
**CONNECTION PROJECT PROPOSAL IN
RELATION TO THE CYPRUS GAS NETWORK**

Contents

Section	Page
1. Disclaimer	1
2. Definitions.....	1
3. Introduction	4
3.1 Invitation to the first Open Procedure.....	4
3.2 Structure of the first Open Procedure	4
3.3 Statement by TSO regarding Connection Projects of the Open Procedure.....	6
3.4 The Cyprus LNG Project Overview	6
3.5 Cyprus Gas Supplies	6
4. Technical Aspects of the Gas Transmission System.....	7
4.1 Overview of the Gas Transmission System.....	7
4.2 Overview of the Technical Parameters of the Gas Transmission System.....	9
4.3 Overview of Entry and Exit Points.....	10
4.4 Onshore Pipeline Network and PRMS	10
5. The Gas Transmission Network	11
5.1 Overview of the CGNC	11
6. Commercial	11
6.1 Tariffs	11
7. Connection Agreement Fees.....	12
8. General Rules and Terms	12
8.1 Purpose of this section 8.....	12
8.2 Applicable Legislation	13
8.3 Eligibility.....	13
8.4 Connection Site Visit and Consultation Meeting	14
8.5 Binding Connection Application.....	15
8.6 Application Guarantee	16
8.7 Clarifications in the Information Period.....	18
8.8 Amendment of form of Binding Connection Application, Connection Agreement and/or Application Guarantee	19
8.9 Late and/or incomplete Submissions	19
8.10 Assessment of Binding Connection Applications by Cygas.....	19
8.11 Notification of acceptance or rejection by Cygas of Binding Connection Applications.....	19
8.12 Connection Agreement.....	19
8.13 Connection Agreement Guarantee.....	20
9. Fraud and Corruption.....	22
9.1 Standing of Applicants	22

9.2 Confidentiality.....	23
Schedule I Application of Call for Expressions of Interest to the First Open Procedure	24
Schedule II Form of Binding Connection Application	28
Annex A Estimated Demand of Natural Gas	32
Annex B Details of Withdrawal Installation	36
Annex C Supporting Documents	37
Schedule III Form of Connection Agreement.....	38
Schedule IV Form of Application Guarantee.....	40
Schedule V Form of Connection Agreement Guarantee	42
Schedule VI Liquefied Natural Gas Quality Specifications	44
Schedule VII Natural Gas Quality Specifications	46
Schedule VIII Cyprus Gas Network Code (CGNC) Overview.....	48

1. Disclaimer

This CPP has been prepared by Cygas-TSO together with its professional advisors and is being made available to Eligible Participants in the first Open Procedure. This CPP has been prepared in accordance with the CERA Guidelines and is not intended to form the basis of any investment decision.

Although the information contained herein has been obtained from sources believed to be reliable, Cygas and its professional advisors expressly disclaim any and all liability for incomplete or inaccurate information, or representations expressed or implied, contained in, or omitted from, this CPP or any other written or oral or electronic media communication transmitted or made available to any recipients of this CPP. Cygas and its professional advisors also expressly disclaim all liability, including, without limitation, liability for misrepresentation, negligence or otherwise arising from any recipient's reliance upon the accuracy or completeness of the information contained in this CPP.

Each recipient of this CPP must rely upon its own investigations and evaluations to establish its own conclusions as to the merits of participation in the Open Procedure and the Gas Transmission System.

Prospective tenderers are not to construe the contents of this CPP as professional advice. Prior to making a proposal, any prospective tenderer should consult with its own legal, business and tax advisers to determine the appropriateness and consequences of participating in the Open Procedure.

No person is authorised to give any information or to make any representation not contained in this CPP as having been authorised by any of the parties referred to herein.

Cygas reserves the right to supplement or amend the information contained herein at any time. Neither Cygas nor its professional advisors has any obligation to update or otherwise revise any information in this CPP including, without limitation, any projections, any revisions to reflect changes in economic conditions or other circumstances arising after the date hereof or to reflect the occurrence of unanticipated events, even if the underlying assumptions do not come to fruition.

2. Definitions

In this CPP, the capitalised terms shall have the following meanings unless the context otherwise requires:

AGI - above ground installation (process units such as the PRMS and isolation valves at the LNG Facilities shoreside, LNG Facilities onshore and on the Gas Transmission System at the inlet to each Withdrawal installation);

Applicant – an Eligible Participant that submits a BCA in accordance with this CPP;

Application Guarantee - the bank guarantee to be provided by an Applicant to Cygas which is not materially divergent from the form of application guarantee provided at Schedule IV (*Form of Application Guarantee*) as may be amended from time to time by Cygas during this Open Procedure;

BOG - boil off gas from the FSRU;

Binding Connection Application or **BCA** – the binding connection application to be submitted in respect of an eligible Withdrawal Installation in the form set out at Schedule II (Form of Binding Connection Application) of this CPP;

BTU - British thermal unit being the amount of energy required to heat one pound of pure water from fifty-nine degrees Fahrenheit (59°F) to sixty degrees Fahrenheit (60°F) at a pressure of 14.696 psia, which is equivalent to approximately 1,054.8 joules;

CERA - Cyprus Energy Regulatory Authority;

CERA Guidelines – the ‘Guidelines For The Way Of Conducting The Natural Gas Demand Estimation Process In The Transmission System From The Natural Gas Transmission System Operator And The Conclusion Of Connection Agreements, February 2021, Report Number 01/2021’ (also known as Regulatory Decision 73/2021);

CGNC - Cyprus Gas Network Code;

Connection Agreement – means the connection agreement to be entered into by successful applicants in respect of their Withdrawal Agreement which is not materially divergent from the form of connection agreement provided at Schedule III (*Form of Connection Agreement*) as may be amended from time to time by Cygas during this Open Procedure;

Connection Agreement Guarantee - the bank guarantee to be provided by an Applicant to Cygas which is not materially divergent from the form of application guarantee provided at Schedule IV (*Form of Connection Agreement Guarantee*) as may be amended from time to time by Cygas during this Open Procedure;

Connection Projects – means the licensing procedure and the necessary works to allow the supply of a Withdrawal Installation with natural gas following the signing of a Connection Agreement;

Connection Site – means the proposed location of the connection of the participant’s Withdrawal Installation to the Transmission System;

CPP - this connection project proposal;

Cygas - the Natural Gas Public Company of Cyprus;

Cygas-Commercial – Cygas acting in its capacity as the exclusive supplier of natural gas to the RoC domestic market;

Cygas-TSO – Cygas acting in its capacity as the TSO;

EAC – the Electricity Authority of Cyprus;

Electricity Generation Licence - a licence (or exemption from a licence) granted by CERA that authorises the holder to engage in the generation of electricity in the RoC, as modified from time to time;

Eligible Participant – a holder of an Electricity Generation Licence in respect of a Withdrawal Installation located within the Offtake Catchment Area;

Entry Point- means the entry point on the Gas Transmission System from which the operator receives natural gas;

Exit Point - means the exit point of the Gas Transmission System to which the natural gas Withdrawal Installation is connected;

FSRU - floating storage and regasification unit; or a combination of a floating storage and regasification unit with a floating storage unit;

Gas Transmission System – the potential new natural gas pipeline network in the RoC from the LNG Facilities’ onshore AGI outlet to the Withdrawal Installations, as described in section 5 of this CPP;

GoC – the Government of the RoC;

GWh - gigawatt hour;

ICE - internal combustion engines;

IPP - independent power producer;

KWh - kilowatt hour;

LNG - liquefied natural gas;

LNG Facilities – the Cyprus LNG Import Terminal Project facilities at Vasilikos Bay;

LNG Operator - Cygas in its capacity as the licensed Liquefied Natural Gas System Operator in respect of the LNG Facilities.

MMBTU - one million (1,000,000) BTUs;

MMSCF – million Standard Cubic Feet;

MMSCFD – million Standard Cubic Feet per day;

Moody’s - means the corporation known as Moody’s Investors Service, Inc, incorporated in the US State of Delaware with the file number 0577904;

MW - megawatt;

MWh – one thousand KWh;

Offtake Catchment Area - shall mean the area of land falling within a five (5) km radius from the LNG Facilities’ termination point;

Open Procedure – an open procedure carried out in accordance with the CERA Guidelines;

PRMS - the onshore pressure regulating and metering station at the LNG Facilities and the inlet to the Withdrawal Installations;

RES - Renewable Energy Sources;

RoC - Republic of Cyprus;

SCFD – Standard Cubic Feet per day;

Standard Cubic Feet or **SCF** - the quantity of natural gas equal to a volume of 1 cubic foot at a temperature of 60 degrees Fahrenheit (15.56°C) and an absolute pressure of 14.696 pound per square inch (101,325 kPa);

Standard & Poor's - the corporation known as Standard & Poor's Corporation, incorporated in the US State of Delaware with the file number 4621989;

TSO – the licensed operator of the Gas Transmission System;

TWh – terawatt-hour;

UFG - unaccounted for gas;

Working Days – means a means any day other than a Saturday or Sunday or a day which is a bank holiday or public holiday in RoC; and

Withdrawal Installation – a facility (existing or under construction or under development at any stage) which may be connected to the Gas Transmission System;

3. Introduction

3.1 Invitation to the first Open Procedure

Cygas-TSO hereby invites all Eligible Participants to take part in the first Open Procedure. It is intended that the Open Procedure will also assist Cygas-TSO in determining future levels of natural gas demand for the Gas Transmission System. The first Open Procedure is limited to Eligible Participants.

The aim of this CPP is to, *inter alia*:

- detail the operational and commercial requirements of Withdrawal Installation in order for Cygas-TSO to fulfil any potential future gas demand and any physical connection requirements to the Gas Transmission System;
- set out the general rules and terms to be accepted in order to participate in the Open Procedure; and
- set out the procedures and deadlines regarding the conduct of the Open Procedure as well as the rules regarding the acceptance or rejection of Binding Connection Applications.

This CPP and the requirements relating to the Open Procedure contained herein are reflective of the requirements of CERA as set out in the CERA Guidelines.

3.2 Structure of the first Open Procedure

(a) Application of Part II only

Pursuant to Article 2, sub-paragraph 7 of the CERA Guidelines, Cygas-TSO hereby acknowledges and draws the attention of Eligible Participants to the following:

- All Open Procedures other than this first Open Procedure are to be conducted in two parts:

Part I: Call for Expressions of Interest for Connection Projects; and

Part II: Submission of Binding Connection Applications and conclusion of Connection Agreements with successful applicants in respect of their withdrawal installations.

- With the exception of this first Open Procedure, the participation of interested and eligible applicants in Part I is a necessary condition for their participation in Part II of the Open Procedure. For the first Open Procedure there is no Part I and all Eligible Participants are entitled to participate in Part II.

(b) Stages of this first Open Procedure

Pursuant to Article 2, sub-paragraph 9 of the CERA Guidelines, this first Open Procedure shall comprise the following stages each being requirements of the Part II framework:

Stage	Description
1	Publication of this CPP for the attention of all Eligible Participants to submit a Binding Connection Application in respect of their Withdrawal Installation and an accompanying Application Guarantee;
2	The assessment by Cygas-TSO of the submitted Binding Connection Applications against the criteria set out in this CPP and a decision by Cygas-TSO to either accept or reject such Binding Connection Applications;
3	The invitation of objections that may be lodged by interested parties according to the procedure set out in this CPP and subsequent consideration by Cygas-TSO of such objections;
4	The notification by Cygas-TSO to successful Applicants whose Binding Connection Applications in respect of such Applicant's Withdrawal Installations are accepted or rejected by Cygas-TSO.
5	The invitation by Cygas-TSO to successful Applicants to enter into a Connection Agreement and submit an accompanying Connection Agreement Guarantee.
6	The submission of a report by Cygas-TSO to CERA summarising the results of Part II of the first Open Procedure.

(c) Applicable deadlines for this first Open Procedure

The following deadlines shall apply during in respect of this Open Procedure as may be amended by Cygas-TSO from time to time.

Event	Applicable Deadline
Information period during which Eligible Participants may submit clarification questions to Cygas-TSO	<i>[Date to be inserted in the CPP sent to Eligible Participants – to be not less than 1 month from the date the CPP is sent to Eligible Participants in accordance with the CERA Guidelines]</i>

Binding Connection Application submission deadline	[Date to be inserted in the CPP sent to Eligible Participants]
Deadline for issuance of Cygas-TSO's decision on the acceptance or rejection of BCAs	[Date to be inserted in the CPP sent to Eligible Participants]
Deadline for objections by any Applicant whose BCA is rejected by Cygas-TSO	[Date to be inserted in the CPP sent to Eligible Participants]
Deadline for issuance of Cygas-TSO's decision on any objection raised by an Applicant whose BCA is rejected by Cygas-TSO	[Date to be inserted in the CPP sent to Eligible Participants]
Deadline for signing of Connection Agreements with successful Applicants	Not earlier than 30 days or later than 60 days from the date the Applicant is notified by Cygas-TSO of the acceptance of its BCA.

3.3 Statement by TSO regarding Connection Projects of the Open Procedure

Connection Projects shall be completed by the estimated operation date of the Gas Transmission System, such date currently being estimated as [date to be inserted in the CPP sent to Eligible Participants].

3.4 The Cyprus LNG Project Overview

The LNG Facilities coupled with the Gas Transmission System is a major natural gas infrastructure project aimed at importing LNG from the global market to the RoC. The natural gas is predominately for thermal power generation and is to be used for all future thermal power units and displacement of fuel oil products in existing power stations.

The LNG Facilities comprise an FSRU, an offshore jetty intended for the FSRU's mooring, a jetty borne, a natural gas pipeline and an onshore gas pipeline, a shoreside block valve facility, an onshore natural gas buffer pipeline array storage solution and an onshore AGI. The Gas Transmission System is expected to initially consist of a pipeline connecting Withdrawal Installations within the Offtake Catchment Area to the LNG Facilities' onshore AGI.

The outcome of the first Open Procedure will assist Cygas-TSO in determining the demand for natural gas within the Offtake Catchment Area, and the Gas Transmission System will be expanded to Withdrawal Installations successful in the Open Procedure where relevant Applicants enter into a Connection Agreement with Cygas-TSO. Preliminary studies on the Gas Transmission System pipeline routing and sizing to potential Withdrawal Installations sites have been conducted and summarised in Section 3 of this CPP.

3.5 Cyprus Gas Supplies

Cygas-Commercial will be responsible for procuring quantities of LNG to meet the RoC forecast annual gas demand and will manage the schedule of LNG cargoes from suppliers to satisfy the forecast annual demand and seasonality. The LNG cargoes are to be unloaded to the FSRU, which has an estimated maximum storage capacity of 136,141 cubic meters of LNG, equivalent to 0.955TWh. LNG will be purchased to meet

the specifications for the RoC as detailed in Schedule VI (*Liquefied Natural Gas Quality Specifications*).

The LNG is regasified on the FSRU topsides with a design rate of 250 tonnes per hour of LNG and treated in the shore side AGI facilities and the onshore PRMS prior to entry to the Gas Transmission System. The natural gas specifications are aligned to the LNG specifications with details of key parameters required for Withdrawal Installations as detailed in Schedule VII (*Natural Gas Quality Specifications*).

The following table provides a summary of the estimated regasification capacity of the LNG Facilities.

Table 1: Technical Capability of the LNG import infrastructure

LNG / Gas Supply			
Location	Peak Hour (Nm ³ /hr)	Peak Day (Nm ³ /day)	Peak Day (MMSCFD)
LNG Facilities	391,680	9,400,280	315
Notes: These figures are based on three regasifiers operating, each with a capacity of 105 MMSCFD. An identical fourth regasifier is installed on standby duty only.			

There will also be a minimum offtake from the LNG Facilities due to the BOG from the LNG stored in the FSRU. The BOG will be compressed and sent out with the regasified gas. It should be noted that a minimum offtake will be required by the Withdrawal Installations for the BOG management.

The normal operating pressure range of the Gas Transmission System is between 40-70 barg, with a maximum operating pressure of 90 barg.

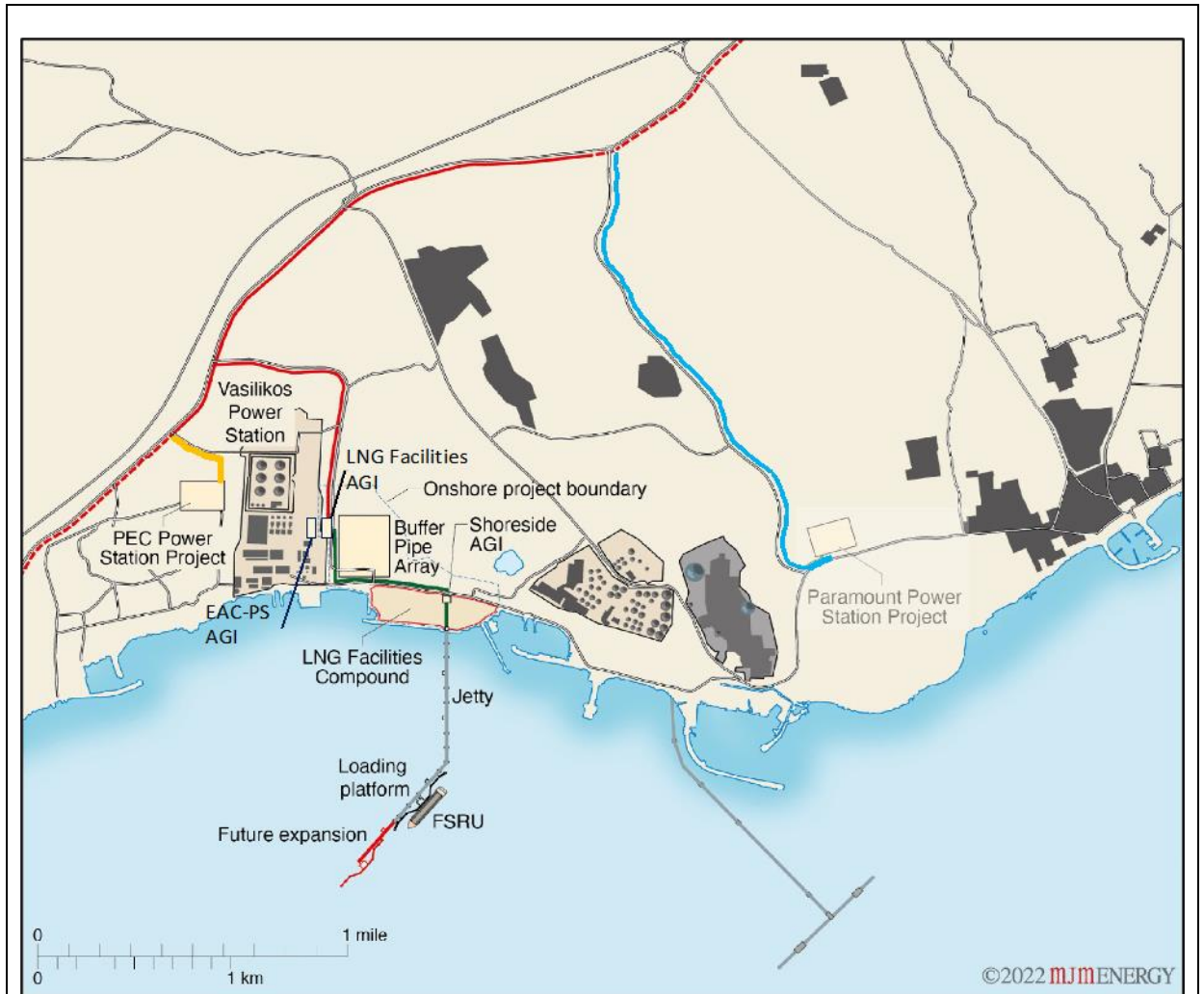
4. Technical Aspects of the Gas Transmission System

This section provides an overview of the identified Withdrawal Installations within the Offtake Catchment Area.

4.1 Overview of the Gas Transmission System

The following map provides an overview of the potential pipeline routing to identified Withdrawal Installations within the Offtake Catchment Area:

Figure 1: Overview of the Potential First Phase Pipeline Infrastructure of the Gas Transmission System



Key

1. **Green line** – 24” high-pressure onshore pipeline links the shoreside AGI with the gas storage (pipeline array) and to the onshore PRMS, which is all part of the LNG Facilities.
2. **Red line** – 24” high-pressure pipeline, start of the Gas Transmission System with a trunkline extending to the east and west, where potentially connecting pipeline will be made to the PEC power station and the Paramount power station projects.
3. **Blue line** – 6” high-pressure gas pipeline linking the Paramount power station with the trunkline.
4. **Yellow line** – 10” high-pressure gas pipeline linking the PEC power station with the trunkline.

Preliminary studies on the potential Gas Transmission System pipeline routing to identified Withdrawal Installations have been conducted and an estimation has been made on the pipeline sizing based on potential demands. Estimations of the completion dates of the different pipeline segments will need to be finalised once the Open Procedure has been completed and is provided below as indicative information only.

Table 2: Summary of potential pipeline segments in the first phase of the Gas Transmission System

Pipeline Description	Pipeline Map Colour	Diameter (Inches)	Length (km)
----------------------	---------------------	-------------------	-------------

24" high-pressure pipeline from the LNG Facilities to the onshore PRMS (boundary of the LNG Facilities) (Note 1)	Green	24"	1.0
24" high-pressure pipeline trunkline linking the LNG Facilities with the connection points for the PEC power station and the Paramount power station.	Red	24"	5.0
6" high-pressure gas pipeline linking the Paramount power station with the trunkline.	Blue	6"	3.2
10" high-pressure gas pipeline linking the PEC power station with the trunkline.	Yellow	10"	0.5
Notes: Note 1: This pipeline is being built as part of the LNG Facilities. It should also be noted that the high-pressure pipeline array is also part of the LNG Facilities.			

The Gas Transmission System will be developed and owned by Cygas-TSO with socialisation of all pipeline and equipment costs to the connected Withdrawal Installations. Cygas-TSO will be responsible for the design and maintenance of the individual PRMS units required at the inlet to each Withdrawal Installation.

4.2 Overview of the Technical Parameters of the Gas Transmission System

(a) System capability

The initial capacity of the Gas Transmission System is expected to be constrained by the output of the FSRU, which is planned to be designed for a maximum of 315 MMSCFD, although the gas pipeline at the LNG Facilities could potentially accommodate higher flows if required.

The LNG Facilities provide an inline buffer storage comprising an underground underground pipe array made up of 6,300 m of 48" high-pressure gas pipeline, which will provide the system with 125 tonnes (T) of gas storage at the operational range (40-70 barg).

The natural gas pipe array storage at 125 T (approx. 167,000 m³ gas) corresponds to approximately 30 minutes of the FSRU's send out at a maximum rate of 250 T per hour. The pipeline array storage would provide approximately 45 minutes storage at the anticipated maximum peak gas rate from the combined identified Withdrawal Installations.

The pipeline array storage and the Gas Transmission System line pack provides the LNG Facilities with the dynamic gas supply capability required to satisfy the potential short-term mismatch between the FSRU gas export dynamics and a Withdrawal Installation's gas demand dynamics.

(b) Operating pressures and temperature

The outlet pressure of the LNG Facilities' AGI is 90 barg maximum, although the outlet pressure will be optimised at a lower range 40-70 barg, which will reduce the need for pre-heating at connected Withdrawal Installations.¹

¹ The need for pre-heating occurs because of the Joule-Thomson effect, which occurs high-pressure gas passes through an orifice to a lower pressure resulting in a significant drop in temperature. Significant drops in temperature can cause operational

The natural gas will be heated to above 5 degrees Celsius to avoid water freezing of instrumentation and the potential formation of white powder called methane hydrate.

4.3 Overview of Entry and Exit Points

(a) Location of Exit Points

The following table provides a summary of exit points on the Gas Transmission System to the identified Withdrawal Installations. The exit points will be located at the Withdrawal Installations site boundary at a point closest to the Withdrawal Installation's PRMS unit.

Table 3: Exit Points for identified potential Withdrawal Installations

Exit Point description	Inlet Pressure (barg)	Outlet Pressure (barg)	Indicative Capacity (MMSCFD)	Indicative Capacity (Nm ³ /day)	Diameter (Inches)
EAC power station	90	40	215	5,758,000	24"
Paramount power station	90	7	22	589,190	6"
PEC power station	90	40	39	1,044,480	10"

(b) Location of Entry Points

The following table provides a summary of entry points to the Gas Transmission System which initially will be from one point at the LNG Facilities at the outlet of the onshore AGI.

Table 4: Entry Points to the Gas Transmission System

Entry Point description	Outlet Pressure Range (barg)	Capacity (MMSCFD)	Peak Day (Nm ³ /day)	Diameter (Inches)
LNG Facilities AGI	40-90	315	9,400,280	24"

4.4 Onshore Pipeline Network and PRMS

All successful Applicants will require a PRMS for regulating the pressure at the Withdrawal Installation and metering the gas from the Gas Transmission System. Cygas-TSO will conduct approval of the design and provide maintenance and inspection services of the individual PRMS units required at the inlet to each

problems, which include freezing of instrumentation and the potential formation of a white powder called methane hydrate, which can block filters and instrumentation lines.

Withdrawal Installation. The PRMS units typically comprise of gas analyser, filters, heaters, metering and pressure regulating trains. In addition, the PRMS units are expected to consist of fuel gas metering for the heaters and pig receivers for inspections.

5. The Gas Transmission Network

5.1 Overview of the CGNC

At the date of issuance of this CPP, the CGNC has not been published. Successful Applicants shall be informed of any required changes to this CPP (including the form of Connection Agreement) following publication of the CGNC. Therefore, the purpose of this part is to provide a high-level overview to Eligible Participants of the most relevant aspects expected to be contained in the final form CGNC.

This part is intended to provide a high-level overview of the expected CGNC, in the context of the initial configuration of the proposed Gas Transmission System pipeline network as described in section 4.

The CGNC will be a public domain document that sets out standard technical and commercial terms and conditions between the transporter of the gas (Cygas-TSO) along the Gas Transmission System and the shipper (Cygas-Commercial). The shippers will need to accept the terms of the code of operations and therefore, before submitting Binding Connection Applications, prospective Applicants (as prospective gas consumers) will need to understand the principles of the CGNC, such as nomination forecasts and scheduling, balancing, capacity, and modification regimes. A summary of these key aspects of the CGNC are provided in Schedule VIII (*Cyprus Gas Network Code (CGNC) Overview*).

6. Commercial

6.1 Tariffs

It is envisaged that gas consumers shall enter into gas sales agreements with Cygas-Commercial under which Cygas shall recover costs of using the LNG Facilities, gas transportation through the Gas Transmission System and the cost of LNG. These elements will be separately shown on invoices to gas consumers. An example of this structure is as set out in the table below.

Table 5: Indicative gas tariffs

Description of tariff	€/MMBTU	€/MWh	Comments
Gas transportation tariff	0.20	0.68	The transportation tariff is based on a simple postalised transportation tariff for all users of Cygas-TSO's gas pipeline network.
Regasification tariff	1.5	5.1	The regasification tariff is based on recovery of capital and operating cost of the LNG Facilities.
Cost of gas	TBC	TBC	The cost of gas will be a function of the procurement policies of Cygas-Commercial and will be based on the weight average price of the LNG cargo in the FSRU.

7. Connection Agreement Fees

A connection to the Gas Transmission System will consist of the following activities and associated charges.

Table 6: Activities and costs associated with connection to the Gas Transmission System

Description of activity	Cost calculation methodology	Comments
Construction of high-pressure gas transmission pipeline "The trunkline"	All costs socialized	During the first Open Procedure any costs associated with the design, construction, and operation of the trunkline constructed within the Offtake Catchment Area shall be absorbed into the Cygas-TSO cost base and recovered through the gas transportation tariffs.
Construction of high-pressure gas transmission pipeline connection from the trunkline to the PRMS at the Withdrawal Installation	All costs socialized	During the first Open Procedure any costs associated with the design, construction, and operation of connections from the trunkline to the Withdrawal Installation constructed within the Offtake Catchment Area shall be absorbed into the Cygas-TSO cost base and recovered through the gas transportation tariffs.
Construction of PRMS at the Withdrawal Installation	All costs socialized	All costs associated with the construction of a PRMS for regulating the pressure at the Withdrawal Installation and metering the gas from the Gas Transmission System will be socialized and recovered through the gas transportation tariffs.

8. General Rules and Terms

8.1 Purpose of this section 8

This section 8 sets out the main general rules and terms to be accepted by Eligible Participants in order to participate in this Open Procedure.

8.2 Applicable Legislation

The Open Procedure shall be conducted in accordance with the laws of the RoC, and in particular in accordance with the CERA Guidelines and relevant decisions.

8.3 Eligibility

(a) Eligible applicants

- (i) An Applicant must be an Eligible Participant.
- (ii) Applicants must not have a conflict of interest that cannot be effectively remedied without excluding them from participation in the Open Procedure. Any Applicant found to have a conflict of interest in the sole opinion of Cygas may be disqualified. An Applicant may be considered to have a conflict of interest for the purpose of the Open Procedure if the Applicant:
 - (A) has a relationship with Cygas, directly or through common third parties, that puts it in a position to influence the decisions of Cygas regarding this Open Procedure;
 - (B) directly or indirectly controls, is controlled by or is under common control with another Applicant;
 - (C) receives or has received any direct or indirect subsidy from another Applicant; or
 - (D) has a relationship with another Applicant, directly or through common third parties, that puts it in a position to influence the application of another Applicant.
- (iii) Cygas reserves the right to disqualify any Applicant that it considers its inclusion to be contrary to the national or financial interests of the RoC.
- (iv) An Applicant must not be in breach of its obligations relating to the payment of taxes prior to entering into a Connection Agreement with Cygas, where these have been established by a judicial or administrative decision having final and binding effect in accordance with the legal provisions of the RoC or with those of the country where it is established.
- (v) Cygas may disqualify an Applicant from executing the Connection Agreement where Cygas can demonstrate by any appropriate means that the Applicant is in breach of its obligations relating to the payment of taxes.
- (vi) An Applicant must not be bankrupt or the subject of insolvency or winding-up proceedings, its assets must not be administered by a liquidator or by a court, it must not be in an arrangement with creditors, its business activities must not be suspended and it must not be in any analogous situation arising from a similar procedure under national laws and regulations.

- (vii) An Applicant must not have entered into agreement(s) with any other Applicant(s) aimed at distorting competition; where Cygas has reasonably plausible indications to conclude so, Cygas may disqualify such Applicant.
- (viii) An Applicant must not have shown significant or persistent deficiencies in the performance of a substantive requirement under a prior public contract, a prior contract with Cygas or a prior concession contract which led to early termination of that prior contract, damages or other comparable sanctions.

(b) Eligible Withdrawal Installations

- (i) Applications for connection to the Gas Transmission System may only be made in respect of a Withdrawal Installation that:
 - (A) generates (or is expected to generate) electricity under an Electricity Generation Licence;
 - (B) is located or will be located within the Offtake Catchment Area.

(c) Evidence of Eligibility

- (i) Each Applicant shall provide evidence that:
 - (A) it holds an Electricity Generation Licence by providing a certified copy of the same with its Binding Connection Application; and
 - (B) is located or will be located within the Offtake Catchment Area by providing a map grid reference and coordinates in the Binding Connection Application.

8.4 Connection Site Visit and Consultation Meeting

- (a) Prospective Applicants are encouraged to visit and examine the Connection Site and its surroundings and obtain for themselves all information that may be necessary for preparing its Binding Connection Application and entering into the Connection Agreement in respect of the respective Withdrawal Installation.
- (b) Prospective Applicants may also request a consultation meeting with Cygas-TSO, which will take place on the same date as the Connection Site visit at a venue to be advised by Cygas-TSO. An Applicant may bring up to 10 representatives to the Connection Site visit and consultation meeting.
- (c) Prospective Applicants should agree the specific date and time of their Connection Site visit with Cygas-TSO by email. The email address of Cygas-TSO to co-ordinate such visits is OpenSeasonTSO@defa.com.cy. Each prospective Applicant will be allocated an individual, specific date and time for their Connection Site visit and consultation meeting.
- (d) The costs of visiting the Connection Site and the participating in the consultation meeting shall be at the prospective Applicant's expense. Travel arrangements and transportation at the Connection Site must be arranged by the Applicant.

- (e) The prospective Applicant and any of its personnel or agents will be granted permission by Cygas to enter upon the Connection Site for the purpose of such visit, but only upon the express condition that the prospective Applicant, its personnel, and agents will release and indemnify Cygas and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the Connection Site visit.
- (f) Non-attendance of a Connection Site visit or consultation meeting will not be a cause for disqualification of an Applicant.
- (g) Prospective Applicants are encouraged to provide comments on the project, the Binding Connection Agreement or Connection Agreement during the consultation meeting. Cygas-TSO will consider any such comments as confidential.
- (h) Prospective Applicants may ask any question of Cygas-TSO during the consultation meeting.
 - (i) Should Cygas-TSO elect to respond orally to a question from a prospective Applicant in the consultation meeting, the prospective Applicant shall also submit the question as a request for clarification by the deadline provided in section 3.2(c). The prospective Applicant should not rely on the oral answer given in the consultation meeting, but rather to the written answer that will follow and be made available to all applicants.
 - (ii) The identity of the prospective Applicant asking a question will not be published.

8.5 Binding Connection Application

(a) Requirement to submit a Binding Connection Application

Each prospective Applicant shall be required to submit a Binding Connection Application to Cygas by the Binding Connection Application submission deadline date set out in section 3.2(c) of this CPP.

(b) Cost of preparing and submitting a Binding Connection Application

The Applicant shall bear all costs associated with the preparation and submission of a Binding Connection Application, and Cygas shall not be responsible or liable for any of those costs, regardless of the conduct or outcome of the Binding Connection Application.

(c) Language of Binding Connection Application

- (i) The Binding Connection Application, as well as all correspondence and documents relating to the Binding Connection Application exchanged by the applicant and Cygas, shall be written in the Greek language.
- (ii) Supporting documents and printed literature that are part of the Binding Connection Application may be in another language, provided they are accompanied by an accurate translation of the relevant passages into the Greek language. In the event of any discrepancy between the

foreign language document and the Greek translation, the Greek translation shall prevail.

(d) Format and Submission of Binding Connection Application

- (i) The Binding Connection Application to be submitted is set out in Schedule II (*Form of Binding Connection Application*) of this CPP and must be submitted by email to OpenSeasonTSO@defa.com.cy.
- (ii) During working hours, applicants may contact the CPP support team (telephone number [+35 7 22 761 761](tel:+35722761761)) for assistance on electronic Binding Connection Application submission procedures, before the deadline for the Binding Connection Application submission.
- (iii) Applicants are strongly encouraged to prepare and submit their Binding Connection Application in a timely manner and to allow for a reasonable time period to email their Binding Connection Application to OpenSeasonTSO@defa.com.cy.
- (iv) If the technical data supporting a Binding Connection Application is too large in volume and, consequently, its email submission may not be possible, the data will be accepted in print form (accompanied by an electronic version) or in the form of a link.
- (v) If the Binding Connection Application contains abbreviations to denote technical or other concepts, the applicant must provide definitions of the abbreviations in an accompanying table.

8.6 Application Guarantee

(a) Requirement to submit an Application Guarantee

An eligible applicant seeking to participate in the Open Procedure in respect of a Withdrawal Installation shall be required to submit an Application Guarantee together with its Binding Connection Application.

(b) Format and Submission of Binding Connection Application

- (i) The Application Guarantee must be an unconditional bank guarantee issued by qualifying banks meeting the criteria set out in section 8.6(c) and who are lawfully operating in the RoC or in other countries of the European Union (EU) or of the European Economic Area (EEA) or in other countries who have signed and ratified association agreements or bilateral agreements with the EU or with the RoC, and having the right to issue such guarantees in accordance with the legislation of these countries. Application Guarantees issued by financial institutions lawfully operating in other third countries are not acceptable.
- (ii) The Application Guarantee must be drawn in the English language in the format of the guarantee contained in Schedule IV (*Form of Application Guarantee*). The Application Guarantee shall be valid for the period set out below:

Application Guarantee validity period: The Application Guarantee shall be valid from (and including) the Binding Connection Application

submission deadline date specified in section 3.2(c) to the date falling six (6) months after the Binding Connection Application submission deadline date.

- (iii) Applicants, during the email submission of a Binding Connection Application, should enclose a PDF copy of the Application Guarantee. Furthermore, the applicant should also send in hard copy by courier the original Application Guarantee, to Cygas, at the address set out directly below by a date no later than 10 days after the Binding Connection Application Deadline date set out in section 3.2(c) of this CPP.

For the Attention of Mr. Andreas Papettas
Natural Gas Public Company (Cygas)
13 Limassol Avenue
Demetra Tower 4th Floor
2112 Nicosia
CYPRUS

(c) Issuing bank debt rating

- (i) A “qualifying bank” shall be a bank which has a long-term debt rating of not less than BBB- by Standard & Poor's or Baa3 by Moody's.

(d) Downgrade of Financial Institution

- (i) If an Applicant becomes aware that the bank issuing the Application Guarantee ceases to be a qualifying bank (a “**downgrade**”), then the Applicant must give notice to Cygas as soon as it becomes so aware.
- (ii) If Cygas becomes aware of a downgrade, Cygas may give notice to the Applicant to that effect.
- (iii) The Applicant must within 10 Working Days of the giving of such notice by Cygas or the Applicant, whichever is the earlier, provide a replacement Application Guarantee at the requisite guaranteed amount required for the Applicant as determined pursuant to section 8.6(e).
- (iv) If the Applicant does not comply with paragraph sub-section 8.6(d)(ii), Cygas may immediately draw down on the Application Guarantee to the full amount stated in the Application Guarantee.

(e) Application Guarantee Amount

The amount of the Application Guarantee is set at one-hundred and fifty thousand Euros (€150,000).

(f) Return of Application Guarantee

- (i) The Application Guarantee shall be returned to the Applicant in the following circumstances:

- (A) following notification to the Applicant by Cygas that the Applicant's Binding Connection Application has been accepted, the occurrence of both:
 - 1. entry into a Connection Agreement between such successful applicant and Cygas; and
 - 2. the submission by the successful applicant of a Connection Agreement Guarantee at the requisite amount required to Cygas;
 - (B) the Applicant being notified that its Binding Connection Application has been rejected by Cygas; or
 - (C) this Open Procedure is otherwise cancelled by Cygas prior to its conclusion,
- and the Application Guarantee shall be returned to the Applicant as soon as possible following the occurrence of (A), (B) or (C) and by no later than 30 Working Days therefrom.

(g) Failure to submit Application Guarantee

Any Binding Connection Application not accompanied by an Application Guarantee in a form that, in the sole discretion of Cygas, is substantially similar to that provided in Schedule IV (*Form of Application Guarantee*) of this CPP shall be rejected by Cygas as non-conforming.

(h) Drawdown of Application Guarantee

- (i) If at any stage prior to the return of the Application Guarantee the Applicant breaches any of the rules and terms of this CPP, the Application Guarantee shall be forfeited in favour of Cygas.
- (ii) If an Applicant has been notified that its Binding Connection Application has been accepted by Cygas and such Applicant does not present themselves when required for signing the relevant Connection Agreement, then:
 - (A) the acceptance of the Binding Connection Application shall be deemed as irrevocably revoked by Cygas; and
 - (B) the Application Guarantee shall be simultaneously be forfeited in favour of Cygas.

8.7 Clarifications in the Information Period

- (a) An Applicant requiring clarification of any aspect of this Connection Project Proposal may submit such request for clarification to Cygas in writing. Requests for clarifications should be submitted to OpenSeasonTSO@defa,con,cy. in accordance with the following procedure:
 - (i) All clarification requests should be submitted at least a week ahead of the Binding Connection Application submission deadline set out in section 3.2(c) of this CPP.

1. Cygas will, where possible, aim to respond to such questions within two (2) Working Days.
 2. Cygas will publish its response to all questions on its website.
- (b) The identity of the prospective Applicant asking a question will not be published.
- (c) Should a response to the clarification process set out in this section 8.4 result in changes to the form of Binding Connection Application and/or Connection Agreement (as attached hereto at Schedule II (*Form of Binding Connection Application*) and Schedule III (*Form of Connection Agreement*), Cygas shall amend the Binding Connection Application and/or Connection Agreement (as applicable) following the procedure under section 8.8.

8.8 Amendment of form of Binding Connection Application, Connection Agreement and/or Application Guarantee

- (a) At any time prior to the deadline for submission of a Binding Connection Applications specified in section 3.2(c), Cygas may amend the Binding Connection Applications, Connection Agreement and/or Application Guarantee by issuing an addendum. Where Cygas deems such amendments are material and merit extensions to the Open Procedure deadlines, Cygas may extend the deadline dates specified in section 3.2(c) accordingly.
- (b) Any addendum issued shall be published on the Cygas-TSO website.

8.9 Late and/or incomplete Submissions

Cygas shall not consider any Binding Connection Application that is submitted after the deadline for submission of Binding Connection Applications set out in section 3.2(c). Applications other than from Eligible Participants shall also not be considered.

8.10 Assessment of Binding Connection Applications by Cygas

Cygas will assess all complete Binding Connection Applications submitted by Eligible Participants on time and in compliance with the requirements of the CPP having regard to and considering the following criteria as part of its decision process:

Number	Criteria:
1.	Evaluation of economic and technical constraints in making the connection to the requisite Withdrawal Installation
2.	Any objections raised by interested parties in respect of connections to such Withdrawal Installations.

8.11 Notification of acceptance or rejection by Cygas of Binding Connection Applications.

Cygas will notify each Applicant of its decision to accept or reject the Applicant's Binding Connection Application by the deadline date specified in section 3.2(c).

8.12 Connection Agreement

(a) Requirement to enter into a Connection Agreement

- (i) All successful Applicants shall be required to enter into a Connection Agreement in respect of the requisite Withdrawal Installation for which a Binding Connection Agreement is notified as being accepted by Cygas; and
- (ii) The deadline for the signing of such Connection Agreements is set out in section 3.2(c).

(b) Cost of preparing and submitting a Binding Connection Application

The Applicant shall bear all costs associated with its entry into the Connection Agreement.

(c) Language of Connection Agreement

- (i) The Connection Agreement, as well as all correspondence and documents relating to the Binding Connection Application exchanged by the applicant and Cygas, shall be written in the Greek language.

(d) Form of Connection Agreement

- (i) At the time of this CPP, the full form of Connection Agreement has not been published. Eligible Participants are referred instead to the Heads of Terms contained within Schedule II (*Form of Connection Agreement*) during the interim period leading up to the publication of the form of Connection Agreement.
- (ii) This CPP will be amended to include the Connection Agreement Schedule II (*Form of Connection Agreement*) in place of the Heads of Terms during the Open Procedure.
- (iii) The final form of Connection Agreement shall be inclusive of any technical details relating to the requisite Withdrawal Installation and any construction requirements (including but not limited to construction milestones and works relating to the provision of the connection).

8.13 Connection Agreement Guarantee

(a) Connection Agreement Guarantee Requirement

- (i) The applicant shall be required to submit an original Connection Agreement Guarantee to Cygas by the deadline for the signing of such Connection Agreements is set out in section 3.2(c) to Cygas, at the address set out directly below.

For the Attention of Mr. Andreas Papettas
Natural Gas Public Company (Cygas)
13 Limassol Avenue
Demetra Tower 4th Floor
2112 Nicosia
CYPRUS

(b) Connection Agreement Guarantee Amount

The amount of the Connection Agreement Guarantee shall be an amount equal to one hundred per cent (100%) of the Total Project Spend for the Connection Project to be undertaken by Cygas to connect the requisite Withdrawal Installation to the Gas Transmission System, where:

“**Total Project Spend**” means, with respect to a Withdrawal Installation, the total amount of Capital Expenditure (excluding contingency) incurred, or expected in the reasonable of Cygas to be incurred (either by Cygas or another person) having consideration to the calculation methodology set out in section 7 of this CPP; and

“**Capital Expenditure**” means the capital expenditure (as determined under International Accounting Standard 16) in relation to property, plant and equipment which has the primary purpose of delivering the connection of the Withdrawal Installation to the Gas Transmission System.

(c) Issuer of Connection Agreement Guarantee

- (i) The Connection Agreement Guarantee must be an unconditional bank guarantee issued by qualifying banks meeting the criteria set out in section 8.13(d) and who are lawfully operating in the RoC or in other countries of the European Union (EU) or of the European Economic Area (EEA) or in other countries who have signed and ratified association agreements or bilateral agreements with the EU or with the RoC, and having the right to issue such guarantees in accordance with the legislation of these countries. Connection Agreement Guarantees issued by financial institutions lawfully operating in other third countries are not acceptable.
- (ii) The Connection Agreement Guarantee shall be in the form set out at Schedule IV (*Form of Connection Agreement Guarantee*) of this CPP. The Connection Agreement Guarantee shall be valid for the **period of three (3) months after the anticipated completion of the construction works relating to the Connection Project as such period shall be notified by Cygas to the applicant by no later than ten (10) Working Days prior to the signature of the Connection Agreement.**

(d) Issuing bank debt rating

- (i) A “qualifying bank” shall be a bank which has a long-term debt rating of not less than BBB- by Standard & Poor's or Baa3 by Moody's.

(e) Downgrade of Financial Institution

- (i) If an Applicant becomes aware that the bank issuing the Application Guarantee ceases to be a qualifying bank (a “**downgrade**”), then the Applicant must give notice to Cygas as soon as it becomes so aware.
- (ii) If Cygas becomes aware of a downgrade, Cygas may give notice to the Applicant to that effect.

- (iii) A must within 10 Working Days of the giving of such notice by Cygas or the Applicant, whichever is the earlier, provide a replacement Application Guarantee at the requisite guaranteed amount required for the Applicant as determined pursuant to section 8.13(b).
- (iv) If the Applicant does not comply with paragraph section 8.13(e)(iii), Cygas may immediately draw down on the Connection Agreement Guarantee to the full amount stated in the Connection Agreement Guarantee.

(f) Return of Connection Agreement Guarantee

The Application Guarantee shall be returned to the Applicant on terms set out in the Connection Agreement.

(g) Drawdown of Connection Agreement Guarantee

Cygas shall be able to draw on the Connection Agreement Guarantee upon the occurrence of an Event of Default or Termination Event (as such terms are defined in the Connection Agreement).

9. Fraud and Corruption

9.1 Standing of Applicants

- (a) To participate in the Open Procedure, prospective Applicants must meet the following requirements concerning their personal situation. They must not have been convicted by final judgment and neither have admitted:
 - (i) participation in a criminal organisation (as defined in Article 2 of the Council Framework Decision 2008/841/JHA of 24 October 2008 on the fight against organised crime);
 - (ii) corruption (as defined in Article 3 of the Convention of the fight against corruption involving officials of the European Communities or officials of Member States of the European Union and Article 2(1) of Council Framework Decision 2003/568/JHA);
 - (iii) fraud (within the meaning of Article 1 of the Convention relating to the protection of the financial interests of the European Communities of 27/11/1995);
 - (iv) terrorist offences or offences linked to terrorist (as defined in Articles 1 and 3 of Council Framework Decision 2002/475/JHA of 13 June 2002 on combating terrorism) or inciting, aiding or abetting an offence as defined in Article 4 of the aforementioned Decision;
 - (v) money laundering or terrorist financing (as defined in Article 2 of the national laws for the Prevention and Suppression of Money Laundering and Terrorist financing (laws of 2007 - 2016));
 - (vi) child labour and other forms of trafficking in human beings in accordance with Article 2 of the Law 60(l) of 2014 on the Prevention, Fighting against Trafficking in and Exploitation of Human Beings and Protection of Victims).

- (b) Cygas shall exclude prospective applicants from the Open Procedure if a person convicted by final judgment or having admitted any of the above, is a member of an administrative, management or supervisory body of the prospective applicants or has powers of representation, decision or control thereof.
- (c) If the prospective Applicant is a consortium / joint venture, the above requirements must be met by all consortium / joint venture members.

9.2 Confidentiality

- (a) Except as permitted under section 8.10, information relating to the evaluation of Binding Connection Applications shall not be disclosed to Applicants or any other persons not officially concerned with the Open Procedure.
- (b) Any attempt by an Applicant to influence Cygas in the evaluation and ranking of the Binding Connection Application may result in the rejection of its Binding Connection Application.

Schedule I

Application of Call for Expressions of Interest to the First Open Procedure

Pursuant to Article 2, sub-paragraph 7 of the CERA Guidelines, and as set out in section 2.2 of this CPP, for the first Open Procedure there is no Part I (*Call for Expressions of Interest for Connection Projects*).

Article 8, sub-paragraph 1(a) of the CERA Guidelines, nevertheless requires this CPP to include the Announcement of Expression of Interest. In the interests of transparency and due process, Cygas-TSO has therefore set out in this Schedule I relevant information that may have been required to be contained in a Announcement of Expression of Interest (had there been a Part I to this Open Procedure) but is not otherwise contained in the CPP. Cygas-TSO has also identified where in this CPP other relevant information can be found.

Article 4(2) of the CERA Guidelines requires the Announcement of Expression of Interest to include:

- a) The Entry Point and any Exit Points that are already under examination by the Operator and any alternative designs, if any.

See section 4.3 of this CPP.

- b) The technical specifications of the Transmission System, such as operating pressure and gas quality limitations, if any, in each Entry and Exit Point, and for each design under examination as per (a) above.

See section 4.2 of this CPP.

The detailed commercial and technical arrangements associated with day-to-day operation of the Withdrawal Installation in relation to ramp rates and notice periods shall be covered by the CGNC and an associated network exit agreement. In particular, the Withdrawal Installation shall be required to give a period of notice to Cygas-TSO of any change in the rate of offtake (by a revised offtake profile notice) subject to agreed notice periods. The following are indicative examples of the typical ramp rates and notice periods that could be required:

- (i) Increase of offtake rate greater than 50%

If the Withdrawal Installation wishes to exceed the rate of offtake by more than 50% it shall give Cygas-TSO a minimum of [8] hours' notice;

- (ii) Increase of offtake rate greater than 25% and less than 50%

If the Withdrawal Installation wishes to exceed the rate of offtake by more than 25% but less than 50% it shall give Cygas-TSO a minimum of [4] hours' notice;

- (iii) Increase of offtake rate less than 25%

If the Withdrawal Installation wishes to exceed the rate of offtake by less than 25% it shall give Cygas-TSO a minimum of [2] hours' notice;

- (iv) Decrease of offtake rate

If the Withdrawal Installation wishes to decrease the rate of offtake by more than 25% it shall give Cygas-TSO a minimum of [2] hours' notice;

The outlet pressure of the LNG Facilities' AGI is designed for 90 barg, although the outlet pressure may be optimised at a lower range 40-70 barg, which will reduce the need for pre-heating at end user's Withdrawal Installations.

The gas will be heated to above 5 degrees Celsius to avoid water freezing of instrumentation and the potential formation of white powder called methane hydrate.

c) The Transmission System's estimated start date.

Estimations on the completion dates of the different Gas Transmission System segments will need to be finalised once the Open Procedure has been completed, and therefore the indicative information provided below is for information only.

- Estimated date of connection to the Gas Transmission System for Withdrawal Installations within 200m of the LNG Facilities – On start-up of the LNG Facilities.
- Estimated date of connection to the Gas Transmission System for Withdrawal Installations within 200m to 5km of the LNG Facilities – Cygas-TSO will endeavour to develop the Gas Transmission System segments as soon as is practical (expected to be approximately 12 months from start-up of the LNG Facilities dependant on the fulfilment of prerequisites to such development such as land acquisition and any necessary approvals).

d) The connection of the Transmission System with the LNG Installation and the LNG Installation's estimated start date. The Installation's estimated start date shall be given on the LNG Operator's data base.

The Gas Transmission System will be connected to the LNG Facilities at the LNG Facilities' onshore PRMS. This connection shall be completed by the estimated operation date of the Gas Transmission System.

The LNG Facilities' estimated start date shall be given on LNG Operator's available at <https://defa.com.cy/>.

e) The manner in which the Operator shall ensure the uninterrupted supply of Natural gas under normal operating circumstances. Within this framework, the Operator shall inform on all the Transmission Services that he estimates to offer on an uninterrupted basis to the Exclusive Supplier (e.g., capacity commitment on an uninterrupted basis).

See section 3.5 of this CPP.

f) Information on the operation of the natural gas market in the Republic of Cyprus.

Cygas is wholly owned by the GoC and is responsible for the introduction of natural gas to the RoC and the operation of the required infrastructure.

The Council of Ministers of the GoC has decided to appoint Cygas as:

- the exclusive supplier of natural gas to the RoC domestic market;
- LNG Operator;
- TSO; and
- the licensed operator of the gas distribution system operator in the RoC.

Cygas is a vertically integrated company with distinct operations and financial accounts as required by regulatory unbundling requirements.

g) Non-binding estimation of the investment and operating cost of the Transmission System as well as the scenarios on which this estimation is made.

See section 6 of this CPP.

h) Non-binding estimation of the investment and operating cost of the LNG Installation as well as the scenarios on which this estimation is made. This estimation shall be given on the LNG Operator's data base.

See sections 3.4 and 6 of this CPP.

i) Summary of the status of authorizations, licenses and regulatory approvals in respect to the Transmission System and the timetable for the approval of those still pending.

Cygas is licensed by CERA as the TSO.

Article 4(3) of the CERA Guidelines requires the Announcement of Expression of Interest to include:

a) Regulations for preserving the confidentiality of the information submitted by the interested parties to the Operator during Part I.

See section 9.2 of this CPP.

b) Statement that the participation in Part I of the Open Procedure is necessary for the participation in Part II that will follow.

Not relevant to the first Open Procedure.

c) The starting and expiration date for the submission of Expression of Interest Applications. The expiration date must be set at least one (1) month following the

publication of the Expression of Interest Announcement.

Not relevant to the first Open Procedure.

d) Details regarding the submission of the Expression of Interest procedure (e.g., how to send the Application and supporting documents), the updating of the participants on the reception and acceptance of their Expression of Interest Application.

Not relevant to the first Open Procedure.

e) The criteria on which the Operator shall reject an Expression of Interest Application.

Not relevant to the first Open Procedure.

f) The Operator's estimations regarding the timetable for the conduct and completion of Part II of the procedure.

See section 3.2(c) of this CPP.

Schedule II
Form of Binding Connection Application

FORM OF BINDING CONNECTION APPLICATION

Binding Connection Application

To:

Natural Gas Public Company (**Cygas - TSO**)
4th Floor Leoforos Lemesou 13, 2112 Nicosia
CYPRUS

From:

Company Name : _____ (**Applicant**)

Registered Address : _____

Company Number : _____

Tax Identification Number: _____

VAT Registration Number: _____

- A. Cygas requires the information requested in this binding connection application form (**Binding Connection Application**) for the purpose of entering into a connection agreement for connection of the Applicant's Withdrawal Installation to the Gas Transmission System, a form of which is contained in Schedule III (*Form of Connection Agreement*) to the Connection Project Proposal of the first open procedure for the Gas Transmission System (**Connection Agreement**).
- B. The Applicant hereby unconditionally and irrevocably applies to enter into the Connection Agreement for connection to the Gas Transmission in respect of the Applicant's Withdrawal Installation set out in Annex B.
- C. The Applicant hereby certifies that the information provided in this Binding Connection Application is correct, true and accurate as at the submission date, and further agrees that it will inform Cygas of any change in the information given in this Binding Connection Application as soon as is practical after becoming aware of any such change.
- D. Where Cygas considers that any information provided by the Applicant is incomplete or unclear, or further information is required, the Applicant will be requested to provide further information or clarification. The provision/clarification of this information may impact on Cygas' ability to enter into the Connection Agreement.

E. The Applicant agrees that the Connection Agreement will be subject to the Cyprus Gas Network Code, as amended from time to time.

Submitted by Applicant

Full name of Authorised Representative:) _____
Designation:) _____
Signature:) _____
Date:) _____

General Information

Section A: Additional Details relating to the Applicant

[Tax no]:	
Authorised contact person	name and surname
	phone:
	e-mail:
Parent Company (if applicable):	

Section B: Location of the Withdrawal Installation

Description of geographical parameters	
Map Grid reference at where natural gas is to be off-taken (Coordinates are required to be specified) If possible please provide a map or drawing of this location	

Annex A
Estimated Demand of Natural Gas

The purpose of this information is to provide Cygas with an early indication of the potential physical operating characteristics of the Withdrawal Installation and, for its wider consideration in Cygas' system capability 'Needs Case' assessment and network planning activity.

Cygas will consider all information contained within this Annex A as indicative, and such information will be non-binding on the Applicant and further is not to be construed as requiring any binding commitment on Cygas whatsoever (including but not limited to Cygas delivering a natural gas quantity to meet any estimated demand specified for the Applicant).

Section A: Consumption Information

First Gas Flow Date(s) Required:	For commissioning purposes	(dd/mm/yyyy)	
	For commercial purposes	(dd/mm/yyyy)	
	Year	Gas Demand	Units
Estimated Load Profile required	Year 1		GWh per year
	Year 2		GWh per year
	Year 3		GWh per year
	Year 4		GWh per year
	Year 5		GWh per year
	Year 6		GWh per year
	Year 7		GWh per year
	Year 8		GWh per year
	Year 9		GWh per year
	Year 10		GWh per year
Meter Sizing Parameters	Max Flowrate		MWh per hour
	Min Flowrate		MWh per hour
Design pressure of Applicant's gas facility			barg
Minimum pressure required at Gas Service Isolation Value			barg
Maximum Daily Quantity			MWh per day

Section B: Physical Operational Flow Requirements

Gas Year	Indicative Ramp Rate(s)		Gas Transmission System Exit Capacity		
	Offtake (MW/min)	Emergency Shutdown (MW/min)	Peak Hourly Energy Flow (GWh)	Maximum instantaneous Offtake Nm ³ /hour (*1000)	Maximum required Daily Offtake rate Nm ³ /day (*1000)
Year 1					
Year 2					
Year 3					
Year 4					
Year 5					
Year 6					
Year 7					
Year 8					
Year 9					
Year 10					

Section C: Commissioning Requirements

If the Applicant has any other particular commissioning requirements in relation to the power station that it is aware at this time, please state them in the box below:

[INSERT]

[INSERT]

Section D: Other Requirements

Other requirements concerning gas quality parameters or conditions, if other than those set out in the Cyprus Gas Network Code:

[INSERT]

Annex B
Details of Withdrawal Installation

Section A: Technical Information

Brief description of Gas Consumers' Facilities/Plant	
Amount of Thermal Generating Units at the plant , with reference to capacity and efficiency	
Thermal Generating Technology Class per Unit:	[Delete as applicable] Gas turbines running in open cycle fired mode Combined cycle gas turbine plants Gas fired plants where the prime mover is an internal combustion engine
Maintenance Month per Unit	[Advise Units Maintenance month]

Annex C Supporting Documents

This Binding Connection Application must be accompanied with the following documentation which should be submitted via email to OpenSeasonTSO@defa.com.cy:

- Certificate of Address:
- Certificate of Company Directors:
- Tax Identification Number:
- VAT Registration Number:
- In the case of a company, a copy of the written resolution of the company approving the entry into of this Binding Connection Application and authorising the signatory to execute the Binding Connection Application on behalf of the company.
- Such other supporting documents as Cygas-TSO may reasonably request prior to the Binding Connection Application submission deadline.

Schedule III
Form of Connection Agreement

Heads of Terms

Heads of Terms (**HoT**) in relation to a Connection Agreement between Cygas and an Applicant whose Binding Connection Application has been notified as accepted by Cygas. These Heads of Terms provide an outline of the commercial terms of the Connection Agreement to be entered into between Cygas and Applicant (together, the **Parties**) in respect of the construction of such of a connection to the Gas Transmission System and subsequent operation. These HoTs are not exhaustive, are indicative only, and are not be legally binding.

1.	Applicant's Obligations	<ul style="list-style-type: none"> • The Applicant shall make payments to Cygas-TSO in accordance with the provisions of the Connection Agreement. • The Application shall not interfere with the works required for the Connection Project. • The Applicant shall prepare the Withdrawal Installation for the connection and keep Cygas-TSO informed of construction progress for the Withdrawal Installation. • The Applicant shall enter into a gas sales agreement with Cygas-Commercial pursuant to which the Applicant will have a take-or-pay obligation commencing on completion of the Connection Project.
2.	Cygas-TSO's Obligations	<ul style="list-style-type: none"> • Cygas-TSO shall carry out the works required for the Connection Project in compliance with relevant Cypriot legislation.
3.	Connection Work	<ul style="list-style-type: none"> • Cygas-TSO shall be required to keep the Applicant informed of construction progress for the Connection Projects and the accounting cost data of the Connection Project and to provide to the Applicant the corresponding documents at least every 3 months or at the end of each contract concluded by Cygas-TSO with third parties in respect to the Connection Project.
4.	Anticipated Completion Date	<ul style="list-style-type: none"> • The Connection Agreement shall include the anticipated completion date of the Connection Project, as well as payments that Cygas-TSO shall be obliged to make to the Applicant should the Connection Project not be completed within 6 months of the anticipated completion date.
5.	Cost Recovery for Construction Costs	<ul style="list-style-type: none"> • The Connection Agreement shall set out the budgeted cost of the Connection Project which will be recovered through the gas sales agreement entered into between the Applicant and Cygas-Commercial, as well as any part of the budgeted cost paid by the Contracting Final Consumer pursuant to Articles 12 and 13 of the CERA Guidelines.
6.	Connection Agreement Guarantee	<ul style="list-style-type: none"> • The Applicant shall be required to maintain in effect the Connection Agreement Guarantee. • Cygas shall be able to draw on the Connection Agreement Guarantee upon the occurrence of an Event of Default or Termination Event.
7.	Network exit arrangements	<ul style="list-style-type: none"> • The Connection Agreement shall set out network exit arrangements such as the gas pressure associated with the exit point, gas quality requirements, the ramp rate, and notice periods for increases in offtake rates.

8.	Maintenance	<ul style="list-style-type: none"> The Connection Agreement shall include obligations regarding an exchange of information and notice requirements for maintenance periods.
9.	Events of Default	<ul style="list-style-type: none"> Material breach of the Connection Agreement. The Applicant has failed to lodge or maintain the Connection Agreement Guarantee to the amount required. There is a material adverse change in the financial condition of the Applicant such as to give Cygas reasonable grounds for concluding that the Applicant will default in the payment of any unsecured sum due to or to become due to Cygas Other customary events to be specified in the full form of agreement.
10.	Termination Rights	<ul style="list-style-type: none"> Cygas-TSO shall have the right to terminate the Connection Agreement following the occurrence of any Events of Default, subject to any specified grace periods.
11.	Force Majeure	<ul style="list-style-type: none"> The Connection Agreement shall relieve the Parties of their obligations (other than payment obligations) where they cannot be performed due to events of force majeure.
12.	Term	<ul style="list-style-type: none"> Subject to Termination Rights, the Connection Agreement shall have legal effect from the time of its conclusion and until its termination by the Applicant. The Connection Agreement shall set out the termination payments that the Applicant is required to make if the Connection Agreement is terminated (i) within the period from the conclusion of the Connection Agreement until the completion of the Connection Project or (ii) in any subsequent period.
13.	Boilerplate Provisions	<ul style="list-style-type: none"> The Connection Agreement shall include usual boilerplate provisions including in relation to variations, waivers, and confidentiality.
14.	Governing Law and	<ul style="list-style-type: none"> The Agreement shall be governed by and construed in accordance with the laws of the Republic of Cyprus and disputes arising under or in relation to the Connection Agreement shall fall within the jurisdiction of the courts of the Republic of Cyprus.

**Schedule IV
Form of Application Guarantee**

Expiry date -----

To

Natural Gas Public Company (Cygas)

4th Floor Leoforos Lemesou 13, 2112 Nicosia

CYPRUS

(hereinafter referred to as "the Contracting Authority")

Dear Sirs,

Guarantee no -----

We have been informed that -----
(hereinafter referred to as "the Applicant") is participating in an open procedure carried out by the Contracting Authority and is submitting a binding connection application in order to enter into connection agreement with the Contracting Authority (this offer hereinafter referred to as "the Application") and that the terms of the open procedure provide for the submission by the Applicant of an Application Guarantee for the amount of €150,000 (in words one hundred and fifty thousand Euro) (hereinafter referred to as "the Guaranteed Amount").

At the request of the Applicant, we the undersigned bank/credit institution, waiving all rights of objection and defence under this open procedure, hereby, irrevocably and without any reference to and notwithstanding any objection by the Applicant, undertake to pay you without delay (and at the latest within 3 working days) the Guaranteed Amount upon receipt by us of your first demand in writing stating that the Applicant:

- (a) has breached any of the rules and terms of the connection project proposal issued in connection with the open procedure; or
- (b) has been notified that its binding connection application has been accepted by Cygas and the Applicant does not present themselves when required for signing the relevant Connection Agreement.

2. This Guarantee shall remain in force up to and including the expiry date mentioned above and any demand from you in respect thereof must be received by us on or before that date (or, if that date is a bank holiday, up to and including the last bank working day before that date). After that date, and provided that no written demand from you has been received by us by then, this Guarantee shall be deemed to be void, whether it has been returned to us or not.

3. This Guarantee shall be governed by and construed according to the laws of the Republic of Cyprus and shall fall within the jurisdiction of the courts of the Republic of Cyprus.

Sincerely,

[Bank/Credit Institution]

(signature and stamp)

{ Place stamp }
duties here

Date:

Schedule V
Form of Connection Agreement Guarantee

Expiry date -----

To

Natural Gas Public Company (Cygas)

4th Floor Leoforos Lemesou 13, 2112 Nicosia

CYPRUS

(hereinafter referred to as **the Contracting Entity**)

Dear Sirs,

Guarantee no -----

Contract no -----

We have been informed that you have entered into a connection agreement with [●] (hereinafter referred to as **the Contract**), and that the terms of the Contract require the provision of a Connection Agreement Guarantee for an amount equal to € [●] (in words [●] Euro).

At the request of [●] **the Applicant**), we the undersigned bank/credit institution, waiving all rights of objection and defence under the Contract, hereby, irrevocably and without any reference to and notwithstanding any objection by the Applicant, undertake to pay you without delay (and at the latest within 3 working days) any sum or sums not exceeding in total the amount of € [●] (in words [●] Euro (hereinafter referred to as **the Guaranteed Amount**), upon receipt by us of your first demand in writing stating that the Applicant has failed or refused to fulfil or has not fulfilled and/or was in breach of any of his obligations under the Contract and that you claim payment under this Guarantee. The Guaranteed Amount will be reduced by each payment made by us as a result of a claim.

It is understood that any change, modification, addition or amendment which may be made to the Contract, or any settlement in relation to it, shall not in any way release us from our obligations and liabilities under this guarantee, and we hereby expressly waive our right to consent to or to receive notice, of any such change, modification, addition, amendment or settlement.

This Guarantee shall remain in force up to and including whichever of the following events first occur, upon which our liability hereunder shall cease and this bond shall be returned to us for cancellation:

1. on the expiry date mentioned above (the **Expiration Date**);
2. when we have paid to you the maximum amount for which we are liable under this Guarantee; or
3. on receipt of written notice from you that this bond is to be discharged.

The Expiration Date of this Guarantee shall be automatically extended for successive thirteen (13) month periods, unless we elect in our sole and absolute discretion not to extend the then-current Expiration Date of this Guarantee, and notice of such election is sent to your address set forth above by registered mail or by nationally recognised courier not less than sixty (60) days prior to the then-current Expiration Date.

If we give notice of our intention not to extend the then-current Expiration Date of this Guarantee as set out above, you are entitled to make a demand under this Guarantee prior to its expiry.

Any demand from you in respect of this Guarantee must be received by us on or before the date on which this Guarantee expires (or, if that date is a bank holiday, up to and including the last bank working day before that date).

After that date, and provided that no written demand from you has been received by us by then, this Guarantee shall be deemed to be void, whether it has been returned to us or not.

This Guarantee shall be governed by and construed according to the laws of the Republic of Cyprus and shall fall within the jurisdiction of the courts of the Republic of Cyprus.

Sincerely,

[Bank/Credit Institution]

(signature and stamp)

{ Place stamp }
duties here

Date:

Schedule VI
Liquefied Natural Gas Quality Specifications

(Indicative and subject to Ministerial Decree)

Parameters	Measured Unit	Limits		Test
		Minimum	Maximum	Method
Molecular Weight	Kg/Kmol	16.04	18.88	CYS EN ISO 6976 ^α
Gross Calorific Value (GCV) ²	KWh/Nm ³	10,497	12,647	CYS EN ISO 6976
Wobbe Index	KWh/Nm ³	13.10	16.37	CYS EN ISO 6976
Density ³	Kg/m ³	420	480	CYS EN ISO 6578 ^β
Methane content (CH ₄) ⁴	% mol	85.00	-	CYS EN ISO 6974 ^γ
Ethane content (C ₂ H ₆)	% mol	0.06	9.6	CYS EN ISO 6974
Propane content (C ₃ H ₈)	% mol	-	3.12	CYS EN ISO 6974
Butane content (i-C ₄ H ₁₀ and n-C ₄ H ₁₀)	% mol	-	4.00	CYS EN ISO 6974
Pentane content (i-C ₅ H ₁₂ και n-C ₅ H ₁₂)	% mol	-	2.00	CYS EN ISO 6974
Heavier than C ₄ and C ₅ hydrocarbons content	% mol	There might exist heavier than C ₄ and C ₅ hydrocarbons provided that the LNG density is within the limits.		
Nitrogen (N ₂)	% mol	-	1.240	CYS EN ISO 6974
Hydrogen Sulphite content (H ₂ S)	mg/Nm ³	-	5	CYS EN ISO 6974

² As an exemption, the LNG System Operator (LSO) may consider the possibility of accepting a cargo with GCV in the range of 10,397 to 10,497 KWh/Nm³, if after unloading this cargo and mixing with the stored LNG in terminal tanks, the GCV of the resulting LNG will be within the mentioned range, that is indicated in the above Table.

³ As an exemption, the LNG System Operator (LSO) may consider the possibility of accepting a cargo with density in the range of 478 to 483.1 Kg/m³, if after unloading this cargo and mixing with the stored LNG in terminal tanks, the density of the resulting LNG will be within the mentioned range, that is indicated in the above Table.

⁴ As an exemption, the LNG System Operator (LSO) may consider the possibility of accepting a cargo with methane content out of the above specification, but within the range of 80% to 85 % mol, if after unloading this cargo and mixing with the stored LNG in terminal tanks, the methane content value of the resulting LNG will be within the mentioned range, that is indicated in the above Table.

Parameters	Measured Unit	Limits		Test
		Minimum	Maximum	Method
Temperature (Boiling Point)	°C	-	-158	CYS EN ISO 6976

^α CYS EN ISO 6976 for the calculation of the calorific value, the Wobbe index, the density and the relative density subject to the gas mixture .

^β CYS EN ISO 6578 calculation based on temperature T= -160°C.

^γ CYS EN ISO 6974 for the estimation of the (gas) mixture .

Schedule VII
Natural Gas Quality Specifications

(Indicative and subject to Ministerial Decree)

Parameters	Measured Unit	Limits		CYS EN ISO
		Minimum	Maximum	
Gross Calorific Value (GCV)	KWh/Nm ³	10,174	13.674	CYS EN ISO 6976 ^a
Wobbe Index	KWh/Nm ³	13.066	16.328	CYS EN ISO 6976
Relative Density		0.56	0.71	CYS EN ISO 6974 ^b
Methane (CH ₄)	% mol	75		CYS EN ISO 6974
Nitrogen (N ₂)	% mol	-	6.0	CYS EN ISO 6974
Oxygen (O ₂)	% mol	-	0.2	CYS EN ISO 6974
Carbon Dioxide (CO ₂)	% mol	-	3.0	CYS EN ISO 6974
Hydrogen Sulphite (H ₂ S)	mg/Nm ³	-	5.4	CYS EN ISO 6974
Total Sulphur	mg/Nm ³	-	80	CYS EN ISO 6974
Water Dew Point (WDP) ⁵	°C	-	+5	CYS EN ISO 6974
Hydrocarbon Dew Point ⁶	°C	-	+3	CYS EN ISO 6974
Solid and Liquid Impurities		Natural Gas must be free of gaseous, solid or liquid substances that could create the risk of blockage or malfunction or corrosion of standard gas installations and standard gas equipment. Exceptions are cases where liquid formations of very small droplets can occasionally form in the gas and cannot be removed.		

⁵ Applies for reference pressure of 80 barg.

⁶ Applies for any pressure ranging from 1 to 80 barg.

Parameters	Measured Unit	Limits		CYS EN ISO
		Minimum	Maximum	
Odourising agent		Natural Gas is delivered to entry points without any odourising agent.		
Natural Gas Temperature	°C	-5	50	CYS EN ISO 6976

^α CYS EN ISO 6976 for the calculation of the calorific value, the Wobbe index, the density and the relative density subject to the gas mixture .

^β CYS EN ISO 6974 for the estimation of the (gas) mixture .

Schedule VIII Cyprus Gas Network Code (CGNC) Overview

The CGNC will be a public domain document that sets out standard technical and commercial terms and conditions between the transporter of the gas (Cygas TSO) along the gas network and the shipper (gas consumers at each Withdrawal Installation) and enables open and non-discriminatory access to the Gas Transmission System.

The code of operations governs the relationship between the transporter and the gas consumer on the Gas Transmission System. The gas consumers will need to accept the terms of the code of operations and therefore, before signing binding Connection Project Applications the gas consumers will need to understand the principles of the CGNC. A summary of these key aspects of the CGNC are provided below for the following:

- nomination forecast
- nomination scheduling,
- balancing,
- capacity,
- modification regimes

9.3 Key aspects of the CGNC - Nominations

Given the relatively small size of the Cygas-TSO gas pipeline network, the close geographical location of gas customers in the vicinity of the LNG Facilities, and the relatively low levels of line-pack even with the pipe array, accurate and timely nominations will be important. The purpose of this section is to highlight the role of nominations in the CGNC, covering the following areas.

(a) Principles

All gas network codes have nominations regimes that allow Gas Shippers to inform the TSO of their best estimates regarding how much gas its suppliers intend to deliver into the gas network and how much gas its customers intend to take from the gas network in each time period. The underlying principles being as follows:

- Cygas-Commercial, its suppliers and customers shall provide accurate and timely nomination forecasts to Cygas-TSO for both gas deliveries and off-takes.
- Nomination forecasts which may take place within day, daily, weekly, monthly, and quarterly intervals.
- Renominations – Updating nominations within the day (re-nominations)

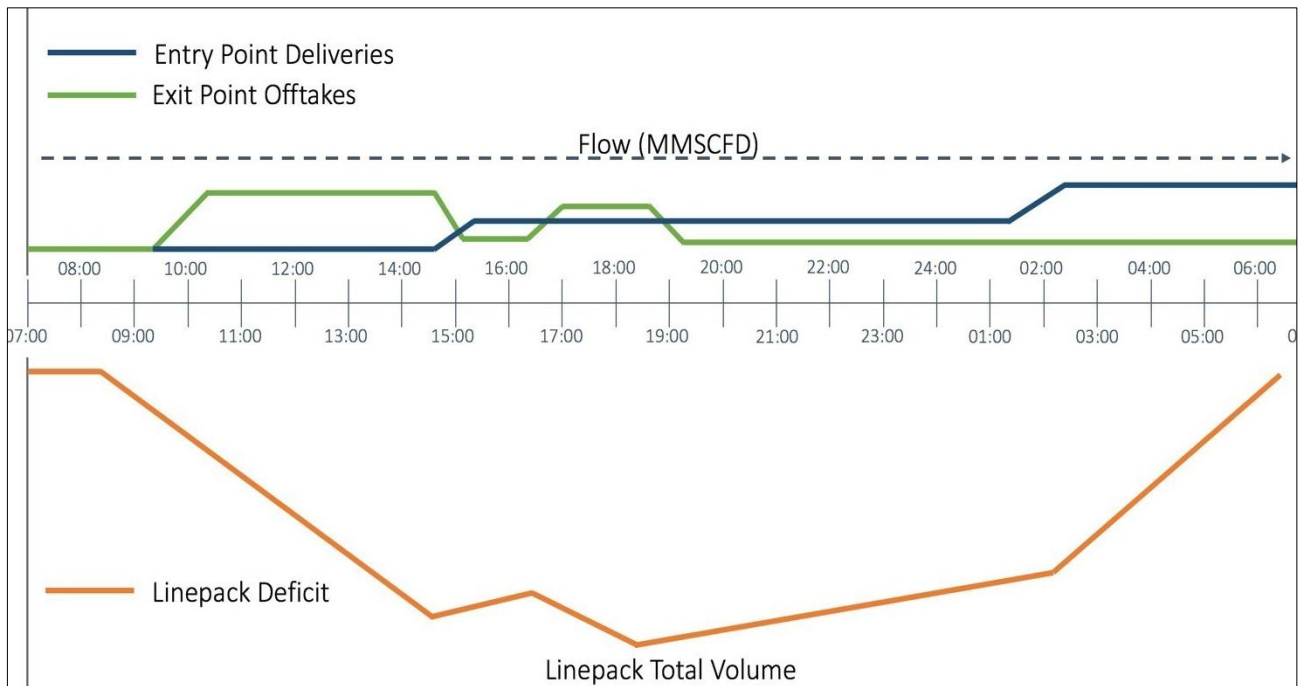
Accurate and timely nominations are required to be provided by Cygas-Commercial, its suppliers and customers to ensure that Cygas-TSO has accurate data to run the gas pipeline system. This need for accurate nominations will only increase as the complexity of the system increases or the number of Gas Shippers or gas suppliers increases so it will be important to put the appropriate processes in place from the start. This in turn ensures operational integrity, allowing the TSO to optimise system maintenance, and the TSO to plan for the longer term.

(b) Practicalities

It is important to remember that the Cygas-TSO gas pipeline system will initially be quite small consisting of only a few km of pipeline with very low levels of line-pack, even with the additional pipe array. This means that even small variations in supply and / or demand could very quickly deplete any available line-pack.

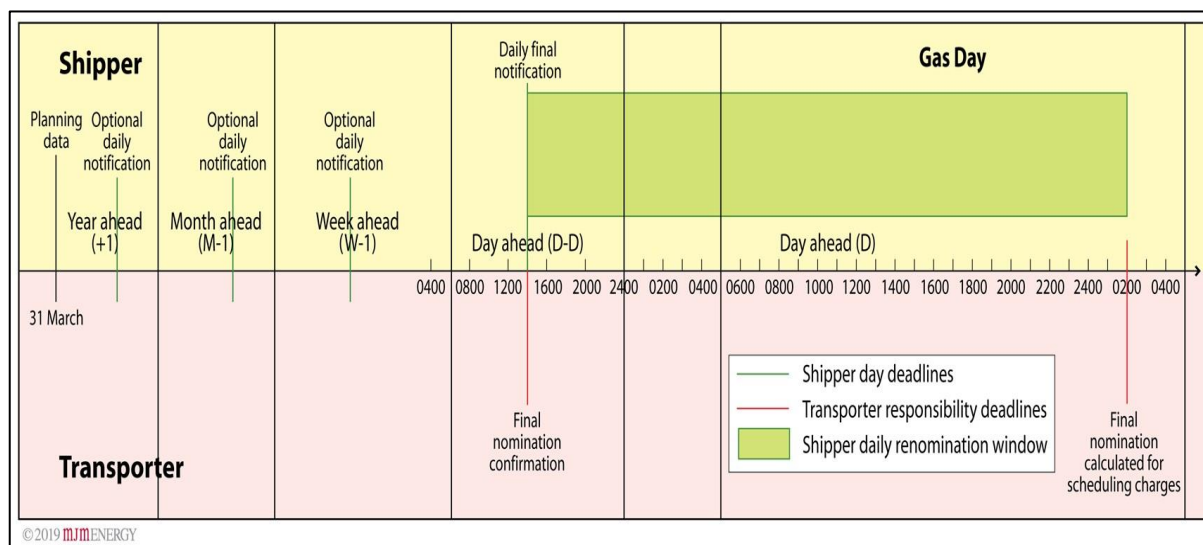
The following schematic shows how small variations in either supply or demand can quickly deplete line-pack.

Figure 2 - Example - Impact of flow variations in line-pack



In the light of the above sensitivity to variations in supply and demand one would expect a rigorous nominations regime in the CGNC like the one shown in the diagram below that includes Year ahead nominations; Month ahead nominations; Week ahead nominations; Day ahead nominations, and possibly hourly nominations. One of the key issues that the CGNC will need to resolve will be whether the CGNC requires balanced nominations, (where both delivery nominations and offtake nominations need to be equal) each day, or some degree of flexibility in nominations is provided subject to other operational controls being in place.

Figure 3 - Example - Typical day-ahead nominations regime.



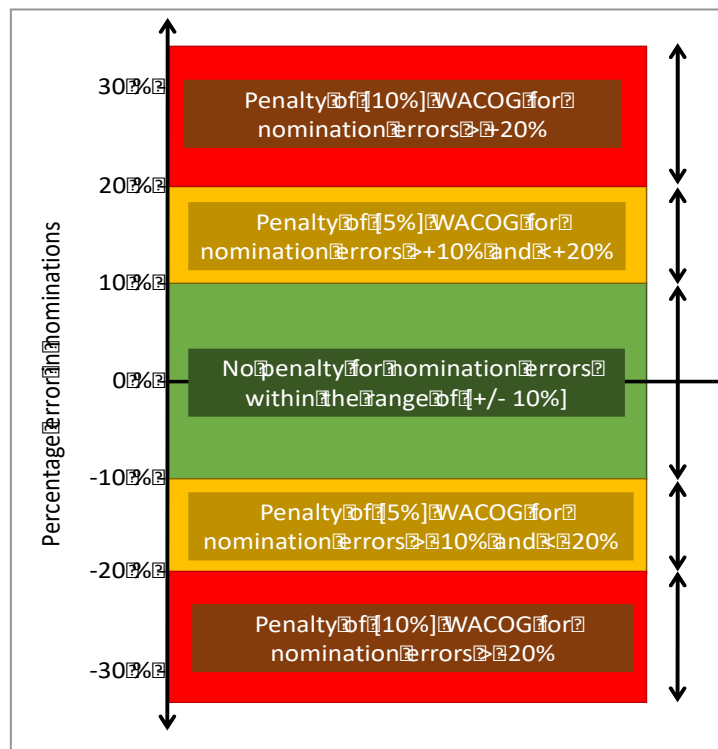
9.4 Key aspects of the CGNC – Nominations scheduling

One proviso for nomination activity is that the nominations are accurate; there is no value to the system of a nomination for a particular level of gas delivery if this does not match the physical characteristics of the plant behind the injection point or exit point⁷. It is not enough just to input matching numbers for entry point flows and exit point flows; they must be deliverable in practice. To that end, it will be important that Cygas-Commercial, and later other Gas Shippers, develop a portfolio of contracts at both Entry and Exit points that allow it to deliver a balanced set of realistic nominations. This is a situation that could take some time to evolve in Cyprus if the only significant source of gas is the single Entry Point at the LNG Facility.

Development of an effective nominations and information transfer system will be crucial to effective operations under the CGNC. One way this can be achieved is using nomination scheduling charges. Where scheduling charges are ex post i.e. after the gas has flowed, charges are levied in proportion to the difference between a nomination and the outturn metered quantity and are designed to incentivise accurate nomination behaviour. Typically calculated as a percentage error. The hope is that these charges will be set at a sufficiently high level to ensure that all stakeholders in the gas chain (LNG suppliers, gas users, Cygas-Commercial) provide accurate and timely nominations. In addition, by encouraging Cygas-Commercial, its customers and suppliers to provide accurate and timely information it will encourage an industry focus on customer activities and will also have the effect of minimising residual balancing as gas is flowing.

⁷ For example, LNG terminal operators may impose lower rates of flow change in the contract than can be delivered by the plant to prolong the life of the plant.

Figure 4 - Schematic of how nomination scheduling charges might work



The above schematic simply describes how scheduling errors of greater than +/- 10% in both deliveries and offtakes will incur a penalty of between 5% and 10% of WACOG for example.⁸ In many respects, the tolerances and the penalties are suggestions which the Cygas-TSO will need to decide in conjunction with Cygas-Commercial and CERA. It is however the principle that inaccurate nomination behaviour by a gas shipper/seller should incur a financial penalty, which increases in severity the greater the error.

9.5 Key aspects of the CGNC – Energy Balancing

Maintaining pressures on a gas pipeline network within safe operating levels is a crucial part of system operations. The CGNC will need to be drafted to facilitate the capability of Cygas-TSO to maintain an effective balance of inputs and offtakes in a fair manner, while encouraging Cygas-Commercial and other connected parties to operate in a manner that supports the balance of the system. Where other connected parties will initially include end-users (the three proposed power stations), the LNG import terminal and at a later date other Gas Shippers, additional end-users and potentially additional supplies of gas. The purpose of this section is to highlight the role of balancing within the CGNC, covering the following areas.

(a) Principles

Typically, gas network codes have energy balancing regimes that allow the TSO to balance supply and demand on the gas pipeline network. The underlying principles being as follows:

- Cygas-TSO has the operational responsibility for gas balancing.

⁸ WACOG – Means the ‘Weighted Average Cost of Gas’, which is a common price used by TSOs in gas transportation agreements and gas network codes. Given the single supply status of the Cyprus gas market, Cygas-TSO will need to decide what value it uses in scheduling and balancing charges.

- The objective is always to ensure that Cygas-Commercial and other future Gas Shippers have a strong financial incentive to balance, where the cost of balancing supplies and demand should be paid for by the Gas Shippers.
- Maintaining an effective and efficient balance on a typical gas transportation network relies on the interaction of several key areas in the CGNC namely the nominations regime, system balancing and imbalance settlement. Where the nominations regime and imbalance settlement processes are the 'pre' and 'post' gas flow elements of the arrangements that encourage Cygas-Commercial and other connected parties to operate in a manner that supports real time system balancing.

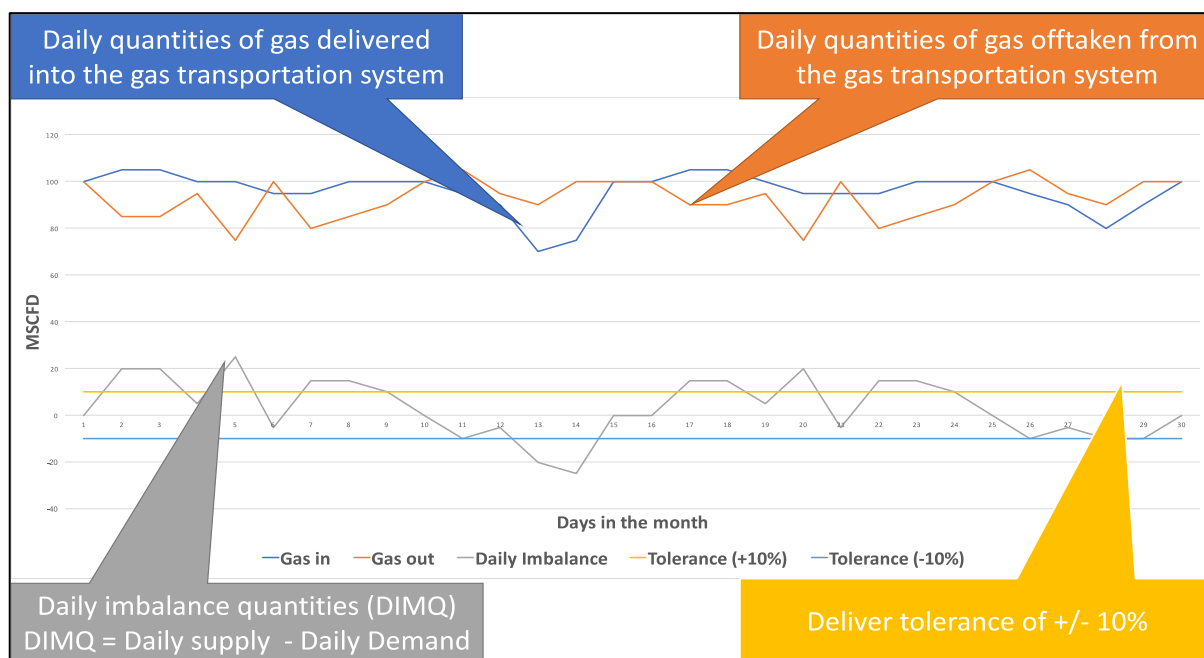
(b) Practicalities

As previously highlighted, the Cygas-TSO gas pipeline system will initially consist of a single Entry-Point (the LNG Facilities AGI) supplying gas via a relatively small gas pipeline transmission network to three Exit Points (the power station AGIs). The relatively small size of the gas transmission system, even with the pipe array, does mean that Cygas-TSO will have very little operational flexibility indeed to respond to even quite small variations in supply and demand. For example, it is estimated that the capacity of the pipe array corresponds to around 30 minutes of operation at maximum flow. Therefore, it will be important that the CGNC identifies and codifies those balancing tools that are at its disposal, which may include one or more of the following.

- Increasing or reducing linepack temporarily.
- Access to gas in storage – This may be possible in the future via a larger FSRU or onshore storage,
- Offers by system users to modify their injections or withdrawals at short notice.
- Utilisation of longer-term contracts to provide margin gas, which is analogous to the use of reserve contracts in a power market.

The following diagram provides a simple example of how relatively small variations in supply and demand can create daily imbalances. In reality the Cygas-TSO gas transmission system, given its relatively small size, will be more sensitive to variations in supply and demand.

Figure 5 – Example of daily balancing variations



In the light of the above, the central principle of energy balancing is that Cygas-Commercial contracts for sufficient gas ahead of time to meet its customers' needs. However, even with the best forecasting techniques, mismatches will occur between forecast and outturn resulting in mismatches between injection and consumption. These mismatches are termed imbalances. A typical balancing incentive regime would consist of the following:

- A proxy penalty price for gas – An imbalance settlement regime works by setting a proxy penalty price for the imbalances. In effect, the 'system' buys surpluses from gas shippers/sellers at a significant discount to the market price (say 75% WACOG) or sells gas to gas shippers/sellers at a significant premium to the market (say 125% WACOG) to cover deficits on a periodic basis.
- The balancing period – The period over which imbalance calculation operates will be determined by the physical parameters of the system. Typically, TSOs balance, daily, or in some cases hourly.
- The imbalance tolerance – Once the balancing period has been agreed the CGNC will need to establish both a tolerance regime and an associated penalty regime for failing to stay within that tolerance.
- Energy equivalent reconciliation – For the avoidance of doubt we would expect the CGNC to undertake all balancing and scheduling calculations in terms of energy.

Therefore, Participants need to be aware that once the CGNC has been agreed that Cygas-Commercial will have operational and commercial obligations to Cygas-TSO in relation to system balancing and imbalance settlement that it will need to pass through to its customers.

9.6 Key aspects of the CGNC – Capacity

In some respects, including a section in this high-level overview of the CGNC on capacity might seem strange but the initial p/th or c/KWh contracts for gas sales between Cygas-Commercial will be based on an implicitly bundled sale of gas as a commodity and the associated pipeline capacity. As the complexity of the system increases, experience of other

developing markets has shown that capacity and commodity treatment will inevitably split so it will be important to establish the principles of capacity management from the start. Hence, in the operational and commercial relationship between Cygas-TSO and Cygas-Commercial governed by the CGNC, both parties will need to consider how capacity is purchased and managed. It will be beneficial for Participants to understand that capacity will need to be booked and managed by Gas Shippers since some of these obligations will ultimately pass through the CGNC to bidders who will be expected to provide information relevant to capacity booking and its use.

Ensuring fair and non-discriminatory access to transmission capacity has been a central theme of the successive Energy Packages of the European Union culminating in Regulation (EU) 2017/459 establishing a network code on capacity allocation mechanisms in gas transmission systems and repealing Regulation (EU) No 984/2013. As the Cyprus gas market develops and the derogation as an emergent market falls away, compliance with Network Codes will become a requirement.

The purpose of this section then, is to provide a high-level overview of the principles and practicalities associated with the booking and management of capacity, as follows:

(a) Principles

Typically, gas network codes have capacity booking regimes where the underlying principles associated with capacity booking and management can be summarised as follows:

- Open and transparent information management – The EU NCs envisage an open and transparent capacity information regime, for the purchase and sale of Entry/Exit capacity.
- Publication of information - Information in relation to capacity to be published on the Cygas-TSO website and reported to CERA,
- Easy access to capacity - Offer and facilitate access to available capacity for gas shippers/sellers in line with the EU Network Code.

(b) Practicalities

As highlighted above while capacity booking and its management can be a huge area for gas network codes, initially given the simplicity of the Cygas-TSO network and the bundled nature of Cygas-Commercial sales to Participants a more simplified version of capacity booking and management is likely to emerge in the early versions of the CGNC. Where the CGNC seeks to establish a fair, open and transparent process. This will include:

- Offering and facilitating access to available capacity.
- Responding to requests for capacity in a timely manner.
- Potentially allocating available capacity via an auction mechanism, at some point in the future and certainly when Cyprus connects to the wider EU gas network.
- Determining capacity in an open and transparent manner using established methodologies

Participants need to be aware that capacity booking and management will be included in the CGNC and will be expected to develop further over time. This will have an impact on how end-users use capacity, since end-user use of capacity will potentially incur

costs for Cygas-Commercial as a Gas Shipper, which it will want to pass onto its customers.

9.7 Key aspects of the CGNC – The Modification Regime

Typically, gas network codes evolve over time as the gas market develops and changes and new players enter the market. This will be true for the Cygas-TSO network which is expected to grow and develop well beyond the initial Offtake Catchment Area. Therefore, it will be important to facilitate effective change management through the CGNC, while maintaining principles of stakeholder consultation and engagement. Although Cyprus is slightly unusual, since it will be starting with only one Gas Shipper, Cygas-Commercial, there will be several other stakeholders in the shape of the various power station operators. The purpose of this section is to examine in the CGNC modification process, covering the following areas.

(NB:While the CGNC modification process is not obviously operational or commercial, we have included this section to provide reassurance to end-users and future Gas Shippers and gas suppliers that they will be involved in any future developments of the CGNC.)

(a) Principles

Typically, gas network codes have modification regimes, where the underlying principles are as follows:

- Open and transparent – Modifications to the CGNC should be determined in an open and transparent manner.
- Wide stakeholder consultation and engagement, which would encompass Cygas-TSO, Cygas-Commercial, end-users (customers), gas suppliers (the LNG import terminal) and the NRA (National Regulatory Authority).
- Clear regulatory oversight – The NRA, CERA, should still be able to oversee the modification process.
- Balanced administration – Ideally the modification panel administration should make best efforts to consider and account for all opinions/concerns/proposals brought to the panel.
- Smooth and effective process – There should be a good admin process for raising and dealing with issues

(b) Practicalities

On a practical note the CGNC will need to set the framework for the formation of a modification panel, its membership, how it will be funded etc. Key points are as follows:

- Open and transparent process – This will establish what organizations should be involved in the modification process, and how the overall process should be managed.
- Impartiality of administration – Cygas-TSO will administer the Modification Panel and it will ensure its impartiality.
- Resources – The cost of administering the Modification Panel, which is typically borne by the TSO, will need to be budgeted for and included in the Cygas-TSO cost base.

The following diagram provides a simple example of what the membership and structure of the Modification Panel might look like. Participants need to recognise that should they be successful that it is likely the CGNC will facilitate the opportunity for them as end-users to participate in such a forum and influence potential modifications to the CGNC.

9.8 Other aspects of the CGNC

For the sake of brevity this high-level review has focused on those key aspects of the CGNC that will have a clear operational or commercial impact on Participants. Clearly, the CGNC will consist of many other areas that have not been included in this high-level but are not so obviously relevant. Therefore, for the sake of completeness we have included a summary table below that shows other aspects of the CGNC that might be of interest to potential bidders.

Figure 6 – Potential additional areas in the CGNC that Participants need to be aware of

Topic	Comments
Interoperability	This will not initially be an issue for the CGNC and will not be part of this section.
Tariff structure	A summary of the Tariffs and the tariff methodology will be discussed elsewhere in the CPP.
Credit issues	In the initial CGNC which will be between Cygas-TSO and Cygas-Commercial credit risk will not be an issue as both parties are business units of Cygas. However, at the point that either Cygas-TSO and Cygas-Commercial are fully unbundled or when independent Gas Shippers are allowed to operate credit will become an import issue.
Gas quality	While there will be a gas quality section in the CGNC, for the purposes of the CPP gas quality is covered in Schedule VII.
Treatment of UFG	Whilst rules for dealing with UFG will be included in the CGNC, given the simplicity of the current pipeline network this is unlikely to be a major commercial issue, because losses should at or near to zero and measurement of Own Use Gas for the operation of heaters or compressors will be easily estimated.
Settlement and invoicing	<p>Whilst these are standard commercial terms that are found in any commercial contract it will be important to set them out in an open and transparent manner for a number of reasons:</p> <ul style="list-style-type: none"> • The nature of these terms in the contract between Cygas-TSO and Cygas Commercial will flow through to the commercial arrangements between Cygas-Commercial and its customers (the power station operators in the first instance). For example, the invoicing timetable of the CGNC will likely drive the equivalent timetable between Cygas-Commercial and End Users; End Users wouldn't expect to be subject to requirements to settle invoices in days if Cygas-Commercial had weeks to settle TSO invoices for instance. • If a new Gas Shipper wanted to enter the market, EU requirements would be that it was subject to similar commercial terms regarding the settlement timetable, invoicing arrangements etc.

Topic	Comments
	<ul style="list-style-type: none">• Where the Cygas Commercial arrangements have “pass thru” arrangements, End Users will need to understand the basis of these charges.