

# Variation notice with introductory note

Environmental Permitting (England & Wales) Regulations 2007

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Barry Cogeneration Plant

Npower Cogen Limited  
Barry Silicon Based Manufacturing  
Installation  
Winbourne Road  
Dock 2  
Barry  
CF63 3DH

Variation notice number  
EPR/BX4135IJ/V002

Permit number  
EPR/BX4135IJ

# **Barry Cogeneration Plant**

## **Permit number EPR/BX4135IJ**

### **Introductory note**

#### ***This introductory note does not form a part of the permit***

The following notice, which is issued pursuant to regulation 20 and Part 1 of Schedule 5 of the Environmental Permitting (England and Wales) Regulations S.I.2007 No. 3538 (the Regulations), gives notice of the variation of an environmental permit to operate a regulated facility.

This variation introduces a change to the monitoring arrangements for the two medium pressure fired boilers (utilised as backup boilers) which discharge via air release points A4 and A5.

The existing continuous monitoring equipment (CEM) is becoming unserviceable due to the limited availability of parts and it has been agreed that due to the nature of use and size of the boilers that a move to 12 monthly spot monitoring using MCERT's equipment and personnel would be acceptable.

Table 2.2.2 is amended to reflect the removal of the continuous monitoring requirement for oxides of nitrogen and carbon monoxide and the insertion of 12 monthly manual extractive monitoring for the above parameters at release points A4 and A5.

Table S2 of Schedule 2 is amended to reflect the revised monitoring arrangements.

Table S4.2 of Schedule 4 is amended to require the operator to report the annual hours of operation for the backup boilers while utilising distillate fuel oil.

Schedule 1 of this notice lists any deleted conditions, Schedule 2 lists any amended conditions and Schedule 3 lists any conditions that have been added.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

<b>Status Log of the permit</b>		
<b>Detail</b>	<b>Date</b>	<b>Response Date</b>
Application BX4135IJ	Received 17/08/05	
Response to request for information	Request dated 27/01/06	Response dated 13/03/06
Request to extend determination	Request dated 13/12/05	Request accepted 20/12/05
Request for additional information - start-up and shutdown definition - BAT assessment for the use of distillate fuel oil within the gas turbines and boilers.	Request dated 26/06/06	Response received 29/06/06
Permit determined	30/06/06	
Application for Variation EA/EPR/BX4135IJ/V002	Duly made 06/07/09	
Variation EA/EPR/BX4135IJ/V002	13/11/09	

<b>Other Part A installation permits relating to this installation</b>		
<b>Operator</b>	<b>Permit Number</b>	<b>Date of Issue</b>
Dow Corning Limited	BR9685IX	06/06/06
Cabot Carbon Limited	BU2110IS	31/03/06
Vopak Terminal Windmill Limited	KP3734SH	01/06/06

End of Introductory Note

**Notice of variation**

Environmental Permitting  
(England and Wales) Regulations 2007

Permit number

**EPR/BX4135IJ**

The Environment Agency in exercise of its powers under Regulation 20 of the Environmental Permitting (England and Wales) Regulations 2007 (SI 2000 No 3538) varies the permit as set out below.

**Npower Cogen Limited** ("the Operator"),

Whose Registered Office is

**Windmill Hill BusinessPark**

**Whitehill Way**

**Swindon**

**Wiltshire**

**SN5 6PB**

Company registration number **2624987**

to operate part of an Installation at

**Barry Cogeneration Plant**

**Barry Silicon Based Manufacturing Installation**

**Winbourne Road**

**Dock No. 2**

**Barry**

**CF63 3DH**

and that permit is varied to the extent set out in Schedules 1 to 3 of this notice.

The notice shall take effect from 13 November 2009

Name	Date
<i>M. A. Bischer</i>	13/11/2009

**M. Bischer – Principal Permitting Team Leader, National Permitting Service**

Authorised on behalf of the Environment Agency

## Schedule 1 – conditions to be deleted

None.

## Schedule 2 – conditions to be amended

The following tables are amended as follows;

Table 2.2.2 : Emission limits to air and monitoring				
Emission point reference	Parameter	Limit (including Reference Period) <sup>1</sup>	Monitoring frequency	Monitoring method
A1	Oxides of Nitrogen (as NO <sub>2</sub> )	125mg/m <sup>3</sup> (burning natural gas) 95% of 1/2 hourly readings in each 24 hr period not exceeding those limits and the maximum average value not exceeding 1.5 times those levels.	Continuous	BS EN 14181 <sup>(2)</sup>
A1	Oxides of Nitrogen (as NO <sub>2</sub> )	125 mg/m <sup>3</sup> (burning natural gas)	Annual manual extractive sampling	BS EN 14792 <sup>(3)</sup>
A1	Oxides of Nitrogen (as NO <sub>2</sub> )	160 mg/m <sup>3</sup> (burning distillate fuel oil) 95% of 1/2 hourly readings in each 24 hr period not exceeding those limits and the maximum average value not exceeding 1.5 times those levels.	Continuous	BS EN 14181 <sup>(2)</sup>
A1	Carbon Monoxide	80 mg/m <sup>3</sup> (burning either natural gas or distillate fuel oil)	Continuous	ISO12039
A1	Carbon Monoxide	80 mg/m <sup>3</sup> (burning natural gas or distillate fuel oil)	Annual manual extractive sampling	ISO12039
A2	Oxides of Nitrogen (as NO <sub>2</sub> )	125 mg/m <sup>3</sup> (burning natural gas) 95% of 1/2 hourly readings in each 24 hr period not exceeding those limits and the maximum average value not exceeding 1.5 times those levels.	Continuous	BS EN 14181 <sup>(2)</sup>
A2	Oxides of Nitrogen (as NO <sub>2</sub> )	125 mg/m <sup>3</sup> burning natural gas)	Annual manual extractive sampling	BS EN 14792 <sup>(3)</sup>

**Table 2.2.2 : Emission limits to air and monitoring**

Emission point reference	Parameter	Limit (including Reference Period) <sup>1</sup>	Monitoring frequency	Monitoring method
A2	Oxides of Nitrogen (as NO <sub>2</sub> )	160 mg/m <sup>3</sup> (burning distillate fuel oil) 95% of 1/2 hourly readings in each 24 hr period not exceeding those limits and the maximum average value not exceeding 1.5 times those levels.	Continuous	BS EN 14181 <sup>(2)</sup>
A2	Carbon Monoxide	80 mg/m <sup>3</sup> (burning either natural gas or distillate fuel oil)	Continuous	ISO12039
A2	Carbon Monoxide	80 mg/m <sup>3</sup> (burning natural gas or distillate fuel oil)	Annual manual extractive sampling	ISO12039
A3	Oxides of Nitrogen (as NO <sub>2</sub> )	125 mg/m <sup>3</sup> (burning natural gas) 95% of 1/2 hourly readings in each 24 hr period not exceeding those limits and the maximum average value not exceeding 1.5 times those levels.	Continuous	BS EN 14181 <sup>(2)</sup>
A3	Oxides of Nitrogen (as NO <sub>2</sub> )	125 mg/m <sup>3</sup> (burning natural gas)	Annual manual extractive sampling	BS EN 14792 <sup>(3)</sup>
A3	Oxides of Nitrogen (as NO <sub>2</sub> )	160 mg/m <sup>3</sup> (burning distillate fuel oil) 95% of 1/2 hourly readings in each 24 hr period not exceeding those limits and the maximum average value not exceeding 1.5 times those levels.	Continuous	BS EN 14181 <sup>(2)</sup>
A3	Carbon Monoxide	80 mg/m <sup>3</sup> (burning either natural gas or distillate fuel oil)	Continuous	ISO12039
A3	Carbon Monoxide	80 mg/m <sup>3</sup> (burning natural gas or distillate fuel oil)	Annual manual extractive sampling	ISO12039
A4	Oxides of Nitrogen (as NO <sub>2</sub> )	45 mg/m <sup>3</sup> (burning natural gas)	Annual manual extractive sampling	BS EN 14792 <sup>(3)</sup>
A4	Oxides of Nitrogen (as NO <sub>2</sub> )	65 mg/m <sup>3</sup> (burning distillate fuel oil)	Annual manual extractive sampling <sup>(4)</sup>	BS EN 14792 <sup>(3)</sup>
A4	Carbon Monoxide	80 mg/m <sup>3</sup> (burning natural gas or distillate fuel oil)	Annual manual extractive sampling	BS EN 15058 <sup>(3)</sup>

**Table 2.2.2 : Emission limits to air and monitoring**

Emission point reference	Parameter	Limit (including Reference Period) <sup>1</sup>	Monitoring frequency	Monitoring method
A5	Oxides of Nitrogen (as NO <sub>2</sub> )	45 mg/m <sup>3</sup> (burning natural gas)	Annual manual extractive sampling	BS EN 14792 <sup>(3)</sup>
A5	Oxides of Nitrogen (as NO <sub>2</sub> )	65 mg/m <sup>3</sup> (burning distillate fuel oil)	Annual manual extractive sampling <sup>(4)</sup>	BS EN 14792 <sup>(3)</sup>
A5	Carbon Monoxide	80 mg/m <sup>3</sup> (burning natural gas or distillate fuel oil)	Annual manual extractive sampling	BS EN 15058 <sup>(3)</sup>

Note 1: The limit does not apply during periods of start-up, shutdown and boiler mode changes as defined under condition 6.1.1.

Note 2: All monitoring for Oxides of Nitrogen required by this permit shall be carried out in accordance with the provisions of Annex VIII of the Large Combustion Plant Directive.

Note 3: Or to an EN, BS or ISO standard as agreed in writing with the Agency.

Note 4: Only if distillate fuel is in use.

**Table S2: Reporting of monitoring data**

Parameter	Emission point	Reporting period	Period begins
Oxides of nitrogen (as NO <sub>2</sub> ) burning natural gas – continuous monitoring mg/m <sup>3</sup>	A1, A2, A3	Every 3 months	01/10/09
Oxides of nitrogen (as NO <sub>2</sub> ) burning distillate fuel oil - continuous monitoring mg/m <sup>3</sup>	A1, A2, A3	Every 3 months	01/10/09
Oxides of nitrogen (as NO <sub>2</sub> ) burning natural gas - manual extractive sampling mg/m <sup>3</sup>	A1, A2, A3	Every 12 months	01/10/09
Oxides of nitrogen (as NO <sub>2</sub> ) burning natural gas/distillate fuel oil - manual extractive sampling mg/m <sup>3</sup>	A4, A5	Every 12 months	01/10/09
Carbon monoxide – continuous monitoring mg/m <sup>3</sup>	A1, A2, A3	Every 3 months	01/10/09
Carbon monoxide – manual extractive sampling mg/m <sup>3</sup>	A1, A2, A3	Every 12 months	01/10/09
Carbon monoxide – manual extractive sampling mg/m <sup>3</sup>	A4, A5	Every 12 months	01/10/09
Water usage	Installation	Every 12 months	01/01/06
Energy usage	Installation	Every 12 months	01/01/06
Net calorific value of the fuel burnt (GJ/tonne) for natural gas, DFO and other fuels (reporting requirements are for each LCPD release point and also in combination).	Installation	Every 12 months	01/01/06
Total annual energy usage (MJ) for LCPD plant (i.e. not including the gas turbines) (reporting requirements are for each LCPD release point and also in combination).	Installation	Every 12 months	01/01/06
Total annual energy usage (MJ) for all combustion plant including the gas turbines (reporting requirements are for all plant in combination)	Installation	Every 12 months	01/01/06

**Table S2: Reporting of monitoring data**

Parameter	Emission point	Reporting period	Period begins
Total annual energy usage for each fuel type (MJ) for LCPD plant (i.e. not including the gas turbines)	Installation	Every 12 months	01/01/06
Total annual energy usage for each fuel type (MJ) for all combustion plant (reporting requirements are for all plant in combination)	Installation	Every 12 months	01/01/06
Waste disposal and/or recovery.	Installation	Every 12 months	01/01/06
Mass releases of oxides of nitrogen as NO <sub>2</sub> from LCPD plant (i.e. excluding gas turbines) t/yr	Installation	Every 12 months	01/01/06
Mass releases of oxides of nitrogen as NO <sub>2</sub> from all plant t/yr	Installation	Every 12 months	01/01/06
Mass releases of carbon monoxide from LCPD plant (i.e. excluding gas turbines) t/yr	Installation	Every 12 months	01/01/06
Mass releases of carbon monoxide from all plant t/yr	Installation	Every 12 months	01/01/06
Mass releases of sulphur dioxide from A1-A5, A7 and A8 from LCPD plant (i.e. excluding gas turbines) t/yr	Installation	Every 12 months	01/01/06
Mass releases of sulphur dioxide from all plant t/yr	Installation	Every 12 months	01/01/06

**Table S4.2: Performance**

Parameter	Frequency of assessment	Performance indicator
Waste per tonne of steam	Annual	Tonnes waste / tonne steam
Waste per MWh of electricity	Annual	Tonnes waste / MWh electricity
Water usage per tonne of steam	Annual	m <sup>3</sup> water / tonne steam
Water usage per MWh of electricity	Annual	m <sup>3</sup> water / MWh electricity
Energy input per tonne of steam	Annual	MWh energy input / tonne steam
Energy input per MWh of electricity	Annual	MWh energy input / MWh electricity
Hours of operation utilising distillate fuel oil on backup boilers	Annual	Hours

### Schedule 3 – conditions to be added



None

**Schedule 4 – amended plan**

None.