



Connecting Europe Facility 2014-2020

ENERGY CALL FOR PROPOSALS 2014

APPLICATION FORM

PART D

Technical and financial information

Title of the proposed action PCI 5.2 Twinning of Southwest Scotland onshore system between Cluden and Brighthouse Bay (United Kingdom)

TENtec number Draft Nr. 26117306

For INEA use only

Received on:

Number:

1. BACKGROUND INFORMATION ON THE PROJECT OF COMMON INTEREST (PCI)

1.1. General outline of the PCI (maximum of 2 000 characters)

PCI project 5.2 in priority corridor North-South gas interconnection in western Europe is the twinning of the South West Scotland Onshore System (SWSOS) between Cluden and Brighthouse Bay in the United Kingdom (UK) which involves the construction of a 900mm steel transmission pipeline for a distance of 50km in Southwest Scotland.

The implementation of PCI 5.2 would result in the completion of IC2, the 2nd gas interconnector pipeline linking the National Grid (UK) and Ervia (Ireland) transmission systems. In 2002, 30km out of total length of 80km for IC2 was constructed. The primary aim of the project is to complete the remaining 50km to ensure the security of gas supplies to both Ireland and Northern Ireland (UK). It would also improve the resilience of the Single Electricity Market (SEM) in Ireland, which is highly dependent on gas fired generation for the supply of electricity.

The project would deliver other benefits;

- Environmental and economic benefits resulting from reduced fuel gas usage and the associated reduction in emissions;
- Facilitating increased market integration by enhancing the viability of physical reverse flow at Moffat (PCI 5.1.1), which the twinning of the pipeline is a prerequisite for;
- Increased network flexibility; the SEM requires increasing flexibility from gas fired generation and the gas network to facilitate increasing renewable generation, as Ireland strive to meet the 2020 target; and
- Sustainability, the project will ensure the Ireland and Northern Ireland (UK) has the supply capacity and security of supply to meet its future energy needs.

The project has been in planning for a number of years with engineering feasibility studies completed, and original planning consents for the 50km pipeline remain valid. Procurement of materials and site investigation could commence in 2015, with pipeline construction commencing in 2016, followed by commissioning of the pipeline in late 2016 based on the following;

- Routing of the pipeline has been completed, subject to any modifications required as result of site investigations.
- Environmental Statement (ES) has been completed for the 50 km consented pipeline and a draft ES requires an update for 7 km deviation within the original consented 50km taking account of latest environmental legislation and any surveys that may be requested by Scottish Environmental Protection Agency (SEPA) in order for SEPA to execute the declarations in Part C of the application.
- Wayleave agreements are in place with landowners along the pipeline route.
- Initial discussions have taken place with Statutory Consultees.

1.2. Current situation and main needs addressed by the PCI (maximum of 2 000 characters)

The SWSOS is the infrastructure associated with two cross border connection points in the EU, Moffat and Twynholm. Moffat is the connection point between the National Grid (UK) and Ervia (Ireland) transmission systems, and Twynholm is the connection point between the Ervia (Ireland) and Premier Transmission Ltd (UK- Northern Ireland) transmission systems.

The SWSOS represents the onshore section of the Interconnector system between the UK and Ireland. It consists of two compressor stations, Beattock (adjacent to National Grid's site at Moffat in Scotland) and Brighthouse Bay (located on the southwest coast of Scotland), and a transmission pipeline system that runs for 80km between the two compressor stations. (See map below).

The transmission pipeline system comprises of two parallel pipelines that run for 30km between Beattock and Cluden, IC1 and IC2; at Cluden they converge into a single transmission pipeline, IC1 that runs for 50km

southwest to Brighthouse Bay. The gas is compressed at Brighthouse Bay and transported to Ireland via two subsea Interconnector pipelines, IC1 and IC2.



The SWSOS is a critical piece of infrastructure. It connects Ireland and Northern Ireland (UK) to the European Energy Market and currently transports a significant portion of the energy requirements for both jurisdictions, meeting 93% and 100% of Ireland and Northern Ireland’s gas demand respectively.

The implementation of PCI 5.2 would result in a complete twinned/paralleled transmission pipeline system from Moffat. This would address the primary need, security of supply, by removing Ireland and Northern Ireland’s dependency on a single pipeline for the significant majority of their gas demand.

PCI 5.2 would also address a range of other needs;

- Increased connectivity with Europe and increased market integration with the European Energy Market;
- Increased flexibility required by the SEM to accommodate increasing renewable (wind) generation;
- Reducing the environmental impact associated with the transportation of energy ; and
- Removing the bottleneck at Moffat and increasing the capacity to meet Ireland’s future energy needs

1.3. Main objectives of the PCI (maximum of 2 000 characters)

The main objective of the project is to ensure security of gas supplies to the Republic of Ireland (Ireland) and Northern Ireland (UK). The project would also ensure the security of gas supplies to a 3rd country, Isle of Man.

The gas network is critical to the Irish economy. Ireland and Northern Ireland (UK) are currently dependent on the Moffat Entry Point as the main source of gas supply. This dependence poses a significant security of supply risk. In 2012, the International Energy Agency noted that *“Ireland has limited indigenous fossil fuel resources – the country remains dependent on imported oil and gas and will remain so in the long term... Ireland is thus vulnerable to a gas supply disruption, and would benefit significantly if there were a greater diversification and flexibility of supply in terms of entry points and sources... The interconnectors are critical to the gas supply for Ireland.”*

There is a risk that the single section of pipeline could fail. An outage of the pipeline would cause major economic and physical disruption, including (depending on the timing and duration of the outage):

- **increased costs of electricity generation** as gas stations must switch to more expensive liquid fuel. The generation sector in Ireland is 50% dependent on gas;
- **curtailment of gas supply** to consumers, including potentially households;
- for longer outages, where liquid fuel stocks are exhausted, **curtailment of electricity supply**.

By placing a second pipeline in parallel with the single section, the likelihood of a loss in gas supply is greatly diminished.

Other positive effects of the Action include:

- **Increased trade.** The Action would increase current entry capacity from Moffat by around 10% (and, with upgraded compression facilities, capacity could be increased by 90%). This increased capacity will become increasingly urgent as gas use is expanded in Ireland and Northern Ireland (UK). In its CBCA decision letter (see Annex D-IV) the CER highlights that additional capacity may be required by 2020-21 to meet demand in Ireland and Northern Ireland (UK) as output from the Corrib Gas Field declines.
- **Sustainability.** The project would reduce the fuel consumed in compression, reducing CO₂ emissions and facilitates the growth of renewable generation by increasing the flexibility of the gas system to accommodate the varied gas demands resulting from wind intermittency. It would also support switching from oil to less carbon-intensive gas heating.

2. DESCRIPTION OF THE PROPOSED ACTION

2.1. Summary of the proposed Action (up to 2000 characters, consistent with summary provided in the application form, Part A3.1)

The action, Southwest Scotland Onshore System (SWSOS) reinforcement, is the construction of a 900mm (diameter) steel transmission pipeline for the transportation of gas over a distance of 50km, between Cluden and Brighouse Bay compressor station in southwest Scotland (UKM3). The action would complete the onshore section of the 2nd interconnector linking the Ervia (Ireland) and National Grid (UK) transmission systems. The pipeline would operate at pressures up to 85 barg and have the capacity to transport up to 34 mscmd of gas.

The project is at a mature stage regarding planning and permitting; the proposed pipeline was granted the required planning consent in 2001 by the Scottish Executive Authorities. In 2010, Ervia extended an option agreement in the original wayleave package for a further ten years (2020). There are a total of 63 landowners impacted by the pipeline route, 61 landowners to date have consented to the option agreement to extend the wayleave period for the pipeline and the remaining two landowners are at final agreement stage.

There is a minor deviation of approximately 7km required to the original 50km consented route due to a natural aquifer which is being harvested by Dumfries and Galloway Council, this deviation is supported by the Scottish Environmental Protection Agency.

A Pipeline Diversion Authorisation (PDA) i.e. a deviation to the original pipeline consented in 2001 will be made to the Scottish Executive for the 7 km deviation when funding is approved for the project. A condition of the consent is the works must commence within 12 months, therefore no application was previously

made.

The primary activities associated with the action are procurement (material and construction services), and pipeline construction and commissioning. An update to the Environmental Statement (ES) completed in 2000 may also be required in addition to finalising the 2007 draft ES to ensure compliance with the latest European environmental legislation.

The cost of the action is estimated to be €92.9 million. Procurement would commence in 2015 followed by construction of the pipeline early 2016 for a period of 9 months, followed by commissioning and full pipeline operation by November 2016.

The action would result in the significant enhancement to Ireland and Northern Ireland's security of supply situation among other benefits detailed in Section 1 of Part D of the application.

2.2. Contribution of the proposed Action to the PCI

In this case, the proposed Action PCI 5.2 under priority corridor North – South gas interconnections in Western Europe (“NSI WestGas”) will complete PCI 5.2 in its entirety. It is therefore essential for the realisation of this PCI.

2.3. Revenues of the proposed Action

If the proposed Action proceeds, it will do so as a regulated asset. Therefore the revenues will be set by the Ireland's energy regulator, the Commission for Energy Regulation (CER).

Revenue cap regulation

The revenues that the transmission business of Ervia is allowed to earn are determined by the CER using a revenue cap. The CER sets Ervia allowed revenue for each system within the transmission business on the basis of:

- Operational expenditure;
- Return on the business' regulated assets – set at the weighted average cost of capital; and
- Revenue to cover depreciation of the business' regulated assets.

Under this regulatory framework, it is therefore not possible for Ervia to earn additional revenue over and above the efficient costs that they incur.

Based on the revenue allowed for each system, Ervia then calculates a set of tariffs for approval by the CER. A commodity charge and a capacity charge are payable in respect of each of the following three systems:

- Entry systems: 1) Interconnector system 2) Inch system
- Exit system: 3) Onshore system

The tariff methodology is under review by the CER. Its current proposals involve setting a long run marginal cost (LRMC) based tariff for each entry and exit point, with an additional factor that is common across all sets of transmission tariffs to ensure allowed revenues are fully recovered. Regardless of the methodology used, Ervia's transmission business will therefore recover the same amount of allowed revenue.

Treatment of grant funding under the revenue cap

The costs associated with the existing 50km single pipe section of the SWSOS are recovered through the revenue cap set by the CER. Assets that are added to the Regulated Asset Base (RAB) of Ervia are added at the date of commissioning and are depreciated on a straight line basis over the appropriate time period. In the case of pipeline this period is 50 years. Ervia understands that the costs associated with the Action would face the same regulatory treatment. However, the CER will only calculate allowed revenue based on costs net of any grant funding provided by the Commission. Ervia will therefore not earn any rate of return on this funding. In the case of previous grants received by Ervia, the grant was netted off capital costs associated with the corresponding project before these costs were added to the RAB.

Treatment of commercial revenues under the revenue cap

It is estimated that the Action would increase current entry capacity from Moffat by about 10% per day. To the extent that shippers value the additional capacity it brings economic benefits, including commercial benefits to Ervia with the sale of this additional capacity. Under the revenue cap described above, Ervia will still only be allowed to earn the same total revenue to cover the efficient costs that they incur, regardless of this additional capacity. These commercial benefits will therefore be passed through to consumers in the form of lower unit tariffs. Under the proposed updated tariff methodology all transmission customers would benefit, not only those using the interconnector entry system.

2.4. Planning overview of the Action (graphic representations)

Please provide a planning detailing the critical path and including the milestones of the proposed Action and their interdependencies, by using graphic project management tools (e.g. Gantt, PERT, CPM).

* Please attach the document as **Annex D-I** (renumbered as this conflicts with numbering of the annexes on page 23 of the application) at the end of this application form (application form D).

Programmes Attached Annex D-III (Gantt format)

- Southwest Scotland Onshore System (SWSOS) Reinforcement – PCI High level Implementation Plan.
- Southwest Scotland Onshore System (SWSOS) Reinforcement – PCI Detailed Implementation Plan.
- Southwest Scotland Onshore System (SWSOS) Reinforcement – PCI Detailed Implementation Plan – Critical Path.

2.5. Key physical characteristics and coordinates of the location of the proposed Action

- Start point (geographical coordinates): **X** = -3.6731961159; **Y** = 55.1050916573
- End point (geographical coordinates): **X** = -4.10888342519; **Y** = 54.7886841099
- Length (km) : 50km
- Route type: Onshore
 Offshore
 Both

Please also attach a map as **Annex D-II** (e.g. JPEG or PDF format) representing the detailed location of the proposed Action AND the PCI the proposed Action is located on. To ensure sufficient level of detail, both types of actions, works and studies, should be digitised at a scale of at least 1:100.000. GIS data of adequate quality should also be delivered as one or more vector datasets (see detailed requirements in the Guide for Applicants).

Annex D-II contains

- Map showing the location of the action
- GIS vector datasets

Annex D-I contains

- Map showing the planning overview of the action and GIS vector datasets, **please note** position of the Action in the UK (Annex D-I and D-II are the same map, showing planning overview and location).

2.6 Risk Assessment Grid by activities (please note activities are linked to activities numbered in Part A Section A3.1 of the application)

Activity/Subactivity N°	Risk	Impact (High/Medium/Low)	Likelihood (High/Medium/Low)	Control (Under/Beyond)	Controls / Preventive / Mitigating measure(s)
2 Design and Planning	Environmental Legislation compliance and review of changes - Gap analysis of current EIS, review of Habitats Directive requirements.	Medium	Low	Under	A gap analysis will be undertaken to determine the updates that will be required for the ES (completed for the 50km route in 2000) to comply with current environmental legislation. A similar analysis will be applied to the draft ES that was undertaken in 2007 for the 7km rerouted section. The regulatory authorities have approved a capital allowance (in the current price control) that will facilitate the work required to progress additional planning and permitting requirements in the current year.
1 Project Management	Stakeholder issues - Potential issues could materialise from stakeholder discussion.	Medium	Medium	Under	Stakeholder issues will be managed by means of the 'Stakeholder management Plan', this will be an ongoing process over the full duration of the project and will involve all stakeholders, be they public or otherwise. Stakeholder management plan utilised during the construction of IC1 pipeline has demonstrated the positive results of the proposed stakeholder management plan, and the 30km construction of IC2.
4 Material Procurement	Material Procurement - Long lead procurement items will/could determine the commencement of the construction activities.	High	Medium	Under	Given the timelines surrounding the procurement and manufacturing processes involved in the project initial efforts have been made to progress the procurement. Preliminary design proposals have developed material specifications and quantities to allow progression of procurement.
3 Wayleaves	Completion Way-leave agreements (Purchase of lands)	High	Low	Under	Currently all but two wayleave agreements have been completed, these are due for completion during quarter four of 2014, with ongoing communications and negotiation being the key preventative measure.
5 Construction	Construction Contractor to be appointed in anticipation of Construction commencement in Quarter 1 of 2016	Medium	Low	Under	Procurement process to be advanced to ensure programme requirements are met. Preliminary design documents will allow the progression of this process in line with timelines identified.

3. TECHNICAL EVALUATION

[MATURITY]

3.1. Please explain why the proposed Action and the included activities are mature enough to be financed from this year's call

- Planning consent is in place for the original 50km route; a draft Pipeline Diversion Authorisation (PDA) for the 7km re-route section has been completed with some minor updates required; currently being progressed. The PDA would be submitted to the planning authorities subsequent to grant funding becoming available and regulatory approval (once grant funding becomes available).
- Wayleaves, in 2010, Ervia extended an option agreement in the original wayleave package for a further ten years (2020), 61 of 63 required wayleaves are currently in place; the remaining two are due to be completed in quarter four of 2014.
- An Environmental Statement (ES) for the original 50km consented route in 2001 was completed; a gap analysis will be progressed in the coming months to ensure the appropriate updates are included to comply with current environmental legislation.
- A draft ES is completed for the 7km deviation re-route and will undergo a similar updating process to the original ES, before it is submitted to the relevant environmental authorities.
- The Irish regulatory authorities have agreed in principle to the construction of the pipeline, subject to an appropriate level of CEF funding.
- The Irish regulatory authorities have approved a capital allowance in the current price control that will facilitate the closeout of the planning requirements such as those mentioned above and to finalise the design of the pipeline.
- Ervia has an excellent track record in delivering large scale gas infrastructure projects on time and on budget; the proposed action could be delivered within 22 months from the date funding is approved, reference Part B, Annex B-VII Operational capacity of the application.

3.2. Explain which preceding steps have been/are being concluded for this Action and their main findings/conclusions

Wayleaves Consent

Cluden to Brighthouse Pipeline Route:

- 63 wayleaves required, 61 way-leave agreements in place, negotiation of remaining two wayleaves is currently at a final stage, and completion of the remaining wayleaves is anticipated during quarter four of 2014, wayleaves are being extended to 2020 as part of an option agreement following discussions between landowners and Ervia in 2010.

PDA Application for Re-route

- A PCA (Pipeline Consent Authorisation) granted by the Scottish Executive 10th December 2001 for the second onshore pipeline interconnector (IC2) is in place for the 80km pipeline. Construction of a 30km section of this pipeline was completed in 2002. The consent remains valid for the remaining 50km to be constructed pertaining to this application.

In 2007, following discussions, and at the request of the Scottish Executive and other Stakeholders it was agreed that a 7km deviation of the original consented 50km section would be re-routed, and a PDA (Pipeline Diversion Authorisation) submission would be lodged for this 7km re-route section of the pipeline. The requirement for the re-route section arose following a review of environmental constraints associated with the project.

The review indicated that the status of the Dumfries Aquifer to the west of Dumfries had changed considerably, these issues were identified since the completion of IC2 Phase 1 (the 30km) of the project in 2002. These constraints in conjunction with increased reliance of Scottish Water on this groundwater as a potable source for the town of Dumfries, prompted the revision to 7km of the original route proposal and subsequent agreement for submission of PDA application for the re-route.

- The PDA application for the 7km re-route section has been completed to draft format. A Gap analysis will be progressed in the coming months to identify any potential issues which may have arisen since the draft was published. Submission of this application was withheld due to time constraints around the implementation of the PDA; works must commence within 12 months of PDA grant of approval,

and therefore there must be a high level of certainty the project will proceed before the PDA submission is made.

FEED (Front End Engineering Design)

- Initial preliminary design has been completed. Additional gap analysis and internal design review to be held to close out and allow progression to detailed design.
- Material Take-off for pipeline and valves is complete.
- Site investigation contract documents, specification and drawings are complete. Tendering process to commence in Quarter 3 2014.

Engagement with Stakeholders

- The applicant is currently re-engaging with Stakeholders to ensure the progression of the project in line with the proposed implementation plan, see Annex D-III.

3.3. If updated, please attach the latest PCI implementation plan

Please attach the document as **Annex D-III** at the end of this application form (application form D).

**** If there are no updates, please provide the latest available PCI implementation plan used for the Transparency Platform.***

The following programmes have been prepared and included in Annex D-III

- PCI High Level Implementation Plan
- PCI Detailed Implementation Plan
- PCI Detailed Implementation Plan – Critical Path

3.4. Brief summary of the public consultation (*only for works*)

The project was included in a number of public documents over the last 12 years (detailed below). More recently it was included in the 2014 Gaslink Network Development Plan, which was issued for public consultation for a period of one month (August '14).

The following is a list of public documents that included the project;

Document	Source of Document	Year of Publication
Gas 2025	Department of Public Enterprise & BGÉ	1999
Network Development Plan (NDP)	Gaslink	2011, 2012, 2013 and 2014
Gas Capacity Statement (GCS)	CER	2003, 2004, 2005 & 2006
Joint Gas Capacity Statement (JGCS)	CER & UREGNI	2011 & 2012
Ten Year Network Development Plan (TYNDP)	ENTSOG	2011 & 2013
Gas Regional Investment Plan (GRIP)	ENTSOG	2011 & 2013

A number of other public documents published by independent bodies noted the need for the twinning;

The Environmental Protection Agency (EPA) note in their “Conflicts Between Energy Policy Objectives and the National Climate Change Strategy in Ireland¹” report undertaken as part of their Science Technology and Research and Innovation for the Environment (STRIVE) program:

- “This single pipeline between Cluden and Brighthouse Bay remains a key concern”; and
- “Provide a twinning of the onshore Scotland pipeline Cluden–Brighthouse Bay to remove this

¹ http://www.epa.ie/pubs/reports/research/climate/STRIVE_31_o-gallachoir_EnergyPolicy_syn_web.pdf

single point of failure”.

The Engineering Academy of Ireland (EAI) note the following in their publication, ‘The Future of Oil and Gas in Ireland²’ (February ’13)

- “Reinforcement of the single 50-kilometre pipeline between Cluden and Brighthouse Bay by twinning the section of unparallelled line would enhance the capacity and reliability of this critical section of the supply network.”
- “Ireland is vulnerable to disruption in gas supply. Security of supply needs to be ensured and a diversity of supply sources and entry points to Ireland is essential. Reliance on a single pipeline in Scotland with known capacity constraints for the country’s gas supply is unacceptable.”

The Economic and Social Research Institute (ESRI) have noted in their latest ‘Review of Irish Energy Policy³’ (April ’11), “Ireland is vulnerable to any difficulties with a single pipe.”

3.5. Building permits (*only for works*)

Subject of building permit procedure	Date of award of building permit	If relevant, foreseen date of award of building permit	Foreseen start date of works
PCA (Pipeline Consent Authorisation) as granted by the Scottish Executive. Consent remains valid. (This consent covers all proposed pipeline with the exception of the 7 kilometre re-route section which will be subject to a PDA application, Section 3.2 above outlines justification for further PDA submission).	12/12/2001	N/A	13/01/2016
Planning Permission for two number Block Valves along pipeline route. Planning permission remains valid as construction on the block valves sites has commenced and required notifications given to the local Authority (Dumfries and Galloway Council)	12/12/2001	N/A	Commenced. Site clearance has been completed to maintain the validity of Planning Permission.
PDA Submission – re-route. Submission to be made to Scottish executive for the 7 km section of pipeline not currently covered under the existing PCA.	TBC	27/08/2015	13/01/2016

3.6. Procurements/Subcontracting

Subject	Date of award	If relevant, foreseen date of award	Foreseen start date
Site Investigations Contract	TBC	01/12/2014	08/01/2015
Detailed Design Contract (Re-engage)	TBC	28/08/2014	28/08/2014
Procurement of Line Pipe	TBC	19/05/2015	22/09/2014
Procurement of Valves	TBC	22/07/2015	24/11/2014
Construction Contract	TBC	12/01/2016	22/09/2014

² http://www.iae.ie/site_media/pressroom/documents/2013/Feb/26/IAE_-_Policy_Advisory_on_Oil_and_Gas_February_2013.pdf

³ http://www.esri.ie/publications/latest_publications/view/index.xml?id=3252

3.7. Pending legal/administrative/technical issues, if any:

CER(Commission for Energy Regulation) approval

- Approval for additional funding to complete the project will be required to progress the project. This approval is dependent on PCI funding.

Wayleave consents

- Signed consent from 2 landowners remain outstanding. Discussions with landowners and their council have been brought to a satisfactory conclusion during June 2014. Final signed consent currently awaiting completion, completion envisaged during quarter 4 2014.

PDA (Pipeline Diversion Authorisation) – Re-route

- Following discussion with the Scottish Executive regarding the re-route there is an agreement to complete a PDA submission for this 7km section of the proposed pipeline. Preparation of the supplementary PDA submission has progressed to draft format (completed in late 2007, submission of this document was withheld due to activation/construction commencement being required within 12 months of award/approval of PDA).
- A review of the draft PDA documents in line with current legislation will be undertaken to ensure compliance and completeness. This review is expected to be complete in quarter 2 2015 to ensure construction commencement early 2016.
- The PDA application for the 7km re-route section has been completed to draft format. This requires a gap analysis to identify any potential issues which may have arisen since initial draft.

3.8. Control procedures and quality management during implementation of the proposed Action

Ervia are accredited to ISO 9001 2008 and for construction projects Ervia require that quality plans are developed for the project at design and construction phase. These quality plans are developed as per the requirement of Ervia procedures and in line with ISO 9001 requirements.

Quality Plans, shall include, inter alia, project number, project description, applicable standards, project activities, project team, programme of works, organisational interfaces (e.g. Design, C & I, Consultants, Contractor), testing, inspection and examination details, quality plan modifications, quality objectives, project review dates, health and safety plan, appendices. Ervia through their Quality Management System (QMS) have a detail suite of procedures in the QMS covering the construction processes.

3.9. Ex-post monitoring and audits of the proposed Action

Ervia has a structured audit process in place to monitor and measure compliance with legislation, external standards and company policy, to monitor the effectiveness of processes and to promote continual improvement in the organisation.

Audit programmes are developed to monitor construction projects, the typical audit programme covers but is not limited to the areas outlined below;

- Ervia Quality Management System (QMS)
- Project QMS
- Quality plans
- Design
- Technical specification
- Inspection arrangements
- Construction inspection
- Certification and as-built data.

3.10. Communication and visibility given to the CEF Energy co-financing within the proposed Action

Objectives

The key objectives of the communication strategy are:

- To inform the beneficiary public of the role of the European Union in developing the project by providing visibility of the CEF funding. It is vital that the public in the beneficiary member countries are targeted.
- To raise awareness amongst relevant influencers including political and media stakeholders and these will be identified and targeted within the communications strategy.

All communications activities will be developed in a partnership approach with the Commission and aim to be timely, accurate, appropriate, targeted and relevant to the particular audience, stakeholder or influencer.

The communication strategy is supported by a communications plan (see Table 1.1) incorporating public relations, public affairs, multi-media advertising and social media channels together with direct stakeholder engagement.

Target Groups

The target groups for all activity primarily reflect the beneficiary populations – i.e. Ireland. Scotland is considered as the locations where the construction phase will impact.

The EU audience is core and it is assumed that we will at all times be working in cooperation with and in response to the requirements of the offices as outlined. From an Irish governmental and regulatory perspective, the Department of Communications Energy and Natural Resources (DCENR) and the Commission for Energy Regulation (CER) in Ireland are included.

On a broader level, the media and those impacted at the various stages of the process are factored to the communications mix presented.

Communication Activities

Table 1.1 Communications Plan in support of the Communications Strategy

Project Cycle stage/communication activity & target groups	Project Approval	Design & Planning	Procurement	Construction	Commissioning	Evaluation
Communication Objective	Awareness raising; positive news story; EU helps deliver key project;	Project is progressing;	Project process progressing; gateway to opportunity; source appropriate engagement for construction	Construction plan overview and timeline. Positive messaging in relation to the project	Project delivered to plan;	Demonstrate excellence; is the project delivered as promised? Is there clarity around the parties responsible for its delivery?;
Responsibility	Commission / Ervia	Commission / Ervia	Commission / Ervia	Ervia	Ervia	Ervia
Type of key message	Project co-funding sanctioned; key project delivered in cooperation with the EU; acknowledgement of significance of EU role; project completion ensures greater security; significance of project; future focused	Significant project is progressing; now at Phase 2 of 5	Procurement process underway, recruit construction and contracts awarded	Construction is underway; critical project, outline plan; stakeholder communications at site location; acknowledge role of local community; display banners acknowledging funding	Project delivered; on time, within target; example of best practice, working in cooperation with the EC	Forging forward with Europe; Project up and running. Have we delivered? Is it clear that the EC has assisted in the delivery of this milestone project?
Appropriate tools	News release highlighting EU funding/announcement; website updates; Phase 1 newsletter - mapping the process ahead, planned outcomes, EU journals;	Website updates; Journals; Specialist publications;	News release; Media advertising; website updates; display materials for construction location (once contract in place); update communication to all stakeholders to map the plan for construction	Website updates; milestone photocall to announce construction start; photo and film record of construction process; display panels with workplan and proposed timeline; local stakeholder communications and liaison (door to door); media advertising - with EC acknowledgement - in local press	Press conference (joint); press visit and photocall at locations; time release video for website; completion newsletter to stakeholders; on site plaque placement; press interviews with key publications.	Feedback - via market research and associated reports; PR - what this means for the beneficiary populations?
Beneficiary population	Ireland		Ireland	Construction location activity and beneficiary populations	Ireland	Ireland
DCENR, CER	One to one meetings; ongoing briefings	One to one meetings; ongoing briefings	Ongoing briefing	Ongoing briefing - invitation to photocall	Ongoing briefing; invitation to attend at site visit photocall	
EU Institutions	Press conference as required; Inform via the media		Include updates in internal briefings; focused media	Inform via the media; specialist press;	High level visits and press opportunities (joint).	key report and feedback outcomes to be made available.
European citizens	Inform via the media			Inform via the media	Inform via the media; news release to specialist press;	Inform via the media

Communications tools chosen

The presentation of jointly-agreed and consistent messaging across all media formats, clearly acknowledging the partnership role of the European Commission in delivering this project, cannot be understated.

The communications' tools selected reflect the mix which we deem to work best at each stage along the project lifecycle. This is borne from experience in the delivery from a communications perspective, of large-scale projects with multiple stakeholders.

While media advertising at certain stages of the process is a given, we shift our communications 'mechanics' to maximise our appeal and our messaging to the target audiences at the different project stages. For example, our preference for the use of local media around the construction phase is tried and tested and works well to deliver localised messaging to the location which is impacted. On site display boards are also impactful at this juncture, as are storyboard illustrations of how, where and when the project will impact.

On a different level, one-to-one meetings and group briefings work well in Ireland from a Governmental and Regulatory perspective; while targeted media articles, in relation to the positive news announcement of the funding and project approval is a clear choice.

Completion of the construction / commissioning brings in a wider audience and for this reason, (softer) mechanisms such as time release video production for relay on the internet to the wider public are proposed at this stage of the project.

Indicators of Achievement

Key performance indicators for each communications activity will be identified in advance such as media coverage, tone, sentiment and evaluated during and after the campaign.

Detailed market research will be undertaken to assess public awareness, with benchmarking in advance and post-campaign research to assess campaign effectiveness.

Resources

The communications campaign will be resourced by a number of full time personnel within Ervia for the duration of the project.

Additional communications resources are available to Ervia as required from a panel of contracted public relations agencies.

[CROSS-BORDER DIMENSION OF THE ACTION, AREA OF IMPACT AND MEMBER STATES INVOLVED]

3.11. Which is the area of impact of your proposed Action? How do Member States cooperate? If relevant, how is the cooperation with third countries ensured?

The proposed Action will impact the four jurisdictions connected to the twinned 50km section of the SWSOS - Ireland, Northern Ireland (UK), Great Britain (UK) and the Isle of Man. While the investment itself will take place in Scotland (UK) it will provide benefits to Ireland, Northern Ireland (UK), Great Britain (UK) and the Isle of Man. The project promoter and its affiliate are based in Ireland, Northern Ireland (UK) and Scotland (UK).

In relation to the current SWSOS pipeline and linked interconnectors, there is already a large amount of cooperation between these jurisdictions, the National Regulatory Authorities (NRAs), and Governments of these countries. This cooperation would be continued under the same arrangements if the twinning of the pipeline were to go ahead.

Ervia holds interconnector licences from the Office of Gas and Electricity Markets (OFGEM) in the UK, along with a gas conveyance licence from the Utility Regulator for Northern Ireland (UREGNI). In addition to the cooperation required in relation to these licences, there are a number of key agreements in place between TSOs, NRAs and the Governments of Ireland, Northern Ireland (UK) and the UK.

- **Regulation 994** - Regulation 994/2010 permits the adoption of a regional approach towards meeting the N-1 infrastructure standard. As part of its compliance with the Regulation, the Competent Authorities in the UK (i.e. DECC) and Ireland (i.e. CER) submitted their respective national Risk Assessments to the European Commission in Q4-2011 and June 2014.

While the UK is able to meet the N-1 standard, Ireland's Risk Assessment confirmed that it is unable to meet the N-1 standard in 2011. Consequently Ireland (CER) requested DECC to adopt a regional approach between the UK and Ireland towards meeting the N-1 standard, as permitted under the Regulation. DECC agreed and both member states submitted a joint risk assessment, preventative action plan and joint emergency plan in 2011/12. Both Competent Authorities submitted the joint Regional Assessment in June 2014, with Emergency Preparedness Plan to be submitted Q4 2014.

- **1993 & 2004 Intergovernmental Agreements** – In 1993, an agreement was signed between the Irish and UK Governments to facilitate the construction and operation of the pipeline between Moffat and Loughshinny in Ireland. In 2004, a second agreement was signed to facilitate the construction and operation of Interconnector 2; this 2nd agreement would apply to the proposed project/action.
- **Transportation agreements between UK & Irish Gas TSOs**
 - The **Connected Systems Agreement (CSA)** between National Grid and Ervia for Great Britain (UK)-Ireland gas interconnectors came into effect on the 1st October 1998. Under the CSA it was agreed that Ervia shall be entitled to have the Ervia gas system connected to National Grid's gas system at the Connected System Points, and that the agreement shall not be amended, except by agreement between NGG and Ervia.
 - The **Transportation Agreement between Ervia and Premier Transmission Limited (PTL)** was signed on the 21st August 1996, and relates to the provision of capacity from Moffat to Twynholm.
- **NGG and Ervia Joint Protocol for Load Sharing** – This outlines the load shedding arrangements in place between NGG and Ervia in the event of a Gas Deficit Emergency affecting either operator's gas transportation network.
- **Regional Communication Forums** – Cooperation between the UK and Ireland on issues pertaining to gas security of supply are facilitated through:
 - **The UK & Ireland Emergency Planning Group** - comprising three government departments (DECC, DCENR and DETI), the three regulators (OFGEM, CER and UREGNI), and the gas and electricity TSOs); and
 - **The All-Island Emergency Planning Group** - chaired alternately by the Irish and Northern Irish government departments, and also includes two regulators (CER and UREGNI), the gas and electricity TSOs and emergency managers from the two jurisdictions.

3.12. Which Member States/ companies from Member States do financially contribute to this Action and how?

Ervia made a cross-border cost allocation (see Annex D-IV taking account regulator views) request to the NRAs of the Member States to which the project provides a net positive impact (CER, UREGNI, and OFGEM). After evaluation this request, the NRAs made the decision that 100% of the costs of the Action (net of any grant funding from the Commission) will be borne by Ireland. More detail around the conclusions of this evaluation are provided in 3.14.

As set out in 2.3, Ervia expects the costs of the Action (net of any grant funding from the Commission) would face the same regulatory treatment as the costs associated with the existing 50km single pipe section of the SWSOS. They would therefore be recouped through Ireland gas transmission tariffs. These tariffs are currently only paid by Ireland gas customers. However, in the event that the South-North Pipeline (at the Gormanston Entry Point) is required to ensure Northern Ireland (UK) system demand can be met, Northern Ireland (UK) shippers would need to book the Moffat Ireland capacity upstream of the Gormanston entry point and pay the associated Irish tariffs.

3.13. Which Member States are impacted by the Action and please describe how

In addition to Ireland, the Action will also impact on two parts of the UK. Further detail on the positive externalities experienced by these parts of the UK is provided in 3.15.

- **UK (Northern Ireland)** - 100% of gas in Northern Ireland (UK) is supplied through the SWSOS pipeline at present. The twinning of the pipeline will provide security of supply benefits to Northern Ireland (UK) of €6.5m (£5.5m). Related to this, the increased perception of reliability around the Northern Ireland (UK) gas supply would provide benefits is estimated to be at least €2.7m (£2.3m) in reduced financing costs for gas-dependent industries. Finally, consumers in Northern Ireland (UK) will benefit from their share of reduced compressor fuel and carbon costs of €6.3m (£5.4m) resulting from the Action.
- **UK (Great Britain)** - By increasing the capacity and reliability of the Moffat entry point, the Action will increase the potential for trade of gas between Great Britain (UK) and Ireland providing commercial benefits for Great Britain (UK) gas producers and shippers. The Action would also help facilitate physical reverse flow at the Moffat entry point which would provide commercial and security of supply benefits to Great Britain (UK) by giving access to potential future gas production and storage facilities in Ireland (e.g. Corrib gas production, Shannon LNG). In the Northern Ireland Gas Capacity Statement 2013/14 – 2022/23, UREGNI explains that “*surplus supply from Larne, i.e. max withdrawal rate less Northern Ireland (UK) demand, may be available for export to Ireland and/or Great Britain (UK) markets subject to the appropriate infrastructural modifications, and contractual and commercial arrangements being in place*”.

3.14. If applicable, please summarise the cross-border cost allocation (CBCA) for the PCI and the main outcome of it (only for works)

(not applicable for smart grids and electricity storage)

On November 7th 2013, Ervia submitted proposals for a CBCA (see Annex D-IV) following the grant of a week’s extension (See Annex D-VI) in relation to the proposed Action to the NRAs of the Member States to which the project provides a net positive impact (CER, UREGNI, and OFGEM). This proposed a cost allocation of 88% to Republic of Ireland (Ireland) and 12% to (NORTHERN IRELAND (UK)) which was based on an assessment of the allocation of benefits to all Member States.

On the 6th May the relevant NRAs reached an agreement on the appropriate allocation of costs. The NRAs believed that detailed information had been provided by Ervia on the allocation of benefits under a number of reasonable scenarios. However, the NRAs came to the view that there was some uncertainty around the dispersion of benefits between Member States. The CER stressed that this uncertainty was “*through no fault of the Project Promoter*”.

Based on this uncertainty, coupled with the reasonable possibility that the material benefits accruing to Northern Ireland could be below or near the significance threshold of 10% of aggregate positive net benefits, the NRAs agreed that the appropriate cost allocation at this time was 100% of costs to Ireland, see CER decision letter Annex D-IV.

[POSITIVE EXTERNALITIES]

3.15 Regarding positive externalities, please provide a description of the positive impacts that the project provides which go beyond the Member States involvement (contribution to the PCI/Action such as regional security of supply, solidarity or technological innovation) (for works only)

Please provide monetary or at least quantified values:

As a result of the CBCA decision, 100% of the costs of the Project will be incurred by Ireland. However, as recognised by the NRAs, the Project will provide benefits to two additional jurisdictions Northern Ireland (UK) and Great Britain (UK). There are five key positive externalities from the Project that would be experienced across these jurisdictions:

- improved security of supply;
- reduced compressor fuel consumption and CO₂ emissions;
- avoided reputational risk;
- increased trade and contribution towards the implementation of the internal energy market; and
- sustainability.

These positive externalities were considered as part of the project-specific cost-benefit analysis (CBA) required by Regulation (EU) No. 347/2013 Art. 12 to accompany the CBCA request. The NRAs evaluated the CBA, including its methodology, assumptions and data sources, and confirmed that they were happy with the results and scenarios presented.

Where possible, the CBA placed monetary values on the benefits arising from the project. In doing so, a conservative approach was taken and benefits were only monetised where robust values could be calculated. As a result, values are only available for the first three benefits listed above, and only for Northern Ireland. Where it was difficult to put a monetary value on the benefits, they were discussed quantitatively.

Further details on each positive externality, and the jurisdictions to which it applies, is discussed in turn below. In the case of the monetised benefits, the value under the most likely future gas supply scenario is provided. However, these values may change if different supply scenarios are used.

Improved security of supply

As discussed in 1.3, without the Project, Northern Ireland (UK) is wholly dependent on a 50km single pipeline section of the SWSOS. This dependence, and the significant economic losses that would therefore result in the event of an outage, therefore poses a very real security of supply risk if this section of pipeline were to fail. Placing a second pipeline in parallel with the single section would greatly reduce the risk of loss of supply to Northern Ireland and the Isle of Man, that would result from the failure of the single section of pipeline.

In Northern Ireland (UK), this benefit was valued at €6.5m (in NPV terms).

Further security of supply benefits are also likely to occur from the Project as a result of increased line-pack. This increase stems from two sources:

- the actual line-pack in the 50km section of twinned pipeline (an increase of approximately 35 GWh, 11% of Moffat's current capacity); and
- increases in subsea line-pack – the twinning results in higher inlet pressures at Brighthouse Bay, providing the capacity to operate the subsea interconnectors at higher pressures than is currently the case (an increase of approximately 40GWh, 12% of Moffat's current capacity).

This aspect of the increase in security of supply has not been monetised. Therefore the estimates for the security of supply benefits can be considered conservative.

There will also be some small security of supply benefits to Great Britain (UK) as this Action facilities physical reverse flow. This in turn would give Great Britain (UK) greater potential for diversification of gas supply (including potential access to future LNG and storage facilities in Ireland and Northern Ireland (UK)).

Avoided reputational risk

There is also a reputational risk for the Northern Ireland (UK) economy associated with the current dependency on the single pipeline section of the SWSOS. Investors may decide limit their investments (or invest elsewhere) if there was a perception that the energy system is unreliable, resulting in lower real GDP than otherwise

The perception of an unreliable energy sector may already have formed. In this case, the Project could improve the perception by being seen to increase reliability of the gas and power sectors. Alternatively, the perception of an unreliable energy sector may only be formed in the event of a major gas supply failure. In this case, by increasing reliability before a failure occurred, the Project would prevent a perception of an unreliable energy sector from forming.

In order to value this benefit, a proxy effect is applied by considering an increased perception of risk about the gas sector alone, as measured by an increase in the regulatory cost of capital faced by the TSOs and DSOs. In Northern Ireland (UK), this benefit was valued at €2.7m. In the Isle of Man, it was not possible to calculate a robust estimate of the value of this benefit due to its size. However, this may be in the region of €0.2m based on relative demands for gas in each jurisdiction. As this approach focuses only on regulated assets, and their associated cost of capital, it produces conservative estimates of the benefits resulting from avoided reputational risk.

Reduced compressor fuel consumption and CO₂ emissions

For any given flow rate of gas, the pressure gradient (i.e. pressure losses) for a single pipeline is significantly higher than for twin pipelines, each of the same specification as the single pipeline. With a single pipeline, there is a requirement to provide a higher supply/source pressure than with the twin pipelines, i.e. the compressor (which provides the source) runs harder with the single pipeline, consuming more fuel and emitting more CO₂. The costs of the Beattock Compressor Station are allocated between Ireland and Northern Ireland (UK) based on throughput. A proportion of the estimated fuel and CO₂ savings will therefore accrue to Northern Ireland (UK). This benefit was valued at €6.3m.

Increased trade and contribution towards the implementation of the internal energy market

By increasing the capacity and reliability of the SWSOS, the Action will increase the potential for trade of gas between Great Britain (UK) and Ireland providing commercial benefits for Great Britain (UK) and Northern Ireland (UK) gas producers and shippers.

As explained in more detail in 3.17, PCI 5.2 is also a key pre-requisite for PCI 5.1.1 (Physical reverse flow at Moffat interconnection point). This Action is estimated to result in a 40% (c.a. €90m) reduction in capital costs for the physical reverse flow project, consequently improving the viability of PCI 5.1.1 and the Larne storage project in Northern Ireland (PCI 5.1.3). If completed, PCI 5.1.1 could also be expected to bring future security of supply benefits to Great Britain (UK).

Sustainability

Currently Northern Ireland (UK) has a high reliance on oil as an energy source for the domestic and industrial & commercial sectors. Increased capacity at Moffat as a result of the Action provides the upstream capacity to Northern Ireland (UK) to facilitate increased switching from oil to gas in these sectors. Particularly given the price savings offered by gas in comparison to oil. In turn, this would be expected to bring significant environmental savings due to the higher carbon emissions generated by burning oil.

Table 1 summarises the positive externalities that will be experienced in each jurisdiction as a result of the Action. The estimated quantified positive externalities are €15.5m. In addition there a range of unquantified benefits.

Table 1. Positive externalities from the Action

	Northern Ireland	Great Britain
Security of supply	✓	✓
Reputational risk	✓	-
Compressor fuel and carbon savings	✓	-
Increased trade	✓	✓
Sustainability	✓	-

All benefits quoted are in 2013 prices and consistent with those submitted for the CBCA application.

3.16. Provide information on the financial viability of the action based on the main features of the Business Plan and explain why the PCI is not commercially viable (*for works only*)

In considering whether the Action would be financially viable, Ervia has considered two situations:

- the Action is undertaken by a merchant investor; or
- the Action is undertaken as a regulated project by Ervia.

This analysis found that the Action would not be commercially viable as a merchant project or a regulated project without grant funding from the Commission.

Merchant project

In order to consider whether the Action would be financially viable if it were to be undertaken by a merchant investor, it is appropriate to compare the costs of the Action, which fall entirely on the promoter, with the revenues that the Merchant investor would earn as a result of the investment.

As set out in 2.3, it is estimated that the Action would increase current entry capacity from Moffat by about 10% per day. To simplify the analysis a conservative assumption is applied; this additional capacity comes from the new section of the pipeline and that the capacity of the original pipeline is not reduced. The revenue earned by the merchant investor therefore amounts to the commercial benefits with the sale of this additional capacity. Estimating the revenues in this way may overstate the benefit that would accrue to the investor since the total value of the incremental capacity is assigned to the investor.

In the case of the Action being undertaken by a merchant investor, it is appropriate to use a higher rate of return for the financial assessment. This is not inconsistent with the approach used by some regulators in Europe to allow a higher rate of return to cross border projects in gas and power networks, reflecting the fact that without the higher allowed return those projects may not proceed. In addition, to avoid an implicit cross subsidy the decision whether to proceed with the Project and how to fund it should be made on an incremental basis, not made on the basis of the average financing cost to the project promoter (Ervia).

A broad estimate of the rate of return required by a merchant investor not underwritten by a regulatory compact is around 10%. This is in line with the indicative cap of 8.4-13.76% proposed by Ofgem in relation to the regulatory regime for electricity interconnector investment in Great Britain (UK). If the investor earns a rate of return above the final cap that is set, they are required to share these profits with consumers.

Based on a 10% rate of return, the NPV of the project is -€73,741,543. It is therefore not commercially viable in this situation.

Regulated project

Of the benefits associated with the Action, only a limited proportion accrue to gas customers in Ireland, the rest accrue to Great Britain (UK) and Northern Ireland (UK) and non-gas customers in Ireland. The CER have recognised this fact, and highlighted its concern about the impact on tariffs if gas customers in Ireland were to bear the full cost of the project. If the CER were to allow 100% of the costs of the project to be included in the calculation of allowed revenues for Ervia transmission business, this would result in an increase in gas tariffs of approximately 10% (as discussed in more detail in 3.20). On this basis, the CER have made the decision that they cannot approve funding of 100% of project costs.

Instead, the CER have indicated that they would be willing to allow up to €47.9m (including €1.6m of ineligible costs) to be recovered through the regulated asset base (RAB). This is the value of the commercial benefits associated with the sale of this additional capacity, discounted at the TSO's weighted average cost of capital (5.2%), which would ultimately be passed through to customers given the regulatory framework under which Ervia operates (as set out in 2.3). CER highlight that including the value of these benefits on the RAB, would therefore have no impact on tariffs in the long term. It would be impossible for the project promoter to commercialise the remaining benefits associated with the Action. Therefore, as 50% of project eligible costs are not funded under the CER's proposed level of allowed funding, the project would not be viable as regulated asset.

Further, it would not be commercially viable for a merchant investor to fund the remaining 50% of project costs. Even in the situation where 100% of the commercial benefits accrue to the merchant investor, this would still result in a NPV of -€27m, based on a 10% rate of return. In reality, it would be likely that a significantly smaller proportion of these benefits would accrue to the merchant investor and the CER would require that some commercial benefits are transferred to consumers as a condition of allowing funding onto the RAB.

If the CER were to allow more than €47.9m to be recovered through the RAB, this would be recovered from increased tariffs for gas customers in the long term, while a large element of the benefits would not accrue to these customers.

Moreover, it is important to also consider solidarity. A tariff increase would cause further affordability issues for domestic customers. Research shows that Ireland has higher levels of excess winter mortality than the rest of Europe (70% of excess winter mortality from cardiovascular disease and respiratory disease arises in the poorest socio-economic groups). In 2012, 12.9% of households in Ireland went without heat at some

stage during the year due to lack of money, while 8.5% were unable to afford to keep the home adequately warm. This is over double the number of households in 2008, when only 6.3% went without heat at some stage during the year due to lack of money, and 3.7% were unable to afford to keep the home adequately warm.

It may also put industrial and commercial customers at a competitive disadvantage. Cost competitiveness is seen as essential for Ireland's recovery. Chairman of the NCC, Dr Don Thornhill commented:

"To deliver the jobs growth that Ireland needs, our international cost competitiveness needs to continue to improve. The analysis from this report points to the Irish economy being at a pivotal point in terms of cost competitiveness. Recent price falls are largely a cyclical response to the Irish and international recessions rather than a response to structural changes in the Irish economy. In this light we need to see the Government's continuing focus on those aspects of the economy which drive costs for business. Reforms that reduce business costs and improve productivity need to become the new story of the Irish economy."

In summary, the national regulatory authority has decided that there are limits to the regulatory funding which can be made available for this project. This is because of the scale of benefits which accrue outside the Ireland gas sector combined with ongoing issues around fuel poverty and competitiveness in Ireland. Partial Union funding of the Action is needed to secure these benefits across Ireland, Northern Ireland, and Great Britain (UK).

[COMPLEMENTARITY]

3.17. Is the Action complementary with another Action of the Connecting Europe Facility in Energy? Are there any interdependencies and/or complementarities with other implementing PCIs that have or might have an impact on the implementation plan of the PCI? (for works only)

- YES
 NO

If yes, please explain:

This Action complements two PCI projects.

- **PCI 5.1, a cluster of PCIs allowing bidirectional flows from Northern Ireland to Great Britain and Ireland and also from Ireland to United Kingdom.** The proposed Action is a key pre-requisite to developing physical reverse flow at Moffat interconnection point from a systems operation perspective, and would increase the viability of storage and gas supply projects in Ireland and Northern Ireland (UK). Although physical reverse flow is currently technically feasible with the current single pipeline, doing so would have a major adverse effect on security of supply. The resulting substantial reduction in linepack volumes in IC1 and IC2 would eliminate the security of supply that this linepack currently provides, as highlighted in the 2011 Market Consultation for Physical Reverse Flows at Moffat. Further, the lead time needed to switch over from to reverse flow back to forward flow with a single pipeline would be a major security of supply risk. With a twinned pipeline, on the other hand, this security of supply risk would be removed as the switch from forward flow to reverse flow would only need to happen on one pipeline.

It is estimated that this Action would account for up to 40% (c.a. €90m) of the costs for PCI 5.1.

- **PCI 5.3, Shannon LNG Terminal located between Tarbert and Ballylongford (Ireland).** By increasing capacity at the Moffat entry point and facilitating physical reverse flow, this Action would increase the value of the of the Shannon LNG project if it were to proceed. It would expand for the potential market for gas from Shannon gas and allow it to contribute to Great Britain (UK) security of supply.

[OVERCOMING FINANCIAL OBSTACLES AND IMPACT ON SOLIDARITY]

3.18. Please describe the financial obstacles and how Union funding would help to overcome them

At present the Action cannot be financed as either a merchant or regulated asset. The reasons for this are set out in detail in 3.16.

The CER has indicated that they would be willing to allow up to €47.9m to be recovered through the RAB (around 50% of the project costs). Union funding would meet the shortfall between this and the total project capital cost, allowing the project to proceed.

3.19. Please describe the general method used in calculating the tariff (*only for works*)

Using a revenue cap, the Commission for Energy Regulation (CER) determines the revenue that the transmission business of Ervia is allowed to recover from customers over the price control period. The CER sets Ervia's allowed revenue for the transmission business on the basis of:

- Operational Expenditure
- Return on the business' regulated assets – set at the weighted average cost of capital; and
- Revenue to cover depreciation of the business' regulated assets.

Assets that are added to the Regulated Asset Base (RAB) of Ervia are added at the date of commissioning and are depreciated on a straight line basis over the appropriate time period. In the case of pipelines this period is 50 years. The value added to the RAB, and therefore the value on which Ervia earns its Regulated Rate of Return, is the net cost of the asset as approved by the CER. Any grants received, or other third party contributions are subtracted from the total cost of the asset and Ervia therefore does not profit from any grant received.

The CER currently sets the allowed revenues for a 5 year period and in doing so also forecasts expected capacity bookings and commodity flows. The Transportation Tariff is based on an Entry/Exit system. The CER uses a financial model that seeks to set a 'levelised tariff' for the 5 year period, i.e. more revenue is earned in years of high demand/capacity bookings, less revenue in years of low demand/capacity bookings. On an annual basis the tariff is updated to take account of the latest forecasts, changes in the allowed Rate of Return (this is linked to the yield on an Irish 5 year Government bond) as well as actual Revenues for the preceding years. Ervia is allowed to earn its allowed revenues, no more and no less. The CER reviews Operational and Capital Expenditure (Opex and Capex) on an ex-ante basis and sets the allowances for a 5 year period. The CER also reviews Capex ex-post and disallows any expenditure that it deems inappropriate or inefficient.

It should be noted that the CER is currently consulting on a re-structuring of the Entry Tariff calculation methodology. In doing so they have indicated that they will introduce a methodology that is compliant with the 3rd Energy Package and the forthcoming Harmonised Network Code on Tariffs. This Code is currently in draft form and is the subject of a public consultation from ENTSOG based on the Framework Guidelines provided by ACER. The new methodology may result in a different revenue profile for Ervia but will not alter the allowed revenues over a price control period.

3.20. What would be the impact on the tariff, if there were no Union grants obtained? (*only for works*)

Based on the current tariff structure, the addition of the cost of the project to allowed revenues would increase the interconnector system (Moffat) entry tariff by 10%.

[PRIORITY AND URGENCY OF THE ACTION]

3.21. The proposed Action will:

- remove bottlenecks
- end energy isolation
- contribute to the implementation of the internal energy market
- other benefits

Please describe how for each of your choices:

The Action would directly address the main priorities of the call for proposals.

- **Removing bottlenecks** - In their CBCA decision, the CER state that “forecasts indicate that additional capacity may be required by 2020/21 to meet demand in Northern Ireland and Ireland as output from Corrib declines”.

The forecasts used for the CBA indicated that, assuming all other gas supply sites such as Corrib are 100% available, peak demand could exceed capacity by 2021/22 (using 1 in 50 year estimates of peak demand). If there are outages or reduced production at Corrib, import capacity could become constrained much sooner than this. In addition, there is also uncertainty around the economic viability of Inch gas storage facility – if closed early this would further accelerate the need for additional import capacity.

These capacity shortages create costs as they mean power stations in Ireland and Northern Ireland (UK) will have to switch away from gas to more expensive liquid fuels in many periods. This constraint would also represent a barrier to expansion of gas use in Ireland and Great Britain (UK). This is costly to industry and consumers and as they continue to use more costly alternatives to gas, such as oil. This constraint on the growth of gas use also impacts on sustainability by reducing the potential for consumers to switch away from oil, which is a more carbon-intensive fuel than gas.

The additional capacity (an increase of 10% or 3.1 mcm per day) associated with the Action would play a major role in removing this bottleneck which is urgently needed. In addition, the twinning of the pipeline opens up the possibility of a 90% increase in import capacity compared to current levels if the existed compression facilities were upgraded.

- **Ending energy isolation** - Ireland and Northern Ireland (UK) are currently at the extremity of the EU gas network with one pipeline supplying 93% of gas in Ireland and 100% of gas in Northern Ireland (UK). The lack of import capacity and security of supply concerns could have a negative impact on investor confidence.

The Action to twin the SWSOS pipeline is likely to have an impact in improving investor confidence. This is particularly urgent given the gradual recovery from the financial crisis in Ireland and Northern Ireland (UK) and the need to stimulate investment.

- **Contributing to the implementation of the internal energy market** - The increase in capacity (and increase in the reliability of this capacity) will help promote greater trade between the European market (via Great Britain), Ireland and Northern Ireland (UK). In addition, this Action is a prerequisite to implementing physical reverse flow to allowing export of gas from Ireland and/or Northern Ireland (UK) to Great Britain (UK) and Europe for the first time. In these ways, the Action will make a major contribution to completing the internal energy market.

The urgency of this Action should be stressed. The lead time (from approval to commissioning) of the twinned pipeline is likely to be approximately 22 months meaning November 2016 is the earliest the pipeline could commission. This is very close to the point where demand for gas in Ireland and Northern Ireland (UK) could exceed supply capacity without the Action. Moreover, until complete, gas supply to Ireland and Northern Ireland (UK) will not be adequately secure and any delays to the project would further undermine investor confidence. There are also sustainability benefits (reduced compressor CO₂ emissions) which can be realised as soon as the project is commissioned.

[STIMULATING EFFECT OF THE CEF FINANCIAL ASSISTANCE ON THE COMPLETION OF THE ACTION]

3.22. How will the grant accelerate the implementation of the proposed Action and the PCI or leverage public or private financing?

Accelerating implementation

EU funding is crucial to the viability of the project. As explained in 3.16, the project would not be viable as a merchant investment and the CER is only likely to allow approximately 50% of the costs to be funded as a regulated asset. EU funding towards the project would therefore allow the project to go ahead with it, potentially, commissioning by late 2016.

Leveraging private funding

EU funding would also help leverage private funding of the project. The CER have suggested that they would allow €47.9m (including €1.6m of ineligible costs) to be added to Ervia's regulated asset base - on the basis that this would not increase consumer tariffs in the long-term due to the offsetting effect of commercial revenues. Ervia could fund all the capital costs allowed onto the asset base if EU funding is provided for the remainder of the capital costs of the project.

As the Action represents the entire PCI, EU funding of the project would complete the PCI and, as described in 3.17, would contribute to the delivery of PCI 5.1.

3.23. Please indicate the financial net present value (FNPV) for the PCI and the financial internal rate of the return (FIRR) if no Union financial assistance is granted, in line with what is provided in the Business Plan (*only for works*)

FNPV

FIRR

*Note these are based on the Merchant project option set out in 3.16.

3.24 Estimated revenues to be generated by the PCI

The commercial revenues from the increased capacity of the pipeline are estimated to be €60.3m in NPV terms in the central scenario (assessed over a 20-year project horizon and discounted at 4%). These would be passed through to consumers in reduced network tariffs and help offset some of the costs of the project. See 2.3 and 3.16 for more detailed explanations.

The value of capacity and the associated revenues based on the cost of gas stations having to switch to liquid fuels in the absence of the additional capacity from the project is estimated. The main benefit of the project, security of supply, and the additional benefit of compressor fuel savings would not generate any revenues for the promoter.

4. ANNEXES

All relevant information for assessing the proposal must be provided in the application form. The purpose of annexes is to provide additional, supporting information. Annexes or their specific relevant sections should be referred to in the relevant parts of the application form.

At minimum, the following annexes shall be attached to the application paper form, as well as in the electronic submission form A.

Annex D-I: Planning overview of the Action (graphic representations) and GIS vector datasets

Annex D-II: Map of the location of the Action and GIS vector datasets

Annex D-III: Latest PCI implementation plan

Annex D-IV: Cost Benefit Analysis & Article 12 (CBCA) CER decision

Annex D-V: Business Plan

Annex D-VI : Gaslink PCI Investment Request letter 31st October 2013