

Produced by National Grid Gas Transmission For the Period 01 April 2021 – 31 March 2022

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1.0 EXECUTIVE SUMMARY

National Grid Gas has been given the discretion by Ofgem with regard to the Procurement of System Management Services, subject to an obligation under National Grid's Gas Transporter (GT) Licence to operate the system in an efficient, economic and co-ordinated manner, and taking into account the GT (Gas Transmission) incentives.

National Grid Gas (NGG) confirms that System Management Services during the period covered by this report has been procured in accordance with the principles set out in the prevailing Procurement Guidelines, and therefore NGG considers that such activities satisfy its relevant Licence obligations.

2.0 INTRODUCTION

2.1 Purpose of the document

This document sets out the Procurement Guidelines ("the Guidelines") which National Grid Gas plc is required to maintain, in accordance with Special Condition 9.19, System Management Services (the Special Condition) of the National Grid Gas plc, Gas Transporter Licence (the Licence). The purpose of the Guidelines is to provide information on the System Management Services and tools that NGG may procure in relation to its System Management role. The Guidelines cannot cover every possible situation that NGG may encounter. They represent a generic statement of the procurement principles and tools that the company may use in respect of gas, energy and/or capacity management.

Unless defined in the Guidelines, capitalised terms used herein shall have the same meanings given to them in the Licence or the Uniform Network Code (UNC). Where statutory obligations or the provisions of the UNC are considered inconsistent with any part of these Guidelines, then the relevant statutory obligation and/or UNC provision will take precedence.

The latest version of this document is available electronically from: https://www.nationalgridgas.com/about-us/how-were-regulated/gas-industry-compliance
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2.2 Reporting Period

The report includes details of System Management Services procured in relation to the gas flow period 1 April 2021 to 31 March 2022 inclusive.

This reporting period covers the last month of the Storage Year 2020/2021 (April 2021) and the majority of Storage Year 2021/2022 (May 2021 to March 2022).

3.0 PROCUREMENT OF SYSTEM MANAGEMENT SERVICES

3.1 <u>Definition of System Management Services</u>

Special Condition 9.19 of National Grid's GT Licence defines the System Management Services as the "services in relation to the balancing of gas inputs to and gas off takes from the National Transmission System (NTS) and includes balancing trades and balancing trade derivatives and constraint management services".

This is the first Procurement Guidelines report that has been issued for RIIO2 period and reflect the new licence changes. The Guidelines have been modified in accordance with the processes set out in Special Condition 9.19 of the Licence. NGG will monitor the operation and application of the Guidelines and, where appropriate, periodically meet with Users to review the Guidelines and consider modifications.

Table 1 summarises the System Management Services required for the following applications; These are: -

- 1. Operating Margins Gas
- 2. Shrinkage
- 3. Entry Capacity Management
- 4. Exit Capacity Management
- 5. Gas Balancing

3.2 System Management Services Procured

The services NGG procured in this period are summarised in Table 1.

1. Operating Margins (OM)

The purpose of an OM system management service is to ensure operational balancing capability in the event of a supply failure, demand forecast change or plant failure. In addition, a quantity of OM is held in reserve to manage the orderly run-down of the system in an emergency.

Service Component	Component Description and Details
Holdings Contracts (Capacity and Deliverability Arrangements)	National Grid (OM) procured this service at the following facilities: Aldbrough storage facility Hill Top Farm storage facility Holford storage facility Hornsea storage facility Humbly Grove storage facility Stublach storage facility Milford Haven LNG importation terminal Grain LNG importation terminal Power Stations

Service Component	Component Description and Details For the period 1 April 2021 – 31 March 2022, NGG procured OM as follows:							
Holdings Contracts (Capacity Arrangements)								
,	Month	Contract Type	Space (kWh)	Average Unit cost (p/kWh/annum)				
	Apr-21	Capacity Contracts	294,281,877	1.6773				
		0 1: 0 :	004 004 077	4.0000	•			
Holdings Contracts	May-21 to Mar-22	Capacity Contracts	294,281,877	1.0826	<u> </u>			
Holdings Contracts (Delivery Arrangements)	For the period 1 April 2021 -			1.0826] 			
(Delivery				Average Price (p/kWh/d/annum)]			
(Delivery	For the period 1 April 2021 -	- 31 March 2022, NGG proc	ured OM as follows:	Average Price				

Service Component	Component Description and Details
Gas Procurement	National Grid (OM) utilises this service to address an Operating Margins gas deficit at a given storage facility where National Grid holds Operating Margins Capacity Arrangements. National Grid (OM) may source required gas by injecting gas that has been withdrawn from storage facilities with an Operating Margins gas surplus, or through a market tender process or through our trading desk.
	For the period 1 April 2021 – 31 March 2022, no OM gas was procured.
Gas Disposal	For the period 1 April 2021 – 31 March 2022, no OM gas was disposed.
OM Transfer between Storage Facilities	National Grid (OM) utilises this service to address a gas-in-store surplus or deficit by transferring OM gas between Storage Facilities. For the period 1 April 2021 – 31 March 2022, NGG transferred 58,900,713 kWh of OM Gas between Storage Facilities.
OM Utilisation	National Grid (OM) utilises Operating Margins services to ensure Operational Balancing capability in the event of a supply failure, demand forecast change or plant failure.
	For the period 1 April 2021 – 31 March 2022, there was no OM service utilisation.

2. Shrinkage

The NTS Shrinkage Provider manages the procurement of gas associated with the shrinkage account. Shrinkage covers gas for own use (running of compressors, vented gas, gas used for preheating) and to cover any gas losses (unidentified theft, meter errors, leakage) and CV shrinkage associated with variations in calorific value of gas. The account is subject to normal cash-out arrangements if the daily gas quantities delivered to the system do not match the Daily Shrinkage Quantities.

NGG manages this service by trading gas at the National Balancing Point (NBP).

Service	Component Description and Details
Component	

NBP Trades

For 1 April 2021 – 31 March 2022, NGG procured NTS shrinkage via NBP trades as follows:

Month	Total Quantity Purchased (kWh)	Purchase Cost (£)	Weighted Average Purchase Price (p/kWh)	Total Quantity Sold (kWh)	Sell Revenue (£)	Weighted Average Sell Price (p/kWh)
Apr-21	237,651,274	4,253,970	1.7900	1,142,977	20,085	1.7573
May-21	190,965,064	3,833,657	2.0075	0	0	0
Jun-21	125,434,388	2,352,148	1.8752	0	0	0
Jul-21	109,022,412	2,010,397	1.8440	35,227,134	1,062,840	3.0171
Aug-21	144,777,074	3,480,111	2.4038	1,172,284	43,600	3.7192
Sep-21	129,537,382	3,094,195	2.3887	1,318,820	76,713	5.8168
Oct-21	354,850,367	15,335,376	4.3216	3,106,553	235,532	7.5818
Nov-21	479,171,085	23,052,705	4.8110	72,769,529	5,378,262	7.3908
Dec-21	523,717,877	26,194,885	5.0017	224,638,922	20,557,200	9.1512
Jan-22	478,878,014	30,819,867	6.4358	12,045,218	871,158	7.2324
Feb-22	514,808,519	32,109,437	6.2372	0	0	0
Mar-22	415,340,221	27,091,687	6.5228	0	0	0

Component mbalance Cash-out	From 1 April 2021 – 31 March 2022, NGG's imbalance cash-out for the NTS shrinkage account was as follows:									
	Month	Total Quantity Purchased (kWh)	Purchase Cost (£)	Weighted Average Purchase Price (p/kWh)	Total Quantity Sold (kWh)	Sell Revenue (£)	Weighted Average Sell Price (p/kWh)			
	Apr-21	20,326,866	396,859	1.9524	799,593	14,416	1.8030			
	May-21	6,104,769	142,757	2.3385	1,479,343	32,408	2.1907			
	Jun-21	4,643,326	109,658	2.3616	2,466,371	61,574	2.4965			
	Jul-21	1,212,530	41,263	3.4031	6,184,906	182,202	2.9459			
	Aug-21	10,478,008	392,910	3.7499	1,081,371	39,101	3.6159			
	Sep-21	6,159,426	293,326	4.7622	2,516,400	141,451	5.6212			
	Oct-21	8,081,585	567,276	7.0194	3,939,132	270,462	6.8660			
	Nov-21	6,390,424	400,315	6.2643	3,690,461	242,035	6.5584			
	Dec-21	5,562,865	526,753	9.4691	3,397,358	324,368	9.5477			
	Jan-22	10,691,442	719,748	6.7320	4,475,668	307,957	6.8807			
	Feb-22	11,776,692	786,370	6.6773	1,616,891	96,601	5.9745			
	Mar-22	13,276,644	1,197,747	9.0215	1,696,570	184,299	10.8631			

3. Entry Capacity Management

The purpose of an entry capacity management service is to enable NGG to efficiently manage firm NTS entry capacity rights. Entry capacity holdings may need to be reduced to either efficiently manage capacity risk exposure or to reduce holdings, and thereby manage flows onto the system. NGG may buyback firm NTS entry capacity from Users via the Gemini entry capacity system or it may enter into Capacity Management Agreements (CMAs). NGG may develop further services or enter into contracts that will enable it to better manage both its operational and commercial risks.

Service Component	Component Description and Details
Buybacks on Gemini	For the period 1 April 2021 – 31 March 2022, NGG procured these services as follows:

Month	ASEP	No. of days on which offers accepted	No. of offers accepted	Quantity accepted (kWh)	Weighted average price (p/kWh)
Apr-21	None	0	0	0	0
May-21	None	0	0	0	0
Jun-21	None	0	0	0	0
Jul-21	None	0	0	0	0
Aug-21	None	0	0	0	0
Sep-21	None	0	0	0	0
Oct-21	None	0	0	0	0
Nov-21	None	0	0	0	0
Dec-21	None	0	0	0	0
Jan-22	None	0	0	0	0
Feb-22	None	0	0	0	0
Mar-22	None	0	0	0	0

Service Component	Component Description and Details							
CMAs – Options Agreements	For the period 1 April 202	21 – 31 March 2022	- 31 March 2022, NGG procured these services as follows:					
	Period	ASEP	Total Quantity Accepted (kWh)	Cost of Option (£)				
	Apr-21	None	0	0				
	May-21	None	0	0				
	Jun-21	None	0	0				
	Jul-21	None	0	0				
	Aug-21	None	0	0				
	Sep-21	None	0	0				
	Oct-21	None	0	0				
	Nov-21	None	0	0				
	Dec-21	None	0	0				
	Jan-22	None	0	0				
	Feb-22	None	0	0				
	Mar-22	None	0	0				

Service Component Component Description and Details

CMAs – Forwards
Agreements

Component Description and Details

For the period 1 April 2021 – 31 March 2022, NGG procured these services as follows:

Month	ASEP	Quantity utilised (kWh)	Total Cost of Forward Buybacks (£)
Apr-21	None	0	0
May-21	None	0	0
Jun-21	None	0	0
Jul-21	None	0	0
Aug-21	None	0	0
Sep-21	None	0	0
Oct-21	None	0	0
Nov-21	None	0	0
Dec-21	None	0	0
Jan-22	None	0	0
Feb-22	None	0	0
Mar-22	None	0	0

Service Component Component Description and Details For the period 1 April 2021 – 31 March 2022, NGG procured these services as follows: CMAs - Options Utilisation **Total Cost of Quantity utilised** No. of days on which Month **ASEP** utilisation (kWh) option exercised (exercise) (£) None 0 0 0 Apr-21 None 0 0 0 May-21 None 0 0 0 Jun-21 None 0 0 0

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Jul-21

Aug-21

Sep-21

Oct-21

Nov-21

Dec-21

Jan-22

Feb-22

Mar-22

Service Component			Component Description and Details
Flow Management Agreements	For the period 1 April	2021 – 31 March 20	22, NGG procured these services as follows:
	Month	Total Cost (£)	
	Apr-21	0	
	May-21	0	
	Jun-21	0	
	Jul-21	0	
	Aug-21	0	
	Sep-21	0	
	Oct-21	0	
	Nov-21	0	
	Dec-21	0	
	Jan-22	0	
	Feb-22	0	
	Mar-22	0	

4. Exit Capacity Management

The purpose of an exit capacity management service is to enable the system to accommodate gas flows in accordance with Users' firm NTS exit capacity rights. In the event of desired exit flows exceeding capability, NGG may procure a range of demand/supply side services in order to achieve the desired changes in gas flows. NGG may buyback firm NTS exit capacity from Users via the Gemini exit capacity system or it may enter into CMAs, to manage NTS exit constraints and/or Network Gas Supply Emergencies. NGG may develop further services or enter into contracts that will enable it to better manage both its operational and commercial risks.

Service Component	Component Description and Details
Buybacks on Gemini	For the period 1 April 2021 – 31 March 2022, NGG procured these services as follows:

Month	Exit Point	No. of days on which offers accepted	No. of offers accepted	Quantity accepted (kWh)	Weighted average price (p/kWh)
Apr-21	None	0	0	0	0
May-21	None	0	0	0	0
Jun-21	None	0	0	0	0
Jul-21	None	0	0	0	0
Aug-21	None	0	0	0	0
Sep-21	None	0	0	0	0
Oct-21	None	0	0	0	0
Nov-21	None	0	0	0	0
Dec-21	None	0	0	0	0
Jan-22	None	0	0	0	0
Feb-22	None	0	0	0	0
Mar-22	None	0	0	0	0

Service Component			ent Description and	
CMAs – Options Agreements	For the period 1 April 20	021 – 31 March 2022	NGG procured these	services as follows:
	Period	Exit Point	Total Quantity Accepted (kWh)	Cost of Option (£)
	Apr-21	None	0	0
	May-21	None	0	0
	Jun-21	None	0	0
	Jul-21	None	0	0
	Aug-21	None	0	0
	Sep-21	None	0	0
	Oct-21	None	0	0
	Nov-21	None	0	0
	Dec-21	None	0	0
	Jan-22	None	0	0
	Feb-22	None	0	0
	Mar-22	None	0	0

Service Component	Component Description and Details								
CMAs – Forwards Agreements	For the period 1 April 2021 – 31 March 2022, NGG procured these services as follows:								
	Month	Exit Point	Quantity utilised (kWh)	Total Cost of Forward Buybacks (£)					
	Apr-21	None	0	0					
	May-21	None	0	0					
	Jun-21	None	0	0					
	Jul-21	None	0	0					
	Aug-21	None	0	0					
	Sep-21	None	0	0					
	Oct-21	None	0	0					
	Nov-21	None	0	0					
	Dec-21	None	0	0					
	Jan-22	None	0	0					
	Feb-22	None	0	0					
	Mar-22	None	0	0					

Service Component Component Description and Details

CMAs – Options
Utilisation Component Description and Details

For the period 1 April 2021 – 31 March 2022, NGG procured these services as follows:

Month	Exit Point	Quantity utilised (kWh)	Total Cost of utilisation (option+exercise) (£)	No. of days on which option exercised
Apr-21	None	0	0	0
May-21	None	0	0	0
Jun-21	None	0	0	0
Jul-21	None	0	0	0
Aug-21	None	0	0	0
Sep-21	None	0	0	0
Oct-21	None	0	0	0
Nov-21	None	0	0	0
Dec-21	None	0	0	0
Jan-22	None	0	0	0
Feb-22	None	0	0	0
Mar-22	None	0	0	0

Service Component	Component Description and Details						
Flow Management Agreements	For the period 1 April 2021	– 31 March 2022, NGG pi	ocured these services as follows:				
	Month	Total Cost (£)					
	Apr-21	0					
	May-21	0					
	Jun-21	0					
	Jul-21	0					
	Aug-21	0					
	Sep-21	0					
	Oct-21	0					
	Nov-21	0					
	Dec-21	0					
	Jan-22	0					
	Feb-22	0					
	Mar-22	0					

5. Gas Balancing

The purpose of a gas balancing system management service is to enable NGG, either acting in its role as residual system balancer to balance the gas inputs to and offtakes from the NTS within acceptable levels, or for the purposes of localised system management.

Service Component	Component Description and Details
OCM trades	NGG trades on the ICE Endex On-the-day Commodity Market (OCM) day ahead and/or within day to resolve imbalances. OCM trades are deployed to achieve both national system balance and to meet localised requirements. For national system requirements, NGG trades in all three OCM markets i.e. physical, title and locational. For localised requirements, NGG only trades in the locational market.
	During the period 1 April 2021 – 31 March 2022, NGG carried out the following OCM trades:

Service Component	Component Description and Details											
OCM 'Title' trades to address a National	National 'NBP Title' Trades											
Requirement	Month	No of Days on Which Trades Accepted	Number of Trade Buys	Number of Trade Sells	Quantity Purchased (kWh)	Quantity Sold (kWh)	Purchase Cost (£)	Sell Revenue (£)				
	Apr-21	22	320	77	798,735,716	203,303,356	15,275,616	3,548,429				
	May-21	24	234	24	560,351,760	50,584,057	12,923,889	1,085,178				
	Jun-21	14	58	77	133,464,534	130,445,903	3,015,999	3,252,491				
	Jul-21	18	41	136	102,750,695	256,671,589	3,124,027	7,721,740				
	Aug-21	19	98	55	195,331,826	125,991,223	7,712,544	4,458,579				
	Sep-21	19	47	178	80,682,450	398,811,020	4,677,082	20,642,002				
	Oct-21	24	62	236	124,174,188	509,298,794	8,776,417	33,497,559				
	Nov-21	21	75	189	165,643,734	384,978,070	12,904,039	24,988,809				
	Dec-21	26	88	330	184,722,653	767,113,352	20,335,929	55,489,145				
	Jan-22	21	104	220	207,523,580	475,712,852	14,953,954	18,895,901				
	Feb-22	16	46	193	104,274,666	439,694,431	6,940,227	27,984,411				
	Mar-22	28	12	454	25,292,027	950,751,653	2,898,057	81,158,333				

OCM 'Physical' trades to address a National Requirement No. of days on which trades buys on which trades buys accepted No. of trade buys on which trades were conducted in this period to address a National Requirement. No. of days on which trades were conducted in this period to address a National Requirement.	Service Component		Component Description and Details										
National Requirement Month No. of days No. of trade buys sells cost (£) CykWh) No. of trades cost (£) CykWh) Purchase Cost (£) Purchase						•	•						
Month No. of days on which trades accepted No. of Trade buys Sells Response Trades No. of days accepted No. of days on which trades accepted No. of Trade buys No. of trades accepted No. of Trade buys accepted No. of Trade buys accepted No. of trades were conducted in this period to address a National Requirement. National 'Locational' Trades No. of Trade buys accepted No. of Trade buys accepted No. of trades were conducted in this period to address a National Requirement. No. of days No. of Trade buys accepted No. of Trade sells No. of trades accepted No. of trades accepted No. of trades trades were conducted in this period to address a National Requirement. No. of days No. of trades were conducted in this period to address a National Requirement. No. of days No. of trades were conducted in this period to address a National Requirement. No. of days No. of trades were conducted in this period to address a National Requirement. No. of days No. of trades were conducted in this period to address a National Requirement. No. of days No. of trades No. of t													
OCM 'Locational' trades to address a National Requirement No. of days accepted No. of trades buys accepted No. of on which trades accepted No. of days	National Requirement					Nation	al 'Physical' T	rades					
OCM 'Locational' trades to address a National Requirement Month No. of days No. of on which trades No. of trade buys Sells No. of trades No. of trades No. of trades No. of trades Sell trades		Month	on which trades	Trade	Trade	Purchased			revenue	Average Purchase Price	Average Sell Price		
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National Requirement Month No. of days on which trades accepted No. of trade sells N													
Gas Demand Side Response Trades Month No. of days accepted No. of Trade buys accepted No. of Trade sells No. of Trade sell													
Gas Demand Side Response Trades Month No. of days No. of Trade trades buys accepted buys sells very sells	National Requirement	Month	on which trades	Trade	Trade	Purchased			revenue	Average Purchase Price	Average Sell Price		
Response Trades Month No. of days No. of on which trades trades accepted buys accepted Demand Side Response Trades Quantity Quantity Purchase cost (£) Sell revenue (£) Weighted Average Average Sell Purchase Cost (£) Purchase Pur			No locational trades were conducted in this period to address a National Requirement.										
Month No. of days No. of trade trades No. of trade trades accepted No. of sells No. of trade Sold (kWh) Sold (kWh						D	N' 1- D	- T I					
on which trades trades accepted Trade buys accepted No. of Quantity Purchase (kWh) Quantity Sold (kWh) Quantity Sold (kWh) Purchase cost (£) Average Average Sell revenue (£) (p/kWh)	-		I		T	Demand	siae Respons	e irades	T				
No OCM Gas Demand Side Response 'Locational' trades to address a National Requirement.		Month	on which trades accepted	Trade buys	Trade sells	Purchased (kWh)	Sold (kWh)	cost (£)	revenue (£)	Average Purchase Price (p/kWh)	Average Sell Price		
			No OC	M Gas De	mand Side	e Response 'L	.ocational' tra	des to addre	ss a Nationa	al Requirement.			

Service Component	Component Description and Details											
OCM 'Locational' trades to address a												
Localised		'Locational' Trades										
Requirement	Month	No. of days on which trades accepted	No. of Trade buys	No. of Trade sells	Quantity Purchased (kWh)	Quantity Sold (kWh)	Purchase cost (£)	Sell revenue (£)	Weighted Average Purchase Price (p/kWh)	Weighted Average Sell Price (p/kWh)		
	Jan-22	2	0	5	0	57,441,916	0	£3,625,500.00	0	6.31		
		1			1	. ,		1 . /		ı		