



Project Approval Modification

Modification of Project Approvals 06_238, 05_0138 and 07_0084 – removal of conditions duplicated in Environmental Protection Licence (EPL) 1429

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Document Owner:	Lauren Barnaby
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1 Introduction

In response to the extreme heat wave events experienced in February 2017, Origin Energy has undertaken a review of the approval and licence conditions that affect the operational reliability of the Eraring Power Station (EPS).

This review has also been undertaken in response to the recommendations made by the NSW Government's Initial Report from the Energy Security Taskforce (May 2017), in particular:

Recommendation 3:

That Government improve the speed and ease with which it can respond to an energy emergency, including revising legislative provisions.

The Eraring Power Station commenced operations in 1982 as a State Government owned entity, and was purchased by Origin Energy Pty Ltd in 2013.

Due to the age of the Eraring Power Station, a number of historical approvals govern the operation. On review of the Development Approvals granted under the *Environmental Planning and Assessment Act 1979*, and the Environmental Protection Licence 1429 (EPL1429) granted under the *Protection of Environment Operations Act 1997*, a number of duplicate conditions were identified.

Origin is therefore seeking a modification of each of the following Project Approvals, to remove a number of conditions that are duplicated within the conditions of EPL1429:

- Project Approval 05_0138 (2006) – Emergency Generator;
- Project Approval 06_238 (2008) – Capacity Increase and Attenuation Reservoir; and
- Project Approval 07_0084 (2008) – Coal Combustion Product Management Facility Expansion.

The proposed removal of the duplicate conditions will not weaken any of the regulations or standards that govern the operation EPS, moreover it will seek to streamline governance of the site.

This report supports the application to modify each of the Project Approvals listed above.

2 Modification Approval Pathway

The modification of the aforementioned Project Approvals will be undertaken in accordance with the provisions of Section 75W of the *Environmental Planning and Assessment Act 1979*, in line with the transitional arrangements for Projects to which the repealed Part 3A of the *Environmental Planning and Assessment Act 1979* applies.

3 Statutory Context

The following Table provides an overview of the statutory documents that historically and currently regulate EPS.

Table 1 – Historic Approvals

Approval Reference	Legislation	Date	Purpose
Legislation	<i>Eraring Power Station Act 1981</i> (EPS Act)	1981	Section 21 states that the following activities are approved: “ the purposes of electricity generating works, public utility undertakings, the transmission or supply of electricity, the storage of water and coal, coal conveyors, coal loading facilities, the storage and use of hazardous substances, the construction of dams,

Approval Reference	Legislation	Date	Purpose
			the storage and disposal of spoiled water, ash and waste, bulk stores, offices, recreation facilities and parking or any of those purposes”
Approval 27005006	<i>Clean Waters Act 1970</i>	1977	To install, construct or modify apparatus, equipment or works at Eraring Power Station. Note this approval was superseded by EPL1429.
Environmental Protection Licence	<i>Protection of the Environment Operations Act 1997</i>	2000	Permits EPS to operate with conditions that control impacts to the environment. A number of variations have been made since 2000, and are reflected in the current EPL1429.
Project Approval 05_0138	<i>Environmental Planning and Assessments Act 1979 - Section 75J.</i>	2006	Construction and operation of a 42MW emergency turbine generator.
Project Approval 06_238	<i>Environmental Planning and Assessments Act 1979 - Section 75J.</i>	2008	Capacity increase and performance increase at EPS including: <ul style="list-style-type: none"> • Replacement/ upgrade of plant components such that the nominal capacity of each turbine is increased from 660MW to 750MW • Construction and operation of a 920ML cooling water attenuation reservoir and associated infrastructure to manage cooling water temperatures and permit extended operation of the power station.
Project Approval 07_0084	<i>Environmental Planning and Assessments Act 1979 - Section 75J.</i>	2008	Expansion of the Coal Combustion Product (CCP) management facility and changes to the CCP disposal method from lean to dense phase and ancillary infrastructure.

Environmental Protection Licence

In addition to the Project Approvals issued under the *Environmental Planning & Assessment Act 1979*, an Environmental Protection Licence (EPL) is in place for the operation of the EPS. EPL1429 permits EPS to operate with conditions that control or mitigate impacts to the environment. When the operating conditions or environmental impacts change, Origin Energy is required to vary the EPL to ensure protection of the environment. The EPL has been in force for the facility since 2000.

When the conditions of the various Project Approvals were drafted, the EPL was used as a basis for many of the conditions relating environmental protection matters. This has resulted in a number of the conditions being replicated in the EPL and Project Approval, causing unnecessary duplication and administrative burden. There is the potential for inconsistencies to arise due to regular changes to the EPL conditions, which may be driven by many factors which include Regulatory amendments, community expectation, risk assessment and management or technological advancement.

4 Strategic Justification

Origin seeks to remove conditions that are duplicated in both EPL 1429 and the three Project Approvals listed in Table 1. The duplicate conditions are of a technical nature and primarily concern environmental monitoring requirements. Therefore they would be most effectively regulated by the Environment Protection Agency.

The EPL was the document on which many of the Project Approval conditions were based, and in many cases the EPL contains more detail around how compliance requirements are to be implemented than the Project Approval (see Table 2). Benefits of removing the duplicate conditions include:

- Reducing the administrative burden for the Department for Planning and Assessment, Environment Protection Agency and Origin, as raised by the Energy Security Taskforce;
- Providing cost efficiencies through streamlining of compliance activities and auditing requirements;
- Removing ambiguity and inconsistencies between the documents; and
- Streamlining the approval and modification process, to enable more efficient and timely management of environmental issues for the facility.

Through ongoing consultation with EPA's Regional Officers (Newcastle), Origin has gained support for a more streamlined approach to governance of the environmental licences and approvals as they relate to the operation of EPS. The EPA have been briefed on the modifications proposed within this document and have indicated that they have no outstanding concerns.

5 Environmental Impact

Origin considers that the risk of environmental impact due to removal of the duplicated conditions is negligible, since the modifications sought are administrative in nature and will not result in the removal of the need to comply with the existing conditions under the EPL. Furthermore, the Project Approval conditions that have been highlighted are of a technical nature (i.e. emissions or discharge monitoring) and would typically be regulated by the EPA.

6 Conclusion

The duplication of EPL conditions in the Project Approval has the potential to result in additional administrative burden and uncertainty for Regulators, Origin and the community.

Removing duplication will result in more effective and efficient management of environmental matters at EPS, through streamlining the compliance process. Due to the replicated Project Approval conditions still being present in the EPL, there will be no weakening of regulations or standards nor will there be any change to environmental impact as a result of this modification.

Table 1 Detailed duplications of licence conditions

Environmental Protection Licence 1429 Conditions	Project Approval 07_0084	Project Approval 05_138	Project Approval 06_238	Justification
<p>Section 2 - Discharges to Air and Water</p> <p>P1.1</p> <p>The following points referred to in the table below (refer to points on table in P1.1 in EPL1429) are identified in this licence for the purpose of monitoring and/or the setting of limits for the emissions of pollutants to the air from the point.</p>	No equivalent monitoring condition	<p><i>Note: The location of the monitoring point within this condition corresponds to point 19 in condition P1.1 of EPL1429.</i></p> <p>3.1 Air Quality Monitoring</p> <p>The proponent shall monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Table 2(refer to Project Approval 05_138) at the turbine stack. The proponent shall use the sampling method, units of measure, and sample at the frequency, specified in Table 2. Turbine stack sampling shall be undertaken at locations that have been determined strictly in accordance with the requirements of test method TM-1, as specified in <i>Approved Methods for the Sampling and Analysis of Air pollutants in New South Wales</i> (EPA, 2011) The results of the post commissioning monitoring required under Table 2 shall be submitted to the Director General of the DEC within 28 days of completing the monitoring.</p>	<p><i>Note: The location of the monitoring point within this condition corresponds to points 11-18 and 25-27 in condition P1.1 of EPL1429.</i></p> <p>2.3 Monitoring and discharge points</p> <p>For the purpose of this approval, air monitoring/ air discharge points shall be identified as provided in Table 1 (refer to Project Approval 06_238)</p>	<ul style="list-style-type: none"> Project Approval 05_138 condition 3.1 Table 2 duplicates point 19 in condition P1.1 of EPL1429. Project Approval 06_238 condition 2.3 Table 1 duplicates points 11-18 and 25-27 in condition P1.1 of EPL1429. Note that historically, both EPL1429 and this project approval had stipulated the same discharge monitoring points for deposited matter, due to the conditions in the Project Approval being drafted based on the conditions of EPL1429. In 2016 the number of dust gauges to be monitored for EPL1429 were reduced from six to four due to Origin committing to undertaking additional monitoring via TEOMs of PM10 and PM2.5. <p>The changes are administrative as monitoring is regulated by the EPA, and there is no change to environmental impact, therefore it is considered justified that conditions be removed:</p> <ul style="list-style-type: none"> 3.1 from Project Approval 05_138 2.3 from Project Approval 06_238
<p>L3 Concentration Limits L3.5 - Air concentration Limits. Point 11, 12, 13 14, and 19 (refer to tables in L3.5. of EPL1429).</p>	No equivalent monitoring condition	<p><i>Note: The location of the monitoring point within this condition corresponds to point 19 in condition L3.5 of EPL1429.</i></p> <p>2.4 Air Quality Impacts</p> <p>The proponent shall design, construct, operate and maintain the project to ensure that the concentration of the pollutants discharges at the turbine stack do not exceed the concentrations listed</p>	<p><i>Note: The location of the monitoring point within this condition corresponds to points 11-14 in condition L3.5 of EPL1429.</i></p> <p>2.4 Discharge Limits the proponent shall design, construct and operate and maintain the upgraded power station to ensure that at monitoring/ discharge points 11, 12, 13 and 14 (as identified under condition 2.3 of this approval), the concentration of</p>	<p>The discharge points and the concentration limits identified in condition 2.4 of Project Approvals 05_138 and 06_238 are replicated in condition L 3.5 of EPL 1429.</p> <p>The changes are administrative as monitoring is regulated by the EPA, and there is no change to environmental impact, therefore it is considered justified that conditions be removed:</p> <ul style="list-style-type: none"> 2.4 from Project Approval 05_138 2.4 from Project Approval 06_238

Environmental Protection Licence 1429 Conditions	Project Approval 07_0084	Project Approval 05_138	Project Approval 06_238	Justification
		in Table 1 (<i>refer to Project Approval 05_138</i>).	each pollutant listed in Table 2 (<i>refer to Project Approval 06_238</i>) is not exceeded.	
Limit Conditions L1.1 Except as may be expressively provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the environment operations Act 1997.	2.5 Soil and water quality impacts Except as may be expressively provided by an Environmental Protection Licence for the Project, the proponent shall comply with section 120 of the <i>Protection of the Environment Operations Act 1997</i> which prohibits the pollution of waters.	2.6 Soil and water quality impacts Except as may be expressively provided by an Environmental Protection Licence for the Project, the proponent shall comply with section 120 of the <i>Protection of the Environment Operations Act 1997</i> which prohibits the pollution of waters.	2.12 Soil and water quality impacts Except as may be expressively provided by an Environmental Protection Licence for the Project, the proponent shall comply with section 120 of the <i>Protection of the Environment Operations Act 1997</i> which prohibits the pollution of waters.	Each Project Approval directly refers to the jurisdictional coverage of the EPL, and the requirement to comply with Section 120 of the Protection of the <i>Environment Operations Act 1997</i> is replicated in condition 1.1 of the EPL. The changes are administrative as monitoring is regulated by the EPA, and there is no change to environmental impact, therefore it is considered justified that conditions be removed: <ul style="list-style-type: none"> • 2.5 from Project Approval 07_0084 • 2.6 from Project Approval 05_138 • 2.12 from Project Approval 06_238
L4.1 For each discharge point or utilisation area specified below (by a point number), the volume/mass of: a) liquids discharge to water; or; b) solids or liquids applied to the area; must not exceed the volume/mass limit specified for that discharge point or area. Point 1 - 11,000 ML/day (<i>refer to table in EPL1429</i>).	No equivalent monitoring condition	No equivalent monitoring condition	2.18 Process Water the proponent shall design, construct, operate and maintain the project to ensure that the rate of discharge of water from the cooling water outlet canal to Myuna Bay does not exceed 11,000 megalitres per day.	The maximum discharge limit of 11,000ML/ day is replicated in both documents, therefore removal of condition 2.18 in Project Approval 06_238 is considered justified. The changes are administrative as monitoring is regulated by the EPA, and there is no change to environmental impact, therefore it is considered justified that conditions be removed: <ul style="list-style-type: none"> • 2.18 from Project Approval 06_238
L3.1 and L3.6 water and/or Land Concentration Limits <i>Specifically, refer to:</i> Note (3) the 100% limit specified for the pollutant 'Temperature' at Point 1 means cooling water may never exceed a maximum temperature of 37.5°C without the consent of AEMO as per special condition E1.6. E1.6 Discharge of Cooling Waters into Lake Macquarie	No equivalent monitoring condition	No equivalent monitoring condition	2.19 Process Water the proponent shall design, construct, operate and maintain the project to ensure that the temperature water discharged from the cooling water outlet canal to Myuna Bay never exceeds 37.5°C. This condition does not apply in the event that the proponent is directed, pursuant to the National Electricity Rules, to maintain, increase or be available to increase power generation for system security.	The condition in Project Approval 06_238 replicates the requirements of EPL1429. EPL1429 provides additional details regarding percentile temperature limits within conditions L3.1 and L3.6, and the mechanisms determining how a direction by AEMO would apply, including notifications to be made by the licensee. The changes are administrative as monitoring is regulated by the EPA, and there is no change to environmental

Environmental Protection Licence 1429 Conditions	Project Approval 07_0084	Project Approval 05_138	Project Approval 06_238	Justification
<p>Notwithstanding the requirements of Special Conditions E1.1, E1.2, E1.3 and E1.4, in the event that the AEMO, directs the licensee, under the National Electricity Rules, to maintain, increase, or be available to increase power generation for system security, the licensee may exceed the maximum operating hours, above 35 and the maximum temperature specified in condition L3.1 for discharge point 1.</p> <p>When the direction is revoked by the AEMO, or a person authorised by the AEMO, the licensee must, as soon as practicable, run down the cooling water temperature to within the limits specified in condition L3.1.</p> <p>In the event that the licensee receives a direction from the AEMO, and exceeds the limits specified in condition L3.1, the licensee must notify the EPA in writing, as soon as practicable, of the time and date the direction was given by the AEMO and the period of time that the limits specified in condition L3.1 were exceeded.</p>				<p>impact, therefore it is considered justified that conditions be removed:</p> <ul style="list-style-type: none"> 2.19 from Project Approval 06_238
<p>M2 Requirement to monitor concentration of pollutants discharged</p> <p>M2.2 (Refer table in EPL 1429 showing Air Monitoring Requirements Point 15).</p>	No equivalent monitoring condition	No equivalent monitoring condition	<p>3.1 Environmental monitoring and auditing - Air quality monitoring</p> <p>The proponent shall determine the pollutant concentrations specified in Table 6 below (refer Project Approval 06_238) at monitoring/ discharge point 15 (as defined under condition 2.3 of this approval). Monitoring shall be undertaken during operation of the project, at the frequency indicated in the table, unless otherwise agreed by the DECC.</p>	<p>The monitoring points identified in condition 3.1 of Project Approval 06_238 are replicated in condition M2.2 of EPL 1429.</p> <p>The changes are administrative as monitoring is regulated by the EPA, and there is no change to environmental impact, therefore it is considered justified that conditions be removed:</p> <ul style="list-style-type: none"> 3.1 from Project Approval 06_238

Environmental Protection Licence 1429 Conditions	Project Approval 07_0084	Project Approval 05_138	Project Approval 06_238	Justification
M2 Requirement to monitor concentration of pollutants discharged M2.2 (Refer table in EPL1429 showing Air Monitoring Requirements Point 16).	No equivalent monitoring condition	No equivalent monitoring condition	3.2 Environmental monitoring and auditing - Air quality monitoring The proponent shall determine the pollutant concentrations specified in Table 7 below (refer Project Approval 06_238) at monitoring/ discharge point 16 (as defined under condition 2.3 of this approval). Monitoring shall be undertaken during operation of the project, at the frequency indicated in the table, unless otherwise agreed by the DECC.	<p>The condition within Project Approval 06_238 was based upon the existing condition within EPL1429, and therefore the monitoring points identified in condition 3.2 of Project Approval 06_238 are replicated in condition M2.2 of EPL 1429, with the exception of fluoride which was subsequently removed as a monitoring requirement on EPL1429 due to Origin providing evidence that fluoride detections at point 16 were extremely low.</p> <p>The changes are administrative as monitoring is regulated by the EPA, and there is no change to environmental impact, therefore it is considered justified that conditions be removed:</p> <ul style="list-style-type: none"> 3.2 from Project Approval 06_238
M2 Requirement to monitor concentration of pollutants discharged M2.2 Air Monitoring Requirements (listed as Point 18 in previous versions of EPL1429, now listed as points 18, 25, 26 ,27 – refer table within this condition in EPL429).	No equivalent monitoring condition	No equivalent monitoring condition	3.3 Environmental monitoring and auditing - Air quality monitoring The proponent shall determine the pollutant concentrations specified in Table 8 below (refer Project Approval 06_238) at monitoring/ discharge point 18 (as defined under condition 2.3 of this approval). Monitoring shall be undertaken during operation of the project, at the frequency indicated in the table, unless otherwise agreed by the DECC.	<p>Both conditions had stipulated the same discharge monitoring requirements for deposited matter, due to the conditions in the Project Approval being drafted based on the conditions of EPL1429. Subsequently the number of dust gauges to be monitored for EPL1429 were reduced from six to four due to Origin committing to undertaking additional monitoring via TEOMs of PM10 and PM2.5.</p> <p>Due to advances in technology, improved monitoring is now in place despite the reduction of monitoring points.</p> <p>The changes are administrative as monitoring is regulated by the EPA, and there is no change to environmental impact, therefore it is considered justified that conditions be removed:</p> <ul style="list-style-type: none"> 3.3 from Project Approval 06_238

Environmental Protection Licence 1429 Conditions	Project Approval 07_0084	Project Approval 05_138	Project Approval 06_238	Justification
<p>M2.2 in EPL1429 points 11,12,13 & 14 (Refer to table within this condition in EPL1429), noting the following exceptions:</p> <ul style="list-style-type: none"> - Sulphuric acid mist is not listed in this condition of EPL1429 (However monitoring of this parameter is still required for EPL1429 as there is a licence limit specified for it in Point M2.2). - The methodologies listed for carbon monoxide are different (OM-1 on EPL1429 and TM-32 in the Project Approval; however TM 32 was formerly referred to as OM-1 (USEPA 1996 Method 10). Therefore the methods are identical. - The unit of measure for NO_x is mg/m³ in EPL1429 and g/m³ in the Project Approval. 	No equivalent monitoring condition	No equivalent monitoring condition	<p>3.4 Environmental monitoring and auditing - Air quality monitoring</p> <p>The proponent shall determine the pollutant concentrations and emission parameters specified in Table 9 below (refer <i>Project Approval 06_238</i>) at monitoring/ discharge point 11, 12, 13, 14 (as defined under condition 2.3 of this approval). Monitoring shall be undertaken during operation of the project, at the frequency indicated in the table, unless otherwise agreed by the DECC.</p>	<p>The conditions of Project Approval 06_238 and EPLA1429 are generally consistent.</p> <p>Due to the fact that monitoring for sulphuric acid mist is still undertaken due to the existence of licence limits in EPL1429 condition M2.2, removal of this condition from the Project Approval is considered justified.</p> <p>Due to advances in technology, improved monitoring is now in place despite the reduction of monitoring points.</p> <p>The changes are administrative as monitoring is regulated by the EPA, and there is no change to environmental impact, therefore it is considered justified that conditions be removed:</p> <ul style="list-style-type: none"> • 3.4 from Project Approval 06_238