Appendix Q – ROAM Report -Generation Scenario Development for AA3 2011-2020

September 2011



Access Arrangement Information for the period 1 July 2012 to 30 June 2017 (AAI)





Report (WEP00017) to



Generation Scenarios for 2011 Revenue Reset Application

17 February 2011





VERSION HISTORY

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1) BACKGROUND

The energy sector is facing considerable changes over the next decade. The possible introduction of some form of carbon trading scheme, with the legislated expansion of the Renewable Energy Target, will significantly change the fundamental economic competitiveness of traditional thermal generators. Coal fired generators will become significantly disadvantaged, and over time could retire, be mothballed for several years, or revert to an intermediate role with combined cycle gas fired generators becoming base-load providers of electricity. The outcome will be a trade off between the disadvantage of a higher price for gas as a fuel and the advantage of lower CO2 emissions.

Transmission Network Service Providers also are exposed to the changes in the energy sector. Increased use of transmission services will be necessary should the market succeed in delivering a broad mix of diversely located renewable energy generators to the grid. Furthermore, improving energy efficiency by reducing transmission losses may provide incentives to upgrade existing transmission corridors.

Emerging technologies, such as carbon capture and storage for coal fired generators and integrated gasification combined cycle (IGCC) may begin to mature, and provide an alternative to gas and renewable generators in a carbon constrained future.

Western Australia is expected to contribute its share towards reducing emissions, with significant capacities of wind generation expected to enter the market. Gas fired generators are expected to dominate new generation projects, although the emergence of the liquefied natural gas (LNG) export industry may increase domestic gas prices such that the benefit of lower emissions, and therefore more competitive market bids, compared to coal generators may be negated to some extent.

Developments in Western Australia in the next decade are highly uncertain. The most significant factors for consideration in scenario modelling are likely to be:

- Level of ambition of Australia's likely Carbon Price Trajectory (CPT)
 - The Rudd Labor Government has committed to emissions reduction targets of 5% to 25% by 2020 from 2000 levels. There is bipartisan support for a 5% target, although it is unclear whether the opposition target would directly involve the electricity sector. There has been substantial difficulty in passing legislation for a domestic emissions trading scheme, which makes further delay in the implementation of domestic carbon pricing possible.
- Demand growth
 - Western Power has proposed 2 demand growth possibilities (central and high), which have been provided to ROAM.
- Availability of gas for electricity generation
 - The further development of LNG export facilities in Western Australia is likely to maintain the high prices of domestic gas. If there is very aggressive growth in this industry it could be difficult for new gas-fired generation to obtain gas at a competitive price, pressuring new generation projects into other technology types.
- Wind ambition





• The SWIS has excellent wind resources, which have attracted significant interest in wind generation development in the SWIS. However, as an isolated grid, there are limitations on the quantity of wind generation that can be accommodated without changes to various market rules and other technical factors. If there is a significant level of ambition to overcome these factors, wind development in the SWIS could be substantial. However, without this ambition wind development is likely to be very moderate.

2) SCOPE

Western Power is commencing work on their Revenue Reset Application for five years commencing 1 July 2012 and has requested ROAM Consulting to provide expert advice on generation scenarios that may influence future transmission development in the SWIS. Western Power has requested a probabilistic planning approach.

This will include:

- development of a suitable number of themes and associated scenarios to cover the full range of anticipated demand and supply scenarios
- identification of scenario probabilities
- preparation of a full list of potential generation developments for the SWIS and associated project likelihoods
- preparation of generation development plans for each scenario
- development of probabilities for each scenario based on a combined top down ranking of scenario probabilities and bottom up ranking of projects.

The forecast period for this analysis is to 2020-21, which encompasses Western Power's next revenue reset period.

3) METHODOLOGY

ROAM Consulting's (ROAM) scenario analysis methodology has been developed to support transmission network service providers' revenue reset applications. The methodology provides a probabilistic assessment of generation and load development options over a ten year period, comprising the five year revenue reset period and a number of years post-revenue reset for which to assess any end-effects. The approach is summarised in the diagram below:







The sections which follow discuss each of the steps of the methodology.

PART A: DETERMINE OUTLOOKS (TOP DOWN APPROACH)

Part A involves defining the external drivers that will influence the development of the electricity sector, and assigning probabilities to those drivers. The result of this is a series of *outlooks*, which define the potential futures the electricity market will respond to.

Step 1: Definition of external drivers (themes)

The first stage is to define the external drivers that are most important to the electricity market. These are external factors that the electricity market has no control over, but will respond to.

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The combination of these themes creates *outlooks*, where an outlook defines a possible future that the electricity market will respond to. By linking themes in the determination of probabilities, some outlooks can be eliminated as extremely unlikely.

Step 2: Ascribe probabilities to external drivers (themes)

ROAM has ascribed probabilities to each theme in the following way.

The most independent theme is considered first, with probabilities ascribed to the various possibilities for that theme.

An example of an initial theme would be the level of ambition of the CPT since this is relatively independent of the other themes, being decided by the Federal Government based upon international commitments.

The other themes are then ascribed probabilities sequentially, with the probabilities being dependent upon the option of the earlier themes. For example, the second theme may be the load growth. Demand projection probabilities are dependent upon the CPT options for each outlook. A low emissions reduction target (-5%) will allow high growth to continue with a higher probability, whereas a very deep target (-25%) is likely to inspire greater levels of energy efficiency, and reduced demand growth.

Step 3: Calculate probabilities of each outlook

The resulting outlook probabilities are calculated as the product of probabilities of each theme for that outlook. Since probabilities are allowed to be varied depending upon the outlook, more informed choices can be made about the likelihood of various aspects, given the other assumptions of the outlook. This results in some outlooks receiving a zero probability weighting, which eliminates them from the solution set.

PART B: DETERMINE PLANTING SCHEDULES (BOTTOM UP APPROACH)

Part B involves determining likely planting schedules that will develop in response to the outlooks defined in Part A. Even within a particular outlook, there is uncertainty regarding the way that investors and market participants will respond to the external drivers. Therefore, multiple planting schedules may be developed for each outlook, with probabilities calculated according to the probabilities of each plant included in that schedule. This captures the uncertainty of the market's responses to external drivers, separate from the uncertainty in those drivers.

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Step 1: Determine a list of all possible plants

Firstly, a list of all the possible plants that could be included in the outlook period for the region of interest is developed. This includes all significant committed, announced and proposed projects (gas, coal and renewable).

Step 2: Determine a list of all possible retirements

In step 2, a list of all the possible plants that may retire in the outlook period for the region of interest is developed. This is based upon ROAM's extensive research and modelling of Australia's likely carbon price trajectory under various outlooks and scenarios, together with the condition of older plant.

Step 3: Assign initial probabilities

Following substantial research into each project and retirement, an initial ranking is assigned to capture their relative likelihoods of being constructed (or retired). These rankings are dependent upon the outlook, since the probability of construction (or retirement) of a particular plant will depend upon the external drivers (such as the demand forecast, the CPT target, and the expansion of the LNG export industry).

Step 4: Planting schedules are developed

In this step, planting schedules for each scenario are developed. A particular *scenario* consists of a particular planting schedule within a particular outlook (each unique planting schedule is a *scenario*). The number of scenarios developed for each outlook can vary depending upon the variety of alternatives available for planting each outlook, taking into consideration which variations are likely to be significant to the modelling.

The following factors are taken into account in ROAM's development of each outlook's planting (and retirement) schedules, in addition to the themes of each outlook:

- 1. *Estimated initial probabilities of each plant.* Plants are included broadly in proportion to their initial estimated probabilities, determined from ROAM's market research and modelling.
- 2. **Demand.** Plants are constructed to achieve the Reserve Capacity Target stipulated by the IMO, with a likely margin above that representing entry of competitive generation above the target.
- 3. **Carbon Price Trajectory.** With a milder emissions reduction target (0% 5%), more emissions intensive plant is allowed, as the penalty for emitting is less arduous for these plants. With higher emissions targets more renewable plant is included. Anticipated average emissions factors for each plant type are used to predict likely emissions from each planting schedule under development, to inform the planting. The price points at which plant type changeover will occur is informed by ROAM's extensive modelling and research.
- 4. **Gas market development**. If gas availability is unrestricted, the majority of future development is likely to be in gas-fired technologies. If gas supplies are limited,



however, coal-fired and renewable energy projects are likely to be more favourable for development.

- 5. *Energy projections.* ROAM uses estimated average capacity factors for each plant type to estimate the likely energy generated from a particular planting mix, in relation to energy consumption forecasts. This ensures that the plant mix (baseload, intermediate and peaking) is feasible.
- 6. *Plant locations.* The locations of new plants are considered in the development of planting schedules, in conjunction with any known limiting factors around plant location. Known transmission limitations are taken into consideration.
- 7. **Other factors.** ROAM also uses market knowledge and experience to take into consideration any other factors that may be important in the development of the market.

In planting each of the scenarios, a number of *iterations* are performed and cross-checks completed in order to reach a plausible planting outcome for each scenario.

PART C: DETERMINATION OF FINAL PROJECT PROBABILITIES

The final probabilities for each proposed generator (and retirement) can be calculated as the sum of the scenario probabilities in which the generator is installed. A generator which is installed in many scenarios is likely to have a higher overall probability, depending upon the probability of the scenarios it is planted within. Similarly, a generator which is installed in only a select few scenarios is likely to have a lower overall probability, depending upon the probability of the scenarios is likely to have a lower overall probability, depending upon the probability of the scenarios it is planted within.

4) **PROPOSED THEMES**

ROAM has used the following themes for developing outlooks.

4.1) LOAD

Western Power has provided two load forecasts:

- 1. Central
- 2. High

These are Western Power's 2010 demand projections for a 10% probability of exceedance level.

A "Low" forecast was not included, since demand growth less than the "Central" projection is considered to have a low probability. In addition, a low growth forecast represents close to a "do nothing" scenario from the point of view of transmission network development, and is therefore not a useful scenario for analysis under this framework. The Central and High demand forecasts are more useful for exploring potential necessary upgrades to the transmission network that may be required in the most likely scenarios.

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These peak demand forecasts were provided to ROAM on an "as delivered" basis. ROAM converted these to a "sent out" basis based upon actual losses in 2009 at time of peak demand. In 2009 peak demand occurred on 11th February, and is listed in the IMO Statement of Opportunities (SOO) to have been 3,515 MW on a sent out basis. Simultaneously Western Power recorded a peak demand of 3,357 MW on an "as delivered" basis. This suggests network losses of 5.1% at time of peak demand, which was applied to peak demand projections throughout the study period.

The figure and table below illustrate the peak demand forecasts used in this study. These values have been converted to "sent out", and include the reserve margin (8.2% of forecast peak demand including transmission losses and allowing for intermittent loads).



Table 4.1 – Peak Capacity Requirement (sent out)										
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
High	4180	4674	4983	5249	5609	6241	6467	6722	6991	7139
Central	4180	4639	4961	5176	5351	5699	5847	5995	6184	6327

Western Power have advised that each load forecast is considered to have the same (i.e. 50%) likelihood of occurring. Both the Central and High projections represent relatively moderate levels of growth (neither represents an extreme case), and therefore both have high probabilities of occurrence. The contribution of known block loads has been included

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in the early years of the projection, but further block loads may develop later in the study period that are not yet announced. This may mean that these demand forecasts could be an underestimate of peak demand, particularly in the later years of the study.

ROAM has used energy projections from the IMO Statement of Opportunities (SOO) 2009. These are provided in the SOO on a sent out basis, as is illustrated in the figure below. Energy projections are not used to assess the installed capacity, but rather the mix of plant that is needed to deliver the energy needs of the SWIS.



4.2) CARBON PRICE TRAJECTORY

The Carbon Pollution Reduction Scheme (CPRS) has faced substantial opposition, failing to pass through the Senate multiple times. There is therefore uncertainty about the future of this legislation. However, both the Rudd Labor Government and the Opposition have committed to a 5% reduction in emissions from 2000 levels by 2020. The details of the Opposition's proposed methods of achieving this are unclear, but it can be expected that the electricity sector is likely to be involved, as the largest single contributor to emissions in Australia. Internationally there is also growing pressure for emissions reduction, which is likely to have consequences for the Australian economy.

For these reasons ROAM has included various carbon price trajectories in the modelled scenarios in this study, recognising the substantial potential impact of a carbon price on the electricity sector and the uncertainty in this area.

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ROAM has included three options for the CPT; 0%, 5%, and 15% reduction below 2000 levels by 2020. The CPT (combined with other factors) contributes to the likelihood of retirements in each scenario.

4.3) GAS AVAILABILITY

There are significant gas reserves available in northern WA. However, in the near future the LNG export industry is likely to rapidly expand, increasing gas prices to international parity. This may significantly reduce the competitiveness of gas-fired plant in the SWIS. In addition, obtaining sufficient gas supplies may become challenging.

Two alternatives for gas availability to the electricity sector in the SWIS have been included:

- 1. Abundant gas supplies are available for electricity generation in the SWIS at a competitive price owing to reduced demand for LNG internationally and/or a wider range of suppliers of this commodity
- 2. Limited gas supplies are available for electricity generation in the SWIS, either due to very high prices (uncompetitive), or supply constraints resulting from expanded LNG exports.

4.4) WIND AMBITION

The SWIS has excellent wind resources, with wind farms achieving capacity factors of approximately 40%. This is significantly better than the wind resource in other parts of Australia (for example, wind farms in South Australia typically achieve capacity factors of \sim 30%). The capacity factor of a wind farm is the most important determining factor in the profitability of a wind development, so this is a significant driver for wind penetration in the SWIS.

However, as an isolated grid the SWIS has major challenges with high levels of wind penetration. Frequency control ancillary services are likely to become substantially more expensive to provide, and significant changes to the market are likely to be required in order to facilitate wind development. Without these changes it is likely to be prohibitively difficult for wind generation to develop to levels in the SWIS consistent with the 20% by 2020 target for renewable under the RET legislation.

For these reasons, the level of ambition of the WA Government and other relevant stakeholders is a significant determining factor in the amount of wind generation that enters in the SWIS. Two alternatives for the level of wind ambition have been included:

1. There is a high level of ambition, and the necessary changes to market structure and technical factors are made, facilitating significant wind development in the SWIS

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2. There is a lower level of ambition, and wind development in the SWIS is limited by technical and cost prohibitive factors (for example, around frequency control ancillary services).

5) OUTLOOK DEVELOPMENT

Carbon Price Trajectory

The level of the CPT is likely to be determined relatively independently of other factors in the Australian domestic economy; the probabilities listed in the table below have therefore been used for this study based upon the current political outlook.

Table 5.1 – CPT outcome probabilities					
CPT outcome (% reduction from 2000 levels by 2020) Probability of occurrence					
0%	25%				
5%	40%				
15%	35%				

Load growth

The amount of load growth is likely to be connected to the CPT outcome. A very deep target for emissions reduction is likely to drive significant investment in energy efficiency and other demand side management technologies.

Probabilities are arranged such that the overall probability of a demand occurring (when taking into account the ascribed probabilities of the CPT outcomes they are associated with) sum to those required.





Table 5.2 – Load growth probabilities					
CPT outcome (% reduction from 2000 levels Load growth Probability by 2020)					
00/	High (HIGH)	70%			
0%	Central (CNTRL)	30%			
E0/	High (HIGH)	60%			
5%	Central (CNTRL)	40%			
159/	High (HIGH)	25%			
10%	Central (CNTRL)	75%			

Unlike the CPT probabilities, which are independent of other themes, the likelihood of high, medium or low load growth depend upon the CPT theme. Western Power and ROAM have agreed that the load forecasts have equal probabilities (50% / 50% for Central and High). ROAM has therefore moderated the probabilities of the load growth theme-sets given the probability of the parent CPT theme-set, such that the overall load growth probabilities are in line with the target values.

Gas Availability

The availability of gas was considered to be relatively independent of other themes, with probabilities as listed in the table below.

Table 5.3 – Gas availability probabilities				
Gas availability	Probability of occurrence			
Abundant (ABUND)	30%			
Limited (LIMTD)	70%			

Wind ambition

The level of wind ambition was considered to be relatively independent of other themes, with probabilities as listed in the table below.

Table 5.4 – Wind ambition probabilities				
Wind ambition level Probability of occurrence				
High (HI)	40%			
Low (LO)	60%			

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Outlook probabilities

These combinations of themes produce the outlooks listed in the tables below for each demand set. The table below highlights the most likely eight scenarios which provide a spread of likely future outcomes and warrant further analysis by Western Power. Outlooks that are not included in the most probable eight outlooks are greyed in the table.





Table 5.5 – Outlook probabilities					
Outlook #	Outlook name (CPT – Demand – Gas – Wind)	Probability			
1	0%-CNTRL-ABUND-HI	0.90%			
2	0%-CNTRL-ABUND-LO	1.35%			
3	0%-CNTRL-LIMTD-HI	2.10%			
4	0%-CNTRL-LIMTD-LO	3.15%			
5	0%-HIGH-ABUND-HI	2.10%			
6	0%-HIGH-ABUND-LO	3.15%			
7	0%-HIGH-LIMTD-HI	4.90%			
8	0%-HIGH-LIMTD-LO	7.35%			
9	5%-CNTRL-ABUND-HI	1.92%			
10	5%-CNTRL-ABUND-LO	2.88%			
11	5%-CNTRL-LIMTD-HI	4.48%			
12	5%-CNTRL-LIMTD-LO	6.72%			
13	5%-HIGH-ABUND-HI	2.88%			
14	5%-HIGH-ABUND-LO	4.32%			
15	5%-HIGH-LIMTD-HI	6.72%			
16	5%-HIGH-LIMTD-LO	10.08%			
17	15%-CNTRL-ABUND-HI	3.15%			
18	15%-CNTRL-ABUND-LO	4.73%			
19	15%-CNTRL-LIMTD-HI	7.35%			
20	15%-CNTRL-LIMTD-LO	11.03%			
21	15%-HIGH-ABUND-HI	1.05%			
22	15%-HIGH-ABUND-LO	1.58%			
23	15%-HIGH-LIMTD-HI	2.45%			
24	15%-HIGH-LIMTD-LO	3.68%			





This results in 24 unique scenarios, which ROAM has developed with planting schedules. The above probabilities are shown graphically in the figure below.



The eight most probable outlooks are listed in order of probability in the table below.

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Table 5.6 – Outlook probabilities					
Outlook #	Outlook name	Probability			
20	15%-CNTRL-LIMTD-LO	11.03%			
16	5%-HIGH-LIMTD-LO	10.08%			
8	0%-HIGH-LIMTD-LO	7.35%			
19	15%-CNTRL-LIMTD-HI	7.35%			
12	5%-CNTRL-LIMTD-LO	6.72%			
15	5%-HIGH-LIMTD-HI	6.72%			
7	0%-HIGH-LIMTD-HI	4.90%			
18	15%-CNTRL-ABUND-LO	4.73%			

5.1) PART B: DETERMINE PLANTING SCHEDULES

Part B involves determining likely planting schedules that may develop in response to the outlooks defined in Part A.

Step 1: Determine a list of all possible plants

Firstly, a list of all existing plant in the SWIS has been developed (refer to Table 5.7). This is important in determining the shortfall of generation required to meet reserve capacity levels (as determined via the peak demand projections).

This plant list is taken from the IMO Statement of Opportunities (SOO) 2009. The SOO lists nameplate capacities which ROAM has converted to a sent out basis by subtraction of likely auxiliary loads (listed in Table 5.10).

Table 5.7 – Existing plant in the SWIS (IMO SOO 2009)				
Station Name	Туре	Nameplate capacity (MW)	Sent Out Capacity (MW)	
ALBANY_WF1	Wind	21.6	21.6	
ALCOA_KWI	Cogen	5.0	4.9	
ALCOA_PNJ	Cogen	10.0	9.7	
ALCOA_WGP	Cogen	25.0	24.3	
Alinta_PNJ_U1	Cogen	142.0	137.9	
Alinta_PNJ_U2	Cogen	142.0	137.9	
Alinta_WGP_GT	OCGT	190.0	188.1	

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Alinta WGP GT2	OCGT	190.0	188 1
	Wind	89.1	89.1
BW1 BILIEWATERS G1	Coal	229.0	206.6
	Coal	225.0	200.0
	Coal	223.0	200.0
	Piomass	0.0	0.0
	BIOITIASS	240.9	122.0
	Ccal	240.8	233.8
	Coal	330.0	297.7
	Vvind	80.0	80.0
GERALDION_GTI	Diesei	21.0	20.8
	Wind	0.0	0.0
KEMERION_GT11	OCGI	156.0	154.4
KEMERION_G112	OCGI	156.0	154.4
KWINANA_G1	Coal	120.0	108.2
KWINANA_G2	Coal	120.0	108.2
KWINANA_G5	Coal	200.0	180.4
KWINANA_G6	Coal	200.0	180.4
Kwinana Cogen PPP_KCP_EG1	Cogen	116.0	112.6
KWINANA_GT1	OCGT	20.9	20.7
MUJA_G5	Coal	200.0	180.4
MUJA_G6	Coal	200.0	180.4
MUJA_G7	Coal	200.0	180.4
MUJA_G8	Coal	200.0	180.4
MUNGARRA_GT1	OCGT	37.4	37.0
MUNGARRA_GT2	OCGT	37.4	37.0
MUNGARRA_GT3	OCGT	38.3	38.0
NEWGEN_KWINANA_CCG1	CCGT	320.0	310.7
NEWGEN_NEERABUP_GT1	OCGT	330.0	326.7
PRK_AG	OCGT	68.0	67.3
PERTH_ENERGY_GT1	OCGT	120.0	118.8
PINJAR_GT01	OCGT	37.4	37.0
PINJAR_GT02	OCGT	37.4	37.0
PINJAR_GT03	OCGT	38.3	38.0
PINJAR_GT04	OCGT	38.3	38.0
PINJAR_GT05	OCGT	38.3	38.0
PINJAR_GT07	OCGT	38.3	38.0
PINJAR_GT09	OCGT	116.4	115.2
PINJAR_GT10	OCGT	116.4	115.2
PINJAR_GT11	OCGT	123.4	122.2
STHRNCRS_EG	OCGT	23.0	22.8
SWCJV_WORSLEY_COGEN_COG1	Cogen	123.0	119.4
TIWEST_COG1	Cogen	38.1	37.0
WEST_KALGOORLIE_GT2	Diesel	38.4	38.0
MUNGARRA_GT3 NEWGEN_KWINANA_CCG1 NEWGEN_NEERABUP_GT1 PRK_AG PERTH_ENERGY_GT1 PINJAR_GT01 PINJAR_GT02 PINJAR_GT03 PINJAR_GT03 PINJAR_GT04 PINJAR_GT04 PINJAR_GT07 PINJAR_GT07 PINJAR_GT07 PINJAR_GT09 PINJAR_GT10 PINJAR_GT10 PINJAR_GT11 STHRNCRS_EG SWCJV_WORSLEY_COGEN_COG1 TIWEST_COG1 WEST_KALGOORLIE_GT2	OCGT CCGT OCGT OCGT OCGT OCGT OCGT OCGT	38.3 320.0 330.0 68.0 120.0 37.4 37.4 38.3 38.3 38.3 38.3 116.4 116.4 123.4 23.0 38.1 38.4	38.0 310.7 326.7 67.3 118.8 37.0 37.0 38.0 38.0 38.0 115.2 115.2 122.2 22.8 119.4 37.0 38.0

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WEST_KALGOORLIE_GT3	Diesel	24.8	24.6
TOTAL	-	5660.2	5387.8

Secondly, a list of all the possible plants that could be included in the outlook period for the region of interest has been developed. This includes all significant committed, announced and proposed projects (gas, coal and renewable). Table 5.8 below shows the list of all plant included for this assessment, as well as capacity, status and announced timings.

Table 5.8 – Committed, advanced and proposed generation options for installation						
Station Name	Туре	Location	Nameplate Capacity (MW)	Sent out Capacity (MW)	Sent out Capacity for Reliability (MW)	
Kwinana HEGT	CCGT	Kwinana	194	188	188.374	
Collgar Stage 1	Wind	East Country	206	206	41.2	
DSM 1	DSM	SWIS	50	50	50	
Muja AB	Coal	Muja	220	198	198.44	
Merredin	Diesel	East Country	74	73	73.26	
Badgingarra	Wind	North Country	130	130	26	
DSM 2	DSM	SWIS	50	50	50	
Carnegie Wave 1	Wave	Kwinana	5	5	2	
DSM 3	DSM	SWIS	50	50	50	
Collgar Stage 2	Wind	East Country	30	30	6	
Spiritwest Neerabup	Biomass	Northern Terminal	29.9	30	29.9	
Grasmere	Wind	Muja	14	14	2.8	
Milyeannup	Wind	Bunbury	55	55	11	
Alinta Walkaway 2	Wind	North Country	94	94	18.8	
Nilgen	Wind	North Country	132	132	26.4	
Mingenew Solar Thermal 1	Solar Thermal	North Country	50	45	22.5	
Coolimba Aviva Coal	Coal	North Country	400	361	360.8	
Newworld Geothermal 1	Geo	North Country	5	4	4.25	
Bluewaters 3	Coal	Muja	215	194	193.93	
Bluewaters 4	Coal	Muja	215	194	193.93	
DSM 4	DSM	SWIS	77	77	77	
Kalgoorlie 2	Solar PV	Eastern Goldfields	1.77	2	0.885	
Centauri 1	OCGT	North Country	168	166	166.32	
Augusta	Wind	Bubury	50	50	10	
Dandaragan - Yandin	Wind	North Country	389.4	389	77.88	
Dandaragan - Waddi	Wind	North Country	198	198	39.6	
Henderson	Wind	South Fremantle	60	60	12	

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Cervantes	Wind	North Country	40	40	8
Mingenew Solar Thermal 2	Solar Thermal	North Country	50	45	22.5
Mingenew Solar Thermal 3	Solar Thermal	North Country	150	135	67.5
Mumbida	Wind	North Country	90	90	18
Joanna Plains	Wind	North Country	40	40	8
Coolimba OCGT	OCGT	North Country	360	356	356.4

Figure 5.2 and Figure 5.3 illustrate the resulting supply demand balance based upon these peak demand projections, existing plant, and announced new plant (all installed in 2020-21 for illustration of its relative aggregate magnitude). There is sufficient new plant announced to meet the demand projections in both cases. A supply-demand shortfall first occurs in 2013-14 in the Central case, and in 2012-13 in the High case.







In addition to announced plant, ROAM has used the hypothetical plant included in the list below as possibilities for development (Table 5.9). Including additional hypothetical plant allows additional flexibility in the planting process, and assists in producing a more realistic outcome. There is very little peaking generation (OCGT) announced, and based upon market drivers ROAM believes the development of quantities of OCGT plant is likely. CCGT plant is also likely in the scenarios where gas supplies are abundant.

Hypothetical plant locations were selected on the basis of:

- Availability of gas supply
- Adequate transmission capability
- Proximity to local load exhibiting growth
- Remoteness from residential areas

Hypothetical OCGTs in North Country are assumed to be associated with new load in that area (included as block loads in the High growth case in particular).

Table 5.9 – Hypothetical generation options for installation					
Station Name	Туре	Location	Nameplate Capacity (MW)	Sent out Capacity (MW)	Sent out Capacity for Reliability (MW)
Kwinana OCGT #1	OCGT	Kwinana	100	99	99
Kwinana OCGT #2	OCGT	Kwinana	100	99	99
Kwinana OCGT #3	OCGT	Kwinana	100	99	99
Kwinana OCGT #4	OCGT	Kwinana	100	99	99

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North Country OCGT #1	OCGT	North Country	100	99	99
North Country OCGT #2	OCGT	North Country	100	99	99
North Country OCGT #3	OCGT	North Country	100	99	99
North Country OCGT #4	OCGT	North Country	100	99	99
Northern Terminal OCGT #1	OCGT	Northern Terminal	100	99	99
Northern Terminal OCGT #2	OCGT	Northern Terminal	100	99	99
Northern Terminal OCGT #3	OCGT	Northern Terminal	100	99	99
Northern Terminal OCGT #4	CCGT	Northern Terminal	100	99	99
Kwinana CCGT #1	CCGT	Kwinana	200	194	194.2
Kwinana CCGT #2	CCGT	Kwinana	200	194	194.2
North Country #1	CCGT	North Country	200	194	194.2
Northern Terminal CCGT #1	CCGT	Northern Terminal	200	194	194.2
Muja Coal #1	Coal	Muja	200	180	180.4
North Country Coal #1	Coal	North Country	200	180	180.4
Regional Diesel #1	Diesel	SWIS	40	40	39.6
Regional Diesel #2	Diesel	SWIS	40	40	39.6
Regional Diesel #3	Diesel	SWIS	40	40	39.6
Regional Diesel #4	Diesel	SWIS	40	40	39.6

The regional diesel plant are aggregates of small projects (~10 MW) located primarily in the south and east areas of the SWIS.

Existing and possible plants were assumed to have the properties listed in Table 5.10

- Auxiliary loads were used for calculation of sent out capacities (from nameplate capacities as listed in the SOO 2009
- Capacity factors were used for calculation of typical energy contribution of various plant types, if operating at economically effective levels
- Emissions factors were used for calculation of greenhouse emissions from the SWIS, to investigate impacts of climate policy and renewable energy
- Contribution factors (to reserve) were used to determine the equivalent capacity of renewable generation to reserve (for example, wind farms were assumed to contribute 20% of capacity based upon capacity available at a 95% confidence level at time of peak demand).



Table 5.10 – Plant properties					
Unit type	Capacity Factor	Emissions (tCO2-e/MWh)	Auxiliary loads ¹	Contribution factor (to reserve)	
Bagasse	75%	0	0.0%	100%	
Biomass	60%	0	0.0%	100%	
CCGT	50%	0.36	2.9%	100%	
CCS	90%	0.081	23.3%	100%	
Coal	75%	0.81	9.8%	100%	
Cogen	90%	0.275	2.9%	100%	
Diesel	50%	0.91	1.0%	100%	
DSM	1%	0	0.0%	100%	
Geothermal	85%	0	15.0%	100%	
OCGT	5%	0.6	1.0%	100%	
Solar PV	20%	0	0.0%	50%	
Solar Thermal	30%	0	10.0%	50%	
Wave	80%	0	0.0%	40%	
Wind	40%	0	0.0%	20%	

Step 2: Determine a list of all possible retirements

In step 2, a list of all the possible plants that may retire in the outlook period for the region of interest was developed. This is based upon ROAM's extensive research and modelling of Australia's likely carbon price trajectory under various outlooks and scenarios.

The following table includes those existing power stations which have been considered as potential retirees for this assessment.



¹ Auxiliary loads assumptions were sourced from input assumptions to AEMO 2010 National Transmission Network Development Plan Consultation, available: http://www.aemo.com.au/planning/ntndp.html

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Table 5.11 – Potential retirements				
Capacity (MW)	Plant	Туре	Location	Status
-240 MW	Kwinana A	Gas	Kwinana	Announced (2011)
-370 MW	Muja C	Coal	Muja	Theoretical

Step 3: Assign initial probabilities

Following substantial research into each project and retirement, an initial ranking is assigned to capture their relative likelihoods of being constructed (or retired). These rankings are dependent upon the outlook, since the probability of construction (or retirement) of a particular plant will depend upon the external drivers (such as the demand forecast, or the CPT target).

Rankings are assigned to each project in each outlook as follows:

Table 5.12 – Ranking of announced projects				
Symbol	Ranking	Approximate initial estimate of probability of being constructed		
D	Definite	100%		
VH	Very high	80%		
Н	High	60%		
М	Moderate	30%		
L	Low	10%		
VL	Very Low	5%		
R	Deferred	1%		

Primary sources of information relating to each project are included in the table below. For a variety of projects, ROAM also used information contained in the following documents:

- Independent Market Operator Statement of Opportunities 2009.
- IMO WA, "2010 Call for Expressions of Interest for New Capacity, Summary of Results".
- IMO WA, "Public Reserve Capacity Mechanism Review Report", May 2009.
- ABARE, Electricity generation major development projects, April 2010 listing, http://www.abare.gov.au/publications_html/energy/energy_10/EG10_AprListing.xls
- Australian Government, Department of the Environment, Water, Heritage and the Arts, Renewable Energy Power Stations, Proposed plants list, <u>http://www.ga.gov.au/bin/mapserv40?map=/public/http/www/docs/renewable/ago.</u> <u>map&mode=browse&layer=states&layer=highway&layer=coast&layer=proposed&</u> <u>mapext=-2201244.400848+-5190134.542706+2031040.723962+-</u>



<u>966224.855040&map_web_template=/public/http/www/docs/renewable/proposed/t</u> emplate.html

 Australian Government, Department of the Environment, Water, Heritage and the Arts, Energy Markets - Fossil Fuel Power Stations, Proposed plants list, http://www.ga.gov.au/bin/mapserv40?map=/public/http/www/docs/fossil_fuel/ffuel. map&layer=states&layer=roads&layer=highways&layer=coast&layer=proposed&m apext=-2201244.400848+-5190134.542706+2031040.723962+-966224.855040&mode=browse&map_web_template=/public/http/www/docs/fossil_fuel/proposed/proposed.html

Table 5.13 – Committed, advanced and proposed Generation options for installation					
Station Name	Notes	Source	Initial Probability		
Muja AB	Verve Energy and Inalco Energy have signed an MOU to set up a joint venture to refurbish, upgrade and recommission Muja Power Station Stages AB. To be known as Vinalco Energy, the joint venture will have Muja AB operating again in time for the 2012 summer. It will operate for about 15 years.	http://www.vervee nergy.com.au/subC ontent/mediaRelea ses/mediaReleases Articles/Muja_AB_i oint_venture.html	Very High		
Kwinana HEGT	Verve Energy has awarded contracts for the supply, construction and commissioning of two 100MW high efficiency gas turbines (HEGT). The State Government announced the \$263 million project in May 2009 as part of the strategy to help maintain a secure supply of electricity in WA as demand for power continued to grow. Construction is scheduled to commence in April	http://www.vervee nergy.com.au/subC ontent/homePageIn fo/latestnews/HEGT s_project_underwa y.html	Definite		





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Merredin	Another new market entrant is the Namarrkon project near Merredin. It is a biodiesel back-up generation system designed to operate over the summer months for 15-20 days a year.	http://webcache.go ogleusercontent.co m/search?q=cache: FXfDA9bM1p0J:ww w.wabusinessnews. com.au/story/1/726 93/Coal-dominates- agency-s-power- supply- list+Merredin+Pow er+Station+namarrk on&cd=1&hl=en&ct =clnk≷=au&client =firefox-a	Very High
Badgingarra	Griffin Energy, in a Joint Development with Stanwell Corporation, is proposing to develop a new wind farm near Badgingarra, approximately 200 kilometres north of Perth. The proposed new Badgingarra Wind Farm is expected to be commissioned in late 2012 and will produce up to 130 megawatts of renewable energy, helping to meet WA's growing energy needs.	http://www.griffine nergy.com.au/defa ult.aspx?MenuID=3 09	Very High
Spiritwest Neerabup	SpiritWest is developing a 30 MW base-load power station at Neerabup, 33 km north of Perth. The power station will use timber waste from pine plantations nearby, and other wood residues. Environmental approval was received in 2006, and a final investment decision is expected by Q2 2009, with construction expected to commence in Q3 2009. Commercial operation is scheduled for 2011.	http://www.dmp.w a.gov.au/document s/Prospect_Projects .pdf	Moderate
Grasmere	Verve Energy is carrying out a feasibility study to extend the Albany wind farm. The project, known as Grasmere wind farm, will add six wind turbines to the existing 12 turbines at the Albany site. The additional wind turbines would produce 14MW of electricity.	http://www.vervee nergy.com.au/main Content/sustainabl eEnergy/Projects%2 Oin%20progress/Gr asmere Wind Far m.html	Moderate
Collgar Stage 1	Collgar Wind Farm is a project consisting of 111 wind turbines located approximately 25km south east of Merredin in Western Australia. Full construction works will commence in June 2010 and will be completed by April 2012.	http://www.collgar windfarm.com.au/	Definite





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Milyeannup	Verve Energy is investigating the feasibility of building a wind farm with up to 30 wind turbines with a combined capacity of up to 55MW at Milyeannup, which is about 20kms east of Augusta. On 22 May 2009 Verve Energy submitted an Application for Planning Approval to the Shire of Nannup for the wind farm.	http://www.vervee nergy.com.au/main Content/sustainabl eEnergy/Projects%2 Oin%20progress/Mil yeannup_wind_far m.html	Moderate
Alinta Walkaway 2	Walkaway 2 Wind Farm is an extension of Infigen Energy's existing 89.1MW, 54 turbine wind farm south of Geraldton. Infigen Energy lists Walkaway 2 as in the development pipeline, with development applications completed.	<u>http://ramblingsdc.</u> <u>net/Australia/Wind</u> <u>WA.html</u>	Moderate
Nilgen	The proposed wind farm site is located approximately 9km east of Lancelin, Western Australia. The site has been selected by Pacific Hydro due to its strong, consistent winds; proximity and access to the Grid (South West Interconnected System), existing land practices which can co-exist with the turbines, large area and low population density and good public road access. The project will be up to 53 (2.5MW) turbines in size, providing up to 132.5MW of capacity.	http://www.pacific hydro.com.au/en- us/our- projects/australia pacific/nilgen-wind- farm	Moderate
Mingenew Solar Thermal 1	Proposed \$1.0 billion 250MW solar thermal power station. Nominally located on Mingenew. Worley plan to investigate the potential for another 33 additional plants being built by 2020.	AGO Proposed Renewables list	Moderate
Carnegie Wave 1	Stage 1 of the Carnegie Wave project is currently underway. Stage 2 will be the first commercial scale wave energy project to operate in Australia. The commercial demonstration will be a 5MW project. Detailed cost and design activities associated with Stage 2 will be undertaken during 2010 with construction and commissioning scheduled for 2011.	http://www.carnegi ewave.com/	High

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Coolimba Aviva Coal	Coolimba Power is a 400-450MW base load coal-fired power station including an additional 360MW of gas fired power located 270km north of Perth in the rapidly developing Mid West region of WA. Coolimba also has plans to phase in up to 2.9 million tonnes per annum of carbon capture and sequestration (CCS) as a separate project when feasible. The Coolimba Power Station will provide approximately 8% of the installed capacity in the SWIS network and have an operating life of 30 years. Construction is planned to commence in 2010 and will extend over three years for completion in 2013/14.	http://www.avivaco rp.com.au/?id=201	Moderate
Coolimba OCGT	In addition to the 400-450MW base load coal-fired plant, approval is also being obtained for up to 360MW of gas-fired generation for Coolimba.	http://www.cooli mbapower.com.a u/images/stories/ pdf/Fact_Sheets/ 0907_19_Fact_Sh <u>eet</u> <u>Coolimba_Powe</u> r_Project.pdf	Moderate
Newworld Geothermal 1	New World has 9 geothermal exploration permits in the Northern (8) and Southern (1) Perth Basins. All locations are closely located to existing and/or proposed transmission assets.	http://newworlden ergy.com.au/index. php/projects/perth- basin/	Moderate





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Bluewaters 3	The proposed Bluewaters Power Station Expansion comprises two new coal-fired, base- load generators, each capable of producing 208	http://docs.google. com/viewer?a=v&q =cache:zd0WGXNm TqwJ:www.griffinen ergy.com.au/getfile. aspx%3FType%3Dd ocument%26ID%3D 5468%26ObjectTyp e%3D3%26ObjectTp %3D1685+bluewate rs+3+coal&hl=en≷	Moderate
Bluewaters 4	megawatts. The two proposed new units are planned for completion in 2013 and 2015 respectively. The EPA has recommended that approvals be granted for the project.	=au&pid=bl&srcid= ADGEESggkZJmc8n OeRU_PrNpw2Sqlrt drFFlfx_0vdCSJdcL1 TfYk5wlgUvGRidLJw 7hNQNRL7dinreSCn A4- CYWILi2cu7D9FMK N2yd7LKu4RCCXz2k szd6baniqABcFKsnD VUibbn0&sig=AHIEt bRT0LSYp1ISImiV6g 8V4c-KIzsp3w	Moderate
Augusta	Proposed 50MW wind farm at Augusta. Wind monitoring is currently underway.	http://www.windfa rms.net.au/html/de velopment_portfoli o/development_por tfolio.html	Low
Dandaragan - Yandin	Two wind farm sites are being investigated on rural land in the Shire of Dandaragan. The Waddi site would contain up to 60 wind turbines and it is located approximately 12km north west of Dandaragan. Wind monitoring is currently underway, and a final planning approval decision is expected in late 2010.	<u>http://dandaragan</u> windfarm.com.au/a bout	Low
Dandaragan - Waddi			Low
Henderson	Proposed wind farm, earning 21MW of capacity credits, by Engineering firm Emerson Stewart.	http://www.imowa. com.au/f875,52032 /RCM_ReportV5_P UBLISHED_1pdf	Low
DSM 1	Total of 227MW of demand management	http://www.imowa. com.au/f177,45592 2/Summary_Expres sions_of_Interest_2 010.pdf	Definite
DSM 2	proposed as part of the 2010 Reserve Capacity Mechanism New Capacity Expressions of Interest process.		Very High
DSM 3			High
DSM 4			Moderate
Kalgoorlie 2	Proposed \$12.8M 48 solar dish project in Kalgoorlie (1776kW DC). Funding support has been granted by the WA Government	http://news.smh.co m.au/national/kalg oorlie-to-have-first- solar-station- 20080629- 2ypt.html	Moderate

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Cervantes	Griffin Energy announced in 2004 that it was committed to the construction of an 80MW wind farm (40MW net) as part of the Bluewaters greenhouse gas management	http://www.epa.wa .gov.au/docs/1176/ B1176 App5B Att7 .pdf	Low
Mingenew Solar Thermal 2	Proposed \$1.0 billion 250MW solar thermal power station. Nominally located on Mingenew. Worley plan to investigate the potential for another 33 additional plants being built by 2020.	AGO Proposed Renewables list	Low
Mingenew Solar Thermal 3	Proposed \$1.0 billion 250MW solar thermal power station. Nominally located on Mingenew. Worley plan to investigate the potential for another 33 additional plants being built by 2020.	AGO Proposed Renewables list	Low
Collgar Stage 2	Planning and environmental approvals have been obtained for 127 turbines. However, this layout has now been divided into two stages, the first consisting of 111 turbines, and a second stage of 16 turbines.	http://www.collgar windfarm.com.au/T he- Process/Planning.as px	High
Centauri 1	Eneabba Gas has proposed the Centauri 1 Power Station, a four gas turbine station with a total capacity of 168MW. Government approvals have been received and land has been purchased however the project appears on hold.	http://www.eneabb agas.com.au/viewSt ory/Centauri+1++Po wer+Station	Moderate
Joanna Plains	Proposed wind farm; little information available therefore a very low probability has been ascribed.	http://www.ga.gov. au/renewable/prop osed/proposed_ren <u>ewable.xls</u>	Very Low
Mumbida	Near Walkaway. Feasibility study due for completion early 2010. Originally considered in 2002, but rejected because of transmission. Revived with proposed Eneabba to Moonyoonooka (Geraldton) 330kV line. Has submitted planning application to City of Geraldton-Greenough. As of 2009, construction could start in 2010.	http://www.vervee nergy.com.au/main Content/sustainabl eEnergy/Projects%2 Oin%20progress/M umbida_wind_farm .html	Moderate

6) DEVELOPMENT OF PLANTING SCHEDULES

Based upon the information collected in the earlier analysis, planting schedules for each scenario were developed. The full planting schedules for each scenario are included in the appendix to this report.

Plant choices were made based upon:

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- Initial plant probabilities (tabulated above) and announced timings
- The economic drivers in each scenario, which change the relative costs and revenues of various plant types
- In-line moderation (explained below)

ROAM's scenario analysis methodology uses in-line moderation while planting each scenario. Key moderators include:

- Emissions
- Reserve Plant Margin
- Average Capacity Factor
- Renewable Capacity Installed

These moderators provide a feedback mechanism to the planting process to ensure that these real-world issues are properly accounted for. The following sections discuss the key indicators, and illustrate how they were used in the development of planting schedules for each scenario. The graphs provided first display the result of all scenarios, while the second graph highlights the most likely eight scenarios.

6.1) RESERVE PLANT MARGIN

There is currently an excess of capacity available in the SWIS. ROAM has not assumed that this will continue, but has instead planted scenarios based upon economic drivers (investment in new projects will only be to the level required for reliability). On this basis, in all scenarios the oversupply of capacity decreases in the initial years of the study as the demand increases, and then is maintained between 2-10%, with new generation projects matching demand growth. This is illustrated in Figure 6.1.

The supply-demand balance (illustrated by the reserve margin) is a significant driving factor for the timing of new generation.



Application



6.2) **AVERAGE CAPACITY FACTOR**

The average annual capacity factor for the SWIS resulting from planting schedules in each of the 24 scenarios is shown in the figure below. This is calculated based upon the total capacity of installed plant compared with the energy forecast.

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Capacity factors calculated via this methodology are maintained close to the load factor in each year. The load factor is defined as the ratio of forecast energy to the forecast peak demand divided by 8.76. The demand and energy forecasts used in this study show load factors reducing from 47%-48% in 2009-10 to 41%-42% in 2020-21. The calculated capacity factor in 2009-10 is below this value due to the oversupply of plant in that year (illustrated in Figure 6.1).



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6.3) RENEWABLE CAPACITY INSTALLED

The total quantity of new renewable generation installed in each scenario is illustrated in Figure 6.3.



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Figure 6.4 illustrates the relationship of this quantity of renewable generation to the quantity of new renewable generation required by the Renewable Energy Target (RET). The RET is a national scheme and does not include a SWIS-specific target; the black dotted line instead indicates the proportion of the RET that would be met in the SWIS, if renewable generation was distributed in each state in proportion to the local load.

Some scenarios exceed this proportion, indicating that conditions for renewable generation in the SWIS are better than in other parts of Australia. In other scenarios, the entry of renewable generation is inhibited in the SWIS and the RET will be met through renewable generation in other locations (not in the SWIS).



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Figure 6.5 illustrates the installed capacity of wind generation (this figure does not include the non-wind renewables such as biomass, geothermal, wave and solar). The quantity of wind installed in some scenarios is very high relative to the size of the SWIS. This reflects the very large capacity of announced wind projects driven by excellent wind resources in the SWIS.

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Due to intermittency, renewable generators do not contribute their full capacity to system reserve. The contribution of renewable generators assumed for this study is illustrated in Figure 6.6. This is based upon the assumed contribution factors for each generator type listed in Table 5.10.

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6.4) EMISSIONS

Figure 6.7 illustrates the forecast greenhouse emissions for the SWIS for each planting schedule. Greenhouse emissions are calculated based upon:

- The existing level of greenhouse emissions from the SWIS
- plus emissions projected for new plant (based upon assumed capacity factors)

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• minus emissions from existing plant undercut by new plant (calculated as the product of the average emissions factor for the SWIS with the difference between the increase in available energy and the increase in demand)

The chart illustrates the following general trends:

- High demand growth generally increases emissions. This is generally the most significant driver of emissions.
- Limited gas supply generally increases emissions, since more emissions intensive coal-fired plant must be installed (instead of gas-fired plant)
- High wind ambition generally decreases emissions, since more energy is generated by zero emissions wind
- A higher CPT generally reduces emissions, by driving the installation of lower emissions plant









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7) **FINAL PROJECT PROBABILITIES**

The final probability for each proposed generator (and retirement) is calculated as the sum of the scenario probabilities in which the generator is installed. A generator which is installed in many scenarios is likely to have a higher overall probability, depending upon the probability of the scenarios it is planted within. Similarly, a generator which is installed in only a few scenarios is likely to have a lower overall probability, depending upon the probability of the scenarios it is planted within.

The following charts show the final project probabilities, in relation to the initial probability of each scenario. The initial ranking (blue line) indicates ROAM's initial estimate of the probability of each project. The red line indicates the percentage of scenarios in which a particular project is planted. The bars indicate the probability of each project calculated based upon the probabilities of the scenarios in which it appears.





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Percentage of Scenarios Planted

Initial Ranking

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8) **DISCUSSION**

Developments in Western Australian electricity sector in the next decade are highly uncertain. The most significant drivers of new generation projects are likely to be:

- Level of ambition of Australia's likely Carbon Price Trajectory (CPT)
- Demand growth
- Availability of gas for electricity generation
- Wind ambition

ROAM has used a scenario analysis methodology to develop 24 outlooks with ascribed probabilities based upon these key drivers. Each of these outlooks was developed into a complete planting schedule utilising announced projects included on the basis of relative probabilities. Entry dates were determined based upon the annual supply-demand balance.

These planting schedules explore a range of possible futures for the SWIS as a basis for further modelling.



2010 Generation Scenario Outlook for the SWIS

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Scenario # CPT Then	e: 0%	25% theme weighting	
1 Load Then	e: CNTRL	30% theme weighting	
Gas Availability Then	ABUND	30% theme weighting	
Wind Ambition Then	ie: HI	40% theme weighting	
Planting Schedu	le: A	1 of 0 planting scenarios for the 0- CNTRL-ABUND-HI Outlook	



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13	Muja AB 220 (198.44MW Coal), Merredin 74 (73.26MW Diesel), Badgingarra 130 (130MW Wind),		
2013-14	Collgar Stage 1 206 (206MW Wind), Carnegie Wave 1 5 (5MW Wave), Grasmere 14 (14MW Wind),		
2014-15	Milyeannup 55 (55MW Wind), Centauri 1 168 (166.32MW OCGT),		
2015-16	Alinta Walkaway 2 94 (94MW Wind), Kwinana CCGT #1 200 (194.2MW CCGT),		
2016-17	Collgar Stage 2 30 (30MW Wind), Nilgen 132 (132MW Wind), Mumbida 90 (90MW Wind),		
2017-18	Augusta 50 (50MW Wind), Northern Terminal CCGT #1 200 (194.2MW CCGT),		
2018-19	Dandaragan - Yandin 389.4 (389.4MW Wind), Kwinana OCGT #1 100 (99MW OCGT), Kwinana OCGT #2 100 (99MW OCGT),		
2019-20	Cervantes 40 (40MW Wind), Northern Terminal OCGT #1 100 (99MW OCGT),		
2020-21	Dandaragan - Waddi 198 (198MW Wind),		
Ranking	Top Down Prol	bability	FINAL Scenario Probability
24	0.9%	·	0.9%
1			



2010 Generation Scenario Outlook for the SWIS

4

Scenario #	CPT Theme:	0%	25% theme weighting	
2	Load Theme:	CNTRL	30% theme weighting	
	Gas Availability Theme:	ABUND	30% theme weighting	
	Wind Ambition Theme:	LO	60% theme weighting	
	Planting Schedule:	Α	1 of 0 planting scenarios for the 0- CNTRL-ABUND-LO Outlook	



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13			
2013-14	Collgar Stage 1 206 (206MW Wind), Muja AB 220 (198.44MW Coal), DSM 2 50 (50MW DSM),		
2014-15	Merredin 74 (73.26MW Diesel), Centauri 1 168 (166.32MW OCGT),		
2015-16	DSM 3 50 (50MW DSM), Grasmere 14 (14MW Wind), Regional Diesel #1 40 (39.6MW Diesel),		
2016-17	Collgar Stage 2 30 (30MW Wind), Alinta Walkaway 2 94 (94MW Wind), Kwinana CCGT #1 200 (194.2MW CCGT),		
2017-18	Cervantes 40 (40MW Wind), Regional Diesel #2 40 (39.6MW Diesel),		
2018-19	Mumbida 90 (90MW Wind), Coolimba OCGT 360 (356.4MW OCGT),		
2019-20			
2020-21	Northern Terminal CCGT #1 200 (194.2MW CCGT),		
Ranking	Ton Down Pro	pability	FINAL Scenario Probability
22	1.4%		1.4%
1			



Scena

Scenario #	CPT Theme:	0%	25% theme weighting	
3	Load Theme:	CNTRL	30% theme weighting	
	Gas Availability Theme:	LIMTD	70% theme weighting	
	Wind Ambition Theme:	н	40% theme weighting	
	Planting Schedule:	Α	1 of 0 planting scenarios for the 0- CNTRL-LIMTD-HI Outlook	



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13	Badgingarra 130 (130MW Wind),		
2013-14	Collgar Stage 1 206 (206MW Wind),		
2014-15	Muja AB 220 (198.44MW Coal), Grasmere 14 (14MW Wind), Bluewaters 3 215 (193.93MW Coal),		
2015-16	Merredin 74 (73.26MW Diasel), DSM 2 50 (50MW DSM), Calgar Stage 2 30 (30MW Wind), Alinta Walkaway 2 94 (94MW Wind),		
2016-17	Milyeannup 55 (55MW Wind), Coolimba Aviva Coal 400 (360.8MW Coal),		
2017-18	Nigen 132 (132MW Wind), Bluewaters 4 215 (193.93MW Coal), Augusta 50 (50MW Wind), Regional Diesel #1 40 (39.6MW Diesel),		
2018-19	Cervantes 40 (40MW Wind), Kwinana OCGT #1 100 (99MW OCGT),		
2019-20	Mumbida 90 (90MW Wind), Northern Terminal OCGT #1 100 (99MW OCGT),		
2020-21			
Ranking	Top Down Pro	bability	FINAL Scenario Probability
18	2.1%		2.1%



2010 Generation Scenario Outlook for the SWIS

Scenario # CPT Th	eme: 0%	25% theme weighting	
4 Load Th	eme: CNTRL	30% theme weighting	
Gas Availability Th	eme: LIMTD	70% theme weighting	
Wind Ambition Th	eme: LO	60% theme weighting	
Planting Sche	dule: A	1 of 0 planting scenarios for the 0- CNTRL-LIMTD-LO Outlook	



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13			
2013-14	Collgar Stage 1 206 (206MW Wind), Badgingarra 130 (130MW Wind),		
2014-15	Muja AB 220 (198.44MW Coal), Merredin 74 (73.26MW Diesel), DSM 2 50 (50MW DSM), DSM 3 50 (50MW DSM),		
2015-16	Bluewaters 3 215 (193.93MW Coal),		
2016-17	Milyeannup 55 (55MW Wind), Bluewaters 4 215 (193.93MW Coal),		
2017-18	Nilgen 132 (132MW Wind), Codimba Aviva Coal 400 (360.8MW Coal),		
2018-19	Regional Diesel #1 40 (39.6MW Diesel),		
2019-20	Augusta 50 (50MW Wind), Regional Diesel #2 40 (39.6MW Diesel),		
2020-21	Centauri 1 168 (166.32MW OCGT),		
Ranking	Top Down Pro	pability	FINAL Scenario Probability
12	3.2%		3.2%
12	0.276		U.L./U



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cenario #	CPT Theme:	0%	25% theme weighting	
5	Load Theme:	HIGH	70% theme weighting	
	Gas Availability Theme:	ABUND	30% theme weighting	
	Wind Ambition Theme:	н	40% theme weighting	
	Planting Schedule:	Α	1 of 0 planting scenarios for the 0- HIGH-ABUND-HI Outlook	



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13	Badgingarra 130 (130MW Wind), DSM 2 50 (50MW DSM),		
2013-14	Collgar Stage 1 206 (206MW Wind), Muja AB 220 (198.44MW Coal), Merredin 74 (73.26MW Diesel), DSM 3 50 (50MW DSM),		
2014-15	Carnegie Wave 1 5 (5MW Wave), Collgar Stage 2 30 (30MW Wind), Spiritwest Neerabup 29.9 (29.9MW Biomass), Grasmere 14 (14MW Wind), DSM 4 77 (77MW DSM), Coolimba OCGT 360 (356.4MW OCGT), Kwinana CCGT #1 200 (194.2MW CCGT),		
2015-16	Milyeannup 55 (55MW Wind), Centauri 1 168 (166.32MW OCGT), Northern Terminal CCGT #1 200 (194.2MW CCGT),		
2016-17	Alinta Walkaway 2 94 (94MW Wind), Kwinana CCGT #2 200 (194.2MW CCGT),		
2017-18	Nilgen 132 (132MW Wind), Mumbida 90 (90MW Wind), Kwinana OCGT #1 100 (99MW OCGT),		
2018-19	Augusta 50 (50MW Wind), Kwinana OCGT #2 100 (99MW OCGT),		
2019-20	Henderson 60 (60MW Wind), Northern Terminal OCGT #1 100 (99MW OCGT),		
2020-21	Cervantes 40 (40MW Wind), North Country OCGT #1 100 (99MW OCGT), Northern Terminal OCGT #2 100 (99MW OCGT),		
Panking	Top Down Pro	hability	FINAL Scenario Probability
Ranking		Jubinty	
18	2.1%		2.1%



0%	25% theme weighting	
HIGH	70% theme weighting	
ABUND	30% theme weighting	
LO	60% theme weighting	
Α	1 of 0 planting scenarios for the 0- HIGH-ABUND-LO Outlook	
	0% HIGH ABUND LO A	0% 25% theme weighting HIGH 70% theme weighting ABUND 30% theme weighting LO 60% theme weighting A 1 of 0 planting scenarios for the 0- HIGH-ABUND-LO Outlook



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13	Merredin 74 (73.26MW Diesel), Carnegie Wave 1 5 (5MW Wave),		
2013-14	Collgar Stage 1 206 (206MW Wind), Muja AB 220 (198.44MW Coal), Badgingarra 130 (130MW Wind), DSM 2 50 (50MW DSM),		
2014-15	DSM 3 50 (50MW DSM), Collgar Stage 2 30 (30MW Wind), DSM 3 50 (50MW DSM), Cantauri 1 168 (166.32MW OCGT), Coolimba OCGT 360 (356.4MW OCCT), Northern Terminal CCGT #1 200 (194.2MW CCGT),		
2015-16	Kwinana OCGT #1 100 (99MW OCGT), North Country CCGT #1 200 (194.2MW CCGT),		
2016-17	Grasmere 14 (14MW Wind), Regional Diesel #1 40 (39.6MW Diesel),		
2017-18	Nilgen 132 (132MW Wind), Kwinana OCGT #2 100 (99MW OCGT), Northern Terminal OCGT #1 100 (99MW OCGT), Kwinana CCGT #1 200 (194.2MW CCGT),		
2018-19	Augusta 50 (50MW Wind), Kwinana CCGT #2 200 (194.2MW CCGT),		
2019-20	North Country OCGT #1 100 (99MW OCGT),		
2020-21	North Country OCGT #2 100 (99MW OCGT),		
Ranking	Top Down Pro	bability	FINAL Scenario Probability
12	3.2%		3.2%
	0.2.70		



2010 Generation Scenario Outlook for the SWIS

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Scenario #	CPT Theme:	0%	25% theme weighting	
7	Load Theme:	HIGH	70% theme weighting	
	Gas Availability Theme:	LIMTD	70% theme weighting	
	Wind Ambition Theme:	н	40% theme weighting	
	Planting Schedule:	Α	1 of 0 planting scenarios for the 0- HIGH-LIMTD-HI Outlook	





	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13			
2013-14	Collgar Stage 1 206 (206MW Wind), Muja AB 220 (198.44MW Coal), DSM 2 50 (50MW DSM), Bluewaters 3 215 (193.93MW Coal),		
2014-15	Merredin 74 (73.26MW Diesel), Badgingarra 130 (130MW Wind), Grasmere 14 (14MW Wind), Nigen 132 (132MW Wind), Coolimba Aviva Coal 400 (360.8MW Coal), Centauri 1 188 (166.32MW OCGT),		
2015-16	DSM 3 50 (50MW DSM), Collgar Stage 2 30 (30MW Wind), Alinta Walkaway 2 94 (94MW Wind), Bluewaters 4 215 (193,93MW Ccal), Mumbida 90 (90MW Wind), Regional Diesel #1 40 (39.6MW Diesel),		
2016-17	Milyeannup 55 (55MW Wind), Augusta 50 (50MW Wind), Regional Diesel #2 40 (39.6MW Diesel), Regional Diesel #3 40 (39.6MW Diesel), Regional Diesel #4 40 (39.6MW Diesel),		
2017-18	Henderson 60 (60MW Wind), Coolimba OCGT 360 (356.4MW OCGT),		
2018-19	Dandaragan - Yandin 389.4 (369.4MW Wind),		
2019-20	DSM 4 77 (77MW DSM), North Country OCGT #2 100 (99MW OCGT),		
2020-21	Kwinana OCGT #1 100 (99MW OCGT), North Country OCGT #1 100 (99MW OCGT),		
Ranking	Top Down Pro	bability	FINAL Scenario Probability
7	4.9%		4.9%



Scenario #	CPT Theme:	0%	25% theme weighting	
8	Load Theme:	HIGH	70% theme weighting	
	Gas Availability Theme:	LIMTD	70% theme weighting	
	Wind Ambition Theme:	LO	60% theme weighting	
	Planting Schedule:	Α	1 of 0 planting scenarios for the 0- HIGH-LIMTD-LO Outlook	



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13			
2013-14	Collgar Stage 1 206 (206MW Wind), Muja AB 220 (198 44MW Coal), DSM 2 50 (50MW DSM), DSM 3 50 (50MW DSM), DSM 4 77 (77MW DSM),		
2014-15	Merredin 74 (73.28MW Diesel), Carnegie Wave 1 5 (5MW Wave), Coolimba Aviva Coal 400 (360.8MW Coal), Bluewaters 3 215 (193.93MW Coal),		
2015-16	Spiritwest Neerabup 29.9 (29.9MW Biomass), Bluewaters 4 215 (193.93MW Coal),		
2016-17	Grasmere 14 (14MW Wind), Coolimba OCGT 360 (356.4MW OCGT), Regional Diesel #1 40 (39.6MW Diesel),		
2017-18	Augusta 50 (50MW Wind), North Country OCGT #1 100 (99MW OCGT), Regional Diesel #2 40 (39.6MW Diesel), Regional Diesel #3 40 (39.6MW Diesel),		
2018-19	Alinta Walkaway 2 94 (94MW Wind), Centauri 1 168 (166.32MW OCGT),		
2019-20	Mumbida 90 (90MW Wind), Kwinana OCGT #1 100 (99MW OCGT), Regional Diesel #4 40 (39.6MW Diesel),		
2020-21	Northern Terminal OCGT #1 100 (99MW OCGT),		
Ranking	Top Down Pro	bability	FINAL Scenario Probability
4	7.4%		7.4%
1			



Installed Capacity

2010 Generation Scenario Outlook for the SWIS

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Scenario # CPT Th	eme: 5%	40% theme weighting	
9 Load Th	eme: CNTRL	40% theme weighting	
Gas Availability Th	eme: ABUND	30% theme weighting	
Wind Ambition Th	eme: HI	40% theme weighting	
Planting Sche	dule: A	1 of 0 planting scenarios for the 0.05-CNTRL-ABUND-HI Outlook	



Peak Summer Requirement

Surplus Capacity



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13			
2013-14	Collgar Stage 1 206 (206MW Wind), Muja AB 220 (198.44MW Coal), Alinta Walkaway 2 94 (94MW Wind),		
2014-15	Badgingarra 130 (130MW Wind), Grasmere 14 (14MW Wind), Kwinana CCGT #1 200 (194.2MW CCGT),		
2015-16	Merredin 74 (73.26MW Diesel), Collgar Stage 2 30 (30MW Wind), Milyeannup 55 (55MW Wind), Nilgen 132 (132MW Wind),		
2016-17	Mumbida 90 (90MW Wind), Coolimba OCGT 360 (356.4MW OCGT),		
2017-18	Dandaragan - Yandin 389.4 (389.4MW Wind),		
2018-19	Centauri 1 168 (166.32MW OCGT), Kwinana OCGT #1 100 (99MW OCGT), Kwinana CCGT #2 200 (194.2MW CCGT),	Muja C 400 (-360.8MW Coal),	
2019-20	Dandaragan - Waddi 198 (198MW Wind), Northern Terminal CCGT #1 200 (194.2MW CCGT),		
2020-21	Cervantes 40 (40MW Wind),		
Ranking	Top Down Prol	bability	FINAL Scenario Probability
20	1.9%	·	1.9%



Installed Capacity

2010 Generation Scenario Outlook for the SWIS

Scenario #	CPT Theme:	5%	40% theme weighting	
<mark>10</mark>	Load Theme:	CNTRL	40% theme weighting	
	Gas Availability Theme:	ABUND	30% theme weighting	
	Wind Ambition Theme:	LO	60% theme weighting	
	Planting Schedule:	Α	1 of 0 planting scenarios for the 0.05-CNTRL-ABUND-LO Outlook	



Surplus Capacity

Peak Summer Requirement



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13			
2013-14	Collgar Stage 1 206 (206MW Wind), Muja AB 220 (198.44MW Coal), Carnegie Wave 1 5 (5MW Wave),		
2014-15	Merredin 74 (73.26MW Diesel), DSM 2 50 (50MW DSM), Centauri 1 168 (166.32MW OCGT),		
2015-16	Badgingarra 130 (130MW Wind), Nilgen 132 (132MW Wind), Mingenew Solar Thermal 1 50 (45MW Solar Thermal), North Country CCGT #1 200 (194.2MW CCGT),		
2016-17	Henderson 60 (60MW Wind),		
2017-18	Spiritwest Neerabup 29.9 (29.9MW Biomass), Milyeannup 55 (55MW Wind), Northern Terminal OCGT #1 100 (99MW OCGT), Regional Diesel #1 40 (39.6MW Diesel),		
2018-19	Cervantes 40 (40MW Wind), Northern Terminal OCGT #2 100 (99MW OCGT),		
2019-20	Kwinana OCGT #1 100 (99MW OCGT), Kwinana CCGT #1 200 (194.2MW CCGT), Regional Diesel #2 40 (39.6MW Diesel),		
2020-21			
Ranking	Top Down Pro	bability	FINAL Scenario Probability
15	2.9%	,	2.9%





e: 5%	40% theme weighting	
e: CNTRL	40% theme weighting	
e: LIMTD	70% theme weighting	
e: HI	40% theme weighting	
e: A	1 of 0 planting scenarios for the 0.05-CNTRL-LIMTD-HI Outlook	
ו ו ו	e: 5% cNTRL e: LIMTD e: HI le: A	Signal 40% theme weighting He: CNTRL 40% theme weighting He: LIMTD 70% theme weighting HI 40% theme weighting HI 40% theme weighting He: A 1 of 0 planting scenarios for the 0.05-CNTRL-LIMTD-HI Outlook



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13			
2013-14	Collgar Stage 1 206 (206MW Wind), Muja AB 220 (198.44MW Coal), DSM 2 50 (50MW DSM),		
2014-15	Merredin 74 (73.26MW Diesel), Badgingarra 130 (130MW Wind), DSM 3 50 (50MW DSM), Milyeannup 55 (55MW Wind),		
2015-16	Carnegie Wave 1 5 (5MW Wave), Grasmere 14 (14MW Wind), Alinta Walkaway 2 94 (94MW Wind), Bluewaters 3 215 (193.93MW Ccal),		
2016-17	Spiritwest Neerabup 29.9 (29.9MW Biomass), Nilgen 132 (132MW Wind), Mingenew Solar Thermal 1 50 (45MW Solar Thermal),		
2017-18	Mumbida 90 (90MW Wind), Coolimba OCGT 360 (356.4MW OCGT),		
2018-19	Henderson 60 (60MW Wind), Kwinana OCGT #1 100 (99MW OCGT),		
2019-20	Augusta 50 (50MW Wind), Northern Terminal OCGT #1 100 (99MW OCGT),		
2020-21	Regional Diesel #1 40 (39.6MW Diesel),		
Ranking	Top Down Pro	bability	FINAL Scenario Probability
9	4.5%		4.5%



Installed Car

2010 Generation Scenario Outlook for the SWIS

Scenario #	CPT Theme:	5%	40% theme weighting	
12	Load Theme:	CNTRL	40% theme weighting	
	Gas Availability Theme:	LIMTD	70% theme weighting	
	Wind Ambition Theme:	LO	60% theme weighting	
	Planting Schedule:	Α	1 of 0 planting scenarios for the 0.05-CNTRL-LIMTD-LO Outlook	



Surplus Capacity

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	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13	DSM 2 50 (50MW DSM),		
2013-14	Collgar Stage 1 206 (206MW Wind), Muja AB 220 (198.44MW Coal),		
2014-15	Merredin 74 (73.26MW Diesel), Badgingarra 130 (130MW Wind), Carnegie Wave 1 5 (5MW Wave), DSM 3 50 (50MW DSM),		
2015-16	Spiritwest Neerabup 29.9 (29.9MW Biomass), Coolimba OCGT 360 (356.4MW OCGT),		
2016-17	Grasmere 14 (14MW Wind), Bluewaters 3 215 (193.93MW Coal), DSM 4 77 (77MW DSM), Mumbida 90 (90MW Wind),		
2017-18	Milyeannup 55 (55MW Wind), Kalgoorlie 2 1.77 (1.77MW Solar PV),		
2018-19			
2019-20	Kwinana OCGT #1 100 (99MW OCGT), Northern Terminal OCGT #1 100 (99MW OCGT),		
2020-21	Kwinana OCGT #2 100 (99MW OCGT),		
Ranking	Top Down Prol	bability	FINAL Scenario Probability
5	6.7%		6.7%





D 2016-17 Vind 2018-19 2010-11 Coal 2012-13 2013-14 2014-15 2015-16 2017-18 2019-20 Diesel

Scenario #	CPT Theme:	5%	40% theme weighting	
13	Load Theme:	HIGH	60% theme weighting	
Ga	as Availability Theme:	ABUND	30% theme weighting	
v	Vind Ambition Theme:	HI	40% theme weighting	
	Planting Schedule:	А	1 of 0 planting scenarios for the 0.05-HIGH-ABUND-HI Outlook	



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13	DSM 2 50 (50MW DSM),		
2013-14	Collgar Stage 1 206 (206MW Wind), Muja AB 220 (198.44MW Coal), Badgingarra 130 (130MW Wind), DSM 3 50 (50MW DSM), Regional Diesel #1 40 (39.6MW Diesel),		
2014-15	Carnegie Wave 1 5 (5MW Wave), Coltgar Stage 2 30 (30MW Wind), Miyeannup 55 (55MW Wind), Centauri 1 168 (166.32MW OCGT), Coolimba OCGT 360 (356.4MW OCGT), North Country CCGT #1 200 (194.2MW CCGT), Regional Diesel #2 40 (39.6MW Diesel),		
2015-16	Nilgen 132 (132MW Wind), Mumbida 90 (90MW Wind), Kwinana CCGT #1 200 (194.2MW CCGT),		
2016-17	Merredin 74 (73.26MW Diesei), Grasmere 14 (14MW Wind), North Country OCGT #1 100 (99MW OCGT),		
2017-18	Alinta Walkaway 2 94 (94MW Wind), Dandaragan - Yandin 389.4 (389.4MW Wind), North Country OCGT #2 100 (99MW OCGT),		
2018-19	Augusta 50 (50MW Wind), Kwinana CCGT #2 200 (194.2MW CCGT),		
2019-20	Kwinana OCGT #1 100 (99MW OCGT), Regional Diesel #3 40 (39.6MW Diesel),		
2020-21	Dandaragan - Waddi 198 (198MW Wind), Regional Diesel #4 40 (39.6MW Diesel),		
Ranking	Top Down Pro	bability	FINAL Scenario Probability
16	2 0%		2 9%
10	2.9%		2.370



40% theme weighting
60% theme weighting
30% theme weighting
60% theme weighting
1 of 0 planting scenarios for the 0.05-HIGH-ABUND-LO Outlook
)



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13	Muja AB 220 (198.44MW Coal),		
2013-14	Collgar Stage 1 206 (206MW Wind), Badgingara 130 (130MW Wind), DSM 2 50 (50MW DSM), Regional Diesel #1 40 (39.6MW Diesel),		
2014-15	Merredin 74 (73.26MW Diesel), Mingenew Solar Thermal 1 50 (45MW Solar Thermal), Centauri 1 168 (166.32MW OCGT), Coolimba OCGT 360 (356.4MW OCGT), North Country CCGT #1 200 (194.2MW CCGT),		
2015-16	Kalgoorlie 2 1.77 (1.77MW Solar PV), Kwinana CCGT #1 200 (194.2MW CCGT), Regional Diesel #2 40 (39.6MW Diesel),		
2016-17	Collgar Stage 2 30 (30MW Wind), Mumbida 90 (90MW Wind), Kwinana CCGT #2 200 (194.2MW CCGT),		
2017-18	Alinta Walkaway 2 94 (94MW Wind), Newworld Geothermal 1 5 (4.25MW Geo), North Country OCGT #1 100 (99MW OCGT), Regional Diesel #3 40 (39.6MW Diesel),		
2018-19	Nilgen 132 (132MW Wind), Northern Terminal CCGT #1 200 (194.2MW CCGT),		
2019-20	Northern Terminal OCGT #1 100 (99MW OCGT),		
2020-21	Kwinana OCGT #1 100 (99MW OCGT),		
Ranking	Top Down Pro	bability	FINAL Scenario Probability
10	4.3%		4.3%
1			



Scenario #

2010 Generation Scenario Outlook for the SWIS

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40% theme weighting
60% theme weighting
70% theme weighting
40% theme weighting
1 of 0 planting scenarios for the 0.05-HIGH-LIMTD-HI Outlook



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13	Muja AB 220 (198.44MW Coal), DSM 2 50 (50MW DSM),		
2013-14	Collgar Stage 1 206 (206MW Wind), Merredin 74 (73.26MW Diesel), Carnegie Wave 1 5 (5MW Wave), DSM 3 50 (50MW DSM), Bluewaters 3 215 (193.93MW Coal),		
2014-15	Badgingarra 130 (130MW Wind), Grasmere 14 (14MW Wind), Mingenew Solar Thermal 1 50 (45MW Solar Thermai), Coolimba OCGT 360 (356.4MW OCGT),		
2015-16	Calgar Stage 2 30 (30MW Wind), Spiritiwest Neerabup 29.9 (29.9MW Biomass), Bluewaters 4 215 (193.93MW Coal), Mumbida 90 (90MW Wind),		
2016-17	Milyeannup 55 (55MW Wind), Centauri 1 168 (166.32MW OCGT), Northern Terminal OCGT #2 100 (99MW OCGT), Regional Diesel #1 40 (39.6MW Diesel),		
2017-18	Alinta Walkaway 2 94 (94MW Wind), DSM 4 77 (77MW DSM), Augusta 50 (50MW Wind), Cervantes 40 (40MW Wind), Northern Terminal OCGT #1 100 (99MW OCGT),		
2018-19	Nilgen 132 (132MW Wind), North Country OCGT #1 100 (99MW OCGT), Regional Diesel #2 40 (39.6MW Diesel),		
2019-20	Henderson 60 (60MW Wind), Kwinana OCGT #1 100 (99MW OCGT), North Country OCGT #2 100 (99MW OCGT),		
2020-21	Kwinana OCGT #2 100 (99MW OCGT),		
Ranking	Top Down Prol	pability	FINAL Scenario Probability
5	6.7%	-	6.7%



2010 Generation Scenario Outlook for the SWIS

2019-20 Diesel

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CPT Theme:	5%	40% theme weighting	
Load Theme:	HIGH	60% theme weighting	
Gas Availability Theme:	LIMTD	70% theme weighting	
Wind Ambition Theme:	LO	60% theme weighting	
Planting Schedule:	Α	1 of 0 planting scenarios for the 0.05-HIGH-LIMTD-LO Outlook	
	CPT Theme: Load Theme: Gas Availability Theme: Wind Ambition Theme: Planting Schedule:	CPT Theme: 5% Load Theme: HIGH Gas Availability Theme: LIMTD Wind Ambition Theme: LO Planting Schedule: A	CPT Theme: 5% 40% theme weighting Load Theme: HIGH 60% theme weighting Gas Availability Theme: LIMTD 70% theme weighting Wind Ambition Theme: LO 60% theme weighting Planting Schedule: A 1 of 0 planting scenarios for the 0.05-HIGH-LIMTD-LO Outlook



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13	Muja AB 220 (198.44MW Coal),		
2013-14	Collgar Stage 1 206 (206MW Wind), DSM 2 50 (50MW DSM), Bluewaters 3 215 (193.93MW Coal),		
2014-15	Merredin 74 (73.28MW Diesel), DSM 3 50 (50MW DSM), Mingenew Solar Thermal 1 50 (45MW Solar Thermal), DSM 4 77 (77MW DSM), Coolimba OCGT 360 (356.4MW OCGT),		
2015-16	Badgingarra 130 (130MW Wind), Collgar Stage 2 30 (30MW Wind), Bluewaters 4 215 (193.93MW Coal), Regional Diesel #1 40 (39.6MW Diesel),		
2016-17	Grasmere 14 (14MW Wind), Mumbida 90 (90MW Wind), North Country OCGT #1 100 (99MW OCGT), Regional Diesel #2 40 (39.6MW Diesel), Regional Diesel #3 40 (39.6MW Diesel),		
2017-18	Alinta Walkaway 2 94 (94MW Wind), Centauri 1 168 (166.32MW OCGT), North Country OCGT #2 100 (99MW OCGT),		
2018-19	Nilgen 132 (132MW Wind), Kwinana OCGT #1 100 (99MW OCGT), Regional Diesel #4 40 (39.6MW Diesel),		
2019-20	Kwinana OCGT #2 100 (99MW OCGT), Northern Terminal OCGT #1 100 (99MW OCGT),		
2020-21	Newworld Geothermal 1 5 (4.25MW Geo), Northern Terminal OCGT #2 100 (99MW OCGT),		
Ranking	Top Down Pro	bability	FINAL Scenario Probability
2	10.1%		10.1%





Installed Capacity

Scenario #	CPT Theme:	15%	35% theme weighting	
17	Load Theme:	CNTRL	75% theme weighting	
	Gas Availability Theme:	ABUND	30% theme weighting	
	Wind Ambition Theme:	н	40% theme weighting	
	Planting Schedule:	Α	1 of 0 planting scenarios for the 0.15-CNTRL-ABUND-HI Outlook	



Surplus Capacity

Peak Summer Requirement



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13			
2013-14	Collgar Stage 1 206 (206MW Wind), Muja AB 220 (198.44MW Coal), DSM 2 50 (50MW DSM),		
2014-15	Badgingarra 130 (130MW Wind), Coolimba OCGT 360 (356.4MW OCGT),		
2015-16	Carnegie Wave 1 5 (5MW Wave), Collgar Stage 2 30 (30MW Wind), Mingenew Solar Thermal 1 50 (45MW Solar Thermal), Centauri 1 168 (166.32MW OCGT),		
2016-17	Grasmere 14 (14MW Wind), Nilgen 132 (132MW Wind), Kalgooriie 2 1.77 (1.77MW Solar PV), Mumbida 90 (90MW Wind),		
2017-18	Spiritwest Neerabup 29.9 (29.9MW Biomass), Alinta Walkaway 2 94 (94MW Wind), Newworld Geothermal 15 (4.25MW Geo), Dandaragan - Yandin 389.4 (389.4MW Wind), Mingenew Solar Thermal 25 0 (45MW Solar Thermal), Kwinana CCGT #1 200 (194.2MW CCGT), Regional Diesel #1 40 (39.6MW Diesel),	Muja C 400 (-360.8MW Coal),	
2018-19	Milyeannup 55 (55MW Wind), Dandaragan - Waddi 198 (198MW Wind), Kwinana CCGT #2 200 (194.2MW CCGT), Regional Diesel #2 40 (39.6MW Diesel),		
2019-20	Henderson 60 (60MW Wind), Regional Diesel #3 40 (38.6MW Diesel),		
2020-21	Northern Terminal OCGT #1 100 (99MW OCGT),		
Ranking	Top Down Pro	bability	FINAL Scenario Probability
12	3.2%		3.2%

Scenario #	CPT Theme:	15%	35% theme weighting	
18	Load Theme:	CNTRL	75% theme weighting	
	Gas Availability Theme:	ABUND	30% theme weighting	
	Wind Ambition Theme:	LO	60% theme weighting	
	Planting Schedule:	Α	1 of 0 planting scenarios for the 0.15-CNTRL-ABUND-LO Outlook	



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13			
2013-14	Collgar Stage 1 206 (206MW Wind), DSM 2 50 (50MW DSM), DSM 3 50 (50MW DSM),		
2014-15	Badgingarra 130 (130MW Wind), Spiritwest Neerabup 29.9 (29.9MW Biomass), Mingenew Solar Thermal 1 50 (45MW Solar Thermal), Kwinana CCGT #1 200 (194.2MW CCGT),		
2015-16	Carnegie Wave 1 5 (5MW Wave), North Country CCGT #1 200 (194.2MW CCGT),		
2016-17	Grasmere 14 (14MW Wind), Mingenew Solar Thermal 2 50 (45MW Solar Thermal), Mumbida 90 (90MW Wind), Kwinana CCGT #2 200 (194.2MW CCGT),		
2017-18	Milyeannup 55 (55MW Wind), Centauri 1 168 (166.32MW OCGT), Kwinana OCGT #1 100 (99MW OCGT),		
2018-19	Newworld Geothermal 1 5 (4.25MW Geo), Augusta 50 (50MW Wind), Northern Terminal OCGT #1 100 (99MW OCGT),		
2019-20	Mingenew Solar Thermal 3 150 (135MW Solar Thermal), Kwinana OCGT #3 100 (99MW OCGT), Northern Terminal OCGT #2 100 (99MW OCGT),		
2020-21	Kwinana OCGT #2 100 (99MW OCGT), Northern Terminal OCGT #3 100 (99MW OCGT), Regional Diesel #1 40 (39.6MW Diesel), Regional Diesel #2 40 (39.6MW Diesel),	Muja C 400 (-360.8MW Coal),	
Ranking	Top Down Pro	bability	FINAL Scenario Probability
8	4.7%		4.7%
1			





CPT Theme:	15%	35% theme weighting	
Load Theme:	CNTRL	75% theme weighting	
Gas Availability Theme:	LIMTD	70% theme weighting	
Wind Ambition Theme:	н	40% theme weighting	
Planting Schedule:	Α	1 of 0 planting scenarios for the 0.15-CNTRL-LIMTD-HI Outlook	
	CPT Theme: Load Theme: Gas Availability Theme: Wind Ambition Theme: Planting Schedule:	CPT Theme: 15% Load Theme: CNTRL Gas Availability Theme: LIMTD Wind Ambition Theme: HI Planting Schedule: A	CPT Theme: 15% 35% theme weighting Load Theme: CNTRL 75% theme weighting Gas Availability Theme: LIMTD 70% theme weighting Wind Ambition Theme: HI 40% theme weighting Planting Schedule: A 1 of 0 planting scenarios for the 0.15-CNTRL-LIMTD-HI Outlook



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13	DSM 2 50 (50MW DSM), DSM 3 50 (50MW DSM),		
2013-14	Collgar Stage 1 206 (206MW Wind), Merredin 74 (73.26MW Diesel), Carnegie Wave 1 5 (5MW Wave),		
2014-15	Collgar Stage 2 30 (30MW Wind), Grasmere 14 (14MW Wind), Milyeannup 55 (55MW Wind), Coolimba OCGT 360 (356.4MW OCGT),		
2015-16	Badgingarra 130 (130MW Wind), Alinta Walkaway 2 94 (94MW Wind), Mingenew Solar Thermal 1 50 (45MW Solar Thermal), Mumbida 90 (90MW Wind),		
2016-17	Spiritwest Neerabup 29.9 (29.9MW Biomass), Centauri 1 168 (166.32MW OCGT), Mingenew Solar Thermal 2 50 (45MW Solar Thermal), Kwinana OCGT #1 100 (99MW OCGT), Northern Terminal OCGT #1 100 (99MW OCGT),	Muja C 400 (-360.8MW Coal),	
2017-18	Nigen 132 (132MW Wind), Kalgoorie 2 1.77 (1.77MW Solar PV), Dandaragan - Yandin 389.4 (389.4MW Wind), Northern Terminal OCGT #2 100 (99MW OCGT),		
2018-19	Dandaragan - Waddi 198 (198MW Wind), Kwinana OCGT #2 100 (99MW OCGT), Northern Terminal OCGT #3 100 (99MW OCGT),		
2019-20	Augusta 50 (50MW Wind), Kwinana OCGT #3 100 (99MW OCGT),		
2020-21	Henderson 60 (60MW Wind), Kwinana OCGT #4 100 (99MW OCGT),		
Ranking	Top Down Prol	bability	FINAL Scenario Probability
3	7.4%		7.4%



Scenario #	CPT Theme:	15%	35% theme weighting	
20	Load Theme:	CNTRL	75% theme weighting	
	Gas Availability Theme:	LIMTD	70% theme weighting	
	Wind Ambition Theme:	LO	60% theme weighting	
	Planting Schedule:	Α	1 of 0 planting scenarios for the 0.15-CNTRL-LIMTD-LO Outlook	



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13			
2013-14	Collgar Stage 1 206 (206MW Wind), Muja AB 220 (198.44MW Coal), DSM 2 50 (50MW DSM),		
2014-15	Merredin 74 (73.26MW Diesel), DSM 3 50 (50MW DSM), Coolimba OCGT 360 (356.4MW OCGT),		
2015-16	Badgingarra 130 (130MW Wind), Nilgen 132 (132MW Wind), Mingenew Solar Thermal 1 50 (45MW Solar Thermal),		
2016-17	Carnegie Wave 1 5 (5MW Wave), Collgar Stage 2 30 (30MW Wind), Milyearnup 55 (55MW Wind), Newworld Geothermal 1 5 (4.25MW Geo), DSM 4 77 (77MW DSM), Kalgoorie 2 1.77 (1.77MW Solar Pv), Cervantes 40 (40MW Wind),		
2017-18	Grasmere 14 (14MW Wind), Dandaragan - Yandin 389.4 (389.4MW Wind),		
2018-19	Centauri 1 168 (166.32MW OCGT), Augusta 50 (50MW Wind), Mingenew Solar Thermal 2 50 (45MW Solar Thermal),		
2019-20	Mumbida 90 (90MW Wind), Kwinana OCGT #1 100 (99MW OCGT),		
2020-21	Dandaragan - Waddi 198 (198MW Wind),		
Ranking	Top Down Pro	bability	FINAL Scenario Probability
	11.0%		11.0%
1	11.0%		11.070



Scenario #	CPT Theme:	15%	35% theme weighting	
21	Load Theme:	HIGH	25% theme weighting	
	Gas Availability Theme:	ABUND	30% theme weighting	
	Wind Ambition Theme:	Н	40% theme weighting	
	Planting Schedule:	Α	1 of 0 planting scenarios for the 0.15-HIGH-ABUND-HI Outlook	



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13	Merredin 74 (73.26MW Diesei), Badgingarra 130 (130MW Wind), DSM 2 50 (50MW DSM), DSM 3 50 (50MW DSM),		
2013-14	Collgar Stage 1 206 (206MW Wind), DSM 4 77 (77MW DSM), Regional Diesel #1 40 (39.6MW Diesel),		
2014-15	Carnegie Wave 1 5 (5MW Wave), Spiritwest Neerabup 29.9 (29.9MW Biomass), Grasmere 14 (14MW Wind), Mingenew Solar Thermal 1 50 (45MW Solar Thermal), Centauri 1 168 (166.32MW OCGT), Kwinana CCGT #1 200 (194.2MW CCGT), Kwinana CCGT #2 200 (194.2MW CCGT),		
2015-16	Cellgar Stage 2 30 (30MW Wind), Milyeannup 55 (55MW Wind), Dandaragan - Yandin 389.4 (389.4MW Wind), Mumbida 90 (90MW Wind), Northern Terminal OCGT #1 100 (99MW OCGT), Regional Diesel #2 40 (39.6MW Diesel),		
2016-17	Nilgen 132 (132MW Wind), Henderson 60 (60MW Wind), Mingenew Solar Thermal 2 50 (45MW Solar Thermal), North Country CCGT #1 200 (194.2MW CCGT),		
2017-18	Alinta Walkaway 2 94 (94MW Wind), Joanna Plains 40 (40MW Wind), Coolimba OCGT 360 (356.4MW OCGT),		
2018-19	Dandaragan - Waddi 198 (198MW Wind), Carvantes 40 (40MW Wind), North Country OCGT #1 100 (99MW OCGT), North Country OCGT #2 100 (99MW OCGT),		
2019-20	Kalgoorlie 2 1.77 (1.77MW Solar PV), Kwinana OCGT #1 100 (99MW OCGT),		
2020-21	Mingenew Solar Thermal 3 150 (135MW Solar Thermal),		
Ranking	Top Down Pro	bability	FINAL Scenario Probability
23	1 1%		1.1%





35% theme weighting
25% theme weighting
30% theme weighting
60% theme weighting
1 of 0 planting scenarios for the 0.15-HIGH-ABUND-LO Outlook



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13	Muja AB 220 (198.44MW Coal), DSM 2 50 (50MW DSM),		
2013-14	Collgar Stage 1 206 (206MW Wind), DSM 3 50 (50MW DSM),		
2014-15	Badgingarra 130 (130MW Wind), Spiritwest Neerabup 29.9 (29.9MW Biomass), Mingenew Solar Thermal 1 50 (45MW Solar Thermai), DSM 4 77 (77MW DSM), Centauri 1 168 (168.32MW OCGT), Coolimba OCGT 380 (3654MW OCGT), Kwinana CCGT #1 200 (194.2MW CCGT),		
2015-16	Milyeannup 55 (55MW Wind), Newworld Geothermal 1 5 (4.25MW Geo), Kalgocrile 2 1.77 (1.77MW Solar PV), North Country CCGT #1 200 (194.2MW CCGT),		
2016-17	Carnegie Wave 1 5 (5MW Wave), Augusta 50 (50MW Wind), Mingenew Solar Thermal 2 50 (45MW Solar Thermal), Murnbida 90 (90MW Wind), Kwinana CCGT #2 200 (194.2MW CCGT),		
2017-18	Mingenew Solar Thermal 3 150 (135MW Solar Thermal), North Country OCGT #1 100 (99MW OCGT),		
2018-19	Nilgen 132 (132MW Wind), Dandaragan - Waddi 198 (198MW Wind), Kwinana OCGT #1 100 (99MW OCGT), Northern Terminal CCGT #1 200 (194.2MW CCGT),		
2019-20			
2020-21	North Country OCGT #2 100 (99MW OCGT), Northern Terminal OCGT #1 100 (99MW OCGT),		
Ranking	Top Down Prol	bability	FINAL Scenario Probability
21	1.6%		1.6%

Scenar

CPT Theme:	15%	35% theme weighting	
Load Theme:	HIGH	25% theme weighting	
Gas Availability Theme:	LIMTD	70% theme weighting	
Wind Ambition Theme:	н	40% theme weighting	
Planting Schedule:	Α	1 of 0 planting scenarios for the 0.15-HIGH-LIMTD-HI Outlook	
	CPT Theme: Load Theme: Gas Availability Theme: Wind Ambition Theme: Planting Schedule:	CPT Theme: 15% Load Theme: HIGH Gas Availability Theme: LIMTD Wind Ambition Theme: HI Planting Schedule: A	CPT Theme: 15% 35% theme weighting Load Theme: HIGH 25% theme weighting Gas Availability Theme: LIMTD 70% theme weighting Wind Ambition Theme: HI 40% theme weighting Planting Schedule: A 1 of 0 planting scenarios for the 0.15-HIGH-LIMTD-HI Outlook



	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13	Merredin 74 (73.26MW Diesel), DSM 2 50 (50MW DSM),		
2013-14	Collgar Stage 1 206 (206MW Wind), DSM 3 50 (50MW DSM), Centauri 1 168 (166.32MW OCGT),		
2014-15	Muja AB 220 (198.44MW Coal), Badgingarra 130 (130MW Wind), Grasmere 14 (14MW Wind), Nilgen 132 (132MW Wind), Coolimba OCGT 360 (356.4MW OCGT),		
2015-16	Collgar Stage 2 30 (30MW Wind), Spiritwest Neerabup 29.9 (29.9MW Biomass), Mingenew Solar Thermal 1 50 (45MW Solar Thermal), DSN 4 77 (77MW DSN), Mumbida 80 (90MW Wind), North Country OCGT #1 100 (99MW OCGT),		
2016-17	Carnegie Wave 1 5 (5MW Wave), Newworld Geothermal 1 5 (4.25MW Geot), Dandaragan - Yandin 389 4 (389.4MW Wind), Kwinana OCGT #1 100 (99MW OCGT), North Country OCGT #2 100 (99MW OCGT), Regional Diesel #1 40 (39.6MW Diesel),		
2017-18	Milyeannup 55 (55MW Wind), Kalgoorlie 2 1.77 (1.77MW Solar PV), Mingenew Solar Thermal 2 50 (45MW Solar Thermal), North Country OCGT #3 100 (99MW OCGT), Northern Terminal OCGT #1 100 (99MW OCGT), Regional Diesel #2 40 (39.6MW Diesel),		
2018-19	Alinta Walkaway 2 94 (94MW Wind), Dandaragan - Waddi 198 (198MW Wind), Joanna Plains 40 (40MW Wind), Northern Terminal OCGT #2 100 (99MW OCGT),		
2019-20	Mingenew Solar Thermal 3 150 (135MW Solar Thermal), Kwinana OCGT #2 100 (99MW OCGT), Regional Diesel #3 40 (39.6MW Diesel),		
2020-21	Henderson 60 (60MW Wind), North Country OCGT #4 100 (99MW OCGT),		
Ranking	Top Down Pro	pability	FINAL Scenario Probability
17	2 5%		2.5%
	2.070		





CPT Theme:	15%	35% theme weighting	
Load Theme:	HIGH	25% theme weighting	
Gas Availability Theme:	LIMTD	70% theme weighting	
Wind Ambition Theme:	LO	60% theme weighting	
Planting Schedule:	Α	1 of 0 planting scenarios for the 0.15-HIGH-LIMTD-LO Outlook	
	CPT Theme: Load Theme: Gas Availability Theme: Wind Ambition Theme: Planting Schedule:	CPT Theme: 15% Load Theme: HIGH Gas Availability Theme: LIMTD Wind Ambition Theme: LO Planting Schedule: A	CPT Theme: 15% 35% theme weighting Load Theme: HIGH 25% theme weighting Gas Availability Theme: LIMTD 70% theme weighting Wind Ambition Theme: LO 60% theme weighting Planting Schedule: A 1 of 0 planting scenarios for the 0.15-HIGH-LIMTD-LO Outlook





	New Projects	Retirements	Comments
2009-10			
2010-11			
2011-12	Kwinana HEGT 194 (188.374MW CCGT), DSM 1 50 (50MW DSM),	Kwinana A 240 (-216.48MW Coal),	
2012-13	Muja AB 220 (198.44MW Ccal), Merredin 74 (73.26MW Diesel), DSM 2 50 (50MW DSM),		
2013-14	Collgar Stage 1 206 (206MW Wind), Badgingarra 130 (130MW Wind), DSM 3 50 (50MW DSM),		
2014-15	DSM 4 77 (77MW DSM), Coolimba OCGT 360 (356.4MW OCGT), North Country OCGT #1 100 (99MW OCGT), Regional Diesel #1 40 (39.6MW Diesel), Regional Diesel #2 40 (39.6MW Diesel),		
2015-16	Carnegie Wave 1 5 (5MW Wave), Collgar Stage 2 30 (30MW Wind), Spiritwest Neerabup 29.9 (29,9MW Biomass), Mingenew Solar Thermal 1 50 (45MW Solar Thermal), Centauri 1 168 (166.32MW OCGT), Cervantes 40 (40MW Wind),		
2016-17	Milyeannup 55 (55MW Wind), Newworld Geothermal 1 5 (4.25MW Geo), Kalgoorlie 2 1.77 (1.77MW Solar PV), Augusta 50 (50MW Wind), Mingenew Solar Thermal 2 50 (45MW Solar Thermal), North Country OCCT #2 100 (99MW OCGT), Regional Diesel #3 40 (39.6MW Diesel),		
2017-18	Alinta Walkaway 2 94 (94MW Wind), Dandaragan - Yandin 389.4 (389.4MW Wind), North Country OCGT #3 100 (99MW OCGT), Northern Terminal OCGT #1 100 (99MW OCGT),		
2018-19	Mingenew Solar Thermal 3 150 (135MW Solar Thermal), Kwinana OCGT #1 100 (99MW OCGT), Northern Terminal OCGT #2 100 (99MW OCGT), Regional Diesel #4 40 (39.6MW Diesel),		
2019-20	Dandaragan - Waddi 198 (198MW Wind), Joanna Plains 40 (40MW Wind), North Country OCGT #4 100 (99MW OCGT),		
2020-21	Kwinana OCGT #2 100 (99MW OCGT),		
Ranking	Top Down Prol	bability	FINAL Scenario Probability
11	3.7%		3.7%



(This is a potential New Plant)

Potential Project #

Appendix B (Projects) of Report to:

Wep00017 17th February 2011

1	Kwinan	a HEGT (188	located in the				Kwi	Kwinana node										
	Initially this project was rated a					Committed				lihood of proceeding, which was deemed				spond to a		100% pro	obability of	proceeding
At the completion of the scenario analysis project, the FINA						FINAL Project Probability for this project was calculated (across all the scenarios that were developed) to be								to be	be 100% probability of proceeding			
				The followi	ng table illus	trates the	vear in which	(for each s	scenario) tł	he plant is	assumed to	o be fully o	perational:					
			Þ	_														Ξ
	СРТ	Load	Gas vailability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	nal Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	А			YES										0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A			YES										1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A			YES										2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A			YES										3.15%
Scenario 5	0%	HIGH	ABUND	н	A			YES										2.1%
Scenario 6	0%	HIGH	ABUND	LO	A			YES										3.15%
Scenario 7	0%	HIGH	LIMTD	н	A			YES										4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A			YES										7.35%
Scenario 9	5%	CNTRL	ABUND	н	A			YES										1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A			YES										2.88%
Scenario 11	5%	CNIRL	LIMID	н	A			YES										4.48%
Scenario 12	5%	CNIRL	LIMID	LO	A			YES										6.72%
Scenario 13	5%	HIGH	ABUND	HI	A			YES										2.88%
Scenario 14	5%	HIGH	ABUND	10	A			TES										4.32%
Scenario 15	5%	HIGH			A			VES										10.08%
Scenario 16	15%				^			VES										2 15%
Scenario 18	15%	CNTRL	ABUND	10	A			YES										4.73%
Scenario 19	15%	CNTRI	LIMTD	н	A			YES										7.35%
Scenario 20	15%	CNTRI	LIMTD	10	A			YES										11.03%
Scenario 21	15%	HIGH	ABUND	н	A			YES										1.05%
Scenario 22	15%	HIGH	ABUND	LO	А			YES										1.58%
Scenario 23	15%	HIGH	LIMTD	н	A			YES										2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A			YES										3.68%
Probability of Proceeding in thi					his Year:	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Cumulative Probability						0%	0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
				_														
CPT Theme-Set					Load Growth Theme Set					Gas Availability Theme Set				Wind Penetration Theme Set			ne Set	
	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
0% 5%	8	8	100%	1	CNTRL HIGH	12 12	12 12	100% 100%		ABUND LIMTD	12	0	0% 0%		LO	12 12	0	0% 0%
15%	8	8	100%	1									•,,•					
Other Comments:		The State Gov	Verver	e Energy has nced the \$26 Constru	s awarded c 3 million pro	ontracts fo oject in Ma	or the supply, y 2009 as par ommence in .	constructio rt of the stra April 2010	n and com ategy to he and the ne	missioning elp maintair w plant wil	of two 100 n a secure be operat	DMW high supply of e ting before	efficiency g electricity in the 2011/1	as turbines WA as de 2 summer	s (HEGT). Imand for p	power cont	inued to gro	ow.


Potential Project #	(This is a	potential New F	Plant)															
2	Collgar	Stage 1 (206	6MW Wind)			locate	ed in the		East C	ountry		node						
		Initially t	his project was	rated a		Con	nmitted		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		100% pr	obability o	f proceeding
	At th	e completion of	the scenario ar	alysis projec	t, the FINA	Project P	robability for	this project	t was calc	ulated (acro	oss all the :	scenarios tl	hat were d	eveloped)	to be	100% pr	obability o	f proceeding
				The followi	ng table illus	trates the	year in which	(for each s	scenario) t	he plant is	assumed t	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	A					YES								0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A					YES								1.35%
Scenario 3	0%	CNTRL	LIMTD	н	А					YES								2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A					YES								3.15%
Scenario 5	0%	HIGH	ABUND	н	A					YES								2.1%
Scenario 6	0%	HIGH	ABUND	LO	A					YES								3.15%
Scenario 7	0%	HIGH	LIMTD	н	A					YES								4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A					YES								7.35%
Scenario 9	5%	CNTRL	ABUND	н	A					YES								1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A					YES								2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A					YES								4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A					YES								6.72%
Scenario 13	5%	HIGH	ABUND	н	A					YES								2.88%
Scenario 14	5%	HIGH	ABUND	LO	A					YES								4.32%
Scenario 15	5%	HIGH	LIMTD	н	A					YES								6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A					YES								10.08%
Scenario 17	15%	CNTRL	ABUND	н	A					YES								3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A					YES								4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A					YES								7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	A					YES								11.03%
Scenario 21	15%	HIGH	ABUND	н	A					YES								1.05%
Scenario 22	15%	HIGH	ABUND	LO	A					YES								1.58%
Scenario 23	15%	HIGH	LIMTD	н	A					YES								2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A					YES								3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	100%	100%	100%	100%	100%	100%	100%	100%	
	CPT	Theme-Set		1	L	oad Grow	th Theme Se	et		Ga	s Availabil	lity Theme	Set		Wi	ind Penetr	ration The	me Set
	SCE	pr	_	1		SCE	pr	_			SCE	pr	_			SCE	pr	_
0% 5%	Number of snarios with this ∞ ∞ o theme	Number of anarios in which ∞ ∞ o roject proceeds	Percentage of scenarios 100%		CNTRL HIGH	Number of theme 12	Number of snarios in which 12 roject proceeds	Percentage of % % scenarios 1 1		ABUND	Number of theme 12	Number of roject proceeds	Percentage of relevant scenarios		HI LO	Number of theme 12	Number of anarios in which O O roject proceeds	Percentage of relevant % scenarios
15%	8	8	100%	I														
Other Comments:	Collg	ar Wind Farm is	s a project consi	sting of 111	wind turbine	s located a	approximately	/ 25km sou complet	th east of ted by Apr	Merredin ir il 2012.	n Western .	Australia. I	Full constru	iction work	s will comr	nence in J	une 2010 a	ind will be



APPENDIX B

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	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	А			YES										0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А			YES										1.35%
Scenario 3	0%	CNTRL	LIMTD	н	А			YES										2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A			YES										3.15%
Scenario 5	0%	HIGH	ABUND	н	A			YES										2.1%
Scenario 6	0%	HIGH	ABUND	LO	A			YES										3.15%
Scenario 7	0%	HIGH	LIMTD	н	A			YES										4.9%
Scenario 8	0%	HIGH	LIMTD	LO	А			YES										7.35%
Scenario 9	5%	CNTRL	ABUND	н	A			YES										1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A			YES										2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A			YES										4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A			YES										6.72%
Scenario 13	5%	HIGH	ABUND	н	A			YES										2.88%
Scenario 14	5%	HIGH	ABUND	LO	A			YES										4.32%
Scenario 15	5%	HIGH	LIMTD	н	A			YES										6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A			YES										10.08%
Scenario 17	15%	CNTRL	ABUND	н	A			YES										3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A			YES										4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A			YES										7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	A			YES										11.03%
Scenario 21	15%	HIGH	ABUND	н	A			YES										1.05%
Scenario 22	15%	HIGH	ABUND	LO	A			YES										1.58%
Scenario 23	15%	HIGH	LIMTD	н	A			YES										2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A			YES										3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
	СРТ	Theme-Set		1	<u>г</u>	oad Grow	rth Theme So	et	I	Gas	s Availabil	ity Theme	Set		w	ind Penet	ration The	ne Set
	sce	p sc		1		so	p sc				sce	PSG				sce	PS	
0% 5% 15%	Number of theme	Number of roject proceeds	Percentage of relevant 00% 100%		CNTRL HIGH	Number of theme	Number of roject proceeds	Percentage of relevant scenarios		ABUND	Number of theme 12	Number of roject proceeds	Percentage of relevant % %		HI LO	Number of theme 12	Number of roject proceeds	Percentage of relevant % scenarios
Other Comments:	-		Total of 22	7MW of dem	and manag	ement pro	posed as par	t of the 201	0 Reserve	e Capacity	Mechanism	n New Cap	acity Expre	essions of	Interest pro	ocess.		

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The following table illustrates the year in which (for each scenario) the plant is assumed to be fully operational:

At the completion of the scenario analysis project, the FINAL Project Probability for this project was calculated (across all the scenarios that were developed) to be

node

3 DSM 1 (50MW DSM) located in the SWIS Initially this project was rated a Committed likelihood of proceeding, which was deemed to correspond to a

Potential Project # (This is a potential New Plant)

Wep00017 17th February 2011

100% probability of proceeding

100% probability of proceeding

2010 Generation Scenario Outlook for the SWIS

Potential Project #	(This is a	potential New F	Plant)															
4	Muja AB	3 (198.44MW	/ Coal)			locate	ed in the		м	uja		node						
	_1	Initially t	his project was	rated a		Ver	y High		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		70% pro	obability of	proceeding
	At th	e completion of	f the scenario ar	nalysis projec	t, the FINA	Project P	robability for	this project	t was calc	ulated (acro	oss all the	scenarios tł	nat were de	eveloped)	to be	87% pro	obability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	scenario) t	he plant is	assumed t	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	А				YES									0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A					YES								1.35%
Scenario 3	0%	CNTRL	LIMTD	н	А						YES							2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	А						YES							3.15%
Scenario 5	0%	HIGH	ABUND	н	A					YES								2.1%
Scenario 6	0%	HIGH	ABUND	LO	А					YES								3.15%
Scenario 7	0%	HIGH	LIMTD	н	А					YES								4.9%
Scenario 8	0%	HIGH	LIMTD	LO	А					YES								7.35%
Scenario 9	5%	CNTRL	ABUND	н	А					YES								1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A					YES								2.88%
Scenario 11	5%	CNTRL	LIMTD	н	А					YES								4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	А					YES								6.72%
Scenario 13	5%	HIGH	ABUND	н	А					YES								2.88%
Scenario 14	5%	HIGH	ABUND	LO	А				YES									4.32%
Scenario 15	5%	HIGH	LIMTD	н	А				YES									6.72%
Scenario 16	5%	HIGH	LIMTD	LO	А				YES									10.08%
Scenario 17	15%	CNTRL	ABUND	н	А					YES								3.15%
Scenario 18	15%	CNTRL	ABUND	LO	А													4.73%
Scenario 19	15%	CNTRL	LIMTD	н	А													7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А					YES								11.03%
Scenario 21	15%	HIGH	ABUND	н	А													1.05%
Scenario 22	15%	HIGH	ABUND	LO	А				YES									1.58%
Scenario 23	15%	HIGH	LIMTD	н	А						YES							2.45%
Scenario 24	15%	HIGH	LIMTD	LO	А				YES									3.68%
		Probabi	ility of Proce	eding in t	his Year:	0%	0%	0%	27%	52%	8%	0%	0%	0%	0%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	27%	79%	87%	87%	87%	87%	87%	87%	87%	
	CBT	Theme-Sot		1		oad Grow	th Theme S	ot			a Availati	lity Thoma	Set		14/2	ind Ponct	ration The	me Set
	<u>8</u>	T S		1	<u> </u>	Sau GIOW	%			Ga	s Availabl	_ s	Jei		V	s s		ile del
	Number of enarios with this theme	Number of enarios in which project proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of enarios in which project proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of project proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of enarios in which project proceeds	Percentage of relevant scenarios
0%	8	8	100%	1	CNTRL HIGH	12 12	10	83% 92%		ABUND LIMTD	12	0	0% 0%		HI LO	12 12	0	0% 0%
15%	8	5	63%					5270		2		0	070				0	0/0
Other Comments:	Verve E	nergy and Inalc	to Energy have s	signed an M0	DU to set up have Mi	a joint ver uja AB ope	iture to refurt rating again	bish, upgrad in time for t	de and rec he 2012 s	commission summer. It	Muja Pow will operat	ver Station e for about	Stages AB 15 years.	. To be kr	iown as Vir	nalco Ener	gy, the join	t venture will



Potential Project #	(This is a	potential New F	Plant)															
5	Merredi	n (73.26MW	Diesel)			locate	ed in the		East C	ountry		node						
	-	Initially t	his project was r	rated a		Ver	y High	I	likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		70% pro	bability of	proceeding
	At th	e completion of	the scenario ar	nalysis projec	t, the FINAI	L Project F	robability for	this project	was calc	ulated (acro	oss all the	scenarios ti	hat were d	eveloped)	to be	91% pro	bability of	proceeding
				The following	ng table illus	strates the	year in which	(for each s	cenario) t	he plant is	assumed t	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	A				YES									0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А						YES							1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A							YES						2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A						YES							3.15%
Scenario 5	0%	HIGH	ABUND	н	A					YES								2.1%
Scenario 6	0%	HIGH	ABUND	LO	A				YES									3.15%
Scenario 7	0%	HIGH	LIMTD	н	A						YES							4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A						YES							7.35%
Scenario 9	5%	CNTRL	ABUND	н	A							YES						1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A					ļ	YES							2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A						YES							4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A						YES							6.72%
Scenario 13	5%	HIGH	ABUND	н	A								YES					2.88%
Scenario 14	5%	HIGH	ABUND	LO	A						YES							4.32%
Scenario 15	5%	HIGH	LIMTD	н	A					YES								6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A						YES							10.08%
Scenario 17	15%	CNTRL	ABUND	н	A													3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A													4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A					YES								7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	A						YES							11.03%
Scenario 21	15%	HIGH	ABUND	н	A				YES	ļ								1.05%
Scenario 22	15%	HIGH	ABUND	LO	A													1.58%
Scenario 23	15%	HIGH	LIMTD	н	A				YES									2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A				YES									3.68%
		Probabi	lity of Proce	eding in th	his Year:	0%	0%	0%	11%	16%	56%	4%	3%	0%	0%	0%	0%	
			Cum	ulative Pro	obability	0%	0%	0%	11%	27%	84%	88%	91%	91%	91%	91%	91%	
r	CPT	Theme-Set		1		oad Grow	/th Theme So	et		Ga	s Availabi	lity Theme	Set		w	ind Penetr	ation The	me Set
	so	p sce		1		sce	p sc				sce	p SC				sce	p	
0%	Number of ∋narios with thi≲ ∞ theme	Number of enarios in which ∞ roject proceeds	Percentage of relevant scenarios	-	CNTRL	Number of enarios with this theme	Number of roject proceeds	Percentage of relevant 33 scenarios		ABUND	Number of theme	Number of enarios in which o roject proceeds	Percentage of relevant scenarios		HI	Number of enarios with this theme	Number of enarios in which o roject proceeds	Percentage of relevant % scenarios
5% 15%	8	8	100%	-	HIGH	12	11	92%		LIMTD	12	0	0%		LO	12	0	0%
Other Comments:	8	Another ner	w market entrar	I nt is the Nam	arrkon proje	ect near Me	erredin. It is a	biodiesel b	ack-up ge	eneration sy	/stem desi	gned to op	erate over	the summe	er months f	or 15-20 d	ays a year.	

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Potential Project #	(This is a	potential New F	Plant)															
6	Badging	garra (130M\	W Wind)			locate	ed in the		North	Country		node						
	-	Initially t	his project was	rated a		Ver	y High		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		70% pro	obability of	proceeding
	At th	e completion of	the scenario ar	nalysis projec	t, the FINA	Project P	robability for	this project	t was calc	ulated (acro	oss all the	scenarios tł	nat were de	eveloped)	to be	91% pro	obability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	scenario) t	he plant is	assumed t	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenaric Probability
Scenario 1	0%	CNTRL	ABUND	н	A				YES									0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A				YES									2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A					YES								3.15%
Scenario 5	0%	HIGH	ABUND	н	A				YES									2.1%
Scenario 6	0%	HIGH	ABUND	LO	A					YES								3.15%
Scenario 7	0%	HIGH	LIMTD	н	A						YES							4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A													7.35%
Scenario 9	5%	CNTRL	ABUND	н	A						YES							1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A							YES						2.88%
Scenario 11	5%	CNTRL	LIMTD	HI	A						YES							4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A						YES							6.72%
Scenario 13	5%	HIGH	ABUND	н	A					YES								2.88%
Scenario 14	5%	HIGH	ABUND	10	A					TES								4.32%
Scenario 15	5%	HIGH	LIMID	HI	A						YES	VEC						6.72%
Scenario 16	3%				~						VEC	TES						2.459/
Scenario 19	15%			10	A .						VES							A 73%
Scenario 19	15%	CNTRL	LIMTD	н	Δ						120	VES						7 35%
Scenario 20	15%	CNTRL	LIMTD	10	Δ							VES						11.03%
Scenario 21	15%	HIGH	ABUND	н	A				YES			120						1.05%
Scenario 22	15%	HIGH	ABUND	10	A						YES							1.58%
Scenario 23	15%	HIGH	LIMTD	н	A						YES							2.45%
Scenario 24	15%	HIGH	LIMTD	LO	А					YES								3.68%
		Probabi	litv of Proce	edina in t	his Year:	0%	0%	0%	6%	17%	37%	31%	0%	0%	0%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	6%	23%	60%	91%	91%	91%	91%	91%	91%	
I											I							
	CPT	Theme-Set	1	1	L	oad Grow	th Theme Se	et		Ga	s Availabi	lity Theme	Set		W	ind Penetr	ration The	ne Set
	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
0%	8	6	75%	-	CNTRL HIGH	12 12	11	92%		ABUND	12	0	0% 0%		HI LO	12 12	0	0%
15%	8	8	100%	1				5276		Linto		0	070		- 20		Ů	0/8
Other Comments:	The	Griffir e proposed new	n Energy, in a Jo / Badgingarra W	oint Developr Vind Farm is	nent with St expected to	anwell Cor be commi	poration, is p ssioned in lat	proposing to	develop a d will produ	a new wind uce up to 1	farm near 30 megaw	Badgingar	ra, approxi wable ene	mately 200 rgy, helpin) kilometre: g to meet \	s north of F WA's grow	Perth. ing energy	needs.

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Potential Project #	(This is a	potential New F	Plant)															
7	DSM 2 (50MW DSM)	1			locate	ed in the		SI	wis		node						
	3	Initially t	his project was	rated a		Ver	y High	I	likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		70% pro	bability of	proceeding
	At th	e completion of	the scenario ar	alysis projec	t, the FINAI	Project P	robability for	this project	was calc	ulated (acr	oss all the	scenarios tl	hat were de	eveloped)	to be	97% pro	bability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	cenario) t	he plant is	assumed t	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	А													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А					YES								1.35%
Scenario 3	0%	CNTRL	LIMTD	н	А							YES						2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	А						YES							3.15%
Scenario 5	0%	HIGH	ABUND	н	А				YES									2.1%
Scenario 6	0%	HIGH	ABUND	LO	А					YES								3.15%
Scenario 7	0%	HIGH	LIMTD	н	А					YES								4.9%
Scenario 8	0%	HIGH	LIMTD	LO	А					YES								7.35%
Scenario 9	5%	CNTRL	ABUND	н	A													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	А						YES							2.88%
Scenario 11	5%	CNTRL	LIMTD	н	А					YES								4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A				YES									6.72%
Scenario 13	5%	HIGH	ABUND	н	A				YES									2.88%
Scenario 14	5%	HIGH	ABUND	LO	A					YES								4.32%
Scenario 15	5%	HIGH	LIMTD	н	А				YES									6.72%
Scenario 16	5%	HIGH	LIMTD	LO	А					YES								10.08%
Scenario 17	15%	CNTRL	ABUND	н	А					YES								3.15%
Scenario 18	15%	CNTRL	ABUND	LO	А					YES								4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A				YES									7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А					YES								11.03%
Scenario 21	15%	HIGH	ABUND	н	A				YES									1.05%
Scenario 22	15%	HIGH	ABUND	LO	A				YES									1.58%
Scenario 23	15%	HIGH	LIMTD	н	A				YES									2.45%
Scenario 24	15%	HIGH	LIMTD	LO	А				YES									3.68%
		Probabi	lity of Proce	eding in tl	his Year:	0%	0%	0%	35%	55%	6%	2%	0%	0%	0%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	35%	89%	95%	97%	97%	97%	97%	97%	97%	
									1				-					-
	CPT :	neme-Set			^L	oad Grow	th Theme Se o	et		Ga	s Availabi	lity Theme	Set		W	nd Penetr 0	ation Thei	ne Set
0%	Number of theme	Number of project proceeds	Percentage of relevant scenarios		CNTRL	Number of theme	Number of project proceeds	Percentage of relevant s scenarios		ABUND	Number of theme	Number of project proceeds	Percentage of relevant scenarios		HI	Number of theme	Number of project proceeds	Percentage of relevant % scenarios
5% 15%	8	7 8	88%		HIGH	12	12	100%		LIMTD	12	0	0%		LO	12	0	0%
Other Comments:			Total of 22	7MW of dem	and manag	ement pro	bosed as par	t of the 201	0 Reserve	e Capacity	Mechanisr	n New Cap	acity Expre	essions of	Interest pro	ocess.		



Potential Project #	(This is a	potential New F	Plant)															
8	Carnegi	ie Wave 1 (5l	MW Wave)			locate	ed in the		Kwi	nana		node						
	1	Initially t	his project was	rated a		ŀ	ligh		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		60% pro	bability of	proceeding
	At th	e completion of	the scenario ar	alysis projec	t, the FINA	Project P	robability for	this project	t was cald	ulated (acro	oss all the s	scenarios th	nat were de	eveloped)	to be	72% pro	bability of	proceeding
				The followi	na table illus	trates the	vear in which	(for each s	cenario)	he plant is	assumed to	o be fully or	perational:					
			ъ		5													1
_	CPT	Load	Gas vailability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Probability
Scenario 1	0%	CNTRL	ABUND	н	A					YES								0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	HI	A				VEO		YES							2.1%
Scenario 6	0%	HIGH	ABUND		A				YES									3.15%
Scenario 7	0%	HIGH	LIMID	н	A						VEO							4.9%
Scenario 8	0%	HIGH		10	A						YES							7.35%
Scenario 9	5%		ABUND	HI	A					VEC								1.92%
Scenario 11	5%				~					TES		VES						2.00%
Scenario 12	5%	CNTRL	LIMTD	10							VES	TES						6.72%
Scenario 13	5%	HIGH		н							VES							2.88%
Scenario 14	5%	HIGH	ABUND	10	A						120							4.32%
Scenario 15	5%	HIGH	LIMTD	н	A					YES								6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A													10.08%
Scenario 17	15%	CNTRL	ABUND	н	А							YES						3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A							YES						4.73%
Scenario 19	15%	CNTRL	LIMTD	ні	A					YES								7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А								YES					11.03%
Scenario 21	15%	HIGH	ABUND	н	A						YES							1.05%
Scenario 22	15%	HIGH	ABUND	LO	A								YES					1.58%
Scenario 23	15%	HIGH	LIMTD	н	A								YES					2.45%
Scenario 24	15%	HIGH	LIMTD	LO	А							YES						3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	3%	18%	20%	16%	15%	0%	0%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	3%	21%	41%	57%	72%	72%	72%	72%	72%	
	СРТТ	Theme-Set		1		oad Grow	th Thoma Sc	at	1	Ga	Availabil	ity Theme	Set		W	nd Penetr	ation The	me Set
	sc	- т ^{сс}				<u>ели 0.0</u> w	«	-			s . wanabii					se i eneu	- ^к	
0%	Number of enarios with this ∞ of theme	Number of enarios in which 4 u project proceeds	Percentage of relevant of scenarios 5		CNTRL	Number of theme	Number of enarios in which ∞ or project proceeds	Percentage of relevant scenarios		ABUND	Number of theme	Number of renarios in which O or project proceeds	Percentage of relevant % scenarios		王	Number of theme	Number of enarios in which o project proceeds	Percentage of relevant scenarios
5% 15%	8	8	63% 100%		HIGH	12	я	/5%	I		12	U	U%		LU	12	U	0%
Other Comments:				Stage 1 of	the Carnegi to opera nd design a	e Wave pr ite in Aust activities a	oject is currer ralia. The cc ssociated wit cor	ntly underw ommercial h Stage 2 mmissionin	ay. Stag demonstra will be u g schedu	e 2 will be th ation will be indertaken led for 20	he first con a 5MW pr during 20 11.	nmercial sc oject. Deta 10 with co	ale wave e ailed cost nstruction	energy proj and	ect			



Potential Project #

9

Appendix B (Projects) of Report to:

(This is a potential New Plant)

Initially this project was rated a

DSM 3 (50MW DSM)

	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	А													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А							YES						1.35%
Scenario 3	0%	CNTRL	LIMTD	н	А													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A						YES							3.15%
Scenario 5	0%	HIGH	ABUND	н	A					YES								2.1%
Scenario 6	0%	HIGH	ABUND	LO	А						YES							3.15%
Scenario 7	0%	HIGH	LIMTD	н	А							YES						4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A					YES								7.35%
Scenario 9	5%	CNTRL	ABUND	н	А													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	А													2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A						YES							4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	А						YES							6.72%
Scenario 13	5%	HIGH	ABUND	н	А					YES								2.88%
Scenario 14	5%	HIGH	ABUND	LO	А													4.32%
Scenario 15	5%	HIGH	LIMTD	н	A					YES								6.72%
Scenario 16	5%	HIGH	LIMTD	LO	А						YES							10.08%
Scenario 17	15%	CNTRL	ABUND	н	A													3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A					YES								4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A				YES									7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	A						YES							11.03%
Scenario 21	15%	HIGH	ABUND	н	A				YES									1.05%
Scenario 22	15%	HIGH	ABUND	LO	A					YES								1.58%
Scenario 23	15%	HIGH	LIMTD	н	A					YES								2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A					YES								3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	8%	31%	39%	6%	0%	0%	0%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	8%	40%	78%	85%	85%	85%	85%	85%	85%	
	CPT	Theme-Set]	L	oad Grow	th Theme Se	et		Gas	s Availabil	ity Theme	Set		W	ind Penet	ration The	ne Set
	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
0%	8	6	75%		CNTRL	12	7	58%		ABUND	12	0	0%		HI	12	0	0%
15%	8	7	88%	1	non	12		9270	l		12	U	070		10	12		U 70
	1			-														
Other Comments:			Total of 22	7MW of dem	and manag	ement pro	posed as par	of the 201	0 Reserv	e Capacity	Mechanism	n New Cap	acity Expre	essions of I	Interest pro	ocess.		

SWIS

node

likelihood of proceeding, which was deemed to correspond to a

located in the

High

At the completion of the scenario analysis project, the FINAL Project Probability for this project was calculated (across all the scenarios that were developed) to be

The following table illustrates the year in which (for each scenario) the plant is assumed to be fully operational:

60% probability of proceeding

85% probability of proceeding



Potential Project #	(This is a	potential New F	Plant)															
10	Collgar	Stage 2 (30)	MW Wind)			locate	ed in the		East C	Country		node						
	-	Initially t	his project was	rated a		٢	ligh		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		60% pro	bability of	proceeding
	At th	ne completion of	f the scenario ar	alysis projec	t, the FINA	Project P	robability for	this project	t was calc	ulated (acro	oss all the	scenarios tl	hat were de	eveloped)	to be	69% pro	bability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	scenario) (the plant is	assumed t	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	А								YES					0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А								YES					1.35%
Scenario 3	0%	CNTRL	LIMTD	н	А							YES						2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	А													3.15%
Scenario 5	0%	HIGH	ABUND	н	А						YES							2.1%
Scenario 6	0%	HIGH	ABUND	LO	А						YES							3.15%
Scenario 7	0%	HIGH	LIMTD	н	А							YES						4.9%
Scenario 8	0%	HIGH	LIMTD	LO	А													7.35%
Scenario 9	5%	CNTRL	ABUND	н	A							YES						1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A													2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A													4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A													6.72%
Scenario 13	5%	HIGH	ABUND	н	А						YES							2.88%
Scenario 14	5%	HIGH	ABUND	LO	A								YES					4.32%
Scenario 15	5%	HIGH	LIMTD	н	A							YES						6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A							YES						10.08%
Scenario 17	15%	CNTRL	ABUND	н	А							YES						3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A													4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A						YES							7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	A								YES					11.03%
Scenario 21	15%	HIGH	ABUND	н	A							YES						1.05%
Scenario 22	15%	HIGH	ABUND	LO	A													1.58%
Scenario 23	15%	HIGH	LIMTD	н	A							YES						2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A							YES						3.68%
		Probabi	ility of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	15%	36%	18%	0%	0%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	15%	52%	69%	69%	69%	69%	69%	
	СРТ	Theme-Set		1		oad Grow	th Theme S	et		Ga	s Availahi	lity Theme	Set	1	w	ind Penetr	ation The	me Set
	s	ъŚ		1		ş	p				s	p 8				8	ъŝ	
221	Number of enarios with this theme	Number of enarios in which of roject proceeds	Percentage of relevant f scenarios		011701	Number of enarios with this theme	Number of enarios in which r roject proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of enarios in which o roject proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of enarios in which roject proceeds	Percentage of relevant scenarios
5%	8	5	63%		HIGH	12	10	58% 83%		LIMTD	12	0	0%		LO	12	0	0%
15%	8	6	75%]					•					•			-	
Other Comments:	Planning	g and environme	ental approvals	nave been o	btained for 1	27 turbine	s. However,	this layout h	nas now b	een divideo	l into two s	tages, the t	irst consist	ting of 111	turbines, a	ind a secor	nd stage of	16 turbines.



ROAM Consulting Pty Ltd

Appendix B (Projects) of Report to:

Wep00017 17th February 2011

Potential Project #	(This is a	potential New I	Plant)															
11	Spiritwe	est Neerabu	p (29.9MW B	iomass)		locate	ed in the	١	lortherr	n Termina	al	node						
		Initially t	his project was	rated a		Мо	derate		likelihood	of proceed	ling, which	was deem	ed to corre	spond to a		40% pro	bability of	proceeding
	At th	e completion of	the scenario ar	nalysis proje	t, the FINA	L Project P	robability for	this project	t was calc	ulated (acr	oss all the	scenarios t	hat were de	eveloped)	to be	54% pro	bability of	proceeding
				The follow	ng table illu	strates the	year in which	(for each s	scenario)	the plant is	assumed t	o be fully o	perational:					
			Av	₽	φъ	N	N	N	N	N	N	N	N	N	N	N	N	Fina
	CPT	Load	Gas ailability	Wind mbition	lanting cenario	009-10	010-11	011-12	012-13	013-14	014-15	015-16	016-17	017-18	018-19	019-20	020-21	al Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	A													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	н	A						YES							2.1%
Scenario 6	0%	HIGH	ABUND	LO	A													3.15%
Scenario 7	0%	HIGH	LIMTD	н	A													4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A							YES						7.35%
Scenario 9	5%	CNTRL	ABUND	н	A													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A									YES				2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A								YES					4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A							YES						6.72%
Scenario 13	5%	HIGH	ABUND	HI	A													2.88%
Scenario 14	5%	HIGH	ABUND	LO	A													4.32%
Scenario 15	5%	HIGH		н	A							YES						6.72%
Scenario 16	5%			10	A									VEO				10.08%
Scenario 17	15%	CNTRL	ABUND		A						VEC			TES				3.10%
Scenario 19	15%	ONTRE			^						TES		VES					7.25%
Scenario 20	15%	ONTRE		10	^								1123					11.03%
Scenario 21	15%				A 						VES							1 05%
Scenario 22	15%	HIGH		10							VES							1.58%
Scenario 23	15%	HIGH	LIMTD	н	A							YES						2.45%
Scenario 24	15%	HIGH	LIMTD	10	A							YES						3.68%
	1070	Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	9%	27%	12%	6%	0%	0%	0%	0.0070
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	9%	36%	48%	54%	54%	54%	54%	
					-													
	CPT	Theme-Set]	L	oad Grow	th Theme Se	et		Ga	s Availabi	lity Theme	Set		w	ind Penetr	ation Ther	ne Set
	scer	pro	υ			scer	pro	Ψ			scer	pro				scer	scen	U
	Narios	ject I	erce)arios	iarios	erce			harios	ject j	erce			narios	iarios	erce
	s with	in w	ntagi relev >enar			i with	umbe ; in w	ntagi relev senar			with the	; in w	ntagi relev senar			umbe 3 with the	umbe ; in wi proce	ntagi relev :enar
	me this	eds	rios f		ONITO	me this	hich of hich	rios		A.D. 1917	me	Pr of hict of	rios e of			me frof	ar of hict of	e of rios
0% 5%	8	2 4	25% 50%	1	HIGH	12	6 7	50% 58%		LIMTD	12	0	0%		LO	12	0	0%
15%	8	7	88%	1					•						-			
	1]
			Contrict Al-	et in double -	ing o 20 M	V hace le-	d nower stat	on at Nac-	ahun 221	m north -f	Dorth The	nower of-	tion will	timbor	acto from -	vino		
Other			plantations	s is develop nearby, and	ing a 30 MV	residues.	Environmen	tal approva	l was rece	eived in 200	6, and a f	nal investm	ent decisio	n is expec	ted by Q2 2	2009,		
comments:					with const	ruction exp	ected to com	mence in C	23 2009.	Commercia	al operatio	n is schedu	led for 201	1.				

http://www.roamconsulting.com.au

Potential Project #	(This is a	potential New F	Plant)															
12	Grasme	re (14MW W	ind)			locate	ed in the		М	uja		node						
		Initially t	his project was	rated a		Mo	derate		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		40% pro	bability of	proceeding
	At th	e completion of	the scenario ar	alysis projec	t, the FINA	Project P	robability for	this project	was calc	ulated (acro	oss all the	scenarios th	nat were de	eveloped)	to be	84% pro	bability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	cenario) t	he plant is	assumed t	o be fully of	perational:					
	CPT	Load	Gas Availabilit	Wind Ambitior	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scena Probabil
Scenario 1	0%	CNTRL		-	A					YES								نې ان 0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A							YES						1.35%
Scenario 3	0%	CNTRL	LIMTD	ні	A						YES							2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	А													3.15%
Scenario 5	0%	HIGH	ABUND	н	A						YES							2.1%
Scenario 6	0%	HIGH	ABUND	LO	А								YES					3.15%
Scenario 7	0%	HIGH	LIMTD	н	А						YES							4.9%
Scenario 8	0%	HIGH	LIMTD	LO	А								YES					7.35%
Scenario 9	5%	CNTRL	ABUND	н	А						YES							1.92%
Scenario 10	5%	CNTRL	ABUND	LO	А													2.88%
Scenario 11	5%	CNTRL	LIMTD	н	А							YES						4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A								YES					6.72%
Scenario 13	5%	HIGH	ABUND	н	А								YES					2.88%
Scenario 14	5%	HIGH	ABUND	LO	A													4.32%
Scenario 15	5%	HIGH	LIMTD	н	A						YES							6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A								YES					10.08%
Scenario 17	15%	CNTRL	ABUND	н	A								YES					3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A								YES					4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A						YES							7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	A									YES				11.03%
Scenario 21	15%	HIGH	ABUND	н	A						YES							1.05%
Scenario 22	15%	HIGH	ABUND	LO	A													1.58%
Scenario 23	15%	HIGH	LIMID	н	A						YES							2.45%
Scenario 24	15%	HIGH	LIMID	LO	A													3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	1%	29%	6%	38%	11%	0%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	1%	29%	35%	73%	84%	84%	84%	84%	
	CPT	Theme-Set]	L	oad Grow	th Theme Se	et		Gas	s Availabi	ity Theme	Set	l	W	ind Penetr	ation The	me Set
	Number scenarios with t the	Number scenarios in wh project procee	Percentage releve scenari			Number scenarios with there	Number scenarios in wh project procee	Percentage releva scenari			Number scenarios with t ther	Number scenarios in wh project procee	Percentage releva scenari			Number scenarios with t the	Number scenarios in wh project procee	Percentage releva scenari
0%		5 CT OL	응 <u> </u>	-	CNTRI	12 12	<u>중</u> 후 수 10	83%		ABUND	12 12	0 0 0	<u>8 11 0</u>		н	12	<u>8</u> 5 0	<u>8 1 9</u> 0%
5%	8	6	75%		HIGH	12	9	75%		LIMTD	12	0	0%		LO	12	Ő	0%
15%	8	6	75%	1														
Other Comments:	Verve Ene	ergy is carrying	out a feasibility	study to exte	nd the Albar	ny wind fan	m. The proje wind turb	ect, known a bines would	as Grasm produce	ere wind fa 14MW of e	rm, will ad lectricity.	d six wind to	urbines to 1	the existing	12 turbine	es at the Al	bany site.	The additional



Potential Project #	(This is a	potential New F	Plant)															
13	Milyean	nup (55MW	Wind)			locate	ed in the		Bur	bury		node						
	-	Initially t	his project was	rated a		Мо	derate		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		40% pro	obability of	proceeding
	At th	e completion of	the scenario ar	nalysis proje	t, the FINA	Project P	robability for	this project	t was calc	ulated (acro	oss all the	scenarios t	hat were d	eveloped)	to be	74% pro	obability of	proceeding
				The follow	ng table illus	trates the	year in which	(for each s	scenario) (he plant is	assumed t	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenaric Probability
Scenario 1	0%	CNTRL	ABUND	н	А						YES							0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	А								YES					2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	А								YES					3.15%
Scenario 5	0%	HIGH	ABUND	н	А							YES						2.1%
Scenario 6	0%	HIGH	ABUND	LO	А													3.15%
Scenario 7	0%	HIGH	LIMTD	н	А								YES					4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A													7.35%
Scenario 9	5%	CNTRL	ABUND	н	А							YES						1.92%
Scenario 10	5%	CNTRL	ABUND	LO	А									YES				2.88%
Scenario 11	5%	CNTRL	LIMTD	н	А						YES							4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	А									YES				6.72%
Scenario 13	5%	HIGH	ABUND	н	A						YES							2.88%
Scenario 14	5%	HIGH	ABUND	LO	А													4.32%
Scenario 15	5%	HIGH	LIMTD	н	А								YES					6.72%
Scenario 16	5%	HIGH	LIMTD	LO	А													10.08%
Scenario 17	15%	CNTRL	ABUND	н	А										YES			3.15%
Scenario 18	15%	CNTRL	ABUND	LO	А									YES				4.73%
Scenario 19	15%	CNTRL	LIMTD	н	А						YES							7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А								YES					11.03%
Scenario 21	15%	HIGH	ABUND	н	А							YES						1.05%
Scenario 22	15%	HIGH	ABUND	LO	A							YES						1.58%
Scenario 23	15%	HIGH	LIMTD	н	А									YES				2.45%
Scenario 24	15%	HIGH	LIMTD	LO	А								YES					3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	16%	7%	32%	17%	3%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	16%	22%	54%	71%	74%	74%	74%	
	CPT	Theme-Set		1		oad Grow	th Theme Se	>t	1	Ga	s Availabi	lity Theme	Set	1	w	ind Peneti	ration The	me Set
	s	T SC		1		«	F SC				ß	%				s,	F SC	
	Number of enarios with this theme	Number of enarios in which project proceeds	Percentage of relevant scenarios	_		Number of enarios with this theme	Number of enarios in which project proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of enarios in which project proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of enarios in which project proceeds	Percentage of relevant scenarios
0%	8	5	63% 75%	1	CNTRL HIGH	12	11 8	92% 67%		ABUND LIMTD	12	0	0%		HI LO	12	0	0% 0%
15%	8	8	100%	1			0	01/0	1			0	0/0	I	20	.2	0	078
Other Comments:	Verve En	nergy is investig	ating the feasibi	lity of buildin	g a wind farr Verve Energ	n with up t Iy submitte	o 30 wind tur d an Applica	bines with a tion for Pla	a combine nning App	ed capacity roval to the	of up to 55 Shire of N	5MW at Mil Nannup for	yeannup, v the wind fa	vhich is ab Irm.	out 20kms	east of Au	gusta. On	22 May 2009

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Potential Project #	(This is a	potential New F	Plant)															
14	Alinta W	/alkaway 2 (94MW Wind))		locate	ed in the		North	Country		node						
	_	Initially t	his project was	rated a		Mo	derate		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		40% pro	obability of	proceeding
	At th	e completion of	the scenario ar	alvsis proier	t the FINAI	Project P	robability for	this project	t was calc	ulated (acr	oss all the	scenarios th	nat were de	eveloped)	to he	67% pro	obability of	proceeding
	74.41	e completion ei					roodoniky roi	uno projoo	indo odio				lat word a	orolopou)			,	p
				The followi	ng table illus	trates the	year in which	(for each s	scenario) 1	he plant is	assumed t	o be fully of	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	A							YES						0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A								YES					1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A							YES						2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	н	A								YES					2.1%
Scenario 6	0%	HIGH	ABUND	LO	A													3.15%
Scenario 7	0%	HIGH	LIMTD	н	A							YES						4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A										YES			7.35%
Scenario 9	5%	CNTRL	ABUND	н	A					YES								1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A													2.88%
Scenario 11	5%	CNIRL		HI	A							YES						4.48%
Scenario 12	5%	CNIRL	LIMID	10	A									2/50				6.72%
Scenario 13	5%	HIGH	ABUND	HI	A									YES				2.88%
Scenario 14	5%	HIGH	ABUND		A									TES				4.32%
Scenario 15	5%	HIGH			A									VES				10.09%
Scenario 17	15%	CNTRI		н	Δ									VES				3 15%
Scenario 18	15%	CNTRI	ABUND	10	A									120				4 73%
Scenario 19	15%	CNTRL	LIMTD	н	A							YES						7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	A													11.03%
Scenario 21	15%	HIGH	ABUND	н	A									YES				1.05%
Scenario 22	15%	HIGH	ABUND	LO	А													1.58%
Scenario 23	15%	HIGH	LIMTD	н	A										YES			2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A									YES				3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	2%	0%	20%	3%	32%	10%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	2%	2%	22%	25%	57%	67%	67%	67%	
L											I							
	CPT 1	neme-Set		{	L	oad Grow	th Theme Se	et		Ga	s Availabil ω	ity Theme	Set		W	ind Penetr	ration The	ne Set
	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
0%	8	6	75% 75%	-	CNTRL HIGH	12 12	7	58% 83%		ABUND	12	0	0% 0%		HI LO	12 12	0	0%
15%	8	5	63%	1	11011	12	10	03 /0	I		1 12		U /0	l		12		U /0
Other Comments:	Walka	way 2 Wind Fa	Irm is an extensi	ion of Infigen	Energy's ex	isting 89.1	MW, 54 turb	ine wind fa applica	rm south o	of Geraldtor pleted.	n. Infigen I	Energy lists	Walkawa	y 2 as in th	e developr	nent pipelii	ne, with de	velopment



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Wep00017	
17th February 2011	

2010 Generation Scenario Outlook for the SWIS

Potential Project #	(This is a	potential New I	Plant)															
15	Nilgen (132MW Win	d)			locate	ed in the		North	Country		node						
	_	Initially t	his project was	rated a		Мо	derate		likelihood	of proceed	ling, which	was deem	ed to corre	spond to a		40% pro	bability of	proceeding
	At th	e completion of	the scenario ar	nalysis proje	ct, the FINA	L Project P	robability for	this project	t was cald	ulated (acro	oss all the	scenarios 1	hat were d	eveloped)	to be	76% pro	bability of	proceeding
				The followi	ng table illus	strates the	year in which	(for each s	scenario)	the plant is	assumed t	o be fully c	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	А								YES					0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	А									YES				2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	А									YES				3.15%
Scenario 5	0%	HIGH	ABUND	н	А									YES				2.1%
Scenario 6	0%	HIGH	ABUND	LO	А									YES				3.15%
Scenario 7	0%	HIGH	LIMTD	н	A						YES							4.9%
Scenario 8	0%	HIGH	LIMTD	LO	А													7.35%
Scenario 9	5%	CNTRL	ABUND	н	A							YES						1.92%
Scenario 10	5%	CNTRL	ABUND	LO	А							YES						2.88%
Scenario 11	5%	CNTRL	LIMTD	н	А								YES					4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	А													6.72%
Scenario 13	5%	HIGH	ABUND	н	А							YES						2.88%
Scenario 14	5%	HIGH	ABUND	LO	А										YES			4.32%
Scenario 15	5%	HIGH	LIMTD	н	А										YES			6.72%
Scenario 16	5%	HIGH	LIMTD	LO	А										YES			10.08%
Scenario 17	15%	CNTRL	ABUND	н	А								YES					3.15%
Scenario 18	15%	CNTRL	ABUND	LO	А													4.73%
Scenario 19	15%	CNTRL	LIMTD	н	А									YES				7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А							YES						11.03%
Scenario 21	15%	HIGH	ABUND	н	А								YES					1.05%
Scenario 22	15%	HIGH	ABUND	LO	А										YES			1.58%
Scenario 23	15%	HIGH	LIMTD	н	А						YES							2.45%
Scenario 24	15%	HIGH	LIMTD	LO	А													3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	7%	19%	10%	18%	23%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	7%	26%	36%	53%	76%	76%	76%	
	CPT '	on Theme-Set		-	L	oad Grow ഗ	th Theme Se	et		Ga	s Availabi	lity Theme	Set		W	nd Penetr	ation Ther	ne Set
<u> </u>	Number of theme	Number of project proceeds	Percentage of relevant scenarios 75% 88%		CNTRL HIGH	Number of theme	Number of cenarios in which on project proceeds	Percentage of relevant 5% scenarios 7 83		ABUND LIMTD	Number of theme	Number of cenarios in which o o project proceeds	Percentage of relevant % scenarios		HI	Number of cenarios with this 12 theme	Number of cenarios in which O O project proceeds	Percentage of relevant % scenarios
15%	8	6	75%	J		_					_	_						
Other Comments:	The prop (South	osed wind farm West Interconr	site is located a nected System),	pproximatel existing land	y 9km east o I practices v	of Lancelin vhich can c	Western Au o-exist with th turbines in	stralia. The he turbines, size, provid	e site has , large are ling up to	been selec a and low p 132.5MW o	ted by Pac population of capacity	cific Hydro density an	due to its s d good pub	trong, cons lic road ac	sistent wind cess. The	ls; proximit project will	y and acce I be up to 5	ss to the Grid 3 (2.5MW)

Appendix B (Projects) of Report to:

2	2010 Generation Scenario Outlook for the SWIS

Potential Project #	(This is a	potential New I	Plant)															
16	Mingen	ew Solar Th	ermal 1 (45M	IW Solar T	hermal)	locate	ed in the		North	Country		node						
	_	Initially t	his project was	rated a		Мо	derate		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		40% pro	bability of	proceeding
	At th	e completion of	f the scenario ar	nalysis projec	ct, the FINAL	Project F	Probability for	this project	t was calc	ulated (acro	oss all the :	scenarios t	hat were d	eveloped)	to be	63% pro	bability of	proceeding
				The followi	ing table illus	trates the	year in which	(for each s	scenario)	the plant is	assumed to	o be fully o	perational:		-			
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	А													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	А													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	А													3.15%
Scenario 5	0%	HIGH	ABUND	н	A													2.1%
Scenario 6	0%	HIGH	ABUND	LO	А													3.15%
Scenario 7	0%	HIGH	LIMTD	н	А													4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A													7.35%
Scenario 9	5%	CNTRL	ABUND	н	А													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	А							YES						2.88%
Scenario 11	5%	CNTRL	LIMTD	н	А								YES					4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	А													6.72%
Scenario 13	5%	HIGH	ABUND	н	А													2.88%
Scenario 14	5%	HIGH	ABUND	LO	А						YES							4.32%
Scenario 15	5%	HIGH	LIMTD	н	А						YES							6.72%
Scenario 16	5%	HIGH	LIMTD	LO	А						YES							10.08%
Scenario 17	15%	CNTRL	ABUND	н	А							YES						3.15%
Scenario 18	15%	CNTRL	ABUND	LO	А						YES							4.73%
Scenario 19	15%	CNTRL	LIMTD	н	А							YES						7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А							YES						11.03%
Scenario 21	15%	HIGH	ABUND	н	А						YES							1.05%
Scenario 22	15%	HIGH	ABUND	LO	А						YES							1.58%
Scenario 23	15%	HIGH	LIMTD	н	А							YES						2.45%
Scenario 24	15%	HIGH	LIMTD	LO	А							YES						3.68%
	-	Probabi	ility of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	28%	31%	4%	0%	0%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	28%	59%	63%	63%	63%	63%	63%	
	CPT	Theme-Set]	L	oad Grow	th Theme Se	et		Ga	s Availabi	lity Theme	Set]	W	ind Penetr	ation The	ne Set
0%	Scenarios with this ∞ ∞	Number of scenarios in which o us project proceeds	Percentage of relevant % scenarios 03%		CNTRL HIGH	Number of theme 12	Number of scenarios in which (c) Project proceeds	Percentage of relevant scenarios		ABUND	Number of scenarios with this theme	Number of scenarios in which o o project proceeds	Percentage of relevant % scenarios		HI	Number of scenarios with this theme	Number of scenarios in which o o project proceeds	Percentage of relevant % scenarios
15%	8	8	100%]					•	·				•				
Other Comments:		Proposed \$	1.0 billion 250M	W solar then	mal power s	tation. Nor	minally locate	d on Minge	new. Wo	rley plan to	investigate	the potent	ial for anot	ther 33 add	litional plan	ts being bu	uilt by 2020	J.



Potential Project #	(This is a	potential New F	Plant)															
17	Coolim	oa Aviva Coa	al (360.8MW	Coal)		locate	ed in the		North	Country		node						
		Initially t	his project was	rated a		Mo	derate		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		40% pro	obability of	proceeding
	A+ +b	a completion of	the scenario ar	alveis proio	et the EINAL	Project P	robability for	this project		ulated (acr	acc all the	congrige t	at woro d	ovelened)	la ha	18% pro	abability of	proceeding
	Atti	e completion of	the scenario ar	aiysis projec	SI, ITHE FINAL	- Flojeci F	TODADIIITY TOT	triis projec	was calo	ulateu (acit	JSS dii trie	scenarios ti	lat were u	evelopeu)	lo be	10 /0 pro	bability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	scenario) t	he plant is	assumed t	o be fully o	perational:		-			
	CPT	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	А													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	А								YES					2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A									YES				3.15%
Scenario 5	0%	HIGH	ABUND	н	A													2.1%
Scenario 6	0%	HIGH	ABUND	LO	A													3.15%
Scenario 7	0%	HIGH	LIMTD	н	A						YES							4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A						YES							7.35%
Scenario 9	5%	CNTRL	ABUND	н	A													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A													2.88%
Scenario 11	5%	CNIRL	LIMID	н	A													4.48%
Scenario 12	5%	CNIRL	LIMID	LO	A													6.72%
Scenario 13	5%	HIGH	ABUND	н	A													2.88%
Scenario 14	5%	HIGH	ABUND	10	A													4.32%
Scenario 15	5%	HIGH			A													0.72%
Scenario 17	15%	CNTRI		н	Δ												<u> </u>	3 15%
Scenario 18	15%	CNTRL	ABUND	10	A													4 73%
Scenario 19	15%	CNTRI	LIMTD	н	A													7.35%
Scenario 20	15%	CNTRL	LIMTD	10	A													11.03%
Scenario 21	15%	HIGH	ABUND	н	A													1.05%
Scenario 22	15%	HIGH	ABUND	LO	А													1.58%
Scenario 23	15%	HIGH	LIMTD	н	A													2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A													3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	12%	0%	2%	3%	0%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	12%	12%	14%	18%	18%	18%	18%	
L																		I
	CPT 1	Theme-Set	1]	L	oad Grow	th Theme So	et		Ga	s Availabi	lity Theme	Set		W	ind Penetr	ation The	ne Set
	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
0%	8	4	50% 0%	-	CNTRL HIGH	12 12	2	17% 17%		ABUND	12	0	0% 0%		HI LO	12 12	0	0%
15%	8	0	0%	1	11011	12	4	11 /0	I		1 12		U /0			12		U /0
Other Comments:	Coolimba The Coo	Power is a 400 limba Power S)-450MW base I also ha tation will provid	oad coal-fire s plans to ph le approxima	d power sta ase in up to ttely 8% of th	tion includi 2.9 million ne installed	ng an additio tonnes per a capacity in t over t	nal 360MW annum of ca the SWIS n	/ of gas fir arbon capt etwork an for compl	ed power k ture and se d have an o etion in 201	ocated 270 questration operating li 13/14.	0km north o n (CCS) as fe of 30 yea	f Perth in t a separate ars. Constr	he rapidly project w	developing hen feasibl lanned to c	Mid West e. commence	region of V in 2010 an	VA. Coolimba
							2.51	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,										





Potential Project #	(This is a	potential New F	Plant)															
18	Newwo	rld Geotherr	nal 1 (4.25M\	₩ Geo)		locate	ed in the		North	Country		node						
		Initially t	his project was r.	rated a		Мо	derate	1	likelihood	of proceed	ling, which	was deeme	ed to corre	spond to a	I	40% pro	obability of	proceeding
	At th	e completion of	f the scenario an	nalysis projec	ot, the FINAL	L Project P	Probability for	this project	t was calc	ulated (acro	oss all the s	scenarios tł	hat were d	eveloped)	to be	41% pro	bability of	proceeding
				The followi	ing table illus	strates the	year in which	(for each s	scenario) t	he plant is	assumed to	o be fully o	perational:					
			Ą		~_ [Ţ
	СРТ	Load	Gas vailability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	nal Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	A													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A	I												1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A	L			L									2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A	I			L	L								3.15%
Scenario 5	0%	HIGH	ABUND	н	A	 				<u> </u>								2.1%
Scenario 6	0%	HIGH	ABUND	LO	A	I			L									3.15%
Scenario 7	0%	HIGH	LIMTD	н	A	I				L								4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A	 			<u> </u>									7.35%
Scenario 9	5%	CNTRL	ABUND	н	A	 	L		<u> </u>	<u> </u>	<u> </u>				ļ!			1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A	 	ļ	ļ	<u> </u>	ļ								2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A	I		ļ!	L	ļ								4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A		 	ļ!	L	<u> </u>	<u> </u>				ļ!			6.72%
Scenario 13	5%	HIGH	ABUND	н	A	I		ļ!	L	ļ	<u> </u>			_				2.88%
Scenario 14	5%	HIGH	ABUND	LO	A			ļ!	L	<u> </u>	<u> </u>			YES	<u> </u>			4.32%
Scenario 15	5%	HIGH	LIMTD	н	A	 		ļ!	<u> </u>									6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A	 	L		<u> </u>	<u> </u>	<u> </u>			_			YES	10.08%
Scenario 17	15%	CNTRL	ABUND	н	A	 	ļ	ļ	<u> </u>	ļ				YES				3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A	 	L		<u> </u>	<u> </u>	<u> </u>				YES			4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A	 				ļ								7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	A	 			L				YES					11.03%
Scenario 21	15%	HIGH	ABUND	н	A	I				L								1.05%
Scenario 22	15%	HIGH	ABUND	LO	A	 			L			YES						1.58%
Scenario 23	15%	HIGH	LIMTD	н	A	 			L				YES					2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A	Ļ			<u> </u>				YES					3.68%
		Probabi	lity of Proce	eding in tl	nis Year:	0%	0%	0%	0%	0%	0%	2%	17%	7%	5%	0%	10%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	2%	19%	26%	31%	31%	41%	Í
												<u> </u>			·	·		
	CPT 1	Theme-Set		1	L	oad Grow	/th Theme So	et 🔰	1	Ga	s Availabil	ity Theme	Set		Wi	ind Penetr	ration The	me Set
	scer	pro				scer	pro	_			scer	scen	- -			scer	pro	σ
0%	Number of arios with this a theme	Number of arios in which c ject proceeds	ercentage of relevant ف scenarios	-	CNTRI	Number of theme	Number of arios in which or ject proceeds	ercentage of relevant for scenarios		ABUND	Number of theme	Number of ject proceeds	ercentage of relevant scenarios		н	Number of theme	Number of ject proceeds	ercentage of relevant క scenarios
5%	8	2	25%	1	HIGH	12	5	42%	1	LIMTD	12	0	0%		LO	12	0	0%
15%	8	6	75%	1														
Other Comments:		New World	J has 9 geothern	nal exploratio	on permits in	the North	ern (8) and S	outhern (1)	Perth Ba	sins. All loc	cations are	closely loc	ated to exi	sting and/c	or proposec	ł transmiss	ion assets.	



Potential Project #	(This is a	potential New I	Plant)															
19	Bluewa	ters 3 (193.9	3MW Coal)			locate	ed in the		М	uja		node						
		Initially t	his project was r	ated a		Мо	derate		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		40% pro	bability of	proceeding
	At th	e completion of	f the scenario an	alysis projec	t, the FINA	Project F	robability for	this project	was calc	ulated (acro	oss all the :	scenarios tł	nat were de	eveloped)	to be	46% pro	bability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	cenario) t	he plant is	assumed to	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenaric Probability
Scenario 1	0%	CNTRL	ABUND	н	A													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A						YES							2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A							YES						3.15%
Scenario 5	0%	HIGH	ABUND	HI	A													2.1%
Scenario 6	0%	HIGH	ABUND	LO	A													3.15%
Scenario 7	0%	HIGH	LIMTD	HI	A					YES								4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A						YES							7.35%
Scenario 9	5%	CNTRL	ABUND	HI	A													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A													2.88%
Scenario 11	5%	CNTRL	LIMTD	HI	A							YES						4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A								YES					6.72%
Scenario 13	5%	HIGH	ABUND	HI	A													2.88%
Scenario 14	5%	HIGH	ABUND	LO	A					VEO								4.32%
Scenario 15	5%	HIGH		HI	A					YES								6.72%
Scenario 16	15%			- 10	^					TES								2 15%
Scenario 19	15%	CNTRL		10	Δ													4.73%
Scenario 19	15%	CNTRI		н	A													7.35%
Scenario 20	15%	CNTRL	LIMTD	10	A													11.03%
Scenario 21	15%	HIGH	ABUND	н	A													1.05%
Scenario 22	15%	HIGH	ABUND	LO	A													1.58%
Scenario 23	15%	HIGH	LIMTD	HI	A													2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A													3.68%
		Probabi	ility of Proce	eding in t	his Year:	0%	0%	0%	0%	22%	9%	8%	7%	0%	0%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	22%	31%	39%	46%	46%	46%	46%	46%	
·																		
	CPT 0	ம் ம				oad Grow	rth Theme Se o	et		Ga	s Availabil o	lity Theme	Set		W	nd Penetr o	ation The	ne Set
	Number of theme theme	Number of project proceeds	Percentage of relevant scenarios			Number of cenarios with this theme	Number of cenarios in which project proceeds	Percentage of relevant scenarios			Number of cenarios with this theme	Number of cenarios in which of project proceeds	Percentage of relevant scenarios			Number of cenarios with this theme	Number of cenarios in which of project proceeds	Percentage of relevant scenarios
0%	8	4	50% 50%		HIGH	12 12	4	33% 33%		LIMTD	12	0	0%		LO	12 12	0	0% 0%
15%	8	0	0%															
Other Comments:	The prop	osed Bluewater	s Power Station	Expansion o	comprises tv 2013 and 2	vo new coa 2015 respe	al-fired, base- actively. The	-load gener EPA has re	ators, eac	h capable o ded that ap	of producir provals be	ng 208 meg granted for	awatts. Th r the projec	ne two proj ct.	posed new	units are p	lanned for	completion in



Potential Project #	(This is a	potential New F	Plant)															
20	Bluewa	ters 4 (193.9	3MW Coal)			locate	ed in the		м	uja		node						
	-	Initially t	his project was	rated a		Mo	derate		likelihood	of proceedi	ing, which	was deeme	ed to corre	spond to a		40% pro	bability of	proceeding
	At th	ne completion of	the scenario ar	nalysis projec	t, the FINA	Project P	robability for	this project	t was calc	ulated (acro	oss all the	scenarios tł	hat were de	eveloped)	to be	34% pro	bability of	proceeding
				The followi	ng table illus	trates the	/ear in which	(for each s	scenario) t	he plant is a	assumed t	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	А													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A									YES				2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A								YES					3.15%
Scenario 5	0%	HIGH	ABUND	н	A													2.1%
Scenario 6	0%	HIGH	ABUND	LO	A													3.15%
Scenario 7	0%	HIGH	LIMTD	н	A							YES						4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A							YES						7.35%
Scenario 9	5%	CNTRL	ABUND	н	A													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	А													2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A													4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A													6.72%
Scenario 13	5%	HIGH	ABUND	н	A													2.88%
Scenario 14	5%	HIGH	ABUND	LO	A													4.32%
Scenario 15	5%	HIGH	LIMTD	н	A							YES						6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A							YES						10.08%
Scenario 17	15%	CNTRL	ABUND	н	A													3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A													4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A													7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А													11.03%
Scenario 21	15%	HIGH	ABUND	н	A													1.05%
Scenario 22	15%	HIGH	ABUND	LO	А													1.58%
Scenario 23	15%	HIGH	LIMTD	н	A													2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A													3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	0%	29%	3%	2%	0%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	29%	32%	34%	34%	34%	34%	
	СРТ	Theme-Set		1	<u>г </u>	oad Grow	th Theme Se	et	I	Gas	s Availabi	lity Theme	Set	I	w	ind Penet	ation The	me Set
	so	ъŝ		1		SC	рő				sc	p SC				SC	p Sq.	
	Number of enarios with this theme	Number of enarios in which roject proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of enarios in which roject proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of enarios in which roject proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of enarios in which roject proceeds	Percentage of relevant scenarios
0% 5%	8	4	50% 25%	1	CNTRL HIGH	12 12	2 4	17% 33%		ABUND LIMTD	12	0	0% 0%		LO	12 12	0	0% 0%
15%	8	0	0%	1						L			0,0	I			-	
Other Comments:	The prop	osed Bluewater	s Power Station	Expansion of	comprises tv 2013 and 2	vo new coa 2015 respe	Il-fired, base ctively. The	-load gener EPA has re	ators, eac	h capable o ded that ap	of producir provals be	ng 208 meg granted for	awatts. Th r the projec	ne two pro	posed new	units are p	planned for	completion in



Scenario Outlook for the SWIS	2010 Generation
W(cc00017	

40% probability of proceeding

	At th	ne completion of	the scenario an	alysis projec	t, the FINA	Project P	robability for	this project	was calc	ulated (acro	oss all the s	scenarios tł	hat were de	eveloped)	to be	61% pro	bability of	proceeding
				The followi	ng table illus	trates the	ear in which	(for each s	cenario) t	he plant is	assumed to	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenaric Probability
Scenario 1	0%	CNTRL	ABUND	н	A													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	HI	A						YES							2.1%
Scenario 6	0%	HIGH	ABUND	LO	A						YES							3.15%
Scenario 7	0%	HIGH	LIMTD	HI	A											YES		4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A					YES								7.35%
Scenario 9	5%	CNTRL	ABUND	HI	A													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A													2.88%
Scenario 11	5%	CNTRL		HI	A													4.48%
Scenario 12	5%	CNIRL		10	A								YES					6.72%
Scenario 13	5%	HIGH	ABUND	HI	A													2.88%
Scenario 14	5%	HIGH			A									VEC				4.32%
Scenario 15	5%	HIGH		HI	A						VES			TES				10.08%
Scenario 16	15%			- 10	A						TES							2 15%
Scenario 19	15%	CNTRL		10	Δ													4 73%
Scenario 19	15%	CNTRL		н	Δ													7 35%
Scenario 20	15%	CNTRI		10	A								YES					11.03%
Scenario 21	15%	HIGH	ABUND	HI	A					YES			120					1.05%
Scenario 22	15%	HIGH	ABUND	LO	A						YES							1.58%
Scenario 23	15%	HIGH	LIMTD	HI	A							YES						2.45%
Scenario 24	15%	HIGH	LIMTD	LO	А						YES							3.68%
		Brobabi	lity of Broco	oding in t	nic Voor:	09/	09/	00/	09/	00/	24.9/	20/	4.00/	70/	0%	E9/	00/	
		FIUDADI	Cum	ulativo Pr	obability	0%	0%	0%	0%	0%	21%	2%	10%	7% 50%	0%	5%	0%	
			Cum	ulative i i	obability	0%	0%	0%	0%	0%	29%	31%	49%	30%	50%	01%	01%	
	CPT	Theme-Set		l	L	oad Grow	th Theme Se	t		Ga	s Availabil	ity Theme	Set	l	w	ind Penetr	ation The	ne Set
	scei	pro				scei	pro	-			sce	pro				scer	scer	
0% 5%	Number of narios with this ∞ ∞ theme	Number of narios in which 4 m pject proceeds	⁹ ercentage of relevant scenarios 50 38%		CNTRL HIGH	Number of theme 12	Number of pject proceeds	scenarios		ABUND	Number of theme 12	Number of narios in which O O pject proceeds	vercentage of relevant scenarios		HILO	Number of theme 12	Number of narios in which O O oject proceeds	vercentage of relevant % scenarios
15%	8	5	63%															
Other Comments:			Total of 227	MW of dem	and manag	ement prop	oosed as part	of the 201	0 Reserve	e Capacity	Mechanisn	n New Cap	acity Expre	essions of	Interest pro	ocess.		

located in the

Moderate

swis

node

likelihood of proceeding, which was deemed to correspond to a

(This is a potential New Plant)

Initially this project was rated a

DSM 4 (77MW DSM)

Potential Project #

21



Potential Project #	(This is a	potential New F	Plant)															
22	Kalgooi	rlie 2 (1.77M)	W Solar PV)			locate	ed in the	E	astern	Goldfield	s	node						
	-	Initially t	his project was	rated a		Мо	derate		likelihood	of proceedi	ng, which	was deeme	ed to corre	spond to a		40% pro	obability of	proceeding
	At th	e completion of	the scenario ar	nalysis projec	ct, the FINA	L Project P	robability for	this project	t was calc	ulated (acro	oss all the :	scenarios tl	hat were de	eveloped)	to be	41% pro	obability of	proceeding
				The followi	ing table illus	strates the	year in which	(for each s	scenario) (he plant is a	assumed t	o be fully o	perational:					
			⊳		-		-	-										21
	СРТ	Load	Gas vailability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	nal Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	A													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	н	A													2.1%
Scenario 6	0%	HIGH	ABUND		A													3.15%
Scenario 8	0%				A .													7 25%
Scenario 9	5%			н	Δ													1.33%
Scenario 10	5%	CNTRL		10	Δ													2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A													4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	А									YES				6.72%
Scenario 13	5%	HIGH	ABUND	н	А													2.88%
Scenario 14	5%	HIGH	ABUND	LO	A							YES						4.32%
Scenario 15	5%	HIGH	LIMTD	ні	A													6.72%
Scenario 16	5%	HIGH	LIMTD	LO	А													10.08%
Scenario 17	15%	CNTRL	ABUND	н	А								YES					3.15%
Scenario 18	15%	CNTRL	ABUND	LO	А													4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A									YES				7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А								YES					11.03%
Scenario 21	15%	HIGH	ABUND	н	A											YES		1.05%
Scenario 22	15%	HIGH	ABUND	LO	А							YES						1.58%
Scenario 23	15%	HIGH	LIMTD	н	А									YES				2.45%
Scenario 24	15%	HIGH	LIMTD	LO	А								YES					3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	0%	6%	18%	17%	0%	1%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	6%	24%	40%	40%	41%	41%	
	CPT	Theme-Set		1		oad Grow	th Theme Se	et	1	Gas	s Availabi	lity Theme	Set		w	ind Penet	ration The	me Set
	sce	p		1		sce	p		1		sce	p sce				SCE	p	
0%	Number of marios with this co theme	Number of narios in which o oject proceeds	Percentage of relevant % scenarios		CNTRL	Number of theme	Number of narios in which 4 oject proceeds	Percentage of relevant & scenarios		ABUND	Number of theme	Number of oject proceeds	Percentage of relevant % scenarios		HI	Number of theme	Number of origination of the second s	Percentage of relevant % scenarios
5% 15%	8	2	25%	-	HIGH	12	5	42%	l	LIMTD	12	0	0%		LO	12	0	0%
15%	8	/	88%	1														
Other Comments:				Proposed \$1	12.8M 48 so	lar dish pro	oject in Kalgo	orlie (1776	kW DC).	Funding su	oport has t	been grante	ed by the V	VA Govern	ment			



Potential Project #	(This is a	potential New F	Plant)															
23	Centau	ri 1 (166.32M	IW OCGT)			locate	ed in the		North	Country		node						
	-	Initially t	his project was	rated a		Мо	derate		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		40% pro	obability of	proceeding
	At th	e completion of	f the scenario ar	alysis projec	t, the FINA	Project P	robability for	this project	t was calc	ulated (acro	oss all the	scenarios ti	hat were d	eveloped)	to be	87% pro	obability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	scenario) (the plant is	assumed t	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	А						YES							0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A						YES							1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A												YES	3.15%
Scenario 5	0%	HIGH	ABUND	н	A							YES						2.1%
Scenario 6	0%	HIGH	ABUND	LO	A						YES							3.15%
Scenario 7	0%	HIGH	LIMTD	н	A						YES							4.9%
Scenario 8	0%	HIGH	LIMTD	LO	А										YES			7.35%
Scenario 9	5%	CNTRL	ABUND	н	А										YES			1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A						YES							2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A													4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A													6.72%
Scenario 13	5%	HIGH	ABUND	н	A						YES							2.88%
Scenario 14	5%	HIGH	ABUND	LO	A						YES							4.32%
Scenario 15	5%	HIGH	LIMTD	ні	A								YES					6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A									YES				10.08%
Scenario 17	15%	CNTRL	ABUND	ні	A							YES						3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A									YES				4.73%
Scenario 19	15%	CNTRL	LIMTD	ні	A								YES					7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	A										YES			11.03%
Scenario 21	15%	HIGH	ABUND	н	A						YES							1.05%
Scenario 22	15%	HIGH	ABUND	LO	A						YES							1.58%
Scenario 23	15%	HIGH	LIMTD	н	A					YES								2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A							YES						3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	2%	23%	9%	14%	15%	20%	0%	3%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	2%	25%	34%	48%	63%	84%	84%	87%	
															1		1	
	CPT	Theme-Set	1]	L	oad Grow	th Theme S	et		Ga	s Availabi	lity Theme	Set		W	ind Penet	ration The	ne Set
	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
0%	8	7	88%		CNTRL	12	9	75%		ABUND	12	0	0%		HI	12	0	0%
15%	8	8	100%		пібн	12	12	100%	I		1 12	U	0%	I	- 10	12	0	0%
Other Comments:	Eneabb	a Gas have pro	posed the Cent	auri 1 Power	Station, a f	bur gas tur	bine station v	with a total o	capacity o appears o	f 168MW. on hold.	Governme	ent approva	Is have be	en receive	d and land	has been	purchased	however the

ROAM Consulting Pty Ltd



Potential Project #	(This is a	potential New F	Plant)															
24	Augusta	a (50MW Wir	nd)			locate	ed in the		Bu	bury		node						
	_	Initially t	his project was	rated a		I	-ow		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		10% pro	obability of	proceeding
	At th	e completion of	the scenario ar	nalysis projec	t, the FINA	L Project P	robability for	this project	t was calc	ulated (acro	oss all the	scenarios ti	hat were d	eveloped)	to be	66% pro	obability of	proceeding
				The followi	ng table illus	strates the	year in which	(for each s	scenario) t	he plant is	assumed t	o be fully o	perational:					
	CPT	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	А									YES				0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	А									YES				2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	А											YES		3.15%
Scenario 5	0%	HIGH	ABUND	н	А										YES			2.1%
Scenario 6	0%	HIGH	ABUND	LO	А										YES			3.15%
Scenario 7	0%	HIGH	LIMTD	н	А								YES					4.9%
Scenario 8	0%	HIGH	LIMTD	LO	А									YES				7.35%
Scenario 9	5%	CNTRL	ABUND	н	А													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	А													2.88%
Scenario 11	5%	CNTRL	LIMTD	н	А											YES		4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	А													6.72%
Scenario 13	5%	HIGH	ABUND	н	А										YES			2.88%
Scenario 14	5%	HIGH	ABUND	LO	А													4.32%
Scenario 15	5%	HIGH	LIMTD	н	А									YES				6.72%
Scenario 16	5%	HIGH	LIMTD	LO	А													10.08%
Scenario 17	15%	CNTRL	ABUND	н	А													3.15%
Scenario 18	15%	5% CNTRL ABUND LO A Performance Perf														4.73%		
Scenario 19	15%	Image: System of the														7.35%		
Scenario 20	15%	15% CNTRL ABUND LO A Image: Constraint of the state o														11.03%		
Scenario 21	15%	HIGH	ABUND	н	А													1.05%
Scenario 22	15%	HIGH	ABUND	LO	А								YES					1.58%
Scenario 23	15%	HIGH	LIMTD	н	А													2.45%
Scenario 24	15%	HIGH	LIMTD	LO	А								YES					3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	0%	0%	10%	17%	24%	15%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	0%	10%	27%	51%	66%	66%	
r	CPT 1	Theme-Set		1		oad Grow	th Theme Se	et		Ga	s Availabi	lity Theme	Set	1	w	ind Penetr	ration The	me Set
	SCE	pr		1		SCE	pr				SCE	pr				sce	pr	
0%	Number of marios with this ∞ theme	Number of anarios in which roject proceeds	Percentage of relevant scenarios		CNTRL	Number of theme	Number of anarios in which roject proceeds	Percentage of relevant scenarios		ABUND	Number of theme	Number of marios in which o roject proceeds	Percentage of relevant % scenarios		ні	Number of theme	Number of or a narios in which or roject proceeds	Percentage of relevant scenarios
5%	8	3	38%]	HIGH	12	8	67%	l	LIMTD	12	0	0%		LO	12	0	0%
15%	8	5	63%	1														
Other Comments:					I	Proposed 5	0MW wind fa	arm at Aug	usta. Wir	d monitorin	ng is currer	tly underwa	ay.					



<text> 262 Default (00,000,000,000,000,000,000,000,000,000</text>															Plant)	potential New F	(This is a	Potential Project #								
<text> Independent Idea Independent Idea Independent Idea A lange and and and and and and and and and and</text>						node		Country	North (ed in the	locate		Wind)	n (389.4MW	agan - Yandi	Dandara	25								
<text></text>	probability of proceeding	10% pro	1	spond to a	ed to corre	was deeme	ing, which	of proceedi	likelihood		Low			ated a	his project was r	Initially th	-									
Colspan="6">Colspan="6">Colspan="6">Colspan="6" Colspan="6">Colspan="6" Colspan="6" Colspan="6" Colspan="6" Colspan="6" Colspan="6" Colspan="6" Colspan="6" Colspan="6" <th <="" colspan="6" td=""><td>probability of proceeding</td><td>39% pro</td><td>to be</td><td>eveloped)</td><td>hat were de</td><td>scenarios th</td><td>oss all the :</td><td>ulated (acro</td><td>t was calc</td><td>this project</td><td>robability for</td><td>Project F</td><td>t, the FINA</td><td>alysis projec</td><td>the scenario an</td><td>e completion of</td><td>At th</td><td></td></th>	<td>probability of proceeding</td> <td>39% pro</td> <td>to be</td> <td>eveloped)</td> <td>hat were de</td> <td>scenarios th</td> <td>oss all the :</td> <td>ulated (acro</td> <td>t was calc</td> <td>this project</td> <td>robability for</td> <td>Project F</td> <td>t, the FINA</td> <td>alysis projec</td> <td>the scenario an</td> <td>e completion of</td> <td>At th</td> <td></td>						probability of proceeding	39% pro	to be	eveloped)	hat were de	scenarios th	oss all the :	ulated (acro	t was calc	this project	robability for	Project F	t, the FINA	alysis projec	the scenario an	e completion of	At th			
Scarato 1 Original ABUND HI A					nerational:	o be fully or	assumed t	he nlant is :	cenario) t	(for each s	vear in which	trates the	na table illus	The followi												
PG EG Age of a base													ng table niu.	THE IOIOWI												
Security 1 ON'S CNTRL ABUND HI A Image: Security 3 ON'S CNTRL ABUND LO A Image: Security 3 ON'S CNTRL LIMTD LO A Image: Security 3 ON'S CNTRL CNTRL Common 3 ON'S CNTRL LIMTD LO A Image: Security 3 ON'S CNTRL CNTRL CNTRL CNTRL CALING 3 CNTRL 3 CNTRL 3	⁼ inal Scenario Probability 2020-21	2019-20	2018-19	2017-18	2016-17	2015-16	2014-15	2013-14	2012-13	2011-12	2010-11	2009-10	Planting Scenario	Wind Ambition	Gas Availability	Load	CPT									
securio 2 0% CNTRL ABUND LO A	0.9%		YES										A	HI	ABUND	CNTRL	0%	Scenario 1								
Securito 3 Or% CNTRL LIMTD HI A	1.35%												А	LO	ABUND	CNTRL	0%	Scenario 2								
seemio 4 0% CNTRL LMTD LO A	2.1%												А	HI	LIMTD	CNTRL	0%	Scenario 3								
Securito 5 0% HIGH ABUND H A A A A	3.15%												А	LO	LIMTD	CNTRL	0%	Scenario 4								
scenario 0 0% HIGH ABUND LO A Image: Constraint of the constraint of th	2.1%												А	HI	ABUND	HIGH	0%	Scenario 5								
Seemio 7 0% HIGH LIMTD HI A Image: Constraints of the second of	3.15%												А	LO	ABUND	HIGH	0%	Scenario 6								
Semario 8 0% HIGH LIMTD LO A Image: Constraint of the semario 10 Constraint of the semario 11 Constraint of the semario 12 Constraint of the semario 12 <th< td=""><td>4.9%</td><td></td><td>YES</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>А</td><td>н</td><td>LIMTD</td><td>HIGH</td><td>0%</td><td>Scenario 7</td></th<>	4.9%		YES										А	н	LIMTD	HIGH	0%	Scenario 7								
Scenario 10 5% CNTRL ABUND HI A Image: Constraint of the second of the se	7.35%												А	LO	LIMTD	HIGH	0%	Scenario 8								
Scenario 10 5% CNTRL ABUND LO A	1.92%			YES									А	н	ABUND	CNTRL	5%	Scenario 9								
Scenario 11 5% CNTRL LIMTD HI A Image: Constraint of the constraint of	2.88%												А	LO	ABUND	CNTRL	5%	Scenario 10								
Scenario 12 5% CNTRL LIMTD LO A	4.48%												А	н	LIMTD	CNTRL	5%	Scenario 11								
Scenario 13 5% HIGH ABUND HI A Image: Constraint of the constraint	6.72%												А	LO	LIMTD	CNTRL	5%	Scenario 12								
Scenario 14 5% HIGH ABUND LO A Image: Constraint of the constraint	2.88%			YES									А	HI	ABUND	HIGH	5%	Scenario 13								
Scenario 15 5% HIGH LIMTD HI A Image: Constraint of the constraint	4.32%												А	LO	ABUND	HIGH	5%	Scenario 14								
Scenario 16 5% HIGH LIMTD LO A Image: Constraint of the constraint	6.72%												А	HI	LIMTD	HIGH	5%	Scenario 15								
Scenario 17 15% CNTRL ABUND HI A Image: Construct of the state	10.08%												А	LO	LIMTD	HIGH	5%	Scenario 16								
Scenario 18 15% CNTRL ABUND LO A Image: Constraint of the state of the stat	3.15%			YES									А	HI	ABUND	CNTRL	15%	Scenario 17								
Scenario 19 15% CNTRL LIMTD HI A Image: Construct of the second of the se	4.73%												А	LO	ABUND	CNTRL	15%	Scenario 18								
Scenario 20 15% CNTRL LIMTD LO A Image: Constraint of the constrain	7.35%			YES									А	HI	LIMTD	CNTRL	15%	Scenario 19								
Scenario 21 15% HIGH ABUND HI A Scenario 22 15% HIGH ABUND LO A Scenario 23 15% HIGH ABUND LO A Scenario 23 15% HIGH LIMTD HI A Scenario 24 15% HIGH LIMTD HI A Scenario 24 15% HIGH LIMTD LO A Scenario 24 15% HIGH LIMTD LO A V Probability of Proceeding in this Year: 0% 0% 0% 0% 0% 1% 2% 30% 6% 0% 0% V Cumulative Probability 0% 0% 0% 0% 0% 0% 0% 1% 4% 34% 39% 39% V Cumulative Probability 0% 0% 0% 0% 0% 1% 4% 34% 39% 39% V Cumulative Probability 0% 0% 0% 0% 0% 1% 4% 34% 39% 39% V Cumulative Probability 0% 0% 0% 0% 0% 0% 0% 0%	11.03%			YES									А	LO	LIMTD	CNTRL	15%	Scenario 20								
Scenario 22 15% HIGH ABUND LO A Scenario 23 15% HIGH LIMTD HI A Scenario 24 15% HIGH LIMTD HI A Scenario 24 15% HIGH LIMTD LO A Scenario 24 15% HIGH LIMTD LO A Version Probability of Proceeding in this Year: 0% 0% 0% 0% 0% 1% 2% 30% 6% 0% 0% Version Cumulative Probability 0% 0% 0% 0% 0% 0% 1% 4% 34% 39% 39% Version Versi	1.05%					YES							А	н	ABUND	HIGH	15%	Scenario 21								
Scenario 23 15% HIGH LIMTD HI A Scenario 24 15% HIGH LIMTD LO A Scenario 24 15% HIGH LIMTD LO A Version 24 15% HIGH LIMTD Q% 0% 0% 0% 0% 1% YES Version Version 24 15% HIGH LIMTD LO A Version Version Yes Version Version Version 24 15% HIGH LIMTD Q% 0%	1.58%												А	LO	ABUND	HIGH	15%	Scenario 22								
Scenario 24 15% HIGH LIMTD LO A Image: Scenario 24 Probability of Proceeding in this Year: 0% 0% 0% 0% 0% 1% 2% 30% 6% 0% 0% Image: Scenario 24 Image: Scenario 24 Image: Scenario 24 0%	2.45%				YES								А	н	LIMTD	HIGH	15%	Scenario 23								
CPT Theme-Set Comparison	3.68%			YES									А	LO	LIMTD	HIGH	15%	Scenario 24								
Cumulative Probability 0% 0% 0% 0% 0% 0% 1% 4% 34% 39% 39 Image: CPT Theme-Set scenarios in which thick scenarios in which the scenarios is the scenarios is the scenarios in which the scenarios is the scenarios is the scenarios in which the scenarios is the scenarios is the scenarios in which the scenarios is the scenarios is the scenarios in which the scenarios is the scenario	0%	0%	6%	30%	2%	1%	0%	0%	0%	0%	0%	0%	his Year:	eding in tl	lity of Proce	Probabi										
CPT Theme-Set Gas Availability Theme Set Wind Penetration Percentage of scenarios with thic project proceeds scenarios with thic theme theme theme theme Percentage of scenarios with thic theme theme Percentage of scenarios with thic theme theme Percentage of scenarios with thic theme theme Percentage of scenarios with thic theme theme vide Percentage of scenarios with thic theme theme theme Percentage of scenarios with thic theme Percentage of scenarios with thic theme Percentage of scenarios with thic theme Percentage of scenarios with thic theme	6 39%	39%	39%	34%	4%	1%	0%	0%	0%	0%	0%	0%	obability	ulative Pr	Cum											
Percentage of scenarios with this scenarios in which the me scenarios with this scenarios in which the me scenarios with the me scenarios in which the me scenarios in which the me scenarios with the me scenarios with the me scenarios with the me scenarios with the me scenarios in which the me scenarios with the me scenarios is a scenarios with the me scenari	netration Theme Set	ind Penetr	Wi		Set	lity Theme	s Availahi	Gas		et	th Theme S	oad Grow		1		Theme-Set	CPT									
Percentage of scenarios with this scenarios with this scenarios in which the menants with the scenarios in which the scenarios is which the scenarios with this scenarios with this the menants with this the menants in which the menants in which the scenarios in which the scenarios in which the scenarios is which this the menants in which the scenarios is which the scenarios with the scenarios is which the scenarios is which the scenarios with the scenarios is which the scenarios with th	- p g	8				- ×	s				ъŚ	s				ъS	s									
	Percentage of scenarios scenarios Number of enarios in which roject proceeds Number of	Number of enarios with this theme			Percentage of relevant scenarios	Number of enarios in which roject proceeds	Number of enarios with this theme			Percentage of relevant scenarios	Number of enarios in which roject proceeds	Number of enarios with this theme		CPT Theme-Set Percentage of scenarios scenarios in which rol Wumber of Number of Number of theme theme												
0% 8 2 25% CNTRL 12 5 42% ABUND 12 0 0% HI 12 0 0% 10	0 0%	12	HI LO		0% 0%	0	12	ABUND		42% 42%	5	12 12	CNTRL HIGH	<u> </u>												
15% 8 6 75%			0		v /0		1 12			74 /0	5	.2			75%	6	8	15%								
Other Comments: Two wind farm sites are being investigated on rural land in the Shire of Dandaragan. The Waddi site would contain up to 60 wind turbines and it is located approximately 12km north west of E monitoring is currently underway, and a final planning approval decision is expected in late 2010.	west of Dandaragan. Wind	m north we	nately 12kn	ed approxir	l it is locate late 2010.	urbines and expected in	60 wind tu lecision is e	ontain up to ⊨approval d	e would co Il planning	e Waddi sit /, and a fina	daragan. The	ire of Daning is currer	nd in the Sh monitorir	d on rural la	peing investigate	farm sites are b	Two wind	Other Comments:								



Potential Project #	(This is a	potential New I	Plant)															
26	Dandara	agan - Wadd	li (198MW Wi	nd)		locate	ed in the		North	Country		node						
	-	Initially t	his project was	rated a		L	.ow		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		10% pro	obability of	proceeding
	At th	e completion of	f the scenario ar	alysis projec	t, the FINAL	Project P	robability for	this project	was calc	ulated (acro	oss all the :	scenarios tl	hat were de	eveloped)	to be	36% pro	bability of	proceeding
				The followi	na table illus	trates the	vear in which	(for each s	cenario) t	he plant is :	assumed to	o be fully o	nerational [.]					
				THE IONOWI	ng table ilu	indico inc												
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	A												YES	0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	н	A													2.1%
Scenario 6	0%	HIGH	ABUND	LO	A													3.15%
Scenario 7	0%	HIGH	LIMTD	HI	A													4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A													7.35%
Scenario 9	5%	CNTRL	ABUND	HI	A											YES		1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A													2.88%
Scenario 11	5%	CNIRL	LIMID	HI	A													4.48%
Scenario 12	5%	CNIRL	LIMID	LO	A													6.72%
Scenario 13	5%	HIGH	ABUND	HI	A												YES	2.88%
Scenario 14	5%	HIGH	ABUND	LO	A													4.32%
Scenario 15	5%	HIGH	LIMID	н	A													6.72%
Scenario 16	5%	HIGH	LIMID	10	A													10.08%
Scenario 17	15%	CNTRL	ABUND	н	A										YES			3.15%
Scenario 18	15%	CNTRL	ABUND	10	A													4.73%
Scenario 19	15%	CNTRL	LIMID	HI	A										YES			7.35%
Scenario 20	15%	UNIRL		10	A										VEC		YES	11.03%
Scenario 21	15%	HIGH	ABUND	HI	A										TES			1.05%
Scenario 22	15%	HIGH	ABUND		A										TES			1.58%
Scenario 23	15%				~										TES	VEC		2.43%
Scenario 24	1378		LIWITD		^											TES		3.00 /8
		Probabi	ility of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	0%	0%	0%	0%	16%	6%	15%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	0%	0%	0%	16%	21%	36%	
r	СРТ	Theme-Set		1		oad Grow	th Theme Se	et	1	Gas	Availabi	lity Theme	Set		w	ind Penet	ration The	me Set
	sc	×		1		sc					s	%			- "	s S	 	
0%	Number of enarios with this ∞ theme	Number of enarios in whict ← proceeds	Percentage of relevant scenarios		CNTRL	Number of theme	Number of enarios in which w project proceeds	Percentage of relevant scenarios		ABUND	Number of theme	Number of enarios in which o project proceeds	Percentage of relevant scenarios		— ні	Number of theme	Number of enarios in which o project proceeds	Percentage of relevant % scenarios
5%	8	2	25%		HIGH	12	5	42%		LIMTD	12	0	0%		LÖ	12	0	0%
15%	8	7	88%	I														
Other Comments:	Two v	vind farm sites a	are being investi	gated on rur	al land in the cu	e Shire of E irrently und	Dandaragan. erway, and a	The Yandi a final planr	n site star ing appro	ts about 4ki val decisior	m south of i is expecte	Dandarag ed in late 20	an and wo 010.	uld have u	o to 118 wi	nd turbines	s. Wind mo	nitoring is



Potential Project #	(This is a	potential New F	Plant)															
27	Henders	son (60MW V	Wind)			locate	ed in the		South F	remantle	•	node						
T	-	Initially t	his project was	rated a		ı	.ow		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		10% pro	bability of	proceeding
	At th	e completion of	the scenario ar	nalysis projec	t, the FINA	Project P	robability for	this project	t was calc	ulated (acro	oss all the :	scenarios tł	hat were de	eveloped)	to be	35% pro	bability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	scenario)	he plant is	assumed to	o be fully o	perational:					
			⊳															Ξ
	СРТ	Load	Gas vailability	Wind	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	nal Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	A													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND		A											YES		2.1%
Scenario 6	0%	HIGH	ABUND		A									VES				3.15%
Scenario 7	0%	HIGH			A									TES				4.9%
Scenario 9	0% 5%			н	Δ													1.35%
Scenario 10	5%	CNTRL		10									VES					2.88%
Scenario 11	5%	CNTRI	LIMTD	н	A								120		YES			4.48%
Scenario 12	5%	CNTRL	LIMTD	10	A													6.72%
Scenario 13	5%	HIGH	ABUND	н	A													2.88%
Scenario 14	5%	HIGH	ABUND	LO	A													4.32%
Scenario 15	5%	HIGH	LIMTD	н	A											YES		6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A													10.08%
Scenario 17	15%	CNTRL	ABUND	н	А											YES		3.15%
Scenario 18	15%	CNTRL	ABUND	LO	А													4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A												YES	7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А													11.03%
Scenario 21	15%	HIGH	ABUND	н	А								YES					1.05%
Scenario 22	15%	HIGH	ABUND	LO	А													1.58%
Scenario 23	15%	HIGH	LIMTD	н	А												YES	2.45%
Scenario 24	15%	HIGH	LIMTD	LO	А													3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	0%	0%	4%	5%	4%	12%	10%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	0%	4%	9%	13%	25%	35%	
				-									-					
	CPT 1	o fheme-Set		-	Ľ	oad Grow ഗ	th Theme Se o	et		Ga	s Availabi	ity Theme ∽	Set		W	ind Penet	ation The	me Set
0%	Number of cenarios with this ∞ theme	Number of cenarios in which or project proceeds	Percentage of relevant scenarios 25		CNTRL	Number of theme	Number of cenarios in which 4 project proceeds	Percentage of relevant scenarios		ABUND	Number of theme	Number of cenarios in which o project proceeds	Percentage of relevant scenarios		н	Number of cenarios with this theme	Number of cenarios in which project proceeds	Percentage of relevant % scenarios
5%	8	3	38%	-	HIGH	12	5	42%]	LIMTD	12	0	0%		LO	12	0	0%
15%	8	4	50%	J														
Other Comments:					Propose	d wind fan	m, earning 21	IMW of cap	pacity cre	dits, by Eng	ineering fir	m Emerso	n Stewart.					



http://www.roamconsulting.com.au

ROAM Consulting Pty Ltd

Potential Project #	(This is a	potential New F	Plant)															
28	Cervant	es (40MW W	/ind)			locate	ed in the		North	Country		node						
		Initially t	his project was	rated a		L	.ow		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		10% pro	bability of	proceeding
	At th	e completion of	the scenario ar	alysis projec	t, the FINA	L Project P	robability for	this project	t was calc	ulated (acro	oss all the :	scenarios tl	hat were d	eveloped)	to be	34% pro	bability of	proceeding
				The followi	ng table illus	strates the	year in which	(for each s	scenario) (he plant is	assumed t	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	A											YES		0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A									YES				1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A										YES			2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	н	A												YES	2.1%
Scenario 6	0%	HIGH	ABUND	LO	A													3.15%
Scenario 7	0%	HIGH	LIMTD	ні	A													4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A													7.35%
Scenario 9	5%	CNTRL	ABUND	HI	A												YES	1.92%
Scenario 10	5%	CNIRL	ABUND	LO	A										YES			2.88%
Scenario 11	5%	ONTRL		HI	A													4.48%
Scenario 12	5%				A													0.72%
Scenario 14	5%	HIGH			A													4.32%
Scenario 15	5%	шец			^									VES				6 72%
Scenario 16	5%	HIGH	LIMTD	10	A									TL3				10.08%
Scenario 17	15%	CNTRI	ABUND	н	A													3 15%
Scenario 18	15%	CNTRL	ABUND	10	A													4.73%
Scenario 19	15%	CNTRL	LIMTD	н	А													7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А								YES					11.03%
Scenario 21	15%	HIGH	ABUND	н	A										YES			1.05%
Scenario 22	15%	HIGH	ABUND	LO	A													1.58%
Scenario 23	15%	HIGH	LIMTD	н	A													2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A							YES						3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	0%	4%	11%	8%	6%	1%	4%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	4%	15%	23%	29%	30%	34%	
	СРТ 1	Theme-Set		1		oad Grow	th Theme Se	et		Gas	s Availabil	lity Theme	Set	1	w	ind Penetr	ation The	ne Set
	sce	p		1		SOE	p SQ				scé	p so:				sc	p Soc	
0%	Number of enarios with this theme	Number of enarios in which < roject proceeds	Percentage of relevant a scenarios		ONTRI	Number of enarios with this theme	Number of anarios in which a roject proceeds	Percentage of relevant a scenarios		ARUND	Number of enarios with this theme	Number of enarios in which or roject proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of enarios in which or roject proceeds	Percentage of relevant a scenarios
5%	8	3	38%		HIGH	12	4	33%		LIMTD	12	0	0%		LO	12	0	0%
15%	8	3	38%	I														
Other Comments:		Griff	in Energy annou	Inced in 200	4 that it was	committee	I to the const	ruction of a	in 80MW	wind farm (40MW net) as part of	the Bluew	aters gree	nhouse ga	s managen	nent	



Comments:



Wep00017 17th February 2011

Potential Project #	(This is a	potential New F	Plant)															
29	Mingen	ew Solar The	ermal 2 (45M	W Solar T	hermal)	locate	ed in the		North	Country		node						
		Initially t	his project was r	ated a		L	_ow		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		10% pro	bability of	proceeding
	At th	e completion of	the scenario an	alysis projec	ct, the FINAL	Project P	robability for	this project	was calo	ulated (acro	oss all the	scenarios t	hat were de	eveloped)	to be	35% pro	bability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	cenario)	the plant is a	assumed t	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenaric Probability
Scenario 1	0%	CNTRL	ABUND	н	А													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	А													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	н	A													2.1%
Scenario 6	0%	HIGH	ABUND	LO	A													3.15%
Scenario 7	0%	HIGH	LIMTD	н	A													4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A													7.35%
Scenario 9	5%	CNTRL	ABUND	HI	Α													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A													2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A													4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	А													6.72%
Scenario 13	5%	HIGH	ABUND	н	A													2.88%
Scenario 14	5%	HIGH	ABUND	LO	A													4.32%
Scenario 15	5%	HIGH	LIMTD	н	A													6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A													10.08%
Scenario 17	15%	CNTRL	ABUND	н	A									YES				3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A								YES					4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A								YES					7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А										YES			11.03%
Scenario 21	15%	HIGH	ABUND	н	A								YES					1.05%
Scenario 22	15%	HIGH	ABUND	LO	A								YES					1.58%
Scenario 23	15%	HIGH	LIMTD	н	A									YES				2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A								YES					3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	0%	0%	18%	6%	11%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	0%	18%	24%	35%	35%	35%	
	CPT	Theme-Set			L	oad Grow	th Theme Se	et		Gas	s Availabil	ity Theme	Set		W	ind Penetr	ation Ther	ne Set
0%	Number of scenarios with this c	Number of scenarios in which c project proceeds	Percentage of relevant ≨ scenarios		CNTRI	Number of scenarios with this 2 theme	Number of scenarios in which a project proceeds	Percentage of relevant scenarios		ABUND	Number of scenarios with this 2 theme	Number of scenarios in which c project proceeds	Percentage of relevant scenarios		н	Number of scenarios with this 2 theme	Number of scenarios in which c project proceeds	Percentage of relevant scenarios
5%	8	0	0%		HIGH	12	4	33%		LIMTD	12	0	0%		LO	12	0	0%
15%	8	8	100%															
Other		Proposed \$	1.0 billion 250M	N solar then	mal power s	tation. Nor	ninally locate	d on Minge	new. Wo	rley plan to i	investigate	the potent	ial for anot	her 33 add	litional plar	its being bi	uilt by 2020	

Appendix B (Projects) of Report to:

ROAM CONSULTING EXPERIISE



The following table illustrates the year in which (for each scenario) the plant is assumed to be fully operational: Wind Ambitior Planting Scenario

2012-13

2013-14

2011-12

likelihood of proceeding, which was deemed to correspond to a

2014-15

2015-16

(This is a potential New Plant) Mingenew Thermal) Solar Thermal 3 (135MW Solar 30 located in the North Country node

Low

2009-10

At the completion of the scenario analysis project, the FINAL Project Probability for this project was calculated (across all the scenarios that were developed) to be

2010-11

2010 Generation Scenario Outlook for the SWIS

2018-19

2017-18

2016-17

2019-20

Wep00017 17th February 2011

10% probability of proceeding

13% probability of proceeding

2020-21

Final Scena Probabil

0.9%

1.35%

2.1%

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Initially this project was rated a

Gas Availability

ABUND

ABUND

LIMTD

н

LO

н

А

А

А

Load

CNTRL

CNTRL

CNTRL

PT

0%

0%

0%

Scenario 1

Scenario 2

Scenario 3

Potential Project #

Potential Project #	(This is a	potential New F	Plant)															
31	Mumbic	la (90MW Wi	ind)			locate	ed in the		North	Country		node						
	_	Initially t	his project was	rated a		Мо	derate		likelihood	of proceed	ing, which	was deeme	ed to corres	spond to a		40% pro	obability of	proceeding
	At th	e completion of	the scenario ar	alvsis proie	ct. the FINAI	Project F	Probability for	this project	t was calc	ulated (acro	oss all the :	scenarios th	nat were de	eveloped)	to be	87% pro	obability of	proceeding
	744 41	lo completion el												(included)	0.00		,,	
				I he follow	ng table illus	trates the	year in which	(for each s	scenario) t	he plant is	assumed to	o be fully of	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	A								YES					0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A										YES			1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A											YES		2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	HI	A									YES				2.1%
Scenario 6	0%	HIGH	ABUND	LO	A													3.15%
Scenario 7	0%	HIGH	LIMTD	HI	A							YES						4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A											YES		7.35%
Scenario 9	5%	CNIRL	ABUND	н	A								YES					1.92%
Scenario 10	5%	CNIRL	ABUND	LO	A									VEO				2.88%
Scenario 11	5%	CNTRL			A								VEC	TES				6 70%
Scenario 12	5%			10	A							VEC	TES					0.72%
Scenario 14	5%	HIGH			A							TES	VES					4.32%
Scenario 15	5%	нісн			A .							VES	TEO					6 72%
Scenario 16	5%	HIGH		10	Δ							1123	VES					10.08%
Scenario 17	15%	CNTRI	ABUND	н	A								YES					3 15%
Scenario 18	15%	CNTRL	ABUND	LO	A								YES					4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A							YES						7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	A											YES		11.03%
Scenario 21	15%	HIGH	ABUND	н	А							YES						1.05%
Scenario 22	15%	HIGH	ABUND	LO	А								YES					1.58%
Scenario 23	15%	HIGH	LIMTD	н	A							YES						2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A													3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	0%	25%	33%	7%	1%	20%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	25%	59%	65%	67%	87%	87%	
	CPT 1	Theme-Set	1		L	oad Grow	rth Theme Se	et		Ga	s Availabi	ity Theme	Set		W	ind Penetr	ration The	ne Set
	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
0%	8	6	75% 88%		CNTRL HIGH	12 12	10	83% 83%		ABUND LIMTD	12	0	0% 0%		HI LO	12 12	0	0% 0%
15%	8	7	88%			.2	.0	03/0			1 12		v /0			2		v /0
Other Comments:	Near W	alkaway. Feasit	bility study due fi	or ecompleti line. Ha	on early 201 as submitted	0. Origina planning a	lly considerec application to	l in 2002, b City of Ger	ut rejected aldton-Gre	d because o eenough. A	of transmis s of 2009,	sion. Reviv constructio	ed with pro n could sta	oposed En rt in 2010.	eabba to N	loonyoono	oka (Geral	dton) 330kV



Potential Project #	(This is a	potential New F	Plant)															
32	Joanna	Plains (40M	W Wind)			locate	ed in the		North	Country		node						
	-	Initially t	his project was	rated a		Ver	y Low		likelihood	of proceed	ing, which	was deem	ed to corre	spond to a		5% pro	bability of	proceeding
	At th	e completion of	the scenario ar	nalysis projec	t, the FINA	L Project P	robability for	this project	t was calc	ulated (acro	oss all the	scenarios t	hat were de	eveloped)	to be	7% pro	bability of	proceeding
				The followi	ng table illus	strates the	year in which	(for each s	scenario) (he plant is	assumed t	o be fully o	perational:					
			ъ						,			-						1
	СРТ	Load	Gas vvailability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	inal Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	A													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A													1.35%
Scenario 3	0%	CNTRL	LIMTD	HI	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	н	A													2.1%
Scenario 6	0%	HIGH	ABUND		A													3.15%
Scenario 9	0%	нісч			A 													4.9%
Scenario 0	0% 5%				A .													1.00%
Scenario 10	5%	CNTRL	ABUND	10	Δ													2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A													4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A													6.72%
Scenario 13	5%	HIGH	ABUND	н	А													2.88%
Scenario 14	5%	HIGH	ABUND	LO	A													4.32%
Scenario 15	5%	HIGH	LIMTD	н	A													6.72%
Scenario 16	5%	HIGH	LIMTD	LO	А													10.08%
Scenario 17	15%	CNTRL	ABUND	н	А													3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A													4.73%
Scenario 19	15%	CNTRL	LIMTD	н	А													7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А													11.03%
Scenario 21	15%	HIGH	ABUND	н	А									YES				1.05%
Scenario 22	15%	HIGH	ABUND	LO	А													1.58%
Scenario 23	15%	HIGH	LIMTD	н	А										YES			2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A											YES		3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	0%	0%	0%	1%	2%	4%	0%	_
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	0%	0%	1%	4%	7%	7%	
	OPT			,			4h Th	4				14. T hama	0-4		14/	and Demot		
	Set 1	neme-set		1	<u>⊢</u>	oad Grow	tn Ineme Se	эт 		Ga	s Availabi	inty Theme	Set		W	ind Peneti		me Set
0%	Number of cenarios with this cenarios	Number of cenarios in which c project proceeds	Percentage of relevant ≶ scenarios		CNTRL	Number of cenarios with this theme	Number of cenarios in which c project proceeds	Percentage of relevant scenarios		ABUND	Number of theme	Number of cenarios in which c project proceeds	Percentage of relevant ⊗ scenarios		н	Number of cenarios with this theme	Number of cenarios in which c project proceeds	Percentage of relevant ⊗ scenarios
5%	8	0	0%	1	HIGH	12	3	25%		LIMTD	12	0	0%		LO	12	Ő	0%
15%	8	3	38%	J														
Other Comments:					Proposed	wind farm	; little informa	ation availa	ble therefo	ore a very k	ow probab	ility has bee	en ascribec	L				



Potential Project #	(This is a	potential New I	Plant)															
33	Coolim	ba OCGT (3	56.4MW OCG	iT)		locate	ed in the		North	Country		node						
	_1	Initially t	his project was	rated a		Мо	derate		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		40% pro	bability of	proceeding
	At th	e completion of	the scenario ar	alysis projec	t, the FINAI	Project P	robability for	this projec	t was calc	ulated (acro	oss all the	scenarios tl	hat were de	eveloped)	to be	86% pro	bability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	scenario)	he plant is	assumed t	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	А													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А										YES			1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	А													3.15%
Scenario 5	0%	HIGH	ABUND	н	А						YES							2.1%
Scenario 6	0%	HIGH	ABUND	LO	А						YES							3.15%
Scenario 7	0%	HIGH	LIMTD	н	А									YES				4.9%
Scenario 8	0%	HIGH	LIMTD	LO	А								YES					7.35%
Scenario 9	5%	CNTRL	ABUND	н	А								YES					1.92%
Scenario 10	5%	CNTRL	ABUND	LO	А													2.88%
Scenario 11	5%	CNTRL	LIMTD	н	А									YES				4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	А							YES						6.72%
Scenario 13	5%	HIGH	ABUND	н	A						YES							2.88%
Scenario 14	5%	HIGH	ABUND	LO	А						YES							4.32%
Scenario 15	5%	HIGH	LIMTD	н	A						YES							6.72%
Scenario 16	5%	HIGH	LIMTD	LO	А						YES							10.08%
Scenario 17	15%	CNTRL	ABUND	н	А						YES							3.15%
Scenario 18	15%	CNTRL	ABUND	LO	А													4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A						YES							7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А						YES							11.03%
Scenario 21	15%	HIGH	ABUND	н	A									YES				1.05%
Scenario 22	15%	HIGH	ABUND	LO	A						YES							1.58%
Scenario 23	15%	HIGH	LIMTD	н	A						YES							2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A						YES							3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	58%	7%	9%	10%	1%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	58%	65%	74%	85%	86%	86%	86%	
r	CPT "	Theme-Set		1		oad Grow	th Theme Se	et		Ga	s Availabi	lity Theme	Set		Wi	ind Penetr	ation The	ne Set
	SCE	pr SCE		1		SCE	pr				SCE	pr				SCE	pr sce	
0%	Number of enarios with this ∞ theme	Number of anarios in whict ഗ roject proceeds	Percentage of relevant 3% scenarios 6		CNTRL	Number of anarios with this theme	Number of anarios in which A roject proceeds	Percentage of relevant scenarios		ABUND	Number of theme	Number of marios in which o roject proceeds	Percentage of relevant scenarios		HI	Number of marios with this theme	Number of anarios in which o roject proceeds	Percentage of relevant % scenarios
5% 15%	8	7	88%	-	HIGH	12	12	100%	l	LIMTD	12	0	0%		LO	12	0	0%
15%	ιö	/	88%	1														
Other Comments:			In additi	on to the 400	- 0 450MW ba	ase load co	- bal fired plant	, approval	is also be	ng obtained	d for up to	360MW of	- gas fired g	eneration	for Coolim	ba.		



Potential Project #	(This is a	potential New F	Plant)															
34	Kwinan	a OCGT #1 (99MW OCG	Т)		locate	ed in the		Kwi	nana		node						
	3	Initially t	his project was	rated a		ı	_ow		likelihood	of proceed	ing, which	was deeme	ed to corres	spond to a		10% pro	obability of	proceeding
	At th	e completion of	the scenario ar	nalysis projec	t, the FINA	Project P	robability for	this project	t was calc	ulated (acro	oss all the	scenarios tł	hat were de	eveloped)	to be	92% pro	obability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	scenario) t	he plant is	assumed t	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	А										YES			0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	А										YES			2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	А													3.15%
Scenario 5	0%	HIGH	ABUND	н	А									YES				2.1%
Scenario 6	0%	HIGH	ABUND	LO	А							YES						3.15%
Scenario 7	0%	HIGH	LIMTD	н	А												YES	4.9%
Scenario 8	0%	HIGH	LIMTD	LO	А											YES		7.35%
Scenario 9	5%	CNTRL	ABUND	н	А										YES			1.92%
Scenario 10	5%	CNTRL	ABUND	LO	А											YES		2.88%
Scenario 11	5%	CNTRL	LIMTD	н	А										YES			4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	А											YES		6.72%
Scenario 13	5%	HIGH	ABUND	н	А											YES		2.88%
Scenario 14	5%	HIGH	ABUND	LO	А												YES	4.32%
Scenario 15	5%	HIGH	LIMTD	н	А											YES		6.72%
Scenario 16	5%	HIGH	LIMTD	LO	А										YES			10.08%
Scenario 17	15%	CNTRL	ABUND	н	А													3.15%
Scenario 18	15%	CNTRL	ABUND	LO	А									YES				4.73%
Scenario 19	15%	CNTRL	LIMTD	н	А								YES					7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А											YES		11.03%
Scenario 21	15%	HIGH	ABUND	н	А											YES		1.05%
Scenario 22	15%	HIGH	ABUND	LO	А										YES			1.58%
Scenario 23	15%	HIGH	LIMTD	н	А								YES					2.45%
Scenario 24	15%	HIGH	LIMTD	LO	А										YES			3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	0%	3%	10%	7%	25%	39%	9%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	3%	13%	20%	45%	83%	92%	
·	СРТТ	Theme-Set		1		oad Grow	th Thoma S	at	1	Ga	s Availabil	lity Theme	Sot	1	w	ind Penet	ration The	no Sot
	8	%		1		8 8	S			- 64	s Availabil				~~~	s s		
0%	Number of theme	Number of enarios in which co project proceeds	Percentage of relevant of scenarios	-	CNTRL	Number of theme	Number of enarios in which or project proceeds	Percentage of relevant scenarios		ABUND	Number of theme	Number of project proceeds	Percentage of relevant scenarios		н	Number of theme	Number of project proceeds	Percentage of relevant scenarios
5%	8	8	100%	1	HIGH	12	12	100%		LIMTD	12	0	0%		LÖ	12	Ő	0%
15%	8	7	88%	1														
Other Comments:																		



Appendix B (Projects) of Report to:

Potential Project #	(This is a	potential New F	Plant)																	
35	Kwinan	a OCGT #2 (located in the				Kwinana node												
	 Initially this project was rated a 					Low like			likelihood	lood of proceeding, which was deemed to correspond to a							10% probability of proceeding			
	At the completion of the scenario analysis project, the FINAL						robability for	this project	t was calc	ulated (across all the scenarios that were developed) to be						e 48% probability of proceeding				
				The followi	ng table illus	trates the	year in which	(for each s	scenario) t	he plant is	assumed to	o be fully o	perational:							
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenaric Probability		
Scenario 1	0%	CNTRL	ABUND	н	А										YES			0.9%		
Scenario 2	0%	CNTRL	ABUND	LO	А													1.35%		
Scenario 3	0%	CNTRL	LIMTD	HI	А													2.1%		
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%		
Scenario 5	0%	HIGH	ABUND	н	A										YES			2.1%		
Scenario 6	0%	HIGH	ABUND	LO	A									YES				3.15%		
Scenario 7	0%	HIGH	LIMTD	н	A													4.9%		
Scenario 8	0%	HIGH	LIMTD	LO	A													7.35%		
Scenario 9	5%	CNTRL	ABUND	н	A													1.92%		
Scenario 10	5%	CNTRL	ABUND	LO	A													2.88%		
Scenario 11	5%	CNTRL	LIMTD	н	A													4.48%		
Scenario 12	5%	CNTRL	LIMTD	LO	A												YES	6.72%		
Scenario 13	5%	HIGH	ABUND	н	A													2.88%		
Scenario 14	5%	HIGH	ABUND	LO	A													4.32%		
Scenario 15	5%	HIGH	LIMTD	HI	A												YES	6.72%		
Scenario 16	5%	HIGH	LIMTD	LO	A											YES		10.08%		
Scenario 17	15%	CNTRL	ABUND	н	A												2/50	3.15%		
Scenario 18	15%	CNTRL	ABUND	LO	A												YES	4.73%		
Scenario 19	15%	CNIRL	LIMID	HI	A										YES			7.35%		
Scenario 20	15%	CNIRL	LIMID	LO	A													11.03%		
Scenario 21	15%	HIGH	ABUND	HI	A													1.05%		
Scenario 22	15%	HIGH	ABUND	10	A											VEO		1.58%		
Scenario 23	15%	HIGH		HI	A											TES	VEC	2.45%		
Scenario 24	15%	Probabi		eding in t	A his Vear	0%	0%	0%	0%	0%	0%	0%	0%	29/	10%	129/	22%	3.08%		
						078	078	078	070	076	078	078	078	576	1078	1370	22.70			
Cumulative Probability						0%	0%	0%	0%	0%	0%	0%	0%	3%	14%	26%	48%			
CPT Theme-Set							th Theme Se	et	l	Gas Availability Theme Set					W	ne Set				
	sce	sce	_			sce	sce	_			sce	pr	_			sce	pp	_		
0%	narios with this α theme	Number of narios in which c oject proceeds	Percentage of relevant g scenarios ۳		ONTRI	Number of theme	Number of narios in which ~ oject proceeds	Percentage of relevant scenarios		ABUND	Number of theme	Number of oject proceeds	Percentage of relevant scenarios		н	Number of marios with this theme	Number of narios in which c oject proceeds	Percentage of relevant ≶ scenarios		
5%	8	3	38%		HIGH	12	6	50%		LIMTD	12	0	0%		LO	12	0	0%		
Other Comments:	8	4	50%	1																



	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenaric Probability
Scenario 1	0%	CNTRL	ABUND	HI	A													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	н	A													2.1%
Scenario 6	0%	HIGH	ABUND	LO	A													3.15%
Scenario 7	0%	HIGH	LIMTD	н	A													4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A													7.35%
Scenario 9	5%	CNTRL	ABUND	н	A													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A													2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A													4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A													6.72%
Scenario 13	5%	HIGH	ABUND	н	A													2.88%
Scenario 14	5%	HIGH	ABUND	LO	A													4.32%
Scenario 15	5%	HIGH	LIMTD	н	A													6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A													10.08%
Scenario 17	15%	CNTRL	ABUND	н	A													3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A											YES		4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A											YES		7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А													11.03%
Scenario 21	15%	HIGH	ABUND	н	A													1.05%
Scenario 22	15%	HIGH	ABUND	LO	A													1.58%
Scenario 23	15%	HIGH	LIMTD	н	A													2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A													3.68%
Probability of Proceeding in this Year:						0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	12%	0%	
Cumulative Probability						0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	12%	12%	
CPT Theme-Set						oad Grow	th Theme S	et]	Ga	s Availabil	lity Theme	Set		w	ne Set		
0%	Number of scenarios with this contained the me	Number of scenarios in which o project proceeds	Percentage of relevant % scenarios		CNTRL	Number of scenarios with this theme	Number of scenarios in which cu project proceeds	Percentage of relevant scenarios		ABUND	Number of theme	Number of scenarios in which o project proceeds	Percentage of relevant % scenarios		HI	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant % scenarios
5% 15%	8	0	0% 25%	-	HIGH	12	0	0%]	LIMTD	12	0	0%	I	LO	12	0	0%
Other Comments:				_														

The following table illustrates the year in which (for each scenario) the plant is assumed to be fully operational:

At the completion of the scenario analysis project, the FINAL Project Probability for this project was calculated (across all the scenarios that were developed) to be 12% probability of proceeding

Kwinana

node

likelihood of proceeding, which was deemed to correspond to a

located in the

Low

(This is a potential New Plant) Kwinana OCGT #3 (99MW OCGT)

Initially this project was rated a

Potential Project #

36



10% probability of proceeding



2010 Generation Scenario Outlook for the SWIS


Potential Project #	(This is a	potential New I	Plant)															
37	Kwinan	a OCGT #4 ((99MW OCG1	Г)		locate	ed in the		Kwi	nana		node						
	_	Initially t	his project was	rated a		ı	.ow		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		10% pro	obability of	proceeding
	At th	e completion of	f the scenario ar	alysis projec	t, the FINA	L Project P	robability for	this project	t was calc	ulated (acro	oss all the :	scenarios ti	hat were de	eveloped)	to be	7% pro	bability of	proceeding
				The followi	na table illus	strates the	vear in which	(for each s	cenario) t	he plant is	assumed to	o be fullv o	perational:					
			⊳						,									<u></u>
	CPT	Load	Gas vailability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	nal Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	A													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A													1.35%
Scenario 3	0%	CNTRL	LIMTD	HI	A													2.1%
Scenario 4	0%	CNTRL		LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	HI	A													2.1%
Scenario 7	0%	Нісн		<u>н</u>	Δ													4 0%
Scenario 8	0%	HIGH	LIMTD	10	Δ													7 35%
Scenario 9	5%	CNTRL	ABUND	н	A													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A													2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A													4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A													6.72%
Scenario 13	5%	HIGH	ABUND	ні	A													2.88%
Scenario 14	5%	HIGH	ABUND	LO	А													4.32%
Scenario 15	5%	HIGH	LIMTD	н	А													6.72%
Scenario 16	5%	HIGH	LIMTD	LO	А													10.08%
Scenario 17	15%	CNTRL	ABUND	н	А													3.15%
Scenario 18	15%	CNTRL	ABUND	LO	А													4.73%
Scenario 19	15%	CNTRL	LIMTD	н	А												YES	7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А													11.03%
Scenario 21	15%	HIGH	ABUND	н	A													1.05%
Scenario 22	15%	HIGH	ABUND	LO	A													1.58%
Scenario 23	15%	HIGH	LIMTD	н	A													2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A													3.68%
		Probabi	ility of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	7%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	7%	
r	CPT	Theme-Set		1	<u>г</u>	oad Grow	th Theme Se	et		Gas	s Availabi	ity Theme	Set		w	ind Peneti	ration The	ne Set
	sce	scer	_			sce	scei				sce	scer	L L			sce	bu	-
08/	Number of narios with this of theme	Number of narios in which o pject proceeds	Percentage of relevant a scenarios		ONTRI	Number of narios with this theme	Number of narios in which oject proceeds	Percentage of relevant scenarios		ARUND	Number of narios with this theme	Number of narios in which o pject proceeds	Percentage of relevant scenarios			Number of narios with this theme	Number of narios in which o pject proceeds	Percentage of relevant a scenarios
5%	8	0	0%	1	HIGH	12	0	0%		LIMTD	12	0	0%		LO	12	0	0%
15%	8	1	13%	1														
Other Comments:																		



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Potential Project #	(This is a	potential New I	Plant)															
38	North C	ountry OCG	iT #1 (99MW	OCGT)		locate	ed in the		North	Country		node						
		Initially t	his project was	rated a		I	_ow		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		10% pro	bability of	proceeding
	At th	ne completion of	f the scenario ar	nalysis projec	t, the FINA	Project P	robability for	this project	t was calc	ulated (acro	oss all the :	scenarios tl	hat were de	eveloped)	to be	50% pro	obability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	scenario) t	he plant is	assumed t	o be fully o	perational:					
			⊳		. 1													Ξ
	СРТ	Load	Gas vailability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Probability
Scenario 1	0%	CNTRL	ABUND	н	A													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	HI	A												YES	2.1%
Scenario 6	0%	HIGH	ABUND		A											YES	VEO	3.15%
Scenario 7	0%	HIGH		н	A									VEO			YES	4.9%
Scenario 8	0%	HIGH		LO	A									YES				7.35%
Scenario 9	5%		ABUND		A													1.92%
Scenario 11	5%	CNTRL			A .													2.00%
Scenario 12	5%	CNTRL		10	A													6 72%
Scenario 13	5%	HIGH		н	A								VES					2.88%
Scenario 14	5%	HIGH	ABUND	10	A								120	YES				4.32%
Scenario 15	5%	HIGH	LIMTD	н	A										YES			6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A								YES					10.08%
Scenario 17	15%	CNTRL	ABUND	н	А													3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A													4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A													7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	A													11.03%
Scenario 21	15%	HIGH	ABUND	н	A										YES			1.05%
Scenario 22	15%	HIGH	ABUND	LO	A									YES				1.58%
Scenario 23	15%	HIGH	LIMTD	н	A							YES						2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A						YES							3.68%
	•	Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	4%	2%	13%	13%	8%	3%	7%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	4%	6%	19%	32%	40%	43%	50%	
 	CDT	Thoma-Sat		1		ood Grow	th Thoma Se	nt.	1	62	Availabil	lity Thoma	Sot		10/1	ind Ponote	ration Tho	ma Sat
	s s	- Set		1		sau Grow					s AvaiidDii		081			s s		10 301
	Number of enarios with this theme	Number of enarios in which project proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of enarios in which project proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of enarios in which project proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of enarios in which project proceeds	Percentage of relevant scenarios
0%	8	4	50% 50%	{	CNTRL HIGH	12 12	0	0% 100%		ABUND LIMTD	12	0	0% 0%		HI LO	12 12	0	0% 0%
15%	8	4	50%	1									0,0			=	-	
Other Comments:																		

8	4	50%															
8	3	38%		HIGH	12	9	75%		LIMTD	12	0	0%		LO	12	0	0%
Number of scenarios with this a theme	Number of scenarios in which or project proceeds	Percentage of scenarios		CNTRI	Number of scenarios with this 2 theme	Number of scenarios in which c project proceeds	Percentage of relevant scenarios		ABUND	Number of scenarios with this 2 theme	Number of scenarios in which c project proceeds	Percentage of relevant scenarios		н	Number of scenarios with this 2 theme	Number of scenarios in which c project proceeds	Percentage of relevant scenarios
CPT T	heme-Set			L	oad Grow	th Theme Se	et		Gas	s Availabil	ity Theme	Set		W	ind Penetr	ation The	ne Set
		Cum	ulative Pro	obability	0%	0%	0%	0%	0%	0%	0%	6%	19%	20%	32%	36%	
	Probabi	lity of Proce	eding in th	nis Year:	0%	0%	0%	0%	0%	0%	0%	6%	13%	1%	12%	5%	
15%	HIGH	LIMTD	LO	A								YES					3.68%
15%	HIGH	LIMTD	н	A								YES					2.45%
15%	HIGH	ABUND	LO	A												YES	1.58%
15%	HIGH	ABUND	н	A										YES			1.05%
15%	CNTRL	LIMTD	LO	A													11.03%
15%	CNTRL	LIMTD	н	A													7.35%
15%	CNTRL	ABUND	LO	A													4.73%
15%	CNTRL	ABUND	н	A													3.15%
5%	HIGH	LIMTD	LO	A									YES				10.08%
5%	HIGH	LIMTD	н	Δ											VES		6.72%
5%	HIGH	ABUND	10	A									TEO				4 32%
5%			- 10	A									VES				0.72%
5%	CNTRL			A													6.70%
5%	CNTRL	ABUND	LO	A													2.88%
5%	CNTRL	ABUND	HI	A													1.92%
0%	HIGH	LIMTD	LO	A													7.35%
0%	HIGH	LIMTD	н	A											YES		4.9%
0%	HIGH	ABUND	LO	A												YES	3.15%
0%	HIGH	ABUND	н	A													2.1%
0%	CNTRL	LIMTD	LO	A													3.15%

At the completion of the scenario analysis project, the FINAL Project Probability for this project was calculated (across all the scenarios that were developed) to be The following table illustrates the year in which (for each scenario) the plant is assumed to be fully operational: Gas Availability Wind Ambition Planting Scenario 2011-12 2012-13 2014-15 2015-16 2016-17 2017-18 2018-19 2019-20 2020-21 2009-10 2013-14 2010-11 Load CPT Scenario 1 0% CNTRL ABUND н А Scenario 2 0% CNTRL ABUND LO А Scenario 3 0% CNTRL LIMTD н А 0% Scenario 4 Scenario 5 0% 0% Scenario 6 Scenario 7 0% 0% Scenario 8 Scenario 9 5%

located in the

Low

36% probability of proceeding

North Country

node

likelihood of proceeding, which was deemed to correspond to a

(This is a potential New Plant)

North Country OCGT #2 (99MW OCGT)

Initially this project was rated a

Potential Project #

39

Scenario 10

Scenario 11 Scenario 12

Scenario 13 Scenario 14

Scenario 15

Scenario 16 Scenario 17

Scenario 18 Scenario 19

Scenario 20

Scenario 21 Scenario 22

Scenario 23

Scenario 24

0% 5% 15%

Other Comments

scenarios theme

Wep00017 17th February 2011

10% probability of proceeding

Final Scena Probabil

0.9%

1.35%

2.1%

Potential Project #	(This is a	potential New F	Plant)															
40	North C	ountry OCG	T #3 (99MW	OCGT)		locate	ed in the		North	Country		node						
. <u> </u>	-	Initially th	his project was	rated a			Low		likelihood	of proceedi	ing, which	was deem	ed to corre	spond to a		10% pro	bability of	proceeding
	At th	e completion of	the scenario ar	nalysis projec	ct, the FINAI	L Project F	robability for	this project	t was calc	ulated (acro	oss all the	scenarios t	hat were d	eveloped)	to be	6% pro	bability of	proceeding
				The followi	ing table illus	strates the	year in which	(for each s	scenario) t	he plant is a	assumed to	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenaric Probability
Scenario 1	0%	CNTRL	ABUND	н	А													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	А													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	А													3.15%
Scenario 5	0%	HIGH	ABUND	н	А													2.1%
Scenario 6	0%	HIGH	ABUND	LO	А													3.15%
Scenario 7	0%	HIGH	LIMTD	н	А													4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A													7.35%
Scenario 9	5%	CNTRL	ABUND	н	А													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	А													2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A													4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	А													6.72%
Scenario 13	5%	HIGH	ABUND	н	А													2.88%
Scenario 14	5%	HIGH	ABUND	LO	A													4.32%
Scenario 15	5%	HIGH	LIMTD	н	А													6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A													10.08%
Scenario 17	15%	CNTRL	ABUND	н	А													3.15%
Scenario 18	15%	CNTRL	ABUND	LO	А													4.73%
Scenario 19	15%	CNTRL	LIMTD	н	А													7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А													11.03%
Scenario 21	15%	HIGH	ABUND	н	А													1.05%
Scenario 22	15%	HIGH	ABUND	LO	A													1.58%
Scenario 23	15%	HIGH	LIMTD	н	А									YES				2.45%
Scenario 24	15%	HIGH	LIMTD	LO	А									YES				3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	0%	0%	0%	6%	0%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	0%	0%	6%	6%	6%	6%	
L																		
		Theme-Set	T	-	L	oad Grow	th Theme So	et		Gas	s Availabi	lity Theme	Set		w	ind Penetr	ation The	ne Set
	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which a project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this! theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
0% 5%	8	0	0%	1	HIGH	12 12	2	0% 17%		ABUND LIMTD	12	0	0%		LO	12 12	0	0%
15%	8	2	25%]			-					-	0/0				Ţ	
Other Comments:																		

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Potential Project #	(This is a	potential New F	Plant)															
41	North C	ountry OCG	T #4 (99MW	OCGT)		locate	ed in the		North	Country		node						
	-	Initially t	his project was	rated a		I	_ow		likelihood	of proceedi	ing, which	was deeme	ed to corre	spond to a		10% pro	bability of	proceeding
	At th	e completion of	the scenario ar	nalysis projec	t, the FINA	Project P	robability for	this project	t was calc	ulated (acro	oss all the :	scenarios t	hat were de	eveloped)	to be	6% pro	bability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	scenario) (he plant is a	assumed t	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	А													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	н	А													2.1%
Scenario 6	0%	HIGH	ABUND	LO	А													3.15%
Scenario 7	0%	HIGH	LIMTD	н	А													4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A													7.35%
Scenario 9	5%	CNTRL	ABUND	н	A													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	А													2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A													4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A													6.72%
Scenario 13	5%	HIGH	ABUND	н	A													2.88%
Scenario 14	5%	HIGH	ABUND	LO	А													4.32%
Scenario 15	5%	HIGH	LIMTD	н	A													6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A													10.08%
Scenario 17	15%	CNTRL	ABUND	н	A													3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A													4.73%
Scenario 19	15%	CNTRL	LIMTD	н	А													7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А													11.03%
Scenario 21	15%	HIGH	ABUND	н	A													1.05%
Scenario 22	15%	HIGH	ABUND	LO	А													1.58%
Scenario 23	15%	HIGH	LIMTD	н	А												YES	2.45%
Scenario 24	15%	HIGH	LIMTD	LO	А											YES		3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	2%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	4%	6%	
	CPT 1	Theme-Set		1		oad Grow	th Theme S	et	1	Gas	Availabi	ity Theme	Set	I	w	ind Penetr	ation The	me Set
	s	pő		1		S	p		1		so	p SQ				ŝ	ъŝ	
0%	Number of enarios with this ∞ theme	Number of enarios in which o roject proceeds	Percentage of relevant % scenarios		CNTRL	Number of theme	Number of enarios in which o roject proceeds	Percentage of relevant scenarios		ABUND	Number of theme	Number of enarios in which o roject proceeds	Percentage of relevant scenarios		H	Number of theme	Number of roject proceeds	Percentage of relevant % scenarios
5%	8	0	0%	1	HIGH	12	2	17%	1	LIMTD	12	0	0%		LÖ	12	0	0%
15%	8	2	25%	J														
Other Comments:																		



Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
me-Set]	L	oad Grow	th Theme Se	et	1	Gas	s Availabil	ity Theme	Set		w	ind Penetr	ation The	ne Set
	Cum	ulative Pro	obability	0%	0%	0%	0%	0%	0%	1%	8%	27%	32%	63%	75%	
Probabi	lity of Proce	eding in th	nis Year:	0%	0%	0%	0%	0%	0%	1%	7%	19%	5%	31%	12%	
HIGH	LIMTD	LO	A									YES				3.68%
HIGH	LIMTD	н	A									YES				2.45%
HIGH	ABUND	LO	A												YES	1.58%
HIGH	ABUND	ні	A							YES						1.05%
CNTRL	LIMTD	LO	А													11.03%
CNTRL	LIMTD	ні	A								YES					7.35%
CNTRL	ABUND	LO	A										YES			4.73%
CNTRL	ABUND	ні	A												YES	3.15%
HIGH	LIMTD	LO	A											YES		10.08%
HIGH	LIMTD	н	A									YES				6.72%
HIGH	ABUND	LO	A											YES		4.32%
HIGH	ABUND	н	A													2.88%
CNTRL	LIMTD	10	A											YES		6.72%
CNTRI	LIMTD	н	A									163		YES		4 48%
CNITRL	ABUND		A .									VEC				0.000/
HIGH		10	A												TES	7.35%
HIGH	LIMID	HI	A													4.9%
HIGH	ABUND	LO	A									YES				3.15%
HIGH	ABUND	HI	A											YES		2.1%
CNTRL	LIMTD	LO	A													3.15%
CNTRL	LIMTD	н	A											YES		2.1%
CNTRL	ABUND	LO	A													1.35%
CNTRL	ABUND	ні	А											YES		0.9%

located in the

Low

At the completion of the scenario analysis project, the FINAL Project Probability for this project was calculated (across all the scenarios that were developed) to be

2010-11

The following table illustrates the year in which (for each scenario) the plant is assumed to be fully operational: Gas Availability

2012-13

2013-14

2011-12

Northern Terminal

node likelihood of proceeding, which was deemed to correspond to a

2015-16

2016-17

2017-18

2018-19

2019-20

2014-15

ABUND LIMTD

Appendix B (Projects) of Report to:

(This is a potential New Plant)

Load

CPT

0%

0%

0%

0%

0%

0%

0%

0%

5%

5%

5%

5%

5%

5%

5%

5%

15%

15%

15%

15%

15%

15%

15%

15%

narios

Number of arios with this theme

CPT Theme-

75% 88%

Northern Terminal OCGT #1 (99MW OCGT)

Initially this project was rated a

Wind Ambition

Planting Scenario

2009-10

CNTRL

Potential Project #

42

Scenario 1

Scenario 2

Scenario 3

Scenario 4 Scenario 5

Scenario 6 Scenario 7

Scenario 8 Scenario 9

Scenario 10

Scenario 11 Scenario 12

Scenario 13

Scenario 14

Scenario 15

Scenario 16

Scenario 17

Scenario 18 Scenario 19

Scenario 20

Scenario 21

Scenario 22

Scenario 23

Scenario 24

0% 5% 15%

Other Comments 10% probability of proceeding

75% probability of proceeding

2020-21

Final Scenau Probabil

			Cum	obability	0%	0%	0%	0%	0%	0%	0%	7%	14%	23%	28%	40%		
				_														
	CPT T	heme-Set			L	oad Grow	th Theme Se	et		Ga	s Availabi	ity Theme	Set		W	nd Penetr	ation The	ne Set
	Number of scenarios with this theme	Number of scenarios in which project proceeds		Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios		
0%	8	1	13%		CNTRL	12	3	25%		ABUND	12	0	0%		HI	12	0	0%
5%	8	3	38%		HIGH	12	5	42%		LIMTD	12	0	0%		LO	12	0	0%
15%	8	4	50%															
Other Comments:	% 8 4 50%																	

		Initially t	his project was	rated a		I	-ow	I	likelihood	of proceed	ling, which	was deem	ed to corre	spond to a		10% pro	bability of	proceeding
	At th	e completion of	the scenario ar	alysis projec	t, the FINA	L Project P	robability for	this project	t was calc	ulated (acro	oss all the :	scenarios t	hat were d	eveloped)	to be	40% pro	bability of	proceeding
				The followi	ng table illus	strates the	year in which	n (for each s	scenario) t	ne plant is	assumed to	o be fully a	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	HI	А													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А													1.35%
Scenario 3	0%	CNTRL	LIMTD	HI	А													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	А													3.15%
Scenario 5	0%	HIGH	ABUND	HI	А												YES	2.1%
Scenario 6	0%	HIGH	ABUND	LO	А													3.15%
Scenario 7	0%	HIGH	LIMTD	н	A													4.9%
Scenario 8	0%	HIGH	LIMTD	LO	А													7.35%
Scenario 9	5%	CNTRL	ABUND	н	А													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	А										YES			2.88%
Scenario 11	5%	CNTRL	LIMTD	н	А													4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	А													6.72%
Scenario 13	5%	HIGH	ABUND	н	А													2.88%
Scenario 14	5%	HIGH	ABUND	LO	А													4.32%
Scenario 15	5%	HIGH	LIMTD	н	A								YES					6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A												YES	10.08%
Scenario 17	15%	CNTRL	ABUND	н	A													3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A											YES		4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A									YES				7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А													11.03%
Scenario 21	15%	HIGH	ABUND	н	A													1.05%
Scenario 22	15%	HIGH	ABUND	LO	A													1.58%
Scenario 23	15%	HIGH	LIMTD	н	A										YES			2.45%
Scenario 24	15%	HIGH	LIMTD	LO	А										YES			3.68%
		Probabi	lity of Proce	eding in tl	his Year:	0%	0%	0%	0%	0%	0%	0%	7%	7%	9%	5%	12%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	0%	7%	14%	23%	28%	40%	
																	-	
	CPT '	Theme-Set		1	L	oad Grow	th Theme S	et		Ga	s Availabi	ity Theme	Set		W	ind Penet	ation The	me Set
	scenario	r scenaric project	Perc			scenario	r scenaric project	Perc			scenario	r scenaric project	Perc			scenario	r scenaric project	Perc

 Initially this project was rated a
 Low
 Northern Terminal
 node

 At the completion of the scenario analysis project, the FINAL Project Probability for this project was calculated (across all the scenarios that were developed) to be
 40% probability

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2010 Generation Scenario Outlook for the SWIS

Potential Project #

43



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	At th	e completion of	f the scenario an	alysis projec	t, the FINA	L Project P	robability for	this project	was calc	ulated (acro	oss all the s	scenarios th	nat were de	eveloped)	to be	12% pro	obability of	proceeding
				The followi	ng table illus	strates the	year in which	(for each s	cenario) 1	he plant is a	assumed to	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	HI	A													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A													1.35%
Scenario 3	0%	CNTRL	LIMTD	HI	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	HI	A													2.1%
Scenario 6	0%	HIGH	ABUND		A													3.15%
Scenario 9	0%	нісн			A 													7 25%
Scenario 9	5%	CNTRL	ABUND	н	A													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A													2.88%
Scenario 11	5%	CNTRL	LIMTD	HI	A													4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A													6.72%
Scenario 13	5%	HIGH	ABUND	н	A													2.88%
Scenario 14	5%	HIGH	ABUND	LO	A													4.32%
Scenario 15	5%	HIGH	LIMTD	н	А													6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A													10.08%
Scenario 17	15%	CNTRL	ABUND	н	A													3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A												YES	4.73%
Scenario 19	15%	CNIRL		HI	A										YES			7.35%
Scenario 20	15%	HIGH		н	A													105%
Scenario 22	15%	HIGH	ABUND	10	A													1.58%
Scenario 23	15%	HIGH	LIMTD	HI	A													2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A													3.68%
		Probabi	ility of Proce	eding in tl	nis Year:	0%	0%	0%	0%	0%	0%	0%	0%	0%	7%	0%	5%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	0%	0%	0%	7%	7%	12%	
	CPT 1	heme-Set			L	oad Grow	th Theme So	et		Gas	Availabil	ity Theme	Set		w	ind Penet	ration Ther	ne Set
	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
0% 5%	8	0	0%		CNTRL HIGH	12	2	17% 0%		ABUND LIMTD	12 12	0	0% 0%		HI LO	12 12	0	0% 0%
15%	8	2	25%			=	-				=	-	•,•				-	0,0
Other Comments:																		

likelihood of proceeding, which was deemed to correspond to a 10% probability of proceeding Initially this project was rated a Low

Northern Terminal OCGT #3 (99MW OCGT) located in the Northern Terminal node

Appendix B (Projects) of Report to:

(This is a potential New Plant)

Potential Project #

44

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Norther	n Terminal C	DCGT #4 (19	8MW OCG	iT)	locate	ed in the	ı	Northern	Termina	ıl	node						
	Initially t	his project was	rated a		I	Low		likelihood	of proceedi	ng, which	was deem	ed to corre	spond to a		10% pro	bability of	proceeding
At th	e completion of	the scenario ar	nalysis projec	t, the FINA	L Project F	Probability for	this projec	t was calcu	ulated (acro	oss all the	scenarios t	hat were d	eveloped)	to be	0% pro	bability of	proceeding
			The following	ng table illu	strates the	year in which	(for each	scenario) tl	ne plant is a	assumed t	o be fully o	perational:					
СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
0%	CNTRL	ABUND	н	А													0.9%
0%	CNTRL	ABUND	LO	А													1.35%
0%	CNTRL	LIMTD	н	А													2.1%
0%	CNTRL	LIMTD	LO	А													3.15%
0%	HIGH	ABUND	н	А													2.1%
0%	HIGH	ABUND	LO	А													3.15%
0%	HIGH	LIMTD	н	А													4.9%
0%	HIGH	LIMTD	LO	А													7.35%
5%	CNTRL	ABUND	н	А													1.92%
5%	CNTRL	ABUND	LO	А													2.88%
5%	CNTRL	LIMTD	н	A													4.48%
5%	CNTRL	LIMTD	LO	А													6.72%
5%	HIGH	ABUND	н	А													2.88%
5%	HIGH	ABUND	LO	A													4.32%
5%	HIGH	LIMTD	н	A													6.72%

5%

15%

15%

15%

15%

15%

15%

15%

15%

HIGH

CNTRL

CNTRL

CNTRL

CNTRL

HIGH

HIGH

HIGH

HIGH

CPT Theme-Set

Wep00017 17th February 2011

Wind Penetration Theme Set <u>2</u>

2.88% 4.32% 6.72% LIMTD LO 10.08% A ABUND нι А 3.15% LO А 4.73% ABUND LIMTD н А 7.35% LIMTD LO 11.03% А А ABUND ΗΙ 1.05% ABUND LO А 1.58% LIMTD HI А 2.45% LIMTD LO A 3.68% Probability of Proceeding in this Year: 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% Cumulative Probability 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%

Gas Availability Theme Set

Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios		Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios			Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios		Number of scenarios with this theme	Number of scenarios in which project proceeds	relevant scenarios
8	0	0%	CNTRL	12	0	0%		ABUND	12	0	0%	HI	12	0	0%
8	0	0%	HIGH	12	0	0%		LIMTD	12	0	0%	LO	12	0	0%
8	0	0%					-								

Load Growth Theme Set

Potential Project # (This is a potential New Plant)

45

Scenario 1

Scenario 2

Scenario 3

Scenario 4 Scenario 5

Scenario 6

Scenario 7

Scenario 8 Scenario 9

Scenario 10

Scenario 11 Scenario 12

Scenario 13

Scenario 14

Scenario 15

Scenario 16

Scenario 17

Scenario 18 Scenario 19

Scenario 20

Scenario 21

Scenario 22

Scenario 23

Scenario 24

0% 5% 15%

Other Comments

2010 Generation Scenario Outlook for the SWIS

Potential Project #	(This is a	potential New F	Plant)															
<mark>46</mark>	Kwinan	a CCGT #1 (194.2MW CC	GT)		locate	ed in the		Kwi	nana		node						
		Initially t	his project was	rated a		ı	_ow		likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		10% pro	obability of	proceeding
	At th	e completion of	the scenario ar	nalysis projec	t, the FINA	Project P	robability for	this project	t was calc	ulated (acro	oss all the	scenarios tł	hat were de	eveloped)	to be	30% pro	obability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	scenario) t	he plant is	assumed to	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	A							YES						0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A								YES					1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	н	A						YES							2.1%
Scenario 6	0%	HIGH	ABUND	LO	A									YES				3.15%
Scenario 7	0%	HIGH	LIMTD	н	A													4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A													7.35%
Scenario 9	5%	CNIRL	ABUND	н	A						YES							1.92%
Scenario 10	5%	CNIRL	ABUND	LO	A											YES		2.88%
Scenario 11	5%	CNTRL	LIMID	HI	A													4.48%
Scenario 12	5%	CNIRL			A							VEC						6.72%
Scenario 13	5%	HIGH	ABUND		A							TES						2.88%
Scenario 15	5%	нісн			A .							TES						6 72%
Scenario 16	5%	HIGH	LIMTD	10	Δ													10.08%
Scenario 17	15%	CNTRI		н	Δ									VES				3 15%
Scenario 18	15%	CNTRI	ABUND	10	A						YES			120				4 73%
Scenario 19	15%	CNTRI	LIMTD	н	A													7.35%
Scenario 20	15%	CNTRL	LIMTD	10	A													11.03%
Scenario 21	15%	HIGH	ABUND	н	A						YES							1.05%
Scenario 22	15%	HIGH	ABUND	LO	А						YES							1.58%
Scenario 23	15%	HIGH	LIMTD	н	A													2.45%
Scenario 24	15%	HIGH	LIMTD	LO	А													3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	11%	8%	1%	6%	0%	3%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	11%	19%	21%	27%	27%	30%	30%	
·																		
	CPT 1	ന്ലെ-Set ഗ		4		oad Grow	th Theme Se o	et 👘		Ga	s Availabil o	ity Theme	Set		w	ind Peneti	ration The	ne Set
0%	Number of scenarios with this a theme	Number of project proceeds	Percentage of relevant escenarios		CNTRI	Number of scenarios with this theme	Number of scenarios in whict a project proceeds	Percentage of relevant e scenarios		ABUND	Number of scenarios with this theme	Number of project proceeds	Percentage of relevant ≷ scenarios			Number of scenarios with this theme	Number of project proceeds	Percentage of relevant scenarios
5%	8	4	50%	1	HIGH	12	6	50%		LIMTD	12	0	0%		LO	12	0	0%
15%	8	4	50%	J														
Other Comments:																		

ROAM Consulting Pty Ltd



ROAM Consulting Pty Ltd



Wep00017 17th February 2011

Potential Project #	(This is a	potential New I	Plant)															
47	North C	ountry CCG	T #1 (194.2N	IW CCGT)		locate	ed in the		North	Country		node						
	_	Initially t	his project was	rated a		I	_ow		likelihood	of proceed	ling, which	was deeme	ed to corre	spond to a		10% pro	obability of	proceeding
	At th	e completion of	f the scenario ar	nalysis projec	t, the FINAL	. Project P	robability for	this project	t was calc	ulated (acro	oss all the	scenarios tl	hat were de	eveloped)	to be	21% pro	obability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	scenario) t	he plant is	assumed t	o be fully o	perational:					
			A	⊳	o – ا													Fin
	СРТ	Load	Gas /ailability	Wind	Planting	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	al Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	A													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	н	A							2/50						2.1%
Scenario 6	0%	HIGH	ABUND	LO	A							YES						3.15%
Scenario 7	0%	HIGH		н	A													4.9%
Scenario 8	0%	HIGH		LO	A													7.35%
Scenario 9	5%		ABUND		A							VEC						1.92%
Scenario 10	5%	CNTRL	ABUND		A							TES						2.88%
Scenario 12	5%				A 													6.72%
Scenario 12	5%				A .						VEC							0.72%
Scenario 14	5%				A 						VES							4 22%
Scenario 15	5%	HIGH		н							163							6.72%
Scenario 16	5%	HIGH	LIMTD	10	A													10.08%
Scenario 17	15%	CNTRI	ABUND	н	A													3 15%
Scenario 18	15%	CNTRL	ABUND	10	A							YES						4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A													7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	A													11.03%
Scenario 21	15%	HIGH	ABUND	н	A								YES					1.05%
Scenario 22	15%	HIGH	ABUND	LO	А							YES						1.58%
Scenario 23	15%	HIGH	LIMTD	н	A													2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A													3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	7%	12%	1%	0%	0%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	7%	20%	21%	21%	21%	21%	21%	
	CPT	Theme-Set		1		oad Grow	th Theme S	et		Ga	s Availabi	lity Theme	Set		w	ind Peneti	ration The	ne Set
	s			1		s, see a	p %				s	p 8				s	p ⁸	
	Number of enarios with this theme	Number of enarios in which roject proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of enarios in which roject proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of enarios in which roject proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of enarios in which roject proceeds	Percentage of relevant scenarios
0% 5%	8	1 3	13%	{	CNTRL HIGH	12 12	2	17% 42%		ABUND LIMTD	12	0	0%		HI LO	12 12	0	0%
15%	8	3	38%	1			v		1			. ~	0/0	•				0 /0
	1																	
Other Comments:																		
connents:																		

ROAM CONSULTING ENERGY MODELLING EXPERTISE

Potential Project #	(This is a	potential New F	Plant)															
48	Kwinan	a CCGT #2 (194.2MW CC	GT)		locate	ed in the		Kwi	nana		node						
	-	Initially t	his project was	rated a		L	_ow		likelihood	of proceed	ing, which	was deeme	ed to corres	spond to a		10% pro	bability of	proceeding
	At th	e completion of	f the scenario ar	nalysis projec	t, the FINA	Project P	robability for	this project	t was calc	ulated (acro	oss all the	scenarios tl	hat were de	eveloped)	to be	25% pro	bability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	scenario) t	he plant is	assumed t	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenaric Probability
Scenario 1	0%	CNTRL	ABUND	н	А													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	А													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	Α													3.15%
Scenario 5	0%	HIGH	ABUND	н	A								YES					2.1%
Scenario 6	0%	HIGH	ABUND	LO	A										YES			3.15%
Scenario 7	0%	HIGH	LIMTD	н	A													4.9%
Scenario 8	0%	HIGH	LIMTD	LO	А													7.35%
Scenario 9	5%	CNTRL	ABUND	н	А										YES			1.92%
Scenario 10	5%	CNTRL	ABUND	LO	А													2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A													4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A													6.72%
Scenario 13	5%	HIGH	ABUND	н	A										YES			2.88%
Scenario 14	5%	HIGH	ABUND	LO	A								YES					4.32%
Scenario 15	5%	HIGH	LIMTD	н	А													6.72%
Scenario 16	5%	HIGH	LIMTD	LO	А													10.08%
Scenario 17	15%	CNTRL	ABUND	н	А										YES			3.15%
Scenario 18	15%	CNTRL	ABUND	LO	А								YES					4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A													7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А													11.03%
Scenario 21	15%	HIGH	ABUND	н	А						YES							1.05%
Scenario 22	15%	HIGH	ABUND	LO	А								YES					1.58%
Scenario 23	15%	HIGH	LIMTD	н	А													2.45%
Scenario 24	15%	HIGH	LIMTD	LO	А													3.68%
		Probabi	ility of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	1%	0%	13%	0%	11%	0%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	1%	1%	14%	14%	25%	25%	25%	
	CPT	Theme-Set		1		oad Grow	th Theme Se	et		63	s Availabi	lity Theme	Set		w	ind Penetr	ation The	ne Set
	s	×		1		s si cw	S				s.c.anabi	%				s cheu	T S	
0%	enarios with thi¢ α theme	Number of enarios in which or project proceeds	Percentage of relevant scenarios		CNTRL	Number of theme	Number of enarios in whict α project proceeds	Percentage of relevant scenarios		ABUND	Number of theme	Number of oroject proceeds	Percentage of relevant scenarios		н	Number of theme	Number of enarios in which o project proceeds	Percentage of relevant % scenarios
5%	8	3	38%	1	HIGH	12	6	50%		LIMTD	12	0	0%		LO	12	0	0%
15%	8	4	50%	J														
Other Comments:																		





Wind Ambitior Planting Scenario 2014-15 2017-18 2011-12 2012-13 2015-16 2009-10 2010-11 2013-14 2016-17

The following table illustrates the year in which (for each scenario) the plant is assumed to be fully operational:

Northern Terminal

node

YES

YES

likelihood of proceeding, which was deemed to correspond to a

located in the

Low

At the completion of the scenario analysis project, the FINAL Project Probability for this project was calculated (across all the scenarios that were developed) to be

Appendix B (Projects) of Report to:

(This is a potential New Plant)

Load

CNTRL

CNTRL

CNTRL

CNTRL

HIGH

HIGH

HIGH

HIGH

CNTRL

PT

0%

0%

0%

0%

0%

0%

0%

0%

5%

5%

5%

5%

5%

5%

5%

5%

15%

15%

15%

15%

15%

15%

15%

15%

solue

Northern Terminal CCGT #1 (194.2MW CCGT)

Initially this project was rated a

Gas Availability

ABUND

ABUND

LIMTD

LIMTD

ABUND

ABUND

LIMTD

LIMTD

ABUND

н

LO

н

LO

н

LO

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LO

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Potential Project #

49

Scenario 1

Scenario 2

Scenario 3

Scenario 4

Scenario 5

Scenario 6

Scenario 7

Scenario 8 Scenario 9

Scenario 10

Scenario 11

Scenario 12

Scenario 13

Scenario 14

Scenario 15

Scenario 16

Scenario 17

Scenario 18 Scenario 19

Scenario 20

Scenario 21

Scenario 22

Scenario 23

Scenario 24

0% 5%

15%

Other Comments

Wep00017 17th February 2011

10% probability of proceeding

15% probability of proceeding

2020-21

YES

2019-20

YES

2018-19

YES

Final Scena Probabil

0.9%

1.35%

2.1%

3.15%

2.1%

3.15%

4.9%

7.35%

1.92%

2.88%

4.48%

6.72%

2.88%

4.32%

6.72%

10.08%

3.15%

4.73%

7.35%

11.03%

1.05%

1.58%

2.45%

3.68%

Percentage of relevant scenarios

1%

15%

Number of scenarios in which project proceeds

tion Theme Se

2010 Generation Scenario Outlook for the SWIS

ROAM CONSULTING

СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
0%	CNTRL	ABUND	ні	А													0.9%
0%	CNTRL	ABUND	LO	А													1.35%
0%	CNTRL	LIMTD	н	А													2.1%
0%	CNTRL	LIMTD	LO	A													3.15%
0%	HIGH	ABUND	н	А													2.1%
0%	HIGH	ABUND	LO	А													3.15%
0%	HIGH	LIMTD	н	A													4.9%
0%	HIGH	LIMTD	LO	Α													7.35%
5%	CNTRL	ABUND	ні	A													1.92%
5%	CNTRL	ABUND	LO	А													2.88%
5%	CNTRL	LIMTD	н	A													4.48%
5%	CNTRL	LIMTD	LO	A													6.72%
5%	HIGH	ABUND	ні	A													2.88%
5%	HIGH	ABUND	LO	A													4.32%
5%	HIGH	LIMTD	ні	A													6.72%
5%	HIGH	LIMTD	LO	A													10.08%
15%	CNTRL	ABUND	ні	A													3.15%
15%	CNTRL	ABUND	LO	Α													4.73%
15%	CNTRL	LIMTD	н	Α													7.35%
15%	CNTRL	LIMTD	LO	A													11.03%
15%	HIGH	ABUND	н	A													1.05%
15%	HIGH	ABUND	LO	A													1.58%
15%	HIGH	LIMTD	ні	A													2.45%
15%	HIGH	LIMTD	LO	A													3.68%
	Probabi	lity of Proce	eding in th	nis Year:	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
		Cum	ulative Pro	obability	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
											_						
CPT 1	heme-Set م			L	oad Grow	th Theme Se	et		Ga	s Availabil	ity Theme	Set		W	ind Penetr	ration The	me Set
Number scenarios with then	Number scenarios in whi project procee	Percentage releva scenaric			Number scenarios with then then	Number scenarios in whi project procee	Percentage releva scenaric			Number scenarios with then then	Number scenarios in whi project procee	Percentage releva scenaric			Number scenarios with then then	Number scenarios in whi project procee	Percentage releva scenaric

ABUND LIMTD

Number of arios with this theme

relevant

0% 0%

Scenario 1

Scenario 2

Scenario 3

Scenario 4 Scenario 5

Scenario 6 Scenario 7

Scenario 8 Scenario 9

Scenario 10

Scenario 11 Scenario 12

Scenario 13 Scenario 14

Scenario 15

Scenario 16 Scenario 17

Scenario 18 Scenario 19

Scenario 20 Scenario 21

Scenario 22

Scenario 23

Scenario 24

0% 5% 15%

Other Comments

Appendix B (Projects) of Report to:

2010 Generation Scenario Outlook for the SWIS

CONSULTING



The following table illustrates the year in which (for each scenario) the plant is assumed to be fully operational:

Potential Project # (This is a potential New Plant) 50 Muja Coal #1 (180.4MW Coal) located in the Muja node Initially this project was rated a likelihood of proceeding, which was deemed to correspond to a Low At the completion of the scenario analysis project, the FINAL Project Probability for this project was calculated (across all the scenarios that were developed) to be

Number of ios with this theme

CNTRL

0% probability of proceeding

10% probability of proceeding

Fin

APPENDIX B

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Potential Project #	(This is a	potential New F	Plant)															
51	North C	ountry Coal	#1 (180.4MV	V Coal)		locate	ed in the		North (Country		node						
F	-	Initially th	his project was r	rated a		L	.ow	ſ	likelihood	of proceedi	ing, which	was deeme	ed to corre	spond to a		10% pro	obability of	proceeding
	At th	e completion of	the scenario an	nalysis projec	t, the FINAL	- Project P	robability for	this project	was calci	ulated (acro	oss all the	scenarios tł	nat were de	eveloped)	to be	0% pro	bability of	proceeding
				The followi	ng table illus	strates the	year in which	(for each s	cenario) t	he plant is a	assumed t	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	А													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A													1.35%
Scenario 3	0%	CNTRL	LIMTD	HI	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	н	A													2.1%
Scenario 6	0%	HIGH	ABUND	LO	A													3.15%
Scenario 7	0%	HIGH	LIMTD	н	A													4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A													7.35%
Scenario 9	5%	CNTRL	ABUND	н	A													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A													2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A													4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A													6.72%
Scenario 13	5%	HIGH	ABUND	н	A													2.88%
Scenario 14	5%	HIGH	ABUND	LO	A	µ												4.32%
Scenario 15	5%	HIGH	LIMTD	н	A													6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A	µ												10.08%
Scenario 17	15%	CNTRL	ABUND	HI	A	µ												3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A													4.73%
Scenario 19	15%	CNTRL	LIMTD	HI	A													7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	A													11.03%
Scenario 21	15%	HIGH	ABUND	HI	A													1.05%
Scenario 22	15%	HIGH	ABUND	LO	A													1.58%
Scenario 23	15%	HIGH	LIMID	HI	A													2.45%
Scenario 24	15%	HIGH	LIMID	LO	A													3.68%
		Probabi	lity of Proce	eding in th	nis Year:	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
			Cum	ulative Pro	obability	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	CPT 1	Theme-Set]	Ľ	oad Grow	th Theme Se	et		Gas	s Availabi	ity Theme	Set		W	ind Penetr	ration The	me Set
	sce	pr	_	1		sce	pr	_			sce	sce	-			sce	pr	_
0%	Number of marios with this control theme	Number of narios in which o oject proceeds	Percentage of relevant % scenarios	-	CNTRL	Number of theme	Number of narios in which o oject proceeds	Percentage of relevant scenarios		ABUND	Number of theme	Number of narios in which o oject proceeds	Percentage of relevant scenarios		н	Number of theme	Number of oject proceeds	Percentage of relevant % scenarios
5%	8	0	0%	1	HIGH	12	0	0%		LIMTD	12	0	0%		LO	12	0	0%
15%	8	0	0%	I														
Other Comments:																		



Appendix B (Projects) of Report to:

Potential Project #	(This is a potential New Plant)																	
<mark>52</mark>	Regiona	al Diesel #1 ((39.6MW Die:	sel)		locate	ed in the		sv	NIS		node						
		Initially t	his project was	rated a		Мо	derate	I	likelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		40% pro	bability of	proceeding
	At th	e completion of	f the scenario ar	alysis projec	ct, the FINAI	L Project F	Probability for	this project	t was calci	ulated (acro	oss all the	scenarios tł	nat were de	eveloped)	to be	68% prc	obability of	proceeding
				The followi	ng table illus	strates the	year in which	(for each s	scenario) t	he plant is	assumed t	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	A													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А							YES						1.35%
Scenario 3	0%	CNTRL	LIMTD	н	А									YES				2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A										YES			3.15%
Scenario 5	0%	HIGH	ABUND	н	A													2.1%
Scenario 6	0%	HIGH	ABUND	LO	A				L				YES					3.15%
Scenario 7	0%	HIGH	LIMTD	н	A				<u> </u>			YES						4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A				<u> </u>				YES					7.35%
Scenario 9	5%	CNTRL	ABUND	н	A													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A									YES	ļ			2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A												YES	4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A										\mid			6.72%
Scenario 13	5%	HIGH	ABUND	н	A					YES								2.88%
Scenario 14	5%	HIGH	ABUND		A					YES			1/20		──┤	l		4.32%
Scenario 15	5%	HIGH			A							VEC	YES	\vdash	\vdash			6.12%
Scenario 15	5% 15%				~							TES		VES				2 15%
Scenario 18	15%	CNTRL		10										TLU			VES	A 73%
Scenario 19	15%	CNTRI															120	7 35%
Scenario 20	15%	CNTRI		10	A			+	-									11.03%
Scenario 20	15%	HIGH	ARUND		A					YES					$\left - \right $			1.05%
Scenario 22	15%	нісн	ABUND	10	A					120								1.58%
Scenario 23	15%	HIGH	LIMTD	н	A								YES					2.45%
Scenario 24	15%	нідн	LIMTD		A						YES							3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	8%	4%	16%	20%	8%	3%	0%	9%	0102.1
			- 	ulative Pr	obability	09/	09/	09/	09/	99/	1.29/	209/	499/	EC9/	50%	E09/	699/	
					obability	U%	0%	0%	0%	0%	12%	20%	40%	50%	59%	59%	00%	
	CPT 1	Theme-Set]	L	oad Grow	/th Theme Se	et	I	Ga	s Availabi	lity Theme	Set		Wi	ind Penetr	ration Ther	ne Set
	scer	pro	σ			scer	pro	-	Í		scer	scen	τ			scer	pro	σ
0%	Number of arios with this arios theme	Number of arios in which co ject proceeds	ercentage of relevant % scenarios	-	CNTRL	Number of theme	Number of pject proceeds	ercentage of relevant scenarios		ABUND	Number of theme	Number of piect proceeds	ercentage of relevant scenarios			Number of theme	Number of arios in which c ject proceeds	ercentage of relevant % scenarios
5%	8	6	75%	1	HIGH	12	10	83%	Í	LIMTD	12	0	0%	l l	LO	12	0	0%
15%	8	5	63%	1														
Other Comments:																		



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ROAM Consulting Pty Ltd

ppendix B (Projects) of Report to:	
etternpower	

Potential Project #	(This is a	potential New F	Plant)															
53	Regiona	al Diesel #2 (39.6MW Dies	sel)		locate	ed in the		SI	WIS		node						
	_	Initially t	his project was r	rated a		Mo	derate	I	ikelihood	of proceed	ing, which	was deeme	ed to corre	spond to a		40% pro	bability of	proceeding
	At th	e completion of	the scenario an	alysis projec	t, the FINAL	Project P	robability for	this project	was calc	ulated (acro	oss all the s	scenarios tł	hat were de	eveloped)	to be	59% pro	bability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	cenario) t	he plant is	assumed to	o be fully o	perational:					
			⊳															<u></u>
	СРТ	Load	Gas vailability	Wind	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	nal Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	A													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A									YES				1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A											YES		3.15%
Scenario 5	0%	HIGH	ABUND	н	A													2.1%
Scenario 6	0%	HIGH	ABUND		A								VEC					3.15%
Scenario /	0%	нісн			A 								TES	VES				4.9%
Scenario 8	0%				A									TES				1.30%
Scenario 10	5%	CNTRL		10	Δ											VES		2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A													4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	А													6.72%
Scenario 13	5%	HIGH	ABUND	н	A						YES							2.88%
Scenario 14	5%	HIGH	ABUND	LO	A							YES						4.32%
Scenario 15	5%	HIGH	LIMTD	н	A										YES			6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A								YES					10.08%
Scenario 17	15%	CNTRL	ABUND	н	A										YES			3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A												YES	4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A													7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	A													11.03%
Scenario 21	15%	HIGH	ABUND	н	A							YES						1.05%
Scenario 22	15%	HIGH	ABUND	LO	A													1.58%
Scenario 23	15%	HIGH	LIMTD	н	A									YES				2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A						YES							3.68%
		Probabi	lity of Proce	eding in tl	his Year:	0%	0%	0%	0%	0%	7%	5%	15%	11%	10%	6%	5%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	7%	12%	27%	38%	48%	54%	59%	
	CPT	Theme-Set		1	L	oad Grow	th Theme Se	et 1		Ga	s Availabil	ity Theme	Set		w	nd Penetr	ation The	ne Set
	sce	p sce				SCE	p SC				sce	p so				SCE	p sce	
	Number of enarios with this theme	Number of anarios in which roject proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of anarios in which roject proceeds	Percentage of relevant scenarios			Number of anarios with this theme	Number of anarios in which roject proceeds	Percentage of relevant scenarios			Number of enarios with this theme	Number of marios in which roject proceeds	Percentage of relevant scenarios
0% 5%	8	4 5	50% 63%		CNTRL HIGH	12 12	5	42% 75%		ABUND LIMTD	12	0	0% 0%		LO	12 12	0	0% 0%
15%	8	5	63%	1														
Other Comments:																		



Potential Project #	(This is a	potential New I	Plant)															
54	Regiona	al Diesel #3 ((39.6MW Die	sel)		locate	ed in the		S	WIS		node						
		Initially t	his project was	rated a		Мо	derate		likelihood	of proceed	ling, which	was deem	ed to corre	spond to a	ı	40% pro	bability of	proceeding
	At th	e completion of	f the scenario ar	nalysis proje	ct, the FINA	L Project F	Probability for	this project	t was calc	ulated (acr	oss all the	scenarios t	hat were d	eveloped)	to be	39% pro	obability of	proceeding
				The followi	ng table illu	strates the	year in which	(for each s	scenario)	the plant is	assumed t	o be fully c	perational:					
			⊳															Ш
	СРТ	Load	Gas vailability	Wind	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	nal Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	A													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	н	A					-							\vdash	2.1%
Scenario 6	0%	HIGH	ABUND	LO	A													3.15%
Scenario 7	0%	HIGH	LIMTD	н	A								YES				\mid	4.9%
Scenario 8	0%	HIGH	LIMTD	LO	A									YES				7.35%
Scenario 9	5%	CNTRL	ABUND	н	A													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A													2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A													4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A													6.72%
Scenario 13	5%	HIGH	ABUND	н	A											YES		2.88%
Scenario 14	5%	HIGH	ABUND	LO	A									YES				4.32%
Scenario 15	5%	HIGH	LIMTD	н	Α													6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A								YES					10.08%
Scenario 17	15%	CNTRL	ABUND	н	A											YES		3.15%
Scenario 18	15%	CNTRL	ABUND	LO	А													4.73%
Scenario 19	15%	CNTRL	LIMTD	н	А													7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А													11.03%
Scenario 21	15%	HIGH	ABUND	н	А													1.05%
Scenario 22	15%	HIGH	ABUND	LO	А													1.58%
Scenario 23	15%	HIGH	LIMTD	н	А											YES		2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A								YES					3.68%
		Probabi	ility of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	0%	0%	19%	12%	0%	8%	0%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	0%	19%	30%	30%	39%	39%	
	CPT	Theme-Set		1	L	oad Grow	th Theme Se	et		Ga	s Availabi	lity Theme	Set	1	w	ind Penet	ration The	me Set
	sce	sce	_			sce	sce	1			sce	sce	-			sce	pr	_
	Number of narios with this theme	Number of narios in which oject proceeds	Percentage of relevant scenarios			Number of narios with this theme	Number of narios in which oject proceeds	Percentage of relevant scenarios			Number of narios with this theme	Number of narios in which oject proceeds	Percentage of relevant scenarios			Number of narios with this theme	Number of narios in which oject proceeds	³ ercentage of relevant scenarios
5%	8	3	38%	1	HIGH	12	7	8% 58%		LIMTD	12	0	0%		LO	12	0	0%
15%	8	3	38%]										-				
	1																	
Other Comments:																		





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55	Region	al Diesel #4	(39.6MW Die:	sel)		locate	ed in the		S	WIS		node						
		Initially t	his project was	rated a		Мо	derate	I	likelihood	of proceed	ing, which	was deeme	ed to corres	spond to a	I	40% pro	bability of	proceeding
	At th	e completion of	f the scenario ar	alysis projec	t, the FINAI	Project P	robability for	this project	was calc	ulated (acro	oss all the s	scenarios t	hat were de	eveloped)	to be	29% pro	bability of	proceeding
				The followi	ng table illus	trates the	year in which	(for each s	cenario)	the plant is	assumed to	o be fully o	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	А													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	А													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	А													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	н	A													2.1%
Scenario 6	0%	HIGH	ABUND	LO	А													3.15%
Scenario 7	0%	HIGH	LIMTD	н	А								YES					4.9%
Scenario 8	0%	HIGH	LIMTD	LO	А											YES		7.35%
Scenario 9	5%	CNTRL	ABUND	н	А													1.92%
Scenario 10	5%	CNTRL	ABUND	LO	A													2.88%
Scenario 11	5%	CNTRL	LIMTD	н	A													4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A													6.72%
Scenario 13	5%	HIGH	ABUND	н	A												YES	2.88%
Scenario 14	5%	HIGH	ABUND	LO	A													4.32%
Scenario 15	5%	HIGH	LIMTD	н	A													6.72%
Scenario 16	5%	HIGH	LIMTD	LO	А										YES			10.08%
Scenario 17	15%	CNTRL	ABUND	н	А													3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A													4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A													7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	А													11.03%
Scenario 21	15%	HIGH	ABUND	н	A													1.05%
Scenario 22	15%	HIGH	ABUND	LO	A													1.58%
Scenario 23	15%	HIGH	LIMTD	н	A													2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A										YES			3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	0%	0%	5%	0%	14%	7%	3%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	0%	5%	5%	19%	26%	29%	
	CPT	Theme-Set		1		oad Grow	th Thoma S	of	1	Ga	s Availabil	ity Theme	Sot		Wi	nd Penetr	ation The	no Sot
	sc					sc	«			- 54	s	- к - к				<u>к</u>	р «С	
0%	enarios with this α	Number of enarios in which o project proceeds	Percentage of relevant scenarios		CNTRL	Number of theme	Number of enarios in which o project proceeds	Percentage of relevant % scenarios		ABUND	enarios with this theme	Number of enarios in which o project proceeds	Percentage of relevant scenarios		н	Number of theme	Number of enarios in which o project proceeds	Percentage of relevant % scenarios
5%	8	2	25%		HIGH	12	5	42%		LIMTD	12	Ő	0%		LÖ	12	0	0%
15%	8	o 2 25% 8 2 25% 8 1 13%																

(This is a potential New Plant)

Potential Project #

0							1			-					-	
Number of scenarios in which co project proceeds	Percentage of scenarios		CNTRL	Number of scenarios with this theme	Number of scenarios in which 2 project proceeds	Percentage of relevant scenarios		ABUND	Number of scenarios with this theme	Number of scenarios in which c project proceeds	Percentage of relevant scenarios		н	Number of scenarios with this theme	Number of scenarios in which c project proceeds	Percentage of relevant scenarios
oset			└─── [┕]	ω odd Grow	ω ineme Se	۶L 		Gas	σ Availabil	ity ineme ∞	Set		Wi	ω Penetra	ω σ	ne Set
0-1			·		4h Th 0				A		0-4			and Dennet	diam Th	
	Cum	ulative Pro	obability	0%	0%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Probabi	lity of Proce	eding in th	nis Year:	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
HIGH	LIMTD	LO	A			YES										3.68%
HIGH	LIMTD	н	A			YES										2.45%
HIGH	ABUND	LO	A			YES										1.58%
HIGH	ABUND	н	A			YES										1.05%
CNTRL	LIMTD	LO	A			YES										11.03%
CNTRL	LIMTD	HI	A			YES										7.35%
CNTRL	ABUND	LO	A			YES										4.73%
CNTRI	ABUND	н	A			YES										3 15%
HIGH		10	A			YES										10.08%
		U	A			VES										4.32%
HIGH		н	A			VES										∠.88%
		LO	A			YES										6.72%
CNTRL		H	A			YES										4.48%
CNTRL	ABUND	LO	A			YES										2.88%
CNTRL	ABUND	н	A			YES										1.92%
HIGH	LIMTD	LO	A			YES										7.35%
HIGH	LIMTD	н	A			YES										4.9%
HIGH	ABUND	LO	A			YES										3.15%
HIGH	ABUND	н	A			YES										2.1%
CNTRL	LIMTD	LO	А			YES										3.15%
CNTRL	LIMTD	н	А			YES										2.1%

likelihood of proceeding, which was deemed to correspond to a 40% probability of proceeding 1 Initially this project was rated a Moderate At the completion of the scenario analysis project, the FINAL Project Probability for this project was calculated (across all the scenarios that were developed) to be 100% probability of proceeding The following table illustrates the year in which (for each scenario) the plant is assumed to be fully operational: Gas Availability Wind Ambitior Planting Scenario 2010-11 2011-12 2012-13 2014-15 2015-16 2016-17 2017-18 2018-19 2019-20 2020-21 2009-10 2013-14 Load CPT

YES

YES

Kwinana

node

located in the

2010 Generation Scenario Outlook for the SWIS

Wep00017 17th February 2011

Final Scena Probabil

0.9%

1.35%

Potential Project # (This is a potential Plant Retirement) 1 Kwinana A (-216.48MW Coal)

Appendix B (Projects) of Report to:

Scenario 1

Scenario 2

Scenario 3

Scenario 4 Scenario 5

Scenario 6

Scenario 7

Scenario 8 Scenario 9

Scenario 10

Scenario 11 Scenario 12

Scenario 13 Scenario 14

Scenario 15

Scenario 16

Scenario 17

Scenario 18

Scenario 19

Scenario 20

Scenario 21

Scenario 22

Scenario 23

Scenario 24

0% 5%

15%

Other Comments: 0%

0%

0%

0%

0%

0%

0%

0%

5%

5%

5%

5%

5%

5%

5%

5%

15%

15%

15%

15%

15%

15%

15%

15%

Number of arios with this theme

8

CNTRL

8

100%

100%

CPT Theme-Set

ABUND

ABUND

н

LO

А

А

CNTRI HIGH



2	Muja C	(-360.8MW (Coal)			locate	ed in the		м	uja		node						
1	.	Initially	this project was	rated a		Мо	derate	1	likelihood	of proceedi	ing, which	was deem	ed to corre	spond to a		40% pro	bability of	proceeding
	At th	ne completion o	f the scenario a	nalysis proje	ct, the FINA	L Project F	Probability for	this projec	t was calc	ulated (acro	oss all the	scenarios t	hat were d	eveloped)	to be	17% pro	bability of	proceeding
				The follow	ing table illu	strates the	year in which	(for each s	scenario)	the plant is	assumed	to be fully a	perational:					
	СРТ	Load	Gas Availability	Wind Ambition	Planting Scenario	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	Final Scenario Probability
Scenario 1	0%	CNTRL	ABUND	н	А													0.9%
Scenario 2	0%	CNTRL	ABUND	LO	A													1.35%
Scenario 3	0%	CNTRL	LIMTD	н	A													2.1%
Scenario 4	0%	CNTRL	LIMTD	LO	A													3.15%
Scenario 5	0%	HIGH	ABUND	н	А													2.1%
Scenario 6	0%	HIGH	ABUND	LO	А													3.15%
Scenario 7	0%	HIGH	LIMTD	н	А													4.9%
Scenario 8	0%	HIGH	LIMTD	LO	А													7.35%
Scenario 9	5%	CNTRL	ABUND	н	А										YES			1.92%
Scenario 10	5%	CNTRL	ABUND	LO	А													2.88%
Scenario 11	5%	CNTRL	LIMTD	н	А													4.48%
Scenario 12	5%	CNTRL	LIMTD	LO	A													6.72%
Scenario 13	5%	HIGH	ABUND	н	А													2.88%
Scenario 14	5%	HIGH	ABUND	LO	A													4.32%
Scenario 15	5%	HIGH	LIMTD	н	A													6.72%
Scenario 16	5%	HIGH	LIMTD	LO	A													10.08%
Scenario 17	15%	CNTRL	ABUND	н	A									YES				3.15%
Scenario 18	15%	CNTRL	ABUND	LO	A												YES	4.73%
Scenario 19	15%	CNTRL	LIMTD	н	A								YES					7.35%
Scenario 20	15%	CNTRL	LIMTD	LO	A													11.03%
Scenario 21	15%	HIGH	ABUND	н	A													1.05%
Scenario 22	15%	HIGH	ABUND	LO	A													1.58%
Scenario 23	15%	HIGH	LIMTD	н	A													2.45%
Scenario 24	15%	HIGH	LIMTD	LO	A													3.68%
		Probabi	lity of Proce	eding in t	his Year:	0%	0%	0%	0%	0%	0%	0%	7%	3%	2%	0%	5%	
			Cum	ulative Pr	obability	0%	0%	0%	0%	0%	0%	0%	7%	11%	12%	12%	17%	
	CDT	Thoma Cat		1	·	and Crow	th Thoma Co			C ~	Availahi	lity Thoma	Rat		14/1	nd Donotr	ation Thor	na Cat
	8	- Sec		1		g g	%			Gas	g		Jei			Nu reneu g		lie Set
0%	Number of theme	Number of enarios in whict c project proceeds	Percentage of relevant scenarios		CNTRI	Number of theme	Number of enarios in which a project proceeds	Percentage of relevant scenarios		ABUND	Number of with this 12 theme	Number of project proceeds	Percentage of relevant scenarios		—н	Number of theme	Number of enarios in which c project proceeds	Percentage of relevant scenarios
5%	8	1	13%	1	HIGH	12	0	0%		LIMTD	12	0	0%		LO	12	0	0%
15%	8	3	38%	1														
Other Comments:																		

Appendix B (Projects) of Report to:

(This is a potential Plant Retirement)

Potential Project #