



***MODIFICATION REQUEST:
Sydney CityGrid Concept Approval***

***Modification of the Concept Approval to
amend condition 3.2 so that design
principles will apply to the design of
building envelope(s) and built form***

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

April 2011

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EXECUTIVE SUMMARY

Ausgrid, formerly Energy Australia, (the Proponent) has sought a modification to the Concept Plan Approval for the Sydney CityGrid project to amend condition 3.2 so that design principles will apply to the design of building envelope(s) and built form in relevant Project Applications for Stage 2A and 2B. The modification application responds to a submission made by Lowy Institute during public exhibition of the Environmental Assessment for the Sydney CityGrid Stage 2A (i) project in relation to urban design issues.

The Department considers the modification to be appropriate. It would clarify and expand on existing assessment requirements by strengthening the competitive design process with the aim of achieving a better urban design outcome.

Ausgrid has also sought correction of a minor typographical error in the Concept Approval.

The design of the substation could affect magnetic field strength external to the substation.

The Department therefore considers it reasonable and appropriate that a requirement be added to the modification for magnetic fields to be assessed during design, and for the substation design to address the Australian Standard 2067-2008 (substation and high voltage installation exceeding 1 kV ac).

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1. BACKGROUND

On 20 September 2009, the then Minister for Planning granted concept plan approval for the Sydney CityGrid project, comprising a proposal by Energy Australia (the Proponent) (now known as Ausgrid) to upgrade electricity supply infrastructure in the Sydney Central Business District (CBD) to ensure reliable electricity supply to meet existing and future demand. The Sydney CityGrid project comprises of several stages as identified below:

- Stage 1A being the construction and operation of the Belmore Park Zone substation building and stub tunnel connection from the existing City South Cable Tunnel to the Belmore Park Zone substation;
- Stage 1B being commercial/retail development on the corner of Pitt, Campbell and Hay Streets to be integrated with works comprising Stage 1A;
- Stage 2A being the construction and operation of the City East Zone substation with potential commercial/retail development in the vicinity of Philip, Bent, Bligh and O'Connell Streets;
- Stage 2B being refurbishment of the existing Dalley Street Zone substation, or construction of a new building adjacent to the existing site;
- Stage 2C being the construction and operation of a sub-transmission switching station (STSS) at Riley Street;
- Stage 2D being the City East Cable Tunnel (CECT) to be constructed between Riley Street STSS and the City North Zone substation, with connections to the proposed City East and existing Dalley Street Zone substations, and a potential services control room adjacent to the Riley Street STSS; and
- Stage 2E being extension to the City South Cable Tunnel from Wade Place to Riley Street, Surry Hills.

At the same time as granting concept plan approval for the overall Sydney CityGrid proposal, the then Minister for Planning granted concurrent project approval for Stage 1, and required further assessment of the remaining stages as part of future project applications under Part 3A of the Environmental Planning and Assessment Act 1979 (EP&A Act).

In this regard, conditions 3.1-3.3 of the concept plan approval specified the further assessment requirements that must be addressed by the Proponent in lodging future project applications for Stage 2 projects.

Stage 2A, as described in the approved concept plan, includes the construction and operation of the City East Zone Substation and a potential commercial tower. The Proponent has subsequently split stage 2A into two sub-stages, via a project application (lodged with and currently under consideration by the Department) for Stage 2A (i), initially comprising of demolition of the existing Kindersley House building, bulk excavation, excavation of a 150 metre long stub tunnel connection under Bligh Street, bridging structure for the CBD Metro tunnel and a building envelope for the proposed sub-station and associated commercial tower. The site is located at 20-22 and 24-26 O'Connell Street and 33 Bligh Street, Sydney. Stage 2A (ii) includes the construction and operation of the substation and associated commercial tower.

The Lowy Institute made a submission during exhibition of the project application for Stage 2A (i) raising concerns regarding the building envelope proposed as part of Stage 2A (i), the

design review process and the impacts on the heritage listed former NSW Club House Building (Lowy Institute Building), and magnetic fields.

In response to issues raised by the Lowy Institute, the Proponent has now removed the building envelope, excavation, bridging structure and construction of the 150m stub tunnel from the current Stage 2A (i) application in its Preferred Project Report. The building envelope, excavation bridging structure and construction of the 150m stub tunnel will be included in the project application for Stage 2A (ii), and be subject to a design review process.

Design Principles

Condition 3.2 of the concept approval originally specified that all future project applications must be subject to a design review process based on the principles of the design review competition of the Sydney Local Environmental Plan 2005 in consultation with Sydney City Council.

Condition 3.2 was previously modified so that a design review process would only apply to building envelope(s) and built form. This modification was determined on the 4 November 2010 by the Director Infrastructure Projects, as delegate of the Minister for Planning.

Magnetic Fields

Lowy Institute also raised concerns regarding the potential effects on human health relating to the emission of magnetic fields.

The Proponent's response to Lowy Institute's concerns relating to magnetic fields was that Stage 2A (i) does not include installation of any electricity infrastructure. Therefore, an assessment was not required as part of the Environmental Assessment for Stage 2A (i) and the Proponent stated that an assessment of electric and magnetic fields from the City East Zone Substation would be outlined in the Environmental Assessment for Stage 2A (ii).

2. PROPOSED MODIFICATION

2.1 Description of Modification Request

The Proponent has sought a modification to the Concept Approval to amend condition 3.2 so that the following design principles will apply to the design of building envelope(s) and built form as part of relevant project applications for Stages 2A and 2B (Attachment 1):

- Design Principle 1 – generate a high quality design for the site and introduce a building form that respects and integrates well with its immediate context, including heritage significance of the surrounding buildings and space, and provides a distinctive architectural contribution to the area and the city skyline.
- Design Principle 2 – improve the quality and significance of the public domain of the site and the precinct (in relation to Stage 2A – specifically Richard Johnson Square).
- Design Principle 3 – Conserve and respect existing heritage items and archaeological items and streetscapes within and adjacent to the site.
- Design Principle 4 – Provide a high level of pedestrian amenity, with street level activation through public art work or other appropriate activity and connection to the precinct (in relation to Stage 2A – specifically Richard Johnson Square).
- Design Principle 5 – Ensure that the design proposals are compatible with other approved development and the city's planning framework.

These design principles are based on the design principles submitted by Lowy Institute. However, they do not include prescriptive controls that were also included in the design principles submitted by Lowy Institute.

The Proponent has also requested that condition 2.1 should be changed to correct a typographical error, so that it refers to Stage 1B instead of 2B.

3. STATUTORY CONTEXT

3.1 Modification of the Minister's Approval

The Minister for Planning is the approval authority for modification requests under section 75W of the EP&A Act. On 25 January 2010, the Minister delegated his powers and functions under 75W of the EP&A Act to the Director-General, in cases where there are fewer than 25 public submissions objecting in respect of the modified project.

The subject modification request complies with the above criteria. Consequently, the Director-General may determine the modification request under delegated authority.

4. CONSULTATION AND SUBMISSIONS

4.1 Exhibition and Consultation

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 modifications, the modification request was not exhibited by any other means.

City of Sydney Council has been consulted with on the modification relating to the design principles. Council raised no objections to the modification.

Lowy Institute were consulted with regarding the modification and subsequently submitted a revised set of design principles on the 23 December 2010. In the submission, Lowy Institute reiterated its support for its previously submitted principles, however suggested additional prescriptive controls, including dimensions of the 5 transformer bays were specified, to be included in the design principles.

5. ASSESSMENT

5.1 Design Principles

The Preferred Project Report submitted for Stage 2A(i) limits Stage 2A (i) to demolition works and removes the building envelope, excavation bridging structure and construction of the 150m stub tunnel from the project application for Stage 2A (i). The building envelope, excavation, construction of the 150 stub tunnel and design review process, construction and operation of the City East Zone Substation and commercial development would be undertaken in Stage 2A (ii).

The Department considers it reasonable and appropriate that design principles are incorporated into the conditions of approval to ensure a superior design outcome. The design principles will enhance the existing requirement in the concept approval whilst providing site specific design outcomes which respond to specific issues raised in relation to future

development on the site, particularly design and heritage outcomes in relation to both the Lowy Institute Building and Richard Johnson Square.

It is noted that the concept approval also requires the Proponent to conduct a design review process for the future building on the site. This design review process, in conjunction with the proposed design principles, would provide an appropriate framework for the further detailed consideration of the optimum design outcome for the site. For this reason, the Department is not supportive of the inclusion of any prescriptive controls as part of the design principles as any such controls could constrain the range of potential design solutions and outcomes on the site.

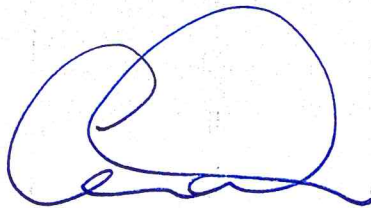
5.2 Magnetic Fields

Magnetic field strengths external to the development are affected by a number of factors including the location and placement of magnetic field generating infrastructure such as cables and transformers. Therefore, as such factors could influence the ultimate design of the substation building, the Department considers it reasonable and appropriate that a requirement be added to the modified concept approval for magnetic fields to be assessed during design, and that the substation design address the Australian Standard 2067-2008 (substation and high voltage installation exceeding 1 kV ac), which requires consideration of reasonable and practical measures to reduce exposure to magnetic fields, and "prudent avoidance" principles.

6. CONCLUSION AND RECOMMENDATIONS


The proposed modifications are essentially of an administrative nature only. The modifications would clarify and expand on existing assessment requirements and thereby provide for an enhanced design process and outcome, and would correct a minor error.

As the design of the substation would also be driven by achieving the best outcome to reduce magnetic fields, the Department has therefore added a requirement for magnetic fields to be assessed during design.



8-5-11

**Executive Director
Major Projects Assessment**



15/5/11

**Deputy Director-General
Development Assessment
and Systems Performance**



Director-General

13/5/2011
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Modification of Minister's Approval

Section 75W of the *Environmental Planning & Assessment Act 1979*

As delegate of the Minister for Planning under delegation executed on 25 January 2010, I approve the modification of the concept plan approval referred to in Schedule 1, in the manner outlined in Schedule 2.


Sam Haddad
Director-General

 Sydney *13th July* 2011

SCHEDULE 1

Major Project Application Number: MP08_0075

Concept/Project Approval: Granted by the Minister for Planning on 20 September 2009

For the following: Concept approval for Energy Australia to upgrade the electricity supply to the Sydney CBD to meet future demand, ensure the continuation of a reliable supply to this area, and meet its N-2 Licence obligations imposed by the then Department of Water and Energy. The project involves new/upgraded/refurbished substations and replacement of old high voltage cables within the Sydney CBD.

 **Modification Number:** MP08_0075 – Modification 2

Modification: Amend condition 2.1 to correct a typographical error, and amend condition 3.2 so that design principles apply to building envelope(s) and built form for Stages 2A and 2B.

SCHEDULE 2

The Concept Approval is modified by:

1. Replacing the existing condition 2.1 with the following:
 - 2.1 The construction and operation of Stage 1 (including Stage 1A and Stage 1B) and associated infrastructure requires no further environmental assessment and is the subject of a separate instrument of approval.
2. Replacing the existing condition 3.2 with the following:
 - 3.2 Pursuant to section 75P(1)(a) of the *Environmental Planning and Assessment Act 1979*, the following environmental assessment requirements apply with respect to any project application for Stage 2A and/ or Stage 2B, in addition to the requirements listed under condition 3.1:
 - a) **a design review process** for the proposed City East Zone Substation (Stage 2A) and Dalley Street Zone Substation (Stage 2B) shall form part of the Environmental Assessment. The outcome of this design review process shall be provided in the Environmental Assessment. This design review process shall be based on the principles of the design review competition of the *Sydney Local Environmental Plan 2005*, and include consultation with Council.
 - b) the following design principles shall be adopted for the purpose of the **design review process**:
 - (i) Design Principle 1 – generate a high quality design for the site and introduce a building form that respects and integrates well with its immediate context, including heritage significance of the surrounding buildings and space, and provides a distinctive architectural contribution to the area and the city skyline.
 - (ii) Design Principle 2 – improve the quality and significance of the public domain of the site and the precinct (in relation to Stage 2A – specifically Richard Johnson Square).
 - (iii) Design Principle 3 – Conserve and respect existing heritage items and archaeological items and streetscapes within and adjacent to the site.
 - (iv) Design Principle 4 – Provide a high level of pedestrian amenity, with street level activation through public art work or other appropriate activity and connection to the precinct (in relation to Stage 2A – specifically Richard Johnson Square).
 - (v) Design Principle 5 – Ensure that the design proposals are compatible with other approved development and city's planning framework;
 - c) the **design review process** shall take into consideration measures to reduce magnetic fields consistent with the Australian Standard 2067-2008 (substations and high voltage installations exceeding 1 kV ac) and the "prudent avoidance" principles; and
 - d) requirements (a) to (c) above only apply to project applications that seek approval for a building envelope(s) or built form and do not apply to project applications that only include development for the purpose of early works, demolition, excavation or site preparation.

