario.

Table 4 Gross benefit parameters

Source	Original estimate	Modified estimate used in this analysis
Ofgem/Barclays Capital (2005a)	2%	0.5%
Oxera (2005)	0.04%-0.15%	0.04%-0.15%
MMA (2006)	~0.5%	0.5%

48. We modified the Ofgem/Barclays Capital estimate for two major reasons. The first is that the Oxera CBA was essentially the same analysis as that undertaken by Barclays Capital for Ofgem. While it is not uncommon for CBA studies to differ, the divergence between these two studies is too great to be a plausible range within which the ‘true’ benefits are likely to lie.
49. Furthermore, the vast majority (around 75 per cent) of the benefits identified in the Barclays Capital study related to efficient risk management, due to further information reducing the spread of prices. While we believe that the GBB and GSOO will have positive effects on price efficiency, it is not plausible for the GBB and GSOO to influence liquidity and efficiency to the magnitude suggested in Barclays Capital study. Trading volumes are simply too low in WA. Having

¹⁰ ACIL Tasman (2010)

¹¹ Joutz et al (2009), Dahl and Roman (2004).

considered the Australian-based MMA study, we were comfortable replacing the 2 per cent figure with a factor of 0.5% as an upper bound.¹²

- 50. In addition, we chose to phase in the (reweighted) benefits associated with efficient risk management in a linear manner over five years (i.e. in year one 20 per cent of the benefit would accrue, increasing to forty per cent in year two and so forth until year five, when 100 per cent of the estimated benefit accrues).
- 51. The major point to take from these studies is that value accrues to further information even when there is a wide range of information available and the market is relatively well informed.¹³ For this reason, we treat the parameters as a representation of the marginal benefits that would accrue to the GBB and GSOO specifically (i.e. over and above the EMF).
- 52. Table 5 shows the total annual quantified benefits under three scenarios - high (0.5%), medium (0.15%) and low (0.04%).

Table 5 Quantified benefits per annum (\$000's, undiscounted)

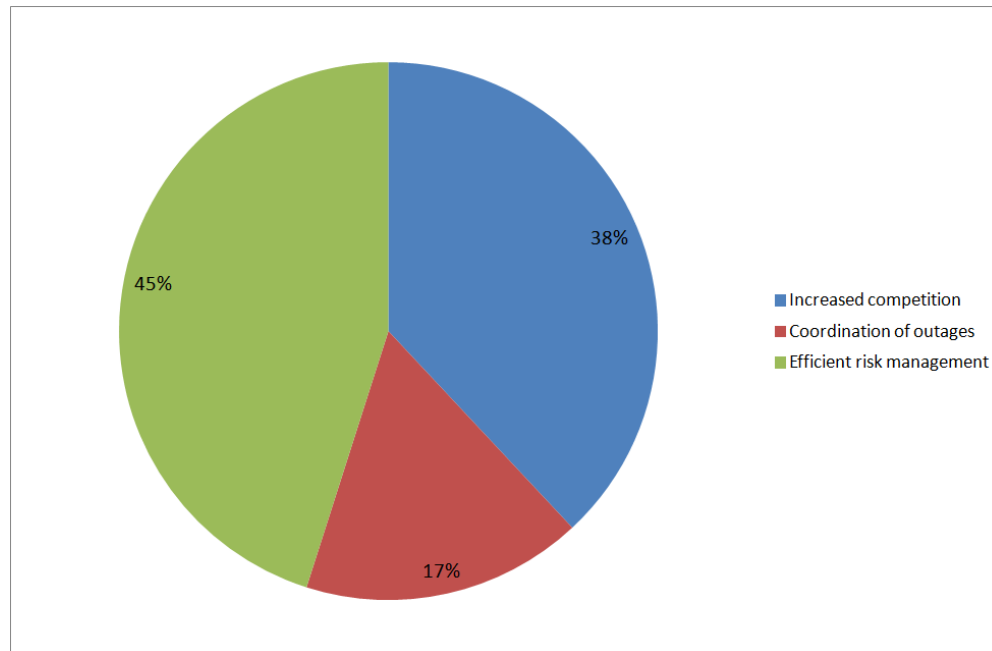
Scenario	2013/14	2014/15	2015/16	2016/17	2017/18 onwards	Total
High	\$10,214	\$11,953	\$13,691	\$15,430	\$17,169	\$154,301
Medium	\$3,064	\$3,586	\$4,107	\$4,629	\$5,151	\$46,290
Low	\$817	\$956	\$1,095	\$1,234	\$1,373	\$12,344

- 53. The 'top down' approach to estimating benefits does not derive directly any estimates of particular categories of benefit. However, we can draw from other studies to arrive at an indicative (albeit speculative) measure of the relative contribution to overall benefits of the main benefit categories. In Figure 1 we show the results of taking the proportion each of three streams of benefits makes to the total benefit identified in the Ofgem/ Barclays Capital study, and adjusted those proportions for the reduced effect of efficient risk management.

¹² The low and medium scenarios are given by the range of the Oxera estimates.

¹³ MMA (2006), p.25. The LNG export component of total WA gas production also supported a reduction in the efficiency factor relative to the UK study which looked at the entire wholesale gas market value.

Figure 1 Benefit shares



54. Based on the relative contributions found in the UK studies, the benefits that might be expected in WA could accrue as follows:
- 38 per cent of the total estimated benefit arises from increased competition in production and supply, stemming from increased information flows around supply and demand fundamentals, which also includes potential new entry;
 - 17 per cent of total estimated benefit arises from better coordination of planned outages; and
 - 45 per cent of total estimated benefit arises from more efficient risk management (i.e. the ability to reduce the “premium” paid by market participants to hedge their deliveries and off-takes in order to stabilise cash-flows).¹⁴

Net effects

55. Having separately considered the costs and benefits in the section above, we now turn to the integration of such impacts. Reiterating, the period for the analysis is ten years. However, to allow for the set-up, implementation and testing requirements discussed previously, the comparison is essentially between almost eleven years of cost and ten years of benefit. Three scenarios are shown:

¹⁴ Note that Ofgem/Barclays Capital identified two further categories of benefit (improved security of supply; reduced balancing costs) but were unable to derive estimates of benefit for either of these categories.

- *Optimistic*- low cost, high benefit;
- *Central*- medium cost, medium benefit; and
- *Pessimistic*- high cost, low benefit.

Summary results

56. Table 6 presents summary results comparing the total *discounted* costs and benefits for the study period, with a discount rate of eight per cent (real). (Note, the figures presented in tables 3 and 5 above were not discounted.) The major point that stands out is the wide divergence of net benefit estimates. To a large degree this reflects the difficulty associated with establishing any precision in both costs and benefits. It is also a function of the method used, which by definition differs markedly in terms of the benefit parameters used. In such a situation, sensitivity testing and further scenario analysis assume more prominence than usual.
57. Nevertheless, the preferred or “central” scenario indicates that the quantifiable benefits exceed quantifiable costs by about 20%. This result is broadly in-line with the midpoint of the medium and low scenario benefit-cost ratios in the MMA CBA result for the NGBB. Interestingly, the central scenario translates to (raw, undiscounted) benefits of about a cent per gigajoule, compared with around 2.5 cents/GJ in the MMA study.

Table 6 Summary results for quantified categories (\$000’s discounted)

	Optimistic	Central	Pessimistic
Total benefits	\$100,254	\$30,076	\$8,020
Total costs	\$21,065	\$25,224	\$32,140
Net benefits	\$79,189	\$4,852	-\$24,119
Benefit-cost ratio	4.76	1.19	0.25

Sensitivity analysis

58. In addition to the summary results shown above, this section considers the impacts of adjusting key assumptions and testing alternative scenarios. While there are myriad factors that can potentially be altered, we focus our attention on the following:
- Combinations of (already modelled) cost and benefit scenarios
 - Alternative parameters (e.g. discount rates, efficiency factors, prices/market value)
 - Other possible events

59. In addition to the three scenarios presented in Table 6, there are six further permutations (using the existing modelled parameters):
1. High cost, high benefit
 2. High cost, medium benefit
 3. Medium cost, low benefit
 4. Medium cost, high benefit
 5. Low cost, low benefit
 6. Low cost, medium benefit
60. As might be expected, altering the relative scenarios does not materially affect the benefits costs ratio (i.e. by definition, they are bounded by 4.76 and 0.25), but does give a clearer sense for possible values for both costs and benefits.

Table 7 Alternative cost and benefit scenarios (\$000's discounted)

	1	2	3	4	5	6
Total benefits	\$100,254	\$30,076	\$8,020	\$100,254	\$8,020	\$30,076
Total costs	\$32,140	\$32,140	\$25,224	\$25,224	\$21,065	\$21,065
Net benefits	\$68,114	-\$2,063	-\$17,204	\$75,030	-\$13,045	\$9,011
Benefit-cost ratio	3.12	0.94	0.32	3.97	0.38	1.43

61. In terms of alternative parameters, the next table assesses how important the discount rate applied is to the final result. We do so with reference to the central scenario only. The results are relatively insensitive to changes in the discount rate, which might be expected given that both costs and benefits stay relatively stable after the first few years. In typical CBAs, costs tend to dissipate over time and benefits rise and thus the effect of different discount rates becomes more pronounced. Nonetheless, reflecting the relatively strong net benefit result in the central scenario, the “break even” point comes at a discount rate of just under sixteen per cent, which would seem outside reasonable bounds for this type of project.

Table 8 Alternative discount rates

	Original	Very low	Low	High	Very High
Discount rate	8%	3%	5%	11%	13%

	Original	Very low	Low	High	Very High
Net benefits	\$4,852	\$8,164	\$6,684	\$3,386	\$2,570
Benefit-cost ratio	1.19	1.26	1.24	1.15	1.12

62. Perhaps of most interest for this study are changes to key input parameters. The two factors altered here are the price elasticity of demand (PED) and the price per gigajoule. Recall that the figures used for these parameters were -0.15 and \$6.50 respectively. In the case of the price elasticity, this means that if the price of gas were to increase by ten per cent, demand for gas would fall by 1.5 per cent. Such demand is very inelastic (unresponsive) to changes in price. We relax that assumption and assume that demand is still inelastic but less severely, using values for the PED of -0.25 and -0.5 (a ten per cent increase in price would lead to a reduction in demand for gas of 2.5 per cent and 5 per cent respectively). We also look at the effect that a different assumed price for gas would have. We consider the effect that \$7.50 and \$8 gas would have on the results.
63. Table 9 shows how sensitive the results are to this parameter. In economic terms, there is little real difference between a PED of -0.15 and -0.25 (both represent very inelastic demand and in the central scenario benefits still outweigh costs by around 14 per cent. With a PED of -0.5, costs just outweigh benefits meaning society is worse off as a result of the GBB and GSOO in the central scenario.
64. As always estimating the PED is an empirical exercise, and different stakeholder groups/users are likely to have different responses to price (i.e. there would be more than one PED applicable). In addition, long-run elasticities are generally greater than those in the short-run, as substitutes become more viable over time. In the context of the gas market, we have assumed (at least implicitly) that the time period for the study is best considered as short-run, though acknowledge the effect of alternative perspectives and what they mean for the results of the analysis.

Table 9 Alternative elasticity assumptions (\$000's)

	Optimistic		Central		Pessimistic	
	-0.25	-0.5	-0.25	-0.5	-0.25	-0.5
Total benefits	\$95,480	\$83,545	\$28,644	\$25,063	\$7,638	\$6,684
Total costs	\$21,065	\$21,065	\$25,224	\$25,224	\$32,140	\$32,140
Net benefit	\$74,415	\$62,480	\$3,420	-\$160	-\$24,501	-\$25,456

	Optimistic		Central		Pessimistic	
Benefit-cost ratio	4.53	3.97	1.14	0.99	0.24	0.21

65. If we alter the price parameter used to value the gas market at present and looking forward, we see that it has the effect of raising the value of the benefits in all three scenarios (see Table 10). In other words, the price effect (i.e. the increase in the value of the gas market as a result of higher prices) outweighs the volume effect (i.e. the reduction in demand as a result of higher prices). In essence, this has further highlighted the important role that the PED plays in the analysis.

Table 10 Alternative gas price effects

	Optimistic		Central		Pessimistic	
	\$7.50	\$8.00	\$7.50	\$8.00	\$7.50	\$8.00
Total benefits	\$111,546	\$116,779	\$33,464	\$35,034	\$8,924	\$9,342
Total costs	\$21,065	\$21,065	\$25,224	\$25,224	\$32,140	\$32,140
Net benefit	\$90,482	\$95,715	\$8,240	\$9,810	-\$23,216	-\$22,797
Benefit-cost ratio	5.30	5.54	1.33	1.39	0.28	0.29

66. The final piece of testing we undertake deals with the issue of uncertainty. In particular, it has been suggested that there may be significant costs if metering equipment had to be replaced to fulfil the requirements of the GBB. Rather than treat as a scenario, we have chosen to consider the issue separately, reflecting both the unknown nature of whether the replacement needs to take place at all and the extent to which such costs might be avoided as a result of the evolution of the rules around the GBB and GSOO. To the best of our knowledge this is the one major issue of this kind.
67. The possible costs associated with meter upgrades are substantial. The costs are attributable in full to the GBB introduction and there does not appear to be any corresponding benefit associated with upgraded metering.¹⁵ When included in the

¹⁵ While it could be argued that costs associated with metering upgrades would be incurred as a normal part of business operation, it is not clear the extent to which replacing or upgrading equipment would occur within

analysis, the effect is to significantly reduce the benefit-cost ratios; only the optimistic scenario remains above one in value. In the preferred (central) scenario costs are well over two times greater than benefits.¹⁶

68. Clearly, this is an issue that could be material to the final analysis. We understand that there is scope for more aggregated options (e.g. reporting capacity of pipelines rather than segments) which would mean that it would not be necessary to replace meters to meet the requirements of the GBB, and hence it would not be appropriate to provide for the cost of additional meters in this cost benefit analysis. Further discussion and a resolution on this particular point is recommended.

the timeframe for the study, and the precise number and sequencing of meters that would need to be upgraded/replaced. Therefore we have allocated (midpoint) costs in their entirety to the GBB and GSOO.

¹⁶ Modelling of costs at a more detailed level has been undertaken but is not able to be reported due to confidentiality concerns.

Discussion points

69. Despite being a well known and frequently used technique, CBA has restrictions and is not always straightforward to undertake. This is the case here. Factors that were not able to be quantified or included in the calculations are likely to be very influential in terms of results.
70. On the one hand, commercial sensitivity issues could result in some economic harm to the WA economy, with concomitant reductions to benefits or increases in cost. The effects of the GBB and GSOO on confidence and willingness to invest may not be fully realisable until some time in the future.
71. There are also benefits that would appear to be contingent upon other events, but were not able to be fully and rigorously included in this analysis. The most obvious is the possibility of a review of producers' ability to joint sell/market gas in WA. A GBB and GSOO, and storage capacity are some of the factors that the ACCC might give consideration to in its review. To the extent that competition is increased as a result of the cessation of joint marketing, and the GBB and GSOO plays a part in that decision, then the benefit estimation should reflect that. At the moment, there is no recognition of this potential benefit in the study.¹⁷
72. A central scenario is preferred, implying the results are, on balance, favourable. This feels about right given the nature of the intervention (and past experience in Australia and overseas). However, there is less certainty than is normally the case in terms of the ability to easily ignore the upper and lower bounds of the study. Landing in either of those situations is a possibility.
73. There is a wide range of issues that stakeholders raised (for example in relation to cost recovery and consultation) which did not have an immediate or direct impact on the costs and benefit estimation process, and have therefore not been specifically addressed in this analysis.
74. While those issues were not influential in this analysis, to the extent that they can be managed and worked through, cost blowouts or benefit retarding is likely to be reduced and therefore the CBA strengthened.
75. To summarise, major areas of concern for stakeholders where costs could be reduced without necessarily impacting on benefits are as follows:
- The threshold for notifying changes (i.e. 5 TJ or 10%) - the actual magnitude and the timing/frequency of the requirement to provide details.
 - The requirement for Capacity Outlook and Forecast Flow data seven days ahead (versus the "minimum" of three days).

¹⁷ On the flip side there is also no consideration of possible negative entry effects which might arise if joint marketing is no longer allowed.

Conclusion

76. Our conclusion is that, under reasonable assumptions, over the ten year period of the study, there is likely to be a net benefit from the introduction of the GBB and GSOO. This finding is robust to scenario analysis and sensitivity testing.
77. The distribution of benefits will not necessarily be uniform, meaning some parties may not immediately accrue benefits, but in terms of economic well-being the result is positive.
78. As further discussion and deliberation around the rules for the GBB and GSOO reduces actual and perceived costs of compliance, including the degree and frequency of forecasting requirements, the benefit-cost ratio will strengthen.

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Appendix 1 Some insights from theory

Efficiency gains drive benefits

79. The potential outcomes identified as benefits above result from a combination of allocative, productive and dynamic efficiency gains. The primary driver of these gains is through improving the information and incentives affecting a myriad of decisions. Improved information and incentives will likely lead to new and better processes and investment decisions which in turn will raise the level and growth rate of the productivity of the sector in the long run; that is, an improvement in dynamic efficiency.
80. By contrast, the welfare gains that can be achieved through allocative efficiency gains are usually “exceedingly small”, as these gains occur through changes in behaviour induced by more efficient prices. Productive efficiency gains – producing the same quantity of goods and services using fewer inputs – may result from reduced costs of managing outages. As allocative efficiency and productive efficiency gains would be achieved through the improved information, which is captured within an estimate of dynamic efficiency, we do not count an allocative efficiency and productive efficiency estimates in addition to the dynamic efficiency estimate. Our approach therefore would tend to understate the total benefits to Western Australia.
81. Although quantifying efficiency benefits, especially dynamic benefits, is a difficult exercise, competition authorities are frequently called upon to assess dynamic efficiency gains and losses. Typically, one of three different approaches is adopted to estimate efficiency effects from changes to decision rules and incentives, including information disclosure:
- (a) estimating the change in consumer surplus from an outward shift of the demand curve; this approach seeks to measure the increase in product innovation (but not process innovation);
 - (b) multiplying the combined allocative and productive efficiency improvements by a factor on the basis that dynamic efficiency consequences are likely to be greater than allocative and productive efficiencies; and
 - (c) multiplying total market revenue by a factor estimated from qualitative information.
82. The first approach would seem less suitable for estimating the efficiency effects of changes to market information because the approach primarily attempts to measure a change in product innovation, which for the gas industry is likely to be significantly less important than process and systems innovation. The approach would also require an estimate of the assumed percentage demand shift, as well as an estimate of demand elasticity. Although estimates of demand elasticity are readily available, we are not aware of any basis for predicting product innovation and converting those predictions into an estimated shift in the demand curve as a result of information changes brought about by the GBB and GSOO.

83. The second approach assumes that potential gains from more efficient investment are a fixed multiple of allocative and productive inefficiencies, which does not reflect the capital intensive nature of the gas industry, particularly the transportation segment. It is difficult to view the innovation potential of the gas sector as linked by a certain ratio to the on-going pressures for cost minimisation.

We have therefore applied the third approach; multiplying a market revenue baseline by a factor estimated from existing information. This approach to the quantification of dynamic efficiencies is generally supportable,¹⁸ though when weighting detriments and benefits, allowance needs to be made for the necessarily abstract nature of the exercise.¹⁹ Two judgments are therefore necessary: a) the choice of revenue base and b) the choice of efficiency factor.

Limits to granularity of study

84. The rationale for such an approach is twofold. First, as mentioned previously, it is not necessarily important for an economic CBA to separate costs or benefits in any way. The perspective taken in an economic CBA is that of the economy or society, and the net effect overall is what matters. Second, and perhaps more importantly, the analysis is much more tractable using a top-down approach. It is not feasible at this stage of the project to undertake the kind of detailed analysis that would be required in order to derive a bottom-up estimation of the costs and benefits.

85. Moreover such an approach is not straightforward and may not yield results of sufficient clarity. The CBA undertaken on two options to provide increased gas market transparency for the Gas Market Leaders Group reviewed available analyses of similar energy market developments and concluded that “[T]he net benefits of new market structures (*designed to improve gas market transparency*) have proved difficult to estimate, both ex ante and ex post. Typically the benefits are a small percentage of the total market value.”²⁰ Ofgem, the UK energy regulator, quoted in the MMA paper, has argued that:²¹

“A cost benefit analysis was difficult because both the costs and benefits were very difficult to quantify. Any cost benefit analysis would be very subjective and unlikely to inform a decision as to whether or not to reform the gas balancing regime.”

86. The practical effect of taking this approach is that a focus on specific components of the costs or benefits of the GBB and GSOO is not feasible. That is, the results here are not the sum of separate analyses of each aspect of the GBB and GSOO in terms of their particular costs and benefits, but an assessment of the overall “package.”

¹⁸ The approach was used by the New Zealand Commerce Commission in a number of competition-related cases in New Zealand.

¹⁹ *Air New Zealand v Commerce Commission* (No 6)/HC/2004, CIV-2003-404-6590, paragraph 313.

²⁰ MMA (2006) “*Gas Market Options and Cost Benefit Analysis*.” Report to Gas Market Leaders Group and MCE Standing Committee of Officials, p.25 (emphasis added).

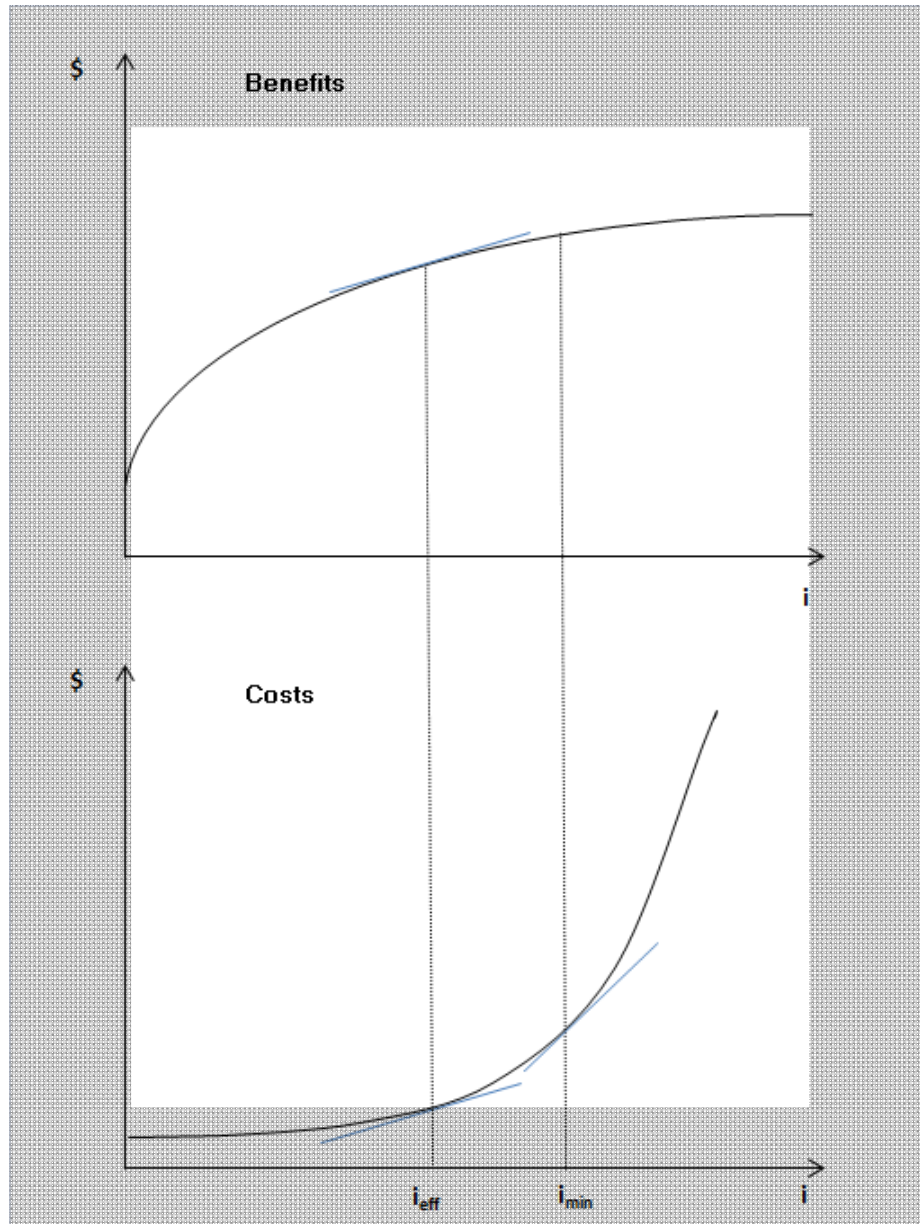
²¹ *Ibid*, p.23.

This may be a disappointment to several of the interviewees, who expressed a desire for the work to consider specific areas (e.g. granularity and frequency of information required) in that manner.

87. In addition to the practical difficulties involved in taking a component-based approach, the conceptual understanding of costs and benefits we took from discussions with stakeholders also suggests that such analysis (if possible) would not produce insights that are helpful. Figure 2 shows stylised versions of cost and benefit curves that participants indicated as being applicable to the GBB/GSOO introduction. Dollar value benefits rise with further levels of information, albeit at a diminishing rate, while costs also rise with levels of information, but at an increasing rate.
88. An economic assessment of the respective curves is that an efficient quantity of information sought exists, i_{eff} , where the marginal benefit is equal to the marginal cost of information sought.²² Any level of information to the right of i_{eff} results in marginal costs that exceed marginal benefits, while the opposite is true to the left of i_{eff} . Economic rationality dictates that society's well-being is maximised at i_{eff} and any information-driven goal should aim for the efficient level of information.

²² At this point, the slopes of both curves (represented by the blue lines) are the same.

Figure 2 Stylised depiction of cost and benefit curves



89. Stakeholders, particularly in relation to costs, were almost unanimous in claiming that the level of information being sought was very much to the right of the efficient level (i.e. there was considerable cost involved in meeting GBB information requirements in their entirety (e.g. capacity and storage outlook, nomination and forecast information, facility-based information, the 5 T] thresholds around required notification of updates to forecasts), but they perceived little benefit for that additional cost. Reference was often made to the NGBB as a model that viewed as less onerous.

90. A few comments seem relevant. Firstly, it is not clear that the NGBB model is necessarily an accurate representation of the efficient level of information, either in WA or for the Eastern States to which it applies. Determining what the efficient level of information might be is an empirical issue. It is outside the scope of this report specifically and CBA in general, to find optimal solutions. In terms of the characterisation in Figure 2, CBA measures the total benefit and total cost (on the respective vertical axes) and thus a next benefit to society may occur even at a level of information that is to the right of the efficient amount. In addition, while there was stakeholder support for the general shape of the cost curve, we were unable to verify in any evidential sense the extent to which actual costs did scale in the manner suggested. In other words, there was a lack of granularity in respect of the costs of information and therefore no ability to accurately define whether specific pieces of information, required to be made available, matter more than others in a cost sense.
91. The final factor worth mentioning is the extent to which emergency response concerns dictates the level and type of information required to be sourced and disclosed. By their nature, emergencies (e.g. gas supply disruptions) are infrequent, but also traumatic. In response to such events, it would not be uncommon for information requirements to “overshoot” what the market might provide naturally. This is especially so given risk tolerances around essential services or inputs such as gas. Thus, the minimum requirement is likely to be to the right of the efficient level when there has been a relatively recent gas supply disruption (the distance between i_{eff} and i_{min} could be thought of as the risk premium governments or regulators place on ensuring security of supply/adequacy of information).
92. The major implication is that conducting “separate” analyses at different points along the cost and benefit curves is not particularly insightful given the nature of the undertaking and the contextual factors that influence the specific information requirements at a point in time.

Relevant concepts

Introduction

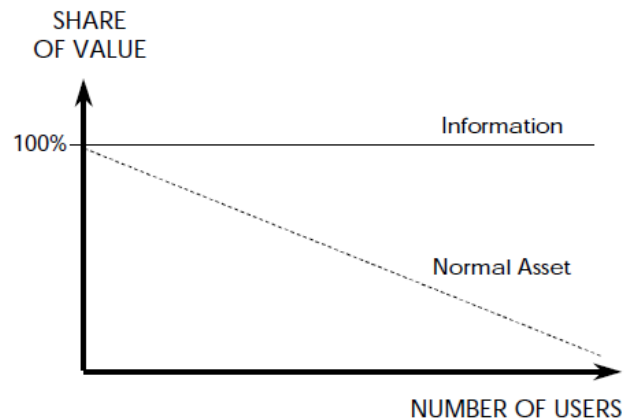
93. While this undertaking is not strictly about the value of information as such (i.e. it is concerned mainly with the disclosure/release of said information) there is some worth in considering the properties of information in terms of its costs and values. This is particularly relevant when assessing quality dimensions associated with information (alongside the obvious quantity aspects). It is also useful in distinguishing characteristics of information that are unique- which differentiate it from other assets and may be exacerbated by particular features of the Western Australian gas market.

Characteristics of relevance for the information asset

94. In this context, information is primarily seen as valuable as a form of asset. Thus, it may have particular value to an individual firm or organisation that may be greater than or less than its value to “the market” as a whole. Unique features ascribed to information as an asset (in a general sense) are as follows:

- (a) Information is (infinitely) shareable- in general, this means that any number of people, organisations or business areas can share information without necessarily resulting in a consequent loss of value to each party. Information as an asset is thus non-appropriable, and its value is therefore cumulative rather than apportioned across users.²³ In general, *information hoarding* prevents the potential value of information being realised. This can often lead to information being replicated. Duplicating information does not double its value unless and until “new” information is created (see Figure 3).

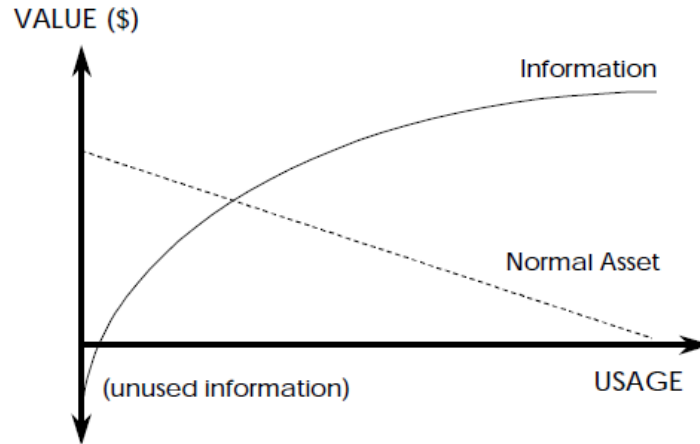
Figure 3 Shareability of Information



- (b) The value of information increases with use- information exhibits increasing returns to use (see Figure 4). In other words, information is not a scarce resource in that it is self-generating- the more you use it, the more you have. This is because new or derived information is often created as a result of summarising, analysing or combining different sources together. The original information remains and the derived information is added to the existing asset base. The major cost of information is in its capture, storage and maintenance – the marginal costs of using it are almost negligible. On its own information has no real value – it must be used. The concept of information literacy is important. It is often assumed that if more information is provided that decision-making will automatically improve. However the quality of decision-making depends on both the quality of information provided and the ability of decision-makers to interpret the information and use it to take appropriate action.

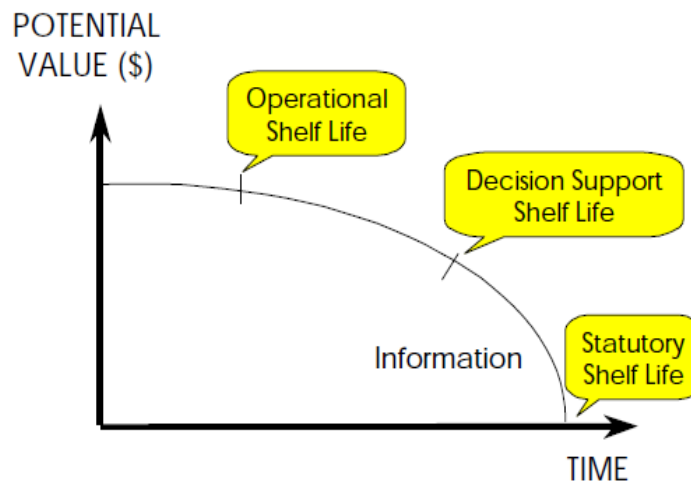
²³ In this regard, information shares characteristics with public goods in the sense of being non-rival in consumption, and (weakly) non-excludable. The latter is important, as there may be frequent cases where information loses value to a particular party when shared and the sharing of the information may result in worse outcomes overall if shared. Depending on the nature of the information in question, exceptions to this “rule” may be more important than the rule itself.

Figure 4 Value Increases with Use



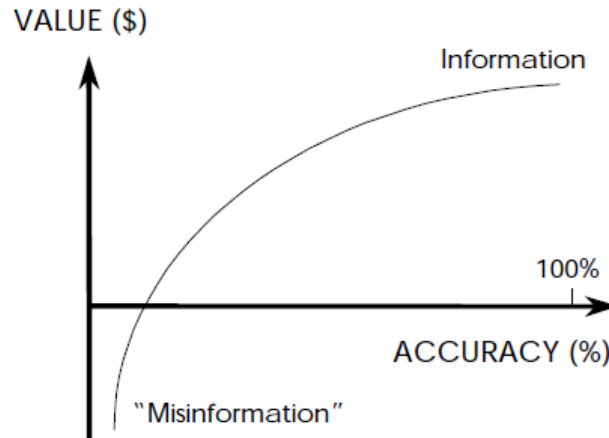
- (c) Information is perishable- in common with other assets the value of information tends to depreciate over time (see Figure 5). The speed at which it loses value depends on the type of information. For example, gas supply figures for the last week may not be especially valuable for the next week, but future supply is likely to be of value for some time. Information effectively has three “lives”: an operational shelf life, a decision support shelf life and a statutory shelf life. Information has a relatively short useful lifetime at the operational level, and may be discarded relatively quickly after exceeding its apparent operational shelf life, meaning it is not available for decision-making purposes. Statutory shelf life relates to legal requirements which may involve timeframes for accounting, audit and competitive behaviour and pricing purposes. Trends and patterns (and other investment signals) are relevant to decision-support shelf life.

Figure 5 Perishability Over Time



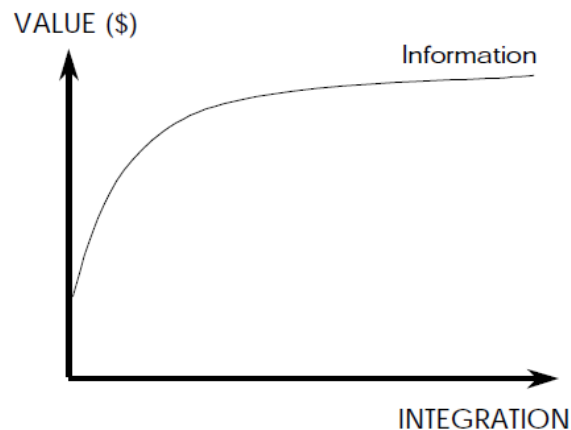
- (d) The value of information increases with accuracy- in general, the more accurate information is, the more useful and therefore valuable it is. Inaccurate information can be costly, but the level of accuracy required is highly dependent on the type of information and how it is used. As shown in Figure 6, there are diminishing marginal returns to accuracy. At the other end, once the accuracy of information falls below a certain threshold it becomes more of a liability than an asset. It becomes “misinformation” and people will no longer use it. For decision-making purposes, often just knowing the accuracy of information is as important as having accurate information. If decision-makers know how accurate (or inaccurate) the information they are working with is, they can incorporate a margin for error into their decisions (i.e. move from uncertainty to risk in terms of investment decisions). In the absence of knowledge around accuracy reliance may be placed on subjective opinions, anecdotal evidence or hearsay/rumour.

Figure 6 Value Increases with Accuracy



- (e) The Value of Information Increases in Combination with Other Information-producing decision support information generally requires consolidating information from a wide range of (complementary) sources and systems. Again, it is important to note the role that diminishing returns play in terms of integration (see Figure 7). As a rough approximation, the “80/20 rule” may have some application. Integrating 20 percent of the information/data may lead to 80 percent of the benefits being realised, while returns past that point are minimal. Total data integration is neither realistic nor necessarily justified/beneficial.

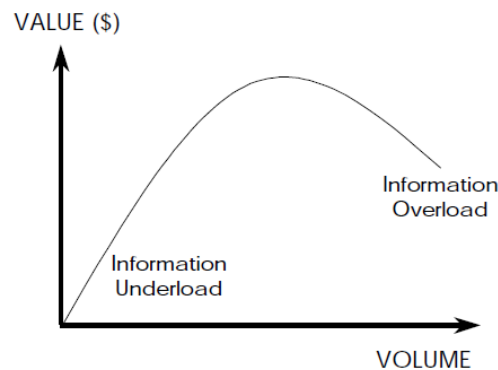
Figure 7 Value Increases with Integration



- (f) More is not Necessarily Better- with limits to cognitive ability to interpret and process information, the prospect of information overload is very real. In the context of non-costless production, this may lead to a reduction in the value of information past a certain point (i.e. not just diminishing marginal returns, but a decline in the return to information- see Figure 8).

Some empirical studies have shown that the perceived value of information to decision-makers continues to increase beyond the point of overload. In other words, human decision-makers tend to seek more information than can be optimally processed. Although the excess information leads to reduced performance, it actually leads to increased confidence and satisfaction with the decision by the decision-maker (cite references). The explanation for this is that people seek more information than can be efficiently processed in an effort to avoid mistakes and reduce uncertainty. This suggests that people believe that “more information is better” are not aware of their own information processing limits.

Figure 8 Volume versus Value of Information



Disclosure the main issue

95. The discussion above establishes that information has a value (i.e. may be considered as an asset), but that diminishing returns means that careful choices are required in terms of the quality and quantity of information. Individual organisations therefore conduct their own assessments of the extent to which they maximise the value of information for their own uses. The material is silent on the issue of disclosure, or release, of that information. It is likely (though not guaranteed) that some of the value to an organisation of information accrues through its ability to generate and access specific information that others can't. Economists refer to situations where private values differ from social values as externalities.
96. Externalities arise when individual decisions around the effects of some action do not take into account the wider/societal impacts of such decisions and therefore an inefficient amount (i.e. too much in the case of a negative externality and too little in the case of a positive externality) of the activity/good/service is produced. Such economic inefficiency is harmful to society. That is, society would be made better off from mechanisms that result in the socially optimal provision of the activity/good/service relative to what would otherwise have occurred.
97. Externalities generally arise through “ignorance” and can be distinguished somewhat from asymmetries of information which are known and exploited for gain by a

specific party. Nevertheless, the economics literature cites both the internalisation of externalities and addressing information asymmetries as rationales for disclosure regulation.

98. Public benefits are typically assessed in terms of improvements in economic efficiency, namely allocative, productive and dynamic efficiency. Allocative efficiency is about channelling scarce resources to where they are valued most highly (through competitive pricing). Productive efficiency is about production at the least cost. Dynamic efficiency is about the speed of innovation. Economic theory suggests that a competitive market is most conducive to achieving economic efficiency, and by implication, anything that changes the competitiveness of the market is likely to have an impact on economic efficiency.
99. To assess the potential public benefits of disclosing information, competition in the relevant market seems the most appropriate lens.
100. Potentially the requirement to disclose information can promote market competition:
 - by discouraging the exercise of market power or collusion;
 - by reducing asymmetries of information; and
 - by making the market more transparent. A more transparent market can facilitate competition and can improve allocative, productive and dynamic efficiency.
101. At the same time, the disclosure of information may also have anti-competitive effects in that it may:
 - reduce the rigour of competition
 - facilitate collusion and introduce distortions into bids and offers; and
 - incur costs.

For each potential anti-competitive effect there is a corresponding potential pro-competitive effect. Establishing the net effect is a difficult, though important aspect of the analysis, which will be tested with stakeholders. In addition, recourse to findings in analogous markets and industries will be used to come to a final stance. Ultimately, this will involve some judgement and will no doubt attract considerable interest.

Exercise of market power and collusion

Unilateral exercise of market power

102. The disclosure of information may make it easier for market participants including consumers to detect instances of parties unilaterally exercising market power (raising prices for services at times and locations where competition was weak). This means that the party exercising unilateral market power would more likely to face pressure from peers, the regulatory authority and the general public. Because of the increased probability of detection of exercising market power, parties with market power may see a higher risk that aggressive offering will be seen to be anticompetitive and may refrain from the actions that may constitute (or give the impression of constituting) an exercising of market power.

103. To the extent that a more conservative strategy adopted by parties may reduce the risk of exercising market power, information disclosure has a pro-competitive effect in the gas industry. However it is also possible that the more conservative strategy may also make such parties less responsive to changing demand conditions and may reduce the rigour of market competition.

Tacit Collusion

104. Disclosure of information (particularly commercially sensitive information) enables market participants to monitor producer and large user strategies more closely. To the extent that information disclosure makes tacit collusion more visible and more likely to face consumer objection, regulatory scrutiny or legal challenge, information disclosure can deter collusion, and is therefore pro-competitive.
105. However, information disclosure can also encourage tacit collusion. If tacit collusion could be sustained, all colluding parties would benefit (at the expense of consumers). Economic theory suggests that tacit collusion is more likely when there are frequent interactions between market participants. Information disclosure makes it easier for colluders to observe competitors' strategies and detect "cheating" on any tacit understanding among them not to compete aggressively. To the extent that market circumstances are likely to change in a manner that makes it easier for parties to co-ordinate, the GISP could facilitate more coordinated actions and encourage and sustain tacit collusion.
106. It is not straightforward to gauge the relative importance of the collusion-detering and collusion-facilitating effects. However if gas industry parties are already able to assess their competitors strategies through other means, the collusion-detering effects would outweigh the collusion facilitating effect.

Information Asymmetry

107. In the economics literature, information asymmetries are often discussed in the context where the purchaser does not have the information to determine the quality of the goods. In that context, there are spontaneous market mechanisms to deal with the problem, for instance, investment in reputation, and warranties.
108. In the gas market, it may not be possible to distinguish "quality of gas" supplied by different producers. "Information asymmetry" in the Western Australian gas industry may arise because purchasers may have less information than producers, and/or small participants and new entrants may have less information than big players and incumbents.
109. If the disclosure of information enables purchasers to better model the relationship between demand and price, so that they are in a better buying position, then the reduced information asymmetry would be of value to purchasers, and could potentially lead to lower market prices.

110. It may be argued that since big players in the market already have good information, information disclosure would benefit small players more and put them on a more level playing field with large players. To the extent information disclosure removes any “artificial” information advantage it would have a pro-competitive effect.²⁴
111. To the extent that information disclosure may make it easier for potential entrants to assess the risks in the market (including how incumbents may react to entry), it may have the effect of facilitating entry.

Transparency and Confidence in the Market

112. In general, it might be argued, the more that stakeholders (traders, investors, etc both actual and potential) know about the market, the more likely they are to feel confident, while the more that is kept secret, the more reason they may have for fearing that they are not getting as good a deal as possible. Secrecy of the market means more than stakeholders not being able to detect anti-competitive behaviour, it entails a high level of uncertainty about how the market functions, and how stakeholders should interpret the signals the market sends.
113. This might suggest that, other things being equal, the disclosure of information would increase transparency of the market and therefore improve a parties’ ability to participate in the market.
114. However in an organised market, well designed rules could ensure that the underlying preferences and costs of purchasers and suppliers are faithfully reflected in their individual bids. And that the aggregate of these preferences and costs is reflected in the final market clearing prices. In a truly efficient market, participants’ confidence would be built on the rules of the market rather than the availability of specific information.
115. Thus while transparency is generally a desirable feature of a market, sometimes it can be redundant and may reduce confidence if it leads to distortions.²⁵ The net benefit of disclosing a particular type of information and the timing of disclosing depends on specific circumstances.
116. In terms of findings in the literature, there is reasonable evidence in the banking industry of support for the “transparency-stability” view (i.e. that transparency enables market participants to better assess risk and performance) as opposed to the “transparency-fragility” view whereby negative informational externalities might arise which induce crises. The net economic effect of greater banking disclosure (transparency) is economically large.²⁶ Further support for the view that there are

²⁴ If the information advantage is gained through investing in searching, such information would not be considered as an “artificial” advantage and forcing its release would likely be welfare reducing because it would undermine incentives to invest in searching.

²⁵ Distortions may arise if participants in otherwise well functioning markets begin to react to the identity of the party involved as opposed to the actual information being disclosed by the party.

²⁶ Tadesse S (2006) “*The Economic Value of Regulated Disclosure: Evidence from the Banking Sector.*” William Davidson Institute Working paper 875, January.

positive externalities from information disclosure and a (beneficial) reduction in informational asymmetry is found in the securities markets²⁷

Costs of disclosure

117. Disclosure of information incurs a cost, including set up costs and ongoing maintenance costs. Given other informational requirements, the additional/incremental costs relating to the GBB and GSOO may well be trivial. Set up costs would already be incurred for the EMF, although maintenance costs could differ markedly given greater frequencies of information reporting under the GISP. The key aspect is how costs scale and the relationship between the information required and the costs associated with generation of that information. To the extent that information would be collected in the future regardless, then the effect of the GISP has been merely to bring forward costs that would have been incurred anyway.
118. In addition, if there is the possibility that information that is collected now (but would not otherwise have been) has merit in use that may have remained undiscovered, such impacts would serve to offset some of the identified costs. On the other hand, given the costs associated with acquiring information (research, data gathering, analysis, etc.) disclosure to other parties (without subsequent recovery of costs) might reduce the incentive for individual parties to collect/acquire information to the same level or to the same quality. The result of this might be that there is less information available to the economy as a result of disclosure requirements. This is again, largely an empirical issue that requires testing with stakeholders.
119. As discussed above, competitive costs incurred by one party might be seen as competitive benefit by another, with the net effect being non-neutral.

²⁷ Bushee B and Christian Leuz (2005) “*Economic Consequences of SEC Disclosure Regulation: Evidence from the OTC Bulletin Board.*” *Journal of Accounting and Economics* 39, pp233-264.