Natural Resources Wales permitting decisions

Normal variation

The variation number is: PAN-003574/V002

The permit number is: PAN-003574

The Applicant / Operator is: PeakGen Power 6 Limited

The Facility is located at: PeakGen Power Limited, East Road off Sully Moors Road, Penarth, South Glamorgan, CF64 5RP

We have decided to issue the variation for PeakGen Power Limited (Sully Moors Road) operated by PeakGen Power 6 Limited.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document:

- Highlights key issues in the determination
- Summarises the decision making process in the decision checklist to show how all relevant factors have been taken into account

Unless the decision document specifies otherwise we have accepted the applicant's proposals. Read the permitting decisions in conjunction with the environmental permit. The introductory note summarises what the permit covers.

Key issues of the decision

Our decision includes but is not limited to the following:

- Air quality

This will be discussed in this decision document.

1 Our decision

We have decided to issue the variation for PeakGen Power Limited (Sully Moors Road) operated by PeakGen Power 6 Limited.

We consider that, in reaching that decision, we have taken into account all relevant considerations and legal requirements and that the permit will ensure that a high level of protection is provided for the environment and human health.

This Application is to operate a regulated facility which is subject principally to the Environmental Permitting Regulations 2016 (EPR), Medium Combustion Plant Directive (MCPD) and Specified Generator (SG) regulations.

The permit contains many conditions taken from our standard Environmental Permit template including the relevant Annexes. We developed these conditions in consultation with industry, having regard to the legal requirements of EPR and other relevant legislation. This document does not therefore include an explanation for these standard conditions. Where they are included in the permit, we have considered the Application and accepted the details are sufficient and satisfactory to make the standard conditions appropriate. This document should be read in conjunction with the application and supporting information and permit.

2 The Legal Framework

The variation will be issued, under Regulation **20** of the EPR. The Environmental Permitting regime is a legal vehicle which delivers most of the relevant legal requirements for activities falling within its scope. In particular, the regulated facility is:

- plant as described by Schedule 25A and Schedule 25B covering the Medium Combustion Plant Directive (MCPD) and Specified Generator (SG) regulations respectively;
- subject to aspects of the Well-Being of Future Generations (Wales) Act 2015 and the Environment (Wales) Act 2016 which also have to be addressed.

The permit regulates 10x 4.79 MW thermal input compression ignition engines fuelled on low sulphur diesel each fitted with Selective Catalytic Reduction (SCR) abatement, they are used for the purposes of electricity generation via balancing services. The engines form one collective Tranche B Specified Generator (SG) and each are individually considered an existing Medium Combustion Plant (MCP) as first put into operation prior to 20 December 2018 and they each discharge emissions to air via individual stacks. The facility is not considered a Section 1.1 Part B activity as there is not a single combustion unit over 20 MW thermal input. The variation is to increase the permitted operational hours of the SG from 500 hours per year to 750 hours per year. There is no change ot number of engines at the site. The Operator has also requested that we include the prospective MCPD requirements in the permit by way of ‘early permitting’ as compliance with the MCPD is not required until 01 January 2030 for these engines as they are under 5 MW thermal input each.

We address the legal requirements directly where relevant in the body of this document. NRW is satisfied that this decision is consistent with its general purpose of pursuing the sustainable management of natural resources (SMNR) in relation to Wales, and applying the principles of SMNR.

In particular, NRW acknowledges that it is a principle of sustainable management to take action to prevent significant damage to ecosystems. We consider that, in granting the Permit a high level of protection will be delivered for the environment and human health through the operation of the Facility in accordance with the permit conditions. NRW is satisfied that this decision is compatible with its general purpose of pursuing the sustainable management of natural resources in relation to Wales and applying the principles of sustainable management of natural resources.

Environment Wales Act 2016 – Biodiversity and resilience of ecosystems duty

Section 6 of the Environment Wales Act 2016 requires that we seek to maintain and enhance biodiversity in the exercise of our functions, and in so doing promote the resilience of ecosystems, in a manner that is consistent with the proper exercise of our functions. NRW is satisfied that in this case we have taken into account and had due regard to this duty in so far as it is consistent with the function of determining an application for an EPR permit.

3 Air Quality

For this kind of regulated activity, the principal emissions are emissions to air. There are no permit conditions for water, land, energy efficiency, odour or noise and BAT does not apply.

The next sections of this document explain how we have approached the critical issue of assessing the likely impact of air emissions from the facility on human health and the environment and what measures we are requiring to ensure a high level of protection.

We have reviewed the operator's assessment of the environmental risk from the facility. The operator's risk assessment is satisfactory.

3.1 Assessment of Impact on Air Quality – Human Health

This section of the decision document deals primarily with the dispersion modelling of emissions to air from the stack(s) and its impact on local air quality.

The Applicant has assessed the facility's potential emissions to air against the relevant air quality standards, and the potential impact upon human health. These assessments predict the potential effects on local air quality from the Facility's stack emission(s).

The air impact assessments, and the dispersion modelling has been based on the plant operating for a maximum of 750 hours per year at the relevant long-term or short-term emission limit values, i.e. the maximum permitted emission rate. For the short-term assessment the plant has been assumed to be running continuously.

We are in agreement with this approach. The assumptions underpinning the model have been checked and are reasonably precautionary. The way in which the Applicant used dispersion models, its selection of input data, use of background data and the assumptions it made have been reviewed to establish

the robustness of the Applicant's air impact assessment. The output from the model has then been used to inform further assessment of health impacts.

The site is not located within a Air Quality Management Area (AQMA) nor an area identified within the Clean Air Plan for Wales.

The applicant has calculated process contributions (PC) and predicted environmental concentrations (PEC) at locations identified as sensitive receptor locations. The modelling results for NOx and ammonia will be discussed separately below, ammonia has been included as there is risk of ammonia slip from the SCR abatement. Emissions of particulate matter and sulphur are expected to be negligible from the plant and are not controlled by an emission limit value in the applicable legislation.

Oxides of nitrogen (NOx)

A long term critical level of 40 µg/m^3 (annual) and short term critical level of 200 µg/m^3 (hourly) was applied for NOx. At sensitive receptor locations the maximum predicted long term PC was >1 % (3.4 %) and the maximum predicted long term PEC was <70 % (67.8 %) of the long term critical level. Therefore in accordance with NRW guidance the long term impacts from NOx can be considered as insignificant. At sensitive receptor locations the maximum predicted short term PC was >10 % (32.5 %) of the short term critical level and the maximum predicted short term PEC was 58.8 % of the short term critical level. Therefore in accordance with NRW guidance the short term impacts from NOx can be considered not significant and it is unlikely the emissions will lead to an exceedance of the critical level.

Ammonia

A long term critical level of 180 µg/m^3 (annual) and short term critical level of 2500 µg/m^3 (hourly) was assumed for ammonia. At sensitive receptor locations the maximum predicted long term PC was <1 % of the long term critical level. Therefore in accordance with NRW guidance the long term impacts from ammonia can be considered as insignificant. At sensitive receptor locations the maximum predicted short term PC was <10 % of the short term critical level. Therefore in accordance with NRW guidance the short-term impacts from ammonia can be considered insignificant.

3.2 Assessment of Impact on Air Quality – habitat sites

3.2.1 National site network sites[1] & Ramsar sites

The following National Site Network sites / Ramsar sites are located within the relevant screening distance (5 km) from the facility:

- SAC UK0013030 / SPA UK9015022 / Ramsar UK11081 Severn Estuary

An OGN 200 Form 1 (Habitats Regulation Assessment) was completed to assess the potential to affect the sites, this is available on the public register.

Assessment of Likely Significant Effect:

[1] National Site Network means the networks of sites in the United Kingdom's territory consisting of such sites as – (a) immediately before exit day formed part of Natura 2000; or (b) at any time on or after exit day are European sites, European marine sites and European offshore marine sites for the purposes of any of the retained transposing regulations.

The project has been screened for likelihood of significant effects and, taking account of the advice received from protected sites advisors, is considered not likely to have a significant effect on any National Site Network site / Ramsar site (As documented in section 3.2 of OGN 200 form 1, or section 5 if applicable).

3.2.2 SSSI Assessment

The following Sites of Special Scientific Interest (SSSI) are located within 2 km of the facility:

- SSSI 33WAL Cog Moors
- SSSI 22WDP Hayes Point to Bendrick Rock

An Appendix 4 Form was completed to assess the potential to effect the SSSIs, this is available to view on the public register. The assessment concluded the facility is not likely to damage any of the features of the SSSI sites.

3.2.3 Non-statutory conservation sites

There are no non-statutory conservation sites located within the relevant screening distance of the facility, therefore no further assessment is required.

Decision checklist

Aspect considered	Decision
Receipt of application	
Duly making	The Application was accepted as duly made on 29 November 2022. This means we considered it was in the correct form and contained sufficient information for us to begin our determination, but not that it necessarily contained all the information we would need to complete that determination.
Confidential application	The Applicant made no claim for commercial confidentiality.
Identifying confidential information	We have not identified information provided as part of the application that we consider to be confidential.
Operator	
Control of the facility	There is no change to the Operator.
Operator competence	
Management system	There is no change to the current management system in place at the site. We are satisfied that appropriate management systems and management structures will be in place for this facility, and that sufficient resources are available to the Operator to ensure compliance with all the permit conditions.
The facility	
The regulated facility	The regulated facility is subject to EPR because it carries out an activity as described in Schedule 25A and/or Schedule 25B of EPR: • One combined Tranche B Specified Generator/existing Medium Combustion Plant aggregated to <50MWth at a specified location

	The Operator has provided the grid reference for the emission points from the plant and the activity is defined in Table S1.1 of the permit.
Annex I of MCPD	The information contained within Annex I of MCPD has been provided by the Operator and incorporated into the permit in Schedule 7.
The site	
Biodiversity, heritage, landscape and nature conservation	The application is within the relevant distance criteria of a site of nature conservation or habitat. We have assessed the application and its potential to affect all known sites of nature conservation or habitats identified in the screening as part of the permitting process. We have assessed the Operator's air emissions impact modelling report and consider that emissions will not affect any sites of nature conservation or habitats identified. See Key Issues section above.
Environmental risk assessment	
Environmental risk	For this kind of regulated activity, the principal emissions are emissions to air. We have reviewed the Operator's assessment of the environmental risk from the facility. The Operator's risk assessment is satisfactory. See Key Issues section above.
Operating techniques	
Operating techniques	We have specified the operating techniques and the operator must use the operating techniques specified in Table S1.2.
Permit conditions	
Use of conditions other than those from the template	Based on the information in the application, we consider that we do not need to impose conditions other than those in our permit template.
Emission limits	Emission limit value(s) (ELV) have been set for the following substances: • 190 mg/Nm^3 oxides of nitrogen (NO and NO_2 expressed as NO_2) Emission limit values are defined at a temperature of 273.15 K, a pressure of 101.3 kPa and after correction for the water vapour content of the waste gases and at a standardised O_2 content of 15 % for engines and gas turbines, 6 % for solid fuels and 3 % for all other MCPs. The ELV(s) have been set in line with the requirements specified within Schedule 25A and/or Schedule 25B of EPR.
Monitoring	We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified. The monitoring requirements have been imposed in order to the Operator to demonstrate compliance with the emission limits specified in the permit, as per the ELV and monitoring

	frequency requirements specified within Schedules 25A and/or Schedule 25B of EPR and/or technical guidance notes. The Operator will carry out monitoring in accordance with the relevant MCERTS methods.
Reporting	We have specified the reporting requirements in Schedule 4 of the permit to ensure data is reported to enable timely review by NRW to ensure compliance with permit conditions.
MCPD/SG charges and subsistence fees	The type of application regarding MCPD/SG will have an associated charge. The MCPD/SG application type and number of plant will also form the basis for ongoing subsistence fees. More information on this can be found in our charging scheme on our website.