



MVV Environment Baldovie Ltd

**Baldovie Energy from Waste and Energy from waste
Combined Heat and Power Facilities,**

Forties Road, Dundee

Heat and Power Plan

March 2020 Rev A



1 Introduction

- 1.1** The responsibility to manage waste generated by households in Scotland lies with local authorities. Through a competitive tendering process, MEB Environment Baldovie Limited (MEB) has been awarded the Dundee and Angus Residual Waste Treatment and Disposal contract.
- 1.2** MEB will operate the existing EfW facility at Forties Road, Dundee and construct and operate a new Energy from Waste Combined Heat and Power Facility (EfW CHP Facility) on a site adjacent to the existing EfW facility.
- 1.3** MEB is a wholly owned subsidiary of MEB Umwelt GmbH. It is a member of the German utility company MEB Energie AG. MEB Umwelt provides flexible solutions for waste disposal, producing environmentally sustainable energy.
- 1.4** In Germany and UK, MEB Umwelt operates seven EfW and biomass facilities, managing 1.9 million tonnes of waste a year. With over 50 years' experience, MEB Umwelt is in the top three companies in Germany in its field. The MEB group has treated 2.3 million tonnes of waste in 2016 across Europe.
- 1.5** In the UK, MEB aims to replicate the success of MEB Umwelt in the German EfW sector. Having been awarded a long term contract for the treatment of residual waste in an EfW CHP Facility in Plymouth, and developed a waste wood biomass EfW Facility in Kent, MEB is now using its extensive expertise in generating energy from residual waste to develop further projects in the United Kingdom market. The EfW CHP Facility in Plymouth has an annual incineration capacity of 245,000 tonnes and will achieve an energy efficiency of up to 49%, which is more than twice as efficient as the current norm at British plants.
- 1.6** The Waste (Scotland) Regulations 2012 set out a number of provisions to help Scotland move toward the objectives and targets set out in the Scotland's Zero Waste Plan. Under the regulations, biodegradable municipal waste going to landfill was to be banned from 1 January 2021, however, the Scottish Government announced in September 2019 that this will be deferred to 2025.
- 1.7** All businesses, public sector and not-for-profit organisations have been required to present metal, plastic, glass, paper and card (including cardboard) for separate collection from 1 January 2014. Local authorities are required to provide a minimum recycling service to householders. These regulations seek to maximise the quantity and quality of materials brought to the market and minimise the residual fraction. Also, these separately collected recyclables are banned from going directly to energy recovery or landfill.
- 1.8** The existing EfW and the EfW CHP facilities will sustainably manage waste arising primarily in the Dundee and Angus area, helping to minimise and control the adverse environmental effects of waste that will not be recycled or reused, including the release of greenhouse gases that contribute to climate change, which are currently generated by landfilling.



2. The Pollution Prevention and Control Regime

- 2.1 To build the EfW CHP Facility MEB has secured planning permission under the Town and Country Planning Act 1997 and in order to operate, the EfW CHP Facility has obtained an Environmental Permit (PPC/A/1003157 VN05, issued 28th February 2019), under the Pollution Prevention and Control (Scotland) Regulations 2012 which applies to both the existing EfW facility and the EfW CHP facility.
- 2.2 Under the current PPC permit, it was intended that the new EfW CHP facility would replace the existing EfW facility in 2020 with minimal operational overlap between the facilities. The permit allows both facilities to operate with shared use of some equipment however, the two facilities are not permitted to burn waste at the same time.
- 2.3 Before MVV took over ownership of the existing EfW facility in 2017, the company had limited detailed information on the performance of the existing plant. MVV, therefore, planned for the worst-case scenario of operations at the existing EfW facility ending in March 2020, when it was anticipated that the new EfW CHP facility would be operational.
- 2.4 Since acquiring the existing EfW facility in 2017, MVV has made a number of improvements and is confident that the life of the existing EfW facility can be extended on a commercial basis for up to 10 years. MVV is, therefore, seeking permission to vary PPC Permit PPC/A/1003157 to allow for the operation of the two facilities, in parallel, for a period of up to 10 years from April 2020.
- 2.5 As part of the procedure to obtain the necessary consents for the EfW CHP facility the Scottish Environmental Protection Agency's (SEPA's) Thermal Treatment of Waste Guidelines (TTWG) 2014 required the preparation of a Heat and Power Plan at the time of submitting a planning application.
- 2.6 Under condition 2.8.3 of the PPC Permit PPC/A/1003157 the Heat and power Plan must be updated 6 months prior to the burning of any waste. This update was issued on the 15 November 2019.
- 2.7 This further update of the Plan is issued to support the application to vary PPC Permit PPC/A/1003157 to allow for the operation of the two facilities, in parallel, for a period of up to 10 years from April 2020 and includes relevant information on the existing EfW facility.
- 2.8 Annex 2 of the TTWG sets out the format that SEPA would expect to be used for the preparation of the Heat and Power Plan (HPP). This comprises:
 - Description of the facility technology;
 - Description of the waste to be treated and its energy value;
 - Heat and power plan; and
 - Annexes: Any supplementary information referred to in the submitted plans.
- 2.9 This HPP has been prepared in accordance with the required format.



3.0 Process and Technology Description

- 3.1 The primary purpose of the existing EfW and EfW CHP facilities is to treat waste from the Dundee and Angus area that has not been recycled, reused or composted. The facilities will primarily deal with Household Waste provided by the Dundee and Angus Councils under the Dundee and Angus Residual Waste Treatment contract. In addition, household waste from other local authorities may be treated in the event that further contracts are obtained by MEB. The remaining capacity will be used to process similar Commercial and Industrial (C&I) waste.
- 3.2 The existing EfW facility comprises two lines capable of treating a total of up to 150,000 tonnes of refuse derived fuel per annum. The as-delivered waste is pretreated to produce the refuse derived fuel (RDF).
- 3.3 The EfW CHP facility is designed to treat 110,000 tonnes of waste per annum at the thermal design point of 39.9 Megawatts thermal (MWth) (hourly throughput of 13.725 tonnes per hour (tph) with a Lower Calorific Value (LCV) of 10.5 Megajoules per kilogram (MJ/kg)) and an availability of 91.3% (equal to 8,000 full load operational hours per year).
- 3.4 In both facilities the waste will be incinerated, and the heat used to generate steam. The steam will drive a steam turbine and generate renewable electricity for use at each facility and for export to the grid.
- 3.5 In the case of the EfW CHP Facility the turbine is designed so that up to 20 tonnes per hour of medium pressure steam can be extracted and fed into an industrial steam network to be used for process and heating purposes. The EfW CHP Facility will therefore incorporate Combined Heat and Power (CHP) technology.
- 3.6 The existing EfW facility was not designed for CHP operation and the turbine does not have any extraction points for the delivery of the quantities of steam required for a CHP network. Modification of the turbine which is now some 20 years old would not be practicable and the use of "live" high pressure steam with pressure reduction for this purpose is not cost effective and would have a significant detrimental effect on the overall energy efficiency of the facility.

Waste Delivery

- 3.7 Waste will be delivered to the existing EfW and the EfW CHP facilities in enclosed refuse collection vehicles, roll-on/roll-off vehicles with enclosed containers, and sheeted or enclosed bulk transfer vehicles.
- 3.8 Upon arrival, a computerised database linked to the weighbridges is used to identify and record the nature, source and type of waste delivery along with the vehicle details. The weighbridges will process deliveries to both the existing EfW and the EfW CHP facility.
- 3.9 Waste to be treated by the existing EfW facility is tipped inside the enclosed main tipping hall building, onto sealed concrete surfaces with controlled drainage to sealed underground concrete pits. Inside the hall, the contents of the vehicle are discharged under the supervision of the front-end loader operator, then the delivery vehicle leaves and is weighed out on the exit weighbridge.



- 3.10 The existing EfW facility tipping hall is intended for short term storage of waste prior to it being fed into the RDF preparation plant. Odour and other fugitive releases from the tipping operations are controlled by fast operating automatic roller shutter doors for entrance and exit. Further odour control is provided by extraction of air for combustion.
- 3.11 At peak delivery times the rate of delivery of the waste exceeds the rate of RDF production (30 tonnes per hour maximum), so it is necessary to stockpile the incoming waste within the hall. The management of the operation is closely geared to minimising the waste inventory on site to the levels consistent with continuous operation.
- 3.12 Waste to be treated by the EfW CHP facility will be unloaded in an enclosed tipping hall. The tipping hall will have a “negative air pressure” system to ensure that all odours are contained within the building and treated so that they do not give rise to nuisance. The malodorous air is extracted from the tipping hall and used as primary combustion air in the furnace. The tipping hall will also be provided with a single fast - acting entrance and exit roller shutter door. Delivery vehicles transfer waste directly into the waste bunker via one of four available tipping bays within the tipping hall.
- 3.13 The EfW CHP facility waste bunker consists of the reception bunker (1161 m³) and the storage bunker (4,413 m³). The storage bunker provides capacity for fuel required for six days continuous plant operation (or ten days, if only contract waste is considered).

Waste Combustion

- 3.14 The existing EfW facility utilises bubbling fluidised bed combustion units so the waste to be treated must be processed to produce Refuse Derived Fuel (RDF).
- 3.15 The front-end loader operator inspects the waste for dangerous or unsuitable items. Reject items are segregated into different containers depending on their nature. These rejects are sent for recycling, further processing or disposal, as appropriate.
- 3.16 Dangerous items such as gas cylinders or petrol cans are removed and held in temporary locked storage until appropriate safe disposal can be arranged. Items of waste that have been found to cause problems within the material handling systems in the plant are removed and held in containers to be either sold as scrap, reprocessed elsewhere or landfilled.
- 3.17 The RDF preparation plant employs a shredder and either of two hammermills to reduce the waste from its relatively bulky and non-uniform state as delivered, to a material suitable for combustion in the fluidised bed units. A system of belt and drag chain conveyors receives the RDF and transports it towards the RDF store. The combined action of the front end loader stacking the waste prior to feeding the waste preparation plant, and the shredding performed by the hammermill serves to homogenise the waste for good combustion.



- 3.18 The RDF from the fuel preparation plant is distributed within the RDF store by a moving shuttle conveyor. The store is a triangular section building approximately 7500m³ capacity. Recovery of the stored RDF is carried out by either of two travelling screw reclaimers.
- 3.19 From the RDF store, the recovered RDF 'fuel' is delivered to the boilers by a system of conveyors designed to supply the correct amount of waste to the boiler furnaces to maintain the steam production rate. Ferrous and non-ferrous metals are separated from the RDF before it is fed to the combustion units.
- 3.20 The incineration of the prepared RDF in the existing EfW facility is carried out in two bubbling fluidised bed boilers each rated at 17 MWth. The RDF is gravity fed into the boiler and distributed across the bed by a fan jet of recirculated flue gas. Combustion of the waste takes place in both the solid and gaseous phase, i.e. within the fluidised bed itself and the freeboard. The thorough mixing, small particle size of waste and rapid combustion within the fluidised bed means that burnout of the waste is almost total, and the total organic carbon content of the bottom ash is consistently very low. The bubbling fluidised bed employs an advanced combustion zone (ACZ) to maximise the time, temperature and turbulence of combustion gas in the critical area above the fluidised bed.
- 3.21 The geometry of the ACZ together with close control of the combustion air and recirculated flue gas flows enables precise control of temperatures and oxygen excess in the furnace. This in turn allows the furnace to operate with low excess air (typically 6%) which provides primary control of NO_x formation and improved thermal efficiency through reduction in flue gas losses. The furnace is designed to provide relatively low gas velocities hence extending the residence time in the combustion phase. The furnace operates at a temperature of between 850 and 900°C thus avoiding excessive NO_x.
- 3.22 Automatically controlled auxiliary burners are used for start-up and shutdown to ensure a minimum temperature of 850°C is maintained at all times that waste is present in the combustion chamber. In addition, flue gas is recirculated from behind the fabric filter into the firing chamber in order to enhance the incineration process and lower the formation of oxides of nitrogen (NO_x).
- 3.23 The boiler control system determines the total amount of air supplied for combustion purposes, but the distribution between primary and secondary airflows can be selectively applied by dampers to optimise emissions performance and efficiency. Boiler steam load is controlled by a thermal load control within the automation system. This is fully automatic and takes into account transitions associated with start-up, shutdown and sootblowing.
- 3.24 In the EfW CHP facility waste will be fed from the waste bunker into the furnace using a grab crane. Prior to being loaded into the furnace, waste will be stored and mixed within the waste bunker. The crane will mix the waste to improve homogeneity and minimise fluctuations in calorific value to optimise the combustion of the waste.
- 3.25 The EfW CHP facility combustion technology will incorporate an inclined reciprocating grate. Ash generated from combustion will drop off the end of the grate directly into a water bath mechanical ash discharge conveyor. Primary combustion air will be drawn from the waste bunker and fed into the combustion chamber from below the grate thereby cooling the grate bars.



- 3.26 Combustion gases will pass into a secondary combustion chamber. The chamber is sized so that the products of combustion, after the injection of secondary air, remain at a temperature of at least 850°C for a minimum of two seconds. This is to ensure the efficient destruction of organic compounds and carbon monoxide. In the unlikely event that the temperature arising from the combustion of the waste on its own is not sufficient (e.g. when burning very low calorific value waste), auxiliary burners are used to maintain this temperature. In addition, flue gas will be circulated from behind the fabric filter into the firing chamber in order to enhance the incineration process and lower the formation of oxides of nitrogen (NO_x).
- 3.27 The waste feed rate, the supply of primary and secondary combustion air and the grate speed will be regulated by an advanced combustion control system which measures steam flow rate, flue gas oxygen content and combustion temperature and controls the plant to keep the rate of steam generation constant. This ensures that the boiler and generator operate at their optimal efficiency; and over firing of the boiler with the consequent increase in thermal stress and corrosion as well as the risk of increased CO emissions is avoided.
- 3.28 The amount of heat released by the waste will vary according to its net calorific value (NCV). The automatic control system will respond to this variation by modifying the waste feed rate and the grate speed to maintain a constant heat release from combustion and hence a constant steam flow rate.
- 3.29 In addition to this, the combustion control will record and control the fire location and thus the burnout on the grate.
- 3.30 The combustion process generates NO_x. In order not to exceed the emission limit for these substances, both the existing EfW Facility and the EfW CHP facility are provided with a NO_x reduction system which will inject a reducing agent into the secondary combustion chamber of the furnaces.
- 3.31 The existing EfW facility uses ammonia and the EfW CHP facility will use urea as the reducing agent. The urea decomposes during injection in the hot flue gas stream, initially to ammonia. The hydrogen in the ammonia then reacts with the oxides of nitrogen to produce molecules of water vapour and nitrogen. This is known as a selective non-catalytic reduction process (SNCR), which is optimised at temperatures of between 850°C and 1,000°C.

Steam Generation

- 3.32 In both the existing EfW facility and the EfW CHP facility superheated steam is created by the evaporation of water in the boilers and the further heating of the saturated steam in the boiler superheaters.
- 3.33 The existing EfW facility boilers produce steam at 40 bara and 405°C.
- 3.34 The EfW CHP facility boiler produces steam at 44 bara and 405°C.



- 3.35 The combustion gases will cool rapidly when passing through the boiler, maintaining heat transfer efficiency, minimising erosion and also minimising the presence of ash deposits on the tubes. The economiser sections of the boiler will reduce the gas exit temperature to the optimum required for the flue gas treatment process and preheat the boiler feed water for increased efficiency. The rapid cooling coupled with minimal ash deposits will help minimise the reformation of dioxins and furans.

Air Pollution Control

- 3.36 Both the existing EFW facility and the EfW CHP facility use a dry air pollution control system using hydrated lime and activated carbon, with a fabric filter.
- 3.37 Acid pollutants HCl, SO₂ and HF will be removed by a dry scrubbing and filtration system, using hydrated lime as the reagent, to enable more energy to be recovered from the flue gas. A controlled amount of powdered activated carbon will also be injected into the flue gas upstream of the fabric filter. The lime and activated carbon is delivered in sealed bulk powder carriers and pneumatically emptied into enclosed silos.
- 3.38 The flue gases pass through the fabric filter in which the entrained particles are trapped in the filter cake which covers the filter bags. The neutralisation reaction is completed as the flue gases pass through the filter cake. The filter cake is removed at regular intervals by reverse air pulses and falls into the filter discharge hoppers. A proportion of this residue will be re-circulated into the flue gas upstream of the fabric filter and in the case of the EfW CHP facility, reactivated by injection of water. This increases the neutralisation reaction efficiency, thereby reducing the final quantity of un-reacted lime in the APC residue.
- 3.39 In the EfW CHP facility the SO₂ and HCl concentrations at the boiler outlet and in the chimney will be continuously monitored and the quantity of hydrated lime injected will be adjusted, in accordance with the difference in the concentrations of the acid gases at the two measurement points, to achieve the permitted emission limits.
- 3.40 The primary method of minimising the release of dioxins will be by careful control of the combustion conditions. The gas residence times and the temperatures in the combustion system are such that dioxins / furans are efficiently destroyed.
- 3.41 For additional removal of dioxins and furans activated carbon injection is used. The activated carbon adsorbs mercury, and organic compounds including dioxins and furans. Other heavy metals such as copper and cadmium are filtered out as particulates by the fabric filter.



Turbine Generator system

- 3.42 In both the existing EfW facility and the EfW CHP facility a steam turbine will generate electricity from the superheated steam produced in the boiler. The superheated steam from the boiler will be expanded in a steam turbine. The expansion of the steam will deliver energy in the form of shaft power which, in turn, will be used to drive an electrical generator.
- 3.43 In the EfW CHP facility provision will be made in the design of the steam turbine for steam extraction which can be used for process or heating purposes. The steam turbine in the existing EfW facility does not have provision for extraction of steam for such purposes.
- 3.44 The existing EfW facility uses a water cooled condenser and hybrid cooling tower. Exhaust steam from the turbine enters the condenser where rapid condensation takes place under vacuum on the cooled tube surfaces, and the condensate collects in the condenser sump before being extracted by the extraction pumps for recirculation to the boiler.
- 3.45 The cooling tower is a twin cell induced draught, cross-flow hybrid design, whereby large fans at the top of the two 'cells' draw air up through the warm water from the condenser cascading through the tower 'fill' and also through heat exchangers supplied by the warmest circulating water. The cooling tower rejects heat by means of evaporation and convection. Water to replace that lost by evaporation is abstracted from the Dighty watercourse.
- 3.46 The EfW CHP facility will use a finned-tube air cooled condenser (ACC) to condense the exhaust steam from the steam turbine. In the ACC the steam will be condensed under vacuum to extract the maximum practical mechanical energy from the expansion in the steam turbine.
- 3.47 The ACC will consist of tube bundles in carbon steel with aluminium fins and twin large diameter cooling fans with adjustable blade pitch, frequency regulated electric motors, and direct drive reduction gear. The fans pass ambient air over the tube bundles through which the exhaust steam is flowing to condense the steam. The condensate is drained to a collection vessel before being returned to the boiler by pumps.

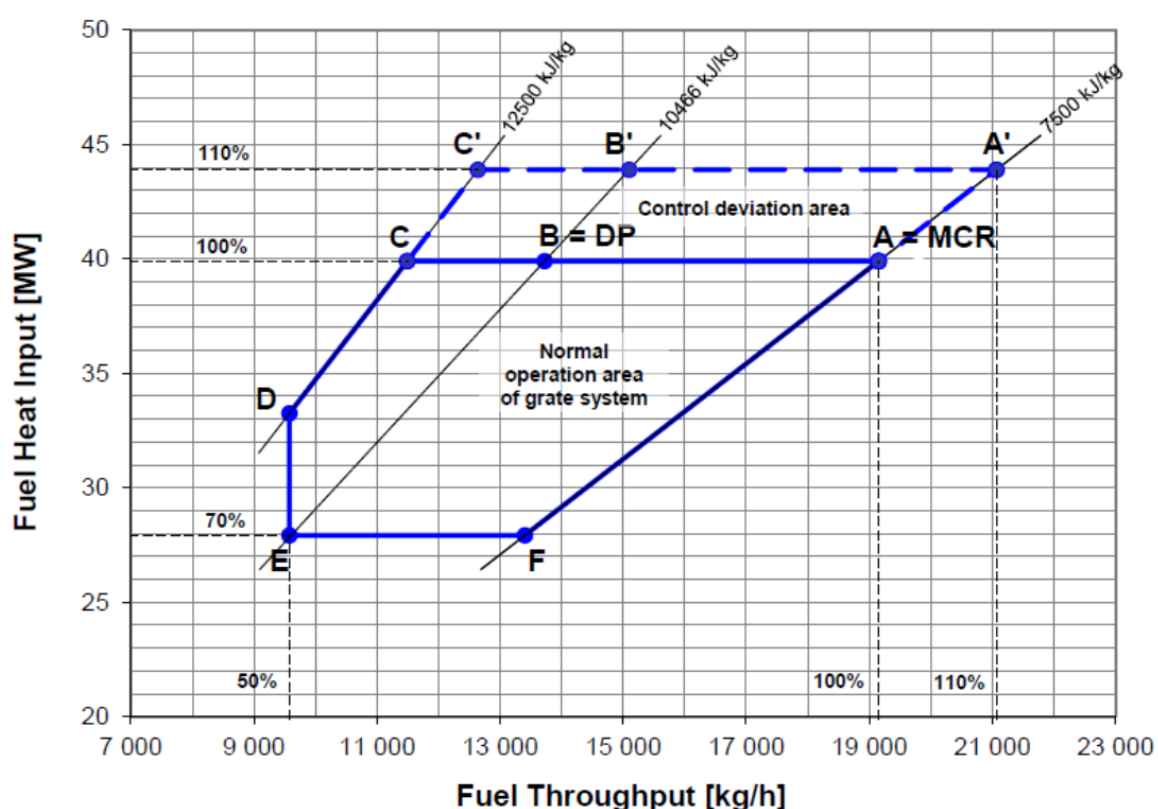
4. Description of the waste to be treated and its energy value

- 4.1 The primary purpose of the existing EfW and the EfW CHP facilities is to treat the household waste collected by Dundee and Angus Councils that has not been recycled, reused or composted (residual waste). In addition, household waste from other local authorities may be treated in the event that further contracts are obtained by MEB. The remaining processing capacity will be used to process similar commercial and industrial (C&I) waste from local businesses in the surrounding area. This commercial and industrial waste will be delivered by local waste collection companies and operators of waste transfer stations and material recycling facilities. It will be restricted to waste from which recyclable and biodegradable material has already been removed.



- 4.2 The existing EfW facility comprises two lines capable of treating a total of up to 150,000 tonnes of refuse derived fuel per annum. The as-delivered waste is pre-treated to produce the refuse derived fuel (RDF).
- 4.3 The EfW CHP facility is designed to treat 110,000 tonnes of waste per annum at the thermal design point of 39.9 Megawatts thermal. This equates to an hourly throughput of 13.725 tonnes per hour of waste with a Lower Calorific Value (LCV) of 10.5 Megajoules per kilogram and a facility availability of 91.3% (equal to 8,000 full load operational hours per year). When treating waste with a lower LCV, the mechanical throughput could be as high as 19.15 tph.
- 4.4 The calorific value of the waste is likely to vary over time depending on the nature of the waste society generates during the life of the facility and the improvements to the reuse and recycling initiatives which will be introduced and applied. The attached firing diagram for the EfW CHP facility (Fig 1) shows the range of calorific value that can be accommodated and the resultant energy generation. The Efficiency / QI calculation according to SEPA's Thermal Treatment of Waste Guidelines 2014 is set out in Appendix 1.1 and the Water / Steam Cycle Calculations are provided in Appendix 2.
- 4.5 The corresponding planned and actual data from 2019 for the existing EfW facility which only generates electrical power, is set out in Appendix 1.2. When reviewing this data, it should be noted that during 2019 the existing EfW facility has been supplying electrical power to the adjacent EfW CHP facility construction site. This appears as increased parasitic load and will have a detrimental effect on the facility efficiency.

Figure 1 Firing Capacity Diagram – EfW CHP Facility

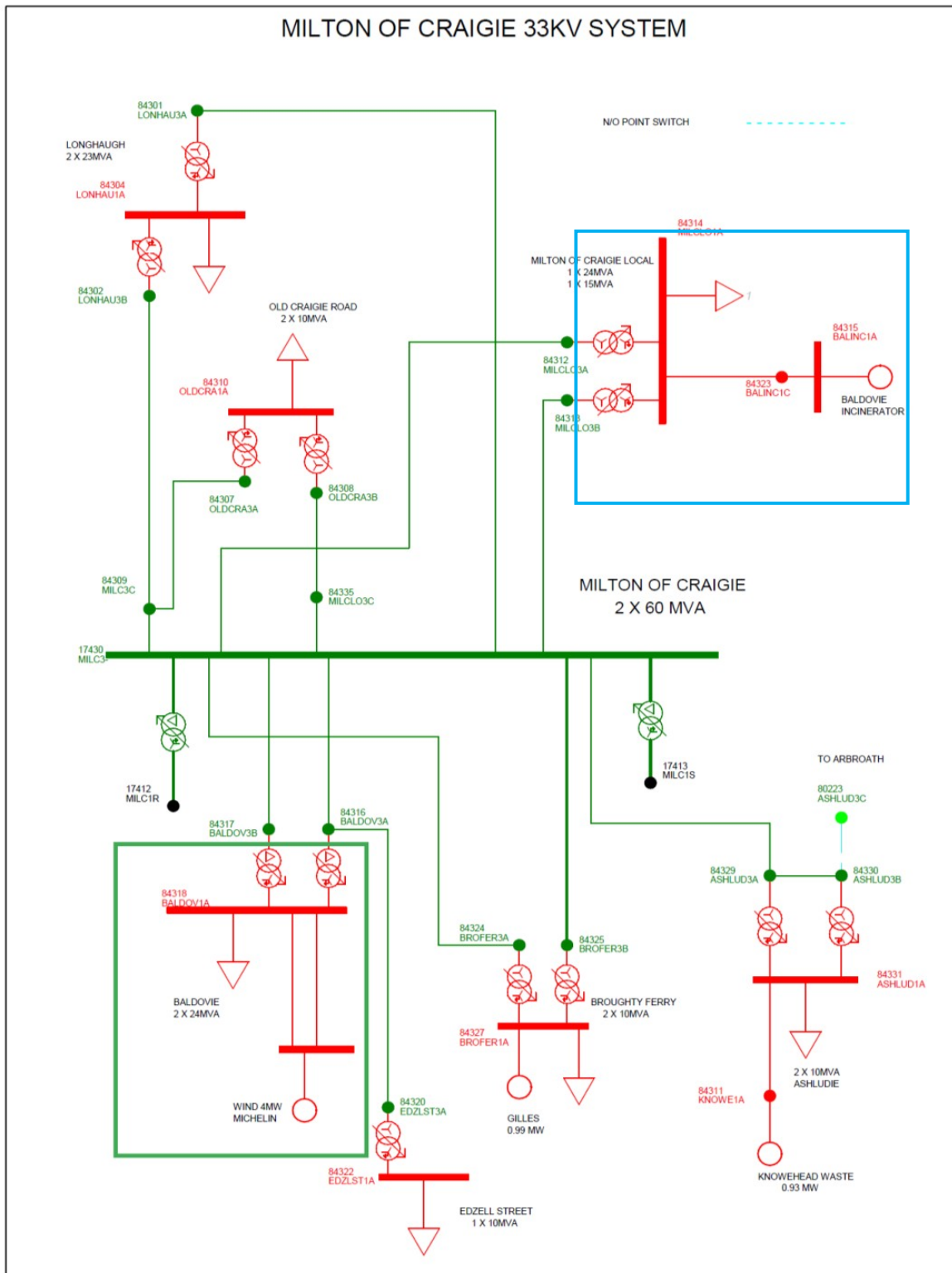




5. Electricity Export

- 5.1 The schematic showing the existing SHEPD Milton of Craigie 33 KV system including the connection of the existing EfW facility (referenced as “MEB Fluidised bed Incinerator”) (blue rectangle) and the connection of the Michelin tyre plant (green rectangle) is shown in Figure 2.

Figure 2





- 5.2 The existing EfW facility remains connected to the grid and exports approximately 8MW of power at 11kV. Gross power output of the turbine is approximately 10MW.
- 5.3 At the time of the signature of the contract with Dundee & Angus Councils it was envisaged that the EfW CHP facility would replace the existing EfW facility and steam would be extracted from the EfW CHP facility turbine to supply the adjacent Michelin tyre factory for production purposes, and a Steam Supply Agreement was signed between the MEB and Michelin.
- 5.4 The continuous extraction of an average of 10MW of steam to Michelin meant that the quantity of electrical power produced by the EfW CHP Facility would be reduced and consequently the net export power would remain within the cable capacity (8.7MW) of the grid connection to the existing EfW facility site. It was therefore planned that the grid export connection for the new facility would be made via the existing 11kV connection using the already installed SSE switch gear and cables, and design work was commenced on this basis.
- 5.5 In November 2018 Michelin announced its intention to close the factory and cease production by 2020. Consequently, although there are plans to find alternative uses for the site and buildings (see section 7), MEB can no longer rely on having a customer for the steam. This necessitated a redesign of the grid connection to find an alternative scheme that would provide sufficient capacity to take the maximum net output of the generator at all expected load cases without steam extraction from the turbine.
- 5.6 Considering the possible load cases, the EfW CHP facility net power output is:
- 9.75 MW @ 100% load (considering no CHP and 1.2 MW parasitic load)
 - 10.7 MW @ 110% load (considering no CHP and 1.2 MW parasitic load)
- 5.7 Consultation took place immediately with the SHEPD and a revised connection application was made. Various schemes were examined concluding with a final proposal from SHEPD for connection at the 33kV level. This scheme utilises an existing 33kV circuit that “loops” through the Michelin site. The new grid connection will also be used to directly import power in situations in which the EfW CHP facility is not generating.
- 5.8 The “loop” in the circuit must be maintained for circuit continuity so the connection will be via a new 11kV/33kV substation to be built on the Michelin site. This involves significantly more work than was originally envisaged with the original design in which a main transformer and substation were not required. Consequently, there is an impact on the date on which the grid connection will be available.
- 5.9 When the new connection scheme was agreed, procurement of the additional scope of supply commenced to achieve availability of a grid connection complying with the requirements of the construction programme for export of electrical power. The additional scope comprises the transformer and switchgear for the substation (6 to 8 months delivery) together with civil construction works, trenching and cabling. Permission also has to be obtained from Michelin for construction on their site and wayleaves for cables.



- 5.10 MEB will also install a new 11 kV cable from the EfW CHP Facility to Michelin's site to provide a "private wire" electricity supply to any future consumers.
- 5.11 The completion of the revised connection works is scheduled for April 2020 and the first synchronisation of the turbine with the grid during commissioning will take place in July 2020. During initial cold and hot commissioning electrical power will be provided from the existing EfW facility.
- 5.12 The Connection offer from SHEPD and signed acceptance form are included in Appendix 3. These documents constitute evidence of permission to connect to the Grid from the DNO.
- 5.13 Figures 3 and 4 show the existing grid connection arrangement for the existing EfW facility and Michelin plant and the final revised grid connection with the EFW CHP Facility in operation.

Figure 3 Existing MEB and Michelin grid connection

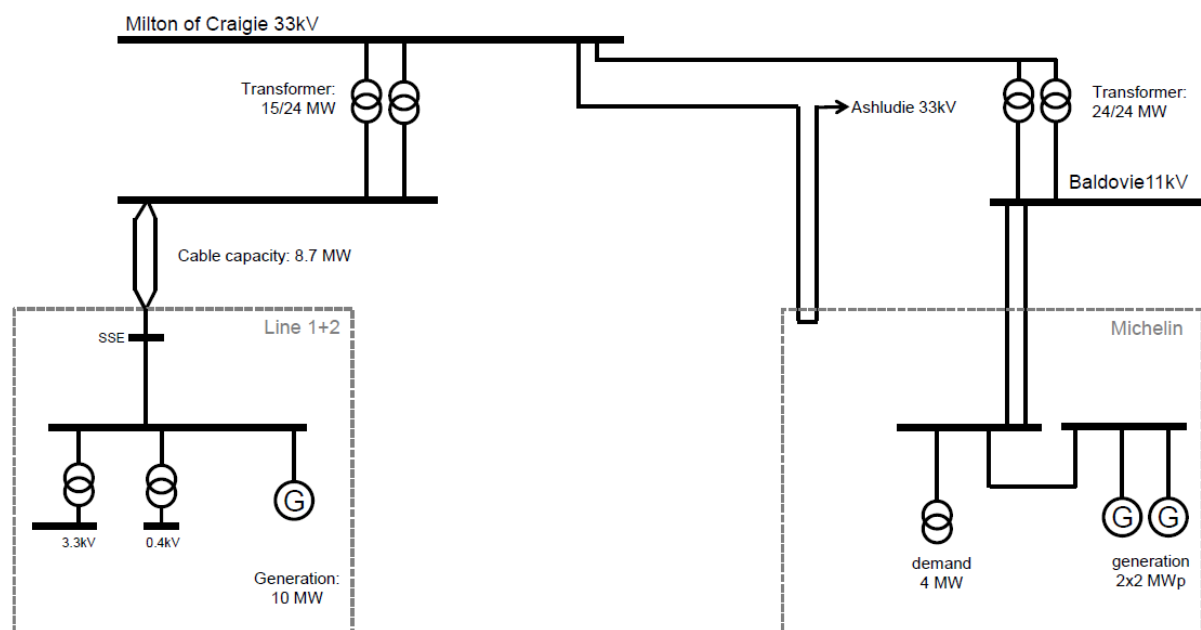




Figure 5 EfW CHP Facility Energy Flow – Power only mode

The Contractor's RWT Facility energy flow, power only mode

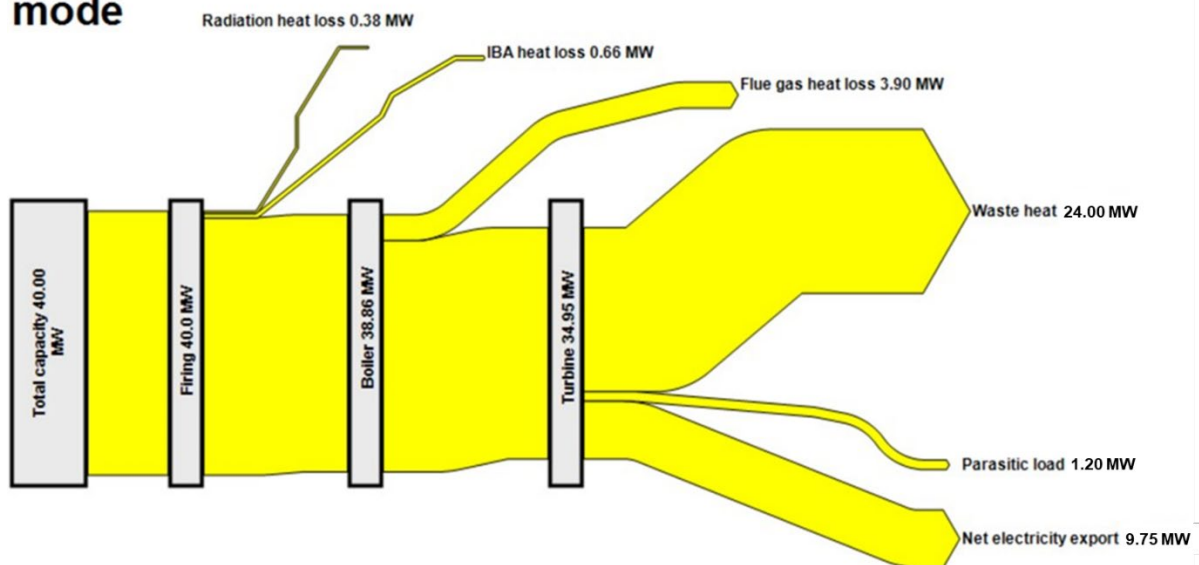
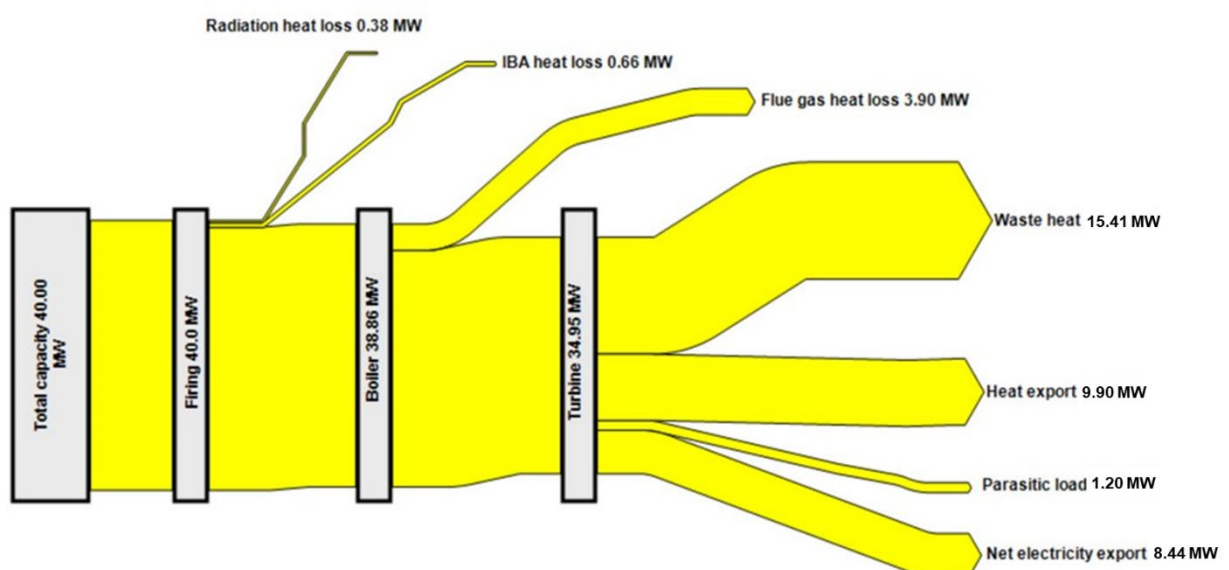


Figure 6 EfW CHP facility - CHP Mode supplying intended Michelin's plant heat demand

The Contractor's RWT Facility energy flow, CHP mode to supply Michelin plant heat demand





7. Heat and Power Plan

- 7.1 The location of the EfW CHP facility on Forties Road was agreed with Dundee and Angus Councils in order to enable the facility to meet the requirement for new energy from waste facilities to operate at maximum efficiency as Combined Heat and Power plants. The location on Forties Road would have enabled the facility to provide steam and electricity directly to Michelin enabling them to receive energy at more economical prices and in a more sustainable form than if they were to generate it themselves or to buy it from the grid.
- 7.2 MEB entered into an agreement with Michelin for the delivery of energy from the proposed EfW CHP facility to the Michelin plant. A new steam pipeline has been constructed to connect the EfW CHP facility with Michelin's heat network to be able to deliver medium pressure steam once the EfW CHP facility is commissioned. Unfortunately, Michelin announced in November 2018 that it will close the production site in 2020.
- 7.3 Michelin is currently looking for suitable tenants to occupy the plant once tyre production has ceased. MEB and Michelin remain in close contact and because the necessary supply infrastructure is already in place MEB will be in a position to supply steam and electricity to new businesses on Michelin's premises should the opportunity arise.
- 7.4 A statement was released on 6 November 2019 stating that "Dundee's Michelin site has received a £60m funding commitment to turn the former plant into an innovation centre. The new centre will focus on sustainable mobility, clean transport and low carbon energy. The Michelin Scotland Innovation Parc (MSIP) will be created over the next decade. The investment is supported by Michelin, Scottish Enterprise and Dundee City Council. The new centre will include office space, with an "innovation hub" for collaborations between industry and academia";
- 7.5 MVV is in discussion with parties involved in developing the Michelin Scotland Innovation Parc (MSIP) with the objective of delivering energy from the EfW CHP Facility to MSIP.
- 7.6 Dundee City Council is investigating the possibility of developing a heat network around the city linking together the two universities, Ninewells hospital and the EfW CHP facility so that they can distribute heat to industrial, commercial and residential premises in the city. The City Council held a conference at the Discovery Centre in Dundee in June 2016 which MEB attended. Progress on the implementation of the citywide heat project is dependent on the development of a distribution network.
- 7.7 If a heat distribution network becomes available, MEB would be willing to work with the city council to provide heat to the proposed housing in Whitfield which is being constructed with infrastructure for the use of hot water.
- 7.8 MEB is therefore in a position to operate the EfW CHP facility in CHP mode from the outset and explore further opportunities to maximize the energy saving opportunities the project presents. The CHP component of the facility could therefore make a major contribution to the strategic and local economic objectives of the City of Dundee, helping to safeguard existing jobs and to attract new jobs.



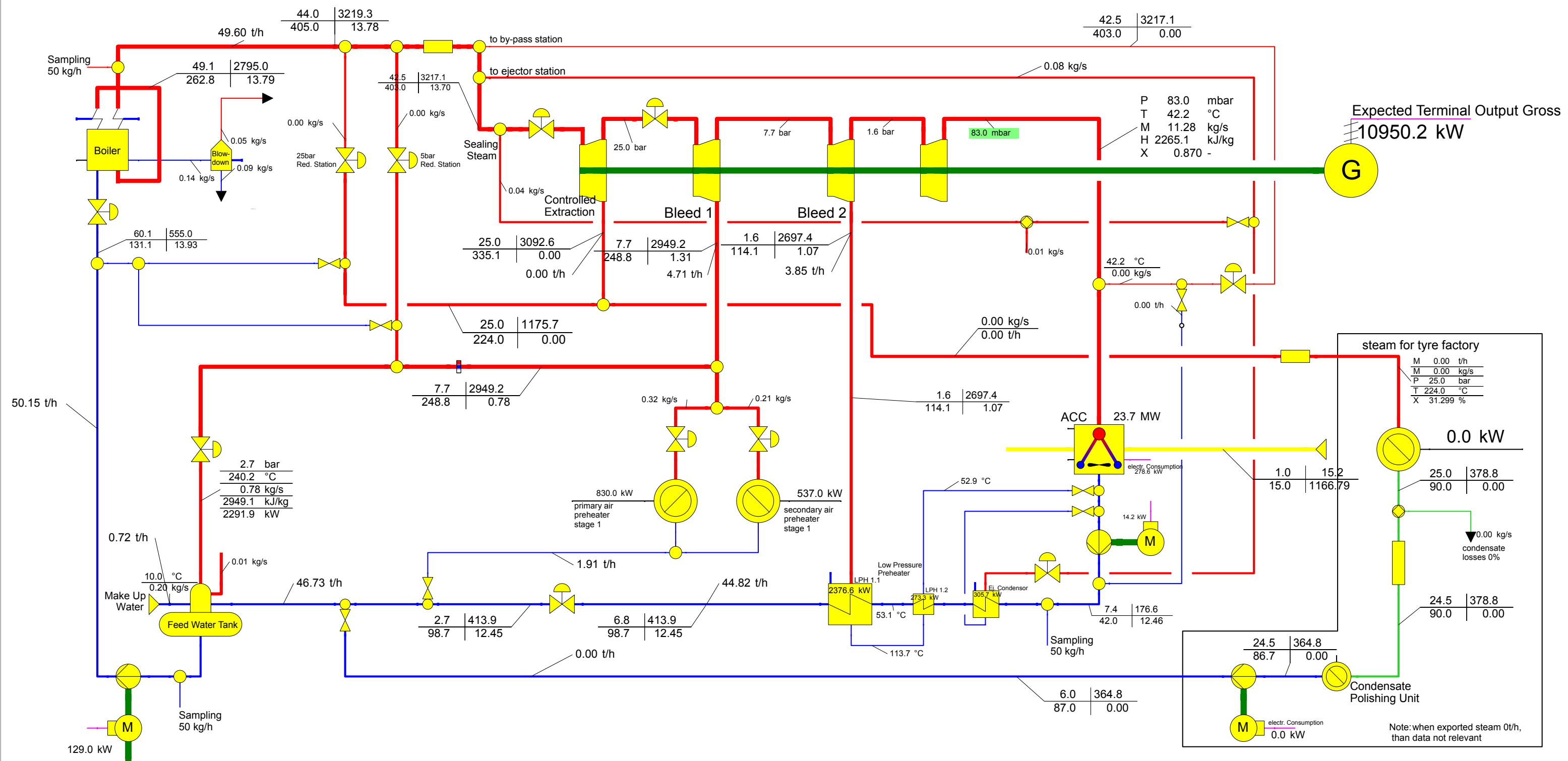
Appendix 1.1 Efficiency / QI calculation – EfW CHP facility

Efficiency / QI Calculation									Load case 3	Load case 1a	Load case 2b
according to SEPA Thermal Treatment of Waste Guidelines 2014									Power only	Michelin	Max CHP
						power (Mwe)			10.95	8.44	6.65
Waste CV net	MJ/kg	10.466				Heat (MWth)			0	9.90	15.03
Waste CV gross	MJ/kg	12.566			(20% water content)	Heat export (MWth(th))			0	79,200	120,200
Throughput	t/h	13.725				Return Heat			0	10,632	6,481
Thermal Capacity net	MW(th)	39.90				Condensate					
Thermal Capacity gross	MW(th)	47.91							KJ/kg	364.1	146.5
									kg/s	3.65	5.53
Availability	h/a	8,000									
Parasitic load	MW	1.2									
Power output gross	MW(e)	10.95									
Power output net	MW(e)	9.75									
Power loss factor	MW(e)/MW(th)	N/A values from heat balance diagrams used									
Energy Input (GCV based)						QI	CHPQA				
Waste	MWh(th)	383,263				X	370				
Fuel Oil	MWh(th)	3,410			1% of waste input	Y	140				
Parasitic Load	MWh(e)	9,600									
Return Heat	MWh(th)	0	10,632	6,481							
		396,273	406,905	402,754							
Energy Output		Power only	Michelin	Max CHP							
Power export gross	MWh(e)	87,600	67,520	53,198		black - power only mode calculation					
Steam export	MWh(th)	0	79,200	120,200		green - CHP calculation with steam export / condensate return to Michelin					
						blue - CHP calculation with maximum steam export / condensate return					
Power efficiency	%	22.1%	16.6%	13.2%							
Heat efficiency	%	0.0%	19.5%	29.8%							
Overall Efficiency Net	%	22.1%	36.1%	43.1%							
Overall Efficiency Gross	%	22.9%	37.2%	44.5%							
QI		81.8	88.6	90.7							



Appendix 2 Water / Steam Cycle Calculations

2.1 CHP Power only mode



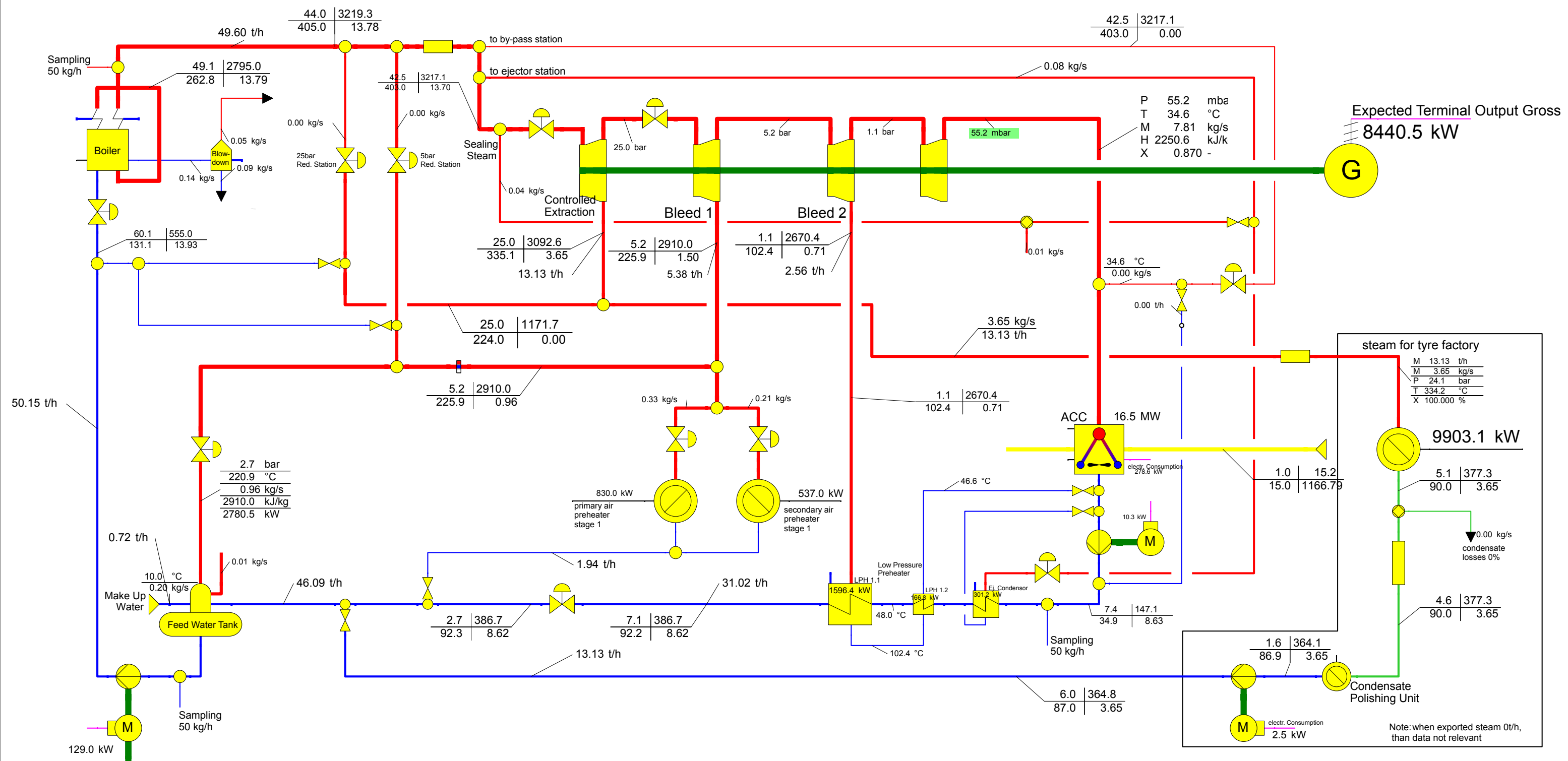
steam flow at boiler outlet = 49.60 t/h at 44.0 bara and 405.0 °C
 plant waste consumption (fuel heat input) = 39.90 MW
 ambient air temperature = 15.0 °C
 turbine exhaust steam pressure = 83 mbar
 primary air temperatur downstream preheater stage 1 = 80 °C
 primary air preheater total heat transfer = 0.830 MW
 secondary air temperatur downstream preheater stage 1 = 120 °C
 secondary air preheater total heat transfer = 0.537 MW
 steam export to tyre factory = 0.0 t/h
 gross plant power output (generator terminal output) = 10.950 MW
 electrical gross efficiency = electrical output / thermal input = 27.44 %

bar	kJ/kg
°C	kg/s

Client:		Heat Balance Diagram			
MWV		Load Case 3: 100% electrification			
Planner:		Project:		302066 - Dundee	
JFE Engineering Group Standardkessel JFE Baumgarte		Document-No.:			
	Date	Name	File Name:	Heat Balance Diagram	
Created	21.06.18	K.Hommel			
Checked			Heat Balance	Page:	04
Approved			Diagram-No.:	of:	
This heat balance diagram is protected by copyright by Baumgarte Boiler Systems GmbH.					




2.2 CHP mode to supply Michelin plant heat demand



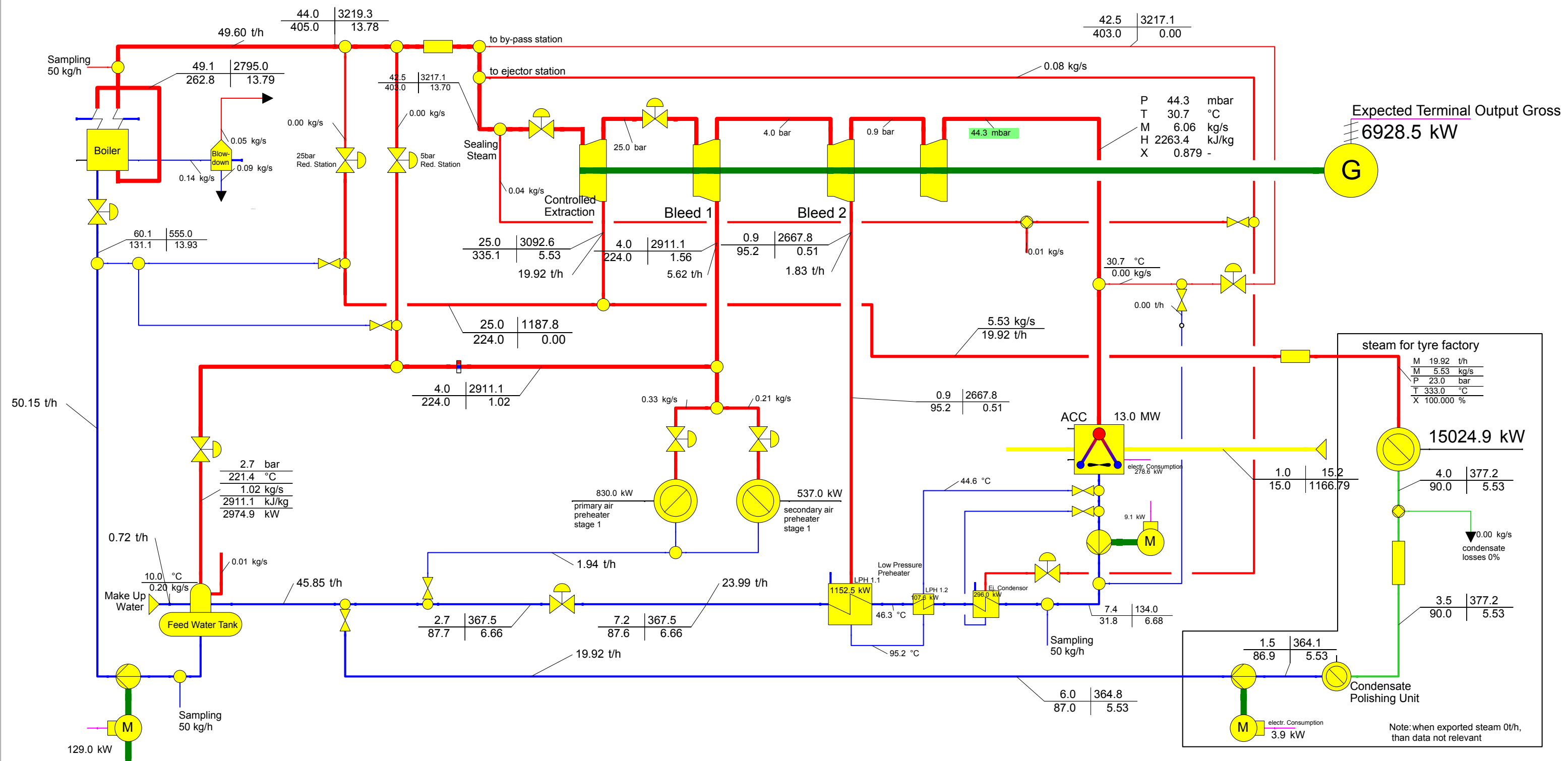
steam flow at boiler outlet = 49.60 t/h at 44.0 bara and 405.0°C
 plant waste consumption (fuel heat input) = 39.90 MW
 ambient air temperature = 15.0°C
 turbine exhaust steam pressure = 55 mbar
 primary air temperatur downstream preheater stage 1 = 80°C
 primary air preheater total heat transfer = 0.830 MW
 secondary air temperatur downstream preheater stage 1 = 120°C
 secondary air preheater total heat transfer = 0.537 MW
 steam export to tyre factory = 13.1 t/h
 gross plant power output (generator terminal output) = 8.440 MW
 electrical gross efficiency = electrical output / thermal input = 21.15 %

bar	kJ/kg
°C	kg/s

Client:		Heat Balance Diagram						
MWV		Load Case 1a: Export 13,13t/h and Condensate Temp. 87°C						
<div></div>			Project:		302066 - Dundee			
			Document-No.:					
	Date	Name	File Name: Heat Balance Diagram					
Created	21.06.18	K.Hommel						
Checked			Heat Balance		Page:		Rev.:	04
Approved			Diagram-No.:		of:			
This heat balance diagram is protected by copyright by Baumgarte Boiler Systems GmbH.								




2.3 CHP mode for maximum heat output



steam flow at boiler outlet = 49.60 t/h at 44.0 bara and 405.0°C
 plant waste consumption (fuel heat input) = 39.90 MW
 ambient air temperature = 15.0°C
 turbine exhaust steam pressure = 44 mbar
 primary air temperatur downstream preheater stage 1 = 80°C
 primary air preheater total heat transfer = 0.830 MW
 secondary air temperatur downstream preheater stage 1 = 120°C
 secondary air preheater total heat transfer = 0.537 MW
 steam export to tyre factory = 19.9 t/h
 gross plant power output (generator terminal output) = 6.929 MW
 electrical gross efficiency = electrical output / thermal input = 17.36 %

bar	kJ/kg
°C	kg/s

Client:		Heat Balance Diagram					
MWV		Load Case 2a: Export 19,92t/h and Condensate Temp. 87°C					
<div><div><div>JFE Engineering Group</div><div>Standardkessel</div><div>Baumgarte</div></div></div>			Project:		302066 - Dundee		
			Document-No.:				
	Date	Name	File Name:		Heat Balance Diagram		
Created	21.06.18	K.Hommel					
Checked			Heat Balance		Page:		Rev.: <div><div></div></div>
Approved			Diagram-No.:		of:		
This heat balance diagram is protected by copyright by Baumgarte Boiler Systems GmbH.							



Appendix 3 Grid Connection Agreement



CUSTOMER ACCEPTANCE FORM

MVV Environment Baldovie Limited, EPD996/1, Baldovie EFW

I* / We* hereby accept for and on behalf of MVV Environment Baldovie Limited, SHEPD's Offer, dated 23rd July 2019, for the Connection on the terms and conditions contained in said Offer.

	Please indicate chosen Works and Payment Option below	Payment With Acceptance (excl. VAT)	VAT (20%)	Total Payment With Acceptance
Option 1: SHEPD to Undertake All Distribution Works				
Full Payment on Acceptance (less the amount of any Second Comer Charge) (see Appendix 1, clause A1.1.1)	✓	██████████	██████████	██████████
Staged Payments (see Appendix 1, clause A1.1.2)	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Or Option 2: SHEPD to Undertake Non-Contestable Distribution Works only				
Full Payment on Acceptance (less the amount of any Second Comer Charge) (see Appendix 1, clause A1.2.1)	X	██████████	██████████	██████████
Staged Payments (see Appendix 1, clause A1.2.2)	Not Applicable	Not Applicable	Not Applicable	Not Applicable
To be included on acceptance of either Option 1 or Option 2				
Provide evidence of progression of BEGA/BELLA with National Grid	PROVIDED	WITH	PROGRESS	ENC848 OFFER

Signature:

[Handwritten Signature]

Witness:

[Handwritten Signature]

Print Name:

Uwe Zickert

Print Name:

GRAHAM BRO

Witness

C/O MVV ENVIRONMENT LTD

Address:

FORTIES ROAD

Acceptance date:

15/08/2019

DUNDEE DD4 0NS

This Offer should be signed by the applicant personally or if the Connection is requested by a company, an appropriate and authorised representative of that company. The signatory's position within the company should be specified together with a statement that he/she is signing on behalf of the company.



Payments on Acceptance

Cheque payments: Please make cheque payable to "Scottish Hydro Electric Power Distribution plc" and return cheque with acceptance of Offer to:

Major Commercial Contracts, Scottish and Southern Electricity Networks, SSE
Training Centre, Ruthvenfield Way, Perth, PH1 3AF

BACS Payments: **Account name:** Scottish Hydro Electric Power Distribution plc **If paying by bank transfer, please indicate in this box:**

Bank: NatWest

Account number: 89543130

Sort code: 60-17-21

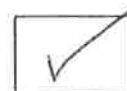
IBAN code: GB41 NWBK 6017 2189 5431 30

Swift No (BIC): NWBK GB 2L

UTR: 85621 10776

VAT registration number: 553 7696 03

Quote reference: EPD996/1



**OFFER TO PROVIDE A CONNECTION FOR PREMISES WITH
EMBEDDED GENERATION**

at

BALDOVIE EFW

EPD996/1

by

SCOTTISH HYDRO ELECTRIC POWER DISTRIBUTION PLC

for

MVV ENVIRONMENT BALDOVIE LIMITED

Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ  ssen.co.uk

Scottish and Southern Electricity Networks is a trading name of: Scottish and Southern Energy Power Distribution Limited Registered in Scotland No. SC213459; Scottish Hydro Electric Transmission plc Registered in Scotland No. SC213461; Scottish Hydro Electric Power Distribution plc Registered in Scotland No. SC213460; (all having their Registered Offices at Inveralmond House 200 Dunkeld Road Perth PH1 3AQ); and Southern Electric Power Distribution plc Registered in England & Wales No. 04094290 having its Registered Office at No. 1 Forbury Place 43 Forbury Road Reading RG1 3JH which are members of the SSE Group www.ssen.co.uk

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OFFER TO PROVIDE A CONNECTION FOR PREMISES WITH EMBEDDED GENERATION:

Baldovie Efw Line 3, Forties Road, Dundee, Angus, DD4 0NS

Date of Offer: 23rd July 2019

SHEPD Ref: EPD996/1

For: MVV Environment Baldovie Limited

This Connection Offer is for an electricity connection at Baldovie Efw Line 3, Forties Road, Dundee, Angus, DD4 0NS for the export and/or import of electricity. The Offer is made by:

Scottish Hydro Electric Power Distribution plc, a company registered in Scotland (Registered No. SC213460), whose registered office is at Inveralmond House, 200 Dunkeld Road, Perth PH1 3AQ, ("SHEPD")

to:

MVV Environment Baldovie Limited, a company registered in Scotland (No. SC148254) whose registered office is Forties Road, Dundee, DD4 0NS (the "Customer")

This Offer is subject to the terms and conditions set out in this document including all appendices and, if accepted by the Customer, these terms and conditions including any appendices and the Customer's acceptance will form the agreement between SHEPD and the Customer for the provision of the Connection (the "Agreement").

THE CONNECTION

1. Connection Specification

- 1.1. Subject to the terms and provisions of this Offer, the Connection will have the following specification:

(a) Connection voltage:	33,000 Volts
(b) Phases:	3 phase, 3 wire
(c) Frequency:	50 Hertz
(d) Maximum Export (generation) Capacity and Power factor range:	11,100 kW 0.95 Lag - 0.95 Lead at the Connection Point
(e) Maximum Import Capacity:	3,500 kVA
(f) Generation mode of operation:	Voltage Control mode
(g) Connection Point:	the Energy from Waste site terminals of the SHEPD metering circuit breaker

- 1.2. The works which are necessary to provide the Connection (the "Distribution Works") are detailed within **Appendix 2**. The Distribution Works may be subject to amendment and variations in accordance with the terms of this Offer or Agreement and in particular with **Clause 24**.

- 1.3. Some or all of these works may be delivered by an alternative provider as outlined in **Clause 4**.

- 1.4. The point of connection to SHEPDs existing network will be established at the location on the attached site plan.

2. Security of Connection and any Connection Constraints

- 2.1. The Connection is provided at a single circuit level of security in line with National Guidance. By accepting this Offer the Customer acknowledges and accepts that the Connection may not be available during network faults or other outages.
- 2.2. Under the terms of the Distribution Code, the Customer's plant may be subject to operational constraints related to planned or unplanned works on SHEPD's Distribution System and/or the GB Transmission System which result in a depletion of distribution network capacity. SHEPD will use reasonable endeavours to reduce the impact, but the Customer acknowledges that some constraint is inevitable.
- 2.3. SHEPD will not be liable for any loss incurred from generation disconnection as a result of a fault or maintenance or any other works on any part of the SHEPD network or any fault or maintenance or any other works on the GB Transmission System.

YOUR CHARGES AND CHOICE

3. Charges for the Distribution Works

- 3.1. The Charges for the Distribution Works and (where applicable) the Customer's options are set out below:

SHEPD to Undertake All Distribution Works	Charges (Excl. VAT)	Charges (Incl. VAT at 20%)
SHEPD will undertake all of the Distribution Works and provide all of the plant and equipment required to provide the Connection, provided that the Customer provides any works, facilities or access specified in this Offer.	██████████	██████████
SHEPD to Undertake Non-Contestable Distribution Works Only	Charges (Excl. VAT)	Charges (Incl. VAT at 20%)
SHEPD will carry out all of the Non-Contestable Distribution Works only and provide all of the plant and equipment required to provide those parts of the Connection, provided that the Customer provides any works, facilities or access specified by in this Offer. The Customer will require to contract with an ICP to undertake the Contestable Distribution Works and provide all of the associated plant and equipment. NB SHEPD will levy additional charges, not included here, on the Customer appointed ICP to cover costs in respect to adoption of the works adopted by us.	██████████	██████████

3.2. **These charges for Distribution works are indicative costs only and may be subject to variation as laid out in Clause 24. A detailed breakdown of these costs is provided in Appendix 2.**

3.3. Connection Offer Expenses

Pursuant to the Electricity (Connection Offer Expenses) Regulations SHEPD is entitled to recover from the Customer the charges reasonably incurred in:

- (a) assessing the impacts of the Connection on the distribution system;
- (b) assessing the impacts of the Connection on a transmission system;
- (c) designing the Connection, including, in particular: -
 - (i) designing any reinforcement works required to add capacity to the distribution system;
 - (ii) designing any reinforcement works required to add capacity to a transmission system;
 - (iii) designing any required extension of the distribution system;
 - (iv) designing any required extension of a transmission system; and
- (d) processing the application.

Together the '**Connection Offer Expenses**'

3.4. The Connection Offer Expenses for this Offer are set out in Appendix 2.

3.5. Connection Offer Expenses shall be invoiced together with this Offer and shall be payable by the Customer, whether or not the Offer is accepted, in accordance with clause 23 of this Offer.

3.6. It should be noted that payment of Connection Offer Expenses must be made in full, in cleared funds, in order for acceptance of this Offer to be valid and binding. Should there be any dispute as to the Connection Offer Expenses, the provisions of clause 31 of this Offer shall apply.

3.7. Where the Customer requests material changes to the proposed Connection, following this Offer but prior to energisation of the Connection, additional consideration of the matters in clause 3.2 will be required and the Customer may be liable for additional Connection Offer Expenses which will be notified to the Customer and invoiced at that time.

4. Customer Choice

- 4.1. SHEPD is the Distribution Network Operator (DNO) for the area in which this Connection is located. There are Independent Connection Providers (ICP's) and Independent Distribution Network Operators (IDNO's) who may be able to provide an alternative offer to carry out some of this work. Please refer to www.lloydsregister.co.uk for further details.
- 4.2. The Customer may choose to:
- (a) appoint SHEPD to undertake all of the Distribution Works; or
 - (b) appoint:
 - (i) SHEPD to undertake only the Non-Contestable Works; and
 - (ii) an Independent Connections Provider (an "ICP") to undertake the Contestable Works.
- 4.3. The scope of the Contestable and Non-Contestable Works (where applicable) are detailed in **Appendix 2. SHEPD will levy additional charges on the Customer appointed ICP to cover costs in respect to adoption of the works.**

5. Requirement to Enter Process with National Grid

- 5.1. As part of acceptance of this Offer the Customer requires to provide evidence to SHEPD that they have entered into the Modification Application Process with National Grid. Acceptance of this Offer for Connection is conditional upon and subject to the Customer providing this evidence to SHEPD at acceptance.
- 5.2. If National Grid subsequently notify SHEPD of any additional fees payable by SHEPD to National Grid in relation to the Connection, SHEPD shall be entitled to recover such amounts from the Customer. This Offer for Connection is dependent on payment on request of any such amounts by the Customer.

6. Requirement to Underwrite Transmission Works and Cancellation Charge and/or Second Comer Charges

- 6.1. The underwriting of Transmission Works may be required to enable the provision of the Connection. SHEPD will advise the Customer, subsequent to the Customer's acceptance of this Offer and the completion of the relevant assessment process, of any requirement for Transmission Works and (where applicable) the scope and estimated completion date of such Works.
- 6.2. Once advised by SHEPD of the requirement to underwrite Transmission Works this Offer shall be subject to the Customer having and maintaining an Approved Credit Rating or, in the absence of such, providing and maintaining security cover or other underwriting arrangements on terms satisfactory to SHEPD (the "Security") particularly in relation (but not limited) to the costs in respect of these Transmission Works and the Cancellation Charge (together, the "Secured Liabilities").
- 6.3. Once advised by SHEPD of the requirement to underwrite Transmission Works the Customer shall notify SHEPD of its credit rating and shall thereafter notify SHEPD of any changes to its Credit Rating prior to energisation of the Connection. Where applicable, the Customer may provide Security to cover the Secured Liabilities in one of the forms specified in **Clause 7**.

7. Form of security

7.1. The Customer may provide Security in one of the following forms:

- (a) Performance Bond or Letter of Credit from a Qualified Bank for the periodic amount stated as the Secured Liabilities; or,
- (b) a cash deposit in a bank account for at least the periodic amount stated as the Secured Liabilities; or,
- (c) a Performance Bond or Guarantee from a Qualified Company for the periodic amount stated as the Secured Liabilities.

All such forms of Security shall be on terms satisfactory to SHEPD in its absolute discretion.

7.2. SHEPD reserves the right to periodically revise the value of the Secured Liabilities at such times as:

- (a) SHEPD receives from National Grid, a revised cost for the Transmission Works; and/or
- (b) SHEPD receives from National Grid a revised Cancellation Charge Statement.

7.3. SHEPD shall notify the Customer in writing of the value of the Secured Liabilities and the Customer shall provide to the value of or the revised value of the Secured Liabilities within 10 working days of receiving such notification.

7.4. In the event that the Customer does not provide or maintain the required value of the Secured Liabilities in accordance with the terms of this **Clause 7**, then SHEPD shall at any time thereafter be entitled to:

- (a) to refuse to commence or continue work on the provision of the Connection or
- (b) to terminate this Agreement in which event the provisions of Clause 26 shall apply.

7.5. The obligations to provide Security under this **Clause 7** shall continue until all sums due under this Agreement have been paid in full and shall survive termination of this Agreement.

8. Period for Acceptance

8.1. **This Offer is open for acceptance for 30 days from the date of issue, subject always to Clause 8.3 and Clause 9. Should this Offer not be validly accepted within this period the Offer shall lapse, though payments in respect of Connection Offer Expenses will remain due and payable.**

8.2. Valid acceptance is dependent upon receipt of payment in full of Connection Offer Expenses and all other payments due and upon provision of appropriate Security (if applicable) pursuant to this Offer. SHEPD will not commence any work on or make any commitment to the Connection until the payments due with acceptance of this Offer and provision of any relevant Security are received.

8.3. SHEPD reserves the right to withdraw this Offer at any time prior to acceptance on giving notice in writing of such withdrawal to the Customer. The Offer shall be deemed to have been withdrawn on the date of the notice. The withdrawal of the Offer by SHEPD shall be without prejudice to the rights of the Customer to request SHEPD to make a new offer in respect of the Connection.

8.4. Acceptance of this Offer supersedes and cancels any other SHEPD Offers for this Connection previously issued or accepted by or on behalf of the Customer the terms of said previous Offer(s) hereby being confirmed as having been withdrawn.

9. Interactive Connection Applications

- 9.1. This Offer may be or may become interactive with one or more other applications and/or offers for connection to the Distribution System. Where this applies, SHEPD will notify the Customer in writing that this Offer is an “Interactive Connection Application”, as defined within the SHEPD Connection Charging Statement. In such event, this Offer and the other relevant Interactive Connection Applications will be subject to the process for managing interactivity set out in the SHEPD Connection Charging Statement.
- 9.2. Upon issuing of a Notice of Interactivity in relation to this Offer in accordance with the SHEPD Connection Charging Statement, the provisions of this Offer in relation to the validity period and acceptance of the Offer will automatically be replaced with the relevant alternative provisions set out in the SHEPD Connection Charging Statement.

10. Acceptance of this Offer

- 10.1. To validly accept this Offer, the Customer must:
- (a) pay the Connection Offer Expenses in full within 30 days of the date of invoice;
 - (b) complete the Customer Acceptance Form, including the selection of which of the alternative Works options and Payment options they wish to accept.
- 10.2. The Acceptance Form must be submitted along with all payments due including the Connection Offer Expenses as well as any other items required by this Offer, including without limitation delivery of any Security pursuant to Clause 7.
- 10.3. Failure to comply with the requirements of this clause could invalidate any acceptance.

THE ESTIMATED CONNECTION DATE

11. Estimated Connection Date

- 11.1. SHEPD estimate that subject to:
- (a) the provisions and conditions of this Offer; and
 - (b) all necessary wayleaves, consents approvals and access arrangements being obtained in sufficient time to enable SHEPD to complete the Distribution Works by the date below, and;
 - (c) all necessary site works being at the appropriate stage including (where applicable) the Customer having completed the Contestable Works or any parts thereof and any other works and/or access arrangements as may be specified in Appendix 2 by a dates laid out in **Clause 13** (where the parties fail to agree such date(s), the date(s) shall be as stipulated by SHEPD);

the distribution works can be provided by **31st December 2019**.

The estimated date stated above relates only to the Distribution Works required to provide the Connection. This date may be subject to variation, in particular but not limited to where any connection dependencies such as Transmission Works apply (see Clause 12).

The estimated date that Transmission access will be available is dependent on your BELLA/BEGA from National Grid.

For the avoidance of doubt, the Connection will not be able to export until the latter of these two dates.

SHEPD reserves the right to amend the estimated connection and/or energisation date at its absolute discretion in the event that a delay occurs in relation to any of the matters referred

to in sub-clauses (b) and (c) above or to any works referred to in Clause 12 (where applicable).

11.2. SHEPD will not energise the Connection until where applicable, National Grid has unconditionally and unequivocally confirmed in writing to SHEPD that all Transmission Works have been completed to the extent necessary to enable energisation of the Connection.

11.3. Subject to Clause 23.5, prior to final energisation of the Connection SHEPD must receive full payment of all charges for the Connection (plus any interest due, where applicable).

12. Connection Dependencies

12.1 This connection is not dependant on SHEPD carrying out any Distribution Works

12.2 Transmission Works may be required to enable the provision of the Connection. SHEPD will advise the Customer, subsequent to the Customer's acceptance of this Offer and the completion of the relevant assessment process, of any requirement for Transmission Works and (where applicable) the scope and estimated completion date of such Works.

13. Progress of the Connection and Generation Facility

13.1. This offer is dependant and conditional on the Customer or his agent achieving the following Connection progress and milestones and failure to do so may result in a delay to any estimated connections dates in **Clause 11** Or termination in line with **Clause 26**. If:

- (a) Where applicable, have failed to enter into process with National Grid as stipulated in **Clause 5** or underwritten Transmission Works and Cancellation Charges as stipulated in **Clause 6**; or
- (b) (where applicable) by **31st August 2019** the Customer's ICP has not submitted and had approved a Design and entered into an Adoption Agreement with SHEPD in relation to the Contestable Works; or
- (c) by **31st August 2019** the Customer has not provided evidence to SHEPD (in terms satisfactory to SHEPD) that it has obtained the appropriate land rights to permit the construction and operation of the Generation Facility; or
- (d) the land rights exhibited to SHEPD pursuant to sub clause (b) above lapse, expire or are otherwise lost, the Customer shall promptly notify SHEPD and if within 6 months of the date that the land rights lapsed, expired, or were otherwise lost the Customer has not provided evidence to SHEPD (in terms satisfactory to SHEPD) that it has obtained the appropriate land rights to permit the construction and operation of the generation facility; or
- (e) by **31st August 2019** the Customer has not obtained planning permission and all other consents necessary for the construction of the Generation Facility or, where relevant, any Dependent Works; or
- (f) by **31st October 2019** the Customer has not commenced construction of the Generation Facility; or
- (g) (where applicable) by **30th November 2019** the Customer has not completed the Contestable Works to the extent necessary for SHEPD to complete the Non-Contestable Works; or
- (h) By **31st March 2020** the Customer's premises and/or site(s) works including, without limitation, the Generation Facility and/or works have not been completed; or

- (i) at any time following acceptance of this Offer in the reasonable opinion of SHEPD the Customer has not satisfactorily progressed or is not satisfactorily progressing the development of the Generation Facility and/or works (including, as applicable, any Contestable Works and the works, facilities and/or provisions set out in Appendix 3) to achieve the estimated Connection date indicated in **Clause 8**,

then SHEPD may terminate the Agreement in accordance with **Clause 26**.

- 13.2. The Customer shall notify SHEPD once it considers that it has been granted the Key Consents. SHEPD shall notify the Customer as soon as reasonably practicable following confirmation from National Grid that National Grid is satisfied that the Customer has been granted the Key Consents or if National Grid is not so satisfied, the reasons for National Grid not being satisfied.

14. Distribution Use of System Charges

- 14.1. From energisation of the Connection, SHEPD will charge Distribution Use of System Charges associated with electricity import and export through the Connection Point(s) to the appointed Electricity Supplier(s), in accordance with the prevailing SHEPD Use of System Charging Methodology and Use of System Charging Statements and the DCUSA.

THE SITE OBLIGATIONS

15. Health and Safety

- 15.1. The Customer shall, pursuant to the Construction (Design and Management) Regulations (2007) as amended or restated from time to time, ensure that they comply with the requirements of the following Health and Safety Executive documents, HSG47 "Avoiding Danger from Underground Services" and GS6 "Avoidance of Danger from Overhead Electric Power Lines" as such publications may be amended or restated from time to time. These documents are available from the HSE Books website at www.hse.gov.uk/pubns/books.
- 15.2. Customers, or their contractors, may use the SHEPD Freephone service on 0800 300 999 to obtain information on the location of SHEPD underground cables and existing overhead lines. It would be helpful if callers provide the Post Code and/or the map reference of their development.
- 15.3. The Customer shall grant to SHEPD, their employees and agents all necessary rights of access to the Customer's premises or site necessary to enable SHEPD to exercise its rights and fulfil its obligations under this Offer or Agreement provided that any of SHEPD's employees, agents or contractors and sub-contractors or others for whom they are responsible in law to whom access is given pursuant to this Clause:
 - (a) shall comply with all reasonable directions given by the Customer and its respective appropriately authorised employees and agents in relation to general safety and security rules and procedures in force at the Customer's premises from time to time and which shall have been brought to the attention of SHEPD; and
 - (b) shall remain the responsibility of SHEPD, who shall direct them to act in a proper, safe and workmanlike manner and at all times having regard to any requisite health and safety rules regulations and industry relevant guidelines in respect of the Distribution Works.
- 15.4. SHEPD reserves the right to stop work and remove all SHEPD employees, officers, agents or contractors and SHEPD equipment from the Customer's premises or site if in SHEPD's reasonable opinion the Health & Safety at Work Act 1974 and its associated Regulations, in each case as may be amended or restated from time to time, and/or any other applicable

health and safety legislation in effect at the relevant time are not being complied with by the Customer at the relevant premises or site(s).

- 15.5. SHEPD will not allow its employees, officers and agents to return to the Customer's premises or site nor to restart the work until satisfied the Customer is complying with the applicable legislation and regulations as set out in **Clause 15.4**.
- 15.6. The Customer shall bring the requirements set out in this **Clause 15** to the attention of the Customer's employees, contractors and subcontractors working on the premises or site(s).
- 15.7. Where the Connection is to be provided for a wind generation development, the Customer shall ensure that the minimum horizontal clearance from the centre of each wind turbine tower to the nearest overhead line conductor is not less than 1.1 times the height of the completed wind turbine, measured from the blade tip at its highest position to normal ground level.
- 15.8. This Offer is made on the basis that the Distribution Works will not be undertaken on contaminated land. SHEPD shall be entitled to refuse to commence, continue or adopt any work in the event that it becomes aware that any of the Works are to be undertaken on land identified as contaminated. The Customer shall be responsible for remedial works on property owned or leased by the Customer or under the control of the Customer, to the reasonable satisfaction of SHEPD. Where the contaminated land is not on property owned or leased by the Customer or under the control of the Customer, the Customer shall be liable to pay any additional costs incurred by SHEPD, howsoever incurred.

16. Design and Adoption of Contestable Works

- 16.1. The ICP is responsible for the design of all Contestable Works. Any Contestable Works undertaken by an ICP on behalf of the Customer must meet SHEPD's specification and adoption requirements. SHEPD will not be obliged to adopt any Contestable Works where the specification and adoption requirements are not met.
- 16.2. The ICP shall be responsible for all third-party negotiations for all Contestable Works including but not limited to ecology and archaeology checks.
- 16.3. The ICP shall be responsible securing for SHEPD, free of charge, all necessary planning permissions, land rights, wayleaves and other consents for all Contestable Works in a form and along a route or at a location approved by SHEPD.

17. Agreements and Technical Compliance Requirements

- 17.1. Prior to the final connection and/or commissioning and/or energisation of the Generation Facility, the Customer or their appointed ICP will be required to enter into or become a party to certain agreements which relate specifically to the Connection. These include but are not necessarily limited to:
 - (a) an Adoption Agreement (where applicable) if the Customer has appointed an ICP to be responsible for Contestable Works; and
 - (b) a Connection Agreement with SHEPD; and
 - (c) an Operating/Site Responsibility Agreement with SHEPD which details the operating responsibilities and safety arrangements with regard to the Connection; and,
 - (d) an electricity supply agreement with an Electricity Supplier who is a party to the DCUSA; and
 - (e) an electricity purchase agreement with an Electricity Supplier who is party to the DCUSA, a party to the BSC and a party to the CUSC; and

- (f) any further agreements, documentation or arrangements in relation to the Connection which National Grid may require or request the Customer to become a party to or enter into.

All necessary agreements must be completed prior to the final connection and/or commissioning of the Generation Facility, but nothing herein contained nor any drafts submitted in connection with the above agreements shall be binding on either party as to the final form and content of such agreement until each such agreement is finally agreed and executed by the parties. Where the agreements are between the Customer and parties other than SHEPD, the Customer must provide documentary evidence satisfactory to SHEPD of compliance with the requirements of this **Clause 17.1**.

- 17.2. The Customer's installation must be installed, operated and maintained in accordance with the technical engineering requirements of the Distribution Code and the Customer shall also comply with the following Engineering Recommendations, as amended or replaced from time to time:

- (a) Engineering Recommendation G59/99;
- (b) Engineering Recommendation G5/4;
- (c) Engineering Recommendation P28.

- 17.3. To ensure compliance with **clause 17.2** a harmonic or other analysis may require to be completed following acceptance of this Offer. Any additional costs and works identified as part of this will be fully funded by the Customer, subject to the variations allowed within **Clause 24**.

- 17.4. SHEPD will not energise the Connection until it is satisfied that the applicable requirements of **Clauses 17.1 and 17.2** have been met.

18. Land Rights (including wayleaves), Planning and Other Consents, Access Rights

- 18.1. We have identified that third party consents are likely to be required for the works and have assumed that they will be granted without dispute and in accordance with Scottish Hydro Electric Power Distribution plc's standard land rights' style agreements.

Where we are unable to obtain third party consents, the design and terms of our contract with you may need to be revised and you will need to meet any associated additional costs that may be incurred by us or such third party, arising from but not limited to:

Land rights

- Legal and other professional fees and expenses incurred by us and any third party in connection with securing the required land rights;
- Wayleave fees levied by third parties to process wayleave agreements; and
- Costs associated with any compulsory purchase or necessary wayleave applications, which may have to be submitted under the Electricity Act 1989. Timescales and costs for determination of a compulsory purchase or wayleave consent will depend on the specific circumstances of the application. An application for a compulsory purchase or necessary wayleave does not guarantee a positive determination. The decision to pursue a compulsory purchase or necessary wayleave remains at the sole discretion of Scottish Hydro Electric Power Distribution plc.

Other consents

- Specialist ecology surveys;

- Tree cutting compensation and sterilisation;
- Archaeology investigations including watching briefs; and
- Damage claims and any associated surveyor's fees where the damage is over and above what is reasonably necessary to undertake the works.

Planning and other statutory consents

- Application fees for planning and other statutory consents including:-
 - Application for consent under section 37 of the Electricity Act 1989 where the connection requires an overhead line element. This is a two stage process requiring an initial application to the local planning authority followed by an application to the relevant Government Department (being the Energy Consents Unit in Scotland or the Department for Business, Energy and Industrial Strategy in England and Wales). Timescales can vary but typically it can take approximately 20 weeks to secure these consents.; and
 - Application for planning permission for an underground cable where the connection cannot be carried out under permitted development;
 - Planning consultation or other professional fees.
- 18.2. For all electric lines and works required for the Connection which are on, over or through property owned, leased by or under the control of the Customer, or within land forming part of the Customer's Landlord's wider ownership, the provision of the Connection and meeting the estimated completion date will be subject to the Customer granting or securing for SHEPD, free of charge, all applicable wayleaves or other necessary facilities in a form and along a route approved by SHEPD.
- 18.3. The Customer shall provide, at no charge to SHEPD, unrestricted access (unless otherwise agreed in writing with SHEPD) to land owned, leased by or otherwise under the control of the Customer for the purposes of providing the Connection, including suitable access and on-site facilities to the extent required for construction traffic, including heavy vehicles, construction plant and equipment.
- 18.4. The Customer shall provide to SHEPD an unrestricted right of vehicular and pedestrian access to and egress from (as applicable) the substation site and/or switchroom, at no charge to SHEPD.

19. Operation, Protection and Control

- 19.1. The generation plant will be subject to the terms of the Distribution Code.
- 19.2. Energisation shall be conditional upon the Customer ensuring their generation output is balanced across the phases of the Connection at all times.
- 19.3. The generation plant must be operated within the power factor range stated within Clause 1 for all levels of generation output.
- 19.4. The generator output at 33 kV at the metering circuit breaker must not exceed 1.03 per unit (33.99 kV). Provision must be made by the Customer to ensure that the generating station can be operated in a Voltage Control mode of operation that fully complies with SHEPD's operating requirements.
- 19.5. SHEPD will provide a local emergency trip facility for the 33kV metering circuit breaker.

- 19.6. SHEPD will witness all protection and control testing, including the Customer's generation protection schemes, to ensure compliance with Engineering Recommendations G59/G99, as amended or replaced from time to time.
- 19.7. SHEPD will coordinate protection relay settings with the Customer to ensure discrimination between the respective protection equipment.

20. Frequency of and Fluctuations Caused by Starting

- 20.1. The voltage depressions experienced by the supply network due to startup loads must not exceed the limits set out in Engineering Recommendation P28 as amended or replaced from time to time. The Customer must establish procedures to ensure compliance with this.
- 20.2. The maximum permissible voltage fluctuation at the Point of Connection(PoC) is 1% for frequent starting events and 3% for infrequent starting events. Frequent starting is defined as more than one event in a ten-minute period. This is based on SHEPD guidelines derived from Engineering Recommendation P28.
- 20.3. The PoC is taken to be the Energy from Waste site terminals of the SHEPD metering circuit breaker. The minimum fault level at the PoC is calculated to be 473.271 MVA which limits the mag. Inrush current to 79 Amps for frequent starting events, and 237 Amps for infrequent starting events.

21. Metering

- 21.1. The charges for the Connection **do not** include the cost of the required export and import metering and the associated communications facilities required for the Connection. The Customer is responsible for meeting all costs associated with the installation of metering.
- 21.2. The Customer must enter into an agreement with a Meter Operator Agent for the provision of the required metering and associated communications facilities and advise SHEPD which Meter Operator Agent has been appointed, prior to energisation of the Connection.
- 21.3. Metering panels and multicore wiring to connect to the metering voltage and current transformers will be supplied and installed by SHEPD, or the Customers ICP if the Customer has accepted this Offer on a Non-Contestable Distribution works only basis. The metering panels will be located by mutual agreement between the Customer and SHEPD and must be suitable for the reasonable requirements of the appointed Meter Operator Agent. The Meter Operator Agent must install import/export metering compliant and installed in accordance with the appropriate Code of Practice. The metering must be programmable, able to record data at half-hourly intervals, able to be read remotely and capable of recording kW and kVAh for both import and export.
- 21.4. A modem and communications link for the metering must be provided by the Customer (either by way of a dedicated BT exchange line, an alternative PAKNET radio communication service or other form of communications mutually agreed between the Customer and SHEPD). The Customer will be responsible for meeting all costs associated with the installation and rental of these communication links.

GENERAL TERMS AND CONDITIONS

22. Basis of Terms

- 22.1. The terms of this Offer are based on the connection application information submitted to SHEPD by the Customer. Should any such information be later shown to be incorrect and have a material bearing on the terms of this Offer or Agreement, then SHEPD reserves the right to revise any affected terms including, but not limited to, the charges for the

Connection, so as to put SHEPD back in the same position as it would have been had the correct information been known prior to the date hereof.

- 22.2. The Offer is subject to screening of the Customer against the OFSI Consolidated List. In the event the Customer is included on the consolidated list the Company reserves the right to withdraw the offer.
- 22.3. The Company reserves the right to carry out Customer screening against the OFSI Consolidated List at any time. If at any time the Customer's details are found on the consolidated list, the Company shall follow the OFSI guidelines.

23. Payments

- 23.1. The costs in respect of any Transmission Works and/or the Cancellation Charge must be paid by the Customer to SHEPD in full within 7 days of the issue date of any invoice by SHEPD.
- 23.2. Full payment of any other sums invoiced by SHEPD relating to this Offer or Agreement must be received by SHEPD within 30 days of the issue date of the invoice.
- 23.3. If the Customer does not pay or is overdue in paying any sums due to SHEPD under the terms of this Agreement, SHEPD reserves the right to:
- (a) refuse to commence or to continue work on the provision of the Connection until payment is received; and/or
 - (b) to charge interest at 3% above the base lending rate of The Royal Bank of Scotland plc calculated on a daily basis on the outstanding payment(s) over the period they remain unpaid; and/or
 - (c) to terminate this Agreement in which the provisions of **Clause 26** shall apply.
- 23.4. In the event that SHEPD does not exercise its right to terminate this Agreement pursuant to **Clause 23.3(c)** but exercises its rights under **Clause 23.3(a)** and/or (b) then, without prejudice to the right of SHEPD to terminate at any time pursuant to **Clause 23.3(c)**, SHEPD shall be entitled to amend this Agreement (including, without limitation, any of its Appendices).
- 23.5. With the exception of charges set out in Clause 23.6, SHEPD must receive full payment of all charges for the Connection (plus any interest due, where applicable) prior to energisation of the Connection.
- 23.6. In accordance with The Electricity (Connection Charges) Regulations, you will become liable to pay a Second Comer Charge on completion of the electrical works. This charge is in recognition of the prior contribution towards the costs of the relevant assets. The Second Comer Charge is included in the charges set out in Clause 3 and will be invoiced by SHEPD to the Customer on completion of the electrical works.

24. Variations and Amendments

- 24.1. The Customer and SHEPD acknowledge and agree:
- (a) that no variations of this Agreement, except for those expressly provided for within the terms of this Agreement, shall be effective unless made in writing and signed by or on behalf of both parties. Each party shall effect any amendment required to be made to this Agreement by the Authority as a result of a change in the Licence or any order made pursuant to the Act or as a result of settling any of the terms hereof and the Customer hereby authorises and instructs SHEPD to make any such amendment on its behalf and undertakes not to withdraw qualify or revoke such authority or instruction at any time; and

- (b) either party shall at any time be entitled to propose variations to this Agreement in addition to those variations expressly provided for within the terms of this Agreement by notice in writing to the other party. SHEPD and the Customer shall negotiate in good faith the terms of any such variations but if a variation to the Agreement has not been agreed and put into effect within three months after it has been proposed, either Party shall be entitled to refer the matter to the Authority pursuant to SHEPD's Distribution Licence. The parties shall give effect to the determination of the Authority and shall enter into any Agreement supplemental to this Agreement as shall be necessary to give effect to any variation agreed or so determined.
- (c) In the event of a proposed Variation not being either agreed or referred to the Authority within three months of the proposal, either Party shall be entitled to terminate this Offer forthwith upon giving written notice to other.

24.2. The charges for the Distribution Works may be subject to variation

SHEPD reserve the right to amend the charges at any time including, for the avoidance of doubt, subsequent to acceptance of this Offer:

- (a) Where the estimated date of completion of the Distribution Works is in excess of 12 months from the date of this Offer, to account for changes in costs incurred by SHEPD in providing the Connection.
- (b) when tender returns for plant, materials, works and any other material expenditure associated with the Distribution Works have been received and evaluated; and/or
- (c) if subsequent to the date of this Offer it is necessary to amend the scope or specification of the Distribution Works following further engineering design in relation to the Connection; and/or
- (d) if an alternative route is necessary or material deviations from the initial route are required when the final route for the Distribution Works has been established; and/or
- (e) if subsequent to the date of this Offer stability studies, power quality assessments, environmental impact surveys, ground condition, archaeological, marine or other such technical studies, assessments, surveys and/or statements are required to undertake the Distribution Works and (as applicable) such subsequent studies, assessments and/or surveys indicate that amendment to the scope of the Distribution Works is necessary; and/or
- (f) in the event of material movement in the price of metals to be used in the Distribution Works; and/or
- (g) if the Distribution Works are delayed by acts, instructions or omissions of the Customer and/or any factor beyond the reasonable control of SHEPD; and/or
- (h) in the event of a material movement in the relevant exchange rate(s) if any element of the Distribution Works is to be paid for by SHEPD in a currency other than Pounds Sterling

24.3. SHEPD reserves the right to amend the terms and conditions of the Agreement, in particular but not limited to the charges and estimated connection date set out in this Offer or Agreement if SHEPD is unable (having used reasonable endeavours) to obtain the necessary Consents, all of which (and any conditions attached thereto) are in terms acceptable to SHEPD, for all electric lines and works necessary for the Connection (but that only to the extent that such non-obtained or delayed Consents have a bearing on such matters).

24.4. Where there are connection dependencies pursuant to **Clause 12**, SHEPD reserves the right to vary:

- (a) the estimated date of completion and/or energisation of the Connection;
- (b) the design and/or specification of the Connection and/or any technical parameters applicable to the Connection;
- (c) the scope of the Distribution Works; and
- (d) any other provisions of this Offer or Agreement without limitation, the Connection date, the charges for the Connection and security requirements (including without limitation the amount of the Secured Liabilities) of the Customer,

to take account of any Cancellation Charge Statement, Cancellation Charge Secured Amount Statement, Notification of Fixed Attributable Works Cancellation Charge, costs, restrictions, conditions, provisions or modifications notified by National Grid relating to the Connection.

24.5. In the event of any variation, SHEPD will notify the Customer of the amended changes. Where applicable, SHEPD will also provide an amended Payment Schedule taking account of the variation.

25. Waiver

25.1. No waiver by either party in connection with this Agreement shall be effective unless given in writing and signed by a duly authorised signatory of that party.

25.2. The failure to exercise or delay in exercising a right or remedy under this Agreement shall not constitute a waiver of the right or remedy or a waiver of any other rights or remedies and no single or partial exercise of any right or remedy under this Agreement shall prevent any further exercise of the right or remedy or the exercise of any other right or remedy. No such failure or delay by either party shall release the other party from performance of its obligations as stated herein.

26. Termination

26.1. This Agreement shall take effect from the date of acceptance of this Offer and shall continue in force, unless terminated earlier in accordance with its terms, until either energisation of the Connection or full payment is received, whichever is the later date.

26.2. At any time prior to the completion of the Distribution Works, the Customer may terminate the Agreement by giving not less than 14 days written notice to SHEPD.

26.3. If:

- (a) any sum due by the Customer to SHEPD shall at any time be in arrears and unpaid for more than 28 days after a formal demand for it has been made; or
- (b) the Customer becomes insolvent within the meaning of the Insolvency Act 1986 as amended or substituted from time to time or has a receiver or administrator appointed or commences to be wound up, other than for the purposes of solvent reconstruction, or enters into any scheme or arrangement with one or more of its creditors or any analogous event in any relevant jurisdiction; or
- (c) there shall be any material breach or any persistent contravention of any of the Customer's obligations contained in the Agreement which remain un-remedied after reasonable written notice of such breach or contravention,

then SHEPD may at any time thereafter by notice in writing forthwith terminate the Agreement.

- 26.4. If the Customer is in breach of the milestones and progress agreed in **Clause 13** then SHEPD may at any time thereafter by notice in writing forthwith terminate the Agreement and in that event SHEPD shall have no liability to the Customer in respect thereof save to refund any sums overpaid (if any) in respect of the works carried out or commitments made up to the date of such notice.
- 26.5. Without prejudice to any other rights of SHEPD contained within this Agreement, where the Customer is in breach of the Agreement and such breach is capable of being remedied and is not so remedied within seven days after written notice has been given to the Customer then SHEPD may terminate the Agreement, and the provisions of **Clause 26.6** shall apply and in such an event the Customer shall pay to SHEPD all sums due hereunder on receiving an invoice.
- 26.6. In the event the Agreement is terminated (howsoever) pursuant to this **Clause 26** or pursuant to any other provision of this Agreement, the Customer shall remain liable and shall be obliged to pay to SHEPD in relation to the Connection: -
- (a) all costs, charges and expenditure (together with a reasonable allowance for profit) incurred by SHEPD up to the date of termination; and,
 - (b) all costs, charges and expenditure which SHEPD is liable for as a result of this Agreement; and,
 - (c) all costs, charges and expenditure for any additional works required to render existing works safe to the reasonable satisfaction of SHEPD; and
 - (d) any amounts payable by SHEPD to NATIONAL GRID relevant to the Transmission Works) and/or the Cancellation Charge.
- SHEPD shall use reasonable endeavours to mitigate its liability to third parties in respect of all costs, charges and expenditure for which it is liable as a result of the termination of this Agreement.
- 26.7. In the event that National Grid terminates its agreement with SHEPD in relation to any Transmission Works relevant to this Agreement, then SHEPD shall be entitled to terminate this Agreement upon written notice to the Customer.
- 26.8. The provisions of **Clause 26** and any provision hereunder regarding payment and security and cost apportionment shall survive termination of this Agreement.

27. Cancellation Charge and Fixed Attributable Works Cancellation Charge

- 27.1. The Cancellation Charge is made up of a number of components which apply at different stages and is calculated and notified to SHEPD in accordance with Section 15 of the CUSC. Part of the Cancellation Charge, The Attributable Works Cancellation Charge, can, by election by the Customer, be on the basis of the Fixed Attributable Works Cancellation Charge rather than the Actual Attributable Works Cancellation Charge.
- 27.2. Following receipt by SHEPD of a Notification of Fixed Attributable Works Cancellation Charge relevant to this Offer, SHEPD shall notify the Customer (unless and until the Customer elects for a Fixed Attributable Works Cancellation Charge or the Customer advises SHEPD that it does not wish to receive this) of the Fixed Attributable Works Cancellation Charge and an estimate of the Actual Attributable Works Cancellation Charge.
- 27.3. The Customer shall, if it wishes to elect for the Fixed Attributable Works Cancellation Charge rather than the Actual Attributable Works Cancellation Charge, notify SHEPD in writing of such election at the time of acceptance of this Offer or (if not elected at that time) within 10 Business Days of receipt of the notification referred to in Clause 6.5. For the avoidance of

doubt, in accordance with Section 15 of the CUSC, if the Customer elects for the Fixed Attributable Works Cancellation Charge, the Customer cannot revert to the Actual Attributable Works Cancellation Charge and the Actual Attributable Works Cancellation Charge shall apply unless and until the Customer elects for the Fixed Attributable Works Cancellation Charge in accordance with this Clause 27.3.

28. Liabilities and Indemnities

- 28.1. Subject to **Clause 28** hereof and save where any provision of this Agreement provides for an indemnity, the respective liability of SHEPD and the Customer (and their respective officers, employees, contractors or agents) (the “Party Liable”) to the other (and its respective officers, employees, contractors or agents) in contract, delict, negligence or otherwise arising out of or in relation to this Agreement shall be limited to one million pounds sterling (£1million) per incident or series of related incidents.
- 28.2. Nothing in this Agreement shall exclude or limit the liability of the Party Liable for death or personal injury resulting from the negligence of the Party Liable, or any of their officers, employees, contractors or agents, and the Party Liable shall indemnify and keep indemnified the other party, its officers, employees, contractors or agents, from and against all such and any loss or liability which such other party may suffer or incur by reason of any claim on account of death or personal injury resulting from the negligence of the Party Liable or any of its officers, employees, contractors or agents.
- 28.3. In relation to third party claims for damage to property belonging to that third party only, each of SHEPD and the Customer shall indemnify and keep indemnified the other from and against all losses, damages, costs (including legal costs), claims or other liability that arises as a direct result of the indemnifying party’s or its officers’, employees’, contractors’ or agents’ negligent or wilful act or omission or breach of this Agreement provided that the indemnified party shall not compromise or settle any such claims, costs, proceedings or demands without the written consent of the indemnifying party (which shall not be unreasonably withheld) and shall permit the indemnifying party to defend the same in the name of the indemnified party at the indemnifying party’s expense.
- 28.4. Save where any provision provides for an indemnity, neither SHEPD nor the Customer (nor any of their respective officers, employees or agents) shall in any circumstances whatsoever (including, without limitation, negligence) be liable to the other, arising out of or in Connection with this Agreement, for any: -
- (i) any direct or indirect loss of profits, business or anticipated savings; or
 - (ii) loss of revenue, loss of use, loss of contract or loss of goodwill; or
 - (iii) any indirect or consequential loss.
- 28.5. Each provision of this Clause excluding or limiting liability shall be construed separately, applying and surviving even if for any reason one or other of these provisions is held inapplicable or unenforceable in any circumstances and shall remain in force notwithstanding the expiry or termination of this Agreement.
- 28.6. Where this Agreement provides for an indemnity, the indemnified party shall not compromise or settle any such claims, costs, proceedings or demands without the written consent of the indemnifying party (which shall not be unreasonably withheld) and shall permit the indemnifying party to defend the same in the name of the indemnified party at the indemnifying party’s expense.

29. Assignment

- 29.1. Subject to this **Clause 29**, the Customer may only assign its rights and obligations under this Agreement with the prior written approval of SHEPD (such approval not to be unreasonably withheld or delayed).
- 29.2. The Customer warrants and undertakes that in the event of it assigning its rights and obligations under this Agreement in accordance with **Clause 29.1** it will promptly and without deduction pay all sums (if any) owing under this Agreement up to the date of assignment.
- 29.3. The Customer acknowledges that SHEPD may, prior to consenting or otherwise to a proposed assignment under this **Clause 29**, perform credit checks on any proposed assignee to establish such proposed assignee's ability to discharge its payment obligations under this Agreement and may request that such proposed assignee provide a guarantee or other form of security, in terms acceptable to SHEPD, as a condition of any written consent.

30. Force Majeure

- 30.1. Neither SHEPD nor the Customer shall be liable whether in contract, delict or otherwise for any failure to comply with the terms of this Offer to the extent that such failure is caused in relation to that party by any event or circumstance which is beyond the reasonable control of that party and which results in or causes the failure of that party to perform any of its obligations hereunder. It is agreed that lack of funds shall not be interpreted as an event or circumstances beyond the reasonable control of the Customer.

31. Disputes

- 31.1. The Customer's attention is drawn to Condition 7 of the SHEPD Licence which the parties accept without limitation applies to any dispute between SHEPD and the Customer in relation with any of the terms of this Offer and provides that any such dispute may be referred by either SHEPD or the Customer to the Authority for their determination.
- 31.2. Nothing contained in this Offer shall prevent or inhibit the Customer in referring any matter or dispute to the Authority for their determination under any applicable terms of the Act.

32. Governing Law

- 32.1. This Offer and any resulting Agreement shall be subject to and construed in accordance with Scottish law and, subject to the terms of the Agreement, the Parties hereby submit to the exclusive jurisdiction of the Scottish Courts.

CUSTOMER ACCEPTANCE FORM

MVV Environment Baldovie Limited, EPD996/1, Baldovie EfW

I* / We* hereby accept for and on behalf of MVV Environment Baldovie Limited, SHEPD's Offer, dated 23rd July 2019, for the Connection on the terms and conditions contained in said Offer.

	Please indicate chosen Works and Payment Option below	Payment With Acceptance (excl. VAT)	VAT (20%)	Total Payment With Acceptance
Option 1: SHEPD to Undertake All Distribution Works				
Full Payment on Acceptance (less the amount of any Second Comer Charge) (see Appendix 1, clause A1.1.1)		██████████	██████████	██████████
Staged Payments (see Appendix 1, clause A1.1.2)		██████████	██████████	██████████
Or Option 2: SHEPD to Undertake Non-Contestable Distribution Works only				
Full Payment on Acceptance (less the amount of any Second Comer Charge) (see Appendix 1, clause A1.2.1)		██████████	██████████	██████████
Staged Payments (see Appendix 1, clause A1.2.2)	Not Applicable	Not Applicable	Not Applicable	Not Applicable
To be included on acceptance of either Option 1 or Option 2				
Provide evidence of progression of BEGA/BELLA with National Grid				

Signature: _____ Witness: _____

Print Name: _____ Print Name: _____

Witness _____

Address: _____

Acceptance date: _____

This Offer should be signed by the applicant personally or if the Connection is requested by a company, an appropriate and authorised representative of that company. The signatory's position within the company should be specified together with a statement that he/she is signing on behalf of the company.

Payments on Acceptance

Cheque payments: Please make cheque payable to "Scottish Hydro Electric Power Distribution plc" and return cheque with acceptance of Offer to:

Major Commercial Contracts, Scottish and Southern Electricity Networks, SSE Training Centre, Ruthvenfield Way, Perth, PH1 3AF

BACS Payments: **Account name:** Scottish Hydro Electric Power Distribution plc If paying by bank transfer, please indicate in this box:

Bank: NatWest

Account number: 89543130

Sort code: 60-17-21

IBAN code: GB41 NWBK 6017 2189 5431 30

Swift No (BIC): NWBK GB 2L

UTR: 85621 10776

VAT registration number: 553 7696 03

Quote reference: EPD996/1

Appendix 1: Payment Schedule

A1.1 Payment Terms for SHEPD to Undertake All Distribution Works

A1.1.1 Full Payment on Acceptance for SHEPD to Undertake All Distribution Works

Payment and Due Date	Value (Excl. VAT)	Value (Incl. VAT at 20%)
Full Payment (less the amount of any Second Comer Charge) Payment with Offer acceptance minus £97,933 + VAT transferred from previous accepted offer ref ENC848		

A1.1.2 Staged Payments for SHEPD to Undertake All Distribution Works

Not Used

A1.2 Payment Terms for SHEPD to Undertake Non Contestable Distribution Works Only

A1.2.1 Full Payment for SHEPD to Undertake Non Contestable Distribution Works Only

Payment and Due Date	Value (Excl. VAT)	Value (Incl. VAT at 20%)
Full Payment (less the amount of any Second Comer Charge) Refund of monies paid on previous accepted offer ref ENC848 £22,672.49 + VAT		

A1.2.2 Staged Payments for SHEPD to Undertake Non Contestable Distribution Works Only

Not Used

Appendix 2: Breakdown of Charges

Connection Offer Expenses

Description:	Charges (excl. VAT)
Connection Offer Expenses	

Breakdown of SHEPD Charges for the Distribution Works

Component of Works	Charges (excl. VAT)	
DIVERSION WORKS	£ Not Applicable	
NETWORK REINFORCEMENT WORKS	£ Not Applicable	
Network Reinforcement Charges Breakdown		
Total Reinforcement Works	£ Not Applicable	
Limit for Cost Apportionment [£200 x *** (APP)] <u>comprising</u>	£ Not Applicable	
Contribution from each party	SHEPD	Customer
EHV (33kV) Voltage Level – Part 1 #£***,***.** x (APP/NNC for EHV)	£ Not Applicable	£ Not Applicable
Reinforcement above High Cost limit and charged in full as Connection Charge		£ Not Applicable
Charges for Previous Reinforcement Works (Second Comer Charge)		£ Not Applicable
	SHEPD	Customer
Reinforcement Charges by each party (excl. VAT)	£ Not Applicable	£ Not Applicable
CONNECTIONS WORK BREAKDOWN		
NON CONTESTABLE WORKS The design and specification of all Distribution Connection Works. Obtaining all the necessary wayleave and planning consents required for all		

<p>Distribution Connection Works.</p> <p>SHEPD will split the existing cable on circuit 309 from Milton of Craigie Grid at suitable point and carry out straight joints to both ends to connect two contestable cables to each end of 33kV circuit.</p> <p>Install Grid Compliant comms link and SCADA facilities at the generating station to allow for remote monitoring and control of the 33kV plant and equipment by SHEPD.</p> <p>SHEPD will witness the testing of the G59 relay</p> <p>SHEPD will review voltage regulation / protection settings at Milton of Craigie Grid substation</p> <p>SHEPD will install Intertrip relays at Milton of Craigie and customers site in order to provide new intertrip with feeder breaker and customers breaker.</p> <p>SHEPD will connect test and terminate contestable pilot cable for intertrip. Including Straight joint to existing pilot cable close to connection of power cable.</p>	
<p>Legal and Professional Costs</p>	<p>██████████</p>
<p>Connection Offer Expenses Charge (Non Refundable)</p>	<p>██████████</p>
<p>Final Connection Charge</p>	<p>██████████</p>
<p>Total Non-Contestable Works Charges (excl. VAT)</p>	<p>██████████</p>
<p>CONTESTABLE WORKS</p> <p>The design and specification of all Distribution Connection Works.</p> <p>Obtaining all the necessary wayleave and planning consents required for all Distribution Connection Works.</p> <p>The survey, design, construction and connection of two 33kV circuit both approximately 90m length from the above proposed straight Joints to the switchgear at the EfW Generating Station.</p> <p>Each circuit is to comprise of 3x 1c x 300mm² Al 33kV underground cable.</p> <p>The 33kV cable must be installed in Black ducts at all positions along the route that will be crossed by vehicular traffic. Suitable provision must also be made to route the cable across or under any river / burn crossings as agreed and approved by SHEPD.</p> <p>The supply, installation, testing and commissioning of three suitably rated indoor 33 kV metering circuit breaker, associated battery charger, rechargeable lead acid batteries and associated AC, DC, alarm, indication, control circuits and power quality monitoring located within a switch room provided by the Customer at a mutually agreeable position at Baldovie EfW site.</p> <p>One Circuit breaker for each incoming feed and one metering circuit breaker.</p> <p>This 33 kV metering circuit breaker must be equipped with a minimum of</p>	

<p>over current, earth fault and neutral voltage displacement (NVD) protection, including the supply, installation, testing and commissioning of the protection and metering class C.T.'s, V.T.'s and associated multicore cabling systems.</p> <p>The supply, installation and testing of a metering panel suitable for a meter operator to install Code of Practice 2 import/export metering, including the supply and installation of the associated multicore cabling to connect to the current transformers and bus bars in the high voltage metering circuit breaker at Baldovie EfW site. The location of the metering panel will be by mutual agreement.</p> <p>The supply, installation, testing and commissioning of all 33kV earthing systems.</p> <p>Provision of a detailed underground cable route schedule with suitable maps, full landowner/tenant details, a completed Environmental Impact Assessment and any other information requested by the relevant statutory Authority, in sufficient detail to allow SSEN to obtain all the necessary wayleave and planning consents for the Contestable Distribution Connection Works.</p> <p>Customer will do all civil works associated with the project (within own ground), at no cost to SSEN.</p>	
Legal and Professional Costs	██████████
Connection Offer Expenses Charge	██████████
Connection Charge at EHV	██████████
Total Contestable Works Charges (excl. VAT)	██████████
Total All Works Charges (excl. VAT)	£██████████

A2 1. Cost Apportionment and Cost Apportionment Contribution

Not used

A2 2. Charges for Previous Reinforcement Works

Not used

A2 3. Charges for Operation and Maintenance of Distribution Equipment

Not used

Appendix 3: Customer Works and Provisions

The provision of the Connection by SHEPD is dependent on the Customer undertaking the following works and/or providing the following facilities, to the specifications of and when required by SHEPD, at no charge to SHEPD:

Access Arrangements

Full unrestricted vehicular access will be required to the new substation location for all operational and maintenance requirements. In addition a level platform area will be required adjacent to the substation location to allow for the delivery and potential replacement of the transformer and / or HV switchgear, the size and location of the platform to be agreed with SHEPD's Delivery Manager.

Tree Cutting

If any trees on land owned, leased by or otherwise under the control of the Customer require to be pruned or removed, in order to prevent interference with the construction, maintenance or working of the electric lines, works or other plant, such trees will be pruned or removed by the Customer.

Track Works

The Customer shall carry out all excavation and backfilling of the cable track in relation to the Distribution Works on land owned, leased by or otherwise under the control of the Customer and shall provide sand for the laying of cable in the cable track.

Civil Works

Provision of a substation base/plinth to the scale and specification issued by SHEPD.

Substation Site

The Customer shall provide SHEPD with a substation site to the scale required by and in the location identified by SHEPD.

Switchroom

The Customer shall provide an indoor switchroom complying with SHEPD requirements for the housing of SHEPD connection equipment.

Wall Space

The Customer shall provide a minimum wall space of 2000 mm x 2000 mm within the indoor switchroom in a position specified by SHEPD for the location and positioning of SHEPD connection equipment.

Earthing

The Customer shall provide the necessary earthing arrangements in line with Engineering Recommendation G59/3 and the latest IEE Regulations. All earthing must comply with statutory requirements and national standards.

Site-Specific Protection Requirements

The Customer shall install protective devices and associated control systems on the Customer's 33kV network which shall ensure that any fault on the Customer's 33kV network is cleared within 100 milliseconds of the fault occurring to ensure discrimination with SHEPD protective equipment.

Electrical Works

You are required to ensure that all works on your own electrical installations are carried out by a qualified electrical contractor. Statutory qualification schemes, for Building Regulation purposes, are currently run by NICEIC, SELECT, ECA, NAPIT, ELECSA, British Standards Institution and BRE Certification. All HV and LV switchgear must be commissioned onsite prior to energization by SHEPD pending a safety clearance document.

Appendix 4: Transmission Works

- 1.1 Transmission Works may be required to enable the provision and energisation of the Connection. The potential requirement for the Connection to be conditional upon Transmission Works is to be the subject of further assessment.
- 1.2 SHEPD will advise the Customer, subsequent to the Customer's acceptance of this Offer and the completion of the relevant assessment process, of any requirement for Transmission Works and (where applicable) the scope and estimated completion date of such Works. SHEPD shall also advise the Customer of any consequent amendments to the provisions of this Offer or Agreement" including, without limitation, the required underwriting and provision of security in respect of such works.

Appendix 5: Glossary of Terms

“Act”	means the Electricity Act (1989), as amended;
“Actual Attributable Works Cancellation Charge”	as defined in the CUSC;
“Adoption Agreement”	means the agreement, in SHEPD’s standard form unless otherwise agreed, between the Customer, their appointed ICP and SHEPD, setting out the basis under which the Contestable Works may be constructed on behalf of the Customer and adopted by SHEPD on completion, at no charge to SHEPD. The standard form template of this Agreement may be downloaded from the Scottish and Southern Electricity Networks website (www.ssen.co.uk);
“Attributable Works Cancellation Charge”	as defined in the CUSC;
“Approved Credit Rating”	any one of the following: <ul style="list-style-type: none"> (a) a credit rating for long term debt of A- and A3 respectively as set by Standard and Poor’s or Moody’s respectively; (b) an indicative long term private credit rating of A- and A3 respectively as set by Standard and Poor’s or Moody’s respectively; a short term rating by Standard and Poor’s or Moody’s which correlates to a long term rating of A- and A3 respectively;
“Authority”	means the Gas and Electricity Markets Authority (GEMA), the regulatory body for the gas and electricity industries established under Section 1 of the Utilities Act 2000;
“BSC”	means the Balancing and Settlement Code as amended from time to time;
“Business Day”	any weekday other than a Saturday on which banks are open for domestic business in the City of London;
“Cancellation Charge”	the charge notified to SHEPD by NATIONAL GRID and payable by SHEPD to NATIONAL GRID in respect of the Transmission Works: (a) in the event of termination of this Offer; and/or (b) in the event of a reduction in the Customer’s maximum export capacity;
“Cancellation Charge Statement”	the statement issued by NATIONAL GRID to SHEPD in accordance with Part Two of the User Commitment Methodology relative to this Contract;
“Connection”	means the particular electricity connection at the location specified in this Offer or Agreement and with the characteristics set out in Clause 1 of this Offer or Agreement;
“Connection Agreement”	means the site-specific agreement between the Customer and SHEPD which must be signed prior to energisation of the Connection and which governs the arrangements between the parties following energisation;
“Connection Charging Statement”	means the statement, as may be amended from time to time, that SHEPD is required to publish under Condition 14 of the Licence setting out the basis on which charges will be made for the provision of connections to the SHEPD Distribution System. The current Statement may be downloaded from the Scottish and Southern Electricity

	Networks website (www.ssen.co.uk);
“Contestable Works”	means the elements of the Distribution Works (where applicable) which the Customer may choose to have undertaken by an ICP, subject to the terms of this Offer or Agreement;
“Cost Apportionment”	means the apportionment of costs between the Customer and SHEPD in relation to reinforcement elements (where applicable) of the Distribution Works;
“Cost Apportionment Contribution” or “CAC”	means the contribution made by SHEPD towards the costs of the reinforcement elements (where applicable) of the Distribution Works;
“CUSC”	means the National Grid Connection and Use of System Code as amended from time to time;
“DCUSA”	means the Distribution Connection and Use of System Agreement as amended from time to time;
“Distribution Code”	means the Distribution Code of the Licensed Distribution Network Operators (DNOs) of Great Britain as amended from time to time;
“Distribution System”	means the electricity distribution system owned and operated by SHEPD;
“Distribution Use of System Charges”	means charges applicable to electricity export and import connections in accordance with the SHEPD Use of System Charging Methodology and Charging Statements, as amended from time to time. The current Statements may be downloaded from the Scottish and Southern Electricity Networks website (www.ssen.co.uk);
“Distribution Works”	means any works which SHEPD may require to undertake on the Distribution System to permit the energisation of the Connection and export of electricity from the Generation Facility;
“Electricity Connection Charges Regulations”	means the Electricity (Connection Charges) Regulations as amended, These regulations provide that if a customer connects to and benefits from infrastructure that was paid for by an earlier party, then the subsequent connecting customer should reimburse the earlier party to account for their proportion of the new infrastructure;
“Electricity (Connection Offer Expenses) Regulations”	Means The Electricity (Connection Offer Expenses) Regulations 2018. These regulations permit SHEPD to charge the Customer for work undertaken in the preparation of the Connection Offer.
“Electricity Supplier”	means a party who is the holder of a licence to supply electricity under Section 6 of the Act or who is exempted from the requirement to hold such a licence under Section 5 of the Act;
“Engineering Recommendation G59”	“Recommendations for the Connection of Generating Plant to the Distribution Systems of Licensed Distribution Network Operators” published by the Energy Networks Association, 4 More London Riverside London, SE1 2AU (or its successor);
“Engineering Recommendation G99”	“Requirements for the connection of generation equipment in parallel with public distribution networks on or after 27 April 2019” published by the Energy Networks Association, 4 More London Riverside London, SE1 2AU (or its successor);
“Engineering Recommendation G5/4”	“Planning Levels for Harmonic Voltage Distortion and the Connection of Non-Linear Equipment to Transmission Systems and Distribution

	Networks in the United Kingdom” published by the Energy Networks Association, Dean Bradley House, 52 Horseferry Road, London, SW1P 2AF (or its successor);
“Engineering Recommendation P28”	“Planning Limits for Voltage Fluctuations Caused by Industrial, Commercial and Domestic Equipment in the United Kingdom” published by the Energy Networks Association, Dean Bradley House, 52 Horseferry Road, London, SW1P 2AF (or its successor);
“Fixed Attributable Works Cancellation Charge”	the charge notified to SHEPD by NATIONAL GRID and which the Customer may elect pursuant to Clause 6.6;
“Generation Facility”	means the electricity generation plant from which the Customer intends to export electricity through the Connection;
“Independent Connections Provider” or “ICP”	means a contractor with current accreditation under NERS appropriate to the scope of the Contestable Works, appointed by the Customer (at the Customer’s cost) to undertake the Contestable Works;
“Key Consents”	those consents required in respect of the Customer’s project and which are identified as such in Appendix 3 to this Offer;
“kVA”	means kilovoltamperes;
“kW”	means kilowatts;
“Letter of Credit”	means an unconditional irrevocable standby letter of credit, in such form as SHEPD may approve at its absolute discretion, issued in favour of SHEPD by a Qualified Bank allowing for partial drawings and providing for the payment to SHEPD forthwith on demand;
“Licence”	means the Electricity Distribution Licence granted to SHEPD under the Act;
“Meter Operator Agent”	has the meaning given to that expression in the BSC and is a reference to party appointed to undertake that role by or on behalf of the Customer;
“NERS”	means the National Electricity Registration Scheme, managed by Lloyd’s Register, for the accreditation of contractors to undertake Contestable Works;
“NETS”	means the National Electricity Transmission System;
“NETSO”	means the holder (from time to time) of the NETSO Licence, which is currently National Grid;
“NETSO Licence”	means the electricity transmission licence granted to, or treated as granted, pursuant to Section 6(1)(b) of the Act and in which section C of the standard of the standard transmission licence condition applies;
“National Grid”	means National Grid Electricity Transmission plc, the company which owns and maintains the electricity transmission system in England and Wales and operates the system across Great Britain as the NETSO;
“Non-Contestable Works”	means the elements of the Distribution Works which may only be undertaken by SHEPD;
“Notification of Fixed Attributable Works Cancellation Charge”	the notification issued by NATIONAL GRID to SHEPD in accordance with Part Two of the User Commitment Methodology showing the Fixed Attributable Works Cancellation Charge;
“Offer”	means this offer for provision of the Connection;

“OFSI Consolidated List”	the list of all those subject to financial sanctions imposed by the UK and published by the Office of Financial Sanctions Implementation (OFSI);
“Performance Bond”	an on first demand without proof or conditions irrevocable performance bond or performance guarantee executed as a deed in a form satisfactory to SHEPD at its absolute discretion but in any case allowing for partial drawings and providing for the payment to SHEPD on demand forthwith and against SHEPD’s delivery to the issuer thereof of a notice of drawing of the amount demanded therein;
“Qualified Bank”	any United Kingdom clearing bank or any other bank which in each case has a long-term debt rating of not less than single "A" by Standard and Poor's or by Moody's, or such other bank as SHEPD may approve and which shall be available for payment at a branch of the issuing bank;
“Qualified Company” or “Qualifying Company”	means a public company or a private company within the meaning of section 1 of the Companies Act 2006 as may be amended or restated from time to time and which is either a shareholder of the Customer or any holding company of such shareholder (the expression “holding company” having the meaning defined in Section 1159 of the Companies Act 2006) and which throughout has the validity period of the Performance Bond or Guarantee holds an Approved Credit Rating;
“Second Comer Charge”	means any amounts payable by the Customer pursuant to the Electricity Connection Charges Regulations;
“Statement of Works”	has the meaning set out in the CUSC;
“Transmission Works”	means any works necessary in relation to the NETS which require to be completed to permit the energisation of the Connection and export of electricity from the Generation Facility;
“Use of System Charging Statement”	means the statement, as may be amended from time to time, that SHEPD is required to publish under Condition 14 of the Licence setting out the basis on which charges will be made for the use of the SHEPD Distribution System. The current Statement may be downloaded from the Scottish and Southern Electricity Networks website (www.ssen.co.uk);
“Use of System Charging Methodology”	means the statement, as may be amended from time to time, that SHEPD is required to publish under Condition 13 of the Licence setting out the methodology upon which charges will be set and made for the use of the SHEPD Distribution System. The current Statement may be downloaded from the Scottish and Southern Electricity Networks website (www.ssen.co.uk); and
“User Commitment Methodology”	the methodology and principles applied by NATIONAL GRID in the application and calculation of the Cancellation Charge and Cancellation Charge Secured Amount such principles being set out in Section 15 of the CUSC.