Permitting decisions

Bespoke permit

We have decided to grant the permit for Rockingham Standby Generation operated by Enersyst Limited.

The permit number is EPR/QP3332QS.

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 provides a record of the decision making process. It:

- 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

Air quality

This is a complex bespoke Medium Combustion Plant/Specified Generator application. In line with the Environment Agency's guidance (https://consult.environment-agency.gov.uk/psc/mcp-and-sg-regulations/), we require applicants to submit detailed air dispersion modelling and impact assessment to assess the predicted impacts on both human receptors (for example dwellings, work places and parks) and ecological sites.

A methodology for risk assessment of point source emissions to air is set out in our guidance *Air emissions risk assessment for your environmental permit* and has the following steps:

- Describe emissions and receptors
- Calculate process contributions
- Screen out insignificant emissions that do not warrant further investigation using the Environment Agency's screening tool (specific to assessing impacts from Specified Generators (SG))
- Decide if detailed air modelling is needed
- Assess emissions against relevant standards
- Summarise the effects of emissions.

We use this methodology to assess the impacts on air quality in the determination of applications.

The methodology uses a concept of “process contribution (PC)”, which is the estimated concentration of emitted substances after dispersion into the receiving environmental media at the point where the magnitude of the concentration is greatest. The methodology provides a simple method of calculating PC, primarily for screening purposes, and for estimating process contributions where environmental consequences are relatively low. It is based on using dispersion factors. These factors assume worst case dispersion conditions with no allowance made for thermal or momentum plume rise and so the process contributions calculated are likely to be an overestimate of the actual maximum concentrations. More accurate calculation of process contributions can be achieved by mathematical dispersion models, which take into account relevant parameters of the release and surrounding conditions, including local meteorology.

Air dispersion modelling enables the PC to be predicted at any environmental receptor that might be impacted by the emissions from a plant. Once short-term and long-term PCs have been calculated in this way, they are compared with Environmental Standards (ES).

PCs are considered insignificant if:

- the long-term process contribution is less than 1% of the relevant ES; and
- the short-term process contribution is less than 10% of the relevant ES.

The long term 1% process contribution insignificance threshold is based on the judgements that:

- It is unlikely that an emission at this level will make a significant contribution to air quality; and
- the threshold provides a substantial safety margin to protect health and the environment.

The short term 10% process contribution insignificance threshold is based on the judgements that:

- spatial and temporal conditions mean that short term process contributions are transient and limited in comparison with long term process contributions; and
- the threshold provides a substantial safety margin to protect health and the environment.

Where an emission is screened out in this way, we would normally consider that the applicant’s proposals for the prevention and control of the emission to be acceptable. However, where an emission cannot be screened out as insignificant, it does not mean it will necessarily be significant.

For those pollutants which do not screen out as insignificant, we determine whether exceedances of the relevant ES are likely. This is done through detailed audit and review of the applicant’s air dispersion modelling, taking background concentrations and modelling uncertainties into account.

Where the PC is greater than these thresholds, the assessment must continue to determine the impact by considering the predicted environmental concentration (PEC). The PEC is the combination of the PC substance to air and the background concentration of the substance which is already present in the environment.

The PECs can be considered ‘not significant’ if the assessment has shown that both the following apply:

- proposed emissions comply with associated emission levels (AELs) or the equivalent requirements where there is no AEL.
- the resulting PECs won’t exceed 100% of the environmental standards.

The operator is developing the facility in two phases. Phase 1 is to generate electricity for the grid using ten 4.71 MWth input generators with an aggregated capacity of 47.1 MWth input. At this stage they have applied for a MCP permit to allow them to operate during the first few months of 2019. In mid-2019 they are anticipating to progress onto Phase 2, which involves installing a further 4 generators so there will be a total of capacity of 70.7 MWth input. Phase 2 will require the operator to apply for a new bespoke installations permit as they will fall under Section 1.1 of the Environmental Permitting (England and Wales) Regulations, 2016.

The operator commissioned WYG to undertake their Air Dispersion Modelling using the third generation Breeze AEROMOD modelling software. The input parameters are based upon Caterpillar CG170-20 gas engines with emissions concentrations of 190mg/m^3 NOx at 15% oxygen reference, 2,000 hours of operation and 5.5m tall stacks. This application is for Phase 1 as detailed above, however the applicant has modelled for 15 generators, which has been undertaken in preparation for Phase 2, plus an additional generator to give them the flexibility to install 15 instead of 14 generators. We have audited their modelling for only ten generators.

We conclude that a detailed audit of the applicant's assessment is not required in this instance because our checks indicate:

- The predicted process contributions (PCs) at sensitive human health receptors are not significant and therefore are unlikely to be a significant contributor to or cause an exceedance of an Environmental Standard.
- The predicted PCs at SACs, SPA and Ramsar sites, and SSSIs are not significant within the relevant screening distances of 5km and 2km respectively. Therefore there should be no impact on the European sites and no damage to SSSIs.

Energy efficiency

Where the combustion units aggregate above 20 MW, an applicant must demonstrate that they have considered all of the requirements of Article 14 of the Energy Efficiency Directive. An installation type 14,5(a) under the directive is defined as, *New thermal electricity generation installation with a total aggregated net thermal input of more than 20 MW (e.g. power station or EfW plant)*. In that scenario, the directive requires an applicant to perform a cost benefit analysis for the operation of the installation as a high-efficiency cogeneration installation.

Using the Environment Agency's guidance, *Draft guidance on completing cost-benefit assessments for installations under Article 14 of the Energy Efficiency Directive*, the applicant has concluded that it would not be feasible to operate as a cogeneration facility, utilising the heat energy produced during the process.

The applicant has justified this by outlining that their commitment to supply electricity under their Capacity Market Agreement. The agreement requires the applicant to supply electricity during stress events declared by the National Grid. This means that predicting when system stress events will occur and how long they will last is difficult. Therefore, identifying potential heat users of an inconsistent heat source would make it unfeasible to export heat on an intermittent basis.

On this basis, we agree with the applicant that operating as a high-efficiency co-generation facility is not feasible.

Decision checklist

Aspect considered	Decision
Receipt of application	
Confidential information	A claim for commercial or industrial confidentiality has not been made.
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	We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with our guidance on legal operator for environmental permits.
The facility	
The regulated facility	The operator has provided the grid reference for the emission points from the specified generator and the activity is defined in table S1.1 of the permit.
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 nature conservation screening report 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. Conservation sites are protected in law by legislation. The Habitats Directive provides the highest level of protection for SACs and SPAs, domestic legislation provides a lower but important level of protection for SSSIs and the Environment Act provides more generalised protection for flora and fauna rather than for specifically named conservation designations. The thresholds for SAC SPA and SSSI features are more stringent than those for other nature conservation sites. Therefore, we would generally conclude that emissions to air will not cause significant pollution at these other sites if the process contribution at the SPA, SACs and SSSIs is less than the relevant critical level or critical loads. Therefore, we have not assessed the impact on these other sites as we have concluded that there is no impact on the SPA, SACs and SSSIs.
Environmental risk assessment	
Environmental risk	We have reviewed the operator's assessment of the environmental risk from the facility.

Aspect considered	Decision
	The operator's risk assessment is satisfactory. The assessment shows that applying the conservative criteria in our guidance on environmental risk assessment [or similar methodology supplied by the operator and reviewed by ourselves], all emissions may be categorised as environmentally insignificant/not significant. 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 of the permit.
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	ELVs have been set for the following substances: Oxides of nitrogen (NO and NO_2, expressed as NO_2). ELV's have been set at 190 mg/m3 at an oxygen reference condition of 15%, which are in line with the Schedule 25B (Specified Generators) of the Environmental Permitting (England and Wales) (Amendment) Regulations 2018.
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. These monitoring requirements have been imposed in order for the operator to demonstrate compliance with the emission limits specified in the permit. The operator will carry out monitoring in accordance with the relevant MCERTS methods. We made these decisions in accordance with SG technical guidance; *Specified Generator Guidance https://consult.environment-agency.gov.uk/psc/mcp-and-sg-regulations/*
Reporting	We have specified reporting in the permit. We have specified that reporting should be every three years, which is in line with the Schedule 25B (Specified Generators) of the Environmental Permitting (England and Wales) (Amendment) Regulations 2018. We made these decisions in accordance with the SG technical guidance; *Specified Generator Guidance https://consult.environment-agency.gov.uk/psc/mcp-and-sg-regulations/*
Operator competence	
Management system	There is no known reason to consider that the operator will not have the management system to enable it to comply with the permit conditions. The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.

Aspect considered	Decision
Relevant convictions	The Case Management System has been checked to ensure that all relevant convictions have been declared.
Financial competence	There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.
Growth Duty	
Section 108 Deregulation Act 2015 – Growth duty	We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit. Paragraph 1.3 of the guidance says: "The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation." We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections. We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.