



Planning &
Infrastructure

***MODIFICATION REQUEST:
Bamarang Gas-Fired Power Station
Bamarang
MP 06_0029 / 08_0021 Mod 5***

Extension of approval lapse date

Director-General's
Environmental Assessment Report
Section 75W of the
Environmental Planning and Assessment Act 1979

May 2013

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Published May 2013
NSW Department of Planning & Infrastructure
www.planning.nsw.gov.au

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EXECUTIVE SUMMARY

Lumo Generation (the proponent) lodged a modification request to extend the approval lapse date by five years to 27 February 2019. The proposal is the fifth modification application and the second such request for an extension of the approval lapse date.

It is less than one year until the current approval lapse date (27 February 2014). The proponent has requested an extension of time to work through matters that have combined to delay this project's ability to commence construction. The proponent requires an extension to:

1. allow more time to consider the viability of the project in the wake of ongoing delays in forecasted electricity demand, as detailed in the Australian Energy Market Operator's Electricity Statement of Opportunities (ESOO) – currently delayed until 2020/21; and
2. allow more time to consider TransGrid's future plans for a 330 kV grid connection to the South Coast at Tomerong, from its Canberra-Kangaroo Valley 330 kV transmission line. Under the existing project approval the power station is proposed to have grid connection via Endeavour Energy's 132 kV network at West Nowra. A modification was previously approved to enable the proponent to pursue its own 330 kV connection, however, this was conditioned to avoid duplication in the event that TransGrid proceeds with its Tomerong proposal. However, despite TransGrid having issued a Request for Proposal (RfP) that would normally signal project commitment, the Tomerong project has not progressed towards project application.

In support of its application, the proponent provided analysis of residential development in the vicinity of the project site, and considered advances in gas turbine technology, or potential alternatives. The proponent has found that there has been little development since the project was first approved, and that existing air quality and noise limits would still be met for nearby sensitive receivers, if the project to commence at this point in time.

The proponent consulted with Shoalhaven Council, the Environment Protection Authority (EPA) and the Office of Environment and Heritage (OEH). The Department also consulted with agencies upon receipt of the project application. None of the public agencies raised any issues with a time extension.

Concept Approval for the Bamarang Gas Turbine Power Generation Facility and Stage 1 Project Approval (MP 06_0029) were granted on 27 February 2007, by the then Minister for Planning under section 75O of the *Environmental Planning and Assessment Act 1979* (EP&A Act). Approval for Stage 2 was granted on 29 October 2008.

The Department has considered the merits of the proposal and is satisfied that there are sound reasons why the project cannot commence ahead of February 2014. However, it notes that an extension of the approval lapse date until February 2019 would take the overall lapse date out to 12 years. The Department considers that a 10 years extension is more appropriate in the circumstances and would be consistent with the maximum extension granted to other gas-fired power stations.

Therefore the Department has issued a recommendation for an extension until 27 February 2017. This is 10 years out from the original concept approval and Stage 1 project approval. The Department also recommends that this be subject to an additional condition involving the preparation of a report that demonstrates operational air and noise limits remain within relevant environmental performance standards.

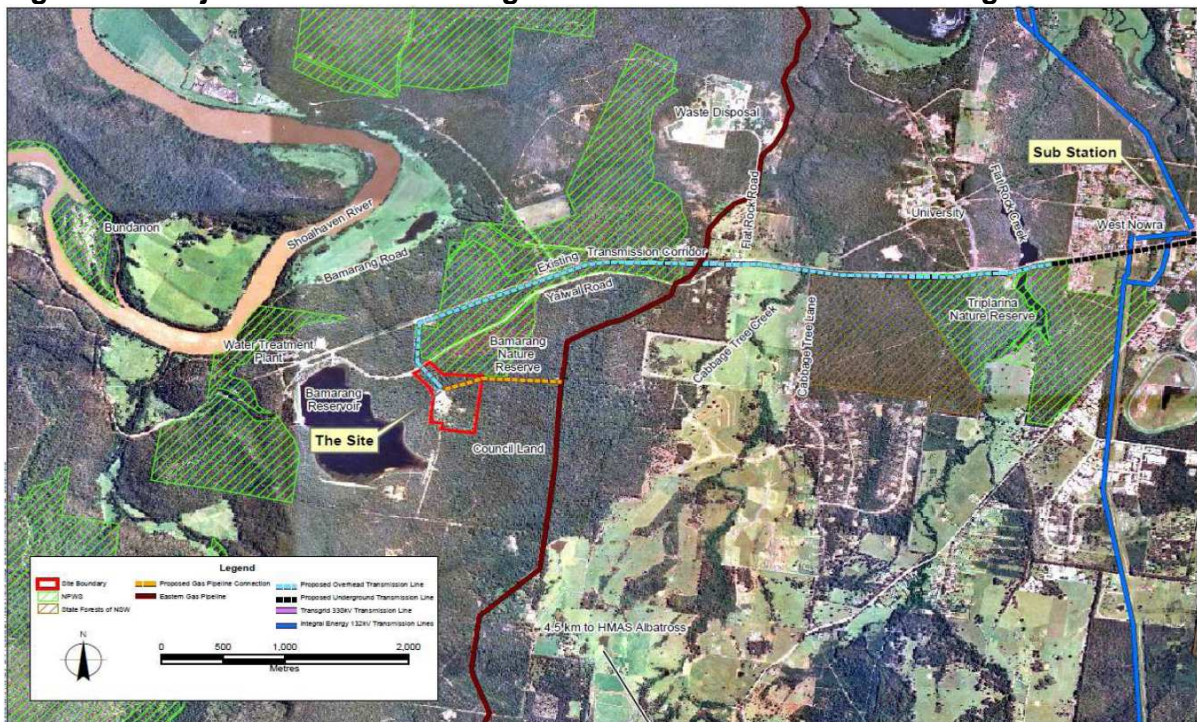
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1. BACKGROUND

On 27 February 2007, the then Minister for Planning granted Concept Approval under section 75O of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to Delta Electricity for Stage 1 and Stage 2 of the Bamarang Gas Turbine Power Generation Facility (MP 06_0029). The site is located at Bamarang, approximately 7 kilometres to the west of Nowra, in the Shoalhaven local government area, approximately 160 kilometres south of Sydney. The site address is 651 Yalwal Road, Bamarang (described as Lot 1 DP127482). The project location is shown in Figure 1.

Figure 1 – Project Location including transmission line easement and gas connection



Stage 1 comprises the construction and operation of an open cycle gas turbine plant consisting of two gas turbines with power generation capacity of 300 megawatts (MW) to generate peak supply. Associated infrastructure includes a 150 mm diameter natural gas pipeline to connect to the Eastern Gas Pipeline, approximately 600 metres east of the site; and a 132 kV transmission line 7.2 kilometres in length connecting to the national grid via Integral (now Endeavour) Energy's 132 kV regional distribution network supplying Nowra, to the east of the site (the Shoalhaven Terminal Station in West Nowra).

Stage 2 comprises the installation of two heat recovery steam generators and a single steam turbine generator to convert the power station to combined cycle configuration with an installed capacity of 400 MW for base-load generation. Additional infrastructure includes a water treatment plant, water cooled condenser, cooling tower and water supply pipeline.

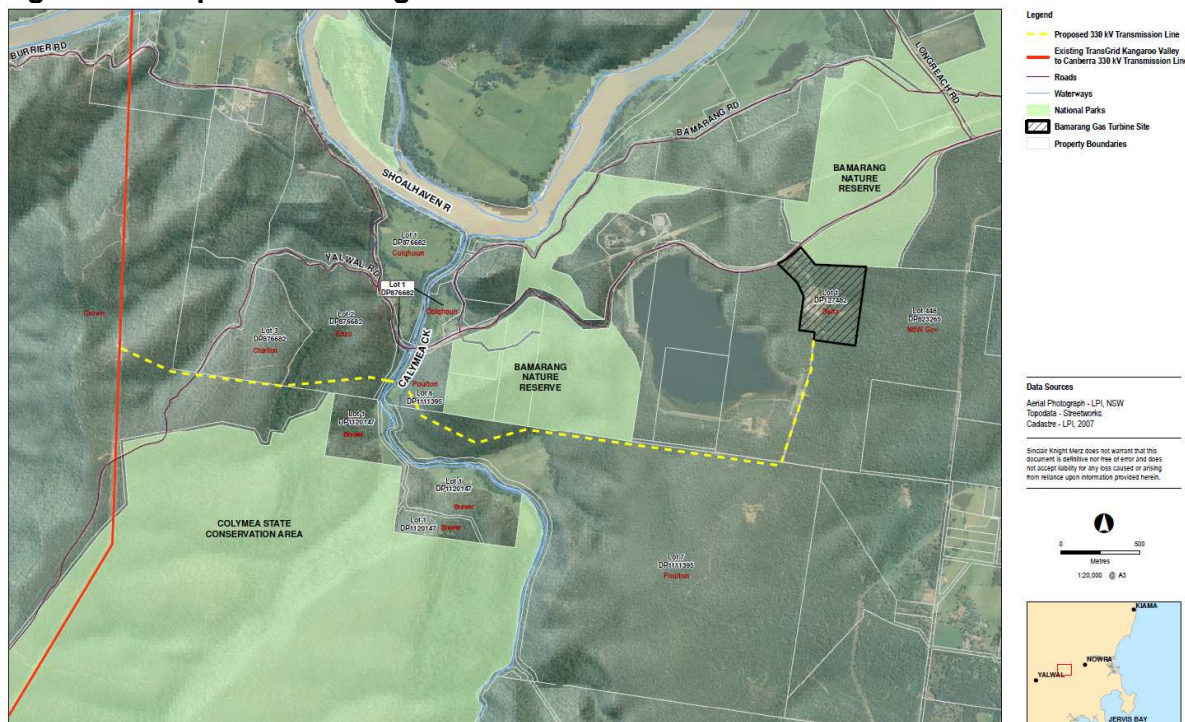
Project Approval for Stage 1 (MP 06_0029) was also granted by the then Minister on 27 February 2007 under section 75J of the EP&A Act.

On 29 October 2008, the then Minister granted Project Approval to Delta Electricity for Stage 2 of the Bamarang Gas Turbine Power Generation Facility (MP 08_0021) under Section 75J of the EP&A Act. Stage 2 comprises the conversion of the Stage 1 facility (if already built) or outright construction and operation of an approximately 400 MW combined cycle facility for base-load electricity generation including the use of the gas pipeline and transmission line infrastructure approved as part of Stage 1.

On 1 June 2010, the Director of Infrastructure Projects, under delegated authority, approved a modification request by Delta Electricity under section 75W of the EP&A Act to the Concept Plan (MP 06_0029 Mod 2) and Stage 2 (MP 08_0021 Mod 2). The modification permitted the expansion of the capacity of the Stage 2 Bamarang Gas Power Combined-Cycle Facility from 400 to 450 MW.

On 21 September 2010, the Director of Infrastructure Projects, under delegated authority, approved a modification request by Delta Electricity for the Bamarang Gas-Fired Power Station Concept Approval and Stage 1 Project Approval under section 75W of the EP&A Act (MP 06_0029 Mod 1). The modification would enable the Proponent to pursue the option of developing a 330 kV transmission line to connect the power station to TransGrid's Canberra-Kangaroo Valley 330 kV transmission line, approximately 5.2 kilometres to the west of the site (see Figure 2). This option would be an alternative to the 132 kV transmission line approved as part of Stage 1. Only one transmission line option would be selected and constructed by Delta Electricity.

Figure 2 – Proposed 330 kV grid connection to the west



In February 2011, the Bamarang Gas-Fired Power Station project (including ownership of the site and associated permits and approvals), was sold to Lumo Generation Pty Ltd as part of the NSW Government's electricity asset sales.

On 23 September 2011, the Acting Director of Infrastructure Projects, under delegated authority, approved a modification request by Lumo Generation to extend

the approval lapse date by two years till 27 February 2014 (MP 06_0029 / 08_0021 Mod 3). In modifying the Approval for the Concept Plan and Stage 1 Project Approval (MP 06_0029), the lapse date for Stage 2 Project Approval (MP 08_0021) was also brought into parity. It should be noted that the Proponent originally sought an extension until 27 February 2017, which would have brought the lapse date to 10 years from the original Concept and Stage 1 Approval. At the time, the Department determined that a five year approval time frame was sufficient to consider the viability of the proposal.

On 9 July 2012, Lumo Generation lodged a modification request (MP 06_0029 Mod 4) to delete conditions 1.6A and 1.6B that formed part of the approval for MP 06_0029 Mod 1. These two conditions allowed for grid connection to the 330 kV Canberra-Kangaroo Valley transmission line only in the event that TransGrid would not proceed with its own planned connection to the 330 kV line from Tomerong, approximately 15 km to the south of Bamarang. The Department imposed these conditions to avoid potential duplication, which would have unacceptable environmental impacts. The lodgement of Mod 4 and the concerns that it has raised with the Department has precipitated the current modification application (Mod 5). Mod 4 is on hold pending the outcome of Mod 5.

2. PROPOSED MODIFICATION

2.1 Modification Description

Condition 1.5 of both the Minister's Concept Approval and Project Approval for Stage 1 (MP 06_0029) specifies that approval for the project will lapse on 27 February 2014 unless works have substantially commenced on the site.

Condition 1.5 of the Minister's Project Approval for Stage 2 (MP 08_0021) specifies that approval will lapse on 27 February 2014 unless works have substantially commenced on the site.

Lumo Generation is seeking an extension of both the Concept and Project Approvals by five years to 27 February 2019 (MP 06_0029 / 08_0021 Mod 5).

3. STATUTORY CONTEXT

3.1 Continuation of Part 3A

In accordance with clause 3 of Schedule 6A of the *Environmental Planning and Assessment Act 1979* (EP&A Act), section 75W of the EP&A Act (as in force immediately before its repeal on 1 October 2011) continues to apply for the purpose of a modification of a Part 3A project.

Consequently, this report has been prepared in accordance with the requirements of Part 3A and the associated regulations, and the Minister (or his delegate) may approve or disapprove the modifications under section 75W of the EP&A Act.

3.2 Modification of the Minister's Approval

Unless specified as part of a condition of approval, there is no automatic approval lapse period for projects approved under Part 3A of the EP&A Act. In addition, there is no provision under Part 3A which prevents a lapse period specified under the Minister's approval from being modified under section 75W of the Act, or which limits the time period to which the lapse period can be extended through such a modification process.

Lapse dates are imposed to provide some certainty that the project would be delivered within a reasonable time frame and to ensure that the impacts of development remain substantially the same as when originally assessed for approval. However, it should be noted that there has been some variation in lapse dates imposed for gas-fired power stations: Marulan was granted a 10 year approval; while Tallawarra B was granted five years.

In considering this modification for a further extension to the lapse date, the Department is aware that this would carry the project delivery date beyond 10 years, to 12 years for Stage 1 and 10 years and 4 months for Stage 2.

3.3 Environmental Assessment Requirements

Section 75W(3) of the EP&A Act provides the Director-General with scope to issue Environmental Assessment Requirements (DGRs) that must be complied with before the matter will be considered by the Minister. Environmental Assessment Requirements were not issued for this modification as the proponent had addressed the key issues in the modification request.

3.4 Delegated Authority

On 27 February 2013, the Minister delegated his powers and functions under section 75W of the EP&A Act to the Executive Director, Development Assessment Systems and Approvals, in cases where the relevant local council has not made an objection, a political disclosure statement has not been made, and there are less than 25 public submissions in the nature of objections in respect of the modification request.

As no public submissions were received, no political donations were made, and Council did not lodge an objection, the Executive Director may determine the modification request under delegated authority.

4. CONSULTATION AND SUBMISSIONS

In accordance with section 75X of the EP&A Act and clause 8G of the EP&A Regulation, the modification request was made available on the Department's website.

Due to the minor nature of the proposed modification, the modification request was not exhibited by any other means. No public submissions were received on the modification request. The request was referred to both the Environment Protection Authority (EPA) and Shoalhaven City Council.

Shoalhaven City Council advised that it raises no objection to the proposal.

The EPA raised no objection, stating that a review of the original EA and approval conditions do not indicate any material change to the relevant environmental regulatory standards, or the surrounding environment. However, the EPA notes that it remains possible that regulatory standards, such as air emission standards, may change over time and that the Proponent should be aware that it would need to comply with any updated environmental regulatory standards if construction of the project is delayed.

In addition, the Proponent consulted with the Office of Environment and Heritage (OEH). OEH advised that it would not have issues with a five year extension as long as the current approval conditions continue to apply.

5. ASSESSMENT

5.1 Justification

Two factors have combined leading to the proponent's request for an extension of the approval lapse date by five years: the first is in relation to the circumstances surrounding the Mod 4 application; the second relates to further changes to electricity demand forecasts for new energy generation, since Mod 3 was approved.

Mod 4 Application

In July 2012, the Proponent lodged Mod 4, seeking approval to delete conditions 1.6A and 1.6B, which were imposed as part of the approval for Mod 1 (September 2010). These conditions placed strict limitations on the proponent's ability to pursue the option of constructing the higher voltage connection between the Bamarang Power Station and TransGrid's 330 kV Canberra-Kangaroo Valley transmission line to the west of the site. The Department imposed these conditions to avoid the potential duplication of a connection to the Canberra-Kangaroo Valley 330 kV transmission line across areas of high conservation value.

However, it is unclear on whether, or when, TransGrid will proceed with its Tomerong proposal, which would also involve a connection to the Canberra-Kangaroo Valley 330 kV transmission line. Despite TransGrid having issued a Request for Proposal (RfP) for non-network alternatives to the project – a National Electricity Rules (NER) requirement that would normally signal commitment to the project – the decision to seek approval to construct the Tomerong substation and 330 kV transmission line has not progressed further.

TransGrid is also impacted by the slowdown in the growth of electricity demand and the implications for its transmission network and in this particular instance, the need to augment network supply to the Nowra region through Tomerong.

Electricity Demand

As with the justification for Mod 3, a delay in the demand for new electricity underpins the current proposal for an extension of the approval lapse date.

At the time of Mod 3's approval (September 2011) three new gas-fired power stations collectively added 1,600 MW of new power into the NSW electricity pool. This pushed out the forecast need for new electricity generation to 2016/17, according to the Australian Energy Market Operator's (AEMO) 2010 Electricity Statement of Opportunities (ESOO).

Subsequent annual updates to the ESOO have further delayed need until 2018/19 (in 2011) and, most recently, 2021/22 (in 2012), reflecting the closure of Norsk Hydro's energy-intensive aluminium smelter in Kurri Kurri in July 2012; the strong uptake of rooftop photovoltaics (PV) generation; and reduced demand from manufacturing industries due to the high Australian dollar.

The reduction in demand growth, combined with the three year construction lead time ahead of the operational commencement of the new power station, means it would not be feasible to commence construction of the Bamarang power station until 2018/19. Therefore Lumo Generation is seeking a modification to extend the approval lapse date until February 2019.

5.2 Consideration

A modification approval that would extend the approval lapse date by five years to 27 February 2019 would result in an approval lapse period of 12 years for stage 1. Although there has not been consistency in the limits of approval for Part 3A projects, ten years has generally been considered the maximum period for approval.

However, the Department also accepts that factors have emerged to complicate this project's delivery, including:

- several revisions to electricity growth forecasts – even in the 19 months since Mod 3 was approved the ESOO forecast date has been extended by five years, and by six years since Lumo Generation bought the project in February 2011; and
- uncertainty surrounding the delivery of TransGrid's Tomerong project that would determine the extent to which the Bamarang project could operate to capacity. An extension of the project approval lapse date would allow more time to resolve this issue.

Future demand for electricity will be influenced by a range of factors beyond the traditional drivers of population growth, economic factors and weather. They include: continued penetration of rooftop PV generation; advances in energy efficiency appliances; the Federal Government's Renewable Energy Target (RET) scheme; and the potential introduction of policies affecting energy use (eg. peak pricing). These factors are influencing the timing and delivery of a range of energy infrastructure including power stations and transmission lines.

The Department considers that gas remains a relevant energy source into the foreseeable future, particularly as it responds well to peak demand and supplements the supply limitations of renewable energy sources.

Having invested in the project as recently as February 2011, the Proponent considers that the Bamarang Power Station is suitably located to meet demand shortfalls if, and when, they arrive.

The Department has considered the complexity of reasons underlying the Proponent's request to extend the approval lapse date and is satisfied that there are sound reasons why this project cannot go ahead at this point in time.

Supporting the Proponent's case is Shoalhaven City Council's position on the planning impacts of the project site, which is unchanged since the original approval, and its decision to rezone the site from "General Rural" to "SP 2 – Infrastructure" in its draft Local Environmental Plan (LEP), recognising the intended use of the site. Other land use controls in the vicinity remain consistent.

It is noted that Council has some concern with the existing route of the 132 kV connection to the Shoalhaven terminal which may pave the way for another modification if this option is pursued.

Notwithstanding, the Department has concerns about approval lapse dates beyond 10 years and considers that 12 years (for Stage 1) in particular would stretch the limits of acceptability for project timing. It does note that February 2019 is 10 years and four months from the date of the original approval for Stage 2.

The Department's preference is to avoid setting a precedent for gas-fired power station approvals beyond 10 years. Considering new State Significant Development (SSD) applications have a lapse date of five years under the EP&A Act, a 12 year approval lapse period is considered unacceptable. As such the Department would consider extending the approval lapse date until 27 February 2017, consistent with other previously approved Part 3A applications for gas-fired power stations such as Marulan.

This is considered sufficient to allow for an estimated three year lead time for construction until 2020, when demand for new electricity is forecast to begin picking up. Importantly, the Department considers that this gives the proponent time to discuss transmission line options with TransGrid for a high-voltage 330 kV connection to the South Coast to both enable the power station to operate at capacity, and to avoid duplication of a line across areas of high sensitivity.

If a further extension beyond this date is proposed in the future, the Department would have to consider if a fresh State Significant Development (SSD) application would be required.

In addition, the Department recommends that a condition be added that requires the proponent to provide an update in its assessment for environmental impacts, and to comply with any changed guidelines for air and noise emissions.

6. CONCLUSION AND RECOMMENDATIONS

The Department has reviewed the proponent's request, and while it acknowledges that there are sound reasons why the project cannot commence by 2014, considers that a 12 years lapse period from the original approval would not be acceptable.

Therefore it recommends that the approval date be extended until 27 February 2017, which is 10 years from the date of the original Concept and Stage 1 approval. This

would allow a three year construction lead time until operation commencing around 2020, which is the date when new demand is predicted.

It is **RECOMMENDED** that the Executive Director, Development Assessment Systems and Approvals:

- notes the information provided in this briefing;
- approves the modification request, subject to conditions; and
- signs the attached modifying instrument (Tag C).

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