



Commission for Energy Regulation

An Coimisiún um Rialáil Fuinnimh

Twinning of the Southwest Scotland Onshore System in light of potential Connecting Europe Facility grant funding

DOCUMENT TYPE:	Consultation
REFERENCE:	CER/14/14795
DATE PUBLISHED:	December 19 2014
CLOSING DATE:	January 31 2015
RESPONSES TO:	bhussey@cer.ie

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CER – Information Page

Target Audience:

This paper is for the attention of all members of the public and energy industry. It will be of particular interest to those who directly or indirectly pay gas transmission network charges to Gas Networks Ireland.

Related Documents:

- [PC3 Decision](#)
- [PC3 Consultation](#)
- [Network Development Plan 2014-2023](#)
- [Preventative Action Plan 2012](#)

The CER intends to publish all submissions received. Respondents who do not wish part of their submission to be published should mark this area clearly and separately or enclose it in an Appendix, stating the rationale for not publishing this part of their comments.

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1.0 Introduction

1.1 Purpose of this paper

The purpose of this paper is to invite stakeholders' comments on the potential twinning of the Southwest Scotland Onshore System (SWSOS) in light of Gaslink receiving an initial grant of €33.76 million towards its capital cost. The paper sets out the CER's stance to-date on the project, and some pros and cons of the CER's potential approval of the expenditure for the project with and without the EU funding. Stakeholders' views are invited on the contents of this paper.

1.2 Responding to this paper

Responses to this paper should be in the format of email, post or fax and marked for the attention of:

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2.0 Background

In October 2013 the European Commission published its first list of Projects of Common Interest under Regulation 347/2013. Included on this list of gas and electricity infrastructure projects from across the European Union, was Gaslink's project to twin the single section of transmission pipe between Cluden and Brighthouse Bay (PCI 5.2).

At present, Interconnectors 1 and 2 exit Beattock Compressor Station as two separate pipelines for a distance of 30 km and converge at Cluden into single section of pipeline for 50 km to Brighthouse Bay compressor station, before entering the Irish Sea. Gaslink are of the view that the twinning of this 50 km section of pipeline is a priority, as it improves security of supply to Ireland, Northern Ireland and the Isle of Man; it also will resolve future capacity constraints at the Moffat Entry Point. The project would also improve the efficiency of the operation of the Southwest Scotland onshore system, reducing CO₂ and other emissions from the GNI compressor stations in the region. The project is also considered a prerequisite to any potential physical reverse flow project at the Moffat Entry Point.

The project had been identified in a series of supply-demand forecast documents, including Joint Gas Capacity Statements and Network Development Plans, as a potential solution to future constraint at the Moffat Entry Point. The project will increase capacity at the Moffat Entry point by 10%.

Gaslink's Network Development Plan 2014-2023 (NDP 2014) indicates that it will be necessary to reinforce the SWSOS by 2020/21, as Corrib flows decline, in order to ensure that the system is capable of meeting forecast peak day demand.

GNI requested approval for the twinning of the Southwest Scotland system in 2012 as part of the Price Control 3 (PC3) process. While the CER acknowledged specific short-term concerns of Gaslink, the CER did not grant its approval for the expenditure at that time.

Prior to the submission of their CEF funding application, Gaslink were required to make a cost allocation request to the NRAs of countries impacted by the project. The CBA provided by Gaslink in support of their application indicated an allocation of benefits of 88% to Ireland, and 12 % to Northern Ireland. A number of uncertainties external to the CBA, including the scale of production at Corrib, commercial decisions at Inch Storage facility and final investment decision by Shannon LNG, were identified in discussions among the NRAs. In light of these uncertainties, the CER accepted that the final dispersion of benefits accruing from the construction of the project was uncertain. To date, the understanding is that the cost of the project would be borne fully by Irish customers.

The project has a capital cost of €93.8 million. The European Commission have provided an initial indication of a grant of €33.7 million toward the capital cost. This makes the capital cost of the project today €60.1m.

Appended to this consultation is Gaslink's letter requesting the CER's approval for the expenditure; Part D of Gaslink's CEF application detailing technical and financial information; and Net Present Value calculations provided by Gaslink in support of their request.

2.1 Status of SWSOS project to date

The Twinning Project has been an aspect of public debate in the Irish gas industry for a number of years. In 2012 the International Energy Agency wrote in *Energy Policies of IEA Countries – Ireland 2012*, that Ireland is vulnerable to a gas supply disruption and 'would benefit significantly if there were greater diversification and flexibility of supply in terms of entry points and sources'. The report underlined the importance of Ireland's interconnector system also.

In the same year, the Twinning Project was a key aspect of the PC3 consultation process. Based on the outcome of a number of industry workshops, information received from GNI, and responses to CER consultations, in November 2012, the CER concluded that the twinning of the SWSOS should not proceed in response to short-term constraints (expected in the Winter of 2013/14 at that time) but that there was a case for twinning in the longer term.

It is useful to quote the CER's decision (CER\12\196) in detail:

The CER is aware of the fundamental importance of flows from the Moffat Entry Point and the related performance of the onshore Scotland network. For the avoidance of doubt, the decision to not progress with reinforcement of the onshore Scotland network at the current time has been made specifically in relation to a potential short-term capacity constraint in 2013/14, as raised by GNI.

On the basis of all information reviewed by the CER and its consultants as part of its PC3 analysis, it is considered that that there is a case for the twinning of the onshore Scotland network in the longer term in particular where Corrib supplies begin to decline (and where no other supply sources have come on stream). All other things being equal, this would entail a regulatory decision to proceed with the reinforcement of the onshore Scotland network in four to five years in order to ensure the necessary infrastructure is put in place.

The CER is mindful that there are a number of variables which could conceivably expedite the need for reinforcement, in particular a cessation of supplies from the Inch Entry Point and/or delayed/reduced flows from the Corrib facility. Increasing renewable electricity generation may also impact on this decision. Investment in the onshore Scotland network may be required in any event in the absence of other large-scale supply projects in the medium term. However, the CER is not of the view

that there is a need to construct the pipeline in the short-term to overcome a 'potential' 2013/14 constraint (Section 9.3.4 – p.89-90).

This view has been restated in a number of CER documents since then, including the CER's Preventative Action Plan published in 2012, and more recently, the CER's letter to Gaslink which accompanied its cross-border cost allocation coordinated decision letter.

The CER's letter accompanying the CBCA decision said

The CER is of the view that the project is desirable but not essential in the short term, particularly in light of the expected security of supply that will arise from the Corrib field on connection in 2015. Calculations provided by the Project Promoter suggest that were the CER to approve funding up to €47.9m this would have no impact on tariffs in the long term. In the event the CER approved funding of €47.9m in respect of this infrastructure, the balance of the capital cost would need to be provided by direct funding.

Inclusive of the CEF grant, the capital cost of the project is €60.1 million (i.e. €93.8 – €33.7= €60.1m).

In the CER's Commentary to NDP 2014, the CER noted that the Twinning project is the preferred option advocated by Gaslink and GNI. The CER also stated that where any such capital investment may be approved, the CER said that it will 'ensure that it is necessary, appropriate and efficient'.

In November 2014, the European Commission notified Gaslink that they are minded to award €33.76 million towards the capital cost of the Twinning project. The CER understands that Gaslink\GNI are currently in discussions with the European Commission on the terms of a draw-down of this money should it be availed of. A CER position on the funding will be required, prior to any agreement being finalised.

To summarise, the issue facing the CER at this point is whether it is appropriate to approve this capital expenditure inclusive of the EU grant, particularly at a time when a number of very welcome developments are in train – namely production from the Corrib field, and potentially Shannon LNG. These projects are likely to increase supply, and diversity of supply in the Irish gas market. Potential arguments for and against approval of this infrastructure expenditure now are set out below.

3.0 Arguments for approval now

3.1 The Project is required in the Network Development Plan

NDP 2014 indicates that the Twinning project will be required in Gas Year 2020/21¹ to meet peak-day demand in light of the expected decline in Corrib production.

Gaslink have provided some NPV analysis on the project costs. This analysis assumes that the project will be required in 2020. They do not consider that the project may be needed earlier, that the project may be needed later, or that the project may not be required at all. Furthermore, Gaslink also assume that there will be no CEF grant available in 2020. There may in fact be a CEF grant available in 2020; this grant may be for the same amount, a larger amount or for a smaller amount.

These uncertainties around the analysis are not easily captured in such calculations, but it is important to flag the inherent uncertainties in such an analysis.

Some initial calculations on the NPV of the capital cost of the project are provided below. Gaslink's own calculations of the NPV of the revenues associated with the capital investment are included among the documents accompanying this paper.

Project capital cost	€93.8m
CEF Grant	€33.7m
Net Project cost including grant	€60.1m

Working on the same basis as Gaslink and accepting that the project is required to meet demand in 2020, the NPV cost of the Twinning Project is €72.8m. This is calculated by multiplying the full Project capital cost of €93.8m by a discount factor of 0.78². On this basis, there would be a saving of €12.7 million by availing of the grant and going ahead now.

As a sensitivity, the calculation is extended by a year and assumes the project is required in 2021 (one year later). In this instance, the NPV of the project costs has dropped from €72.8m in 2020, to €69.2m in 2021 eg. a saving of €9.1 million. This illustrates that the

¹ The NDP 2014 considers Gas Years, eg. from October 1st 2020 to September 30th 2021. The accompanying Gaslink analysis refers to calendar years. Gaslink have confirmed that the requirement for the reinforcement foreseen in the NDP 2014 (Tables A.2.4 & A.2.7) in 2020/21, would be required for Q4 2020. Thus, the project occurs in calendar year 2020.

² The discount factor is calculated according to the following formula:

$$\text{Discount Factor} = 1 / (1 + \text{GNI's Cost of Capital})^{\text{Number of years until project is required}}$$

Thus, for 2020 the calculation is: $1 / (1 + 5.2\%)^5 = 0.78$

further out in time the project would proceed, the less the saving for gas consumers arising from progressing now, including of the grant.

A final calculation suggests that were the project not required until 2024, the saving to customers by the early construction of the project including the CEF grant is eroded entirely. The NPV cost of the project in 2024 has fallen to €59.44 million, marginally below the cost of the project today including the CEF grant.

These calculations suggest that were the project not required until as late as 2024, the NPV of the project would be almost neutral, and if the project were to be required before then, a saving may be made by approving the expenditure now. In other words, if the project is not needed until 2024, it is cheaper to wait and pay the full capital cost of the project. Implicit in these scenarios is the assumption that the project will be required sometime in the next few years.

3.2 Future EU funding?

While there is no barrier to Gaslink reapplying for CEF funding in a subsequent round, there is no guarantee that funding will be offered a second time, or that it would get funding of the scale currently on offer.

The Twinning Project was notable among the first PCI list in its project maturity, being as it is, 'shovel ready'. As other PCIs come closer to final investment decisions, the Twinning project may be competing with major transit pipelines which link several Member States' gas markets and impact significantly on these countries reliance on imports from potentially unreliable sources. It is considered likely that as these projects reach more advanced stages of readiness, they will be given greater priority in assessments of potential funding.

Moreover, it could be argued that if Gaslink were to turn down the offer of funding in light of a CER decision, this may have an impact on future assessments of the project as it may undermine Gaslink's case for the importance of the project in a future CEF process.

3.3 Reduced chance of a security of supply incident on the SWSOS

Regardless of possible capacity constraints arising at the Moffat Entry Point in 2020/21, the twinning project would have an immediate positive impact on Ireland's security of supply status. At peak flows, the Corrib Gas field will be capable of satisfying approximately half of Ireland's demand, but none of Northern Ireland or the Isle of Man's demand. Gaslink's letter accompanying this consultation, indicates that were an incident to occur on the single section of pipe, GNI estimate this would lead to between a two to 14 day supply shortage. Twinning of the single section of pipe reduces the likelihood of a gas supply shortage as a

result of an incident such as a pipeline strike, to almost zero ie. if one pipe was struck, the other pipeline could continue to be used.

The potential impact of a gas supply incident includes the need for gas-powered generation stations to switch from gas to distillate oil. This could have implications for electricity security of supply. Some generators may have a lower output on the alternative fuel. The alternative fuels in the normal course would be more expensive and this would be expected to have an impact on the SEM price for the period. In the event of a prolonged period of interruption, there may be insufficient stocks of alternative fuel, and/or insufficient supply infrastructure for these fuels.

In order to ensure natural gas supply is maintained to residential customers it may be necessary to limit consumption in the Industrial and Commercial sector. This would have a knock-on effect on economic productivity for the period.

While it is difficult to put a monetary value on the security of supply benefit of twinning, it is arguable that these benefits are significant. Thus, notwithstanding the additional capacity provided by the project, it could be argued that the security of supply benefit alone is justification for the project.

4.0 Arguments against approval now

4.1 Timing

The CER recognises that the timing of the offer of the CEF grant raises its own issues. Flows from Corrib are expected in the first half of 2015 at which point, predominant flows of gas will shift from east-to-west (from Moffat, across the island), to west-to-east (from Corrib, and potentially Shannon LNG, across the island). This development greatly reduces the role of the SWSOS in Irish gas supply. In proceeding with the project in the short term it is likely that the additional capacity will not be used for a number of years. It appears reasonable to consider whether this represents efficient investment.

4.2 Uncertainty

The NDP 2014 forecasts that the project will be required in 2020/21 based on information provided by the industry as part of the NDP data collection process. The expected need for the additional capacity which the project will bring is based on forecasts of demand and supply which, while based on reasonable, conservative assumptions and modelling, are still only forecasts. There are a number of developments that may arise which may undermine the expected need for the project, including, the Corrib gas field being larger than expected³ and system demand being lower than expected. It should also be noted that Shannon LNG was not modelled in NDP 2014. Should the Shannon LNG terminal proceed, this would also impact on the time at which twinning is required, or may negate the need for Twinning to meet peak day demand in the long-term.

4.3 Bringing forward network expenditure costs

The approval of the expenditure now would bring forward network tariff increases that may not be otherwise be required, should the project ultimately never be necessary from an additional capacity perspective, notwithstanding the security of supply benefits outlined in Section 3.3. A high-level calculation by Gaslink has indicated the following tariff impacts on the basis of the addition of the twinning project to the RAB in 2016 (€93.8m - €33.7m = €60.1m).

- Interconnector Network Tariff: There would be a 2.57% tariff increase for PC3 and a 6.27% increase thereafter (from October 2017).
- Cost of transporting UK gas⁴: There would be a 1.24% increase for PC3 and a 3.18% increase thereafter in the cost of transporting gas from the UK to Ireland.

³ Or more accurately, that flows from the Corrib field are sufficiently large for a longer period at the start of its production, so as to push out the need for reinforcement on the SWSOS

⁴ This is the percentage increase on the Moffat tariff plus the Exit tariff.

- Gaslink’s letter indicates that the impact of these network tariff increases on residential customers is less than 0.5% of total bills. For the average household, this would equate to an increase of approximately €3.68 per annum⁵.

These calculations are reflective of the prevailing tariff regime, which will change in October 2015⁶, however the impact on residential customers would be as shown above.

It should be noted that the impact of the addition of the project to the RAB could be mitigated through a number of measures, including amending the depreciation profile of the asset to better reflect forecast usage, rather than a straight-line depreciation. Comments on this or other proposals to mitigate the impact of the project cost on network tariffs would be welcomed from stakeholders.

⁵ This calculation is based on average consumption of 10,732kWh; a pre-VAT unit rate of €0.05377 and standing charge of €82.04.

⁶ Please see CER/14/127 and CER/14/455 for more information on the reform of the Gas Entry Tariff regime.

5.0 Conclusion

The CER invites the view and comments of industry and stakeholders on the content of this document and the accompanying Gaslink documents. Due to the Christmas break, consultation responses are requested before close of business on January 31st 2015.

The documents included with this consultation are

1. Gaslink\GNI's letter of December 4th requesting approval of the expenditure
2. Part D of the Gaslink CEF application containing Financial and Technical Information
3. Gaslink's NPV calculations

Responses in electronic format are preferred and may be sent to bhussey@cer.ie

Alternatively, responses can be sent to

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