

GT 17 price control response

General approach to Engineering costs

In the recent draft determination we note a continuing approach, which, if followed by the asset owners, would result in essential work on the gas transmission system not being undertaken, with potentially far reaching consequences to an asset base which is fundamental to the economic wellbeing of Northern Ireland.

Having went through the draft determination we believe your approach gives insufficient weight to the resolution of risks and hazards which are identified through the comprehensive inspection regimes, instead seeking to rely on theoretical processes and evidence such as failure rate analysis which may simply not be available.

This deficient approach is not new. We experienced it at the last price control process were again, the desire to rely on spreadsheet analysis rather than engineering physical reality was prevalent. As an example, previously, you did not regard the actual physical evidence of corrosion at one wind- waterline point containing 75bar gas pressure as "sufficient evidence" to justify inspecting the other similar wind waterline points.

Had we followed the investment approach you believe is reasonable we could well have faced a catastrophic failure of the transmission system as, having chosen to disregard your flawed reasoning we carried out the necessary inspections and did indeed identify more corrosion. As we acted in a timely manner we were able to prevent the corrosion becoming critical and manage the investigation and repair process without impacting upon the flow of gas into Northern Ireland.

We believe that the identification of hazards through the inspection and health and safety processes should be sufficient to trigger remedial action and is sufficient evidence to any reasonable regulatory process. In the current price control the flawed process being followed leads to you proposing to disallow:

- fire detection equipment at a ups kiosk despite there being recent documented history of fires at similar installations, the site being a key site and the recommendation for detection equipment being confirmed by the insurers own technical advisers;
- A number of statutory inspections required by law such as those required under Pressure System Safety Regulations and TD1;
- Civil works to address installations which have been assessed as a specific health and safety risk;

IT infrastructure

We have similar reservations to the approach taken in respect of the IT and coms infrastructure used to operate the system. The effect of disallowing any replacement or investment in the SCADA systems



and servers that support them means that we will be running a system with multiple pieces of equipment outside of warranty and on versions no longer supported by the original vendors. This poses significant risk both in respect of failure of key equipment and susceptibility to cyber-attack. If there is no investment, as proposed by the draft price control, by the end of the price control period our key IT will all be outside of support and almost a decade old.

We have written a separate letter outlining more detail on the line items but wanted to clearly document our concern at the general process that results in these outcomes.

Yours faithfully

A handwritten signature in black ink that reads "P. Claire Stewart". The signature is written in a cursive, slightly slanted style.

Gerard McIlroy

Director

Mutual Energy Ltd

Veronika Gallagher
Finance and Network Assets
Queens House
14 Queen Street Belfast
BT1 6ED

Mutual Energy Limited
First Floor The Arena Building
85 Ormeau Road, Belfast BT7 1SH
Tel: +44 28 9043 7580 Fax: +44 28 9024 9673
Web: www.mutual-energy.com
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1. Replacement expenditure (RepEx)

Our submission requested £4.98m replacement expenditure but the draft allowance was set at £1.95m, a reduction of £3.0m. Only three engineering projects were allowed and a general allowance of £0.4m to cover all other engineering projects for the 5-year price control period, an average of only £0.08m per year for assets which will be over 25 year old by the end of the price control.

The draft determination only gave specific rationale for the disallowance of one project, the Ballylumford Waterbath Heaters (£0.8m), with all other projects being dismissed on the basis that there was less 'less robust evidence than might be expected' and "lack of detail". The evidence presented was consistent with a price control which i) was out of sequence for the group; ii) covered a period which is two years longer than that normally submitted; iii) we were only made aware of the requirement to submit at relatively short notice and iv) coincided with the major engineering projects in the summer period where engineering resources were already fully committed.

Replacement of Ballylumford waterbath heaters: We note that you anticipate Ballylumford "B" station will be closing in the near future and so you do not believe the replacement of the waterbath heaters to be necessary. We recognise that NIAUR are better placed to advise as to the future operation of the "B" station, but again wish to highlight the need for these waterbath heaters to be replaced if the Local Reserves Services Agreement is extended. If this situation were to arise we understand that this project would be reconsidered by NIAUR in light of the change. The original gas supply agreements which were transposed into the PTL code (as approved by NIAUR) contractually require us to supply gas within temperature specification to the B station, hence the costs fall to PTL and therefore gas consumers under these historic arrangements. If NIAUR were to take a different view to the funding of these, as suggested in the draft determination, then contractual changes would be required which would fall outside our remit.

Even if the contract is not extended beyond 2018 work is required this year to allow us to continue to meet our contractual requirements. The waterbath heaters are now over 20 years old, and because of much lower flows to the B station they are operating outside their original design envelope, and are in a precarious state. There are a number of issues with the controls and waterbath heater A has had to be temporarily isolated, resulting in no resilience. If we were not able to maintain the temperature of the gas at the "B" station it would not be able to operate, giving rise to potential electricity supply concerns. An additional project to replace the control system of this waterbath heater (£81k) was also included in the submission but it is unclear as to whether this has been allowed. We request that an allowance be given to facilitate improvements to this equipment this year to allow it to continue to function until 2018.

Fire detection system – kiosks: We requested an allowance to install fire detection systems in our kiosks following the recommendations of a HAZOP study, insurance audits, UPS incidents which resulted in smouldering of equipment, and kiosks fires (both within the company and in the wider utility industry), but these have been entirely disallowed. We do not understand why these have been



disallowed and believe by not installing these the group will be exposed to undue fire risk to its assets and potentially higher insurance costs.

Transformer rectifier replacement and lagging replacement are key to the reduction of corrosion on the pipeline but have been disallowed. Transformer rectifiers form an essential part of the pipeline cathodic protection system but our equipment is now 20 years old and obsolete so needs replaced due to the inability to obtain spares. If these are not replaced this essential protection cannot be maintained. Replacement of lagging is also required to allow for regular inspection to ensure any moisture trapped within the lagging and the pipework does not accelerate corrosion. Given that the group has had issues with corrosion in recent years it is a priority that our assets are adequately protected.

Replacement/overhaul of valves/actuators is required for engineering critical valves which are showing signs of degradation. We run this ancillary equipment to failure and have experienced several failures and carried out some replacements in the last few years. This will continue. These ancillary parts just do not have the running life of the pipeline itself.

Other projects: Other projects totalling £1.8m were given a combined allowance of £0.4m with no indication as to which of these projects were being allowed. Projects requested include: civil works (including restoring emergency escape routes and replacing a leaking roof); electrical and instrumentation upgrades required due to the age of the equipment; replacement of valves which are required in the event of an emergency as these are becoming inoperable; pipework recoating to prevent corrosion; replacement of damaged pipeline markers to ensure the pipeline route is clearly indicated, and other minor engineering works (which cumulatively total more than the NIAUR allowance for all other projects).

It was noted that a consolidated allowance was being considered to cover minor projects however we have not received any indication of the amount of this allowance, the rationale in setting the amount, or even whether such an allowance will be given at all. We request that an allowance is indeed made to cover these minor works as the current allowance is insufficient to safely and reliably operate our aging equipment.

2. Grid control

The draft determination ignores the historic market data of the past procurements for the grid control services, rather deciding on an arbitrary allowance to match the allowance given to GNI. This effectively assumes that the grid control co-ordinating all the gas that enters into Northern Ireland is the same as one which is a gas taker under the NINOA, ignores any structural differences in the level of service and disregards the interactions with upstream transporters required. The draft determination noted that it ignored the reality of any joint procurement and costs of transfer of service. The practicalities of such joint procurement would likely involve the development and deployment of a new SCADA system for the whole NI network. This would introduce significant cost to the project. Existing comms links and meter station router equipment could be reused but would require reconfiguration. As this equipment is managed differently by each TSO, the new SCADA system would have to cater for the functionality of both. Unless the implementation date coincided with the end of hardware lifecycles for both TSOs, this would involve additional cost. Similarly unless the implementation is timed to coincide with the cessation of existing hosting and support contracts there would be substantial termination payments to at least one TSO provider.

Because the systems used by the TSOs, both process and physical, are different a joint procurement could only realise savings if these became fully aligned using one SCADA system for the whole NI network. This would be a new design and build project, bringing both networks together. Current

comms and router equipment will need to be reconfigured to point to the new SCADA system, data centre etc. Leakfinder migration would be required to new hosted data centre site and demobilisation costs would be required for TSOs to manage the de-scoping of services, staff retraining and reassignment and the decommissioning of redundant infrastructure.

Based upon the costs discovered during PTLs last transition of services and support in 2012 / 2013, and on internal resource of only one dedicated resource working on this project at 50% of their working time for a 6 month period (110 days) and at 100% of their working time for a further 6 month period (110 days). We estimate the following costs before contract termination charges:

SCADA Development and Implementation	£2.5m
Existing COMMS and METERS reconfiguration (£100k per TSO)	£0.2m
Existing Control Room Demobilisation (£200k per TSO)	£0.4m
Leakfinder migration (£50k per TSO)	£0.1m
Consultancy and 3 rd Party Support (£200K per TSO)	£0.4m
Internal Resource time (£314 p/d, c£50k per TSO)	£0.1m
TOTAL	c.£3.7m

Termination costs at the date indicated are expected to add at least another £0.8m in costs.

3. SCADA refresh

The current PTL SCADA infrastructure was designed to be replaced after 5 years. This is in line with industry best practice, with servers typically having a lifespan of 3 to 7 years and with mission-critical applications having their infrastructure replaced at least every 5 years. SCADA is deemed a critical application so infrastructure refresh should be at a maximum every 5 years.

Each of the separate infrastructure items has a 'service end date' determined by the supplier, at which it is expected the relevant item should be replaced. Some key points relating to the PTL SCADA infrastructure are:

- Network switches and routers – operators will usually replace these after 5 years, however the supplier has determined that these could be maintained for 7 years, albeit with increasing risk of a failure.
- The SCADA environment has been built using HP servers. These servers reach their 'end of service' dates 5 years after supply, which means they should be replaced in 2018. Our experience has been that we start seeing an increasing amount of failures as these servers approach 5 years old. As an example SGN replaced all their five year old SAN storage in 2015 as they were seeing an increasing number of disc failures at that time.
- Our infrastructure support supplier will not be in a position to support our EVA Storage beyond 2018, so a new supplier will have to be found and the storage devices will need to be replaced.
- The current Virtual Farm Technology (ESX Version 5.1) went out of support in August 2016 in terms of new patches. It is still under technical support but we will need to upgrade to version 5.5 which will extend support until September 2018. After 2018 the latest version of ESX (V6) does not support SAN Storage so an upgrade to 3PARS and ESX will be required.

Supplier-determined 'service end date' are determined from experience of past failures on key components of each device. While these components could be replaced, the risk of a failure would continue to increase leading to more frequent failures which would ultimately impact on the availability and therefore quality of the service being provided.

In addition, where the infrastructure estate is all of the same model and age (as it is for PTL), the risk of a failure against multiple components or devices, leading to loss of data and service, increases.

4. Engineering and support staff costs

The draft determination disallows the forecast real price increases in GT17 for MEL staff costs, however MEL consider it inappropriate to directly compare the GY16/17 FTE average to the GY17/18 FTE average without considering the associated savings. As previously outlined MEL will be bringing their procurement function in house in order to significantly reduce external procurement costs. This will result in a clear split in responsibilities between the engineering team and the commercial team concentrating on contracting and procurement strategy.

The in house commercial team needs to be headed up by a senior staff member therefore results in a change to the mix of staff levels and although this causes an increase in average cost per FTE we expect the reduction in the procurement costs, by an average of approximately £150k p.a. for GT17, to at least offset this.

Further advantages of an in-house procurement team include improved uniformity of terms and conditions across all contracts and a commercial review of all engineering, IT and other material contracts separate from the engineering team.

5. Planned maintenance

The submission for **asset management and compliance costs** included costs of inspections and overhauls required to comply with statutory requirements such as PSSR and TD1 regulations. The determination noted that the expenditure has been reduced to be more in line with the period 2012-13 to 2014-15, a period in which no material overhauls were required (as these are undertaken on a periodic basis at 4-7 yearly intervals, dependent on the requirements). **By doing this the determination effectively disallowed the costs of all statutory major inspections and overhauls.** In our previous discussions, post submission, it had been indicated that this category had been intended to only include management costs, rather than the costs of any works undertaken, and that it would be proposed that these were moved to either planned maintenance or RepEx, however these have not been allowed elsewhere and there is no allowance for these statutory works in the current draft determination. We request that an allowance for these statutory works be included within the appropriate cost category (£231k total over GT17).

6. NEDs

We note the NIAUR position on costs for NEDs, deducting £0.4m in allowances in paragraph 4.17. This equates to an allowed NED cost of £5k per NED, which we do not believe is sufficient. Companies with listed debt have average NED costs higher than the overall average for NEDs throughout the UK.

7. West insurance

As West Transmission was at the early stages of development upon submission of our request we did not have any quotes on which to base our estimates, but instead forecast the cost based on the cost of Belfast Gas which we considered to be a reasonable comparator. Since submission of our request

we have received indicative quotes for insurance from our insurance broker from full operation based on an asset value of £80m. These quotes have indicated that the costs would be approximately £133k per annum before brokerage fees, directors and officers' insurance and business interruption, therefore it would appear that our request was actually too low. The allowance proposed is only £49k per annum which is totally unachievable for these assets. We ask that you reconsider your allowance for West's insurance costs from full operation in light of these estimates. We are happy to provide details of the quotes upon request.

8. CJV costs

a. CJV Staff Costs

As part of the organisation structure design for the CJV, both PTL and GNI UK identified the functions that the CJV would take responsibility for. In assessing the required staff resourcing to deliver the CJV functions, a joint working group from both TSOs was appointed to evaluate the level of effort required to maintain a 'business as usual' service, within each of the process areas.

On this basis, the TSO's have consistently stated that 8 FTE's is the minimum staffing level that the CJV requires in order to perform its functions effectively. The TSOs believe that attempting to run the CJV with 6 staff as suggested in the draft determination would result in a significant reduction of the envisaged scope of operations.

NIAUR anticipate a reduction in the overall FTE's required when these functions are transferred into the CJV however we consider the following additional activities to largely offset any expected efficiencies:

- The new structure will create a requirement for an additional layer of governance and performance reporting;
- The PSA function is being brought 'in-house';
- There will be greater interaction with TSO "parent companies" due to the nature of the CJV not being a legal entity and the new 5-way structure of CJV and 4 TSOs;
- Focus on market facing role with increased industry engagement e.g. code mod forums etc.;
- The CJV will create central administration for Shipper Issues, with 24/7 support in place for all user issues;
- Input into regulatory, adjacent TSO and departmental activities surrounding Brexit;
- Implementing enduring arrangements with stakeholders post-Brexit;
- Gormanston will become a live IP and the CJV team will manage all PRISMA auction processes at both IP's; and
- Gas to the West go-live and ongoing operation.

The draft determination outlines the expected amalgamation of market operation and market development roles however this is an unrealistic expectation given the magnitude of the additional tasks as a result of the new structure and processes outlined above.

In addition, as the TSOs are handing over the reins to a small team for the commercial operation of their networks, resilience will be reduced which brings with it operational and financial risk. Therefore, it is imperative that at least 8 staff are in place to operate the NI market moving forward. In addition, with any less staff numbers, setting aside the risk for the TSOs it may be that the scope of the envisaged CJV activities will be reduced due to insufficient resourcing.

b. Contracts & Licences

We note the draft determination proposes that the IT application enhancement allowance is £50k per annum compared to the TSO submission of £200k per annum. The £200k/annum TSO submission was based on estimated costs to deliver:

- (i) GTMS upgrade work required to ensure the system remains compatible with the PRISMA platform which is upgraded 1-2 times per year by PRISMA; and
- (ii) application enhancements which arise from new market processes, new market requirements or new user requirements.

An allowance of £50k per annum will be largely absorbed by (i) above and this will leave the CJV team with little or no meaningful allowances for general enhancements necessary to meet business requirements or to implement modifications to the Code of Operations. In such a scenario, the CJV team will have to seek supplemental allowances to UR each time a modification to the GTMS application is to be deployed creating an administrative overhead and uncertainty for market participants. Without additional allowances such business or market driven enhancement cannot be implemented.

The PRISMA allowance requested covers the ongoing connection fees and annual licence fees incurred by GNI(UK) and PTL for the Gormanston and Moffat IPs respectively. These costs are set by PRISMA and not controllable by the CJV nor the TSOs therefore the TSOs would expect these to be included within uncontrollable costs in line with their historic treatment.

c. Network Code Development

Allowances in relation to a Time to Fail model have been removed in the draft determination. This is a dynamic IT model using complex fluid mechanic and thermodynamic calculations that is used in an emergency/constraint situation which gives an accurate picture of how long the network can provide gas based on both the current situation unfolding and also in "what if" scenarios. This is vital information during emergency/constraint management both for operational decisions for NINEC/PTL/GNI(UK) and also at the political level. Without knowing accurately what level of demand needs to be cutback and where means that decisions made would be based on high level assumptions as opposed to live dynamic information.

We note your decision that we should not invest in a more sophisticated time to fail model, relying instead upon the extremely basic model used to date. We would point out that in recent years the emergency regime has undergone a number of fundamental changes (Gormanston entry, fuel switching arrangements, changes to the NINEC steps to reflect GB changes). Also, as peak day capacity has increased and as a result the likelihood of a 'flip-flop' event taking place has increased. It is common practice for TSOs to have a dynamic Time to Fail model in place for management of the network. Should the allowance not be granted, using a less sophisticated model will mean that it is likely that more cutbacks might be done than are necessary than if the system were being managed using a dynamic model, or worse still the system integrity could be compromised and therefore fail completely.

d. European Compliance

i. Travel for Meeting Attendance

The TSOs requested allowances for costs associated with travel and subsistence for representation at ENTSOG Working Groups, ENTSOG General Assembly, GIE General Assembly, GIE Conference, PRISMA Working Groups and PRISMA Shareholder meetings. It is important that NI is represented at these meetings. Attendance at these meetings is key for a number of reasons, notably that decisions are made which have both direct and indirect impacts on TSO costs. This ranges from development of network codes, to the specification of interface files as well as determination of membership and shareholder fees. Without a presence at these meetings, it is very difficult for the NI TSOs to effectively represent NI's interests. As the NI TSOs have such a small voting percentage, to simply rely on submitting a vote is not effective whereas discussing the issues face to face and influencing other TSOs has proven a more effective strategy. Without the allowance to attend the meetings, the TSOs would have concerns that the NI TSOs are limited in their ability to minimise the risk that NI is subject to unnecessary obligations and costs.

It is also essential that the TSOs attend physically on a regular basis to ensure they are as fully informed as possible to fulfil functions of the CJV, notably development of the Single Code and associated Code Modification Forum. The draft determination, states that the amount requested by the TSOs to travel to Europe was considered "excessive". To set some context, the TSOs requested an allowance for attendance at 55 meetings organised by ENTSOG, PRISMA, GIE and other organisations throughout the year. In 2016, the aforementioned organisations held over 600 meetings with TSOs, ENTSOG alone, has over 30 active working and kernel groups. Whilst some of those meetings were held via web conferencing, the number of physical meetings greatly exceeded what the TSOs requested an allowance for. For this reason and the others outlined above, the TSOs do not agree that the request is excessive. We therefore request that the travel costs are allowed.

ii. REMIT Reporting

The draft determination states that REMIT reporting is currently "carried out by in house staff". This statement is incorrect. A third party Registered Reporting Mechanism ("RRM") is used to send the data to ACER on a daily basis for which a monthly fee is charged. If this function was to be moved in house it would require a significant investment in the CJV IT system to deliver the necessary functionality plus ongoing fees for support and further development should ACER's requirements change in the future. When determining which method to use for REMIT report, the use of a third party was the most economically efficient by a wide margin. To continue utilising the third party RRM we therefore request that the allowance for the REMIT reporting is granted.

e. Transfer Mechanism

The TSOs welcome the ability to transfer allowances where the resource for activity shifts between them. A commitment from NIAUR on a timeframe for their response to any such transfer requests would be welcomed as a timely response would ensure operations are not adversely impacted. The TSOs would suggest a 14-day response period.

9. Efficiency

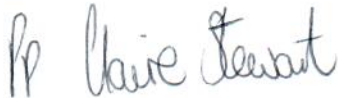
The price control submission included areas where significant efficiencies have already been built into the forecasts. This includes areas such as system operation, for which we forecast savings as a result of the creation of the single system operator and the removal of the costs of one IT system. Another area of efficiencies is the bringing in house of the procurement function which has resulted in

significant savings in procurement costs. The application of this additional efficiency results in efficiencies on top of already existing efficiencies.

10. Uncontrollable

£0.694m was disallowed in respect of uncontrollable compressor fuel gas costs, with the draft determination noting the reason being that “a formula error in the submission spreadsheet inflated these costs slightly”. This is not correct and there was not actually a formula error in the spreadsheet. Our submission notes clearly stated in para 6.6 that this line also included imbalance charges from GNI(UK), for which there was no suitable alternative category, and para 6.8 stated “NB: The unit cost multiplied by the volume does not equal the cost shown, as the cost shown also includes the imbalance charges”. It appears that a reduction was, however, made so that the cost allowed equalled the unit cost times the volume, thereby excluding the imbalance charges added here, but without accounting for these costs elsewhere. We have no issue with these being separated into an additional uncontrollable category if preferred.

Yours faithfully



Gerard McIlroy

Director

Mutual Energy Ltd