



Application for Licence Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L6637/1995/15
Licence Holder	Electricity Generation and Retail Corporation T/A Synergy
File Number	DER2015/000109-1
Premises	Collie 'A' Power Station Boys Home Road PALMER WA 6225 Legal description - Being Part of Lot 3001 on Plan 51101
Date of Report	17/09/2021
Proposed Decision	Revised licence granted

1. Amendment description

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the existing licence issued in respect to the prescribed premises as set out below. This notice of amendment is hereby given under section 59B(9) of the EP Act.

This amendment is limited to adding in the provision for a reduction in the frequency of stack testing under specified circumstances.

In completing the assessment documented in this report, the department has considered and given due regard to its regulatory framework and relevant policy documents which are available at <http://dwer.wa.gov.au/regulatory-documents>.

1.1 Purpose and scope of assessment

Electricity Generation and Retail Corporation T/A Synergy (the licence holder) is seeking to change the stack testing frequency on their existing licence (L6637/1995/15) for the Collie A Power Station.

Background

Collie A Power Station (the premises) is a 340 MWe, single generation unit, coal fired thermal power station located about 10 km east of the town of Collie. The power station has been in operation since 1999 and is owned by Synergy. Electricity generated at this facility supplies customers via the South-West Interconnected System (SWIS).

Pre-crushed coal is delivered to the premises via an overland conveyor from the Premier Coal Mine, approximately 6 km southeast. Coal is transferred from the stockpiles to the Power Block where it is fed into a boiler with low nitrogen oxide (NO_x) burners. Coal is burnt in the boiler with the resultant heat being used to heat circulating water to generate steam. High pressure steam is then directed to a turbine hall to spin a single turbine which generates power. Steam exhausted from the turbine is cooled in a condenser and returned to the boiler for reuse.

The primary emissions within the exhaust gases include carbon monoxide (CO), carbon dioxide (CO₂), sulfur dioxide (SO₂), NO_x and particulate matter (PM) with minor emissions of metals and organics. Wastewater is treated on site and about 65% of the treated water is reused on site with the remainder being discharged via the 68 km underground ocean outfall pipeline north of the Leschenault Inlet. The fly ash is slurred with water and discharged to the Ash Storage Dam on the premises. Bottom ash is collected and intermittently trucked to the Ash Storage Dam. Decant water from the Ash Storage Dam is collected in a lined pond and returned to the power station for reuse or treatment and disposal.

Proposed amendment

Alteration of stack testing frequency

According to the licence holder, the opportunity for the premises to dispatch electricity to the SWIS has been reduced in recent years due to increased electricity demand from renewables (solar and wind) and competition from other electricity suppliers. Dispatch is also highly variable during the 'shoulder periods', around March to May and August to October each year, due to the variability of renewable supply which is directly linked to weather conditions.

Condition 3.2.1 of the existing licence requires quarterly sampling of point source emissions to air (PM, NO_x and SO₂) at emission point A1, being the main stack, until Continuous Emissions Monitoring Systems (CEMS) are installed. The licence holder has applied for an amendment to this condition as they are finding it difficult to conduct quarterly testing due to the power station being offline for extended periods of time in response to decrease in demand.

The licence holder has proposed to alter the frequency of stack testing by allowing it to be deferred if the power station is offline when testing is scheduled, or if the power station has

operated for less than 45 days in a quarter. Power generation and fuel consumption data from 2012 to 2020 has been provided to support the application for amendment. The data indicates that from 2018, power generation and coal consumption reduced in line with reduced operation of the premises; therefore, emissions to air (PM, NO_x and SO₂) also reduced (Table 1).

Removal of the requirement to install CEMS

The licence holder has also requested to remove the requirement to install CEMS in line with the reduced stack testing discussed above. The installation of CEMS was required in the existing licence to continuously monitor and report on ambient SO₂ concentrations in order to inform the Collie Airshed Study (CAS); an industry-funded study developed to establish a scientific foundation on which to base an airshed management strategy for the greater Collie area. The two-year monitoring phase of the CAS concluded in November 2019, therefore continuous ambient SO₂ monitoring is no longer required to inform the study.

Table 1: Production and emission data for the premises (2012 to 2020)

Licence year ¹	Power sent out (MWh)	Coal consumed (M tonnes)	Fuel oil to burner (kL)	NO _x (tonnes)	SO _x (tonnes)	PM ₁₀ (tonnes)
2012	1,975,424	1.01	2,028	4,100	16,000	400
2013	2,180,115	1.16	2,053	4,210	13,600	419
2014	1,801,515	0.99	2,231	3,500	12,500	236
2015	2,064,623	1.11	2,048	3,968	11,934	414
2016	2,110,160	1.13	1,937	3,972	13,199	484
2017	2,056,644	1.08	1,233	3,045	13,239	359
2018	1,866,966	0.99	2,298	3,388	13,012	344
2019	1,447,194	0.77	3,268	2,751	12,306	300
2020	872,550	0.47	2,998	1,786	7,759	297

Note 1: Licence years align with financial years, so 2012 licence year is the period from 1 July 2011 to 30 June 2012.

2. Decision

Alteration of stack testing frequency

The delegated officer has determined to amend condition 3.2.1 of the licence to include the provision for reduced stack testing where the power station has operated for less than 45 days in a three-month period. If the power station is offline at the time of scheduled stack testing, the stack testing may be deferred until it is back online, upon notification to the Department. The delegated officer has considered the power generation and fuel consumption data indicating a consistent reduction in air emissions since 2018 in the determination.

The changes have been made on the grounds that the power station may need to be brought online specifically for the purpose of completing the quarterly stack testing under the existing licence conditions, which may cause air emissions to be discharged to the environment that otherwise would not be. The delegated officer has determined that including the provision for reduced stack testing under specific operational circumstances is an administrative amendment that does not alter the risk profile of the premises.

Removal of the requirement to install CEMS

The CAS Scientific Director has acknowledged the conclusion of the monitoring phase of the CAS and therefore the delegated officer has determined to remove the part of condition 3.2.1 requiring CEMS to be installed. This amendment does not alter the risk associated with emissions and discharges from the premises.

Consultation

The licence holder was provided with drafts of the amended licence and this report for comment on 14 September 2021. The licence holder responded on 16 September 2021 waiving the remaining comment period. No comments on the draft documents were made.

3. Conclusion

The delegated officer has determined to amend the existing licence, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

3.1 Summary of amendments

Table 2 below provides a summary of the proposed amendments and will act as a record of implemented changes. All proposed changes have been incorporated into the amended licence as part of the amendment process.

Table 2: Summary of licence amendments

Condition no.	Proposed amendments
Condition 3.2.1	Frequency of stack testing for parameters PM, NO _x and SO ₂ amended to allow for testing to be deferred where the power station operates for less than 45 days in a three-month period, or where the power station is offline at time of scheduled test upon notification to the CEO. Removal of the requirement to install CEMS.