UNC

Supplemental

Agreement

|  |  |
| --- | --- |
| Site | Stratford-upon-Avon Offtake |
| Site Owner | Cadent Gas Limited |
| Site User(s) | National Grid Gas plc |
| Date | 26th September 2018 |

**Any issues concerning the content within this document should be raised with the Site Owner via email to: address@operatororganisation.com**

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**Section 1: Site Details**

|  |  |  |
| --- | --- | --- |
| Name of the Offtake Site | Stratford-upon-Avon | |
| Postal address of the Offtake Site | Shipstone Road  Stratford-upon-A von  CV37 8NA | |
| Co-ordinates for the Offtake Site | OS Coordinates | BNG Coordinates |
| SJ 2052 | E: 420619, N: 252143 |
| Owner of the site (the Site Owner) | Cadent Gas Limited | |
| Site User(s) | National Grid Gas plc | |
| Site safety and access arrangements | Dual Lock and Keys allowing each party to access to site as and when required. | |
| Third Party Interests | None.  i.e. third parties that hold a lease – acquiva  any NGG customer connections on site  any third party assets | |

**Section 2: Site Assets & Ownership**

**2.1 Points of Offtake**

|  |  |  |
| --- | --- | --- |
| Points of Offtake | There is one formal points of offtake at this site. This is:   * Inlet of Cadent Valve 381905 | |
| Exceptions | All assets downstream of the ‘points of offtake’ belong to the site owner, Cadent.  All assets upstream of the ‘points of offtake’ belong to the site user, National Grid plc. | |
| Other | * Cathodic Protection system is owned by the site owner (see Section 2.4) * Telemetry is Shared (see Section 2.3) * **No** Shared Electrical arrangements exist (refer to Section 2.1) * All ISS assets are owned by the site owner | |
| Drawing/Diagram | Please refer to the following Site Owner drawings: | |
| PSD | WM/3819NS/Y/001 |
| GA | WM/3819NS/P/001 |
| Electrical SLD | WM/095/E/001B |
| Other (please specify) |  |

**2.2 Electrical Arrangements**

2.2.1 Main Arrangements

|  |  |
| --- | --- |
| Main Supply | One main feed to site.  All electrical assets are owned by site owner. |
| Specific Ownership | * All Distribution Boards are owned by Cadent Gas Ltd * There is no Block Valve Unit on site. |

2.2.2 Shared Boards

|  |  |  |  |
| --- | --- | --- | --- |
| Board Number or Name | No shared Boards | | |
| Board Owner |  | | |
| Specific Ownership | *Way/Fuse* | *Owner* | *Asset / Description* |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

2.2.2 Actuated Valves

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Specific Ownership | ***Cadent*** | | ***NGG*** | |
| *Valve* | *Type* | *Valve* | *Type* |
| There are no actuators on site | |  | |

2.2.3 Hydraulic Valves

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Specific Ownership  (note: Any RGH’s will be connected to the site’s telemetry arrangements) | ***Cadent*** | | ***NGG*** | |
| *Valve* | *Type* | *Valve* | *Type* |
| There are no hydraulic valves on site | |  | |

2.2.4 Standby Power Arrangements

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Owner | Location | Supports |
| Generator Inlet Socket | Cadent | Inside Control Building | Site – DB1 and all assets downstream |
| UPS | Cadent | Inside Control Building | LGT, FWACV and Danylzer |
| Ulysses PSU | Cadent | Inside Control Building | Cadent Telemetry System |
| Generator Appliance Inlet | Cadent | o/s Control Building | Boiler House only |
| Comments: | | | |

**2.3 Telemetry Arrangements**

2.3.1 Main Arrangements

|  |  |  |  |
| --- | --- | --- | --- |
| Specific Ownership | ***Site Owner (Cadent)*** | | |
| Assets | IS Barrier Box | Notes:  Assers located in or around the Control Building.  P1 Transmitter is owned by Cadent and connected to site owner RTU. This shares the same barrier as P5.  Line: 01789 267068 (ISDN) |
| RTU |
| Router |
| Ethernet Hub |
| Ports |
| DSL |
| Satellite Dish / Radio |
| Non IS I/F Box |
| ***Site User (NGG)*** | | |
| Assets | IS Barrier Box | Notes:  No Site user telemetry assets on site. |
| RTU |
| Router |
| Ethernet Hub |
| Ports |
| DSL |
| Satellite Dish / Radio |
| Non IS I/F Box |

2.3.2 P1 Pressure Transmitter

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Transmitter | Owner | Demarcation | Location | RTU |
| P1 | CGL | Below Offtake Valves | Between CGL IJ/1 and 381907 | Cadent |

2.3.3 Other Pressure Transmitters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Transmitter | Owner | Demarcation | Location | RTU |
| P5 | NGG | Below Points of Offtake | Between 381933 and IJ/2 | Cadent |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

2.3.4 Shared Barrier Loops

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Transmitter | Owner | Transmitter | Owner | Loop |
| P1 | Cadent | P5 | Cadent | Position 1. Channels 1 & 2 |

Any maintenance required to P1 will require prior notification via the OAD process.

**2.4 FWACV Arrangements**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| FWACV Asset | Number  on Site | Location, description & ownership | | |
| Sample Point | 1 | 1 | All FWACV assets are owned by Cadent. |  |
| 2 |  |  |
| PRU’s | 1 | 1 |  |  |
| 2 |  |  |
| Chromatographs | 1 | 1 |  |  |
| 2 |  |  |
| OMNI Computers | 1 | 1 |  |  |
| 2 |  |  |
| Controllers | 1 | 1 |  |  |
| 2 |  |  |
| Mircobox / AB’s | 1 | 1 |  |  |
| 2 |  |  |
| Moxa Unit | 0 | 1 |  |  |
| ADAM Unit | 0 | 1 |  |  |
| Brief description of how systems are shared | | | | |

**2.5 Cathodic Protection Arrangements**

|  |  |  |
| --- | --- | --- |
| CP System / Asset | Owner | Comments |
| AGI TR | Cadent | All CP assets are owned by Cadent. |
| Pipeline TR | Cadent |
| I/J’s 1 and I2 | Cadent |
| Other I/J’s | n/a |
| Groundbeds | Cadent |
| Drain Point(s) | Cadent |
| Shared Test Posts | n/a | No Shared Posts on site |
| Data Loggers | n/a | No data-loggers on site |
| Other Information:   * All National Grid assets are outside the Cadent Offtake CP scheme. These are protected by an NGG pipeline scheme. | | |

**2.6 Buildings, structures and enclosures**

All building, structures and enclosures are owned by the site owner unless listed below:

|  |  |  |  |
| --- | --- | --- | --- |
| Specific Ownership | *Asset* | *Owner* | *Location* |
| All buildings and structures including site fencing are owned by Cadent. |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**2.7 Other Shared Arrangements**

|  |  |  |  |
| --- | --- | --- | --- |
| *Asset* | *Owner* | *Location* | *Description of Shared Arrangement* |
| n/a |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

**Section 3: Site Services:**

The following services are provided by the Site Owner to the Site User:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Cathodic Protection | Not applicable. No NGG assets are protected by the offtake’s CP scheme. | | | |
| Electrical | All power is provided to site via the main supply and busbar. This includes lighting to all buildings, site flood lighting, and space heating.  Site Lighting and Heating are provided via DB1.  All electrical assets are owned by the site owner. (See Section 2.2). | | | |
| Site Security | 2.4m Chainlink Site Fence.  (See Section 1 for access arrangements) | | | |
| General Site Services | * Drainage * General Site Maintenance | | | |
| Telecommunications | The following lines are available on site: | | | |
| *Line* | *Type* | *Owner* | *Comment* |
| 01789 298094 | ISDN | Cadent | Inside Cadent RTU - LHS Control Building. |
| 01789 267068 | PSTN | Cadent | Site Land Line for all parties to use. Located RHS in Main Control Building. |
| Telemetry | All Telemetry assets including the P1 Transmitter are owned by the Site Owner (See Section 2.3). | | | |
| Water and Welfare Arrangements | No water or welfare arrangements within the offtake site. | | | |

**Section 4: Measurement Equipment and Permitted Ranges:**

The Measurement Equipment, and the Permitted Range for the Measurement Equipment, are as follows:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Flow Rates** | | | | | | | | | |
|  | | | **Specified Range** | | | **Permitted Uncertainty Level** | | | |
| **Instantaneous Volume Flow Rate**  Based on pressureof  37 barg | | | Between 1% and 100% of  0.691 MCM/day | | | +/- 2 % of actual flow between 30% and 100% of maximum flow rate. | | | |
| +/- 3.5 % of actual flow between 10% and 30% of maximum flow rate. | | | |
| **Instantaneous Energy**  **Flow Rate**. Based on mean CV = 39.19 MJ/m³ and pressure of 37 Bar | | | Between 1 % and 100% of 27.08 TJ/day | | | +/- 3.2 % of actual flow between 30% and 100% of maximum flow rate. | | | |
| +/- 4.3 % of actual flow between 10% and 30% of maximum flow rate. | | | |
|  | | | | | | | | | |
| **Pressure and Temperature** | | | | | | | | | |
|  | | | | **Specified Range** | | |  | | |
| **Offtake Inlet Gas Pressure** | | | | 0 – 80 barg | | | +/- 0.4% of specified range | | |
| **Outlet Gas Temperature** | | | | -10 to 40 deg C | | | +/- 0.2% of specified range | | |
| **Gas Quality – CV Directed Offtake** | | | | | | | | | |
|  | | | | **Specified Range** | | | **Permitted Uncertainty Level** | | |
| **CV** | | | | 35 - 44 MJ/m³ | | | +/- 1.0 MJ/m³ | | |
| **Carbon Dioxide** | | | | n/a | | | n/a | | |
| **Nitrogen** | | | | n/a | | | n/a | | |
| **Relative Density** | | | | 0.5 – 0.8 | | | +/- 0.002 | | |
| **Wobbe No.** | | | | n/a | | | n/a | | |
| **Measurement Equipment** | | | | | | | | | |
| **No. of Meter Streams** | | | **Stream flow as % of total capacity** | | | **Meter Type** | | **Design Details** | |
| 2 stream(s) | | | 2 x 100% | | | Turbine | | Tube MRA DIA = 150mm  Tube MRB DIA = 150mm | |

**Section 5: Telemetered Data Requirements:**

In this section:

1. a Minimum Requirement is a requirement applicable in relation to any Offtake;
2. a Site-Specific Option is a requirement applicable (in accordance with paragraph (c) below) in relation to certain Offtakes;
3. Site-Specific Options are applicable where so provided under 'Comments' or where agreed between the Parties.
4. Information may be provided under ‘Comments’ in relation to Minimum Requirements and/or Site-Specific Options.

**Part 1 – Analogues**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Point Name** | **Minimum Required** | **Site Specific Options** | **DN Control System**  **Point Name** | **NGG Unique Name** | **Comments** |
| Feeder/Inlet Pressure | Yes |  | P1 | P1 | DNP3 Link – Raw Data to GNCC |
| Outlet Pressure | Yes |  | P5 |  | DNP3 Link – Current Value to GNCC |
| Instantaneous Volume Flow | Yes |  | F1 |  | DNP3 Link – Current Value to GNCC |
| Instantaneous Energy Flow | Yes |  | EF1 |  | DNP3 Link – Current Value to GNCC |
| Outlet Gas Temperature |  | Yes | T1 |  | DNP3 Link – Current Value to GNCC Where Fitted |
| Calorific Volume | Yes |  | CV1 |  | DNP3 Link – Current Value to GNCC |
| Relative Density | Yes |  | SG1 |  | DNP3 Link – Current Value to GNCC |
| Nitrogen | Yes |  | N2\_1 |  | DNP3 Link – Current Value to GNCC Except Tracker only sites |
| Carbon Dioxide | Yes |  | CO2\_1 |  | DNP3 Link – Current Value to GNCC Except Tracker only sites |
| Wobbe | Yes |  | WB1 |  | DNP3 Link – Current Value to GNCC Except Tracker only sites |
| 24 Hour Average CV | Yes |  | CV1\_AVG |  | DNP3 Link – Current Value to GNCC |
| 24 Hour Average RD | Yes |  | SG1\_AVG |  | DNP3 Link – Current Value to GNCC |
| Orifice Standby Differential Pressure |  | Yes | ODP1 |  | DNP3 Link – Current Value to GNCC  ODPn (orifice differential pressure x, where x is a numerical identify) only where fitted |
| Orifice ‘in Use’ Differential Pressure |  | Yes | METER1\_DP |  | DNP3 Link – Current Value to GNCC  METER\_DPn (orifice differential pressure x, where x is a numerical identify) only where fitted |
| Flow Meter Temperature |  | Yes | FT1 |  | DNP3 Link – Raw Data to GNCC  Where Fitted |
| Compressibility |  | Yes | Z1 |  | DNP3 Link – Raw Data to GNCC  Where Fitted |
| Filter Differential Pressure |  | Yes | FLT\_DP1 |  | DNP3 Link – Current Value to GNCC  Where Fitted |

**Part 2 – Digitals**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Point Name** | **Minimum Required** | **Site Specific Options** | **DN Control System**  **Point Name** | **NGG Unique Name** | **Comments** |
| Power | Yes |  | MAINS1 |  | DNP3 Link – Current Value to GNCC  Mains/Phase Fail |
| Charger | Yes |  | CHGR1 |  | DNP3 Link – Current Value to GNCC |
| Site UPS |  | Yes | UPS\_ALM1 |  | DNP3 Link – Current Value to GNCC  Where Fitted |
| Gas Quality System UPS | Yes |  | n/a |  | Not Fitted |
| Gas Quality System Alarm | Yes |  | SYSTEM1 |  | DNP3 Link – Current Value to GNCC  SYSTEMn (system x, where x is a numerical identity |
| Generator Alarm |  | Yes | n/a |  | Not Fitted |
| Generator Available |  | Yes | n/a |  | Not Fitted |
| Generator Bypass |  | Yes | n/a |  | Not Fitted |
| Generator Trip |  | Yes | n/a |  | Not Fitted |
| Generator Running |  | Yes | n/a |  | Not Fitted |
| Generator Status |  | Yes | n/a |  | Not Fitted |
| Barrier |  | Yes | BARRIER |  | DNP3 Link – Current Value to GNCC  Where Fitted |
| Local Comms Link Status |  | Yes | n/a |  | Not Fitted |
| RTU Fault |  | Yes | n/a |  | Not Fitted |
| Watchdog |  | Yes | n/a |  | Not Fitted |
| Filter |  | Yes |  |  | No Digital fitted. See Analogues Section. |
| Maintenance Key |  | Yes | MTCE\_1 |  | DNP3 Link – Current Value to GNCC  Where Fitted |
| Intruder |  | Yes | INTRUDER1 |  | DNP3 Link – Current Value to GNCC  Where Fitted |
| Metering Alarm | Yes |  | MTR\_SUSP1 |  | DNP3 Link – Current Value to GNCC |
| Meter Stream Change |  | Yes | n/a |  | Not Fitted |
| Meter Valve Position |  | Yes | n/a |  | Not Fitted |
| Status Local/Remote |  | Yes | STATUS1 |  | DNP3 Link – Current Value to GNCC  Where Fitted |
| Pressure Override Alarm |  | Yes | OVERRIDE1 |  | DNP3 Link – Current Value to GNCC  Where Fitted |
| CV Not Valid |  | Yes | CV\_N\_VLD1 |  | DNP3 Link – Current Value to GNCC  Where Fitted |
| CV Not Attributable |  | Yes | CV\_N\_ATR1 |  | DNP3 Link – Current Value to GNCC  Where Fitted |
| Outstation Comms Status |  | Yes | OS\_STATUS |  | DNP3 Link – Current Value to GNCC  Scada Link Telemetry Only |
| Comms Routing Status |  | Yes | CM\_ROUTING |  | DNP3 Link – Current Value to GNCC |
| Valve position of all remotely operable valves  (INDICATORS) |  | Yes | V01, V02, V03, V61, V62, V63, V70, V75, V77  All Open |  | DNP3 Link – Raw Data to GNCC  Valves operated by National Grid NTS and Distribution Networks for inlet isolation to be provided where control facilities are necessary but no NTS Physical Telemetry Facilities exist |

**Part 3 – Valve Monitoring / Control**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Point Name** | **Minimum Required** | **Site Specific Options** | **DN Control System**  **Point Name** | **NGG Unique Name** | **Comments** |
| Control Function for remotely operable valves operated by National Grid NTS  (CONTROLS) |  | Yes | n/a | n/a | No remotes on site |

**Part 4 – Integrators**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Point Name** | **Minimum Required** | **Site Specific Options** | **DN Control System**  **Point Name** | **NGG Unique Name** | **Comments** |
| Offtake Volume Integrator | Yes |  | INTG1 |  | DNP3 Link – Current Value to GNCC |
| Offtake Energy Integrator |  | Yes | INT\_EF1 |  | DNP3 Link – Current Value to GNCC  Where Fitted |
| Fuel Gas for Pre-heater Volume Integrator |  | Yes | INTG2 |  | DNP3 Link – Current Value to GNCC  Where Fitted |
| Fuel Gas for Pre-heater Energy Integrator |  | Yes | n/a |  | Not Fitted |

**Section 6: Document History:**

|  |  |
| --- | --- |
| Dated Version | Recorded Changes |
| 28 September 2018 | Conversion to the new template |
| 01 Oct 2016 | Updated to support Hive down for Cadent sale |
| 01 May 2005 | Document Implemented to support Network Sales process |

**Document End**