

19.1 Introduction

This chapter details the Draft Statement of Commitments in accordance with section 75F (6) of the EP&A Act. The inclusion of appropriate environmental management measures into the detailed design and construction of the project would minimise potential adverse impacts on the environment. The construction and operation would be undertaken in accordance with an Environmental Management System(s) (EMS) to the standard of ISO 14001 or equivalent.

The EMS would provide an overarching system to achieve the environmental management objectives for the Project and address commitments in the Environmental Assessment. This would also include the Ministers Conditions of Approval and any environmental due diligence requirements identified by the Proponents and/or contractor.

A Construction Environmental Management Plan(s) (CEMP) and Operational Environmental Management Plan(s) (OEMP) would be an important component of the EMS and reiterate the commitment of Delta Electricity and its contractors to mitigation of environmental impacts identified in this assessment.

This Draft Statement of Commitments describes the environmental management and monitoring to be undertaken during the construction and operation of the Delta Electricity Marulan Gas Turbine Facility.

19.2 Environmental Management

19.2.1 Construction Environmental Management Plan

Environmental management during the construction phase of the proposed project would be undertaken in compliance with the requirements of a CEMP. The CEMP is an administrative tool outlining environmental management practises, safeguard measures to be implemented, timing of their implementation, and management and monitoring of the process and procedures. The CEMP must be adhered to during the construction of the Gas Turbine Facilities. The CEMP may be a suite of documents addressing construction for each of the Delta Electricity (Stage 1 and Stage 2) and EnergyAustralia Facilities. It would identify where there are shared responsibilities and provide a cohesive management approach for the Site. The CEMP(s) would address the shared infrastructure, shared works, each individual Facility and the staged nature of the development.

The key objectives of the CEMP would include:

- ensuring that works are carried out in accordance with appropriate environmental statutory requirements, the conditions of approval for the project, relevant guidelines and existing environmental management systems and procedures;
- ensuring that works are carried out in accordance with the goals and requirements presented in the Environmental Assessment;
- ensuring that works are carried out in such a way as to minimise the likelihood of environmental degradation occurring;

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- ensuring that works are carried out in such a way as to manage the impact of the works on neighbouring land uses;
- ensuring that all employees engaged in the works comply with the terms and conditions of the CEMP;
- providing clear procedures for management of environmental impact including corrective actions; and
- identifying management responsibilities and reporting requirements to demonstrate compliance with the CEMP.

Generally the CEMP would include:

- establishment of environmental goals and objectives;
- conditions of project approval;
- lists of actions, timing and responsibilities;
- identification of areas of responsibility for environmental management of the project;
- statutory requirements – licences and approvals required;
- a structured reporting system detailing all relevant matters on a regular basis;
- procedures and forms for documentation and reporting of issues;
- training of personnel in environmental awareness;
- guidelines for emergencies, contact names and corrective actions for non-conformance and notifications to appropriate authorities and affected parties;
- auditing implementation of the CEMP;
- review procedures and protocols for modification of the CEMP;
- complaint handling procedure;
- site management and control procedures; and
- monitoring procedures.

Specifically, the CEMP would provide management actions in relation to:

- erosion and sediment control;
- surface water management;
- waste generation and disposal;
- flora and fauna management
- Aboriginal cultural heritage;
- the control of atmospheric emissions;

- the control of construction traffic movements;
- the control of noise emissions; and
- consultation.

Environmental Management Representative

An Environmental Management Representative would be appointed for construction of the Delta Electricity Facility.

Consultation Plan

Delineation of consultation responsibilities would be detailed in a consultation plan developed as part of the CEMP. Responsibilities under this plan would include ongoing consultation with stakeholders and detail of processes to receive, manage and respond to complaints. It is anticipated that a single complaints line would be administered for the construction phase of the Project, with a jointly managed response process to be developed.

19.2.2 Operational Environmental Management Plan

An Operational Environmental Management Plan(s) (OEMP) would be prepared for the Facility, which would address the key ongoing monitoring requirements. Similar to the CEMP, the OEMP may be a suite of documents addressing operation for each of the Delta Electricity (Stage 1 and Stage 2) and EnergyAustralia Facilities. It would identify where there are shared responsibilities and provide a cohesive management approach for the Site. The OEMP(s) would include:

- details of proposed maintenance and monitoring programs;
- responsibility for maintenance and monitoring for each Facility and areas where there is shared responsibility;
- reporting requirements;
- permits, approvals and consents issued under the approval process;
- community liaison such as complaints registers and a 24-hour hotline;
- the appropriate standards and protocols for the necessary controls, monitoring and remediation measures;
- auditing procedures;
- response plans for contingency events;
- properly established operating procedures;
- environmental training and education at all levels;
- monitoring system, review of plans and progress toward achieving objectives and goals;
- non-compliance handling procedures; and
- environmental quality controls.

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Consultation Plan

Delineation of consultation responsibilities would be detailed in a consultation plan developed as part of the OEMP. Responsibilities under this plan would include ongoing consultation with stakeholders and detail of processes to receive, manage and respond to complaints. It is anticipated that a single complaints line would be administered for the operational phase of the Project, with a jointly managed response process to be developed.

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A number of environmental safeguards and mitigations measures to prevent or minimise environmental impacts as a result of the construction and operation of the Facility are proposed. These measures would be incorporated in both EMPs and implemented throughout the life of the project.

Table 19-1 summarises these safeguard measures as a statement of commitment for Delta Electricity, sets out priorities for implementation (construction and operation). The phase of implementation is indicated in the table by *Cons* – Construction *Ops* – Operation, *Planning* and *Design*.

Table 19-1 Draft Statement of Commitments

Mitigation Measures	Implementation of mitigation measures
	Delta Electricity Facility
General	
The Proponent would carry out construction and operation generally in accordance with the: <ul style="list-style-type: none"> – Concept and Project Applications; and – Agreed Statement of Commitments. 	✓ (Planning, Cons. & Ops)
Monitoring would be undertaken in accordance with the Environmental Protection Licence.	✓ (Cons. & Ops)
Environmental Management	
The construction and operation would be undertaken in accordance with an Environmental Management System(s) to the standard of ISO 14001 or equivalent.	✓ (Cons & Ops)
The EMS would provide an overarching system to achieve the environmental management objectives for the Project and address commitments in the statement. This would also include the Ministers Conditions of Approval and any environmental due diligence requirements identified by the Proponent and/or contractor.	✓ (Cons & Ops)
Prepare and implement: <ul style="list-style-type: none"> – CEMP(s); and – OEMP(s). <p>Which include the specific measures outlined in the following sections of this table.</p> <p>These may be developed as a suite of documents that would address each Facility, shared infrastructure, staging of the development and shared responsibilities with EnergyAustralia.</p>	✓ (Planning, Cons. & Ops)

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Mitigation Measures	Implementation of mitigation measures
	Delta Electricity Facility
An Environmental Management Representative would be appointed for the construction of the Delta Electricity Facility.	✓ (pre-Cons)
Consultation	
Consultation will continue with stakeholders during the planning, detailed design, construction, operation and maintenance of the Facilities as needed.	✓ (Cons. & Ops)
Notify potentially affected local residents and businesses of construction activities as needed.	✓ (Cons.)
Develop and implement protocols to notify stakeholders of relevant activities and as appropriate, any relevant incidents should they occur.	✓ (Cons. & Ops)
A consultation plan would be developed as part of the CEMP / OEMP to outline a coordinated, jointly managed consultation process for the Facilities. A single complaints line would be established for the two Facilities with a jointly managed response process to be developed.	✓ (Cons. & Ops)
Air Quality	
Liaise with Civil Aviation Safety Authority (CASA) to address the issue of potential aviation hazard of the plant.	✓ (Design)
The Construction Environmental Management Plan (CEMP) would consider the most appropriate dust mitigation method suited to the activity and circumstances. This would likely include measures such as: <ul style="list-style-type: none"> watering, spraying or covering earthworks during excavation and handling and on exposed surfaces and stockpiles; scheduling activities for more favourable meteorological conditions; covering or limiting truck soil loads; reducing speed limits on unsealed surfaces; and cleaning soil off the undercarriage and wheels of trucks when required. 	✓ (Design & Cons)
Any long-term stockpiles would be stabilised (for example using measures such as fast seeding grass or synthetic cover spray).	✓ (Cons)
Delta Electricity monitors GHG emissions and thermal efficiency and when possible implements programs to improve operational performance to reduce emissions.	✓ (Ops.)
Noise and Vibration	
Prepare and implement of a Construction Noise Management Plan (CNMP) within the CEMP to consider, if appropriate: <ul style="list-style-type: none"> positioning of plant / processes; and limiting the “clustering” of plant / processes. 	✓ (Design & Cons)
Delta Electricity Facility Stage 1 would incorporate the following inherent noise treatments into the design: <ul style="list-style-type: none"> air intake silencers; generator transformer walls on three sides; and exhaust air silencers. 	✓ (Design)

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Mitigation Measures	Implementation of mitigation measures
	Delta Electricity Facility
Delta Electricity Facility Stage 2 detailed design would incorporate mitigation measures as necessary to achieve the specified noise limits.	✓ (Design & Ops)
Where operational noise is predicted to exceed the noise criteria for residential dwellings (established in accordance with the Industrial Noise Policy (INP) guideline and most recent assessment process) property acquisition or negotiated agreements would be put in place.	✓ (Design)
Low frequency noise would be addressed during detailed design, consistent with the most recent assessment process that has been developed overseas in lieu of the INP.	✓ (Design)
Soils, Geology and Groundwater	
A Construction Soil and Water Management Plan would be developed and implemented to ensure effective management of potential soil erosion issues.	✓ (Cons.)
All construction works would be undertaken in a manner to minimise the potential for soil erosion and sedimentation, and managed through a Soil and Erosion Control Plan. These measures would be incorporated into the CEMP.	✓ (Cons.)
As a minimum the measures outlined in the <i>Managing Urban Stormwater – Vol 1 Soils and Construction</i> would be implemented. Measures may include: <ul style="list-style-type: none"> limiting slope length; installation of sediment filters; and the construction of a sedimentation basin downstream of the disturbed areas. 	✓ (Design & Cons.)
Soil erosion and sedimentation devices would remain in place until the surface is restored. These devices would also capture any gross pollutants.	✓ (Cons.)
Where practicable, disturbed areas would be quickly revegetated or covered with a non-erodable surface following construction.	✓ (Cons.)
Subject to design requirements, where excavation work extends into bedrock, suitable material may be reused as engineering fill on the Site.	✓ (Design)
Assess need for groundwater control and collection system during further geotechnical investigations.	✓ (Design)
Depending on engineering design requirements for the fill, material excavated from the Site (except for up to 150 mm of topsoil and root-affected material) may be used as engineered fill in any cut / fill operations.	✓ (Design & Cons.)
Construction would be planned to minimise the time that disturbed land is exposed.	✓ (Cons.)
Water required for dust suppression would be sourced from the existing dams on the Site where available and practicable or imported if necessary.	✓ (Cons.)
Appropriately bunded areas would be included for storage of fuels, oils and chemicals.	✓ (Cons. & Ops)
Areas within the Facility area would be appropriately drained so that surface run-off would be prevented from infiltrating directly onto the ground and from reaching the groundwater.	✓ (Cons. & Ops.)

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Mitigation Measures	Implementation of mitigation measures
	Delta Electricity Facility
All possible pollutant materials would be stored well clear of Site boundaries and stormwater drainage lines and stored in a designated covered area.	✓ (Ops.)
Waste disposal and collection would be properly undertaken.	✓ (Cons. & Ops.)
All major vehicle maintenance would be undertaken offsite.	✓ (Cons. & Ops.)
Stormwater and wastewater ponds would be lined with an appropriate impermeable liner to minimise the risk of water escaping into the natural groundwater system.	✓ (Design & Ops.)
Traffic and Transport	
Further traffic assessments undertaken: <ul style="list-style-type: none"> – to review what works may be required to bridges, causeways, traffic islands, intersections and drainage culverts along Canyonleigh and Brayton Roads to facilitate the construction and operation of the Facilities; – to identify and cater for any necessary remedial treatments to facilitate passage to the Site along Canyonleigh and Brayton Roads once the actual weight and dimensions of the proposed plant are known; and – in consultation with Goulburn Mulwaree and Upper Lachlan Shire Councils. 	✓ (Design & Cons)
Pre construction evaluation of pavement condition of Brayton Road (between George Street intersection and Canyonleigh Road intersection) and Canyonleigh Road (from intersection of Brayton Road to the Site).	✓ (prior to Cons)
Post construction evaluation of pavement condition of Brayton Road (between George Street intersection and Canyonleigh Road intersection) and Canyonleigh Road (from intersection of Brayton Road to the Site) to determine remedial action required following passage of oversized vehicles.	✓ (post- Cons)
Transport of over-mass and over- dimensional loads to be undertaken under RTA and NSW Police permit conditions and approved routes.	✓ (Cons)
Flora and Fauna	
As part of the Environmental Management Plan, prepare and implement a Vegetation Management Plan which complies with the DECC (2006a) guidelines.	✓ (Cons. & Ops)

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Mitigation Measures	Implementation of mitigation measures
	Delta Electricity Facility
<p>Management actions would include the implementation of an offset strategy jointly by Delta Electricity and EnergyAustralia and include measures (as appropriate) such as:</p> <ul style="list-style-type: none"> • exclusion of grazing through fencing; • weed removal and control; • erosion control; • retention of fallen timber, hollow logs, leaf litter, rocks and other habitat resources; • installation of nest boxes for displaced arboreal fauna (if required); • maintenance and monitoring of natural surface water quality and flows; • control of feral animals, where appropriate and practical; • timing construction to recognise breeding seasons of resident fauna (where practical); • setting low maximum speed limits to reduce fauna road fatalities; • limiting vehicular and personnel entry to adjacent vegetation through appropriate fencing; and • using down-lights and motion sensor lighting in order to reduce impacts on fauna species using woodland. 	<p>✓ (Cons. & Ops)</p>
<p>Delta Electricity and EnergyAustralia would jointly implement an offset strategy with key measures such as:</p> <ul style="list-style-type: none"> • maintenance of woodland biodiversity values through permanent conservation of approximately 32.3 ha of Tableland Hills Grassy Woodland. Land portion to be re-titled (with VCA or equivalent) for this purpose in perpetuity; • rehabilitation of 9 ha of riparian vegetation and adjoining cleared land in Riparian Rehabilitation Zone. Creation of vegetated corridor connecting offset area to nearby woodland stands and adjacent riparian zone; and • temporary exclusion fencing of offset area during construction. 	<p>✓ (Cons. & Ops)</p>
<p>A Weed and Pest Management Plan would be prepared as part of the EMP for the Site, which would aim to actively control feral animals and noxious weeds.</p>	<p>✓ (Cons. & Ops)</p>
<p>The CEMP would formulate safeguard measures to reduce soil erosion and pollutant runoff for the Site particularly for waterbodies.</p>	<p>✓ (Cons. & Ops)</p>
<p>Disturbed sites would be quickly revegetated or covered with a non-erodible surface following construction.</p>	<p>✓ (Cons.)</p>
Visual Amenity	
<p>Subject to CASA requirements, where practicable, colour and texture of structures in the proposed Facilities would be appropriate and utilise non-reflective materials</p>	<p>✓ (Design)</p>
<p>Tree and shrub planting would be carried out within the general site area jointly by Delta Electricity and EnergyAustralia to provide additional screening to views from surrounding properties. Consideration would be given to planting on mounding within the Site.</p>	<p>✓ (Design, Cons & Ops.)</p>
<p>Where practicable, tree planting within selected private residential properties would be considered jointly by Delta Electricity and EnergyAustralia, subject to negotiation and agreement by property owners.</p>	<p>✓ (Design & Ops.)</p>

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Mitigation Measures	Implementation of mitigation measures
	Delta Electricity Facility
Lighting design would avoid direct line of sight from properties surrounding the proposed Facilities.	✓ (Design & Ops.)
Top of the exhaust stacks would not have lighting unless requested by CASA.	✓ (Design & Ops.)
Measures would be employed to avoid light spill from security lighting onto surrounding residences.	✓ (Design & Ops.)
Water Cycle Management	
As a way of further enhancing public infrastructure, and if deemed viable, upgrade works would be jointly considered by Delta Electricity and EnergyAustralia to be undertaken to local sewage treatment facilities to meet the Facilities operational water requirements.	✓ (Cons & Ops)
Site Design	
The Facilities would be designed to incorporate the following: <ul style="list-style-type: none"> • minimum elevation of risk averse property within the Facility is to be approximately 605 m AHD to minimise the potential for flooding; and • maintaining approximately 150 m between the Wollondilly River and the Facility. 	✓ (Design)
Soil Erosion	
All construction works would be undertaken in a manner to minimise the potential for soil erosion and sedimentation. Construction works would also be managed through a Soil and Erosion Control Plan. These measures would be incorporated into the CEMP.	✓ (Cons)
Spills and site management	
All possible pollutant materials would be stored well clear of site boundaries and stormwater drainage lines and stored in a designated covered area.	✓ (Design & Cons. & Ops.)
Appropriately bunded areas would be included for storage of fuels, oils and chemicals.	✓ (Design & Cons. & Ops.)
Waste collection areas would be designated.	✓ (Design & Cons. & Ops.)
Appropriate bunding would be installed and appropriated containers would be provided.	✓ (Design & Cons. & Ops.)
Waste disposal and collection would be properly undertaken.	✓ (Design & Cons. & Ops.)
All major vehicle maintenance would be undertaken offsite.	✓ (Design & Cons. & Ops.)
Any vehicle washing on-site would be restricted to designated bunded areas.	✓ (Design & Cons. & Ops.)

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Mitigation Measures	Implementation of mitigation measures
	Delta Electricity Facility
Staff facilities would be installed and maintained so that pollutants, including wash water are not conveyed from the site in stormwater so there is no discharge to the environment.	✓ (Design & Cons. & Ops.)
Surface water	
There would be no direct drainage from the Site to the Wollondilly River other than natural surface flows.	✓ (Design & Ops.)
Water management strategies would be developed and implemented to maintain zero discharge from the site except for natural surface flows.	✓ (Design & Ops.)
Water from impervious surfaces would be directed through oil and grit traps designed to remove any oil and minimise suspended solids to an acceptable level prior to discharge from the site. This system may also be fitted with a gross pollutant trap to collect any large material mobilised by stormwater.	✓ (Design & Ops.)
The outlet of the Facilities' stormwater system would be designed to maximise the dispersion of these high flows and spread the outflow over a wider area and thereby minimise their potential to cause soil erosion downstream.	✓ (Design & Ops.)
Wastewater Treatment	
Maintain a minimum distance of 150 m from the Wollondilly River for effluent management areas.	✓ (Design & Cons.)
Staff facilities would be installed and maintained so that pollutants, including wash water are not conveyed from the site in stormwater to ensure zero discharge to the environment.	✓ (Design, Cons.& Ops)
"Black" wastewater during operations would be treated by a proprietary septic-type system and waste products stored and then disposed of offsite by a licensed contractor.	✓ (Design & Ops.)
Clean water drains would be directed to the stormwater storage pond from which any stormwater flow would be released in a regulated manner.	✓ (Design & Ops.)
Dirty water drains would be directed to settlement ponds and oil/water separators before discharge to the onsite wastewater pond.	✓ (Design & Ops.)
Contaminated drains would be directed to a contaminated drains tank with oil water separator. Oil would be disposed offsite to a licensed facility and water would be directed to the on-site wastewater pond.	✓ (Design & Ops.)
Preliminary Hazard Analysis	
In accordance with Department of Planning's HIPAP No. 3 (<i>Environmental Risk Impact Assessment Guidelines</i>), the safety assessment process would continue throughout the design, construction and commissioning of the Facility to refine and update the outcome of the development approval / environmental risk process.	✓ (Design & Ops.)
An assessment of the safety management system implemented and used at the site, specifically as it applies to the proposed hazardous materials handling, pipelining and storages, would be conducted within the first year of operation.	✓ (Ops.)

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	Delta Electricity Facility
Leak detection equipment would be used in areas where high risk natural gas piping is used (high likelihood of leak and/or confined locations).	✓ (Design & Ops.)
The detailed design of the turbine housing and associated equipment would clearly outline the safety approach used to ensure that explosive situations do not arise (the risk is rendered negligible). Reference should be made to European ATEX Directive and the UK HSE PM84 or other guidance / regulation of equivalent safety.	✓ (Design)
Fire protection ratings inside the turbine housing would be determined, including use of explosion panels and use of fire retardant material.	✓ (Design)
Installation of an automatic valve at site boundary which would isolate natural gas supply to the site in case of a major leak at one of the natural gas pipes on site. The reliability of this automatic valve to close on demand is set as 95 % (SIL1). A major leak is regarded as one which results in a mass flow through the hole in the pipe of 5 kg/s or more.	✓ (Design)
Bush Fire	
Prepare Bush Fire Management Plan within the CEMP.	✓ (Cons)
Prepare Bush Fire Management Plan within the OEMP, which could include measures such as management and maintenance of Asset Protection Zone(s), landscaping and vegetation management water supply, access and other bush fire protection measures for the Site.	✓ (Ops)
Include emergency response provisions for bush fire in a site emergency response plan. The plan would include evacuation arrangements, drills and nominated control staff for bush fire events.	✓ (Ops)
Where practicable, provide an Asset Protection Zone approximately 10 m to 15m wide around the Site boundaries.	✓ (Design & Ops)
Where practicable, the Asset Protection Zone would be managed as follows: <ul style="list-style-type: none"> • according to the <i>Standards for Asset Protection Zones</i> (RFS 2007); • groundcover and understorey strata would be managed to avoid accumulations of dense grass, weeds or shrubs; • dense swards of grass would be slashed prior to summer or as required; • shrubs should be thinned only as required to ensure no connection to canopy stratum; and • maintain fuel loads through mowing/slashing during the spring/early summer months, as required. 	✓ (Design & Ops)
Where practicable, provision of water tank(s) at appropriate locations (in consultation with RFS) within the Facilities, fitted with Storz valves compatible with RFS hoses.	✓ (Design & Ops)
Provide access for fire fighting vehicles to all parts of the Site.	✓ (Design)

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Mitigation Measures	Implementation of mitigation measures
	Delta Electricity Facility
<p>Where practicable, landscaping would include the following features:</p> <ul style="list-style-type: none"> • tree canopy separation by at least 2 m; • discontinuous shrub layer (clumps or islands of shrubs where possible; not rows); • vertical separation between canopy and shrub layer; • tree canopies not overhanging structures; • no landscaping trees within 2 m of any building; • use of non-combustible mulch, e.g., stones; and • use of 'fire retardant' species of local provenance. 	<p>✓ (Design & Ops)</p>
<p>Vegetation near transmission lines would be managed in accordance with EnergyAustralia (2007) <i>Tree Safety Management Plan</i>.</p>	<p>✓ (Design & Ops)</p>
Socio Economic	
<p>Where possible, suitable personnel would be sourced from the region.</p>	<p>✓ (Cons & Ops)</p>
<p>Delta Electricity recognises their part in their long term presence within the community for this Project and would explore means for contribution to the community on a case by case basis.</p>	<p>✓ (Cons & Ops)</p>
<p>As a way of further enhancing public infrastructure, and if deemed viable, upgrade works would be jointly considered by Delta Electricity and EnergyAustralia to be undertaken to local sewage treatment facilities to meet the Facilities operational water requirements.</p>	<p>✓ (Cons & Ops)</p>