MEETING MINUTES OCTOBER 2008

MEETING	TALLAWARRA COMMUNITY LIAISON	GROUP MEETING	MEETING NUMBER	6/2008
HELD AT	TRUENERGY TALLAWARRA SITE, WO	LLONGONG	DATE	15 OCTOBER 2008
PROJECT	TALLAWARRA CLG MEETING			
ATTENDEES	Graham Towers Andrew Knowlson Michael Andrews Doug Prosser Rita Webb Sharalyn Robinson Roy Kennedy Tony Gardiner Chris Brandis Geoff McEntee Sarah Stent Anthony Savenkov Graham Dowers John McIntyre Lloyd Townsend Lucy Greig Brendan Blakeley	Department of Plannir Duck Creek Catchmen Conservation Voluntee Lake Illawarra Authori Dapto Chamber of Con Illawarra Local Aborig Illawarra Local Aborig Concerned Residents of Illawarra Bird Observed TRUenergy TRUenergy TRUenergy TRUenergy TRUenergy TRUenergy TRUenergy TRUenergy Elton Consulting (Note Elton Consulting (Faci	t Group ers Australia ity mmerce inal Land Cou inal Land Cou of East Dapto ers Club	ncil
APOLOGIES DISTRIBUTION	Bill Sarkis Jon Bridge Maureen McGee To all invitees	Winten Property Grou Wollongong City Coun CRED	p	

CTIOND	ACTION	DATE

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ite	tour – Tallawarra A Power Station
	site tour was led by Geoff McEntee (Construction Manager) and John McIntyre (Plant nager).
(ey	points of interest on the visit were the:
•	Water treatment plant which uses a 'reverse osmosis' process to cleanse water prior to it being used in the power station steam cycle.
•	Cooling water pumps – the power station draws cooling water from the lake via the pumps and inlet canal, as did the former power station. Geoff demonstrated how marine animals are protected by the filtering system and exit via the sluiceway.
•	Former cooling water canal – this has been excavated by TRUenergy to a depth of up to 11 metres. Lake water enters via the pumps and is used to cool the steam cycle within the power station. Discharged water will be up to five degrees warmer than incoming water, cooling rapidly as it disperses down the outlet canal.
,	Steam turbine – uses the steam produced in the HRSG to drive the generator
•	Generator - produces some 400 MW of electrical power.
•	Gas turbine Whilst the area was unable to be entered due to commissioning activities Geoff explained the process whereby the filtered air is drawn into the compressor, the natural combusts in the compressed air and the high temperature gas is directed through the gas turbine losing temperature and pressure as it drives the generator.
•	Heat recovery steam generator ("HRSG") - the 600 degree gas exiting the gas turbine passes through the HRSG producing steam that is circulated through the steam turbine.
•	Pipe work connecting the heat recovery unit and steam generator is located on the reverse side of the power station building to minimise visual impacts for those in the surrounding area.
,	Air intake – incorporates a large filter system to remove dust and pollens from the air before passing through the machine. It comprises thousands of individual filters.
•	Control room – the entire power station is controlled by a Distributed Control System which allows the power station's operators to constantly monitor and adjust the plant operation.
•	Stack – the state of the art combustion system ensures very low emissions.

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3.0		ower Station Works Update (continued), Site Maintenance Update and Stage Update – Geoff McEntee, Lloyd Townsend and Graham Dowers, TRUenergy			
	Site Maintenance Update				
	Llo	Lloyd Townsend made the following key points:- <u>Lands Management</u>			
	Laı				
	•	Northern drains successfully cleared.			
	•	The first 2008 community volunteer planting day with Conservation Volunteers Australia took place as planned on Friday 17 October at Yallah Bay Road along Duck Creek. This involved clearing of lantana and new plantings. This is one step in a programme to help restore Duck Creek with natural vegetation. Removal of nonnatives / exotics is to take place once a permit to do so is issued by Wollongong City Council.			
	•	Landscaping is commencing around the power station with planting of 10,000 indigenous trees to be supplied and planted by local contractors. Species include Eucalyptus, Melaleuca and Wattle. Other areas will be planted out as the power station progresses.			
		Lloyd displayed an image of the power station describing the zones and intended order of planting.			
	Po	ower Station Works Update (continued)			
	Ge	eoff McEntee made the following key points:-			
	Po	wer station progress			
	Po	wer plant:			
	•	Labour force now to approximately 220			
	•	1.6 million work-hours to date, with a good safety record			
	•	As previously notified, first firing of the gas turbine occurred on the 4 th October followed by first synchronization and export of power to the grid on the 14 th October.			
	Sw	vitchyard:			
	COI	ne connection works have been handed over to Integral Energy and are now under their ntrol. Doug Prosser: Members appreciated opportunity to visit the power station and ok forward to another visit when the plant is fully operating.			
4.0	Та	Illawarra B Update and Guest Presentation			
	Tallawarra Stage B Update - Graham Dowers, TRUenergy				
	Gra	aham Dowers made the following key points:-			
	Sta	age B Planning			
	•	As advised previously, planning for Tallawarra B includes either CCGT (combined cycle gas turbine, as per Tallawarra Stage A) or an OCGT (open cycle gas turbine) – dependent primarily on whether market demand is for peak demand power or intermediate to base load energy.			
	•	An Adequacy Review has been undertaken by the Department of Planning and relevant agencies as a key part of the Part 3A planning process.			
	•	Their comments relate to:			

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- requirements for additional information on project;
- air quality assessment;
- > lake water quality impacts when using wet cooling towers;
- noise
- hazard assessment regarding potential impact on any future development; &
- flooding

Commitments from TRUenergy regarding the following:-

- An annual NOx output from the power station.
- Confirmation that Tallawarra A water monitoring is to be expanded to include Tallawarra B.
- Noise emissions and their impacts regarding future developments.
- Simultaneous starting of units.
- Requirements to use diesel fuel (OCGT).

Next steps:

- Respond to DoP and agencies with clarifications, updating draft as agreed
- Public exhibition period commencing in the coming months
- Ministerial approval anticipated 2009

Questions and comments:

- Question: Will Tallawarra A noise emissions and NOx levels be measured to confirm modelling predictions?
- Graham Dowers: Yes, this will be carried out by Alstom however the plant needs to
 achieve full load and normal operating status before this work can be completed. Part
 of the Stage B modelling process involved clarification that the original modelling for
 Stage A was verified and baseline data obtained.

Tallawarra B: A core part of Australia's low carbon future – Peter McCosker, TRUenergy

The Chair introduced Peter McCosker, an Analyst in TRUenergy's Business Development Group. Peter is highly involved in TRUenergy's renewable energy investments including acquisitions for solar and wind farm projects.

Sarah Stent noted that TRUenergy was recently identified as an industry leader in terms of being a low carbon emitter by the Worldwide Fund for Nature (WWF).

Peter McCosker made the following key points:-

- TRUenergy is a vertically integrated energy company with approx 1.3m retail customers.
- TRUenergy has commenced 6-7 new renewable energy projects in recent years.
- Australia is a difficult market for renewable energy suppliers to enter due to the low cost of energy.
- TRUenergy has developed its own Climate Change Strategy (see presentation in Attachment A).

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- Implications include:-
 - Investment in gas fired generation
 - Extensive investment in new wind farms tenfold increase in 10 years, mainly concentrated in South Australia, Victoria and Tasmania.
 - Extensive research and development in emerging renewables such as solar and enhanced geothermal and clean coal.

Australia has strong renewable energy resources:

- Australia is a world leader in solar and enhanced geothermal system (EGS) resources.
- Key issues are cost competitiveness, risk and access to market.

Roaring 40s is TRUenergy's key wind development vehicle:

- Roaring 40s is a Joint Venture project between Hydro Tasmania and the CLP Group (TRUenergy's parent company).
- > 200MW of operational projects in Australia and >300MW of operational projects in Asia
- > 300MW of near term development projects in Australia and >1,000 MW of development projects in Asia.
- Up to 10,000 MW of wind required in Australia by 2020 this is a considerable challenge.

TRUenergy and Solar Systems are developing the next generation solar power stations.

- Solar Systems (an Australian company) is developing a world leading concentrated solar PV technology.
- Developing a 154 MW photo-voltaic power station (the largest photo-voltaic power station in the world) in North West Victoria (2008-2012).
- 4-5 times more efficient than conventional solar cells

TRUenergy, Petratherm and Beach Petroleum are progressing the Paralana EGS project:

- Petratherm are 'heat explorers' who are seeking to generate electricity from 'hot rocks'.
- 200 degrees Celsius at 4km.
- TRUenergy and Beach Petroleum have 'farmed in' to the Paralana resource 600km north east of Adelaide.
- Pilot plant to be developed over 2009-2010.
- Potential for > 1000 MW of baseload renewable generation.

TRUenergy is supportive of the current research and development of other low emission technologies such as coal drying, carbon capture, and sequestration – geological and biological.

A low emissions future is possible, but requires support from government, industry and the community.

TRUenergy a leader in the renewable energy industry.

See **Attachment A** for a copy of Peter's presentation.

MEETING MINUTES OCTOBER 2008

Questions and comments:

- Question: What happens at times when there is not enough wind for the wind farms to operate?
- Peter McCosker: A typical wind farm has a capacity factor of 30-40%. Tallawarra can theoretically generate 99-100% of the time. A wind farm involves intermittent generation, as opposed to base load generation. Wind farms alone cannot solve the energy needs of Australia. They require back up from other sources at times when wind is not available.
- Question: Are there implications of Australia's drought conditions for these projects?
- Peter McCosker: In most instances there has been water found in deep aquafers more than enough to supply projects.

5.0 Tallawarra Lands Update – Guest presentations

Aboriginal heritage planning for Tallawarra Lands – Alison Nightingale, Kelleher Nightingale

Alison Nightingale introduced herself as an archaeologist – formerly of the National Parks and Wildlife Service and the Australian Museum consultancy arm.

Kelleher Nightingale was engaged by TRUenergy to assess the Aboriginal cultural heritage of the Tallawarra Lands site. Please see **Attachment B** for a copy of Alison's presentation.

Questions and comments:

- Michael Andrews of CVA expressed an interest in liaising with Alison regarding potential participation by local Aboriginal groups in some of CVAs activities. Brendan Blakeley to provide contacts.
- Roy Kennedy advised that the best point of contact with local Aboriginal groups is through the Illawarra Local Aboriginal Land Council.

Kathryn Price - Don Fox Planning

Kathryn Price of Don Fox Planning provided a presentation on the overall statutory framework for the Tallawarra Lands site, including an outline of the next steps in the planning process. Please see **Attachment C** for a copy of Kathryn's presentation.

Questions and comments:-

- Graham Towers (DoP) commented that the presentation by Don Fox Planning provided a good overview of how the Part 3A process could work for the Tallawarra Lands project. He emphasised the importance of participation by the community and stakeholders at the LEP stage.
- Andrew Knowlson asked whether any changes had been made to the Cox [Structure]
 Plan for Tallawarra Lands [as previously presented to the CLG by urban designers Cox Richardson].
- TRUenergy: The Structure Plan reflects the draft Wollongong Local Environmental Plan. It is a preliminary, indicative version of a masterplan for the site. It has undergone some minor changes. It will likely continue to evolve, and become more detailed, with each major step in the development planning process through stakeholder input, and with improved knowledge. The intended next key step in the development planning process is the Major Project Development Application a masterplan, known as a Concept Plan, will accompany the Major Project Development

MEETING MINUTES OCTOBER 2008

	•	Rita Webb: Can the CLG be provided a copy of the current Structure Plan?			
	•	TRUenergy: Yes. We are planning to provide a Structure Plan report, which explains how the Structure Plan has been developed.			
	•	Andrew Knowlson: To what extent are issues around climate change being assessed? Some regional work is available regarding the Illawarra, which was recently completed by the University of NSW (UNSW). This work identified significant issues for the Illawarra of relevance to the Concept Plan and LEP, such as increases in the rise of sea level and in rainfall.			
	•	TRUenergy: Flood studies undertaken for the rezoning considered the potential impacts of climate change.			
	•	Kathryn Price: Studies to be undertaken for the development application will reflect the requirements to be specified by the Director General of the Department of Planning.			
	•	Sharalyn Robinson: Will the existing Aboriginal studies be reviewed?			
	•	Graham Towers: There are Aboriginal studies that have been undertaken that will be considered in the LEP determination process. Any potential inadequacies will need to be addressed.			
	•	Sharalyn Robinson: Has there been any discussion regarding Aboriginal employment as part of the Tallawarra projects?			
	•	Anthony Savenkov: Yes, preliminary discussion.			
	•	Sharalyn Robinson: The Aboriginal Land Council welcomes the opportunity for further dialogue on this issue.			
0.6	Dis	scussion and next steps – Brendan Blakeley, Elton Consulting			
	Th	e Chair thanked all participants for attending the meeting.			
	Clo	Close - Next meeting			
7.0	NEXT REGULAR MEETING: 4.30 pm Wednesday 17 December 2008 onsite.		 		

Attachments:

Attachment A - Presentation by Peter McCosker, TRUenergy

Attachment B – Presentation by Alison Kelleher, Kelleher Nightingale

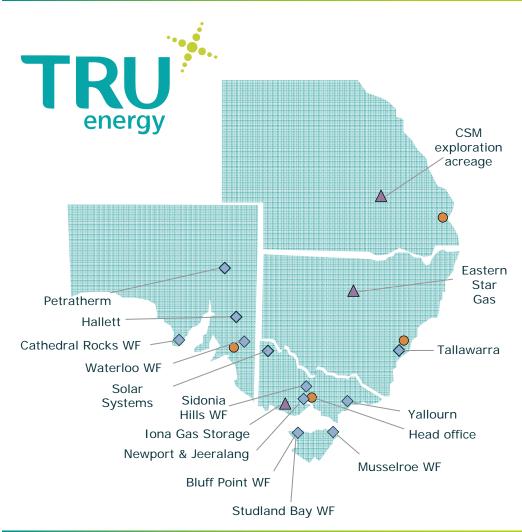
Attachment C - Presentation by Kathryn Price, Don Fox Planning



TRUenergy – Tallawarra Community Liaison Group 15th October 2008

Why Tallawarra isn't a solar power station

TRUenergy's is a vertically integrated energy company



Retail assets ~ 1.3m Customers					
Mass market	Electricity ~ 750,000 customer accounts Gas ~ 550,000 customer accounts				
I&C	7 TWh				
GreenPower	~125,000 customer accounts				
Connect Now	50% equity				
Electricity assets	– 4,000+ MW	(MW)			
Yallourn	Coal-fired power station	1,480			
Hallett	Gas-fired power station	180			
Newport & Jeeralang	Gas-fired power station	966			
Tallawarra	Stage A CCGT (construction) Stage B (TBD)	400 TBD			
Roaring 40s	Development and management of wind assets in Australia, China and India	871			
Solar Systems	20% equity + solar power station	154			
Petratherm	30% equity in Paralana project	30			
Gas assets					
Iona gas storage	20 PJ gas storage facility				
Eastern Star Gas	~5% Equity				
Upstream gas	Equity in Queensland CSM developments				



TRUenergy has made a significant commitment to reducing its carbon footprint

Market Context

- ~85% of Australian energy is generated from coal fired power stations
- One of the lowest costs of energy in the world

Regulatory Context

- Carbon Pollution Reduction Scheme (CPRS) driving fundamental change in generation industry
- National 20% renewable energy target

TRUenergy's Climate Change Strategy

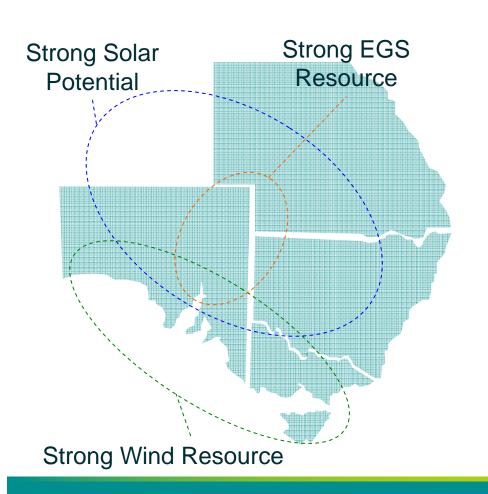
- 33% decrease in emissions intensity by 2020
- 35% reduction in total emissions by 2035
- 60% reduction in total emissions by 2050
- No Greenfield, traditional technology, coalfired power stations

Implications

- Large investment required in gas fired generation in the short to medium term
- Very large investment in proven renewable technologies (i.e. wind) prior to 2020
- Extensive R&D in
 - Emerging renewables such as solar and enhanced geothermal
 - Clean Coal (carbon capture and storage, alternative sequestration)



Australia has strong renewable energy resources



- Australia is blessed with multiple renewable energy resources
 - World leading solar resource
 - World leading EGS
 - Very strong wind resources c.f. mature European markets
- Cost competitiveness, risk and access to market remain as the key issues



Roaring 40s is TRUenergy's key wind development vehicle



Woolnorth Wind Farm - Tasmania

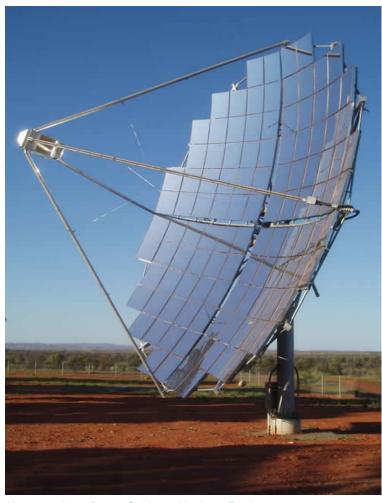


Cathedral Rocks Wind Farm - South Australia

- Roaring 40s is a 50:50 JV between Hydro Tasmania and the CLP group (TRUenergy's parent)
- > 200 MW of operational projects in Australia and > 300 MW of operational projects in Asia
- > 300 MW of near term development projects in Australia and > 1,000 MW of development projects in Asia
- Up to 10,000 MW of wind required in Australia by 2020



TRUenergy and Solar Systems are developing next generation solar power stations



Hermannsburg Power Station - Northern Territory

- Solar Systems (an Australian company) are developing a world leading concentrated solar PV technology
- Support from Federal and Victorian governments up to A\$ 130m
- Planning to develop a 154 MW PV power station (the largest PV station in the world) in north-west Victoria (2009 – 2012)
- Very large potential application in Australia, Asia, Americas and Africa



TRUenergy, Petratherm and Beach Petroleum are progressing the Paralana EGS project



Paralana Well Site - South Australia

- Petratherm are 'heat explorers' who are seeking to generate electricity from "Hot Rocks"
- ~ 200 Deg C at 4 km's
- TRUenergy and Beach Petroleum have "farmed in" to the Paralana resource ~ 600 km north east of Adelaide
- Pilot plant to be developed over 2009
 2010
- Potential for > 1,000 MW of baseload renewable generation



TRUenergy is very active in the development of other low emission technologies

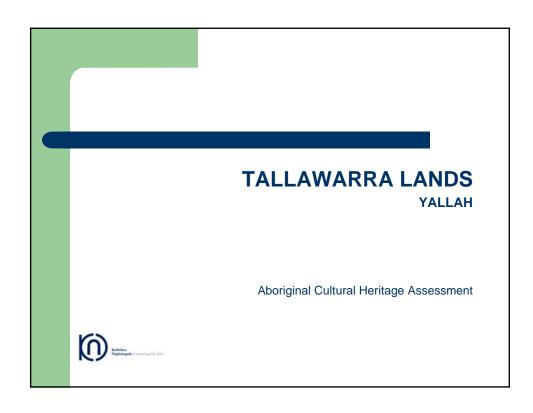
- TRUenergy is actively examining multiple low emission technologies
 - Coal Drying
 - Carbon Capture
 - Sequestration
 - Geological
 - Biological (Algae to Biofuel)



A low emissions future is possible

- A low emissions future is a significant challenge
- However with Government, Industry and Public support it can be a reality
- TRUenergy is acting as a leader in the renewable energy industry







Aboriginal cultural heritage assessment:

- previous investigations
- Local Environmental Study
- sites and places of Aboriginal cultural heritage and archaeological significance identified
- recommendations for land use which recognises Aboriginal cultural heritage
- Master planning
- Development application





Aboriginal Community Stakeholders included:

- Illawarra Local Aboriginal Land Council (ILALC)
- Korewal Elouera Jerrungarugh Tribal Elders Aboriginal Corporation (KEJ)
- Wodi Wodi Elders Corporation (WWEC)
- Wadi Wadi Coomaditchie Aboriginal Corporation (WWCAC)
- Northern Illawarra Aboriginal Collective (NIAC)
- Wodi Wodi Traditional Owner Aboriginal Corporation (WWTOAC)
- Illawarra Aboriginal Corporation (IAC)
- Coomaditchie United Aboriginal Corporation (CUAC)



TALLAWARRA LANDS



Informed about:

- Strong connection with the area
- Lake Illawarra and foreshore
- Middens
- High points and access ways
- Areas of potential
- Creek lines, vegetation corridors and wetlands
- Concern for burials
- Further work





Aboriginal cultural heritage sites and places identified include:

- Cultural sites
- Areas of cultural sensitivity
- Archaeological sites
- Areas of Potential Archaeological Deposit (PAD)
- Areas of archaeological sensitivity



TALLAWARRA LANDS



- Identified Aboriginal cultural heritage is significant
- Identified sites and areas connect the foreshore and escarpment
- Sites, places, features, areas of potential and areas of sensitivity should be conserved
- Master planning developed in consideration of identified Aboriginal cultural heritage
- Connections maintained





Next steps:

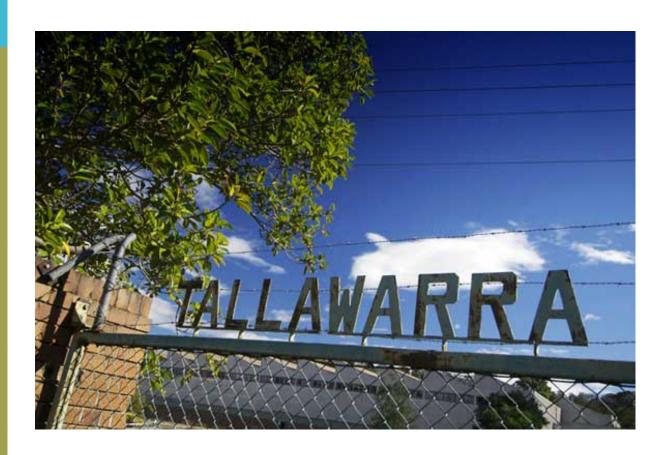
- Development application
- Part 3A approval process
- Department of Planning requirements
- Ongoing consultation
- Management strategies
- Mitigation works



Tallawarra CLG Meeting 15 October 2008



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Next Steps in the Statutory Planning & Assessment Process

- Tallawarra Lands Rezoning Update
- Major Project Assessment Process (Part 3A of the Environmental Planning & Assessment Act)
- Tallawarra Lands Major Project Outline
- Concept Plan & Project Plan Public Consultation Opportunities
- Additional Consultation Opportunities
- Tallawarra Lands Public Amenities & Services Delivery
- Tallawarra Lands Voluntary Planning Agreement
- Next Steps

Tallawarra Lands Rezoning

- Current Zoning 5(a) Special Uses, 7(a) Special Environmental Protection, 7(b) Environmental Protection Conservation and 6(b) Private Recreation
- Proposed Zoning B1 Neighbourhood Centre, B6 Enterprise Corridor, B7 Business Park, E2 Environmental Conservation, E3 Environmental Management, IN1 General Industrial, IN2 Light Industrial, R2 Low Density Residential, R3 Medium Density Residential, R5 Large Lot Residential, RE1 Public Recreation, SP2 Infrastructure and SP3 Tourist
- Likely Future Development employment land uses, low density and large lot residential housing, recreation facilities, open space and environmental conservation areas

Tallawarra Lands Rezoning

EARLIER

- ■Rezoning Application submitted (2005)
- Local Environmental Study prepared (2006)
- Local Environmental Study reviewed and adopted by Council (2007)
- ■Draft Local Environmental Plan prepared for Tallawarra Lands (2007)
- Draft Local Environmental Plan reviewed by Council and endorsed for public exhibition (2007)
- Council resolved to include Tallawarra Lands rezoning in comprehensive city-wide template Local Environmental Plan
- Draft template Local Environmental Plan endorsed for public exhibition by Council's administrator (2008)

NOW

- Council awaits receipt of the Section 65 certificate from the DG of the Department of Planning which will endorse the public exhibition of the draft template Local Environmental Plan
- ■Council and the Department of Planning are hoping the Section 65 Certificate will be issued by the DG shortly
- Council is hoping to exhibit the draft template Local Environmental Plan in late 2008
- ■The timeframe for gazettal of the draft template Local Environmental Plan will depend on the content of the submissions received during the public exhibition process but the targeted date is March 2009

Major Project Assessment Process Part 3A of the EP&A Act

Stage 1 – Preparation of Environmental Assessment

Minister declares the development is a project to which Part 3A applies.

Proponent lodges a project application.

Director-General consults other agencies on matters to be addressed in an environmental assessment of the proposal. The Director-General's requirements for environmental assessment are issued to the proponent.

Proponent prepares and submits a draft environmental assessment. The Director-General determines whether the environmental assessment is adequate and OK to exhibit.

Major Project Assessment Process Part 3A of the EP&A Act

Stage 2 – Exhibition & Consultation

The Director-General advertises and exhibits the environmental assessment for at least 30 days, notifies relevant parties and receives public submissions.

Proponent prepares a response to the issues raised in submissions and, if required, a Preferred Project Report if changes are proposed.

Major Project Assessment Process Part 3A of the EP&A Act

Stage 3 – Assessment & Determination

Director-General prepares an environmental assessment report for the Minister.

Minister decides to approve or disapprove the project.

Proponent is notified of the Minister's determination. Also people who made a submission are advised and the notice of determination is placed on the website.

Tallawarra Lands – Major Project Outline

The Major Project Application is expected to include a:

- ■Concept Plan Application (big picture concepts); and
- ■Stage 1 Project Plan Application (detailed site planning)

The Concept Plan Application and Stage 1 Project Plan Application are likely to be lodged for assessment concurrently.



Concept Plan & Stage 1 Project Plan Consultation Opportunities

Opportunity # 1

During preparation of the Environmental Assessment Report (as directed by the DGR's) – consultation process initiated by TRUenergy's project team

Opportunity # 2

After lodgement of the Environmental Assessment Report – consultation process initiated by the Department of Planning and will include public exhibition of documentation for a minimum of 30 days during which public comments on the application will be invited

Opportunity # 3

Re-exhibition after lodgement of the Preferred Project Report (if deemed appropriate by the Department of Planning based on changes made to the application in response to comments received during the initial exhibition period)



Additional Consultation Opportunities

- During exhibition of Project Plan Applications lodged with the Department of Planning for Stage 2 onwards of the subdivision
- During exhibition of development applications lodged with Wollongong City Council for subdivision, construction of dwelling houses, industrial premises, recreation facilities, community buildings etc



Tallawarra Lands Public Amenities & Services Delivery

For instance....

- ■Open space and recreational facilities playgrounds, parks, sports fields and bicycle paths
- ■Community facilities multi purpose centre / neighbourhood centre / cultural centre
- ■Traffic management road upgrades



Tallawarra Lands Voluntary Planning Agreement

A planning agreement is a voluntary agreement between a planning authority and a developer under which the developer is required to dedicate land free of cost, pay a monetary contribution and / or provide any other material public benefit to be used for or applied towards a public purpose.

- The Concept Plan Application will include broad details regarding how infrastructure delivery will be managed and will include recommendations on the establishment of a Voluntary Planning Agreement (VPA)
- The Stage 1 Project Application will contain a draft version of the VPA
- The draft VPA will be publicly exhibited together with the Stage 1 Project Application and comments invited
- The draft VPA will be amended (if necessary) after the public exhibition and signed by TRUenergy and Wollongong City Council



Next Steps

- TRUenergy and its advisors will meet with the Department of Planning to discuss the major project application (late October 2008)
- ■TRUenergy and its advisors will draft the Preliminary Assessment Report (November 2008)
- ■The Preliminary Assessment Report will be reviewed by the Department of Planning and the DGR's will be issued (late 2008)
- ■TRUenergy and its advisors will draft the Environmental Assessment Report and undertake public consultation in accordance with the DGR's (2009)



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