

Common Arrangements for Gas (CAG)

Draft conclusions on the options for the Gas Operational Regime

20 October 2008

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Executive summary

In May 2008, the Utility Regulator and the Commission for Energy Regulation (the 'Regulatory Authorities') issued a discussion document outlining a number of operational options currently being considered for the 'Common Arrangements for Gas' ('CAG') project.

Responses to the discussion paper were supportive of the proposal to operate the transportation systems on the island as one system, particularly if this will reduce costs, reduce complexity, improve efficiency, and increase security of supply. Furthermore, there was general consensus amongst stakeholders on the suggested functions of the CAG system operator¹ and on the structure of the CAG Code of Operations. However, there was uncertainty as to the most appropriate structure of the CAG SO.

This paper sets out the Regulatory Authorities (RAs) draft conclusions with respect to the functions of the CAG SO and the structure of the CAG Code of Operations. It provides further information and scoping on the options for the structure of the CAG SO still under consideration and outlines some of the legal, operational and technical aspects associated with the different options. To the extent that our conclusions are likely to entail changes in legislation, they will need to be discussed with the relevant Government Departments in Northern Ireland and Ireland.

Stakeholders are invited to submit responses to this consultation by the 28th November. A stakeholder workshop will be held on the 7th November in the Gresham Hotel, Dublin at 2pm. The RAs will aim to issue their final conclusions on the design of the single operational regime by the end of January 2009. This stage of consultation, which began in May, is part of a series of consultations which will culminate in the implementation of CAG in October 2010.

Conclusions on the functions of the CAG SO

Taking into consideration the general support of respondents and given the minimum vision outlined in the CAG Memorandum of Understanding, the RAs' view is that the long-term management, day-to-day operations, balancing of the system, capacity trading, aspects of congestion management, and end-of-day allocations functions will be carried out on an all-island basis by the CAG SO. The function of the procurement of gas is considered to be part of the general balancing function of the CAG SO.

Section 3.2 of the paper outlines the detail of these functions and the expected role of the CAG SO with respect to these functions.

¹ For the purposes of this document, the CAG system operator refers to the three system operator structures that are currently under consideration. From this point forward in the document they will be referred to collectively as the CAG SO and could mean any of these options (Single TSO, SSP or Joint Venture), whichever option may be chosen for the purposes of the CAG project.

Conclusions on the structure of the CAG SO

In light of the greater degree of organisational complexity involved and based on the general support of respondents we propose not to proceed with more detailed analysis of both the proposed coordination model and the dual TSO models. The coordination model would require complicated coordination mechanisms which would be difficult to sustain and the dual TSO solution requires almost as much effort as the single TSO to implement, but does not have many advantages over the coordination model. In addition the responses to consultation favour either an SSP or single TSO.

It was also suggested during the consultation process that the CAG SO could be organised through the formation of a Joint Venture (JV) between the current licensed Transmission System Operators (TSOs), such that they will coordinate and discharge the all-island functions as a single organised entity. Further scoping of this option by the RAs has revealed that in essence a JV between the TSOs would be a variation on either of the SSP or Single TSO option, depending on how it would be formed. Therefore, we do not believe that the JV is a separate option.

This leaves a choice between two options- the SSP and the single TSO. The legal, technical and operational aspects of these options are discussed in section 4.

Conclusions on the CAG Code arrangements

We believe that a single unified network code is the most desirable outcome for the CAG project as it is the most efficient practicable longer term solution. Responses to the discussion paper indicate that a majority of respondents also support the implementation of a single network code for the project, if this could be achieved by 2010. However, as discussed in section 5, the first phase of the CAG project (leading up to October 2010) will only address harmonisation of arrangements at transmission level. The CAG unified code of operations will only therefore, seek to harmonise transmission arrangements but the code will facilitate separate distribution codes in Northern Ireland.

Summary of Decisions

1. Functions of the CAG SO

- The long-term management of transportation arrangements, day-to-day operations, balancing the system, capacity trading, aspects of congestion management, and end-of-day allocations functions will be carried out on an all-island basis by the CAG SO

2. Structure of the CAG SO

- We propose not to proceed with more detailed analysis of both the coordination and dual TSO options
- The options for CAG single operation are for; a Single TSO or a Single

Service Provider. These are to be examined further from a legal, technical and operational perspective

3. CAG Code of Operations

- A single unified code of operations will be developed and implemented for October 2010. The CAG project will initially focus on harmonising arrangements at transmission level only
- The CAG unified code will facilitate independent distribution codes. Harmonisation of distribution arrangements will be examined further as part of the second phase of the project

1 Introduction

1.1 Purpose of this document

In May 2008, the Utility Regulator and the Commission for Energy Regulation (the 'Regulatory Authorities') issued a discussion document outlining a number of operational options currently being considered for the 'Common Arrangements for Gas' ('CAG') project. This discussion paper sought responses to certain specific questions and also general comments/suggestions from stakeholders on other options that should be considered in the design of this project. The Regulatory Authorities hosted an open workshop during this consultation period, engaging with industry and debating the options proposed. This stage of consultation, which began in May, is part of a series of consultations which will culminate in the implementation of CAG in October 2010.

The Regulatory Authorities received eight responses to their consultation. We would like to thank the respondents for their time and input into the consultation process.

In their responses to the consultation, there was general consensus amongst stakeholders on the suggested minimum functions of the CAG SO and on the structure of the CAG Code of Operations. However, there was uncertainty as to the most appropriate structure of the CAG SO.

This paper sets out the Regulatory Authorities proposed decisions with respect to the functions of the CAG SO and the structure of the CAG Code of Operations. It provides further information and scoping on the options for the structure of the CAG SO still under consideration and outlines some of the legal, operational and technical aspects associated with the different options. To the extent that our conclusions are likely to entail changes in legislation, they will need to be discussed with the relevant Government Departments in Northern Ireland and Ireland.

The Regulatory Authorities would welcome stakeholders views on the proposals outlined in this paper and would ask for responses to the specific questions raised throughout the paper.

1.2 Structure of this document

This document has four key sections each corresponding to a particular aspect of the proposed all-island gas operations regime:

- Goals of CAG operations
- All-island system operator functions
- Options for system operation

- Network codes

Each section follows the same format in that it re-caps the options consulted on in May before summarising the consultation responses received and setting out the conclusions of the RAs and any additional analysis which has been conducted.

We have also included in Appendix 2 an assessment of the likely impact on CAG of the EU's Third Legislative Package on Energy. However, as the Third Package has not yet been agreed this should not be considered as definitive.

1.2.1 Responses to the May discussion paper

All non-confidential responses to the discussion paper published in May have been published in full on the CER and Utility Regulator websites. One of the responses received was confidential.

1.3 Responding to this consultation

The Utility Regulator and CER would welcome responses to the issues and questions in this document by **28 November 2008**.

In addition to this consultation the Regulatory Authorities will host a joint workshop to discuss the issues in this paper on the **7th November 2008**. The workshop will be held in the Gresham Hotel Dublin at 2pm. This is open to all stakeholders and interested parties. Please advise Roisin McLaughlin or Jill Murray if you wish to attend.

Responses should be sent to:

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Respondents may ask for their responses, in whole or in part, not to be published, or that their identity should be withheld from public disclosure. Where either of these is the case, we will ask respondents to also supply us with the redacted version of the response that can be published.

Respondents should note that both the Utility Regulator and CER are bound by freedom of information legislation in their respective jurisdictions. Therefore it is possible that all responses may be discoverable under these rules, regardless of where they are submitted. It is therefore important that respondents note these developments and in particular, when marking responses as 'confidential' or asking the Regulators to treat responses as confidential, should specify why they consider the information in question to be confidential.

If you have any queries concerning the issues raised in this document, please contact Roisin McLaughlin on 028 9031 6350 (roisin.mclaughlin@niaur.gov.uk).

1.4 Next steps – process and timetable

Following the end of this consultation the RAs will consider the responses received together with the discussion at the workshop on the 7th November. The RAs will then issue their final conclusions on the design of the single operational regime by the end of January 2009.

We are available at each stage of the CAG project to all stakeholders who wish to engage with us bilaterally. If you want to arrange a meeting please contact either Roisin McLaughlin or Jill Murray whose contact details are above.

After the high level design has been published the RAs will commence the implementation phase of the CAG project which is outlined in the work-plan published on the websites of the RAs.² Further consultation will be held during the implementation phase.

² On the CER website this document is referenced as CER/08/171.

2 Goals of CAG operations

2.1 Goal of the work stream

In May the RAs consulted on the criteria against which the options for single system operation and codes would be judged. These criteria were based on the statutory duties of the RAs. The RAs suggested the following criteria for the project;

1. Efficient
2. Cost Effective
3. Customer Friendly
4. Transparent
5. Consistent with EU legislation
6. Compatible with present and future developments towards an EU Single Market in Gas

In addition the RAs stated that the safety, reliability and integrity of the gas systems on the island will be enshrined in whatever operational arrangements are put in place by the CAG project.

The May discussion document asked whether these criteria are appropriate, whether other criteria should be added to the list and whether any of the criteria should be prioritised over others. We also asked stakeholders to provide their view of the cost/benefits of CAG for shippers and suppliers.

2.2 Summary of the responses received

Stakeholders who attended the workshop on operations and who submitted responses to the May consultation paper saw value in operating the island as one system particularly if this would reduce the costs that customers pay for gas, reduce complexity, improve efficiency, and increase security of supply.

There was general support for the criteria listed by the RAs. In addition, some respondents suggested the following criteria should be considered:

- Certainty and stability of the industry structure
- Certainty, stability, clarity and ease of operation of the market arrangements
- Recognition and respect for the rights and obligations of asset owners

- Market responsiveness and innovation such that the entity performing system operation independently anticipates and drives future transmission tariff changes for the betterment of the whole market and on a coherent all-island basis.

Only one respondent suggested that we prioritise the criteria in a particular way, placing consistency with EU developments first. One operator placed more emphasis on efficient operations and customer friendly arrangements. The other respondents either did not answer this question or emphasised the criteria equally.

Two of the suppliers who provided their initial view of the costs and benefits of CAG for shippers/suppliers did not place a monetary value on the benefits or costs of CAG but instead emphasised the qualitative benefits that they hoped CAG would bring such as increased transparency, and the promotion of competition in the form of reduced barriers to entry, and encouraging new market entrants through the opening up of the retail markets.

The responses to this section of the consultation paper also emphasised the need for the project to deliver benefits to customers in both jurisdictions and that the benefits of postalisation and mutualisation in Northern Ireland should not be lost. Respondents asked the RAs to fully model the costs and benefits of CAG and for the assumptions underpinning the modelling to be made public, including the breakdown of benefit between Northern Ireland and Ireland.

2.3 Conclusions

The criteria proposed by the RAs appear to have wide support among stakeholders therefore we propose to adopt these as the criteria going forward.

Regarding the additional criteria proposed we agree that the arrangements need to be appropriately stable, and provide certainty and clarity. To an extent this intention is explicitly expressed in criteria 4, 'transparent' and may be assumed elsewhere. We also agree that the common arrangements should ultimately reflect the needs of customers and are flexible such that they can adapt as those needs change. For this reason we wish to ensure that the arrangements at transmission level are customer friendly and we look forward to engagement with shippers and suppliers about the code arrangements and IT interface to be used. Ultimately the degree of market responsiveness and innovation will depend on the adaptability of the arrangements and the ability of the regime to host, facilitate and promote competition.

3 All-island system operation functions

European legislation (Directive 2003/55/EC and Regulation 1775/2005) establishes the functions of a TSO for the purpose of providing access to Natural Gas Transmission Pipelines. In short, the key features of the TSOs functions relate to the operation, maintenance and development of the system, as well as information sharing, both with system users and with other network operators.

The functions for the CAG SO proposed in the May discussion paper suggested that these functions, amongst others (such as emergency management) should be provided for on an all-island basis. Generally there was good consensus among participants in regard to the core functions which should be carried out on an all island basis but there was a lack of consensus in a few areas. In some cases specific comments were made. The responses are summarised in the sections below.

The extent to which these functions can be carried out by the CAG SO depends on the structure of the CAG SO decided upon. It is not possible at this stage therefore, to clearly and definitely outline the division of responsibility of these functions between the CAG SO and the asset owners. This will be discussed in more detail with the parties' concerned and general industry following a decision on the structure of the CAG SO in January 2009.

3.1 Summary of responses

There was general agreement amongst respondents that the functions of the; day-to-day operation of the transportation system; balancing the system; procurement of fuel (for balancing, shrinkage and compression purposes); capacity trading; congestion management; and end-of-day allocations should be carried out on an all-island basis by the CAG SO.

There was also general support for the proposal that the long-term management of the transportation arrangements should be carried out on an all-island basis, however, respondents requested clearer definition as to what the management of long-term transportation arrangements would entail.

The general consensus on the function of issuing a single bill is that this would be difficult given the differing VAT and exchange rates in the two jurisdictions. One respondent proposed that it should remain a function of the asset owner. Another respondent felt that although it could add value to network users, it would be difficult to achieve. Two shippers who addressed the question did not feel that it would add value to shippers because it was not a cost consideration for shippers and the difference in foreign exchange and VAT rates would make the process very complicated.

The discussion paper also proposed that metering could be carried out by the CAG SO as an all-island function. Respondents generally supported the idea that this should be carried out on an all-island basis. One respondent, however, felt that metering should remain the responsibility of the asset owner.

Few respondents addressed emergencies in their submissions to the RAs. Those that did felt that there was an all-island role for the CAG SO in an emergency however, the extent of this role differed. One respondent felt that this role should solely be on a procedural basis to prevent an emergency and to act as a central point of communication in the event of an emergency. Another respondent felt that emergencies should only be managed on an all-island basis in the event of a supply shortage, such that all other emergencies could be managed on a local basis.

The majority of respondents proposed that the planning and development of the system should be carried out on an all-island basis by the CAG SO, such that it would maximise the utility of the network. One respondent was of the view that it should not be an all-island function of the CAG SO and that it should remain the responsibility of the asset owner.

Respondents who addressed the maintenance question felt that maintenance should be carried out by the asset owner. Two respondents felt that the TSO should have the responsibility for maintenance, another felt that scheduling maintenance on an all island basis should be considered.

Of the respondents that addressed the issue of connections, only one felt that it should be managed locally by the asset owner. The other respondents who addressed this point (of which there were three) believed that it should be carried out on an all-island basis.

Responses on the collection and disbursement of transport charges differed greatly. Two responses believed there was merit in this function being carried out on an all-island basis by the CAG SO. One respondent believed that a PoT system, similar to that currently in operation in Northern Ireland, would be the minimum requirement for transparency purposes.

In response to the discussion paper, some respondents suggested other functions that they believe would add value if offered on an all-island basis. These were;

- The provision and development of a single IT interface
- The provision of consolidated market reports
- Development and consultation of new products and services
- The provision of a single market balancing point
- The streamlining of gas safety and quality
- The management of financial security obligations

3.2 Conclusions

Given the minimum vision of the CAG project outlined in the project Memorandum of Understanding and taking into account the general support of respondents the RA's view is that long-term management of the transportation arrangements, day-to-day operations, balancing of the system, capacity trading, aspects of congestion management, and end-of-day allocations functions will be carried out on an all-island basis. The function of the procurement of gas is considered to be an integral part of the general balancing function of the CAG SO.

In terms of the long-term management of the system, this function will include management of the code modification process to accommodate new product offerings and new arrangements and hosting and maintaining the IT interface between the CAG SO and network users.

On the issue of distributing a single bill to network users and the collection and disbursement of transportation charges, the responses from stakeholders suggest that placing this on an-island footing would be a complicated process without delivering many benefits to network users. It is difficult to understand how charges will be collected and disbursed without knowing the precise structure of the CAG SO. The RAs therefore, propose to consider how responsibility for these functions should be divided between the CAG SO and the asset owners when the structure of the CAG SO and tariffing arrangements are more clearly defined.

With respect to metering, it remains to be decided at this stage of the project what the role of the asset owner will be under the CAG regime. It is clear however, that the CAG SO will require immediate access to metering data if it is to control the system and carry out its allocation functions. The division of metering functions between the CAG SO and the asset owners will be clarified when the structure of the CAG SO is defined.

The issue of emergencies needs to be considered further in some depth. Generally there is support for a co-ordinated approach but whether this should generally apply or only in the case of supply shortages needs to be addressed. Emergency responses are probably best dealt with locally. Issues of safety and gas quality may be relevant to this topic. It is recommended that a sub group be established to address this area specifically and this will require input from the Health and Safety Executive in Northern Ireland (HSENI).

The RA's view is that planning and development should be co-ordinated on an all-island basis. It is anticipated that a co-ordinated approach to planning and developing the system will give rise to significant benefits and cost savings, such that it will maximise the utility of the network and possibly defer investment through the optimal use of the current infrastructures. This will be explored in more detail later in the year as part of the planning and development work stream.

There is a role for both the CAG SO and asset owners in maintaining the system on an all-island basis. It is currently envisaged that the co-ordination and scheduling of maintenance should be carried out on an all-island basis by the CAG SO to ensure minimum disruption of the network. The physical maintenance itself will be carried out by the asset owners.

Taking into account the submissions from respondents, the RA's initial position is that the connection policy, standards and agreements will be approved by the regulatory authorities on an all-island basis. These approved standards and policies will be managed by the CAG SO. The physical connection of points to the network will however be carried out by the asset owners.

Higher level policy aspects of connections will remain independent of CAG, such that the authorities in Northern Ireland and Ireland will be free to roll-out the connection of new towns or industrial facilities as appropriate. Other aspects, such as who bills for connections, requires further work.

The provision of a single shipper IT interface is a minimum requirement of CAG and will be required to support the role of the CAG SO.

As part of the work-stream to design and implement a CAG Code (which is discussed in more detail in section 5), CAG will aim to create an all-island Code Modification Panel to manage the implementation and development of the CAG Code. This will ensure a coordinated approach to the development of new products and services. The detailed design of the code modification panel will require further consultation.

The RAs agree that consolidated market information and reports will be advantageous, both for market participants and for those charged with planning and developing the system. The RAs envisage that this consolidation will begin with the production of an all-island gas capacity statement in 2009.

The RAs are currently chairing a working group with the aim of assessing the requirements for streamlining gas safety and quality across both jurisdictions. This will be taken forward as an independent work-stream but it is expected that the outcomes will be implemented as part of the CAG code and possibly may require legislative changes in one or both jurisdictions.

The RAs agree with the proposal of one respondent that a single financial security policy would be advantageous for the overall operation of CAG. This will be examined as part of the work-stream to develop the CAG code.

For those functions we propose should be coordinated on an all-island basis, responsibility for these functions must be divided between the asset owners and the CAG SO. This will entail deciding which decisions may be required on an all-island basis.

Table 1: Assessment of initial conclusions against the criteria

Proposed all-island SO functions	Assessment
Long term management of transportation arrangements	<p>This function includes the provision and maintenance of a single IT interface for users which is more customer friendly for suppliers than the current arrangements. In the long run a single IT interface is also more cost effective than maintaining the two interfaces which exist at present.</p> <p>It is also more efficient, cost effective and customer friendly to optimise code modification processes and the introduction of new products and arrangements on an all-island basis, as this avoids the need for duplication in both jurisdictions.</p>
Day to day operations of the system	<p>As a core function necessary to deliver the minimum vision of CAG we believe that it is more efficient, cost effective, customer friendly and transparent to conduct day-to-day operations on an all-island basis. The RAs are working on a revised CBA which will assess how efficient and cost effective optimising this function will be on an all-island basis. By efficient we mean that the arrangements should allow for gas to be moved in an efficient manner, regardless of ownership of pipelines and that the transmission assets are operated to optimise fuel costs, balancing costs, additional investment and available capacity.</p> <p>As all aspects of this function will be performed on an all-island basis responsibility for this function will rest with the single TSO or the existing TSOs, making this more transparent than if this function were shared between operator and owner.</p> <p>Operating the system is considered a TSO function for the purposes of Directive 2003/55/EC and the proposed third package. Therefore performing this function on an all-island basis would not contravene European legislation. The fact that operations will be performed on an all-island basis improves the interoperability of the two systems on the island and so contributes to greater interoperability at European level.</p>
Balancing the system	<p>Balancing is also a core function necessary to deliver the minimum vision of CAG and the revised CBA which will assess how efficient and cost effective all-island balancing will be.</p> <p>Balancing and the procurement of fuel for balancing are considered TSO functions for the purposes of Directive 2003/55/EC and the proposed third package. Therefore performing this function on an all-island basis would not contravene European legislation and also contributes to greater interoperability at European level.</p>
Facilitating capacity	Performing this function on an all-island basis facilitates a more

transfers	<p>customer friendly regime for suppliers and is more efficient and cost effective than separate capacity transfer regimes. This function is largely related to the IT systems necessary to track trades and could be provided by the single IT interface thereby making the interface more cost effective.</p> <p>European legislation also requires TSOs to take reasonable steps to allow capacity rights to be freely tradable. Therefore performing this function on an all-island basis would not contravene European legislation and also contributes to greater interoperability at European level.</p>
Aspects of congestion management	Performing aspects of this function (such as administering use it or lose it mechanisms and interruptions) on an all-island basis is more customer friendly for shippers, while also being more cost effective.
End of day allocations	It is more cost effective and customer friendly for one entity to make allocations rather than duplicate this role between the TSOs. In addition, the provision of information to network users on their balancing status is a TSO function for the purposes of the Directive. Therefore, performing this function on an all-island basis would not contravene European legislation.
Proposed functions to be coordinated	Assessment
Coordination of planning and development	The RAs anticipate that coordination of planning and development at the all-island level will increase efficiency by improving the utilisation of the network and should be cost effective in that it may defer investment. The revised CBA which will assess how efficient and cost effective optimising this function will be on an all-island basis.
Coordination and scheduling of maintenance	The coordination and scheduling of maintenance on an all-island basis will be more cost effective and efficient than not doing so as part of CAG, as scheduling maintenance on an all-island basis will allow pipelines to be taken out of use with minimal disruption and cost to network users.
Administration of connection policy and standards	<p>A single connection policy will be more customer friendly and transparent to network users than separate rules and administering this on an all-island basis will be more cost effective and customer friendly than each jurisdiction administering the policy separately.</p> <p>Administering the policy on a single basis also avoids the possibility that it could be applied differently in each jurisdiction.</p>
Coordination of consolidated market reports	<p>We believe all-island information is more customer friendly for shippers and that this advantage outweighs any increased cost in providing this information on an all-island basis.</p> <p>In the long run providing consolidated market reports should improve the interoperability of the gas markets on the island and</p>

	therefore increase interoperability at the European level.
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3.3 Summary and questions for industry

Proposed all-island system operation functions;

- Long-term management of transportation arrangements
- Day-to-day operations of the system, including the hosting & management of a single IT system
- Balancing the system (including the procurement of fuel for balancing purposes)
- Facilitating capacity transfers between network users (using single IT interface)
- Aspects of congestion management
- End of day allocations

Proposed functions to be coordinated on an all-island basis

- Coordination of planning and development
- Co-ordinating and scheduling of maintenance
- Administration of connection policy and standards
- Co-ordination of consolidated market reports

Functions which Require Further Scoping and Discussion;

- Co-ordination of emergencies
- Metering
- Other aspects of congestion management
- Collection and disbursement of transportation charges
- Administering and monitoring gas quality and safety
- Management of financial security policy

Questions for Industry;

- 1) Do you have any views on the draft conclusions outlined in this section?
- 2) For those functions we propose should be coordinated on an all-island basis, how should responsibility for these functions be divided between the asset owners and the CAG SO?
- 3) Do you have any other views or suggestions?

4 Options for system operation

4.1 Re-cap of the options for single system operation

The options consulted on in May were:

- **Coordination between multiple TSOs** who are responsible for the provision of system operator services in their areas and who coordinate their activities in order to provide the all-island system operator services. This option closely parallels the current situation in Northern Ireland where the existing TSOs coordinate their activities in order to create a single balancing zone.
- **The Single Service Provider (SSP) model** envisages placing a licence obligation on the existing TSO/TOs to contract with the same company for system operator services. The licensed entities would continue to be legally responsible for performing all operation functions. This single service provider would then provide system operation services under a contract between it and the licensed entities. The contract would set out how the single service provider will operate the system, remuneration for its services etc. The SSP would not be licensed and there would be no relationship between the RAs and the SSP.
- **The Dual TSOs option** would involve assigning a Northern Irish TSO to work alongside the TSO in Ireland. This would be similar to the organisation of the system operator functions in the Single Electricity Market (SEM). Together the two TSOs would be responsible for providing certain system operator functions on an all-island basis. Each TSO would be licensed separately in its own jurisdiction but the licences would place an obligation on the dual TSOs to coordinate their activities on an all-island basis. Therefore appropriate coordination mechanisms would be set out in a contractual arrangement between the two TSOs.
- **A single TSO** would provide a number of all-island system operation functions rather than multiple TSOs retaining that responsibility. The single TSO would be licensed and its activities would be regulated via its licence.

At the industry workshop on 6th June a Joint Venture (JV) model was also proposed. This model is outlined further below.

4.2 Summary of responses received

No respondent favoured the option of coordination between multiple TSOs. One respondent was of the view that it could provide a quick win but that future coordination itself would take increasing amounts of time and effort. Another respondent discounted it because it did not meet the objectives of CAG, would not be adequate to meet market challenges and would not be consistent with the Third Package. They also argued that it would allow fragmentation to persist in Northern Ireland.

The dual TSO option was favoured by one respondent who considered that retaining a dual TSO structure would enable the RAs to benchmark the TSOs and so generate possible efficiency gains especially as this was also the TSO structure adopted in the SEM. One respondent stated that it was institutionally complex but did not discount it for this reason. However, another respondent argued that dual TSOs would not achieve much over the coordination between multiple TSOs option.

The SSP option was considered by some to meet the goals of CAG but in a more achievable way than the single TSO. Three respondents put this forward as their preferred option; one of these stated that the SSP should be chosen by common agreement among the existing TSOs following a competitive tender. One other respondent argued that the SSP could drive further harmonisation and if selected as the option for CAG could eventually evolve into a single or dual TSO structure.

Most respondents noted that the single TSO was the ideal solution and that we should aspire to this outcome as it would deliver a more efficient and optimal solution than the other options. However, they felt that it would be difficult and time consuming to achieve a single TSO by October 2010.

At the consultation workshop in June, participants proposed the creation of a joint venture between the existing TSOs as another alternative to discharge the all-island functions. Attendees at this workshop and respondents to the discussion document requested that this option be considered and scoped by the RAs.

4.3 Conclusions

The RAs propose not to proceed with more detailed analysis of two options – the coordination among multiple TSOs model and the dual TSO model. Table two below examines these options against the CAG criteria.

This leaves the SSP and the single TSO options and the regulatory, legal and technical issues associated with establishing these options are considered below. We also scope out the JV option and conclude that this is a variation of the options proposed rather than an option in its own right. This is because the joint venture could be formed as either a contractual joint venture or a corporate joint venture. The contractual joint venture is a variation of the SSP option and the corporate joint venture a variation of the single TSO option. This is explained further below at 4.6.1 and 4.4.1.

In proposing not to analyse the coordination model further we recognise that it has similarities to the SSP option. Both are essentially coordination models but the key difference is that the SSP option prescribes how coordination is to take place in order to facilitate single system operation – i.e. through an SSP. In the coordination among multiple TSOs option, the TSOs decide how to coordinate their all-island responsibilities. We believe this difference is material when assessing the options against the criteria.

Table 2: Assessment of initial conclusions against the criteria

Option for system operation	Assessment
<p>Coordination among multiple TSOs</p>	<p>This option would require four TSOs to coordinate their all-island responsibilities. The TSOs would need to agree how the all-island services are to be provided and put arrangements in place. None of the TSOs own a control room so they will need to contract with a service provider (either collectively or singly) for control room services or could build or buy their own control room(s). We recognise that the TSOs are extremely unlikely to build or buy a control room as this is highly unlikely to be cost effective.</p> <p>The coordination model requires complicated coordination mechanisms which must be maintained in the long term. For this reason coordination is not cost effective in the long run.</p> <p>In contrast the SSP solution recognises the inherent need to have a single control room if all-island balancing and operations are to be provided and simply prescribes that the TSOs contract with the SSP in order to solve this issue. Contracting with the SSP is more cost effective and efficient than other methods of coordination. In addition the requirements on the parties are more clearly defined at the outset leading to increased transparency of the SSP option compared to the coordination option.</p> <p>It is arguably more difficult for four to maintain a single IT interface than two or one. Therefore this option is not as efficient or cost effective as other options in the long run.</p> <p>In terms of consistency with EU legislation and compatibility with future developments towards an EU single gas market in gas, it is difficult to distinguish between the options at this stage.</p> <p>For these reasons we believe the coordination model as proposed meets the criteria least effectively.</p>
<p>Dual TSOs</p>	<p>The dual TSO solution may be slightly more efficient and cost effective in the long run than coordination among multiple TSOs because it involves two rather than four TSOs. However, the dual TSO option is also a form of coordination model and so suffers from many of the disadvantages of coordination.</p> <p>The dual TSO option requires almost as much effort to implement as the single TSO solution and perhaps more as a single TSO in Northern Ireland would have to be created. Therefore the implementation of this option is not cost effective.</p> <p>We believe that the dual TSO option may meet the criteria more effectively than the coordination option because there are fewer TSOs involved. However, dual TSOs do not meet the criteria significantly better than the coordination option. This is because of the effort involved in putting a Single TSO in place in Northern Ireland.</p>

To a shipper the remaining options - the single TSO and SSP – will look very similar because they both entail one entity performing the same system operation functions on an all-island basis. However, in legal, regulatory and contractual terms these options are fundamentally different. At the root of the difference between these options is where responsibility for system operation lies – with the exiting TSO in the case of the SSP option or with the single TSO in the case of the single TSO option. This affects the licence and contractual changes that are necessary to implement each option.

As a general point of note, compliance with the Third Package will require fundamental legislative, regulatory and possibly structural change to the arrangements in place in both jurisdictions in respect of gas transmission system operations, including the current structure of Gaslink. Against this background, it would be futile to show preference for any option presented on the basis that it seeks to avoid substantive legislative or regulatory change as this may be illusory in light of the changes that will be required to take place in any event.

4.3.1 Joint regulation

Irrespective of the choice of single operation method, a joint regulatory system will be required to facilitate the joint regulation of the TSO entity. It is likely that the current SEM committee would be expanded to regulate the role of the CAG SO and its surrounding arrangements. This may require legislation to expand the role of the current committee and will be considered as part of the overall governance arrangements that will be put in place.

4.4 Explanation of the Single TSO option

This option means that a single entity, the single TSO would be responsible for performing all-island TSO functions across the two jurisdictions. The single TSO would carry out the functions identified in section 3 for all parties downstream of Moffat. Given the nature of its functions it will probably need to submit a safety case in Northern Ireland and Ireland. If this option is chosen a mechanism will be needed to ensure that the RAs license the same entity in each jurisdiction.

Who might be the single TSO?

There are a number of ways in which the single TSO could be created but in all cases it would be a licensed entity. It could be:

- a) Appointed by the RAs after a licence application process.
- b) The identity of the single TSO could be specified in legislation north and south. We call this the All-island SO (AISO) option. The single TSO would need to either own the control room or have it made available to it.

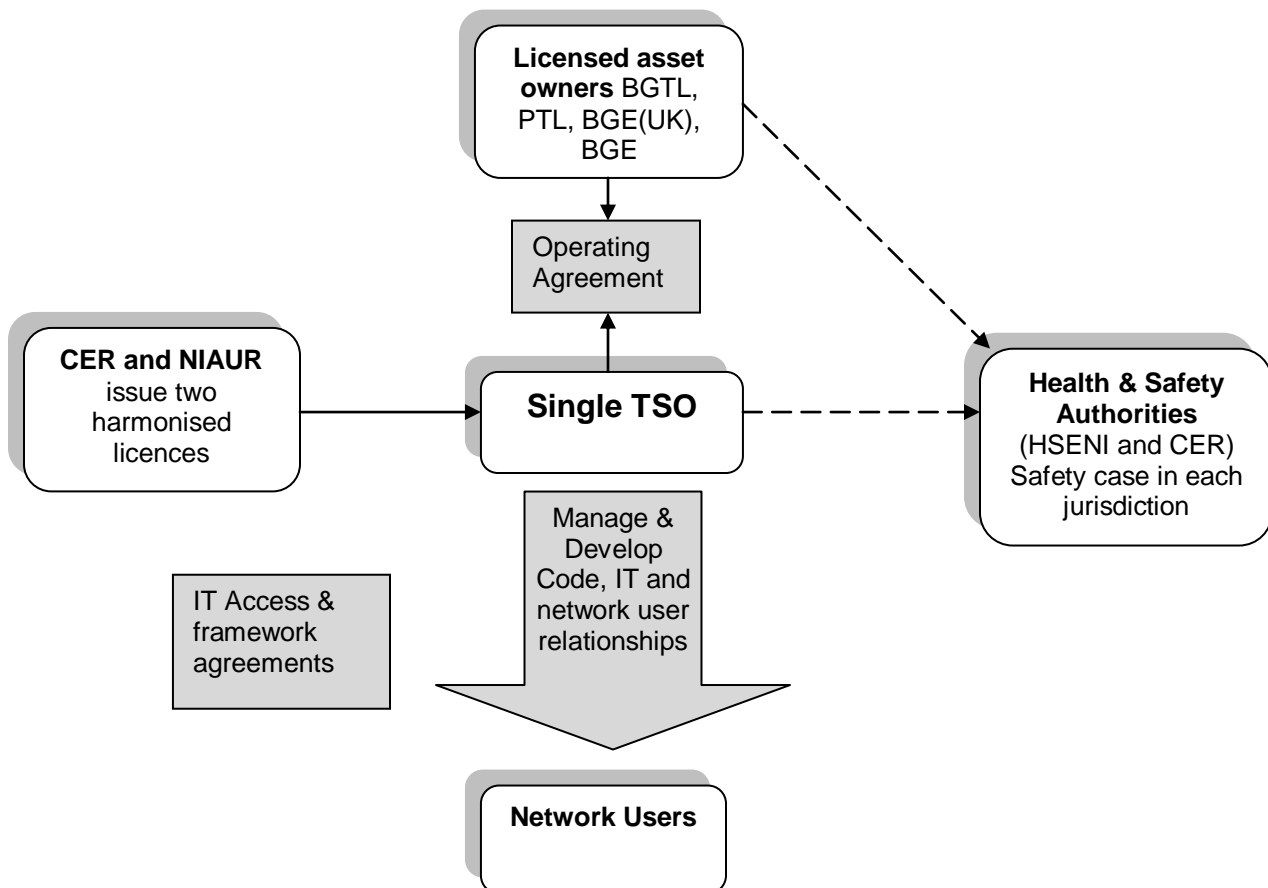
- c) The single TSO could be a new entity set up as a result of a joint venture between the existing TSOs. The RAs would give the TSOs a licence obligation to set up the joint venture. The JV would need to either own the control room or have one made available to it.

Licence and contract changes

The single TSO will have two harmonised licences – one from CER and the other from the Utility Regulator and as a licensed entity it will be regulated directly by the RAs. It will also be designated by the authorities in Ireland and Northern Ireland for EU Directive purposes as the TSO for the island. The single TSO will need to own a control room or have one made available to it. The existing TSO licenses will need to be altered to take out the functions that the single TSO will perform. The single TSO will be operating pipes it does not own so will need an operating agreement with the asset owners.

Shippers will make nominations to the single TSO. Therefore it will own and host the single IT interface. Joint regulation of the single TSO will be needed in the form of an SEM type committee.

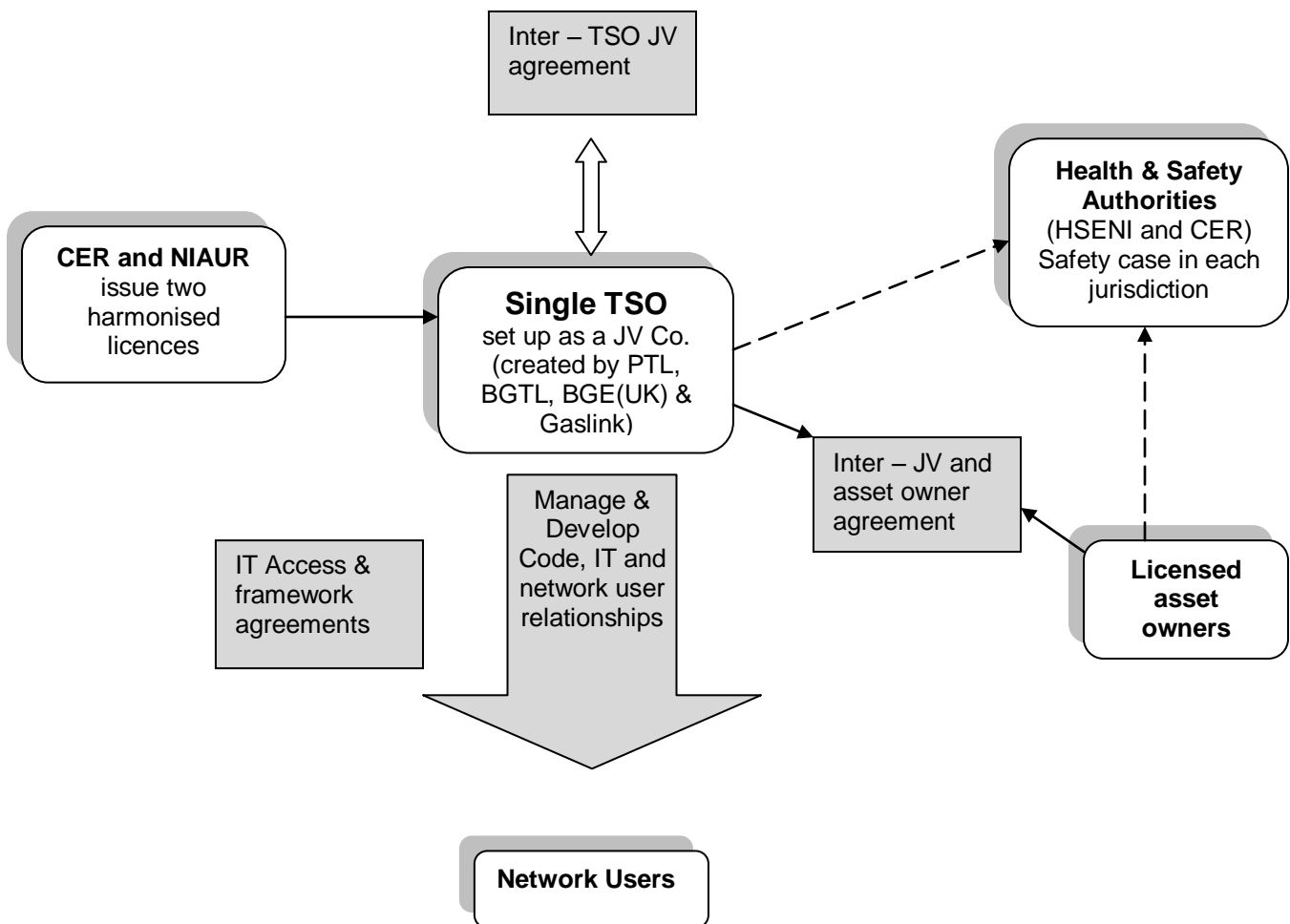
Figure 1: Overview of the Single TSO Option



4.4.1 The single TSO as a joint venture company

As mentioned above the single TSO could be set up as a joint venture. In order to have a single entity performing the role the JV would have to be set up as a separate company rather than as a contractual joint venture. The explanation of what this would look like is common to the single TSO option described above except for the fact that the existing TSOs would create a joint venture company to be the single TSO. This means the existing TSOs will have to put up an equity stake in the JV which will then have to acquire premises and staff etc. The JV will need to own the control room or have one made available to it.

Figure 2: Overview of the Single TSO as a Joint Venture Company



4.5 Implementing the Single TSO option

4.5.1 Relationship between the Single TSO and the Regulatory Authorities

The single TSO would be licensed independently by the two RAs through harmonised licenses, i.e. the same entity will be licensed by both RAs. It is probable that the designation of a single TSO for the island will require legislative changes in both Northern Ireland and the Republic of Ireland.

In order to grant a single TSO licence in Northern Ireland under existing legislation, the activities undertaken under the current licences would have to be split into two types of conveyance for the purpose of licensing asset owners and a system operator:

- a) Coordinating and directing the flow of gas into and through a pipeline by means of which the conveyance of gas takes place (system operation) and
- b) Making a pipeline available for use of the purposes of such conveyance (asset ownership)

In Ireland the Commission has the authority to issue separate operation and asset owner licences but legislative changes may be required particularly concerning definition of TSO and asset owner.

To facilitate harmonisation of licenses and functions, it is likely that legislative changes will be required in both jurisdictions to ensure harmonised definitions and licence requirements.

4.5.2 Relationship between the Single TSO and the Asset Owners

Agreements between the single TSO and the asset owners, such as an 'Operating Agreement', would be necessary to manage the operational relationship between the single TSO and the asset owners. These agreements would give practical effect to the regulatory separation of responsibilities between TSOs and asset owners and generally cover matters including detailed roles and responsibilities, information provision, payment obligations, risk allocation, dispute resolution, indemnities and limitation of liability. Operating procedures covering how the single TSO will operate those pipelines it does not own, will be an essential part of this agreement. It may also be necessary for certain contractual provisions between the asset owners to be put in place.

The formulation of these contracts will be overseen by the RAs and underpinned by licence provisions. The roles and responsibilities of the respective parties will need to be clearly specified particularly in relation to the areas where both the TSO and asset owners have responsibilities e.g. maintenance, metering, development of the system.

4.5.3 Contestability of Single TSO services

Responses to the May discussion paper did not in general favour the proposal to apply contestability to the role of the single TSO. On the other hand it could be argued that introducing contestability may provide another element of governance to the role, from a cost perspective and for the maintenance of the operational integrity of the system. The RAs propose to consider whether single TSO services should be contestable once it is known what functions any single TSO might perform.

4.5.4 Regulation of the Single TSO

As the single TSO will be licensed by the two RAs, it will be regulated both in terms of costs and services provided. Its costs will also need to be allocated between the two jurisdictions. It is envisaged that this regulation will fall under the joint CAG regulatory arrangements that will need to be established between the two jurisdictions.

The services provided and the standard to which these services are provided will be established and monitored through the standards and conditions of the single TSO licences. The RAs will need to be satisfied that the TSO complies with all the licence conditions and take appropriate action if this is not the case.

The single TSO will also be subject to financial regulation in terms of its operating costs and any capital costs it incurs. Separately, the asset owner will be subject to financial regulation in terms of the transportation assets and its operating costs. The details on submission of regulatory accounts to be provided to the RAs will be considered as part of the overall governance structure and may form part of the operating agreement.

4.5.5 Treatment of New Pipelines

In order to preserve the 'single system operational regime', consideration must be given as to how new pipelines connecting to the system should be treated. One option is that new pipelines connecting to the system would be issued with an asset owner license from the relevant RA and operation of the pipeline would be assigned to the single TSO. Further consideration will be given to the issues around the treatment of new pipelines.

4.5.6 Health and Safety Obligations of the Single TSO

In both Northern Ireland and Ireland, the TSOs have licensed responsibility for the operation and safety of the system and under this obligation submit a safety case to the relevant safety authority (HSENI and the CER respectively). In Ireland, Gaslink as system operator submits a safety case; the asset owner does not submit a safety case.

In creating a single TSO, responsibility for the operation and safety of the system may shift to a single entity. This will change the current arrangements and potentially displace responsibility for health and safety between the single TSO and the asset owners.

The RAs will engage with the asset owners and, in Northern Ireland, the HSENI as the relevant safety authority to ensure that the arrangements for CAG will not diminish the safety standards or create any anomalies as to the division of responsibilities for the safe operation and ownership of the pipelines.

4.6 Explanation of the Single Service Provider option

The four existing TSOs would contract with a single entity, the single services provider (SSP) which would perform all-island TSO functions. The SSP would not be licensed therefore its activities will be controlled through licence obligations on the existing TSOs, who remain responsible for the functions undertaken by the SSP.

As an unlicensed entity the SSP would not be designated for Directive purposes – instead the RAs would continue to designate their existing TSOs. Similarly the SSP will not submit a safety case in Northern Ireland – this will remain the responsibility of the TSOs who would ensure that their safety case obligations are assured by including sufficient audit and control mechanisms in their contract with the SSP.

The relationship between the TSOs and the SSP would essentially be one of principal and agent. There could be no question of a TSO seeking to contract out responsibility for its statutory functions. The TSOs would be given an obligation to decide who is to be the SSP.

Role of the SSP

In appointing an SSP without a requirement that it be individually licensed, it would be important to ensure that the SSP did not actually purport to carry out the functions of a ‘transmission system operator’ as defined in Directive 2003/05/EC. If it did carry out those functions it would be necessary to licence that entity individually as a TSO in its own right, thereby essentially making the SSP a Single TSO.

This therefore caps the ability of the SSP to carry out certain of the functions identified in section 3. Legal advice suggests that a TSO can subcontract the exercise or implementation of ‘mechanical’ or ‘non-discretionary’ system operation functions. This would preclude the SSP from having a role in the strategic elements of operations such as the long-term development of transportation arrangements, emergencies, planning and development, the procurement of fuel for balancing purposes and congestion management.

In effect the SSP could only be sub-contracted the functions of operating the system on a day-to-day basis, i.e. managing bookings, nominations and allocations and processing capacity trades. It may have a role in coordinating an emergency and/or informing the planning and development process, but the strategic management of these functions will rest with the TSOs.

Licence and contract changes

This option entails fewer licence changes than the single TSO option. The existing TSO licenses will need to be altered to require the licensees to cooperate to ensure that certain functions are performed on an all-island basis and for a number of these functions to contract with an SSP. However, as above we believe that the TSOs will only be able to sub-contract the day to day management of the system. The other, more strategic all-island functions identified above, such as planning and development will need to be coordinated between the existing TSOs. We therefore envisage some of the all-island SO functions being provided through an SSP and the rest coordinated between the TSOs (i.e. the coordination among multiple TSOs option). This may require two sets of contracts – a coordination agreement between the TSOs and their contract with the SSP. The provisions of any such contracts will be scoped out if this option is chosen. In addition it will also be necessary to assess whether the TSOs will need to contract with the asset owners – this will depend on how responsibility is divided between the TSOs and the asset owners and who makes decisions.

Shippers flowing gas to one or both parts of the island will make nominations to a single entity, the SSP rather than to the individual TSOs. In order to facilitate this role the SSP will host the single IT interface but is not likely to own it. However, shippers and suppliers would not have a contractual relationship with the SSP for the transportation of gas as the SSP would not be licensed to convey gas. Therefore shippers will continue to contract with the existing TSOs for this purpose.

Some form of joint regulation and governance will be needed with this option as there will be a single code. This could be achieved by expanding the role of the SEM committee.

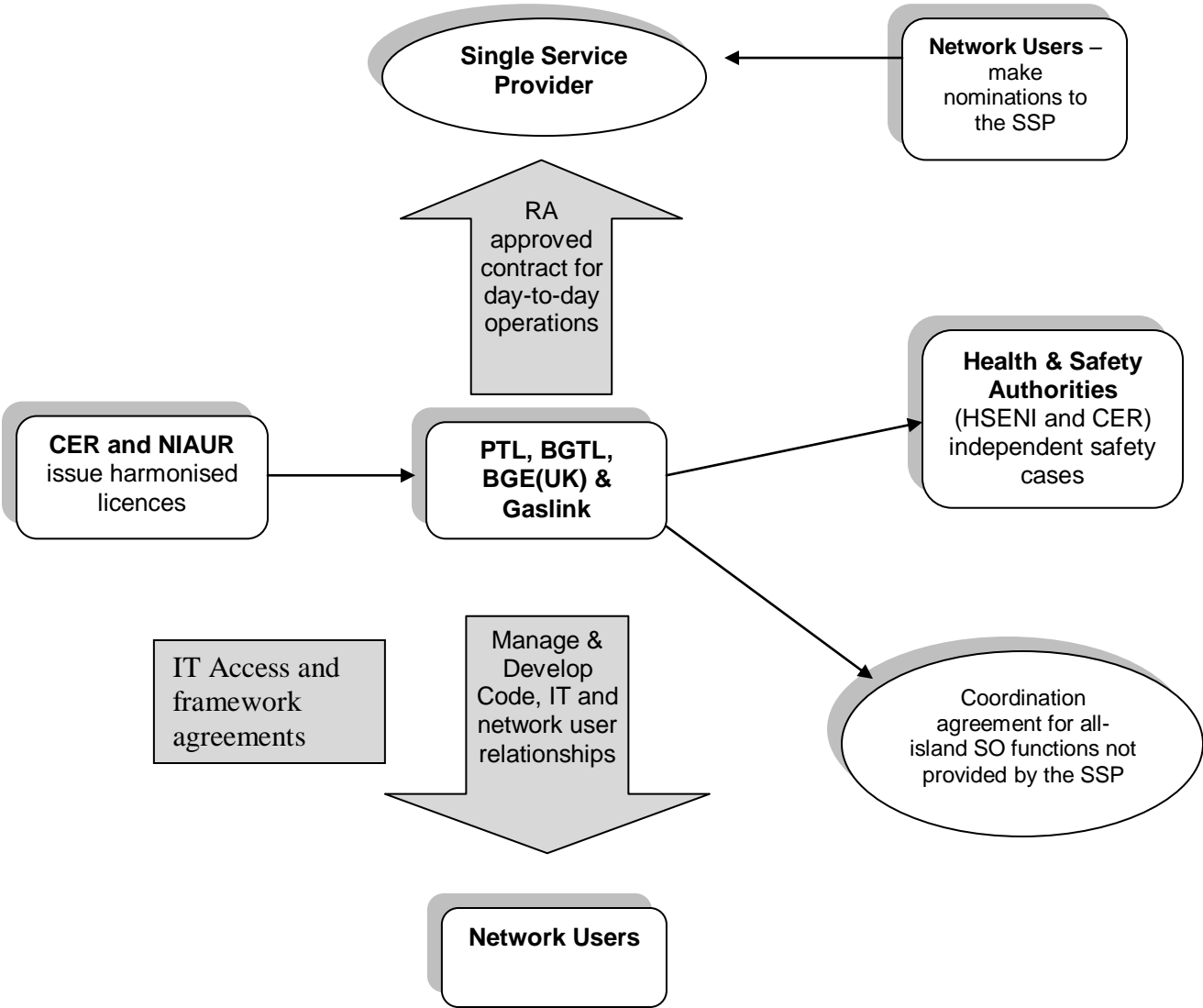
Why put this in place?

The main advantage of this option is that the SSP facilitates a single interface for users. A single interface would be much more difficult to provide and maintain if the day to day operations were coordinated among the TSOs.

However, given that we now believe the SSP cannot perform all the all-island functions identified above this option appears less attractive than it did in May. It is contractually more complex than previously thought and arguably less transparent as a consequence. Also, we would need to rely on certain functions being coordinated between the TSOs, a model which we have discounted.

We will retain this option for now and continue to call it the SSP option for simplicity, even though it entails a mixture of coordination and service provision through an agency.

Figure 3: Overview of the Single Service Provider Option



4.6.1 The coordination model as a contractual joint venture

At the CAG operations workshop it was suggested that we examine the joint venture option. As mentioned above there are two ways of establishing a joint venture – as a contractual joint venture or as a corporate joint venture. The corporate joint venture model as a variation on the single TSO has been outlined above.

The contractual joint venture is a means to coordinate the activities of multiple TSOs and as such we believe that it is a variation on coordination between multiple TSOs. The Market Operator in the Single Electricity Market is a contractual joint venture which did not involve the creation of a separate company. Instead the market operation (MO)

functions are coordinated between the licensed market operators, SONI and Eirgrid. The contract between them is the vehicle for the provision of MO services. Likewise, in the coordination between multiple TSOs model, the coordination agreement between the TSOs would be the vehicle for the coordination of all-island system operator services.

4.7 Implementing the SSP option

4.7.1 Regulation of the SSP

Under this model the RAs would maintain their current respective licensing regimes but amend the licenses such that they would oblige the licensees to cooperate and coordinate for the purpose of the all-island functions discussed in section 3 and specifically that the licensees (the TSOs) would appoint a SSP.

It would be the responsibility of the TSOs to ensure that standards and conditions assigned in their respective licenses are adhered to. The RAs would not have a direct relationship with the SSP.

The SSP will not be licensed therefore its costs will not be price controlled by the RAs. However, a contract price will need to be put in place for the SSP's services which should be based on an efficient level of operating cost.

As the SSP will not be a licensed entity any control over its activities must be exercised by the TSOs through their contract with the SSP. From a regulatory perspective, the most important issue is to how the costs of the SSP will be controlled. This could be achieved through regulated contracts, but this is not the ideal as the RAs will be a step removed from the SSP.

Other issues to be considered include;

- How initial costs will be approved;
- What incentives are there on the TSOs and the SSP to reduce costs;
- How to ensure transparent information is made available to shippers and the RAs;
- Can the RAs have sufficient control of the SSP;
- Should the role of the SSP be contestable;
- What rights should individual TSOs have in administering the contract

New legislation may be required in one or both jurisdictions to give the RAs authority to place specific conditions in their respective licenses, mandating all licensees, current and future to enter into an inter-licensee 'coordination agreement' and to contract with the SSP. It may also be necessary to harmonise the role of the TSOs and the licenses

themselves in Northern Ireland and Ireland to facilitate the provision of a harmonised service and a harmonised licence.

4.7.2 Inter-TSO Relationship

As above a 'Coordination Agreement' between the TSOs to agree the principles for the harmonised operation of the system may be required. It is envisaged that this agreement would be similar to the current NINOA agreement in operation in Northern Ireland. This agreement would address the arrangements in respect of the specific instances where the TSOs would coordinate operations, how this coordination would be achieved, the rights and obligations of the TSOs with respect to the agreement and the arrangements for the appointment of the SSP.

However, as above, if this option is put in place we will need to assess where the various contractual arrangements will need to be set down – it may be possible to address some of these issues in the contract between the TSOs and the SSP.

4.7.3 Inter-TSO and SSP Relationship

An initial analysis of public procurement law would suggest that the appointment of an SSP would be subject to the formalities of public procurement. Therefore, in order to appoint an SSP, the TSOs would be required to publish a tender to request applications for the role and follow the normal procurement methodologies as part of the appointment process.

A contract would be established between the SSP and the TSOs. This contract would stipulate the role of the SSP with respect to the identified all-island functions and will establish a contractual relationship whereby the TSOs discharge certain of their functions through the SSP. That is not to say that from a legislative or regulatory point of view that the SSP would be responsible for these functions. Ultimately, responsibility would rest with the TSOs. It is therefore imperative that this contract ensures that the SSP carries out the required functions according to the established arrangements, agreement, codes and standards.

4.7.4 Role of the SSP

As above the functions that the SSP will be able to perform on behalf of the TSOs will depend on the ability of the TSOs to sub-contract to the SSP.

If the SSP role is to be purely mechanical there may be value in making these services contestable on a regular basis. We will assess the benefits of contestability if this option is chosen and we know what services the SSP may provide.

4.7.5 Treatment of New Pipelines

As outlined in the Single TSO option, consideration must be given as to how the preservation of the 'single system operational regime' can be maintained as new pipelines connect to the system. The most practical solution would be for all new pipelines to be issued with a TSO licence containing standard conditions that oblige all TSOs to coordinate with all other TSOs on the system and contract with an SSP for the purposes of discharging the pre-defined all-island functions. It is likely that legislative changes will be required to permit the RAs to include such prescriptive licence conditions.

4.7.6 Health and Safety Issues

It is envisaged that responsibility for health and safety will remain with the TSOs as under the existing regime. It will be the responsibility of the TSOs, through its contract with the SSP, to ensure that the SSP carries out its functions in accordance with the health and safety obligations and in such a manner that it would not jeopardise the safety of the system.

The relevant authorities in both Northern Ireland and Ireland will need to be satisfied that contract between the TSOs and the SSP sufficiently addresses their respective health and safety concerns.

4.5 Summary and questions for industry

We propose not to proceed with more detailed analysis of the coordination among multiple TSOs option and the dual TSOs option. We will instead focus on the SSP and single TSO options.

In weighing the relevant merits of the remaining options they can be distinguished by:

- Where responsibility for system operation lies – with the existing TSOs in the case of the SSP or the single TSO in the case of that option
- The degree of regulatory control – greater with the single TSO than with the SSP which is unlicensed. The RAs would not control the activities of the SSP or its costs directly – this would be done by the TSOs via their contract with the SSP
- The degree of licence changes required to implement them - minimal in the case of the SSP as responsibility for all-island system operation remains with the existing TSOs but substantial in the case of the single TSO as significant changes are required to split the present responsibilities for system operation between the single TSO and the existing TSOs
- Implications for health and safety in Northern Ireland - minimal in the case of the SSP as it does not have licensed responsibility for TSO functions while the single TSO option may require revisions to existing safety cases or the single TSO may need to submit a safety case. This will need to be assessed depending on final licence responsibilities of the single TSO for system operation.

- Both of these options will require contractual underpinning but the SSP option is more complicated than previously thought due to potential sub-contracting limits. Those all-island functions not subcontracted will require a coordination agreement.
- Both options will provide a single IT interface for shippers.

Questions for Industry:

- 1) Which option for the CAG SO delivers the objectives of CAG most effectively?
- 2) Of the remaining options, the Single TSO and SSP, which do you prefer?
- 3) Which of the remaining options best meets the criteria set out in section 2?
- 4) Which of the remaining options best:
 - a. provides stability and certainty of market structure?
 - b. allows flexibility for changing customer needs and market environment?
 - c. allows for sufficient regulatory control over costs and services?
- 5) Do the different options ensure that the relevant health and safety authorities can enforce their health and safety obligations?
- 6) Are there any variations of the options that could work better?
- 7) Is there anything at all in the construction of the CAG operating model that we have missed, or that you think is material and requires further consideration by the RAs?

5 Network Codes

5.1 The Scope of System Operation and the CAG Network Code

The discussion paper in May asked for the opinion of stakeholders on the initial scope of the CAG project, both in terms of the functions of the system operator(s) and the extent of the CAG network code. All respondents were of the opinion that the first phase of the project, leading up to October 2010, should focus solely on the harmonisation of transmission arrangements.

The RAs propose to concentrate on the harmonisation of arrangements at transmission level during the first phase of the project. This infers that the functions of the system operator(s) and the scope of the network code will only extend to transmission arrangements. The second phase of the project scoping the prospect of harmonising distribution arrangements will be dealt with by the retail work stream. The RAs are currently scoping the options for retail alignment and will be mindful that changes made to the transmission arrangements will not impede the harmonisation of distribution and retail arrangements in the future.

5.2 Re-cap of CAG Network Code Options

The May discussion paper proposed three code options:

- Retain multiple network codes – this option would see all the current codes remaining in place but they would be aligned to ensure that they operate together in a seamless fashion.
- Dual codes would involve two network codes – one in Northern Ireland and one in Ireland. This would entail combining the codes in Northern Ireland and aligning the combined Northern Ireland code with the code in Ireland.
- A single code for the island. This solution would involve developing a single all-island code to govern the movement of gas on the system on a daily basis. This code would replace the existing codes north and south.

For each option a number of implementation issues were identified. For example the multiple and dual code options would require codes to be aligned so that they operate together in a seamless fashion and mechanisms to ensure that the codes do not grow apart over time. In addition the more codes there are the more difficult it would become to give a single service to shippers. The single code option would not entail these implementation issues but there would be a significant amount of work involved in agreeing and adopting a single code.

The discussion paper also raised the question of who should own a single code and reviewed the feasibility of combining each code option with the options for single system operations – particularly the combination of a single code with multiple TSOs.

5.3 Summary of responses received

Of the respondents who addressed the issue of codes in their responses none favoured retaining multiple codes, stating that multiple codes are a sub-optimal solution and that keeping the codes aligned would be time consuming and difficult. Moreover there was a general feeling that multiple codes represented the status quo and as such would not add any additional benefits to the market.

Three out of eight respondents favoured a dual code solution – either as a building block for further harmonization given the time constraints, for unspecified technical reasons, or because the respondent also favoured a dual TSO solution and viewed dual codes as a complementary arrangement.

The majority of respondents therefore favoured a Unified Network Code as the optimal solution but some participants felt this might not be achieved in the timescale. There was a view by three participants that such a code should facilitate separate distribution codes.

The views of respondents on who should own the code were mixed. Some respondents did not take a view on this; others proposed that ownership of the Code depended on the structure for operation that is chosen. However, two respondents mentioned the GB model and one respondent was of the view that no one party should own the code.

No respondents commented specifically on the feasibility of combining each code option with the options for single system operations but some respondents viewed the combination of single TSO and single code as desirable.

5.4 Conclusions

It is proposed at this stage not to proceed with more detailed analysis of the multiple code option and the dual code option. The responses received favour this conclusion. A single network code is generally thought amongst industry to be the most desirable long term outcome and the responses indicate that a majority of respondents would be likely to support a single network code if this could be achieved by 2010.

The RA's view is that the long run benefits of a single code outweigh the implementation issues associated with this option. In the long run this option does not entail coordinating multiple codes and is therefore more cost effective than other options. A single code is also the most customer friendly option.

The table below assesses the multiple and dual code options against the CAG criteria.

Table 3: Assessment of CAG code options against the criteria

Code option	Assessment
Multiple codes	<p>The overall goal of CAG is to provide amongst others an efficient, cost effective and customer friendly regime. The fewer codes are required by a particular option, the more highly it will score against the criteria. This is because in the long run fewer codes are more customer friendly for shippers and more cost effective and efficient to manage and maintain. Multiple codes also need to be coordinated on an on-going basis so that they operate seamlessly and this reduces the cost effectiveness of this option in the long run.</p> <p>Multiple codes are more cost effective initially because they do not entail as many changes as other options but this advantage is outweighed by the ongoing advantages of having fewer codes. Because the multiple code option entails retaining the highest number of codes on the island it does not score as well as the other code options</p>
Dual codes	<p>For similar reasons dual codes do not score as highly as a single code. In addition the dual code solution entails almost as much work as a single code as it requires merging the codes in Northern Ireland into a single code and then coordinating this with the code in Ireland. In the long run this is not as efficient or cost effective as a single code. Both the multiple and dual code options would require onerous arrangements to manage the development of codes and to prevent them from diverging over time.</p> <p>In addition there seems to be some movement at EU level towards coordinating national codes and potentially merging some provisions over time. The ultimate aim of this work is unclear but the direction appears to be one of convergence. Therefore a code solution on the island which involves a single code would appear to be the most future proofed option.</p>

However, the first phase of the CAG project will not endeavour to harmonise the distribution elements of operations as our initial scoping work for this part of the CAG project indicates that it would not be feasible to achieve both harmonisation at transmission and distribution levels by 2010. Therefore, a unified transmission code should be developed which facilitates separate distribution codes. The RAs are currently examining the options for harmonisation at the distribution and retail levels.

5.5 Governance of the Code

Also for consideration when defining the role of the system operator(s) and when considering the CAG Code of Operations, is the process for managing and governing the code modification process.

Under the current regimes in Northern Ireland and Ireland, it is the system operators that own the codes and take responsibility for maintaining the code of operations in accordance with their respective licenses and for managing the process of modifying the code. Any modification to the codes requires approval from both RAs.

The proposal for the CAG Code is that the responsibility for the management of the Code and modifications to the Code would rest with the system operator(s). If in the instance that it is decided to implement the SSP model for system operation, the responsibility for the code will rest with the licensed TSOs and the code will establish the operational procedures to be followed by the SSP in accordance with its contract with the TSOs.

A CAG Code would involve the creation of an all-island modification grouping for the purpose of modifying the code. This would be overseen by both RAs. Any modification to the code would require approval from both RAs.

If the SSP option is put in place, the code would be owned by the TSOs with whom suppliers and shippers would contract for transportation and other services. If the single TSO option is put in place we will need to assess who should own the code based on the responsibilities allocated to the single TSO.

Appendix 1

Summary of EU requirements on TSO functions

The functions of a TSO are set out in Directive 2003/55/EC and in Regulation (EC) No 1775/2005 of the European Parliament. In summary, the Directive and Regulation 1775/2005 provide for the following TSO functions:

- (a) the operation, maintenance and development of reliable and efficient transmission, having due regard to the environment (Article 8(1) of the Directive);
- (b) information sharing with other system operators (Article 8(1) of the Directive);
- (c) procurement of energy used for the carrying out of their functions according to transparent, non-discriminatory and market based procedures (Article 8(4) of the Directive);
- (d) ensuring they offer services on a non-discriminatory basis to all network users...under equivalent contractual terms and conditions, either using harmonious transportation contracts or a common network code approved but the competent authority (Article 4 of Regulation 1775/2005);
- (e) providing both firm and interruptible third party access services (Article 4 of Regulation 1775/2005);
- (f) offering network users both long and short term services (Article 4 of Regulation 1775/2005);
- (g) implementation and publication of non-discriminatory and transparent capacity allocation mechanisms (Article 5 of Regulation 1775/2005);
- (h) publication of detailed information regarding the services they offer and the relevant conditions applied, together with the technical information necessary for network users to gain effective network access (Article 6 of Regulation 1775/2005);
- (i) provision of sufficient, well-timed and reliable on-line based information on the balancing status of network users. TSO's may impose penalty charges on network users whose input and off take from the transmission system is not in balance (Article 7 of Regulation 1775/2005); and
- (j) taking reasonable steps to allow capacity rights to be freely tradable. They must develop harmonised transportation contracts and procedures and notify the regulatory authorities of these developments (Article 8 of Regulation 1775/2005).

As such the key features of the system operator function from a European perspective relate to the operation and maintenance of the system; planning and development of the network; and information sharing both with system users and with other network operators to ensure interoperability. Regulation 1775/2005 also places responsibility for product offerings with the TSO.

Appendix 2

CAG operations and the EU Third Legislative Package

The implications of proposals in the Third Package on the unbundling of transmission systems and transmission system operators on the CAG operations regime need to be assessed.³ In particular it will be important to assess:

- Whether the remaining options for CAG operations – the SSP and single TSO are structures for the CAG operator in light of the Third Package, and
- What implications the unbundling proposals in the Third Package may have, if any, for the structure of these options.

The precise details of the permissible unbundling arrangements remain unclear, and indeed are slightly different in the consolidated text of the Proposed Directive dated 23 June 2008 following the meeting of the Council of Ministers on 6 June 2008 and the subsequent text adopted by the European Parliament on 9 July 2008. **Therefore, we cannot form a definitive view on the impact of the Third Package at this stage.**

Nevertheless there are essentially three options for unbundling - the fully unbundled option, the Independent System Operator (ISO) and the Independent Transmission Operator (ITO).

- Full ownership unbundling (Art.7) Article 7(1)(a) requires each undertaking which owns a transmission system to act as a transmission system operator which must be fully unbundled from production and supply activities. Someone with control over the transmission system operator cannot hold an interest or exercise any right in a supply undertaking and vice versa. This option would be complied with where several transmission owners have created a joint venture which acts as TSO in several member states.
- Independent system operator (ISO (Article 9)): This option would allow vertically integrated undertakings to retain ownership of their assets but the operation of the assets would be given to an ISO which would be a separate entity from the vertically integrated company. A number of measures are envisaged to ensure the effective unbundling of transmission system owners from production and supply.
- Independent Transmission Operator (ITO) (Chapter IIIa. Article 10): Similar to the ISO option, the ITO option allows a vertically integrated company to retain ownership of its transmission assets but allows for the assets to be operated in a

³ Specifically the Proposal for a Directive of the European Parliament and of the Council amending Directive 2003/55/EC of the European Parliament and of the Council of 26 June 2003 (“**Proposed Directive**”).

slightly different way. Essentially the assets would be operated by a separate company within the vertically integrated undertaking which must have 'effective decision making rights independent from the vertically integrated undertaking.' A detailed range of measures are intended to ensure the independence of the ITO.

Permissible structure of the CAG operator

The Directive defines a transmission system operator as someone who discharges the function of transmission and is responsible for operating, ensuring the maintenance of, and, if necessary, developing the transmission system.

If the SSP option is to be compliant with the directive the SSP must not actually carry out the functions of a "transmission system operator", as defined in the Directive. In practical terms this means that the SSP must not have any discretion in discharging the functions of a system operator to ensure that the SSP was not a TSO. Conversely the single TSO must be empowered to carry out the functions of a TSO in order to be consistent with the Directive. In light of our conclusions on the system operation functions to be performed by any single TSO, we believe this requirement would be satisfied.

Therefore at this stage it appears that either option can be structured so as to be consistent with EU law.

Implications of unbundling on the SSP and single TSO options

On a strict reading of Article 7 of the Proposed Directive, the ISO and ITO options are only available to vertically integrated entities such as BGE and its subsidiaries, Gaslink and BGE (NI). Only the fully unbundled option is open to undertakings which are not vertically integrated on the date of entry into force of the Directive such as PTL and BGTL.

This consequence of the current drafting is arguably unintended and appears inconsistent with the broader EU policy objectives of establishment of single regional or pan-European transmission system operators (see for example Recital (8d) of the text adopted by the European Parliament on 9 July 2008). Nevertheless, although the Third Package has not been agreed, it is important that cognisance be given to this proposed wording in the CAG process.

If the Third Package were implemented in a manner consistent with the current drafting of Article 7(1)(a) and it was proposed to implement CAG using a single TSO option, asset owners which are not vertically integrated on the date of entry into force of the Directive could fulfil Art. 7(1)(a) by creating a joint venture with other transmission system operators and ISOs. The joint venture, if incorporated, would be the CAG single TSO and would be designated as system operator for the purposes of the Directive, acting as a TSO in several member states (art.7(5)). If it was not incorporated, each

member of the unincorporated JV would be designated as TSOs but would discharge their functions collectively through the arrangements documented in the joint venture agreement.

If the Third Package is implemented in a manner consistent with the current drafting of Article 7(1)(a) and it was proposed to implement CAG using the SSP option there is no requirement for a joint venture as PTL and BGTL will have responsibility for those system operation functions required by the Directive. They and Gaslink will be able to enter into an SSP agreement to discharge these functions.