



**SOUTH EAST FIBRE EXPORTS PTY LTD
(S E F E)**

**SUBMISSION TO THE DEPARTMENT OF
PLANNING NSW**

**PROPOSED 5 MW BASE LOAD BIOMASS-
FIRED POWER STATION AT EDEN, NSW**

Preliminary Environmental Assessment

January, 2009

**SOUTH EAST FIBRE EXPORT PTY. LTD.
EDEN
BIOMASS-FIRED POWER STATION PROPOSAL**

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1. INTRODUCTION

1.1 Executive Summary

The Minister for Planning has made an order under Section 75B of the Environmental Planning and Assessment Act making the proposed project subject to Part 3A of the EP & A Act.

The purpose of this document is to provide the Department of Planning NSW with additional information in support of a Major Project Application

State Environmental Planning Policy (Major Projects) indicates that the proposal is listed in Schedule 1 Group 8 as being a major project.

The following is provided as a summary of the project and its potential environmental impacts.

The information has been provided to enable the Department of Planning to issue environmental assessment requirements (Clause 75F of the EP&A Act 1979) that can be prepared for the purpose of the of the Minister approving the project.

The project proponent is South East Fibre Exports Pty Ltd, a timber processing company owned jointly by Nippon Paper Industries (62.5%) and Itochu Corporation Pty Ltd (37.5%).

In the course of its business processing logs and exporting both hardwood and softwood chips, SEFE generates around 44,500 tonnes of mill waste in the form of wood fines and bark. A proportion of this waste is currently sold as landscaping material with the balance being disposed of in a burner with no energy recovery. In addition, a survey conducted of local timber processing plants indicates an additional 17,600 tonnes of wood-based waste would be available to SEFE for power generation.

The Power Station project comprises the installation of fuel handling facilities, a 22 MW (thermal) grate furnace, superheated boiler producing 22 tonnes per hour steam, and a multi-stage steam turbine connected to an electrical generator. Flue gas and ash handling systems will be connected to the furnace. Cooling water for the turbine exhaust steam will be extracted from and returned to the sea via pipelines connected to SEFE's export wharf.

Make-up water for the steam generator would be sourced from SEFE's existing fresh water supply system located to the south of the mill site.

It is anticipated that the SEFE power plant will operate as a base load plant, producing 31 GWh per annum, of which SEFE would consume around 20% with the balance being sold into the national electricity grid.

SEFE is committed to meeting its environmental and community obligations throughout this process and undertaking a consultation program with stakeholders during the environmental assessment process.

The development will require \$18.7 million of new investment, with the plant proposed to be integrated with the existing SEFE mill near Eden.

It has been estimated that the project construction period would span 15 months.

1.2 The Proponent

The project proponent is South East Fibre Exports Pty Ltd, a timber processing and exporting company based near Eden on the NSW Far South Coast and jointly owned by Nippon Paper Industries (62.5%) and Itochu Corporation (37.5%).

Nippon Paper Industries is the second largest Japanese domiciled producer of pulp and paper products. Itochu Corporation Limited is a Japanese domiciled trading house with extensive forestry-based interests in Australia and other countries.

Since establishing in Eden in 1968 (as Harris-Daishowa Australia Pty Ltd) SEFE has invested in excess of \$68 million and owns and manages a plantation estate of 3900 hectares.

SEFE has been exporting woodchips since 1971 with total export value almost \$2 billion. Apart from a trial shipment of 12,000 tonnes of pine chips in 2001, up until 2008 all exports were of hardwood chip. In 2008 commercial shipments of pine chip commenced.

SEFE's direct employment is 80 and a further 300 persons are employed in our direct supply chain and in forest management. A similar number of indirect jobs attach to the SEFE operation.

SEFE markets are integral to the financial viability of 11 regional sawmills and will also be important to the large softwood sawmill planned for Bombala.

SEFE operates an ISO 14001 Environmental Management System and SEFE plantations and private forest operations are operated to the Australian Forestry and Chain of Custody Standards.

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Australia

Street Address:

Edrom Road,
Eden, NSW

1.3 Project Need and Justification

The NSW Government has made it clear in recent press releases and Labor party Conference reports that the State will require a major upgrade to base load supply in the order of 2500 mW in the period 2010 to 2016.

In light of the State Government's unsuccessful bid to privatise its electricity generation assets and in the absence of a clear plan to address this projected shortfall in electricity generation capacity, SEFE seeks to protect its future interests and also to capitalize on the opportunities presented by way of incentives established to encourage transition to renewable electricity generation. Nationally, the projected impact of climate change and the introduction in 2010 of the Carbon Pollution Reduction Scheme (CPRS) as foreshadowed by the Labor Government make the need for "cleaner" energy most pressing. The use of renewable biomass as fuel for SEFE's power plant will deliver neutral greenhouse gas impacts.

Since the Kyoto Protocol deems biomass generated power to be carbon neutral, the generation of 31,000 MWh per annum from SEFE's proposed plant will avoid the emission of approx 31,000 tonnes of CO₂ from fossil-fuel based power generation.

As byproducts and in the form of waste from its milling operations of both hardwood and softwood logs, SEFE generates around 44,500 tonnes of potential fuel, a proportion of which is currently sold as landscaping materials with the balance being burnt in a burner with no energy recovery. In addition SEFE has established an additional 17,600 tonnes of wood-based waste would be available to SEFE for power generation from local timber processing operations.

The development would generate local employment opportunities for six operators, with anticipated flow-on employment opportunities in the engineering maintenance sector.

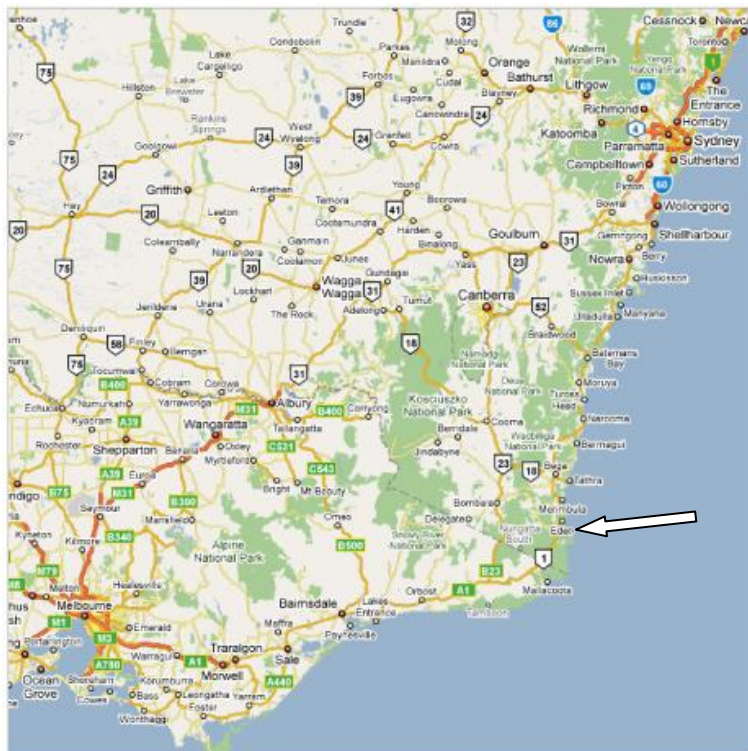
2. PROJECT DESCRIPTION

2.1 Site

2.1.1 Location

The SEFE biomass power station will be situated on SEFE's Munganno Point mill site, located on the southern shoreline of Twofold Bay.

The attached locality map and aerial photograph identify the property in relation to nearby settlements and infrastructure.



Existing waste burner



Navy Wharf

Access to the mill site is gained by turning off the Princes Highway at Kiah and proceeding to the end of Edrom Road.

The mill site is approximately 119 acres in size and is mostly cleared of vegetation.

2.1.2 Land Title and Zoning

The land is owned by South East Fibre Exports Pty Ltd.

The title details of the land are:

Lot 3, DP 529447 in the Parish of Kiah, County of Auckland.

This lot is in the Bega Valley Shire Local Government area.

The subject land is zoned 1 (a) (Rural General Zone) under the Bega Valley Local Environment Plan (2002).

The objectives of Zone 1 (a) are:

- a) To encourage continued growth in the area's rural economic base;
- b) To encourage other forms of development, including tourism, that are compatible with agricultural activities and do not create undesirable environmental and cultural impacts;

- c) To protect and conserve the productive potential of prime crop and pasture land;
- d) To maintain the scenic amenity and landscape quality of the area;
- e) To promote the protection, and the preservation and enhancement, of natural ecological systems and processes;
- f) To provide proper and co-ordinated use and protection of rivers, riparian corridors and water catchment areas;
- g) To promote the economic provision of services compatible with the nature and intensity of development and the character of the area.
- h) To ensure the development and management of the land has minimal impact on water quality and environmental flows of receiving water;
- i) To maintain significant features of natural and cultural heritage.

The SEFE property is bounded by coastline to the north, National Park to the east, and William Allan Road to the south west.

The other lands in the locality are zoned to the Rural 1 (f) Forestry Zone and Zone 8 National Parks and Nature Reserves.

The objective of the Rural Forestry Zone is to enable the continuance or expansion of forestry and development for associated purposes, which complements the Zone 1(a) (Rural General Zone), while the objective of the National Parks and Nature Reserves Zone is to recognize existing National Parks and Nature Reserves.

2.1.3 Compatibility with Planning Provisions

Given the existing nature of the woodchip production activity and the objectives of Zone 1(a), the proposed development would be compatible with the planning provisions applicable to the site.

The NSW Maritime Cargo Storage area and Navy Wharf located immediately to the west of SEFE's property are zoned 7(f) Rural Forestry and 7 (f2) Coastal Lands Acquisition Zone under the new Bega Valley Comprehensive LEP.

In October 2007 SEFE, in conjunction with NSW Maritime, lodged an application for rezoning to the Bega Valley Shire Council, which was to be considered under the preliminary investigations for the new Comprehensive LEP, which is currently being prepared.

Given that these properties are utilized as an industrial type use it is considered more appropriate under the current LEP that the land be zoned either 4 (a) Industrial Zone, or 5(a) Special Uses Zone which would more accurately reflect the current uses of the land.

2.2 Project Benefits

The commissioning of the SEFE bio-electricity plant would benefit the local Eden community and assist the Federal Government's efforts to reduce reliance on fossil fuels.

The project would:

- Enhance security of electricity supply to the Eden Community. At present electricity reticulation to the Eden area is vulnerable to the effects of bushfires on the electricity distribution network.
- Potentially supply the electricity needs of up to 2500 households
- Contribute to achieving the Federal Governments' expanded NRET scheme of 45,000 GWh.
- Provide employment in the Eden area, initially during the construction period, and subsequently, at a reduced level to cover plant operation and maintenance.
- Establish a use for mill waste which is currently incinerated with no energy recovery
- Establish a higher value use for screening waste and bark which is currently transported to the nearest major metropolitan centres and sold as landscaping materials.

New employment opportunities in this area are limited, and the unemployment rate is higher than the national average.

3. DESCRIPTION OF PROJECT

3.1 Bio-Electricity Facility

The bio-electricity plant will be constructed in the area currently occupied by SEFE's mill waste burner.

Fuel for the plant will comprise hardwood screening fines (42%), pine bark and fines (27%), mill waste (9%), sawdust/shavings (13%) and potentially municipal wood waste (9%).

The power plant will include:

- An uncovered area for fuel storage (which will be in the area that screen fines and bark are currently stored);
- A weatherproof fuel storage shed with 600m³ capacity;
- A fuel reclaim bunker and fuel feed conveyor (reused existing plant);
- A 90 tonne fuel storage day bin;
- A boiler package including grate furnace, boiler and boiler make-up water treatment system;
- The boiler proposed will be a typical two-drum, natural circulation saturated steam boiler incorporating a superheater;
- Particulate emission control baghouse filter;
- Flue gas exhaust stack (around 20 m high);
- Axial flow condensing multi-stage steam turbine;
- 3.3 KV electrical power generator with appropriate switching gear to ensure safe and reliable connection to the electricity network;
- 15 MW steam cooling / condensing system utilising sea water as the cooling medium;
- Reverse osmosis boiler make-up water treatment system to condition the 275 litres per hour of fresh water supplied from SEFE's existing mill fresh water supply infrastructure;

3.2 Project Cost Estimate

Based on expressions of interest received from potential suppliers and cost estimates provided by a consulting engineering firm the project cost has been estimated at \$18.7 million.

3.3 Project Employment Projections

The proposed bio-electricity plant will operate continuously on a four shift roster. There will be one operator / maintainer in attendance each shift, supported by a relief operator and plant supervisor, creating a total of six permanent operating positions. SEFE intends to outsource maintenance requirements where specific on-site skills are not available.

Regular major maintenance expected every two or three years will increase this number considerably for short periods of time.

Construction activities are expected to create a peak requirement for contractors of up to a total of 80 workers, over a construction period of 15 – 18 months.

3.4 Project Timetable

From the date of submission of this Preliminary Environmental Assessment until commissioning of the bio-electricity plant, a period of approximately two and a half years will elapse. This period assumes a requirement of twelve months for the project approval processes to be completed.

4. PLANNING CONSIDERATIONS

Following the receipt of the environmental assessment requirements from the Department of Planning, South East Fibre Exports Pty Ltd will prepare and submit a full environmental assessment as required by Section 75F of the EP & A Act, to support the development approval sought from the Minister for Planning.

Both State and local levels of Government have a role in this approval process, and, in particular, reviewing the environmental impact of the project.

4.1 Commonwealth Legislation

4.1.1 Environment Protection and Biodiversity Conservation Act, 1999

The Environment Protection and Biodiversity Act, 1999 (EP&B Act) requires the approval of the Commonwealth Minister for the Environment for actions on Commonwealth land or those that may have a significant impact on matters of national environmental significance, which are: World heritage areas, national heritage places, wetlands of international importance, threatened species and ecological communities listed in the EP&B Act, migratory species listed in the EP&B Act, nuclear actions, and actions affecting the Commonwealth Marine Environment.

4.2 New South Wales Legislation

4.2.1 Environmental Planning and Assessment Act 1999 and Regulation 2000

The Minister for Planning has made an order under Section 75B of the Act making the project subject to Part 3A of the EP & A Act. This report identifies and makes a preliminary assessment of key issues that will require further assessment. The report provides details to enable the Director-General to issue the Environmental Assessment Requirements that focus on relevant key aspects of environmental control.

4.2.2 Protection of the Environment Operations Act, 1997

An Environment Protection Licence (Number 1482) under the Protection of the Environment Operations Act, 1997 (PoEO Act) is held for the existing timber processing and bulk shipping activities on site. A variation to this Licence will apply to the proposed development.

4.2.3 Local Environment Plans

The proposed development is located on land zoned 1 (a) (Rural General Zone) under the Bega Valley Local Environment Plan (2002)

5. PRELIMINARY ENVIRONMENTAL ASSESSMENT

5.1 Overview

The following key environmental issues have been identified as being relevant to the environmental assessment of the bio-electricity project:

- Air quality and photochemical smog;
- Land use and socio-economic impact;
- Health impact;
- Noise and vibration;
- Visual amenity;
- Water quality;
- Traffic
- Cultural and historic heritage;
- Flora and fauna.

5.2 Key Environmental Issues

5.2.1 Air Quality

The proposed power station will emit the products of combustion through an exhaust stack. The emissions will largely comprise carbon monoxide, carbon dioxide, nitrogen oxides (NO_x) and minor amounts of particulates and smoke.

Biomass fired power systems are considered to be carbon-neutral technology when compared to systems that burn non-renewable fossil fuels and they also have minimal greenhouse gas emissions. The final environmental assessment will fully address greenhouse gas and other gas and smoke emissions from the proposed plant.

5.2.2 Land Use and Socio-Economic Impact

South East Fibre Export's 40 hectare site has been owned by the company for 40 years. The site has an established hardwood timber processing operation which has been running continuously over this period. In 2008 a softwood timber processing line was commissioned adjacent to the existing hardwood line.

Adjacent land is either National Park to the south east or occupied by a softwood timber marshalling and export operation; which utilises the nearby multipurpose (Navy) wharf.

Given the very small footprint of the power plant on the existing mill site and the distance between the footprint and those shared boundaries any land use impact or socio-economic impact is likely to be minimal.

South East Fibre Exports Pty. Ltd. will provide a land use and socio-economic impact assessment in the environmental assessment.

5.2.3 Noise and Vibration

The sound generated from steam turbines has the potential to affect receptors depending upon the extent and efficiency of an engineered sound attenuation system. The development footprint is located approximately 1 km from the nearest receptor and approximately 4 km across Twofold Bay from the town of Eden.

A detailed noise assessment will be included in the environmental assessment which will identify mitigation measures to ensure appropriate noise guidelines are met.

5.2.4 Visual Amenity

When construction is complete, the development will comprise a fuel feed bin, boiler and turbine hall and an exhaust stack approximately 20 metres high. All these structures will be visible from various locations external to the mill site.

South East Fibre Exports Pty Ltd will include a visual impact study to assess the potential effects of the power station project on visual amenity.

5.2.5 Water Quality

The power station will have two process water requirements. Boiler make-up water will be required to replace blow-down water at the rate of 1 – 1 ½ % of the steam flow rate, or about 275 litres per hour.

South East Fibre Exports Pty Ltd proposes to source this water from its existing fresh water supply from Bull Creek dam.

Water will also be required to remove heat from the steam turbine exhaust condenser. In this case sea water would be used to dissipate the heat and would be pumped from a point on SEFE's wharf, through the heat exchanger and returned to the sea some 15 – 20° warmer.

An assessment of impact on water quality will be conducted and mitigating measures proposed to prevent any detrimental impact on surrounding water bodies.

5.2.6 Traffic

During construction of the power station project there will be a limited number of heavy vehicle movements associated with machinery delivery in addition to construction workforce traffic, peaking at an estimated 15 vehicles per day for a period of 15 months. Edrom Rd is the only access road from the Princes Highway to the mill and currently over 200 heavy vehicles traverse this road each day, delivering to SEFE and another operation nearby.

The power station when in the operating phase will generate less traffic than the current site operation due to the cessation of truck despatches carrying mill waste.

A traffic impact study including mitigating measures to ensure the safety of those travelling on local roads will be prepared for the environmental assessment.

5.2.7 Indigenous and Historic Heritage

The proposed power station is to be constructed on an established timber processing site where no known indigenous or heritage issues exist. Moreover, the power station footprint will be located where SEFE's waste burner is currently situated.

5.2.8 Flora and Fauna

Given that the power station is proposed to be built on an existing operating site, it is considered that a detailed flora and fauna assessment is not required.

5.3 Community Consultation

As part of SEFE's EPL, the Company is required to operate a public complaints hotline.

As part of its environmental assessment process, SEFE will provide timely and accessible information to the Eden Community and will actively seek the views of the public regarding the proposed development and its impact. SEFE will maintain a shop in Eden township over the summer period that will facilitate public awareness and consultation on the project.