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**ESB GWM Response to Consultation on Gas Networks Ireland's 2016 Ten Year Network
Development Plan (CER/16/235)**



Introduction

ESB GWM welcomes the opportunity to respond to GNIs draft *Network Development Plan*. This is an important document. Under Article 22 of EU Directive 2009/73/EC¹, network development plans give market participants visibility of the required infrastructure investments and their timing over the next 10 years, as well as details of the infrastructure for the next 3 years. Because infrastructure must already be in place when it is needed, high quality planning is important in any energy network. If infrastructure is not built in time, economic growth could be impeded. If it is built too far ahead of demand, the cost is not supported by throughput and becomes a burden for the customer.

For this reason, the assumptions are of key importance. The Directive calls for the transmission operator to make reasonable assumptions about the supply and demand for gas in forming the plan.

ESB GWM contends that the difficulties and uncertainties surrounding the making of reasonable assumptions regarding the continued use of gas in the medium and long term have never been greater, nor the significance of these assumptions more critical. The long term role of unabated natural gas in Ireland's energy future is highly questionable. Thus any medium term GNI plan needs to be grounded by a high level analysis of the long term vision of Ireland's energy future (and the role of gas in that future) and endorsed as being consistent with Ireland's energy policy. In advance of the completion of the National Transition and Mitigation Plan it could be argued that the existing plan does not achieve that objective and extends its reach to the promotion of gas use in a manner than may not be in Ireland's long term interest.

Gas use is clearly part of Ireland's energy future. However, gas use in Ireland will be constrained by various factors. First and foremost is Ireland's commitment to decarbonise the energy sector by at least 80% by 2050, with specific commitments for the non-ETS sector by 2030. Clearly there is a limit

¹ Article 22 requires that

"The ten-year network development plan shall, in particular:

(a) indicate to market participants the main transmission infrastructure that needs to be built or upgraded over the next ten years;

(b) contain all the investments already decided and identify new investments which have to be executed in the next three years; and

(c) provide for a time frame for all investment projects.

*When elaborating the ten-year network development plan, **the transmission system operator shall make reasonable assumptions** about the evolution of the production, supply, consumption and exchanges with other countries, taking into account investment plans for regional and Community-wide networks, as well as investment plans for storage and LNG regasification facilities."*



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to the role unabated gas can play in that future. Gas use for power generation or at industrial sites in conjunction with CCS could and should see gas continue to play a role in Ireland's energy future for many years to come. However there are barriers to CCS development in Ireland. We believe GNI should take lead role in exploring [or promoting] CCS development in Ireland given its competencies in large scale transport and storage of gas.

Distributed gas is unlikely to be capable of having its carbon captured for economic reasons. Therefore long term use of gas at a residential level is predicated on widescale adoption of biomethane at economic levels. ESB GWM supports GNI activities to promote research in this area. However until such time as the resource and economic feasibility of a networked biomethane outcome is determined, ESB GWM would caution against the expansion of the gas network to new towns. This is not to say that infill of gas in towns where networked gas is already present does not have a role in the medium term and ESB GWM would not be surprised if the high level vision in the forthcoming National Transition and Mitigation Plan reflects this. However, the desirability of such an outcome from a policy perspective should not be taken for granted at this juncture.

As a result of the high level concerns expressed above, ESB GWM contends that the plan should be minimalist in nature until such time as the National Transition and Mitigation Plan provides this high level energy vision and clarity surrounding the future role of gas and in particular the gas network. There is undoubtedly an option value to waiting in this respect.

In our submission below, we highlight a number of areas where we believe the assumptions made should be revisited or, at a minimum, alternative, less speculative scenarios should also be included to enable a sound basis for planning into the future. However our comments in this regard must be taken in the context of our preceding comment that the role of unabated gas, CCS abated gas and biogas (and in particular bio-methane) should be clearly determined at a policy level in order to inform the specifics related to network development. There is a section in the Plan devoted to a 'Gas Growth Strategy' which is a case in point. It includes growth possibilities of varying levels of feasibility, as measured today. We believe it is questionable whether a regulated operator of a fossil fuel network should be including these in a network plan in the absence of policy direction and, in particular, ahead of the forthcoming National Transition and Mitigation Plan. Ireland is committed to transitioning to a low carbon energy system and it is unclear whether these strategies will have a role in the optimal solution of a significance to justify being part of the basis for a medium term investment plan.

This 'growth strategy' includes, but is not limited to, incorrect assumptions in relation to ESB's coal fired power station, Moneypoint (as discussed further below). GWM is a significant user of gas in Ireland and GNI is a valued partner. In common with other users, we have a stake in the right answer being found and the avoidance of the risk of stranded assets and the associated expense. The Plan itself notes in passing the impacts on gas flows of the increasing penetration of renewables. We would submit that planning for future impacts of 40% penetration of wind generation on



Ireland's highly integrated gas and electricity system is a serious question requiring detailed attention and is easily more urgent and concrete than debatable growth strategies.

We elaborate on these concerns below.

Section 4. Gas Demand Forecasts

Overall

In general, this section appears soundly based. We note a relatively optimistic growth assumption in power generation. Given the unpredictable and volatile nature of recent relative fuel costs, we would request that this be carefully stress-tested. Similarly the growth assumption for the Industrial and commercial sector assumes that growth from new connections will outstrip energy savings. If that is the case, it would have implications for the national emissions targets in the Non-ETS sector. We would again advise that this assumption be tested as Government will presumably have to act to counter any increase in emissions in the Non ETS energy sector.

Moneypoint Generation Station, an ESB asset, features prominently in GNI's draft plan. There is a detailed reference in the short Executive Summary, the gas demands forecast section (section 4, p32) includes a two page description of a network study for an extension to bring natural gas to the site (p32) and the section on growth plans features a full page explaining why GNI believe that biomass *is* not feasible for ESB's site and a CCGT is preferable. GNI has titled this putative project 'Moneypoint to Gas'.

Again we must point out that these assumptions are not realistic and the speculation about the future is simplistic. The Programme for Government highlighted the need to look at the best strategic options for the site after the current plant closed. No solid date was set for this as it will depend upon operational considerations. GWM agrees with this stance. Because generators, like all major emitters, are accountable for their own day-to-day emissions, the principal issue for Ireland in electricity generation is a strategic one: what kind of new generation plant should be built and where in order to achieve the low carbon generation mix Ireland needs for the future? This is a complex question, critical to our future and worthy of detailed study and discussion. In our view, the inclusion of a gas-fired Moneypoint undermines the credibility of the plan and raises doubts regarding other forecasts/assumptions contained within the draft NDP.

We recommend that it be removed from the final version of the plan.

The draft NDP states that "the Moneypoint coal plant in County Clare is due to come to the end of its operating life in 2025²". As asset owner of Moneypoint, ESB GWM would like to refer GNI to its public response to the Department of Communications, Climate Action & Environment, Green Paper

² Page 32, Draft NDP 2016, Section 4.4.7 Moneypoint to Gas



consultation in 2014³ (please see the Appendix of this document for an extract of ESB GWMs response)

Section 4.3.4 Compressed Natural Gas for Transport

The draft NDP gas demand forecast includes transport sector gas demand. GNI is proposing to develop a 70 station CNG fuelling network, co-located in existing forecourts, on major routes and/or close to urban centres. In an early CER information paper, D/15/050, page 9 states “The CER’s initial view is that GNI would not be providing a regulated monopoly service when installing CNG equipment, and therefore this equipment would not normally be added to GNI’s regulated asset base.”

We recognise that, pending the development of low carbon options for heavy goods vehicles, natural gas has a role to play as an interim solution, achieving some reduction in greenhouse gas emissions and improving air quality compared to diesel. There are however competing technologies such as electric rail trucks, which could also play a role. However the key issue in CNG infrastructure development is whether it is a regulated or a commercial activity and if regulated which users should pay for the infrastructure development. Should gas users be required to pay for the infrastructure to benefit a small number of road users or would apportionment of cost to road users be more appropriate e.g. a road users tax? We would welcome clarity on this matter. The most recent CER decision paper (CER/16/154) does not appear to have an explicit statement with respect to CNG fuelling stations/compressors and their exclusion/inclusion in this respect.

Section 6.1 Residential New Connections Growth

Within the draft NDP, GNI estimates that up to 300,000 households located close to existing gas network could be readily connected to gas. This would also appear to be compatible with the modelling carried out by UCC. It will be important that any growth assumptions based on this should be reviewed in the light of the National Transition and Mitigation Plan once published. More critically, it is not at all clear that new projects to bring gas to new towns should be considered in advance of the National Transition and Mitigation Plan which should in turn should provide clarity on the role of unabated gas and biogas (and in particular bio-methane) into the future .

Section 6.2 Industrial and Commercial Sector Development

Within Section 6.2.1 Data Centres and Section 6.2.2 Combined Heat and Power, GNI advocates using renewable natural gas for onsite electricity generation. Again, GWM would caution against including these assumptions as a basis for investment without thorough testing. Similar to previous comments compatibility with energy policy and the National Transition and Mitigation Plan should be a pre-requisite for inclusion.

³ http://www.dccae.gov.ie/energy/en-ie/_layouts/15/website/submissions.aspx?ID=10#



Growth

In general, GWM believes that CER needs to give significant consideration before including the proposals in the 'Gas Growth Strategy' in the Plan. In particular, there is a significant potential for inefficiencies across the system.

- Firstly, there is a risk of stranded costs for the energy customer. If infrastructure is built and the projects do not materialise, this will increase network charges for customers.
- While CHP is acknowledged to be a highly efficient in the right applications, its use in data centres without a substantial nearby heat demand is open to question. Given this, the cost impacts and interactions between the electricity and gas networks and the impact of potentially increasing curtailment of wind would need to be understood before seeing this as an attractive solution.
- This issue may be further exacerbated by the gas connections policy where a substantial upfront cost of the gas connection at a CHP could be shouldered by the wider gas customer which of itself might skew incentives. GB is currently tackling the issue of net demand benefits and lessons can be learned in Ireland from this. Another issue is that CHP may well be displacing wind in this scenario. These interactions should be studied before promotion
- It is not clear that the potential levels of renewable gas exists to justify expansion of gas use outside of power generation (where carbon capture will be required). Presumably the CER is testing these numbers with GNI ahead of PC 4. Unless the actual ramp up in renewable gas production becomes apparent, caution must be taken on promoting investment decisions.

Section 7 System Operation

Within Section 7, GNI discusses the changes experienced by the gas transmission network, particularly since the Bellanaboy Entry Point has come on line. In particular, the challenges associated with reduced flows through Moffat Interconnector are referenced and the requirement for investment in more flexible compressor/turbine technology. At present large quantities of gas are being virtually exported to NBP through the Moffat Interconnector using the VRF product.

In November 2011, the CER published a Decision Paper, *Tariff for Virtual Reverse Flow Product at Moffat (CER/11/190)*, which outlined the tariff arrangement for VRF which consisted of a registration fee, a commodity charge and a capacity charge. Apart from the registration fee, the capacity and commodity charge were set at €0/MWh with a commitment from the CER that these tariffs were for an interim period and *"Further analysis will be undertaken by the CER in the future to determine the appropriateness of this tariff arrangement in the context of future developments to the Irish gas market and in particular the pending Decision on the regulatory treatment of the BGE interconnectors."* [page 12, CER/11/190]. The current costs for registration include a €7,300 registration fee and a €0/MWh commodity charge. At the time of setting the VRF charges for 2015/16 the CER stated that *"This methodology will continue to apply to shippers who register for use of the service until such time as the enhanced VRF is made available"*.



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Corrib gas became fully operational in June 2016 and during days of low demand in summer, Corrib gas is expected to meet full ROI gas demand. In 2016/17, Corrib is expected to meet 55% of the annual ROI gas system demand. An enhanced within-day VRF has been utilised extensively since April 2016. In effect, large amounts of gas produced at Corrib are being virtually exported to NBP with no charges attached to this service in ROI except for the minimal registration fee. This allows producers at Corrib access to NBP and the use of GNI's compressors without any significant tariffs attached. VRF charges should recoup both the costs and value of this service.

ESB GWM believe that the impact of VRF on compressors should be considered during the PC4 consideration process. It is also a concern that the changing dynamic of gas flows may require entry points being interrupted to facilitate on-line pipe inspections.

Please feel free to contact me if you would like to discuss any aspect of this response in further detail.

Yours sincerely,

Karol O'Kane



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Appendix

Extract from ESB GWM public response to the Department of Communications, Climate Action & Environment, Green Paper consultation in 2014

“Moneypoint Generating Station

Moneypoint Generating Station was commissioned over the period 1985-1987 and is approaching 30 years old. Moneypoint station has:

- *Invested significantly in 2008 to ensure the capability to operate well into the next decade with modern air quality emissions abatement technology.*
- *Is the youngest coal plant in Ireland and the UK with an average age of 28 years. The average age of operational coal plant in the UK is 42 years and these plants are expected to continue in operation into the early part of the next decade.*
- *Large scale maintenance programs are designed to ensure long term availability and reliability of plant/station equipment.*
- *Provides fuel diversity and security of supply in respect of the generation fuel mix and is ideally suited in terms of location, design and service connections to continue to provide a reliable complement to gas power generation.*

Moneypoint station continues to be a commercially and technically viable station and ESB expects it to continue operation well past 2025.”