LNG facility operators, primary
capacity holders and shippers,
gas shippers, upstream and
downstream market participants
and other interested parties

*Promoting choice and value for all gas and electricity customers*

Date: 12 November 2012

Dear colleague,

**National Grid Grain LNG's application for exemption from regulated third party access for Isle of Grain phase 4 - Our initial views and questions for consultation**

On 16 March 2012, National Grid Grain LNG Ltd ('GLNG') submitted to us an application ('GLNG's application') for an exemption from section 19D of the Gas Act 1986 (as amended) for the phase 4 expansion of its LNG (Liquefied Natural Gas) importation terminal at Isle of Grain ('Grain 4'). Section 19D of the Gas Act 1986 contains provisions for exemptions from regulated third party access ('rTPA')[1] for new or modified gas infrastructure facilities (including LNG importation terminals).

Isle of Grain is one of the largest LNG importation facilities in Europe. The current facility has been built in three phases, which we have granted exemptions from rTPA in 2004[2] and 2007[3].

GLNG launched in January 2011 an open season process to test market demand for additional LNG import capacity ('phase 4') and its allocation at the Isle of Grain terminal. In November 2011, GLNG received several bids, indicating 8.4 billion cubic meter per year (bcm/y) demand for phase 4 terminal capacity. It is currently negotiating contracts with three parties based on the bids received. GLNG has submitted to us confidential information regarding the identity of these three bidders and the volumes of capacity that they have expressed an interest in.

Based on these volumes, GLNG applied for an exemption from rTPA arrangements for a capacity of approximately 8.4 bcm/y and a duration of 27 years[4]. Phase 4 would increase Grain's LNG importation capacity from the existing 20 bcm/y to approximately 28 bcm/y.

Our initial view, based on our analysis of GLNG's application against the exemption criteria set out in the legislation[5], is that an exemption from rTPA requirements for Grain 4 capacity

[1] The EU's internal market rules for electricity and gas require regulated third party access for all transmission and distribution infrastructures and for LNG facilities. Operators of such infrastructures must grant third parties (i.e. companies other than their related subsidiaries) non discriminatory access to their facilities. However, some new investments, particularly those in cross border gas pipelines and LNG terminals, as well as cross border electricity interconnectors can be particularly risky. If, exceptionally, such projects cannot be realised if the rules on third party access were applied, national regulators may "exempt" them entirely or partially from the respective rules for a limited period of time. (http://ec.europa.eu/energy/infrastructure/exemptions/exemptions_en.htm)

[2] http://www.ofgem.gov.uk/Europe/ad/Documents1/27304%20-%20Application%20by%20Grain%20LNG%20Ltd%20under%20section%2019C%20of%20the%20Gas%20Act%201986%20for%20an%20exemption%2003%2012.pdf

[3] http://www.ofgem.gov.uk/Markets/WhlMkts/CompandEff/TPAccess/Documents1/Final%20views%20Grain%203%20letter%20FINAL%20_2_.pdf

[4] Commencing from October 2016 or in the event of delays to phase 4 construction or commissioning, the dates the new capacity becomes available.

[5] These criteria are set out in Section 19C (7) and Section 19DB of the Gas Act 1986 (as amended).

should be granted, subject to the following conditions. Firstly, the exemption duration should not exceed the pay-back period of the investment; we therefore are minded to grant a 24 year rather than the 27 year duration sought by GLNG. Secondly, capacity that becomes un-contracted during the 24 year period, when an original contract expires, should be subject to rTPA arrangements[6]. Third, anti-hoarding arrangements for selling any phase 4 unused capacity should be subject to our approval before the facility becomes operational and to periodic reviews as deemed necessary by us.

We note that there is still some uncertainty regarding the final outcome of the open season process which will determine who the primary capacity holders are at Grain 4 and the volumes of capacity requested by them. In the event that the outcome of the open season process differs from that presented in GLNG's application, we may re-examine whether all the relevant criteria are met in full or in part.

Our assessment in the next two sections of this letter is based on all the information provided by GLNG through its application[7]. We welcome views from all interested parties on GLNG's application and our initial views in response to the questions at the end of this document. Responses should be sent to grain4@ofgem.gov.uk by 04 January 2013.

To protect its commercial process and the wishes of participants in the open season process to remain anonymous, GLNG has omitted confidential information from the materials we are publishing on our website. We consider that the information provided in this letter is sufficient to allow third parties to express informed views in response to our questions for consultation.

**Section 19C(7) of the Gas Act 1986 – GLNG's submission and our initial views**

This section of the Gas Act 1986 (as amended) sets out five criteria that must each be met for an exemption to be granted. Hereafter, we refer to these as the security of supply, investment, ownership, charging and competition, respectively.

### a) Security of supply

This criterion says that the facility must promote security of supply[8].

*GLNG's submission*

GLNG states in its application that the investment represents a net addition to the non-indigenous sources of gas supply that will be available to the UK market and that Grain 4 will therefore enhance the UK's security of supply at a time of increasing dependence on imports. GLNG cites figures from National Grid's Ten Year Statement 2011[9], according to which the UK's import dependence will increase to more than 80% by 2030/31[10].

GLNG also refers to National Grid's UK Future Energy Scenarios[11] for which the slow progression scenario indicates that LNG import volumes may rise to a level of approximately 40bcm/y in 2020 against a base load installed import capacity of approx 50

[6] These arrangements are described in our recent rTPA guidance, available at the following link: http://www.ofgem.gov.uk/Markets/WhlMkts/CompandEff/Documents1/Guidance%20on%20the%20regulated%20Third%20Party%20Access%20regime%20for%20Liquefied%20Natural%20Gas%20Facilities%20in%20GB.pdf
[7] GLNG's application and Frontier's 'Grain LNG phase 4 competition assessment' are available on Ofgem's website.
[8] Section 19C (7) (a) Gas Act 1986: the facility or (as the case may be) the modification of the facility to provide for a significant increase in its capacity the modification of the facility will promote security of supply.
[9] http://www.nationalgrid.com/NR/rdonlyres/E60C7955-5495-4A8A-8E80-8BB4002F602F/50703/GasTenYearStatement2011.pdf
[10] In 2010/11 UK's gas import dependence was 55% according to National Grid Ten Year Statement (2011).
[11] UK Future Energy Scenarios, National Grid, November 2011: http://www.nationalgrid.com/NR/rdonlyres/86C815F5-0EAD-46B5-A580-A0A516562B3E/50819/10312_1_NG_Futureenergyscenarios_WEB1.pdf



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bcm/y[12] currently. GLNG asserts that unless new LNG importation capacity is built, supply flexibility from LNG could be reduced as existing terminals would need to operate close to peak for much of the time.

GLNG says that the Grain 4 expansion would provide increased security of supply by increasing UK's LNG importation and temporary storage capacity. GLNG also considers that the LNG imported at Grain may flow to other European markets via the interconnectors proving an enhancement to European security of supply.

Based on the bids GLNG has received to date in the open season process, it also considers that the investment will contribute to diversity of supply by introducing a new source of LNG supply to the UK which would have the potential to significantly reduce the proportion of LNG imported from Qatar from 78% in 2010 (2010, Eurostat[13]) to 72% in 2016/17 when Grain 4 would be operational.

Further, in its application, GLNG provides specific reasons on how different investment components, notably additional send out equipment, additional tank capacity and second unloading pipeline, would contribute to security of supply. GLNG says that this additional capacity, coupled with existing blending plant, would enhance Grain's ability to accept LNG from a wider variety of sources. Meanwhile, additional tank capacity and a second unloading pipeline would increase the operational flexibility of the terminal by increasing Grain's ability to respond to short-term supply-demand imbalances arising from, for example, offshore supply failures, and in the longer term environmental legislation (eg the Large Combustion plant Directive) as well as greater deployment of intermittent renewable generation.

*Our initial view*

We consider that GLNG has provided sufficient evidence that Grain 4 would enhance UK's security of supply by increasing LNG import capacity by approx 8.4 bcm/y. We agree that the additional 8.4 bcm/y will increase flexibility as the demand for LNG as a route to market increases, although there is a high degree of uncertainty around future LNG import volumes and LNG capacity needs. Given the current information on the open season process provided by GLNG, we also note that phase 4 could have a positive impact on the UK's diversity of gas supply and contribute to the diversification of sources of LNG imports. We therefore currently consider that the requirements of condition (a) have been met.

### b) Investment

This criterion says that the level of risk is such that the investment would not be made without the exemption[14].

*GLNG's submission*

In its application, GLNG explains that Grain 4 is a major, capital intensive project and represents a sunk cost, which cannot be used for any purpose other than LNG importation.

GLNG also refers to the two key relevant risks, identified in the Commission Staff Working Paper on New Infrastructure Exemptions[15], that should be considered to determine if

[12] This figure does not include the additional 8.4 bcm/y of phase 4 capacity at the Isle of Grain terminal.
[13] See Eurostat database available at the following link:
http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database
[14] Section 19C (7) (b) Gas Act 1986: the level of risk is such that the investment to construct the facility or (as the case may be) to modify the facility to provide for a significant increase in capacity would not be or would not have been made without the exemption.
[15] Commission Staff Working paper (6 May 2009) on Article 22 of Directive 2003/55/EC concerning common rules for the internal marker in natural gas and Article 17 of Regulation (EC) No 1228/2003 on conditions for access to the network for cross-border exchanges in electricity- New Infrastructure Exemptions.
http://ec.europa.eu/energy/infrastructure/infrastructure/gas/doc/sec_2009-642.pdf


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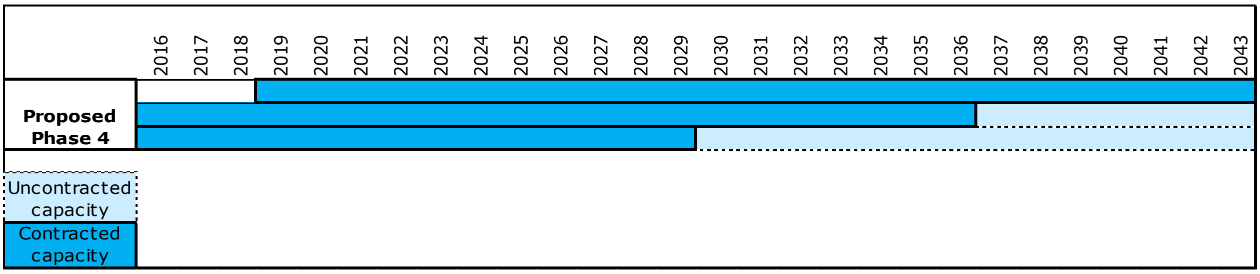
criterion b) is satisfied, namely the '*risk of non-use of the investment'* and the '*risk of a change in costs and/or revenues in the future*'.

- On the risk of non-use of the investment, GLNG asserts that although this risk can be mitigated to some extent through appropriate long term contracts, persistent non-use of the Grain 4 capacity could leave GLNG without revenues to pay for the investment it has made and in a market where it may be unable to re-sell the capacity.
- On the risk of changes in costs and/or revenues, GLNG considers that this risk would be most acute under an rTPA regime. GLNG explains that while the project is forecast to meet the company's own financial criteria[16], this is achieved with a rate of return that GLNG considers modest for a business of this nature. GLNG also notes that it is facing significant counterparty risks associated with potential future increases in construction and operational costs[17].

GLNG explains that the duration sought (27 years, to 2043) is required to ensure the Grain facility is sufficiently attractive to upstream LNG suppliers, compared to other commercial opportunities in the gas market. Specifically, it explains the 27 year term is required to accommodate customers' different requirements according to the bids it has received to date: two bids for contracts of 20 and 13 years' duration starting from 2016 and a bid for a 25 year contract from 2018, as shown in Figure 1 below. GLNG notes that under the 27 years duration requested, no primary capacity holder will have capacity exempt for more than 25 years. GLNG considers that the requested duration is consistent with 'numerous precedents'[18] of long duration, both in the UK and across Europe and that it reflects the long payback period associated with the Grain 4 investment and the upstream investment projects to which it is linked.

**Figure 1-Timing of proposed allocation of Grain 4 capacity based on current information provided by GLNG**




GLNG has also provided Ofgem with its financial model for the Grain 4 expansion, information regarding the capital and operational expenditures required and an assessment of the relevant risks and mitigation measures undertaken.

Based on the bids received in the open season, GLNG has modelled two scenarios for phase 4 capacity. Under the first scenario all of the capacity (8.4 bcm/y) is sold under long-term contracts according to the durations described above (all dark blue bars in Figure 1). However, there will be certain volumes of capacity, which would fall within the exemption duration sought but would not be covered by the current contracts from 2029 (last 14 years) and 2036 (for the last 7 years).
Under the second scenario, GLNG assumes that only approx 75% of capacity is contracted on a long term basis for 25 and 20 years (corresponding to the first two dark blue bars in Figure 1) and the remaining 25% is not pre-sold at this stage on a long-term basis. For both scenarios, GLNG calculates a number of financial indicators such as net present value of the investment, internal rate of return and payback period.

[16] This is defined in terms of the Internal Rate of Return (IRR) and net present value of the project.
[17] GLNG asserts that these counterparty risks are higher than those for other National Grid subsidiaries active in gas transportation, electricity transmission and gas distribution.
[18] In its application (page 20), GLNG provides examples of long exemption durations such as South Hook LNG (25 years), Isle of Grain phase 2 (25 years), Viking Cable (25 years), IUK (25 years) and Shannon LNG (20 years).

GLNG has explained that should the second scenario arise, it will only proceed with the investment on the assumption that the remaining capacity will ultimately be contracted by a new or existing customer.
Under both scenarios, GLNG assumes that the project's revenues are zero in respect of the capacity that becomes available following the expiry of the long-term contracts. GLNG's modelling also illustrates that the return of the project is sensitive to small changes to assumptions on the discount rate and revenues levels. For example an increase in the discount rate of 0.2% to reflect increased counterparty or regulatory risk, or a reduction in revenue of 2.2% would make the net present value of the project zero.

GLNG summarises that an exemption is essential to mitigate counterparty risks, the risk of future regulatory intervention and to ensure that an appropriate balance of risk and reward for both GLNG and its customers is preserved over the life of the project. GLNG states that the absence of an exemption, or an exemption of shorter duration than that requested, would lead to an insufficient risk-adjusted return on phase 4 and that it would therefore not invest in the project.

*Our initial view*

In assessing whether this investment would not take place without an exemption, we have considered the risks faced by GLNG and its prospective customers as well the overall cost and revenue profiles of the project and its financial return as per the Commission Staff Working paper.

We consider that phase 4 represents a 'significant increase'[19.] of capacity of 8.4 bcm/y (compared to annual gas demand of approx 100bcm in 2010/11[20] in the UK) equivalent to approximately 40% of the currently installed capacity at Isle of Grain. This capacity represents a sunk cost, as once invested, the assets cannot be easily redeployed elsewhere. Given its size and the costs involved (supported by the financial information submitted by GLNG), we consider that this investment is eligible to be considered for an exemption.

We note that under the scenario where all of the capacity is contracted, the project achieves a rate of return that is somewhat above that of National Grid's regulated business[21]. We accept that there is uncertainty regarding GLN's revenues compared to those of a regulated business and that a slightly higher rate of return reflects this risk. However, we consider that the risk associated with the project is reduced by the commitments from parties to buy the phase 4 capacity on a long term basis. We are not persuaded by GLNG's modelling assumption that there will be no revenues associated with capacity that becomes available following the expiry of the original contracts. As its indigenous sources of gas decline, the UK will become more import dependent and potentially increase its reliance on LNG as a route to market. This would have a positive impact on GLNG's revenues. However, we accept that there is uncertainty regarding the level of revenues relating to any remaining un-contracted capacity, which will depend on levels of UK gas demand and LNG import capacity.

We consider that the duration of the exemption requested by GLNG is relatively long given that the majority of exemptions for LNG terminals have been limited to 20 years by the European Commission[22]. We note that the contracts underpinning the Grain 4 investment

[19] See paragraphs 22-24 of the Commission Staff Working paper.
[20] Actual gas demand in 2010/11 was 97.5 bcm according to National Grid Ten Year Statement (2011).
[21] RIIO-T1: initial Proposals for National Grid Electricity Transmission (NGET) plc and National Grid Gas (NGGT) plc proposed 5.5% for NGET and 5.2% for NGGT, expressed on a pre tax basis, which may be amended at Final Proposals which are due to be published in December 2012.
http://www.ofgem.gov.uk/Networks/Trans/PriceControls/RIIO-T1/ConRes/Documents1/RIIO%20T1I%20NGGT%20and%20NGET%20Finance.pdf
[22] We note that most of the LNG exemptions granted by the Commission are for 20 years. To our knowledge only South Hook (25 years) and Grain phase 2 (25 years) in the UK, Rovigo LNG (25 years) and Porto Empedocle (25 years) in Italy have been granted an exemption for more than 20 years. See paragraph 63 of EU Commission's decision on Shannon LNG (27 July 2010)



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are staggered and that almost one third of the capacity will become un-contracted over the 27 year period sought by GLNG. Further, we note that under the first scenario, the payback period of the project (24 years to 2040) is shorter than the exemption duration sought by GLNG (to 2043) [23]. We are therefore not persuaded that an exemption for 27 years is necessary for the investment to go ahead.

We note that the Commission's guidance states that exemptions have to be limited to what is strictly necessary to realise the investment and that the scope of the exemption has to be proportionate[24]. The Commission's guidance also states that 'the duration of the exemption does not have to correspond to the full length of the amortisation period. The exemption duration should be equal or less than the expected period for cost recovery of the new infrastructure'[25]. Therefore, we are minded to grant the exemption for a duration that does not exceed the payback period.

Furthermore, we are concerned that by granting an exemption for un-contracted capacity, there is no obligation on GLNG to offer third party access to the capacity that becomes available following the expiry of the original contracts. Therefore, there is no guarantee that this capacity will be allocated on a fair, non-discriminatory basis; or that parties, which in future may want access to LNG capacity, will be able to obtain it on fair terms in a market where LNG may become an important route to market. As noted above, if LNG becomes a more significant route to the UK market in the future, then the terms and conditions on which this capacity may be accessed by new or future entrants are important. Therefore, we consider that the exemption should not cover the un-contracted capacity.

We note that GLNG argues that if it is required to offer this un-contracted capacity under rTPA, this would introduce risks in the operation of the remaining phase 4 shippers who share the capacity at the terminal. GLNG fears that these increased risks may lead to a reduction in annual charges paid by the remaining shippers in those periods, and as such, may have a negative impact on the rate of return of the Grain 4 project. We recognise the importance of not undermining the value of the remaining contracts and of having regulatory certainty. However, we consider that in determining the regulatory arrangements applicable to this un-contracted capacity, these risks can be minimised.

In conclusion, whilst we accept there is a risk that the investment will not be made without the exemption, we are also of the view that un-contracted capacity should be allocated in a fair, non-discriminatory and transparent manner approved by Ofgem. This could be achieved through a specific requirement in the exemption to allocate this capacity under an rTPA regime. As such, the capacity that would become un-contracted would be subject to rTPA arrangements and allocated following the procedures described in our recent LNG rTPA guidance[26]. We would welcome views from respondents on this approach.

### c) Ownership

This criterion says that the facility must be owned by a person other than the gas transporter who operates the pipeline system connected to the facility[27].

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(http://ec.europa.eu/energy/infrastructure/exemptions/doc/doc/gas/2010_shannon_decision_en.pdf) and Annex 4 of this document.

[23] Under the second scenario the project does not pay back.
[24] See paragraph 17 of Commission Staff Working Paper.
[25] See paragraph 52.1 of Commission Staff Working Paper.
[26] Our guidance specifies two ways to allocate capacity: auctions and open seasons. http://www.ofgem.gov.uk/Markets/WhlMkts/CompandEff/Documents1/Guidance%20on%20the%20regulated%20Third%20Party%20Access%20regime%20for%20Liquefied%20Natural%20Gas%20Facilities%20in%20GB.pdf
[27] Section 19C (7) (c) Gas Act 1986: the facility is or is to be owned by a person other than the gas transporter who operates or will operate the pipeline system connected or to be connected to the facility.



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*GLNG's submission*

As stated in its application, GLNG is the owner and operator of the existing Isle of Grain LNG terminal and will also be the owner of the phase 4 expansion. GLNG is a wholly-owned subsidiary of National Grid plc. GLNG is a separate entity from National Grid Gas plc, the owner and operator of the UK's National Transmission system.

*Our initial view*

Our initial view is that that condition (c) is met.

### d) Charging

This criterion says that charges must be levied on users of the capacity[28].

*GLNG's submission*

In its application GLNG states that capital and ongoing costs from the Grain 4 expansion will be recovered through the sale of importation capacity on a long-term basis. Primary capacity holders will be charged an annual fee for the use of Grain 4 capacity, which will be set out in their long-term capacity contracts with GLNG. As a result GLNG considers that condition d) is met.

*Our initial view*

We consider that this condition (d) is met.

### e) Competition

This criterion says that the exemption must not be detrimental to competition, the operation of an economically efficient gas market or the efficient functioning of the pipeline system connected to the facility[29,30].

In considering the impact on competition, it is important to take into account whether the exemption will lead to an increase in market concentration or a lessening of competition in any of the 'relevant markets'. It is also important to consider whether granting an exemption from third party access requirements will lead to a situation whereby holders of LNG import capacity are able to hoard it or to block current third parties or potential future entrants from the market. We consider the anti-hoarding arrangements proposed by GLNG in the next section under Conditions 2) and 3).

*GLNG's submission*

GLNG states that phase 4 represents a 'net addition' to the sources of gas supply that are available to the UK and Europe. It considers that in satisfying criterion (a) promotion of security of supply, Grain 4 will also provide enhanced gas-on-gas competition through the anticipated introduction of two new entrants in the UK LNG importation market. Based on the bids received in the open season, GLNG anticipates that the number of primary capacity holders at Grain would rise to eight (from six) and the number across all UK LNG terminals

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[28] Section 19C (7) (d) Gas Act 1986: charges will be levied on users of the facility or (as the case may be) the increase in its capacity.

[29] Article 36 of the European Gas Directive envisages an additional criterion '*the investment should enhance competition in gas supply*' that is not present in the Gas Act. In 2005, we considered that there were no material differences between the criteria in the Gas Act and those in the Gas Directive for the Dragon LNG exemption, Ofgem final views, February 2005, paragraph 1.3. (http://www.ofgem.gov.uk/Markets/WhlMkts/CompandEff/TPAccess/Documents1/10028_2005.pdf). Our legal advisors are still of the same view.

[30] Section 19C (7) (e) Gas Act 1986: the exemption will not be detrimental to competition, the operation of an economically efficient gas market or the efficient functioning of the pipeline system connected or to be connected to the facility.



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would rise from 11 from 13. It considers this will further enhance competition to attract cargoes and LNG supplies to the UK. Further, GLNG states capacity not utilised by the primary capacity holders will be made available to the market through 'normal' bilateral trading or secondary capacity and Use-It or-Lose-It (UIOLI) mechanisms.

GLNG also commissioned a competition assessment from Frontier Economics to consider whether the exemption could have a material adverse effect on the market structure and hence the competitiveness of any relevant gas market.

Frontier looks at the impact of the Grain 4 exemption on a number of wholesale gas, retail and other markets in 2016/17, immediately after Grain 4 would be commissioned, and again five years later in 2021/22. Frontier notes that whilst the competitive assessment should ideally be made over the life of the exemption (Grain has requested an exemption for 27 years), it is not practicable to forecast competitive conditions beyond 2021/22[31] given the high degree of uncertainty over future market developments[32].

Frontier's analysis considers changes in market concentration for each market with and without the proposed investment and assumes that the player with the highest share in the market under the counterfactual (without the proposed investment) will acquire all capacity rights at Grain 4. Specifically, Frontier's assessment of the competitive impact of the Grain 4 expansion is based on the Herfindahl-Hirschman concentration index (HHI)[33], a measure of concentration frequently used in the analysis of mergers. Frontier explains that markets with an HHI of less than 1,000-1,200 are considered competitive and markets with an HHI in excess of 1,800-2,000[34], are considered concentrated. It also indicates that changes to the HHI of less than 250 would in general be unlikely to cause competition concerns[35] in case of a horizontal merger[36].

Frontier considers that the markets most affected by the Grain 4 expansion are those for wholesale gas and for flexibility (daily and seasonal). For wholesale gas, Frontier looks at three geographic markets: UK, North West Europe (UK, France, Belgium, the Netherlands and Germany) and Europe (North West Europe plus Spain, Italy and Austria). They consider it 'quite possible' that the relevant market would be wider than the UK by the time Grain 4 will be operational (October 2016)[37].

We consider that the most significant impact of an exemption for Grain 4 would be on the UK, North West and European wholesale gas markets, given these are the primary markets in which the additional source of LNG capacity is offered for sale.

For the UK wholesale gas and flexibility markets, Frontier looks at market concentration with and without the exemption under a base case and a 'worst case' scenario in 2016/17

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[31] Frontier also explain that they chose year 2021/22 since the most recent National Grid Ten Year Statement (December 2011) can be expected to provide a credible projection of market developments until the end of 2021, on which they base their projections (page 61 of Frontier's report).
[32] Frontier also notes (on page 26) that the majority of 'market developments' that could make the impact of Grain 4 exemption 'worse' are controlled by regulators, who also have a right to amend or withdraw an exemption where circumstances have changed and the exemption has become detrimental to competition.
[33] The Herfindahl-Hirschmanl index (HHI) is a measure of the size of firms in relation to the industry they operate in and an indicator of the amount of competition among them. It is defined as the sum of the squares of the market shares of the largest firms within the industry. If whole percentages are used, the index ranges from 0 to 10,000.
[34] See OFT & CC, *Merger Assessment Guidelines* (2010). Also see European Commission, Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentrations between undertakings (2004/C 31/03). http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2004:031:0005:0018:EN:PDF.
[35] See *OFT & CC, Merger assessment guidelines* , September 2010, page 40. This threshold is also in line with European Commission Guidelines on the assessment of horizontal mergers under the Council Regulation on the control of concentration between undertakings(2004/C31/03).
[36] Horizontal mergers are between firm operating at the same level of the supply chain in a specific industry. OFT & CC, *Merger Assessment Guidelines* (2010), page 19.
[37] Frontier (page 59) also notes that no more than one of them can be the correct geographic definition of the market at any time.

and 2021/22. Their results as summarized in Table 1[38]. They show low levels of concentration in both 2016/17 and 2021/22, but increases in HHI levels above the 250[39] threshold in the UK wholesale gas market under both scenarios.

**Table 1- Market concentration (HHI) for the markets and scenarios considered by Frontier in 2016/17 and 2021/22, if the largest player in each market obtains all of Grain 4 capacity**

| **Markets** | **2016/17- HHI without the investment (with increase in HHI due to the Grain exemption in brackets)** | **2021/22- HHI without the investment (with increase in HHI due to the Grain exemption in brackets)** |
|---|---|---|
| **UK wholesale gas** | | |
| Base case | 937 (311) | 899 (299) |
| Worst case | 999 (353) | 1,007 (372) |
| **UK daily flexibility** | | |
| Base case | 479 (35) | 487 (36) |
| Worst case | 490 (40) | 494 (40) |
| **UK seasonal flexibility** | | |
| Base case | 533 (47) | 540 (53) |
| Worst case | 539 (49) | 552 (57) |
| **North West Europe wholesale gas** | | |
| Base case | 844 (49) | 912 (64) |
| Rapid decline in gas production | 882 (59) | 1,063 (89) |
| Higher demand growth | 857 (48) | 940 (56) |
| Reliance on one supplier | 848 (49) | 899 (66) |
| **Europe wholesale gas** | | |
| Base case | 819 (49) | 906 (57) |
| Rapid decline in gas production | 870 (55) | 1,075 (70) |
| Higher demand growth | 838 (46) | 935 (49) |
| Reliance on one supplier | 832 (51) | 935 (60) |
| **UK retail market** | | |
| Industrial and Commercial consumers non-daily metered (a) | 1472 (88) | |
| Industrial and Commercial consumers daily metered (a) | 1,481 (103) | |
| Residential customers (b) | 2,480 (n.a) | |
| **Other markets** | | |
| Global LNG supply (b) | 735 (47) | |
| Global LNG shipping (c) | 659 (47) | |
| UK Gas shipping (d) | n.a. | |

(a) HHHI based on year 2009
(b) HHI based on year 2010
(c) HHI based on year 2012
(d) Frontier notes that due to the absence of publically available data on market shares it is not possible to calculate market concentration for this market. It states that there are 211 shippers licensed to use the UK system and that low barriers to entry and expansion would prevent shipping from becoming an uncompetitive market irrespective of the Grain 4 development.

Frontier argues that although for these markets changes in HHI are above the 250 threshold, the exemption will still not create any competition concerns. Frontier explains that in the case of Grain 4 is considering changes in HHI as result of a capacity addition rather than a merger and suggests that the test for competition detriment based on the 250 threshold might be too restrictive in the case of Grain 4[40].

We note that the changes to HHI in the UK wholesale gas market are above the 250 threshold that would be considered to raise competition concerns in case of a horizontal merger. However, we also recognise that Frontier's analysis is likely to overstate the detrimental impact of the exemption as it assumes that the largest market player obtains

[38] For wholesale markets (UK, North West Europe and Europe) Frontier also uses information on long-term contracts to calculate HHI levels and changes to HHI (see pages 57-58 of Frontier's report). In table 1, we report HHI levels and changes to HHI which do not take into account long-term contracts.
[39] Changes to HHI are also above the 250 threshold when long-term contract adjustments are taken into account by Frontier (see pages 66-67 and 107-116 of their report).
[40] Frontier's competition assessment, page 63.


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all of Grain 4 capacity in the wholesale market. Furthermore, we note that even with this assumption the UK market remains 'competitive' (using the above definitions). Based on the confidential information submitted by GLNG, the three parties bidding in the open season for Grain 4 will have relatively small market shares in the UK wholesale market under the two scenarios modelled by Frontier. We therefore do not foresee competition concerns arising from the exemption in this market in both 2016/17 and 2021/22.

As discussed earlier, Frontier also considers two wider market definitions for the wholesale gas market, encompassing North West Europe and Europe under a base case and three other scenarios. Their analysis shows that these markets are competitive (HHIs below 1,000) and that there are only marginal increases in concentration from the Grain 4 exemption in both 2016/17 and 2021/22 (see Table 1).

For retail, Frontier considers the impact of the exemption on three UK markets: supply of gas to non-daily metered and daily metered Industrial and Commercial customers, and to residential customers. As set out in Table 1, although these markets are less competitive than wholesale gas markets (with HHIs of 1,472, 1,481 and 2,480 respectively) changes to HHI from the exemption are relatively small. Frontier therefore concludes that, given the competitive structure of the wholesale market, it is unlikely that any change to the wholesale market resulting from the Grain 4 expansion will affect retail markets.

Frontier also considers the impact of the Grain 4 exemption on global LNG supply, global LNG shipping and gas shipping in the UK. They conclude that given the very competitive nature of these markets the exemption would not cause any competition concerns.

*Our initial view*

In considering whether condition (e) is met, we have taken into account the information provided by GLNG on the current status of the open season process for the allocation of Grain 4 capacity as well as the analysis undertaken by Frontier Economics.

Frontier's analysis concludes that there are no markets where the Grain 4 exemption would have a detrimental impact. Our initial view is that we do not foresee competition concerns arising from the Grain 4 exemption in the wholesale, flexibility and retail markets over the timeframe considered by Frontier (2021/22). We note that in the UK wholesale gas market, Frontier's analysis shows changes to market concentration resulting from the exemption greater than the 250 threshold but concentration levels remain relatively low. Furthermore, we accept GLNG's argument that Frontiers analysis overstates the impact of the exemption as it assumes that the largest market player obtains all of Grain 4 capacity. We also note that two of the bidders in the open season are not existing customers of Grain and have a relatively small market share in the UK wholesale gas market at present.

However, the timeframe of Frontier's competition analysis is significantly shorter than the 27 years (to 2043) exemption period sought by GLNG. We recognise that it is difficult to provide projections of market shares beyond 2021/22, given the high degree of uncertainty about market developments. However, longer term considerations need to be taken into account before we can grant an exemption. Over the 27 years of the exemption period sought, competitive conditions in the wholesale, retail and related markets (both in UK and at a wider European level) may well be different from those observed today, in 2016/17 or 2021/22. Particularly, we consider that although the UK market currently has a large surplus[41] in import infrastructure and is well served by a number of different sources of supply, this situation might well be different in the future as both UK and European indigenous gas production continue to decline.

Under a scenario where UK gas demand stays constant throughout 2030/40 and UKCS production continues to decline as currently expected, there might be a need for more gas

[41] Currently this surplus is 103 bcm/y and is expected to fall to 83 bcm/y in 2030/31 according to National Grid, Gas Transportation Ten Year Statement (2010).


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import infrastructure. We note, for example, that National Grid in its Ten Year Statement (2011) forecasts that due to the decline in UK gas production, LNG would become the major long term supply source to the UK and that more LNG import infrastructure might be needed[42].

As a result of the decline in indigenous gas production and the future allocation of capacity at existing and future gas import infrastructures[43], it is possible that market concentration increases and a smaller number of market participants enjoy greater market shares which gives them the ability to exercise market power. We therefore consider it to be important that arrangements are developed to ensure that any unused capacity is allocated in a transparent, fair and non-discriminatory manner and that these are approved by us.

In conclusion, for the reasons discussed above, we consider that this exemption criterion is met, specifically if:

- the outcome of the open season process is consistent with the information contained in GLNG's application (in terms of number of bidders, their capacity shares and duration of the underlying contracts with GLNG), and

- the arrangements for making unused capacity available to third parties are subject to regulatory approval and periodic reviews by us.

We examine GLNG's proposals for making available unused capacity in the section below.

**Section 19DB of the Gas Act 1986 – GLNG's submission and our initial views**

This section of the Gas Act 1986 (as amended) set out three additional conditions that must each be met for an exemption to be granted. Hereafter, we refer to these as the publication, unused capacity, and secondary trading conditions respectively.

**Condition 1) Publication**

This criterion says that interested parties must be able to register interest in using the exempt infrastructure[44]**.**

The Commission Staff Working paper on exemptions says that project promoters are required to test market demand through open seasons and other equivalent procedures, before they can obtain an exemption for a new piece of infrastructure or a capacity increase at an existing infrastructure[45]. This is to ensure that the size of the proposed infrastructure meets market participants' needs and that capacity is allocated in a fair, transparent and non-discriminatory way. A process for testing market demand also mitigates the potential foreclosure and increased barriers to entry which might arise from the allocation of capacity on a long term basis.

We note that before deciding to invest in phase 4, GLNG has run two open seasons to identify market demand for additional capacity at the Isle of Grain terminal. We consider that parties appear to have been able to register interest in the open season and have had

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[42] See National Grid 'Slow Progression scenario', National Grid Ten Year Statement 2011.
[43] For example capacity on the BBL interconnector is not fully contracted at the moment. Further, approx 13 bcm/y of capacity on BBL will become un-contracted in 2022. http://www.bblcompany.com/operations/available-transmission-capacity.
[44] Section 19DB (5) Gas Act 1986: before a right to use the exempt infrastructure is granted to the owner of the facility or to any other person.
(a) the intention to grant a right to use the exempt infrastructure must be published in a way that the Authority considers appropriate for the purpose of bringing it to the attention of persons likely to be interested in using the infrastructure; and
(b) such person must be able to register an interest in using the exempt facility.
[45] See Box 3: Testing of market demand in the Commission Staff Working paper.

adequate opportunity to indicate to GLNG the level of capacity required and the value placed on it.
The first open season process commenced in August 2009, with the issue of a press release, a notification on the GLNG website[46] and in the LNG Journal. Following an invitation to submit firm proposals, the open season was abandoned due to a lack of market demand for additional LNG capacity.
In January 2011, GLNG launched a second open season for Grain 4 with similar market notifications[47] taking place as in August 2009. In addition, GLNG placed an advert in the GasTech 2011 version of the LNG Journal. Firm proposals were solicited and then received by GLNG in November 2011. Negotiations are currently ongoing between GLNG and three parties based on firm and non-firm proposals submitted.

**Conditions 2) and 3) Unused capacity and secondary trading of capacity**

These criteria say that any unused capacity must be made available to other users or potential users[48] and that the capacity allocation mechanism must not prevent secondary trading of capacity[49].

*GLNG's submission*

The Gas Act and European legislation require both regulated and rTPA-exempted LNG importation terminals to implement anti-hoarding arrangements so that any unused capacity (berthing slots, space and deliverability) can be offered to the market and the utilisation of these facilities can be maximised[50].

GLNG states in its application that three levels of anti-hoarding measures, already in place at the Grain terminal for phases 1-3, will also apply to phase 4. These are: secondary trading of cargoes, secondary capacity mechanism and Use-It-Or-Lose-It (UIOLI) mechanisms.

- Secondary trading of cargoes is the most utilised of the three anti-hoarding mechanisms at Grain according to GLNG. It involves secondary trading of LNG cargoes belonging to third parties[51] from many months ahead of delivery to the day before. GLNG estimates that since July 2011, at least 30% of cargo deliveries[52] at the Grain terminal have come from third parties under secondary trading arrangements with Grain's six primary capacity holders. According to GLNG, these bi-lateral trading arrangements are efficient and allow primary capacity holders to optimise the utilisation of their capacity when conditions in the UK gas market are attractive relative to elsewhere in Europe or the world.

- Secondary capacity products are available at the Grain terminal only from primary capacity holders. Third parties interested in obtaining secondary capacity need to contact each primary capacity holder to enquire about the availability of berthing slots, storage and deliverability capacities. Any trading of secondary capacity is based on an agreement setting out the terms and conditions between the primary capacity holder and the third party. Dependent upon the nature of the arrangement, the third party might need to conclude an additional agreement with the terminal operator (GLNG). The notice period for secondary capacity products depends on which primary capacity holder is offering the capacity, but is always prior to the 7 days period that is applicable

[46] http://www.nationalgrid.com/uk/GrainLNG/MediaInfo/PressReleases/03.08.09.htm
[47] See pages 54-64 of GLNG's application.
[48] Section 19DB(6) Gas Act 1986: any unused capacity in the exempt infrastructure be made available to other users or potential users.
[49] Section 19DB(7) Gas Act 1986: the [capacity allocation] mechanism must not prevent, and must not be capable of being used to prevent, subsequent trading of right to use the exempt infrastructure.
[50] See Article 17 of the EU Gas Regulation of 13 July 2009.
[51] Third parties here are parties who intend to buy capacity at the terminal and are not the existing primary capacity holders of Grain.
[52] This figure has been estimated by GLNG based on trade press reports- see page 44 of GLNG's application.


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to a UIOLI slot offered by GLNG (see below). GLNG states that all primary capacity holders at the Grain terminal now offer secondary capacity products. It also says that each phase 4 primary capacity holder would be obliged, under the terms of its terminal use, to put in place a secondary capacity mechanism similar to those already in existence.

- UIOLI arrangements come into effect 7 days before each berthing slot, unless the capacity holder has confirmed that it will be used. With UIOLI there is no interaction between any of the primary capacity holders and the third party, only between the third party and GLNG. This mechanism applies to capacity held under Phases 1-3.[53] GLNG has developed an on-line bulletin board where UIOLI capacity is offered and upon which third parties may express interest in buying capacity at the terminal. Any of the estimated one hundred phase 4 berthing slots not used by primary capacity holders would be offered to the market via the GLNG bulletin board as described above. [54]

In order to be able to use any of the three mechanisms described here, third parties would need to complete a number of pre-application activities[55] prior to using the facility such as: entering into confidentiality agreements, satisfying specific credit arrangements, agreeing to general terms and conditions in place at the Isle of Grain terminal, meeting gas blending, ship vetting and port requirements.

GLNG also states that the 'take or pay' nature of the annual capacity charge paid by its primary capacity holders ensures that they are fully incentivised to utilise efficiently the capacity for their own portfolio of LNG supplies, for example by acquiring cargoes from third parties or by selling the capacity via secondary trading.

GLNG considers that the anti-hoarding arrangements at Grain are consistent with those in place at other exempted facilities in both the UK and elsewhere in Europe. Further, GLNG suggests that phase 4, through the introduction of two new primary capacity holders, would result in greater competition for third party cargo trading, greater potential for more offerings of unused capacity under UIOLI arrangements and more primary capacity holders offering secondary capacity products.

In summary, GLNG believes that the anti-hoarding measures employed at the Grain terminal, which they say would also apply to Phase 4 capacity, meet the condition that any unused capacity is offered to other potential users. Further, it also considers that the capacity allocation mechanism employed for Grain 4 does not prevent secondary trading, given the multi-customer and non-vertically integrated nature of the Grain terminal, nor is it capable of being used to prevent secondary trading in any form.

*Our initial view*

We noted in our recent consultation on third party access to LNG facilities that secondary trading and UIOLI arrangements were infrequently used at LNG terminals in Great Britain[56]. Respondents to the consultation considered that a key reason for their limited usage is that current LNG import capacity in the UK outstrips requirements, so their infrequent use is not necessarily due to a lack of effectiveness of the anti-hoarding arrangements. Some respondents also pointed out that other mechanisms for accessing unused capacity, such as secondary trading of cargoes, were more prevalent and effective. While we welcome the secondary trading of LNG cargoes, this does not release LNG terminals of their obligations to provide third party access to unused primary capacity at the terminal.

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[53] Capacity is offered for 150,000 $m^3$ with a 10 day send out window.
[54] GLGN has explained to us that phase 4 UIOLI slots would be auctioned with the highest eligible bidder gaining the capacity on a pay as bid basis.
[55] http://www.nationalgrid.com/NR/rdonlyres/25CA3BBC-E62B-408B-96EA-32558506F37F/55144/ThirdPartyAccessGuideJuly2014.doc
[56] See pages 16-18 of our LNG rTPA guidance: http://www.ofgem.gov.uk/Markets/WhlMkts/CompandEff/Documents1/Guidance%20on%20the%20regulated%20Third%20Party%20Access%20regime%20for%20Liquefied%20Natural%20Gas%20Facilities%20in%20GB.pdf.



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Therefore, while no concerns have been raised with the existing anti-hoarding arrangements to date, we consider that more transparent and streamlined arrangements may be required in the future. For example, in order to obtain secondary capacity, third parties need to contact the primary capacity holders to find out how much capacity is available and on what terms. Current primary capacity holders at Grain provide little information on their secondary capacity arrangements such as berthing slots, capacities available, prices and procedures to be followed. Some primary capacity holders only provide their contact details. Furthermore, once they have obtained such capacity, third parties may need to enter into further agreements, for example with port authorities.

The process for third parties to obtain secondary capacity could be made more efficient and streamlined if greater transparency was provided on the volumes of secondary capacity available near to real time, the terms and conditions for the products were standardised, and a simpler process for obtaining and using secondary capacity was introduced. Given the increasing importance of LNG in meeting UK's gas demand in the future, we are therefore minded to grant this exemption subject to regulatory approval of anti-hoarding arrangements for Phase 4. Following this approval, we will closely monitor[57] the effectiveness of these arrangements and if we were to believe that the measures in place are not effective we would ask GLNG to make appropriate amendments.

**Our consultation questions and next steps**

We invite stakeholders to respond to our consultation questions below, and to comment on any of the other issues set out in this letter.

1. Do you agree that the requested exemption should be granted subject to the three conditions set out in this letter? Please explain your reasons.

2. Do you consider that the capacity that becomes un-contracted upon expiry of the initial contracts should be subject to rTPA arrangements? Please explain your reasons.

3. What are your views on the competition analysis undertaken by Frontier? In particular, do you consider that they have sufficiently extended the analysis into the future to support the conclusion that no competition concerns from the Grain 4 exemption would arise?

4. Do you consider the three levels of anti-hoarding arrangements which would apply to Grain 4 are sufficient to ensure that any unused capacity will be offered to third parties? What improvements (if any) would you like to see GLNG to make?

5. Is there any information currently not provided by GLNG that would facilitate the trading of unused capacity through any of the three mechanisms available? Please provide details of the information that you would like GLNG to make available.

6. Do you consider that GLNG and primary capacity holders at Grain need to provide more information on secondary capacity products or do you consider that contact details of primary capacity holders are sufficient?

7. Do you consider that anti-hoarding arrangements at the Isle of Grain terminal might need to be improved to reflect the possible increasing importance of LNG as a route to market in the future? Should they be subject to regulatory approval and periodic reviews?

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[57] As explained in our recent rTPA guidance (see page 24), Ofgem will engage in a mix of proactive market surveillance to investigate and take action against market players where there is reason to believe that they are not complying with the relevant regulatory requirements.



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8. Do you consider that there should be any further conditions imposed on the requested exemption? If so, which specific conditions do you suggest?

Responses should be sent to grain4@ofgem.gov.uk by 04 January 2013. Any non-confidential information will be published on our website. We ask respondents to put any confidential information into appendices. We expect to publish a final decision on the application in early 2013. In the event that we decide to grant an exemption, we would notify the European Commission of our decision. The Commission will then have two months from the day following receipt of our decision, to request us to withdraw or amend it[58].

If you have any questions or comments on the content of this letter, please contact Francesca Caputo at francesca.caputo@ofgem.gov.uk.

Kind regards,

Pamela Taylor
Associate Partner, Wholesale Markets

[58] See Article 36(9) of the European Gas Directive of 13 July 2009.



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## Annex 1 – Exemption criteria set out in the Gas Act 1986 (as amended)

### Section 19C (7)

The requirements of this subsection are that

(a) the facility or (as the case may be) the [modification] will promote security of supply;

(b) the level of risk is such that the investment to construct the facility or (as the case may be) to modify the facility would not be or would not have been made without the exemption;

(c) the facility is or is to be owned by a person other than the gas transporter who operates or will operate the pipeline system connected or to be connected to the facility;

(d) charges will be levied on users of the facility or (as the case may be) the increase in its capacity; [and]

(e) the exemption will not be detrimental to competition, the operation of an economically efficient gas market or the efficient functioning of the pipeline system connected or to be connected to the facility;

(f) the Commission of the [European Union] is or will be content with the exemption.

### Section 19DB: Allocation of capacity in exempt new and modified facilities

(1) This section applies in relation to an application for an exemption
  (a) under section 19A(2), in respect of all or part of the capacity of a storage facility; or
  (b) under section 19C(2), in respect of all or part of the capacity of an LNG import or export facility.

(2) The application must specify the criteria that will be used to determine
  (a) who is to be granted rights to use the facility, or the part of the capacity of the facility, to which the application relates (the "exempt infrastructure"); and
  (b) the way in which those rights may be exercised, (the "capacity allocation mechanism").

(3) The Authority must not give an exemption under section 19A or 19C in response to the application unless it has
  (a) approved the capacity allocation mechanism specified in the application; or
  (b) approved the mechanism on condition that certain modifications are made to it.

(4) The Authority may only approve the capacity allocation mechanism under subsection (3)(a) if it considers that the mechanism meets the following three conditions.

(5) The first condition is that before a right to use the exempt infrastructure is granted to the owner of the facility or to any other person
  (a) the intention to grant a right to use the exempt infrastructure must be published in a way that the Authority considers appropriate for the purpose of bringing it to the attention of persons likely to be interested in using the infrastructure; and
  (b) such persons must be able to register an interest in using the exempt infrastructure.

(6) The second condition is that the mechanism must require that any unused capacity in the exempt infrastructure be made available to other users or potential users.

(7) The third condition is that the mechanism must not prevent, and must not be capable of being used to prevent, subsequent trading of rights to use the exempt infrastructure.

(8) The Authority may only approve the capacity allocation mechanism under subsection (3)(b) if it considers that the mechanism will meet those three conditions once the modifications on which the approval is conditional have been made.



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**Annex 2 – Frontier's competition analysis**

In the following paragraphs we summarise the main findings of Frontier's competition assessment for all markets considered in their analysis.

*UK wholesale gas and UK daily and seasonal flexibility markets*

For the UK wholesale gas market, Frontier considers if the addition of the Grain 4 capacity would foreclose other developments and allow the holders of rights to Grain 4 to exercise dominance in supply under a base scenario and a 'worst case' scenario in 2016/17 and 2021/22:

- Base case scenario: gas demand under this scenario is relatively flat in the short term and then starts to decline after 2020[59] while supply follows the following merit order established by Frontier: UKCS production, Norwegian gas, imports through Grain 4 capacity, LNG imports from existing LNG terminals, LNG imports from other future terminal developments[60] and imports from continental Europe through the BBL and IUK interconnectors. The expected decline in UKCS gas production affects all producers equally under this scenario.

- Worst case scenario: all assumptions about demand and supply are as in the base case. The only difference relates to the decline in UKCS production. Unlike the base case, the largest gas supplier under this scenario maintains the absolute level of its UKCS output while the expected decline in UKCS output only affects all the other producers.

Frontier' s results show that under both scenarios the UK wholesale gas market has a low level of concentration[61] in both 2016/17 and 2021/22. If the largest player (Petoro) were to acquire all the capacity at Grain 4, its market share would reach 28%[62], which is well below the 40% threshold[63] above which there is a presumption of dominance. For some of the markets analysed, namely:

- UK wholesale market in 2016/17 under the base case and worst case scenario on UKCS

- UK wholesale market in 2021/22 under the base case and worst case scenario on UKCS

changes in HHI, if the largest player were to acquire all capacity rights at Grain 4, are above the 250 threshold (ranging between 299 and 372)[64] that Frontier considers problematic in case of a horizontal merger. However, Frontier states a number of reasons why even there the exemption would not have a detrimental impact on competition.

Specifically, Frontier notes that for Grain 4 it is considering changes in HHI as a result of a capacity addition rather than merger and therefore the HHI will tend to indicate that the market is more problematic than it really is. Frontier argues that the test for competition detriment in relation to exemption might not be the same as in the case of a horizontal merger.

Further, Frontier argues that the UK has a large surplus in import capacity compared to annual import requirements, which makes it unlikely that the largest player in each of the

[59] Frontier's demand forecasts for the base case are in line with the 'Slow Progression' scenario as described in National Grid Ten Year Statement (2011).
[60] This includes approximately 32 bcm/y of proposed new LNG capacity excluding Grain 4- see page 105 of Frontier' report.
[61] Frontier explains that markets with an HHI of less than 1,000-1,200 are considered competitive and market with an HHI in excess of 1,800-2,000, are considered concentrated. See *OFT & CC, Merger assessment guidelines*, September 2010, page 40.
[62] See table 7 and table 37 of Frontier's report.
[63] See *Guidance on the Commission's Enforcement Priorities in Applying Article 82 EC Treaty of Rome to Abusive Exclusionary Conduct by Dominant Undertakings*, Dec 2008, page 7.
[64] See Table 1 in the main body of this letter and Tables 5-10 and 32-55 in Frontier's report. Changes to HHI are also above the 250 threshold when long-term contract adjustments are taken into account by Frontier.



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markets above could raise prices substantially. Currently this surplus is 103 bcm/y but this is expected to fall to 83[65] bcm/y in 2030/31[66]. Frontier also examines the potential impact of Grain 4 on the UK daily and seasonal flexibility markets in 2016/17 and 2021/22 under a base case scenario and a worst case scenario on UKCS production (as described previously) and assumes the player with the largest market shares takes all the capacity at Grain 4. In doing so, Frontier considers all sources that can deliver gas to the market on the days in which market demand is the greatest for daily deliverability; and over a continuous period of 67 days of high demand for seasonal flexibility. Based on the changes in the HHI index, which for daily and seasonal deliverability markets are in the range of 35-57, and the fact that the HHI index with Grain 4 is well below 1,000, Frontier concludes that the exemption is not detrimental to competition in these markets.

North West Europe and Europe wholesale gas markets

Frontier also considers two wider geographic market definitions: North West Europe (UK, France, Belgium, the Netherlands and Germany) and Europe (North West Europe plus Spain, Italy and Austria)

For those markets Frontier's analysis shows a low level of concentration (HHIs below 1,000) and relatively modest changes to HHI under a base case and three other scenarios that could lead to less competition than assumed in the base case in 2016/17 and 2021/22[67].

- Base case: Frontier assumes the decline in EU production is in line with the ENTSOG Ten Year Network Development Plan (TYNDP)[68] (2011) and the increasing import gap is met by non-EU supplies including LNG. Demand is calculated by Frontier based on ENTSOG's TYNDP (2011).

- Faster than expected decline in EU gas production: Decline in EU gas production doubles compared to the base case and the increasing import gap is met by non-EU supplies including LNG but excluding Norway. Demand is the same as in the base case.

- Increase in gas demand: Under this scenario demand is 10% higher in each of the countries considered compared to the base case and the increased import gap is met by non-EU suppliers.

- Reliance on one supplier: Demand assumed to be the same as in the base case. Emerging import gap can only be met by the largest player (Gazprom) and no other players can increase their market share. This scenario depicts worse competitive conditions than in the other three cases.

Even under the relatively less competitive scenario where the decline in indigenous gas production in Europe can only be met by the largest player, Gazprom, and no other player can increase its market share, HHIs levels are still below 1,000 and changes to HHIs are relatively modest and well below the 250 threshold. Under this scenario, Gazprom market shares would reach 21% in the NW European wholesale market and 24% in the European wholesale market in 2021/22[69].

*UK retail markets*

Frontier also considers the impact of Grain's phase 4 expansion on retail markets in the UK. Frontier sets out that the acquisition of the additional capacity at Grain 4 by a downstream player could potentially enable this player to foreclose competing downstream players from

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[65] Page 64 of Frontier's report.
[66] If all 40 bcm/y of proposed LNG import capacity (including Grain 4) were included, the import surplus would be between 130 and 150 bcm/y (see page 64 of Frontier's report).
[67] Frontier considers calendar year 2022 for NW and Europe rather than the gas year (October- September) used for the UK.
[68] http://www.entsog.eu/publications/tyndp.html.
[69] See tables 18-19 in Frontier's report.



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access to gas. Frontier considers that this concern would only materialise if the additional capacity were acquired by a player with control over a large part of the upstream gas supply in the UK.

As with the other markets, Frontier considers the changes to HHIs as a result of the Grain 4 expansion on three markets[70]: Industrial and Commercial (I&C) non-daily metered customers, Industrial and Commercial daily metered customers, and households.

The HHI index for the I&C non-daily metered customers and daily metered customers markets are 1,472 and 1,481 respectively. This is over the commonly adopted threshold of 1,000, below which there is a general presumption of competition. However, changes to HHIs as a result of the Grain expansion in both markets are relatively small, 88 and 103, well below the 250 threshold.

For the residential supply segment, the HHI was in 2010 well above the 1,000 threshold, at a level of 2,480. The HHI of this segment has fallen significantly from 5,000 in 2001 driven by the fall in 'Centrica's market share from 68.8% in 2001 to 42% in 2009' according to Frontier's data.

Frontier concludes that, given the competitive structure of the wholesale market, it is unlikely that any change to the wholesale market resulting from the Grain 4 expansion will affect the domestic retail market. A party would need to be dominant in the wholesale market in order to leverage its changed position in the wholesale market from the Grain expansion to gain an unfair competitive advantage in the retail market. Frontier also notes that for the domestic retail market, the largest player (Centrica) is not the same as the largest player in the wholesale market (Petoro).

*Other markets*

Frontier considers the impact of the Grain exemption on global LNG supply, global LNG shipping and UK gas shipping.

Their analysis concludes that given the very competitive nature of these markets (HHI level well below 1,000) Grain's exemption would not cause any competition concern as it would result in very small increases in the HHI index.

[70] For these markets, Frontier's analysis is based on 2009 and 2010.



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**Annex 3 – Draft Exemption Order**

**GAS ACT 1986**
**SECTION 19C**
**EXEMPTION**

Pursuant to sub-section 19C (5) of the Gas Act 1986 (the Act), the Gas and Electricity Markets Authority hereby gives to Grain LNG Ltd (Phase 4)[71], as owner of an LNG import and export facility, an exemption from the application of section 19D of the Act in respect to the LNG import and export facility located at the Isle of Grain, Nr Rochester, Kent, ME3 0AB subject the attached Schedule.

Pamela Taylor
Authorised in that behalf by the Gas and Electricity Markets Authority
Dated [ ]

[71] Registered in England No 446379. Registered Office 1-3 Strand, London, WC2N 5EHX.



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**SCHEDULE**
**PERIOD, CONDITIONS, AND REVOCATION OF EXEMPTION**

## A. Interpretation and Definitions

In this exemption:

| | |
|---|---|
| "the Authority" | means the Gas and Electricity Markets Authority established by section 1(1) of the Utilities Act 2000 |
| "the Act" | means the Gas Act 1986 as amended from time to time |
| "the facility" | means LNG import and export facility |
| "facility owner" | means Grain LNG Ltd in its capacity as owner of the facility |
| "facility operator" | means Grain LNG Ltd in its capacity as operator of the facility |
| "throughputter" | means any user of the facility |

## B. Full description of the LNG import or export facility to which this exemption relates

The exemption relates only to the volume of capacity contracted at the Grain LNG (Phase 4) import and export facility from the date that the facility commences commercial operations[72].

## C. Period

Subject to Section E below, and pursuant to section 19C(3)(a), this exemption will cease to have effect in respect of the capacity which has been contracted at the facility, 24 years from the date that the facility commences commercial operation.

## D. Conditions

Pursuant to sub-section 19C (3)(b) and (c) of the Act, this exemption is made subject to the following conditions:

1. That the material provided by the facility owner to the Authority in respect of the exemption is and remains accurate in all substantial respects.
2. The facility owner notified the Authority within ten days of the capacity of the facility commencing commercial operation.
3. Any capacity which becomes un-contracted during the period of the exemption will be subject to the regulated Third Party Access rules.
4. The facility owner has effective anti-hoarding measures in place, approved by the Authority. Such measures shall be subject to periodic review by the Authority.
5. The facility owner furnished the Authority in such manner and at such times as the Authority may reasonably require, with such information as the Authority may reasonably require, or may be necessary, for the purpose of:
   (a) performing the function assigned to it by or under the Act, the Utilities Act 2000, or the Energy Act 2004; or
   (b) monitoring the operation of the exemption.
6. The facility owner complies with any direction given by the Authority (after the Authority has consulted the relevant gas transporter and, where relevant, the Health and Safety Executive) to supply to the relevant gas transporter such information as may be specified or described in the direction
   (a) at such times, in such form and such manner; and

[72] The facility has a total of capacity of 8.4 cubic meters per year.



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(b) in respect of such periods, as may be specified or described.

7. Where the facility owner is prevented from complying with such a direction by a matter beyond its control, it shall not be treated as having contravened the condition specified in this paragraph.

In this condition:

| | |
|---|---|
| "information" | means information relating to the operation of the pipeline system which is operated by a relevant gas transporter |
| "relevant gas transporter" | means any holder of a gas transporter licence under section 7 of the Act owning a transportation system within Great Britain to which the facility is connected or with whom the facility operator interfaces with as a system operator |

8. Should any of the grounds for revocation arise under section E of this exemption, the Authority may amend this exemption rather than revoke the exemption.
9. The Authority may amend this exemption where the Authority has been requested to amend the decision to grant this exemption by the European Commission (such request being made in accordance with Article 36(9) of Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009).
10. This exemption is transferable to another facility owner where the Authority has reviewed the conditions of the exemption and given its written consent to such a transfer subject to any conditions which the Authority considers appropriate.

### E. Revocation

Pursuant to sub-section 19 CA (5) of the Act, this exemption may be revoked in the following circumstances:

The Authority may revoke this exemption where the European Commission has requested (in accordance with Article 36(9) of Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009) that the Authority withdraw the decision to grant this exemption.

The Authority may revoke this exemption where the European Commission has requested (in accordance with Article 36(9) of Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009) the Authority to amend the decision to grant this exemption and the facility owner does not agree (under paragraph D7 above) for this exemption to be amended in the manner so requested by the European Commission.

The Authority must revoke if the construction of the facility has not been started within 2 years from the date of this exemption or if operations at Grain LNG (Phase IV) do not commence operations within 5 years from the date of this exemption decision in accordance with section 19 CA(3) of the Act.

This exemption may also be revoked by the Authority by giving a notice of revocation to the facility owner not less than four months before the coming into force of the revocation in any of the following circumstances:

(a) Where:

i. the Authority considers that any or all of the conditions contained in section D are no longer met.

ii. in the Authority's reasonable opinion there is a material change in the degree to which the requirements of sub-section 19C (7)(a), (c), (d) or (e) of the Act are met with respect to the facility as the result of any action or omission of the facility owner, facility operator or throughputter;


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iii. the facility owner has a receiver (which expression shall include an administrative receiver within the meaning of section 251 of the Insolvency Act 1986) of the whole or any material part of its assets or undertaking appointed;
iv. the facility owner has an administration order under section 8 and Schedule B1 of the Insolvency Act 1986 made in relation to it;
v. the facility owner is found to be in breach of the Competition Act 1998; or
vi. there is merger or acquisition activity in relation to, or by the facility owner, that is detrimental to competition.

(b) the facility owner has failed to comply with a request for information issued by the Authority under paragraph D (5) above and the Authority has written to the facility owner stating that the request has not been complied with and giving the facility owner notice that if the request for information remains outstanding past the period specified in the notice, the exemption may be revoked; or
(c) the facility owner has failed to comply with a direction issued by the Authority under paragraph D (6) above and the Authority has written to the facility owner stating that the direction has not been complied with and giving the facility owner notice that if the direction remains outstanding past the period specified in the notice, the exemption may be revoked.



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### Annex 4 – Length of LNG exemptions approved by the EU Commission

| | Date of approval | LNG terminal name | Duration |
|---|---|---|---|
| 1 | 10/02/2005 | Isle of Grain (UK) - phase 1<br><br>Isle of Grain (UK) - phase 2 | 20 years<br><br>25 years |
| 2 | 10/02/2005 | South Hook (UK) | 25 years |
| 3 | 10/02/2005 | Rovigo (IT) | 25 years |
| 4 | 29/03/2005 | Dragon LNG (UK) | 20 years |
| 5 | 13/09/2005 | LNG Brindisi (IT) | 20 years |
| 6 | 26/03/2007 | Gate Terminal (NL) | 20 years |
| 7 | 18/10/2007 | LionGas (NL) | 20 years |
| 8 | 30/06/2007 | Isle of Grain (UK) – phase 3 | 19 years |
| 9 | 15/05/2009 | LNG Eemshaven (NL) | 20 years |
| 10 | 11/12/2009 | LNG Livorno (IT) | 20 years |
| 11 | 26/07/2010 | LNG Shannon (IE) | 20 years |
| 12 | 20/01/2010 | LNG Dunkerque (FR) | 20 years |
| 13 | 07/05/2012 | LNG Porto Empedocle (IT) | 25 years |

Source: Based on information provided on the EU Commission website at the following link
http://ec.europa.eu/energy/infrastructure/exemptions/doc/exemption_decisions.pdf


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