TRANSEND

APPENDIX 11

ROAM Consulting, *Scenarios for Revenue Reset Application—2009–10 to 2013–14,* May 2008

TRANSEND

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REPORT (TEN00004) TO

NATIONAL ELECTRICITY MARKET ASSISTANCE

Scenarios for Revenue Reset Application – 2009-10 to 2013-14

8 May 2008

VERSION HISTORY

Version History					
Revision	**Date Issued**	**Prepared By**	**Approved By**	**Date Approved**	**Revision Type**
1.0	03-09-2007	Mr Andrew Turley	Dr Ian Rose	03-09-2007	Original release
1.1	04-02-2008	Mr Matthew Holmes	Dr Ian Rose	04-02-2008	Update with latest information
1.2	24-04-2008	Mr Andrew Turley	Dr Ian Rose	24-04-2008	Update with latest information and minor revisions
1.3	08-05-2008	Mr Andrew Turley	Dr Ian Rose	08-05-2008	Final Report. Update to Meander Hydro.

EXECUTIVE SUMMARY

To assist Transend in identifying the likely areas of network development over the next Revenue Reset period from 2009-10 to 2013-14, potential generation development paths for the region of Tasmania over the next ten years have been assessed through the application of a scenario analysis methodology. The methodology is based on the identification of three separate 'theme sets' defining the direction of the energy sector in the region of Tasmania. These theme sets relate to:

- Market demand for grid supplied electricity in Tasmania;
- The expectation for water inflows to hydroelectric storages;
- Influences on new generation projects stemming from the imposition of a more rigorous greenhouse gas abatement policy and including the potential for increased availability of gas in Tasmania via the Tasmanian Gas Pipeline (TGP).

The generation developments that have been assessed cover a mix of gas fired plant and renewable technologies including hydro, wind and biomass. Unlike other NEM regions, Tasmania is more susceptible to energy constraints, rather than capacity constraints, owing to its reliance on hydro generators for much of its generation capacity. ROAM therefore has been cognisant of both capacity levels to meet peak demands, and anticipated energy levels to meet annual energy forecasts. An appropriate mix of technologies is therefore necessary in order to provide a reliable and secure supply network.

ROAM has incorporated the latest information from the 2007 Transend Annual Planning Report and the 2007 NEMMCO Energy and Demand Projections documents in this analysis.

The following table summarises the themes, which were developed and studied in this scenario analysis:

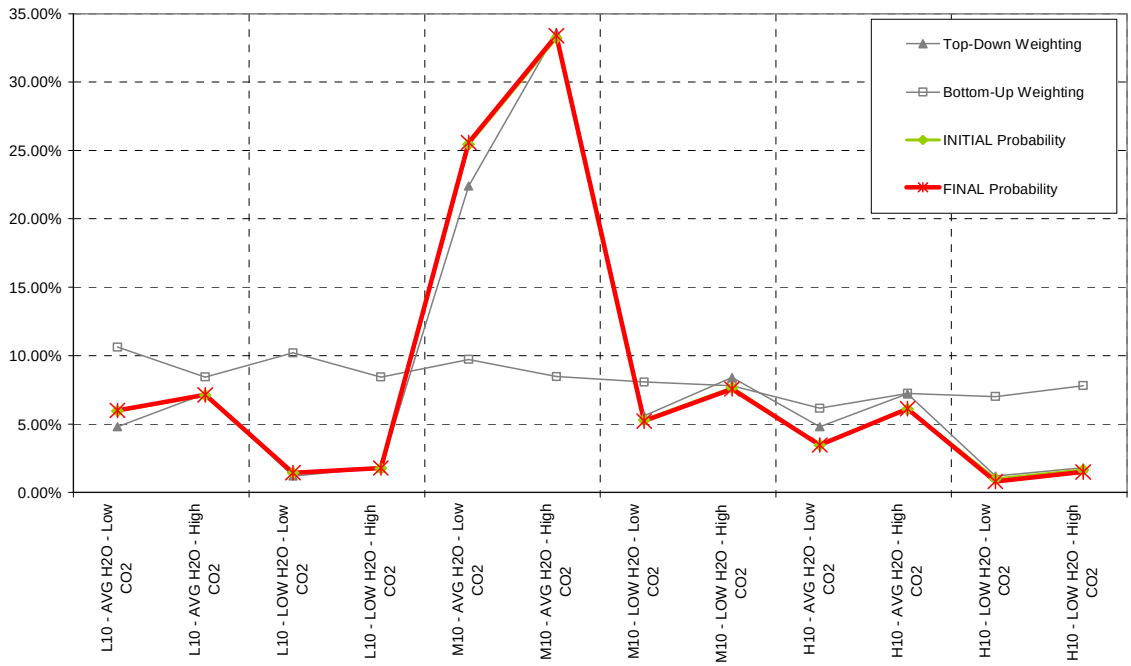
Table A – List of Themes Studied			
1. Load Growth			
Theme	**Description**		
L10[1]	Low economic growth with 10% probability of exceedance demand.		
M10	Medium economic growth with 10% probability of exceedance demand.		
H10	High economic growth with 10% probability of exceedance demand.		
2. Water Availability		**3. Greenhouse Policy**	
Theme	**Description**	**Theme**	**Description**
AVG H_2O	Hydro inflows maintain long term average levels, with yields at approximately 9,500GWh per annum.	LOW CO_2	Present State and Federal greenhouse policies are maintained consistent with present arrangements. No significant incentives exist for large scale renewable developments.
LOW H_2O	Hydro inflows are lower than long term averages, matching closer to drought levels. Yields vary but average approximately 8,000GWh.	HIGH CO_2	Significant change in greenhouse policy, with the introduction of a nominally $35/tonne equivalent CO_2 trading scheme. Additional gas supplies made available. Increased incentive for renewable technologies.

Using the combination of these three theme sets, twelve discrete development scenarios were constructed encompassing a range of widely differing market development paths. The relative likelihood of each of these development paths was assessed using a probabilistic methodology, which takes a 'Top-down' theme-based approach and a 'Bottom-up' individual project-based approach and combines the two strategies, through a process of moderation.

[1] Reliability standards in the National Electricity Market (NEM) are based on ensuring that installed generating capacity in each region is sufficient to meet 1 in 10 year peak demands, which are here referred to as L10, M10 or H10, depending on the respective economic growth scenario.

The following chart summarises the relative probabilities determined for each of those twelve scenarios (final probabilities marked in red):

Figure A – Final Scenario Probabilities



The outcome of the scenario analysis as seen in the chart above is a set of twelve scenarios which have corresponding generating plant installation programmes matching the projected state peak demand and at least meeting the required Tasmanian minimum reserve margin. Equally, the twelve scenarios ensure that sufficient energy is available, either locally or by imports from Basslink, to meet annual energy forecasts. The probability that has been determined for each of these scenarios varies significantly. Nevertheless it may be important for Transend to address each of the scenarios in order to provide a reliable view of the variability of future generating patterns.

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1 BACKGROUND

In support of its next regulated revenue application, Transend has requested that ROAM Consulting (ROAM) provide an analysis of prospective generation development scenarios for the period 2009-10 to 2013-14. The future generation development pattern in the NEM and in Tasmania specifically is subject to market forces resulting from competitors' assessments of a wide range of factors that may include forecast future electricity prices, minimum reliability standards, availability of hydro facilities, and electricity growth rates. Hence it is necessary to assess the need for network developments against a set of backgrounds that represent the more probable likely future developments.

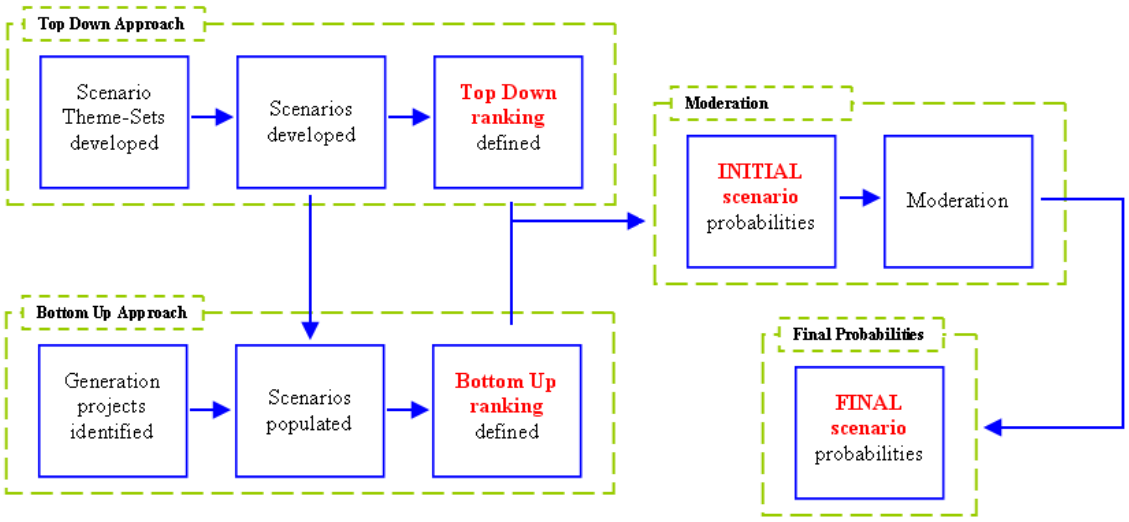
The scenario analysis conducted relates primarily to assisting Transend in identifying the need for load driven transmission augmentations associated with various generation developments, interconnector capacity and load forecast assumptions.

2 SCENARIO ANALYSIS METHODOLOGY

The methodology used in this assessment has been designed to deliver a forward-looking view of a number of plausible market development scenarios, specifically focusing on the Tasmanian region.

The approach is summarised in the diagram below:

Figure 2.1 – Scenario Analysis Methodology Matrix



Specific comments are made with respect to each of the steps identified above:

Step 1) Scenario Theme Sets Identified

The following theme sets were used in the study:

1) Three themes within the Load Growth scenario theme set:

- **Low, Medium** and **High** load growth. The three theme set limbs relate to economic growth levels, each considering 10% poe demand. ROAM has considered only the 10% poe demands as the NEM reliability standards require TNSPs to plan the system in order to meet one in ten year peak demands. It is necessary to plan to meet the 10% poe demand in each year ahead, as the weather conditions associated with peak demands cannot be predicted more than a few days ahead.

2) Two themes within the Water Availability theme set:

- **Average Water Availability (AVG H_2O)** and **Limited Water Availability (LOW H_2O)**. Under the AVG H_2O theme set, the long term average hydro inflow of approximately 9,500GWh is maintained. The limited water scenario reduces the annual energy capacity of the Tasmanian hydroelectric stations. The prevailing drought is considered a potential outcome of climate change and permanently altered weather patterns. Should this pattern become established, inflows may reduce and an average level of 8,000GWh is considered credible.

3) Two themes within the Greenhouse Policy theme set:

- **LOW CO_2** and **HIGH CO_2**. The HIGH CO_2 theme set involves the introduction of a nominally \$35/tonne CO_2-e emissions trading scheme within the period of the next revenue reset. The Low CO_2 theme reflects the present situation whereby a variety of State and Federal schemes have been introduced to curb emissions, with an implied carbon value of approximately \$15/tonne CO_2-e.

Other developments consisting of high impact, but low probability events, for example the development of additional interconnector facilities linking Tasmania to Victoria, or changes to baseloads in Tasmania have not been considered within this report. These exceptional scenarios would result in a substantial shift in generation patterns requiring separate treatment by the regulator, and are therefore not within the scope of the Revenue Reset Scenario Analysis. The timing of such developments may also be beyond the current regulatory reset period.

The defined theme sets and themes are discussed in detail in Section 3 of this report.

Step 2) Theme Probabilities and Top Down Scenario Weightings

Each of the themes has been assigned a relative probability of proceeding. The probabilities associated with each are shown below:

Table 2.1 – Initial Scenario Probabilities

1. Load Growth		2. Water Availability		3. Greenhouse Policy	
Theme		**Theme**		**Theme**	
L10	15%	AVG H_2O	80%	LOW CO_2	40%
M10	70%	LOW H_2O	20%	HIGH CO_2	60%
H10	15%				

The probabilities assigned have been estimated in light of emerging government policy, market trends and experience, and are discussed further in Section 3.

From the themes contained within the four theme sets of Load Growth, Water Availability and Greenhouse Policy, twelve (12) discrete combinations are possible. Each of these combinations forms a 'scenario'. The relevant theme probabilities are combined to produce a 'Top-Down' Weighting for each of the twelve scenarios using the following formula:

$$TDW = W_{Load} \times W_{Water} \times W_{Greenhouse}$$

*where **TDW** is the Top Down Weighting, and **W** is a theme weighting.*

The Top Down Weighting for each of the scenarios was calculated to be as follows:

Table 2.2 – Top Down Weightings for each Scenario			
Scenario	**Scenario Theme Combination**	**Combination of Probabilities**	**Top-Down Weighting**
1	L10 * AVG H_2O * LOW CO_2	0.15 * 0.8 * 0.4	**4.80%**
2	L10 * AVG H_2O * HIGH CO_2	0.15 * 0.8 * 0.6	**7.20%**
3	L10 * LOW H2O * LOW CO_2	0.15 * 0.2 * 0.4	**1.20%**
4	L10 * LOW H2O * HIGH CO_2	0.15 * 0.2 * 0.6	**1.80%**
5	M10 * AVG H_2O * LOW CO_2	0.7 * 0.8 * 0.4	**22.40%**
6	M10 * AVG H_2O * HIGH CO_2	0.7 * 0.8 * 0.6	**33.60%**
7	M10 * LOW H2O * LOW CO_2	0.7 * 0.2 * 0.4	**5.60%**
8	M10 * LOW H2O * HIGH CO_2	0.7 * 0.2 * 0.6	**8.40%**
9	H10 * AVG H_2O * LOW CO_2	0.15 * 0.8 * 0.4	**4.80%**
10	H10 * AVG H_2O * HIGH CO_2	0.15 * 0.8 * 0.6	**7.20%**
11	H10 * LOW H2O * LOW CO_2	0.15 * 0.2 * 0.4	**1.20%**
12	H10 * LOW H_2O * HIGH CO_2	0.15 * 0.2 * 0.6	**1.80%**

Therefore the scenarios with the highest Top-Down Weighting are scenarios 5 and 6: M10 demand, average water availability and either the present range of greenhouse reduction measures (or a low price Emissions Trading Scheme) or a higher price emissions trading scheme aimed at significantly reducing greenhouse emissions, at 22.4% and 33.6% respectively.

Step 3) Potential Generation Developments identified

A total of 27 new projects of the technology types, locations and fuel types presently applicable to Tasmania were included in the study. These projects were based upon information available to ROAM Consulting through published documents and market research. Most new generation options are publicly announced projects, with parameters as per the best publicly available information. However, insufficient publicly announced projects exist to meet energy requirements going forward in some scenarios, and therefore ROAM has included some likely new entrants or "modelled projects". Each of the projects considered appears in the Project Listing section in the Appendices, including details of size, plant type and location.

In order to include the potential generation developments in the scenario analysis process, it is necessary to assign rankings to each project describing its likelihood of proceeding. These rankings are converted into a numerical figure for use in the analysis process. The ranking categories chosen and corresponding numerical weightings were:

Table 2.3 – Project Rankings and Weightings		
Code	**Ranking**	**Weighting**
D	Definite	**100%**
VH	Very High	**80%**
H	High	**60%**
M	Moderate	**30%**
L	Low	**5%**

Each potential project was assigned a ranking from the table above. The selection of a ranking was based heavily upon the proportion of key milestones achieved by each project, including the acquisition of land, the purchase of equipment, the acquisition of approvals and licences, the achievement of power sales, the finalisation of finance and the commencement of construction. Generally, projects that had achieved more of these milestones were given a higher ranking. However, other factors were also taken into account, such as known economic drivers (or disincentives), opposition to the project (for example, from local or national bodies), the determination of the project's proponent, and the elapsed time between announcements regarding the project.

Step 4) Scenario 'Planting' and Bottom-Up Scenario Weightings

A manual methodology was used for 'planting' each of the twelve scenarios, consistent with the approach used in previous assignments of this nature for TNSPs.

Each of the scenarios was then 'planted' to reflect the combination of themes from which the scenario was comprised. The following factors were considered when performing this task:

- Where multiple plants of a similar type or size were able to be selected concurrently, the project with the higher 'probability' ranking was typically installed first;
- Sufficient capacity and energy was installed to ensure that where possible, a realistic balance between supply and demand was maintained;
- Scenarios that included the alternate greenhouse policy, introducing a significant carbon emissions trading scheme increased incentives for the uptake of renewable technologies, tend towards a higher level of wind generation;
- In planting scenarios to meet the minimum reserve margin conditions, wind farms were assumed to contribute a maximum of 8% of their installed capacity at the time of a 10% POE system peak demand, in line with independently assessed figures[2,3], and;
- Many 'iterations' of the planting procedure were performed and cross-checks completed in order to reach a plausible planting outcome for all scenarios.

[2]The following is a quote from ESIPC's Planning Council Wind Report to ESCOSA regarding the assumed capacity factor of wind generation during the time of South Australia's regional peak demand:
"…it is prudent to leave the current Figure of between 7% and 8% for the calculation of the supply-demand balance to accommodate for this currently unquantifiable reduction at peak load until more detailed operational information is obtained."

[3] ROAM notes that Transend presently plans on a 5% contribution from wind during the annual peak.

Factors affecting the location of new plant developments within Tasmania were considered through the creation of the scenarios above.

The Top-Down Weightings for each scenario generally reflect the likelihood that particular combinations of scenario themes will occur.

However, they do not address the uncertainty relating to which of the various prospective generation developments of each type will be developed under the particular theme.

For this purpose, Bottom-Up Scenario Weightings were derived as the **sum** of the weightings applicable to each of the generation projects assumed to proceed within a given scenario. The Bottom-Up Weighting was calculated as follows:

$$BUW_{Scenario\ i} = [(WP_1 + WP_2 + \ldots) / NPI_{Scenario\ i}] / \sum_{i=1\ to\ 12}(APW_{Scenario\ i})$$

*Where **BUW** is the Bottom Up Weighting, **WP_1, WP_2**, etc are the individual probabilities of each of the projects **installed at any point within** scenario'i', **NPI** is the number of plants installed throughout scenario 'i', and **$APW_{Scenario\ i}$** is the average plant weighting of each Scenario 'i'.*

The Bottom-Up Weighting can therefore be interpreted as the average weighting of the planting options selected in a scenario, compared with all of the scenarios. An example of this calculation is provided for the M10-AVG H_2O - LOW CO_2 scenario, for which the Bottom-Up Scenario Weighting was calculated to be **9.72%**:

Table 2.4 – Example Bottom-Up Weighting Calculation

Plant installed or retired within the scenario	Plant Ranking	Plant Weighting
Meander Hydro	D	100%
Alinta Tamar Valley CCGT	VH	80%
Alinta Tamar Valley OCGT	VH	80%
Gunns Pulp Mill	VH	80%
Retirement of Bell Bay Thermal	VH	80%
Musselroe Windfarm	VH	80%
Lake Margaret Hydro Redevelopment	VH	80%
Trevallyn Hydro	M	30%
Sum of plant weightings (SumPW)	= (1.0+0.8+0.8+0.8+0.8+0.8+0.8+0.3) = **6.1**	
Number of Plant Installations/Retirements (NPI)	**8**	
Average Plant Weighting in Scenario (APW)	= SumPW / NPI = **0.7625**	
Bottom-Up Weighting of Scenario (BUW)	=APW / SUM (All scenario APW's) = 0.7625 / 7.84 = **9.72%**	

The Bottom-Up Weighting calculation gives a *high* value where the selected plant within the scenario consists of projects primarily of high likelihood, and a *low* value where most of the

selected plant is of a low likelihood. The Bottom-Up Weighting of a scenario can therefore be quite different from the Top-Down Weighting relative to the weightings of the other scenarios.

The calculated Bottom-Up Weighting for each of the 12 scenarios is shown below:

Table 2.5 – Bottom-Up Weightings for each Scenario

Scenario	Scenario Theme Combination	Bottom-Up Weighting
1	L10 * AVG H_2O * LOW CO_2	10.63%
2	L10 * AVG H_2O * HIGH CO_2	8.43%
3	L10 * LOW H2O * LOW CO_2	10.20%
4	L10 * LOW H2O * HIGH CO_2	8.43%
5	M10 * AVG H_2O * LOW CO_2	9.72%
6	M10 * AVG H_2O * HIGH CO_2	8.46%
7	M10 * LOW H2O * LOW CO_2	8.08%
8	M10 * LOW H2O * HIGH CO_2	7.81%
9	H10 * AVG H_2O * LOW CO_2	6.16%
10	H10 * AVG H_2O * HIGH CO_2	7.24%
11	H10 * LOW H2O * LOW CO_2	7.01%
12	H10 * LOW H_2O * HIGH CO_2	7.81%

In this scenario analysis, it can be observed that the Bottom-Up Weightings are loosely clustered between 6.16% and 10.63%. This fair degree of volatility results from the low level of new entrant plant required to enter the market in order to meet capacity and energy targets; due to the high levels of existing capacity. In the low load growth theme in particular, existing generation is capable of delivering sufficient energy to supply the Tasmanian demand independent of any imports across Basslink.

Step 5) Calculation of the Initial Scenario Probability

The Initial Scenario Probability is determined from the combination of the Top-Down Weighting and the Bottom-Up Weighting. It is calculated as follows:

$$ISP_{Scenario\ i} = (TDW_{Scenario\ i} * BUW_{Scenario\ i}) / \sum_{i=1\ to\ 12}(TBW_{Scenario\ i})$$

*Where **ISP** is the Initial Scenario Probability, **TDW** is the Top-Down Weighting, **BUW** is the Bottom-Up Weighting, and $TBW_{Scenario\ i}$ is the Top Bottom Weighting of Scenario 'i'(i.e. $TDW_{Scenario\ i} * BUW_{Scenario\ i}$).*

The Initial Scenario Probability for each of the twelve scenarios was calculated to be as follows:

Table 2.6 – Initial Scenario Probabilities for each Scenario		
Scenario	**Scenario Theme Combination**	**Initial Scenario Probability**
1	L10 * AVG H_2O * LOW CO_2	5.96%
2	L10 * AVG H_2O * HIGH CO_2	7.09%
3	L10 * LOW H2O * LOW CO_2	1.43%
4	L10 * LOW H2O * HIGH CO_2	1.77%
5	M10 * AVG H_2O * LOW CO_2	25.44%
6	M10 * AVG H_2O * HIGH CO_2	33.21%
7	M10 * LOW H2O * LOW CO_2	5.28%
8	M10 * LOW H2O * HIGH CO_2	7.66%
9	H10 * AVG H_2O * LOW CO_2	3.45%
10	H10 * AVG H_2O * HIGH CO_2	6.09%
11	H10 * LOW H2O * LOW CO_2	0.98%
12	H10 * LOW H_2O * HIGH CO_2	1.64%

The initial scenario possibilities are slightly more variable than the top down weightings, ranging from 33.21% down to 0.98%.

Step 6) Moderation and the Final Scenario Probabilities

The *Initial Scenario Probability* calculated in Step 5 (being the product of the *Top-Down* and *Bottom-Up Weightings*) was developed for each scenario, without considering any particular market indicators. Hence, the values may not accurately reflect realistic limitations on system capacity and energy imposed either by the market in limiting oversupply or by regulatory requirements for minimum generation.

ROAM recognises that Tasmania is a unique NEM region in that it is energy constrained rather than capacity constrained. That is, Tasmania has excess capacity to meet peak demand, but the region relies heavily on water inflows into storage facilities to ensure that annual energy demands are supplied.

Tasmania's annual energy demand is forecast to grow from approximately 10,200GWh to 12,000GWh under medium economic conditions during the study timeframe. The operation of the Basslink interconnector with Victoria and the Bell Bay gas fired generators provide some portion of the annual energy generation required, but the majority is generated by the large hydroelectric resources of the region. With inflows to the hydro system being variable, dependant upon the prevailing weather patterns each year, this reliance on an energy constrained portfolio of generators requires careful consideration when forecasting generation planning outcomes for transmission planning studies.

ROAM has moderated each scenario based upon the total amount by which Tasmanian generation (annual energy) exceeds (or falls short of) the annual energy demand of the region. No specific amount of import or export across Basslink is assumed, that is, only

island generation is included in the moderation. The moderation favours a net energy balance of between -2000GWh and +2000GWh, with strongest weighting given to a balance near zero. This assumption is consistent with a long term annual trend towards energy neutrality, while allowing for extensive trading in either direction across Basslink over shorter time frames, particularly daily.

In order to calculate the total amount of energy which new and existing generators will provide each year, ROAM has used the following capacity factor assumptions for each generation type:

Table 2.7 – Assumed Annual Capacity Factor for Each Generation Technology

Generation Technology	Capacity Factor
Hydro	50%
Combined Cycle Gas Turbine (CCGT)	60%
Open Cycle Gas Turbine (OCGT)	10%
Wind Farm[4]	30%
Cogeneration	80%
Biomass / Bagasse	60%

The Annual Energy moderation factor for each scenario was calculated as the average of the factors determined for individual years:

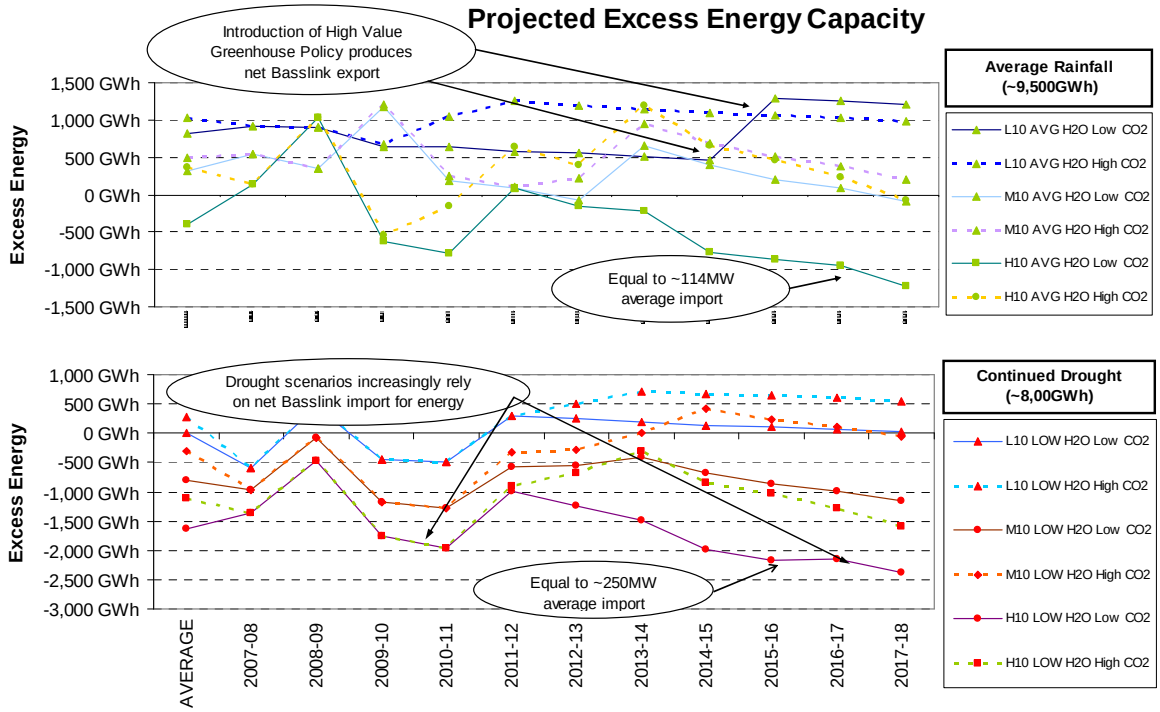
$$MF_{AE} = Average\ (MF_{AE\ 2006/07}\ ,\ MF_{AE\ 2007/08}\ ,\ ...)$$

Where MF_{AE} *is the Moderating Factor for Annual Energy.*

The yearly and average deviation from the annual energy demanded for each of the twelve scenarios is summarised in the following figure. It should be noted that the figures exclude any import or export across Basslink.

[4] The capacity factor of a wind farm is highly dependant upon the location and prevailing wind patterns. Existing and proposed wind farms in Tasmania are typically located within the 'Roaring Forties', and are therefore exposed to comparatively good conditions for wind generation. For example, the Hallett Wind Farm in South Australia has achieved an average capacity factor of 27% in 2008 to date (excluding January commissioning period), and the Lake Bonney wind farm, also in South Australia, has also achieved an average capacity factor of approximately 28% since January 2008. It is generally accepted that long term average capacity factors for wind farms with good wind resources will achieve a capacity factor of between 30% and 40% (ESIPC Planning Council Wind Report to ESCOSA, 2005) which analysed wind resources based on a seven year dataset. Tasmania would have equivalent if not better wind resources than the South Australian locations analysed in the 2005 ESIPC report.

Figure 2.2 – Net Tasmanian Energy Balance – All Scenarios



As can be seen in the chart above, the scenarios maintain a level of annual generation between 1,300GWh above the annual energy demanded and 2,300GWh below the annual energy required. A shortage of energy requires that Basslink operate to support the Tasmanian network. The largest shortage of approximately 2,300GWh (caused by high demand growth combined with drought conditions and a low-priced CO_2 mitigation scheme) would require Basslink to import approximately 270MW on average for each hour to compensate for the limited local generation. Conversely, the largest energy surplus suggests that Basslink will export approximately 145MW on average for the year, or hydro stations might be operated at lower levels to allow water storages to increase (or spill water depending upon the timing and location of inflows). This therefore provides a credible range of outcomes for the future direction of Tasmanian network and generation development.

Moderating the Initial Scenario Probabilities

The moderating factor discussed above is combined with the Initial Scenario Probabilities in the following way:

$$FSP_{Scenario\ i} = (ISP_{Scenario\ i} * MF_{AE\ of\ Scenario\ i}) / \sum_{i=1\ to\ 12}(MSP_{Scenario\ i})$$

*Where **FSP** is the Final Scenario Probability, **ISP** is the Initial Scenario Probability, MF_{AE} is the Moderating Factor for the Annual Energy, and $MSP_{Scenario\ i}$ is the Moderated Scenario Probability of Scenario 'i'(i.e.*

$$ISP_{Scenario\ i} * MF_{AE\ of\ Scenario})_i.$$

The Moderating Factor weightings used are summarised in the following table. Negative values of MW indicate a shortfall of supply, and positive values indicate an excess of supply. ROAM considers it may be unacceptable for Tasmania to rely too heavily upon the import of energy from Victoria, as this would imply higher pool prices in Tasmania, more periods of the day where the interconnector with Victoria is constrained importing, and higher risk of blackouts if the link fails for any period of time. Given this, the moderation weightings penalise a significant shortfall of available annual energy more than scenarios where there is an excess.

Table 2.8 – Annual Energy Moderating Factor Weightings

Annual Energy exceeding Annual Energy Demanded	Implied Basslink Flow	Weighting
-3,500 GWh	-400 MW	0
-3,250 GWh	-371 MW	0
-3,000 GWh	-342 MW	1
-2,750 GWh	-314 MW	2
-2,500 GWh	-285 MW	3
-2,250 GWh	-257 MW	3
-2,000 GWh	-228 MW	4
-1,750 GWh	-200 MW	4
-1,500 GWh	-171 MW	4
-1,250 GWh	-143 MW	5
-1,000 GWh	-114 MW	5
1,000 GWh	114 MW	5
1,250 GWh	143 MW	5
1,500 GWh	171 MW	4
1,750 GWh	200 MW	4
2,000 GWh	228 MW	4
2,250 GWh	257 MW	4
2,500 GWh	285 MW	3
3,000 GWh	342 MW	2
3,250 GWh	371 MW	1
3,500 GWh	400 MW	0

ROAM has assumed that Tasmania will under most circumstances be capable of supplying its own load, and Basslink will operate to displace peaking generation where energy shortfalls exist. The table above shows that the moderation mechanism does not penalise any scenario for which the total available Tasmanian energy supports between 150MW average import and 150MW average export, as these would be readily accommodated by the bidirectional interconnector capacity.

Following the moderation process, the Final Scenario Probability for each of the twelve discrete scenarios was determined to be as follows:

Table 2.9 – Final Scenario Probabilities for each Scenario

Scenario	Scenario Theme Combination	Final Scenario Probability
1	L10 * AVG H_2O * LOW CO_2	**5.99%**
2	L10 * AVG H_2O * HIGH CO_2	**7.13%**
3	L10 * LOW H2O * LOW CO_2	**1.44%**
4	L10 * LOW H2O * HIGH CO_2	**1.78%**
5	M10 * AVG H_2O * LOW CO_2	**25.58%**
6	M10 * AVG H_2O * HIGH CO_2	**33.40%**
7	M10 * LOW H2O * LOW CO_2	**5.22%**
8	M10 * LOW H2O * HIGH CO_2	**7.57%**
9	H10 * AVG H_2O * LOW CO_2	**3.48%**
10	H10 * AVG H_2O * HIGH CO_2	**6.12%**
11	H10 * LOW H2O * LOW CO_2	**0.79%**
12	H10 * LOW H_2O * HIGH CO_2	**1.50%**

Step 7) Final Project Probabilities

In addition to calculating scenario probabilities, one of the outcomes of the methodology is a set of final *project* probabilities. The calculation of a final project probability is defined as follows:

$$FPP_{Project\ i} = \sum_{i=1\ to\ 12} (FSP_{Scenario\ i} * DF_{Scenario\ i})$$

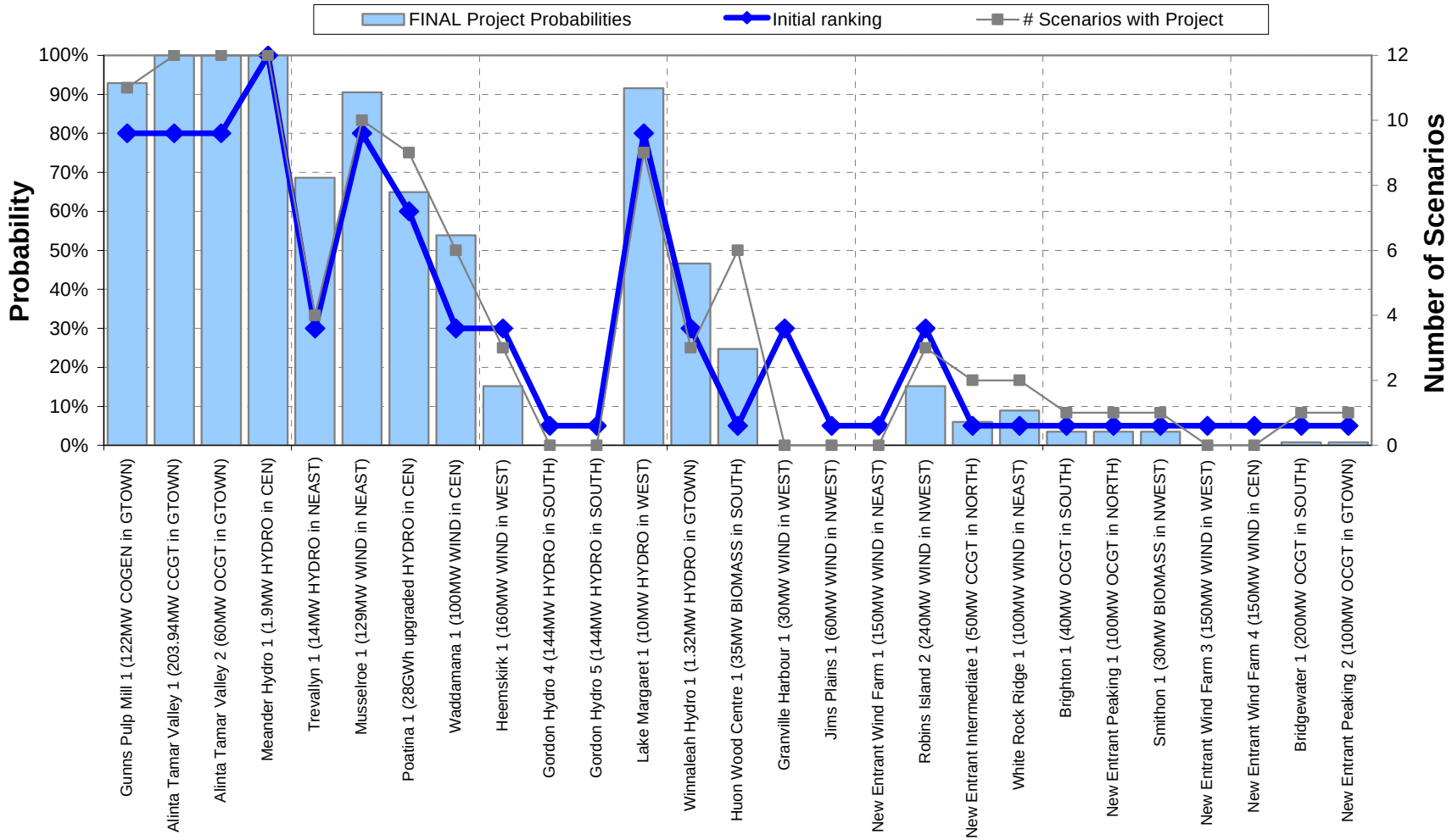
Where ***FSP*** *is the Final Scenario Probability, and*

$$DF_{Scenario\ i} = \begin{cases} 1 \text{ if Project i is selected in Scenario i} \\ 0 \text{ if Project i is NOT selected in Scenario i} \end{cases}$$

That is, the final *project* probability is the sum of the final *scenario* probabilities of every scenario in which that project was used (installed). Therefore the initial project ranking has no effect on the final project probability other than making that project more likely to appear in scenarios if it had a higher initial ranking (and vice versa).

The final project probabilities are summarised in the following chart (aligned perpendicular to the text for readability).

Figure 2.3 – Initial and Final Project Probabilities



3 DATA ASSUMPTIONS

3.1 Generation Requirements

ROAM has used the NIEIR load forecasts as published in the 2007 NEMMCO Energy and Demand Projections in order to determine the level of generation required for each of the load growth scenarios. The NIEIR forecasts include L10, M10 and H10 forecasts. In this analysis ROAM has only considered the 10% poe load forecast by NIEIR. According to the National Electricity Rules (Version 19),

> *"A 10% probability of exceedence of* load *forecast must be adopted for the purposes of determination of* short term capacity reserve *and* medium term capacity reserve *requirements under the* power system security and reliability standards.*"*[5]

The following table shows the NIEIR generator-terminal peak demand forecasts for the relevant 10% POE case.

Table 3.1 – Tasmania NIEIR forecast winter Peak Demand

Load Growth Theme	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18
L10	1,739	1,742	1,752	1,767	1,773	1,780	1,790	1,796	1,798	1,803	1,809
M10	1,805	1,840	1,864	1,898	1,927	1,949	1,988	2,024	2,045	2,067	2,097
H10	1,867	1,932	1,977	2,036	2,088	2,136	2,224	2,265	2,319	2,371	2,432

In the 2007 NEMMCO Statement of Opportunities, NEMMCO has determined that the forecast level of demand side participation (DSP) for Tasmania is 0MW. This is based upon annual surveys of NEM participants to estimate the levels of price-sensitive loads. The 2007 Transend Annual Planning Report does not list any demand management opportunities. Should a material amount of Tasmanian load become price sensitive and be curtailed in the event of high prices, it could be considered that DSP loads would compete directly with the installation of peaking plant. Therefore, DSP could be considered a direct alternative to peaking plant, and may replace the installation of such a plant in these forecasts.

The following table shows the assumed current and committed installed capacity in Tasmania available at time of system peak. These numbers are as published in the 2007 NEMMCO Statement of Opportunities (for the Winter peak). Note that these numbers assume the retirement of the Bell Bay Thermal power station in 2009-10.

Table 3.2 – Assumed Current Installed and Committed Capacity in Tasmania
MW As Generated

2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
2,521	2,521	2,281	2,281	2,281	2,281	2,281	2,281	2,281	2,281

[5] National Electricity Rules (Version 19), Chapter 4, Section 4.9.1(e)

Despite the retirement of Bell Bay thermal power station, the current installed capacity is sufficient to meet the Tasmanian minimum reserve without the need for new capacity for the duration of the regulatory period except under High load growth. The capacity of Tasmanian generators however to meet annual energy demand is important, given that Tasmania is an energy constrained system, rather than capacity constrained.

Table 3.3 shows the annual energy demand as 'sent out' reported by NIEIR.

Table 3.3 – Tasmania NIEIR forecast annual energy (GWh)

Load Growth Theme	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17
Low	9,846	9,869	9,939	9,990	10,050	10,106	10,157	10,212	10,234	10,275
Medium	10,221	10,418	10,661	10,781	10,927	11,087	11,205	11,470	11,653	11,771
High	10,619	10,806	11,242	11,447	11,690	11,942	12,191	12,733	12,918	13,151

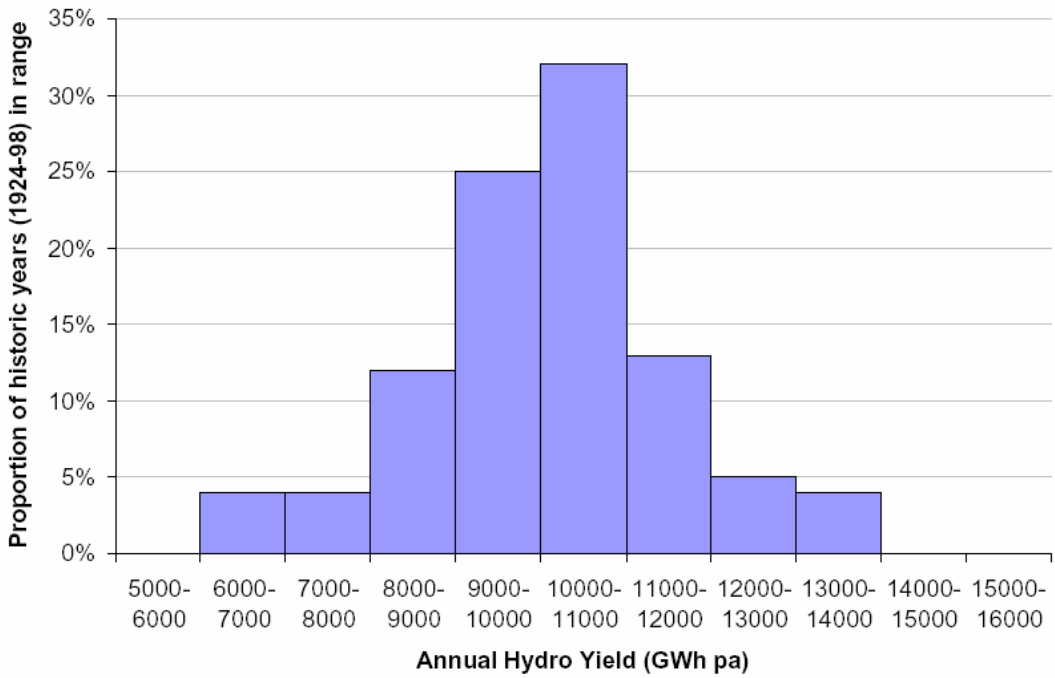
The now recognised long term average capacity of the Tasmanian hydro generators is approximately 9,500GWh. The operation of the Bell Bay gas generators increases the total local energy capacity, and the operation of Basslink can further increase the available energy. However, especially in the high load growth theme and where water availability is materially lower than the long term average, new entrant generation will be required in order to meet the energy shortfall without moving towards Tasmania becoming a significant net importer of power.

3.2 Water Availability Themes

An increasing concern over recent years has been the availability of water to Tasmania's major generating plant, the various hydroelectric facilities operated by Hydro Tasmania. Hydro generator availability is affected by maintenance needs and the availability of water. Even with overall water storage at reasonable levels it is possible that some hydro generating plant associated with small and medium storages would not be able to operate. This is due to limited water storage or periods of low rainfall yield. Over recent years a combination of low rainfall and increased demand for electricity has gradually reduced water storage levels.

Water inflows in Tasmania are highly variable. The annual average net system yield from the Hydro system is 10,205GWh. The maximum storage capacity of 14,389GWh could meet Tasmania's electrical energy requirements for about 18 months. Annual yields can vary significantly, as shown in Figure 3.1.

Figure 3.1 - Distribution of Annual Hydro Yields (Long Term Average)



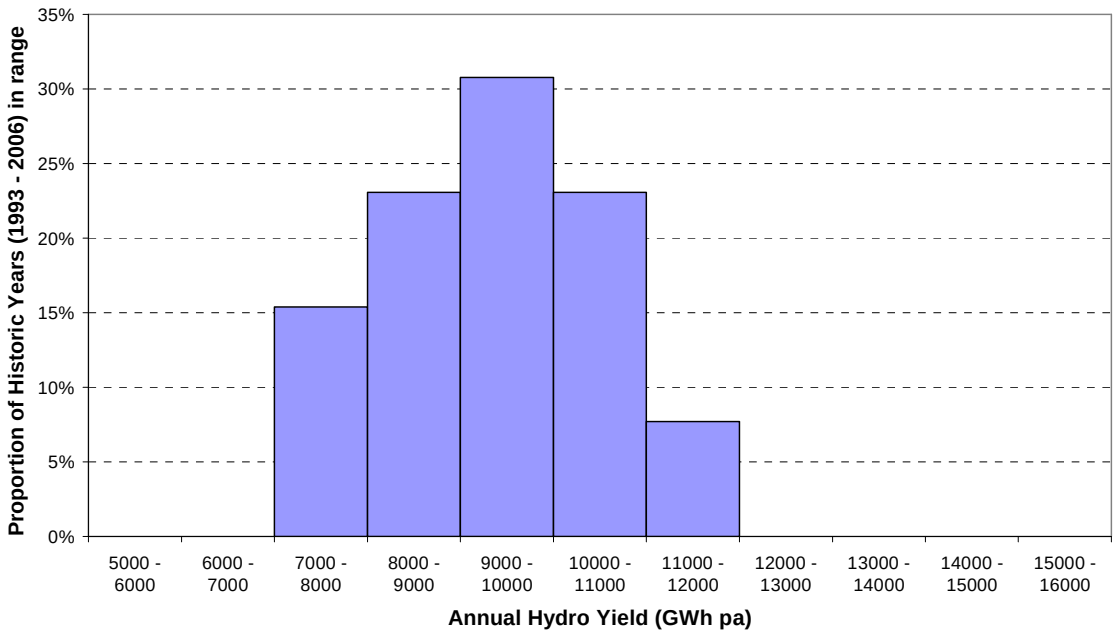
In 8% of years, water inflows will be less than sufficient to generate 8,000GWh. To date, Hydro Tasmania has met electricity demand through access to the long term water storage and operating Bell Bay power station in dry years. However, long term water storage levels are now about 20%, therefore Hydro Tasmania's ability to draw from existing dams is limited.

In recognition of the importance that water plays in maintaining high levels of availability at Tasmania's hydro stations, ROAM Consulting has considered two possibilities of water inflows. Under the first limb, Tasmania receives average water inflows over the forecast period, with a distribution curve similar to Figure 3.1 above. This scenario assumes that inflows are approximately 9,500GWh per annum on average, and all generating capacity is available at peak load conditions.

The second limb assumes that climate change will result in a material change in the distribution of inflows which hydro plant may experience over the forecast period. Analysis of the last fourteen (14) years of inflow data, as published by Hydro Tasmania[6], shows that the distribution of inflows over that period is materially different from that of the longer term average as presented in Figure 3.1. A significantly greater proportion of years have received less than 9,500GWh of hydro yield. The distribution curve of this short to medium term analysis is shown in Figure 3.2 below.

[6] As reported in Hydro Tasmania Annual Reports 2000-01 to 2006-07.

Figure 3.2 - Distribution of Annual Hydro Yields (1993 – 2006) – Drought-level Inflows



Under the second limb, average inflows are assumed to be materially less than the long term historic average, at approximately 8,000GWh. Existing installed capacity continues to be fully available at time of system peak. This limb effectively represents the continuation of the present drought conditions for the duration of the next regulatory period.

This would present the Hydro Tasmania generators with increasing difficulty in providing the majority of Tasmania's energy supply, and the use of the Basslink transmission link with the mainland would be critically important to support the network. Tasmania would predominantly be an importing region, with increased installation of thermal plant to support the diminished energy output from hydro generators.

Long term climate forecasting tends to indicate that rainfall will return to long term average levels, thereby easing current water restrictions than the case where the drought will continue with such low inflows. Rainfall levels are unpredictable, and although the present drought conditions have persisted for a longer than average period, drought events are not unprecedented in history. It is therefore ROAM's assessment that, without detailed long term weather forecasting, it is considered more likely that the long term yields continue with a reasonable degree of variability, consistent with the AVG H_2O water theme.

The scenario where inflows recover to the long term average, with volatility around the distribution curve shown in Figure 3.1, has been assigned a probability of 80%. A probability of 20% has been assigned to the scenario where the present drought conditions persist for the duration of the next regulatory period, with inflow volatility matching the distribution curve shown in Figure 3.2.

3.3 Carbon Value Themes

Background to Greenhouse Emissions

Under the Kyoto Agreement on Climate Change participating states have committed to limit their emissions of greenhouse gases during the period 2008-2012 (the first reporting period). Limits apply to total national emissions of greenhouse gases and are expressed as percentages of 1990 CO_2-e levels. For Australia the cap for the first reporting period was set at 108% of 1990 levels, this increase being in recognition of Australia's position as a leading producer of low cost coal and its preponderance of energy intensive industries. Australia has recently ratified the Kyoto Agreement and the Federal Government has stated that it anticipates meeting the agreed target. Consistent with this expectation a number of policy initiatives have been introduced such as the Mandatory Renewable Energy Target (MRET) scheme and subsequent MRET expansion designed to encourage additional generation from renewable sources. It is widely recognised that the MRET scheme in its expanded form will not be sufficient to produce the sustained cuts required if Australia's emissions are to be contained at a level sufficient to provide deep emissions cuts in the longer term. This issue is underscored by the fact that electricity consumption is forecast to continue to grow significantly into the future, and therefore any emissions target below current levels of emissions will be increasingly difficult to achieve.

In the absence of a stronger response to climate change by the previous Federal Government, individual state governments promoted their own alternative arrangements to further reduce greenhouse gas emissions. Initiatives included the development of enhanced renewables requirements for both NSW and Victoria and the Greenhouse Gas Abatement scheme in NSW. Most recently the states have sought to promote a national carbon trading scheme canvassed under the National Emissions Trading Taskforce. Industry leaders have also stated their belief that stronger policy measures are required from Australia if the issue of climate change is to be addressed successfully. Within the generation sector the scarcity of new coal fired projects post commissioning of the Kogan Creek Power Station and the increased interest in gas fired projects indicates the anticipation that some form of emissions trading scheme will be introduced within the near future. The Federal Labor government, elected in November 2007, has committed to introducing an emissions trading regime from early in the next decade. Whilst it is not possible to predict the ultimate form that such a policy change would take, informed opinion is that reduced levels of emissions consistent with such a policy change will be expected from the generation sector within the medium term.

It is outside the scope of the current assignment to determine quantitatively how great the future reductions required from the generation sector may be, the date from which they might commence or the impact that these would have on the Tasmanian generation sector. However, in order to undertake the generation scenario analysis in support of Transend's revenue application it is necessary to form a qualitative assessment of the impact on new generation developments should such a policy change be implemented.

Fuel Gas Availability and Greenhouse Gas Restrictions Theme Set

ROAM considers that the Greenhouse Policy theme set can be described using two Limbs. One limb represents the continuation of the current market conditions with respect to

emissions policy and gas pricing and availability. Under this limb the proposed carbon emissions trading scheme is introduced at a low price for emissions at approximately \$15/tonne CO_2-e, in line with existing State based greenhouse schemes and allowing a smooth transition from the state schemes to the announced Federal emissions trading scheme.

Under the alternative limb an emissions trading policy sufficient to drive the market towards a carbon price of \$35/tonne CO_2-e is introduced, this being sufficient to promote the development of additional renewable generation, expected to largely consist of wind power, and other lower emission fuels and technologies. In this scenario Tasmania would be likely to provide greater levels of 'green energy' to the mainland, with increased utilisation of the hydro resources as well as increased installation of wind facilities. Under this Limb additional quantities of gas will be expected to become available in Tasmania from the Tasmanian Gas Pipeline (TGP).

ROAM has modelled wind generation uniquely in the model. ROAM has recognised that significant work has been performed, and remains to be performed, to determine what level of capacity of wind may be relied upon to be operating during peak load conditions. ROAM has recognised only 8% of the planted wind power as contributing to reserve margins within the Tasmanian Region this being consistent with the intermittent operating profile of that technology. However, wind generators have an average capacity factor of between 30% and 40%[7], this being consistent with the operational capabilities of the existing wind facilities in the NEM. For the purposes of this review, ROAM has conservatively assumed that the energy generated from wind farms will be equivalent to a 30% average capacity factor.

Table 3.4 –Greenhouse Policy Theme Set

Limb Identifier	Description	Impact on Market	Probability of Occurrence
LOW CO_2	\$15/tonne CO_2-e implied through State-based schemes	Increased utilisation of Basslink to import low cost VIC coal-fired energy.	40%
HIGH CO_2	\$35/tonne CO_2-e introduced over time.	Increased utilisation of Basslink to export TAS 'green energy', with further likelihood of greater gas installations in the state.	60%

[7] The capacity factor of a wind farm is highly dependant upon the location and prevailing wind patterns. Existing and proposed wind farms in Tasmania are typically located within the 'Roaring Forties', and are therefore exposed to comparatively good conditions for wind generation. For example, the Hallett Wind Farm in South Australia has achieved an average capacity factor of 27% in 2008 to date (excluding January commissioning period), and the Lake Bonney wind farm, also in South Australia, has also achieved an average capacity factor of approximately 28% since January 2008. It is generally accepted that long term average capacity factors for wind farms with good wind resources will achieve a capacity factor of between 30% and 40% (ESIPC Planning Council Wind Report to ESCOSA, 2005) which analysed wind resources based on a seven year dataset. Tasmania would have equivalent if not better wind resources than the South Australian locations analysed in the 2005 ESIPC report.

4 DISCUSSION

ROAM Consulting has constructed twelve plausible scenarios for generation development within the Tasmanian region for the next ten years. As a result of implementing this methodology, the relative probability with which each of the twelve identified development scenarios would proceed has been calculated, and the relative likelihood of each of the identified potential projects has also been calculated.

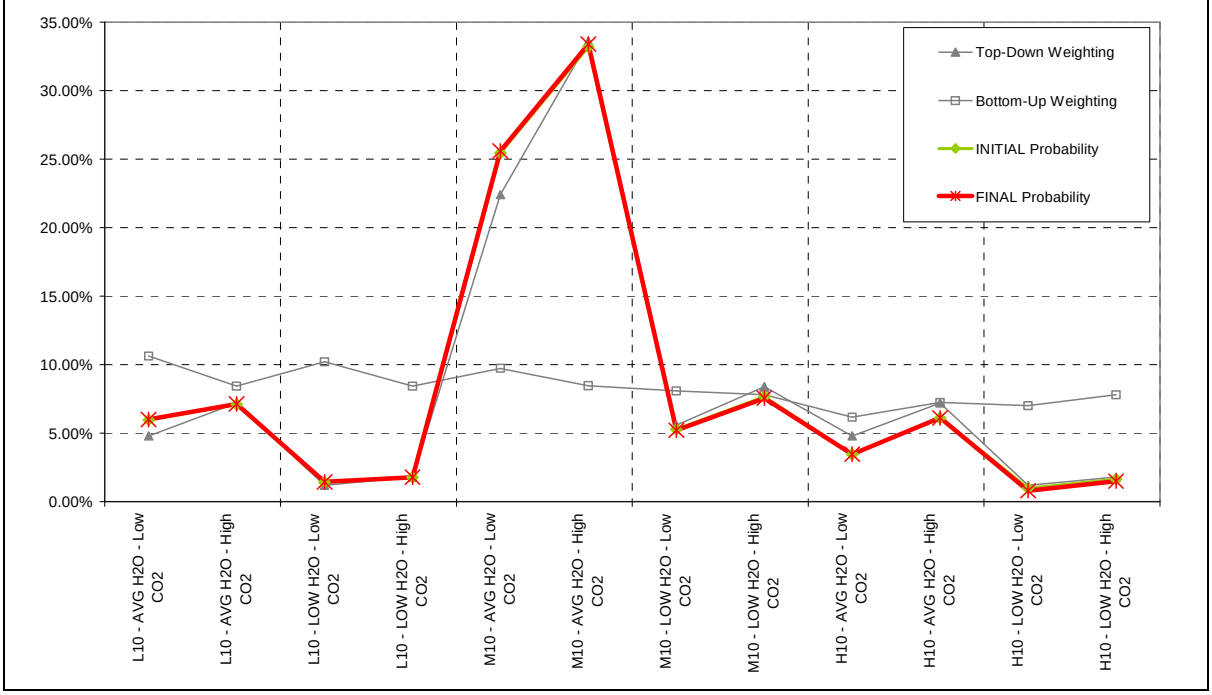
Specific mention is made here of key results. Individual commentary has also been provided with respect to each scenario (Appendix A) and each potential project (Appendix B).

4.1 Analysis of the Scenarios

The seven defined themes were combined to create twelve discrete scenarios capturing a variety of developmental trends. The actual outcome may (and likely will) differ from all of the scenarios with respect to the final size, timing and constitution of the projects. However the range of scenarios provided in this assessment is intended to provide a broad enough range of possibilities such that the future market development that actually evolves in Tasmania over the next ten years is not dissimilar from those proposed in this assessment.

The following chart summarises the relative probabilities determined for each of those twelve scenarios:

Figure 4.1 – Final Scenario Probabilities



With respect to Figure 4.1, the following observations can be made:

- The M10-AVG H_2O-HIGH CO_2 (medium load growth, long term average water availability, and \$35/tonne CO_2-e carbon value emissions policy) scenario was determined to be the most likely of the twelve at 33.4%, 7.8% more likely than M10-AVG H_2O-LOW CO_2. Compared with the M10-AVG H_2O-LOW CO_2 scenario, this scenario features significantly more wind and hydro development, representing the increased uptake of renewables under the CO_2 theme. 120MW of cogeneration, the Alinta Tamar Valley CCGT and OCGT, and the retirement of the existing Bell Bay thermal plant all proceed in this scenario. 229MW of new wind generation is commissioned whilst a further 26MW of hydro is installed.

- The M10-AVG H_2O-LOW CO_2 (medium load growth, long term average water availability, and the maintenance of the existing greenhouse policy) scenario was determined to be the second most likely outcome out of the twelve studied scenarios, achieving a final probability rating of 25.6%. This scenario features the addition of approximately 35MW of new gas fired plant (incorporating the addition of the Alinta Tamar Valley CCGT, the Alinta Tamar Valley OCGT, and the retirement of the existing Bell Bay thermal power station), and approximately 150MW of new cogeneration and hydro facilities. One new windfarm, Musselroe, proceeds in this case.

- There was a significant degree of variation in the planting schemes across the scenarios; in the low load growth scenarios where water availability was at long term average levels, there was less impetus to install new entrant stations. However, under high load growth conditions with additional renewable incentives under a carbon trading theme, significant levels of lower probability hydro and wind projects proceed. The bottom-up weightings were spread between 10.63% (L10-AVG H_2O-LOW CO_2) to 6.16% (H10-AVG H_2O-LOW CO_2), where a large number of low probability developments proceed to support the high load growth.

- The increased incentive for wind generation under a significant greenhouse emissions reduction policy may present challenges for the Tasmanian region. With little existing thermal plant, should significant levels of wind generation enter the market, the level of system inertia may drop under some extreme circumstances, which would make frequency management more critical. This could be managed via contracted inertia or via other strategies.

- As dictated by the scenario themes, some scenarios feature an overall negative energy balance for Tasmania. In these cases, the shortfall in local generation would be made up via energy imported across Basslink.

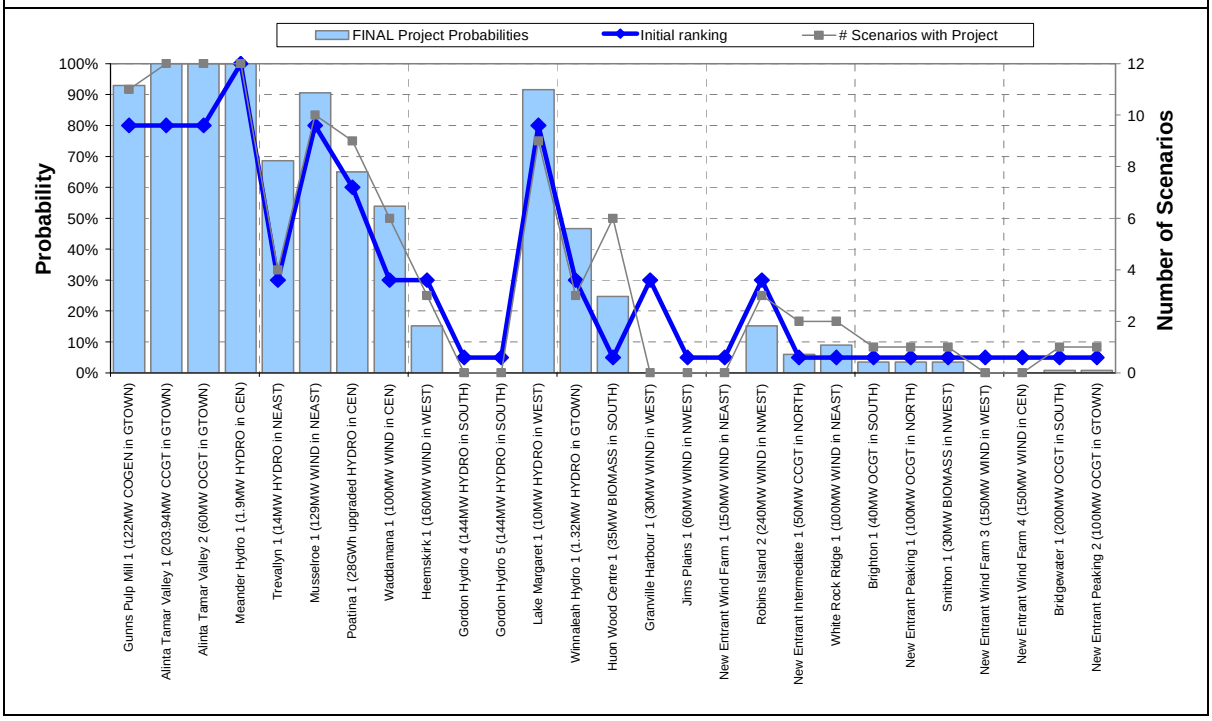
- The amount of new installed wind capacity varies from 0MW up to as much as 630MW. This is discussed in more detail below.

- The combination of the theme weightings was seen to have a much greater bearing on the final scenario probabilities than the bottom-up (project) weightings. This is consistent with the design of the methodology.

4.2 Analysis of New Generation Developments

The Initial Ranking and Final Project Probability for each of the 28 studied development options are shown in Figure 4.2.

Figure 4.2 – Project Probabilities



As a result of this study, the following projects were considered highly likely or committed (>80%).

- The Meander 1.9MW mini-hydro is expected to be operational during 2007-08.
- The Gunns Pulp Mill, a 122MW cogeneration facility, had an initial likelihood of Very High, and a final probability of 93%. The development looks highly likely to proceed.
- Alinta's Tamar Valley gas generation developments, which involve the installation of a 204MW combined cycle gas turbine, an additional 60MW of peaking plant (to bring total peaking plant including Bell Bay to 180MW), and the retirement of the Bell Bay thermal gas plant, has a final probability of 100%. This indicates the project was utilised in all scenarios, which is consistent with the information in the NEMMCO 2007 Statement of Opportunities.
- Lake Margaret Hydro redevelopment (nominal 10MW) has progressed to the design and tender stage, and is considered very likely to proceed having received board approval. This project received a final probability of 92%.
- Musselroe, a 129MW wind project in North East Tasmania. This project received a final probability of 90%.

The following major projects received a high likelihood of proceeding (> 60%).

- The Trevallyn 14MW upgrade to two of the generating units at the Trevallyn Power Station has been assigned a high initial probability. The project proceeds in all long term

average inflow scenarios where load growth is either medium or high, with a final probability of 69%.

- The Poatina Hydro power station efficiency upgrade which would deliver an additional 28GWh per annum. This development received a final probability of 65%);

The following projects received a moderate likelihood of proceeding (> 30%).

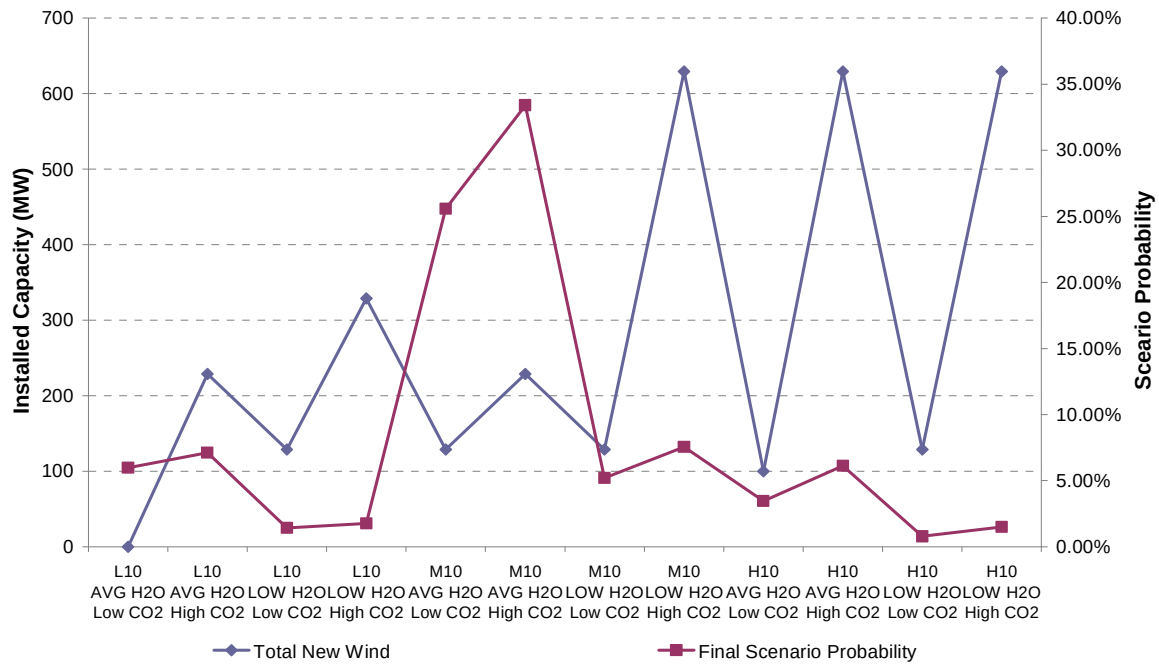
- Waddamana 100MW Wind Farm (54%).
- Winnaleah 1.32MW Hydro (47%).

4.3 Analysis of New Wind Generation

The amount of wind generation likely to proceed over the next ten years is an important input in planning the development of transmission assets in Tasmania. Tasmania has a good wind resource and it is possible that a large number of wind projects may go ahead in the region.

Figure 4.3 below shows the total amount of new wind generation in each of the twelve scenarios studied in this analysis, along with the final probability of those scenarios. There is a high degree of volatility; in one scenario, no additional wind generation is installed, and in several scenarios, more than 600MW is installed. However, these extreme outcomes correspond with relatively low probability scenarios. The two highest probability scenarios include around 130 to 230MW of new wind generation.

Figure 4.3 – Projected New Wind Capacity by Scenario



5 CONCLUSIONS

Potential generation development paths for the region of Tasmania over the next ten years have been assessed through the application of a scenario analysis methodology. The methodology is based on the identification of three separate 'theme sets' defining the future direction of the energy sector in the region of Tasmania. These theme sets relate to:

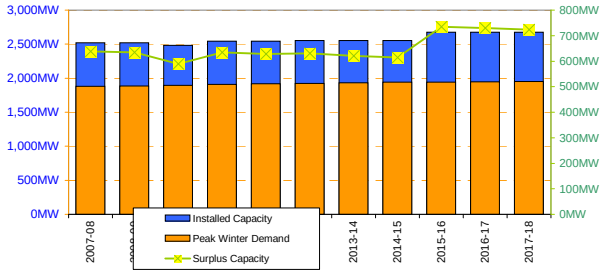
- Three alternate load growth rates;
- The availability of water to hydro generators in Tasmania; water inflows will return to long term average or maintain present drought conditions in the medium term;
- The level of government action on greenhouse emissions. Either a gradual transition from current greenhouse policies where emissions mitigation of the stationary energy is encouraged in the form of the expanded MRET and other current state initiatives into an emissions trading scheme with relatively mild caps, or the introduction of a more aggressive trading scheme whereby carbon emissions incur significant financial penalties within the next revenue reset period.

The generation developments that have been assessed cover a mix of gas fired plant, wind generation and other renewable technologies including hydro expansion and biomass.

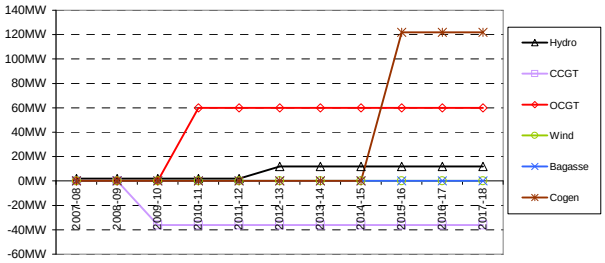
With an energy constrained system, and reasonable demand and energy growth over the forecast period, a reasonable level of new entrant generation is forecast to secure reliable energy supply or to take advantage of government greenhouse policy and the relative abundance of 'green energy' in Tasmania.

Scenario #				
1	Load Growth Theme:	**L10**	15% theme weighting	
	Water Availability Theme:	**AVG H2O**	80% theme weighting	
	Greenhouse Gas / Gas Availability Theme:	**Low CO2**	40% theme weighting	

Available Supply and Peak Demand



Cumulative Capacity Additions (or Retirements)

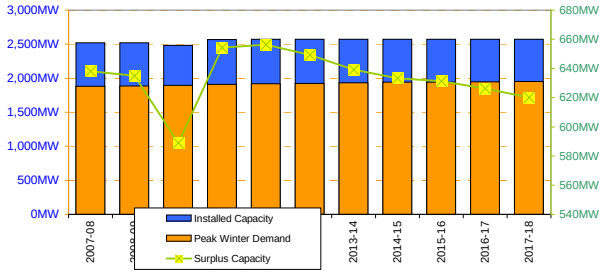


	New Projects	Retirements	Comments
2007-08	Meander Hydro 1 (1.9MW HYDRO),		Meander Hydro is due for operation in 2007-08.
2008-09			
2009-10	Alinta Tamar Valley 1 (203.94MW CCGT),	Bell Bay 1 (-240MW CCGT),	The Tamar Valley combined cycle generator is considered very likely. The development will be located within the existing Bell Bay Power Station, forcing the retirement of the existing thermal gas plant. Alinta proposes to augment the existing 105MW of peaking plant with a further 60MW of open cycle plant. The Musselroe Wind Farm, proposed by Roaring 40s, has local and state government approval, and has an exploration licence for the land. The progress of the station is advanced. The Poatina Upgrade is at an advanced level of commitment, with an expected entry in 2009 according to the 2007 Transend Annual Planning Report. The upgrade will improve generator efficiency, increasing annual energy by 28GWh.
2010-11	Alinta Tamar Valley 2 (60MW OCGT),		
2011-12			
2012-13	Lake Margaret 1 (10MW HYDRO),		Lake Margaret Power Scheme was closed on 1 July 2006 due to operations and maintenance difficulties, however redevelopment is being considered. ROAM considers that a CO2 regime will likely promote the redevelopment of the station.
2013-14			
2014-15			
2015-16	Gunns Pulp Mill 1 (122MW COGEN),		The Gunns Pulp Mill cogeneration plant is highly likely, The pulp mill has State and Federal approval, and requires only environmental consent to proceed.
2016-17			
2017-18			

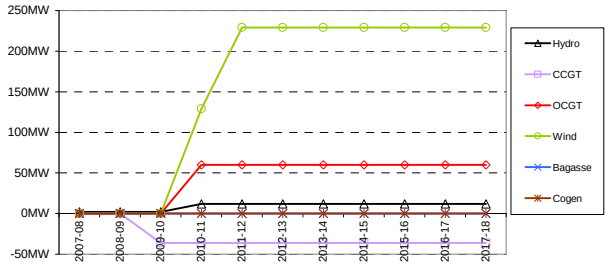
Ranking	Combined Theme-Set Ranking	**INITIAL Scenario Probability**	**FINAL Scenario Probability (after moderation)**
#6 /12	4.8%	**6.0%**	**6.0%**
Other Notes:	This scenario is ranked 10th of the 12 analysed. The scenario produces an excess of energy in Tasmania beyond what is required to be supplied locally. Basslink will therefore export the abundance of renewable energy to the mainland in this scenario.		

Scenario #				
2	Load Growth Theme:	**L10**	15% theme weighting	
	Water Availability Theme:	**AVG H2O**	80% theme weighting	
	Greenhouse Gas / Gas Availability Theme:	**High CO2**	60% theme weighting	

Available Supply and Peak Demand



Cumulative Capacity Additions (or Retirements)

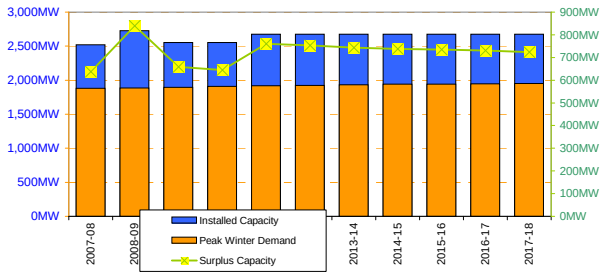


	New Projects	Retirements	Comments
2007-08	Meander Hydro 1 (1.9MW HYDRO),		Meander Hydro is due for operation in 2007-08.
2008-09			
2009-10	Alinta Tamar Valley 1 (203.94MW CCGT), Poatina 1 (28GWhMW HYDRO),	Bell Bay 1 (-240MW CCGT),	The Poatina Upgrade is at an advanced level of commitment, with an expected entry in 2009 according to the 2007 Transend Annual Planning Report. The upgrade will improve generator efficiency, increasing annual energy by 28GWh.
2010-11	Alinta Tamar Valley 2 (60MW OCGT), Musselroe 1 (129MW WIND), Lake Margaret 1 (10MW HYDRO),		The Musselroe Wind Farm, proposed by Roaring 40s, has local and state government approval, and has an exploration licence for the land. The progress of the station is advanced.
2011-12	White Rock Ridge 1 (100MW WIND),		The White Rock Ridge Wind Farm has a low probability of proceeding. First mooted by Pacific Hydro, the development appears to have stalled. The introduction of a strict carbon regime however may revive such a development.
2012-13			
2013-14			
2014-15			
2015-16			
2016-17			
2017-18			

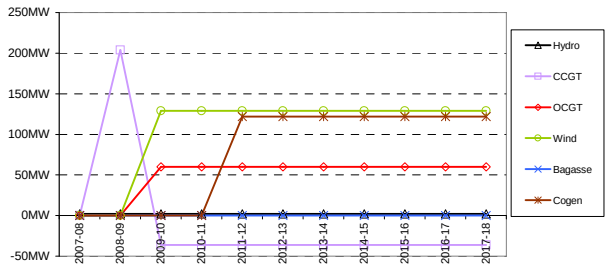
Ranking	Combined Theme-Set Ranking	INITIAL Scenario Probability	FINAL Scenario Probability (after moderation)
#4 /12	7.2%	**7.1%**	**7.1%**
Other Notes:	This scenario is ranked 10th of the 12 analysed. The scenario produces an excess of energy in Tasmania beyond what is required to be supplied locally. Basslink will therefore export the abundance of renewable energy to the mainland in this scenario.		

Scenario #				
3	Load Growth Theme:	**L10**	15% theme weighting	
	Water Availability Theme:	**LOW H2O**	20% theme weighting	
	Greenhouse Gas / Gas Availability Theme:	**Low CO2**	40% theme weighting	

Available Supply and Peak Demand



Cumulative Capacity Additions (or Retirements)

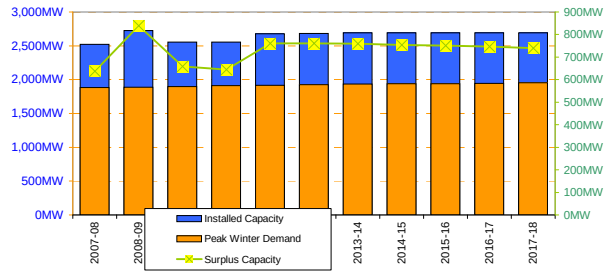


	New Projects	Retirements	Comments
2007-08	Meander Hydro 1 (1.9MW HYDRO),		Meander Hydro is due for operation in 2007-08.
2008-09	Alinta Tamar Valley 1 (203.94MW CCGT),		The Tamar Valley combined cycle generator is considered very likely. The development will be located within the existing Bell Bay Power Station, forcing the retirement of the existing thermal gas plant. Alinta proposes to augment the existing 105MW of peaking plant with a further 60MW of open cycle plant.
2009-10	Alinta Tamar Valley 2 (60MW OCGT), Musselroe 1 (129MW WIND), Poatina 1 (28GWhMW HYDRO),	Bell Bay 1 (-240MW CCGT),	The Musselroe Wind Farm, proposed by Roaring 40s, has local and state government approval, and has an exploration licence for the land. The progress of the station is advanced. The Poatina Upgrade is at an advanced level of commitment, with an expected entry in 2009 according to the 2007 Transend Annual Planning Report. The upgrade will improve generator efficiency, increasing annual energy by 28GWh.
2010-11			
2011-12	Gunns Pulp Mill 1 (122MW COGEN),		The Gunns Pulp Mill cogeneration plant is highly likely, with local media only speculating where the new facility will be located, rather than whether the new facility will go ahead. The pulp mill has State and Federal approval, and requires only environmental consent to proceed.
2012-13			
2013-14			
2014-15			
2015-16			
2016-17			
2017-18			

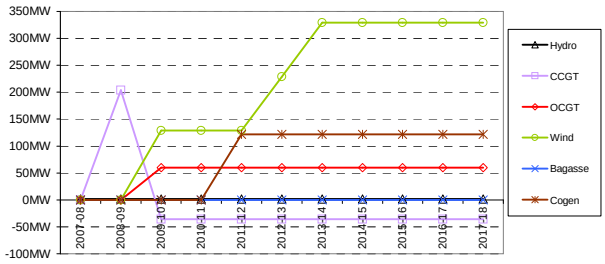
Ranking	Combined Theme-Set Ranking	INITIAL Scenario Probability	FINAL Scenario Probability (after moderation)
#11 /12	1.2%	**1.4%**	**1.4%**
Other Notes:	This scenario is ranked 10th of the 12 analysed. The scenario results in a fairly neutral energy balance overall. Basslink will export excess energy to the mainland in this scenario.		

Scenario #				
4	Load Growth Theme:	**L10**	15% theme weighting	
	Water Availability Theme:	**LOW H2O**	20% theme weighting	
	Greenhouse Gas / Gas Availability Theme:	**High CO2**	60% theme weighting	

Available Supply and Peak Demand



Cumulative Capacity Additions (or Retirements)

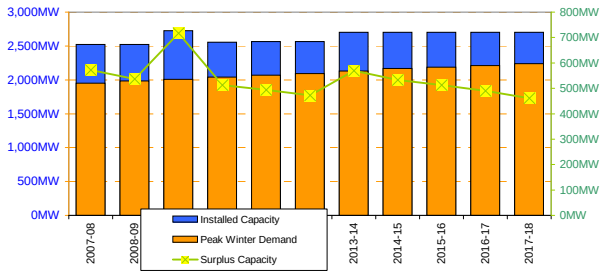


	New Projects	Retirements	Comments
2007-08	Meander Hydro 1 (1.9MW HYDRO),		Meander Hydro is due for operation in 2007-08.
2008-09	Alinta Tamar Valley 1 (203.94MW CCGT),		The Tamar Valley combined cycle generator is considered very likely. The development will be located within the existing Bell Bay Power Station, forcing the retirement of the existing thermal gas plant. Alinta proposes to augment the existing 105MW of peaking plant with a further 60MW of open cycle plant.
2009-10	Alinta Tamar Valley 2 (60MW OCGT), Musselroe 1 (129MW WIND), Poatina 1 (28GWhMW HYDRO),	Bell Bay 1 (-240MW CCGT),	The Musselroe Wind Farm, proposed by Roaring 40s, has local and state government approval, and has an exploration licence for the land. The progress of the station is advanced. The Poatina Upgrade is at an advanced level of commitment, with an expected entry in 2009 according to the 2007 Transend Annual Planning Report. The upgrade will improve generator efficiency, increasing annual energy by 28GWh.
2010-11			
2011-12	Gunns Pulp Mill 1 (122MW COGEN),		The Gunns Pulp Mill cogeneration plant is highly likely. The pulp mill has State and Federal approval, and requires only environmental consent to proceed.
2012-13	White Rock Ridge 1 (100MW WIND),		The White Rock Ridge Wind Farm has a low probability of proceeding. First mooted by Pacific Hydro, the development appears to have stalled. The introduction of a strict carbon regime however may revive such a development.
2013-14	Waddamana 1 (100MW WIND),		
2014-15			
2015-16			
2016-17			
2017-18			

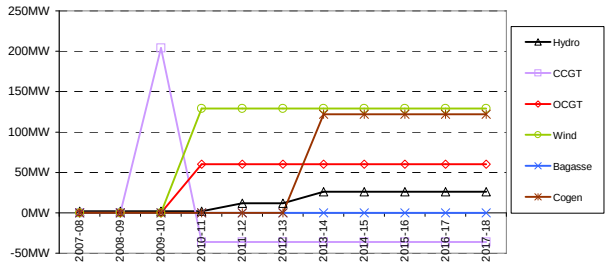
Ranking	Combined Theme-Set Ranking	INITIAL Scenario Probability	FINAL Scenario Probability (after moderation)
#9 /12	1.8%	**1.8%**	**1.8%**
Other Notes:	This scenario is ranked 9th of the 12 analysed. The scenario generally gives an excess of energy in Tasmania beyond what is required to be supplied locally. Basslink will therefore export the abundance of renewable energy to the mainland in this scenario.		

Scenario #				
5	Load Growth Theme:	**M10**	70% theme weighting	
	Water Availability Theme:	**AVG H2O**	80% theme weighting	
	Greenhouse Gas / Gas Availability Theme:	**Low CO2**	40% theme weighting	

Available Supply and Peak Demand



Cumulative Capacity Additions (or Retirements)

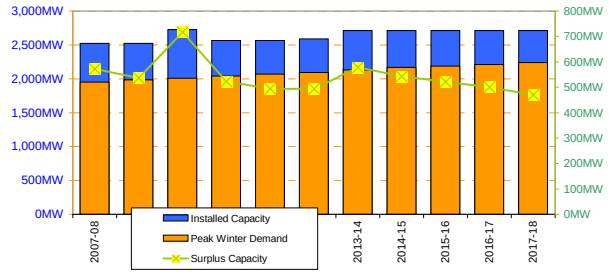


	New Projects	Retirements	Comments
2007-08	Meander Hydro 1 (1.9MW HYDRO),		Meander Hydro is due for operation in 2007-08.
2008-09			
2009-10	Alinta Tamar Valley 1 (203.94MW CCGT),		The Tamar Valley combined cycle generator is considered very likely. The development will be located within the existing Bell Bay Power Station, forcing the retirement of the existing thermal gas plant. Alinta proposes to augment the existing 105MW of peaking plant with a further 60MW of open cycle plant.
2010-11	Alinta Tamar Valley 2 (60MW OCGT), Musselroe 1 (129MW WIND),	Bell Bay 1 (-240MW CCGT),	
2011-12	Lake Margaret 1 (10MW HYDRO),		
2012-13			
2013-14	Gunns Pulp Mill 1 (122MW COGEN), Trevallyn 1 (14MW HYDRO),		The Gunns Pulp Mill cogeneration plant is highly likely. The pulp mill has State and Federal approval, and requires only environmental consent to proceed.
2014-15			
2015-16			
2016-17			
2017-18			

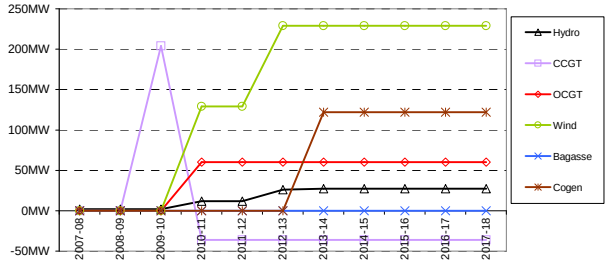
Ranking	Combined Theme-Set Ranking	**INITIAL Scenario Probability**	**FINAL Scenario Probability (after moderation)**
#2 /12	22.4%	**25.4%**	**25.6%**
Other Notes:	This scenario is ranked 2nd of the 12 analysed, indicating it is a scenario of considerable importance.		

Scenario #				
6	Load Growth Theme:	**M10**	70% theme weighting	
	Water Availability Theme:	**AVG H2O**	80% theme weighting	
	Greenhouse Gas / Gas Availability Theme:	**High CO2**	60% theme weighting	

Available Supply and Peak Demand



Cumulative Capacity Additions (or Retirements)

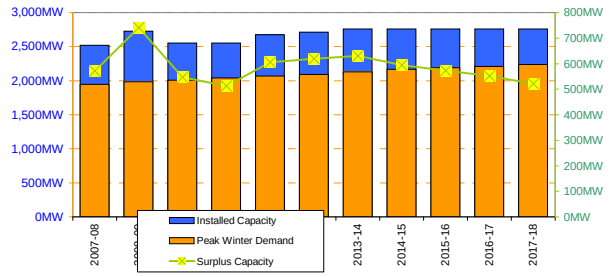


	New Projects	Retirements	Comments
2007-08	Meander Hydro 1 (1.9MW HYDRO),		Meander Hydro is due for operation in 2007-08.
2008-09			
2009-10	Alinta Tamar Valley 1 (203.94MW CCGT), Poatina 1 (28GWhMW HYDRO),		The Tamar Valley combined cycle generator is considered very likely. The development will be located within the existing Bell Bay Power Station, forcing the retirement of the existing thermal gas plant. Alinta proposes to augment the existing 105MW of peaking plant with a further 60MW of open cycle plant.
2010-11	Alinta Tamar Valley 2 (60MW OCGT), Musselroe 1 (129MW WIND), Lake Margaret 1 (10MW HYDRO),	Bell Bay 1 (-240MW CCGT),	The Musselroe Wind Farm, proposed by Roaring 40s, has local and state government approval, and has an exploration licence for the land. The progress of the station is advanced.
2011-12			
2012-13	Trevallyn 1 (14MW HYDRO), Waddamana 1 (100MW WIND),		Hydro Tasmania has publicly announced its intention to upgrade the capacity of the remaining two generators at the Trevallyn Power Station.
2013-14	Gunns Pulp Mill 1 (122MW COGEN), Winnaleah Hydro 1 (1.32MW HYDRO),		The Gunns Pulp Mill cogeneration plant is highly likely. The pulp mill has State and Federal approval, and requires only environmental consent to proceed.
2014-15			
2015-16			
2016-17			
2017-18			

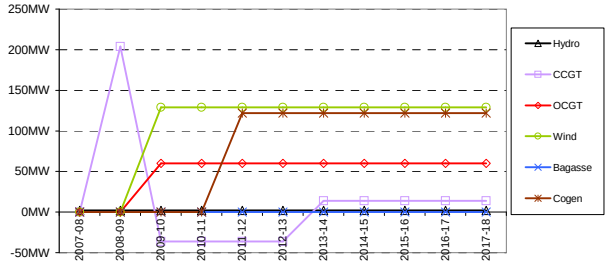
Ranking	Combined Theme-Set Ranking	INITIAL Scenario Probability	FINAL Scenario Probability (after moderation)
#1 /12	33.6%	**33.2%**	**33.4%**
Other Notes:	This scenario is ranked 1st of the 12 analysed, making it an important set of developments. This scenario includes around 10 new projects for Tasmania, and these are located right across the region.		

Scenario #				
7	Load Growth Theme:	**M10**	70% theme weighting	
	Water Availability Theme:	**LOW H2O**	20% theme weighting	
	Greenhouse Gas / Gas Availability Theme:	**Low CO2**	40% theme weighting	

Available Supply and Peak Demand



Cumulative Capacity Additions (or Retirements)

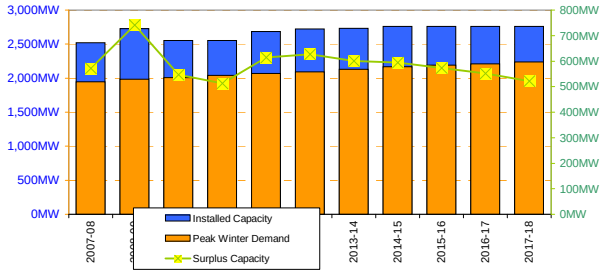


	New Projects	Retirements	Comments
2007-08	Meander Hydro 1 (1.9MW HYDRO),		Meander Hydro is due for operation in 2007-08.
2008-09	Alinta Tamar Valley 1 (203.94MW CCGT),		The Tamar Valley combined cycle generator is considered very likely. The development will be located within the existing Bell Bay Power Station, forcing the retirement of the existing thermal gas plant. Alinta proposes to augment the existing 105MW of peaking plant with a further 60MW of open cycle plant.
2009-10	Alinta Tamar Valley 2 (60MW OCGT), Musselroe 1 (129MW WIND), Poatina 1 (28GWhMW HYDRO),	Bell Bay 1 (-240MW CCGT),	The Musselroe Wind Farm, proposed by Roaring 40s, has local and state government approval, and has an exploration licence for the land. The progress of the station is advanced. The Poatina Upgrade is at an advanced level of commitment, with an expected entry in 2009 according to the 2007 Transend Annual Planning Report. The upgrade will improve generator efficiency, increasing annual energy by 28GWh.
2010-11			
2011-12	Gunns Pulp Mill 1 (122MW COGEN),		The Gunns Pulp Mill cogeneration plant is highly likely. The pulp mill has State and Federal approval, and requires only environmental consent to proceed.
2012-13	Huon Wood Centre 1 (35MW BIOMASS),		The Huon Wood Centre Power Station is a 35MW wood-fired development, developed to support local wood chipping and logging industry.
2013-14	New Entrant Intermediate 1 (50MW CCGT),		Low average inflows to the hydro stations will promote the development of additional baseload capacity.
2014-15			
2015-16			
2016-17			
2017-18			

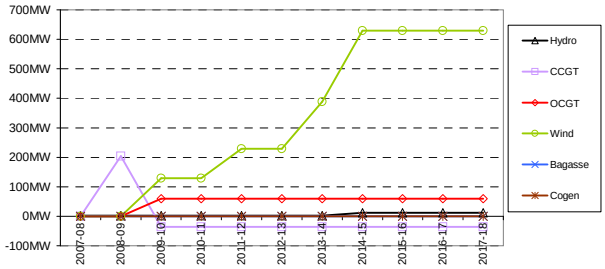
Ranking	Combined Theme-Set Ranking	**INITIAL Scenario Probability**	**FINAL Scenario Probability (after moderation)**
#7 /12	5.6%	**5.3%**	**5.2%**
Other Notes:	This scenario is ranked 7th of the 12 analysed. It generally exhibits a shortfall in local generation, with Tasmania increasingly relying on power imported from the mainland to support future load growth.		

Scenario #				
8	Load Growth Theme:	**M10**	70% theme weighting	
	Water Availability Theme:	**LOW H2O**	20% theme weighting	
	Greenhouse Gas / Gas Availability Theme:	**High CO2**	60% theme weighting	

Available Supply and Peak Demand



Cumulative Capacity Additions (or Retirements)

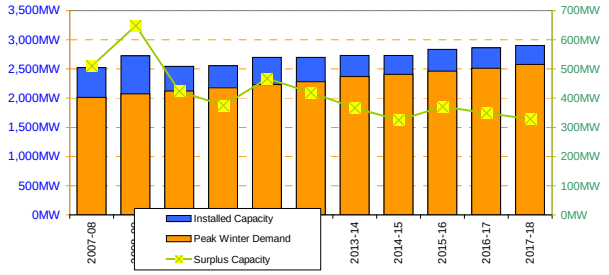


	New Projects	Retirements	Comments
2007-08	Meander Hydro 1 (1.9MW HYDRO),		Meander Hydro is due for operation in 2007-08.
2008-09	Alinta Tamar Valley 1 (203.94MW CCGT),		The Tamar Valley combined cycle generator is considered very likely. The development will be located within the existing Bell Bay Power Station, forcing the retirement of the existing thermal gas plant. Alinta proposes to augment the existing 105MW of peaking plant with a further 60MW of open cycle plant.
2009-10	Alinta Tamar Valley 2 (60MW OCGT), Musselroe 1 (129MW WIND), Poatina 1 (28GWhMW HYDRO),	Bell Bay 1 (-240MW CCGT),	The Musselroe Wind Farm, proposed by Roaring 40s, has local and state government approval, and has an exploration licence for the land. The progress of the station is advanced. The Poatina Upgrade is at an advanced level of commitment, with an expected entry in 2009 according to the 2007 Transend Annual Planning Report. The upgrade will improve generator efficiency, increasing annual energy by 28GWh.
2010-11			
2011-12	Gunns Pulp Mill 1 (122MW COGEN), Waddamana 1 (100MW WIND),		The Gunns Pulp Mill cogeneration plant is highly likely. The pulp mill has State and Federal approval, and requires only environmental consent to proceed.
2012-13	Huon Wood Centre 1 (35MW BIOMASS),		The Huon Wood Centre Power Station is a 35MW wood-fired development, developed to support local wood chipping and logging industry.
2013-14	Heemskirk 1 (160MW WIND),		The Heemskirk Wind Farm is a stalled project, which is reinstated due to the CO2 theme set limb. The project's original proponent was Hydro Tasmania. The CO2 theme set will promote significant renewable developments.
2014-15	Lake Margaret 1 (10MW HYDRO), Robins Island 2 (240MW WIND),		Further wind developments, such as Robins Island 2, also are likely given the CO2 regime.
2015-16			
2016-17			
2017-18			

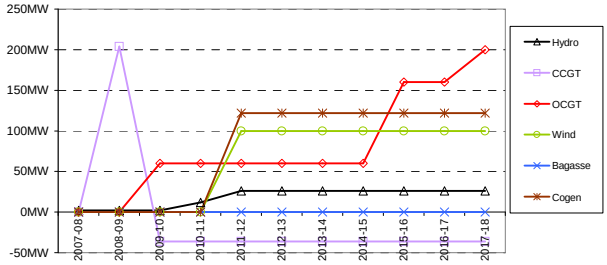
Ranking	Combined Theme-Set Ranking	**INITIAL Scenario Probability**	**FINAL Scenario Probability (after moderation)**
#3 /12	8.4%	**7.7%**	**7.6%**
Other Notes:	This scenario is ranked 3rd of the 12 analysed. The energy balance in this scenario oscillates between under and oversupply. This scenario sees the addition of a significant amount of new wind generation in Tasmania, which could be a challenge for the system.		

Scenario #				
9	Load Growth Theme:	**H10**	15% theme weighting	
	Water Availability Theme:	**AVG H2O**	80% theme weighting	
	Greenhouse Gas / Gas Availability Theme:	**Low CO2**	40% theme weighting	

Available Supply and Peak Demand



Cumulative Capacity Additions (or Retirements)

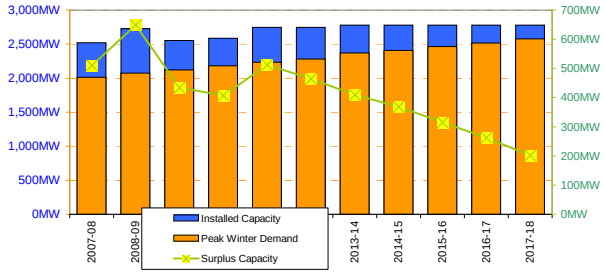


	New Projects	Retirements	Comments
2007-08	Meander Hydro 1 (1.9MW HYDRO),		Meander Hydro is due for operation in 2007-08.
2008-09	Alinta Tamar Valley 1 (203.94MW CCGT),		The Tamar Valley combined cycle generator is considered very likely. The development will be located within the existing Bell Bay Power Station, forcing the retirement of the existing thermal gas plant. Alinta proposes to augment the existing 105MW of peaking plant with a further 60MW of open cycle plant.
2009-10	Alinta Tamar Valley 2 (60MW OCGT),	Bell Bay 1 (-240MW CCGT),	
2010-11	Lake Margaret 1 (10MW HYDRO),		
2011-12	Gunns Pulp Mill 1 (122MW COGEN), Trevallyn 1 (14MW HYDRO), Waddamana 1 (100MW WIND),		The Gunns Pulp Mill cogeneration plant is highly likely. The pulp mill has State and Federal approval, and requires only environmental consent to proceed.
2012-13			
2013-14	Huon Wood Centre 1 (35MW BIOMASS),		The Huon Wood Centre Power Station is a 35MW wood-fired development, developed to support local wood chipping and logging industry.
2014-15			
2015-16	New Entrant Peaking 1 (100MW OCGT),		High load growth will support the installation of additional peaking capacity.
2016-17	Smithon 1 (30MW BIOMASS),		
2017-18	Brighton 1 (40MW OCGT),		

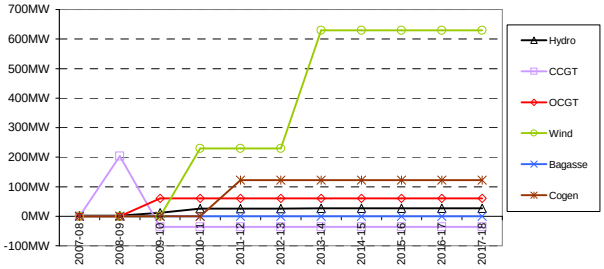
Ranking	Combined Theme-Set Ranking	**INITIAL Scenario Probability**	**FINAL Scenario Probability (after moderation)**
#8 /12	4.8%	**3.5%**	**3.5%**
Other Notes:	This scenario is ranked 8th of the 12 analysed. It generally exhibits a shortfall in local generation, with Tasmania increasingly relying on power imported from the mainland to support future load growth.		

Scenario #				
10	Load Growth Theme:	**H10**	15% theme weighting	
	Water Availability Theme:	**AVG H2O**	80% theme weighting	
	Greenhouse Gas / Gas Availability Theme:	**High CO2**	60% theme weighting	

Available Supply and Peak Demand



Cumulative Capacity Additions (or Retirements)

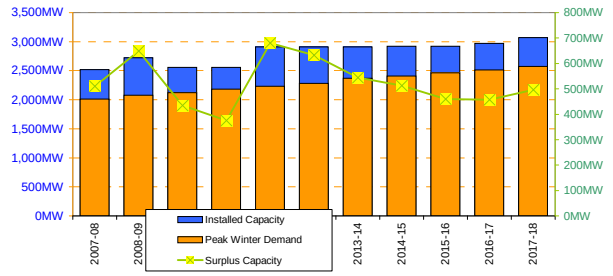


	New Projects	Retirements	Comments
2007-08	Meander Hydro 1 (1.9MW HYDRO),		Meander Hydro is due for operation in 2007-08.
2008-09	Alinta Tamar Valley 1 (203.94MW CCGT),		The Tamar Valley combined cycle generator is considered very likely. The development will be located within the existing Bell Bay Power Station, forcing the retirement of the existing thermal gas plant. Alinta proposes to augment the existing 105MW of peaking plant with a further 60MW of open cycle plant.
2009-10	Alinta Tamar Valley 2 (60MW OCGT), Poatina 1 (28GWhMW HYDRO), Lake Margaret 1 (10MW HYDRO),	Bell Bay 1 (-240MW CCGT),	
2010-11	Trevallyn 1 (14MW HYDRO), Musselroe 1 (129MW WIND), Waddamana 1 (100MW WIND),		The Musselroe Wind Farm, proposed by Roaring 40s, has local and state government approval, and has an exploration licence for the land. The progress of the station is advanced.
2011-12	Gunns Pulp Mill 1 (122MW COGEN), Huon Wood Centre 1 (35MW BIOMASS),		The Gunns Pulp Mill cogeneration plant is highly likely. The pulp mill has State and Federal approval, and requires only environmental consent to proceed.
2012-13			The introduction of a high value carbon reduction policy by the Federal Government will promote considerable renewable developments in Tasmania thanks to its good wind resources.
2013-14	Heemskirk 1 (160MW WIND), Winnaleah Hydro 1 (1.32MW HYDRO), Robins Island 2 (240MW WIND),		
2014-15			
2015-16			
2016-17			
2017-18			

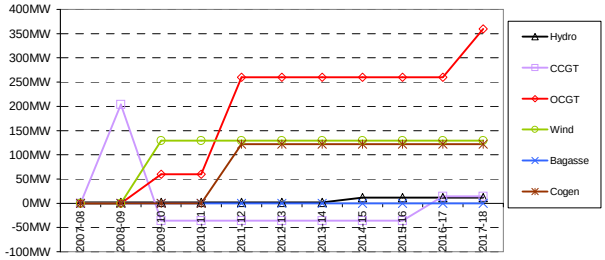
Ranking	Combined Theme-Set Ranking	INITIAL Scenario Probability	FINAL Scenario Probability (after moderation)
#5 /12	7.2%	**6.1%**	**6.1%**
Other Notes:	This scenario is ranked 3rd of the 12 analysed. The energy balance in this scenario is generally positive, indicating that excess renewable energy would be sold into the mainland via Basslink. This scenario sees the addition of a significant amount of new wind generation in Tasmania, which could be a challenge for the system.		

Scenario #				
11	Load Growth Theme:	**H10**	15% theme weighting	
	Water Availability Theme:	**LOW H2O**	20% theme weighting	
	Greenhouse Gas / Gas Availability Theme:	**Low CO2**	40% theme weighting	

Available Supply and Peak Demand



Cumulative Capacity Additions (or Retirements)

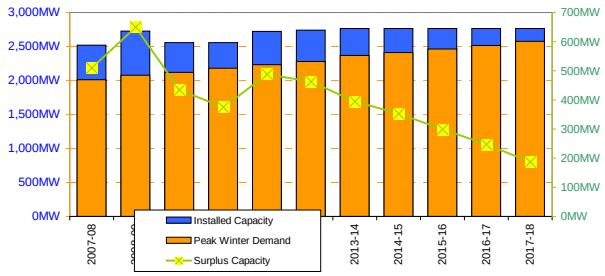


	New Projects	Retirements	Comments
2007-08	Meander Hydro 1 (1.9MW HYDRO),		Meander Hydro is due for operation in 2007-08.
2008-09	Alinta Tamar Valley 1 (203.94MW CCGT),		The Tamar Valley combined cycle generator is considered very likely. The development will be located within the existing Bell Bay Power Station, forcing the retirement of the existing thermal gas plant. Alinta proposes to augment the existing 105MW of peaking plant with a further 60MW of open cycle plant.
2009-10	Alinta Tamar Valley 2 (60MW OCGT), Musselroe 1 (129MW WIND), Poatina 1 (28GWhMW HYDRO),	Bell Bay 1 (-240MW CCGT),	The Musselroe Wind Farm, proposed by Roaring 40s, has local and state government approval, and has an exploration licence for the land. The progress of the station is advanced. The Poatina Upgrade is at an advanced level of commitment, with an expected entry in 2009 according to the 2007 Transend Annual Planning Report. The upgrade will improve generator efficiency, increasing annual energy by 28GWh.
2010-11			
2011-12	Gunns Pulp Mill 1 (122MW COGEN), Huon Wood Centre 1 (35MW BIOMASS), Bridgewater 1 (200MW OCGT),		The Gunns Pulp Mill cogeneration plant is highly likely. The pulp mill has State and Federal approval, and requires only environmental consent to proceed.
2012-13			
2013-14			
2014-15	Lake Margaret 1 (10MW HYDRO),		
2015-16			
2016-17	New Entrant Intermediate 1 (50MW CCGT),		High load growth, with low average annual hydro inflows, will support additional intermediate and peaking generation in Tasmania.
2017-18	New Entrant Peaking 2 (100MW OCGT),		

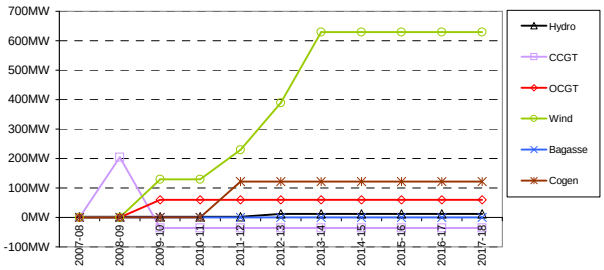
Ranking	Combined Theme-Set Ranking	INITIAL Scenario Probability	FINAL Scenario Probability (after moderation)
#12 /12	1.2%	**1.0%**	**0.8%**
Other Notes:	This scenario is ranked last out of the 12 analysed. It generally exhibits a significant shortfall in local generation, with Tasmania increasingly relying on power imported from the mainland to support future load growth.		

Scenario #				
12	Load Growth Theme:	**H10**	15% theme weighting	
	Water Availability Theme:	**LOW H2O**	20% theme weighting	
	Greenhouse Gas / Gas Availability Theme:	**High CO2**	60% theme weighting	

Available Supply and Peak Demand



Cumulative Capacity Additions (or Retirements)



	New Projects	Retirements	Comments
2007-08	Meander Hydro 1 (1.9MW HYDRO),		Meander Hydro is due for operation in 2007-08.
2008-09	Alinta Tamar Valley 1 (203.94MW CCGT),		The Tamar Valley combined cycle generator is considered very likely. The development will be located within the existing Bell Bay Power Station, forcing the retirement of the existing thermal gas plant. Alinta proposes to augment the existing 105MW of peaking plant with a further 60MW of open cycle plant.
2009-10	Alinta Tamar Valley 2 (60MW OCGT), Musselroe 1 (129MW WIND), Poatina 1 (28GWhMW HYDRO),	Bell Bay 1 (-240MW CCGT),	The Musselroe Wind Farm, proposed by Roaring 40s, has local and state government approval, and has an exploration licence for the land. The progress of the station is advanced.
2010-11			
2011-12	Gunns Pulp Mill 1 (122MW COGEN), Waddamana 1 (100MW WIND), Huon Wood Centre 1 (35MW BIOMASS),		The CO2 regime will promote the installation of significant levels of renewable generation, particularly of green energy such as hydro and new wind developments. High load growth will further support such installations, as peak demand and annual load will require greater levels of plant.
2012-13	Heemskirk 1 (160MW WIND), Lake Margaret 1 (10MW HYDRO),		
2013-14	Robins Island 2 (240MW WIND),		
2014-15			
2015-16			
2016-17			
2017-18			

Ranking	Combined Theme-Set Ranking	INITIAL Scenario Probability	FINAL Scenario Probability (after moderation)
#10 /12	1.8%	**1.6%**	**1.5%**
Other Notes:	This scenario is ranked 11th of the 12 analysed. The energy balance in this negative, meaning Tasmania would move to be a net importer of power. This scenario sees the addition of a significant amount of new wind generation in Tasmania, which could be a challenge for the system.		

Potential Project # ***(This is a potential New Plant)***

1 **Gunns Pulp Mill 1 (122 COGEN)** located in the **George Town** node

Initially this project was rated a **Very High** likelihood of proceeding, which was deemed to correspond to a **80% probability of proceeding**

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 **92.87% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2									YES			5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2					YES							1.44%	
Scenario 4	L10	LOW H2O	High CO2					YES							1.78%	
Scenario 5	M10	AVG H2O	Low CO2							YES					25.58%	
Scenario 6	M10	AVG H2O	High CO2							YES					33.4%	
Scenario 7	M10	LOW H2O	Low CO2					YES							5.22%	
Scenario 8	M10	LOW H2O	High CO2					YES							7.57%	
Scenario 9	H10	AVG H2O	Low CO2					YES							3.48%	
Scenario 10	H10	AVG H2O	High CO2					YES							6.12%	
Scenario 11	H10	LOW H2O	Low CO2					YES							0.79%	
Scenario 12	H10	LOW H2O	High CO2					YES							1.5%	
Probability of Proceeding in this Year:				**0%**	**0%**	**0%**	**0%**	**28%**	**0%**	**59%**	**0%**	**6%**	**0%**	**0%**		
Cumulative Probability				**0%**	**0%**	**0%**	**0%**	**28%**	**28%**	**87%**	**87%**	**93%**	**93%**	**93%**		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	3	**75%**
M10	4	4	**100%**
H10	4	4	**100%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	5	**83%**
LOW H2O	6	6	**100%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	6	**100%**
High CO2	6	5	**83%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

2 **Alinta Tamar Valley 1 (203.94 CCGT)** located in the **George Town** node

Initially this project was rated a **Very High** likelihood of proceeding, which was deemed to correspond to a **80% probability of proceeding**

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:

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2			YES									5.99%	
Scenario 2	L10	AVG H2O	High CO2			YES									7.13%	
Scenario 3	L10	LOW H2O	Low CO2		YES										1.44%	
Scenario 4	L10	LOW H2O	High CO2		YES										1.78%	
Scenario 5	M10	AVG H2O	Low CO2			YES									25.58%	
Scenario 6	M10	AVG H2O	High CO2			YES									33.4%	
Scenario 7	M10	LOW H2O	Low CO2		YES										5.22%	
Scenario 8	M10	LOW H2O	High CO2		YES										7.57%	
Scenario 9	H10	AVG H2O	Low CO2		YES										3.48%	
Scenario 10	H10	AVG H2O	High CO2		YES										6.12%	
Scenario 11	H10	LOW H2O	Low CO2		YES										0.79%	
Scenario 12	H10	LOW H2O	High CO2		YES										1.5%	
Probability of Proceeding in this Year:				**0%**	**28%**	**72%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**		
Cumulative Probability				**0%**	**28%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	4	**100%**
M10	4	4	**100%**
H10	4	4	**100%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	6	**100%**
LOW H2O	6	6	**100%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	6	**100%**
High CO2	6	6	**100%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

3 **Alinta Tamar Valley 2 (60 OCGT)** located in the **George Town** node

Initially this project was rated a **Very High** likelihood of proceeding, which was deemed to correspond to a **80% probability of proceeding**

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:

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2				YES								5.99%	
Scenario 2	L10	AVG H2O	High CO2				YES								7.13%	
Scenario 3	L10	LOW H2O	Low CO2			YES									1.44%	
Scenario 4	L10	LOW H2O	High CO2			YES									1.78%	
Scenario 5	M10	AVG H2O	Low CO2				YES								25.58%	
Scenario 6	M10	AVG H2O	High CO2				YES								33.4%	
Scenario 7	M10	LOW H2O	Low CO2			YES									5.22%	
Scenario 8	M10	LOW H2O	High CO2			YES									7.57%	
Scenario 9	H10	AVG H2O	Low CO2			YES									3.48%	
Scenario 10	H10	AVG H2O	High CO2			YES									6.12%	
Scenario 11	H10	LOW H2O	Low CO2			YES									0.79%	
Scenario 12	H10	LOW H2O	High CO2			YES									1.5%	
Probability of Proceeding in this Year:				**0%**	**0%**	**28%**	**72%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**		
Cumulative Probability				**0%**	**0%**	**28%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	4	**100%**
M10	4	4	**100%**
H10	4	4	**100%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	6	**100%**
LOW H2O	6	6	**100%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	6	**100%**
High CO2	6	6	**100%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

4 **Meander Hydro 1 (1.9 HYDRO)** located in the **Central** node

Initially this project was rated a **Definite** likelihood of proceeding, which was deemed to correspond to a **100% probability of proceeding**

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:

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2	YES											5.99%	
Scenario 2	L10	AVG H2O	High CO2	YES											7.13%	
Scenario 3	L10	LOW H2O	Low CO2	YES											1.44%	
Scenario 4	L10	LOW H2O	High CO2	YES											1.78%	
Scenario 5	M10	AVG H2O	Low CO2	YES											25.58%	
Scenario 6	M10	AVG H2O	High CO2	YES											33.4%	
Scenario 7	M10	LOW H2O	Low CO2	YES											5.22%	
Scenario 8	M10	LOW H2O	High CO2	YES											7.57%	
Scenario 9	H10	AVG H2O	Low CO2	YES											3.48%	
Scenario 10	H10	AVG H2O	High CO2	YES											6.12%	
Scenario 11	H10	LOW H2O	Low CO2	YES											0.79%	
Scenario 12	H10	LOW H2O	High CO2	YES											1.5%	
Probability of Proceeding in this Year:				**100%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**		
Cumulative Probability				**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	4	**100%**
M10	4	4	**100%**
H10	4	4	**100%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	6	**100%**
LOW H2O	6	6	**100%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	6	**100%**
High CO2	6	6	**100%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

5 **Trevallyn 1 (14 HYDRO)** located in the **North East** node

Initially this project was rated a **Moderate** likelihood of proceeding, which was deemed to correspond to a **30% probability of proceeding**

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 **68.58% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2							YES					25.58%	
Scenario 6	M10	AVG H2O	High CO2						YES						33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2												7.57%	
Scenario 9	H10	AVG H2O	Low CO2					YES							3.48%	
Scenario 10	H10	AVG H2O	High CO2				YES								6.12%	
Scenario 11	H10	LOW H2O	Low CO2												0.79%	
Scenario 12	H10	LOW H2O	High CO2												1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	6%	3%	33%	26%	0%	0%	0%	0%		
Cumulative Probability				0%	0%	0%	6%	10%	43%	69%	69%	69%	69%	69%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	0	**0%**
M10	4	2	**50%**
H10	4	2	**50%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	4	**67%**
LOW H2O	6	0	**0%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	2	**33%**
High CO2	6	2	**33%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

6 **Musselroe 1 (129 WIND)** located in the **North East** node

Initially this project was rated a **Very High** likelihood of proceeding, which was deemed to correspond to a **80% probability of proceeding**

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 **90.53% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2				YES								7.13%	
Scenario 3	L10	LOW H2O	Low CO2			YES									1.44%	
Scenario 4	L10	LOW H2O	High CO2			YES									1.78%	
Scenario 5	M10	AVG H2O	Low CO2				YES								25.58%	
Scenario 6	M10	AVG H2O	High CO2				YES								33.4%	
Scenario 7	M10	LOW H2O	Low CO2			YES									5.22%	
Scenario 8	M10	LOW H2O	High CO2			YES									7.57%	
Scenario 9	H10	AVG H2O	Low CO2												3.48%	
Scenario 10	H10	AVG H2O	High CO2				YES								6.12%	
Scenario 11	H10	LOW H2O	Low CO2			YES									0.79%	
Scenario 12	H10	LOW H2O	High CO2			YES									1.5%	
Probability of Proceeding in this Year:				0%	0%	18%	72%	0%	0%	0%	0%	0%	0%	0%		
Cumulative Probability				0%	0%	18%	91%	91%	91%	91%	91%	91%	91%	91%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	3	**75%**
M10	4	4	**100%**
H10	4	3	**75%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	4	**67%**
LOW H2O	6	6	**100%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	4	**67%**
High CO2	6	6	**100%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

7 **Poatina 1 (28GWh HYDRO)** located in the **Central** node

Initially this project was rated a **High** likelihood of proceeding, which was deemed to correspond to a **60% probability of proceeding**

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 **64.95% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2			YES									7.13%	
Scenario 3	L10	LOW H2O	Low CO2			YES									1.44%	
Scenario 4	L10	LOW H2O	High CO2			YES									1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2			YES									33.4%	
Scenario 7	M10	LOW H2O	Low CO2			YES									5.22%	
Scenario 8	M10	LOW H2O	High CO2			YES									7.57%	
Scenario 9	H10	AVG H2O	Low CO2												3.48%	
Scenario 10	H10	AVG H2O	High CO2			YES									6.12%	
Scenario 11	H10	LOW H2O	Low CO2			YES									0.79%	
Scenario 12	H10	LOW H2O	High CO2			YES									1.5%	
Probability of Proceeding in this Year:				0%	0%	65%	0%	0%	0%	0%	0%	0%	0%	0%		
Cumulative Probability				0%	0%	65%	65%	65%	65%	65%	65%	65%	65%	65%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	3	**75%**
M10	4	3	**75%**
H10	4	3	**75%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	3	**50%**
LOW H2O	6	6	**100%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	3	**50%**
High CO2	6	6	**100%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

8 **Waddamana 1 (100 WIND)** located in the **Central** node

Initially this project was rated a **Moderate** likelihood of proceeding, which was deemed to correspond to a **30% probability of proceeding**

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 **53.85% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2							YES					1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2						YES						33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2					YES							7.57%	
Scenario 9	H10	AVG H2O	Low CO2					YES							3.48%	
Scenario 10	H10	AVG H2O	High CO2				YES								6.12%	
Scenario 11	H10	LOW H2O	Low CO2												0.79%	
Scenario 12	H10	LOW H2O	High CO2					YES							1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	6%	13%	33%	2%	0%	0%	0%	0%		
Cumulative Probability				0%	0%	0%	6%	19%	52%	54%	54%	54%	54%	54%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	1	**25%**
M10	4	2	**50%**
H10	4	3	**75%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	3	**50%**
LOW H2O	6	3	**50%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	1	**17%**
High CO2	6	5	**83%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

9 **Heemskirk 1 (160 WIND)** located in the **West** node

Initially this project was rated a **Moderate** likelihood of proceeding, which was deemed to correspond to a **30% probability of proceeding**

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 **15.19% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2												33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2							YES					7.57%	
Scenario 9	H10	AVG H2O	Low CO2												3.48%	
Scenario 10	H10	AVG H2O	High CO2							YES					6.12%	
Scenario 11	H10	LOW H2O	Low CO2												0.79%	
Scenario 12	H10	LOW H2O	High CO2						YES						1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	0%	0%	2%	14%	0%	0%	0%	0%		
Cumulative Probability				0%	0%	0%	0%	0%	2%	15%	15%	15%	15%	15%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	0	**0%**
M10	4	1	**25%**
H10	4	2	**50%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	1	**17%**
LOW H2O	6	2	**33%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	0	**0%**
High CO2	6	3	**50%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

10 **Gordon Hydro 4 (144 HYDRO)** located in the **South** node

Initially this project was rated a **Low** likelihood of proceeding, which was deemed to correspond to a **5% probability of proceeding**

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 **0.0% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2												33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2												7.57%	
Scenario 9	H10	AVG H2O	Low CO2												3.48%	
Scenario 10	H10	AVG H2O	High CO2												6.12%	
Scenario 11	H10	LOW H2O	Low CO2												0.79%	
Scenario 12	H10	LOW H2O	High CO2												1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
Cumulative Probability				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	0	0%
M10	4	0	0%
H10	4	0	0%

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	0	0%
LOW H2O	6	0	0%

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	0	0%
High CO2	6	0	0%

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

11 **Gordon Hydro 5 (144 HYDRO)** located in the **South** node

Initially this project was rated a **Low** likelihood of proceeding, which was deemed to correspond to a **5% probability of proceeding**

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 **0.0% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2												33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2												7.57%	
Scenario 9	H10	AVG H2O	Low CO2												3.48%	
Scenario 10	H10	AVG H2O	High CO2												6.12%	
Scenario 11	H10	LOW H2O	Low CO2												0.79%	
Scenario 12	H10	LOW H2O	High CO2												1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
Cumulative Probability				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	0	0%
M10	4	0	0%
H10	4	0	0%

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	0	0%
LOW H2O	6	0	0%

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	0	0%
High CO2	6	0	0%

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

12 **Lake Margaret 1 (10 HYDRO)** located in the **West** node

Initially this project was rated a **Very High** likelihood of proceeding, which was deemed to correspond to a **80% probability of proceeding**

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 **91.56% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2						YES						5.99%	
Scenario 2	L10	AVG H2O	High CO2				YES								7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2					YES							25.58%	
Scenario 6	M10	AVG H2O	High CO2				YES								33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2								YES				7.57%	
Scenario 9	H10	AVG H2O	Low CO2				YES								3.48%	
Scenario 10	H10	AVG H2O	High CO2			YES									6.12%	
Scenario 11	H10	LOW H2O	Low CO2								YES				0.79%	
Scenario 12	H10	LOW H2O	High CO2						YES						1.5%	
Probability of Proceeding in this Year:				0%	0%	6%	44%	26%	7%	0%	8%	0%	0%	0%		
Cumulative Probability				0%	0%	6%	50%	76%	83%	83%	92%	92%	92%	92%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	2	**50%**
M10	4	3	**75%**
H10	4	4	**100%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	6	**100%**
LOW H2O	6	3	**50%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	4	**67%**
High CO2	6	5	**83%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

13 **Winnaleah Hydro 1 (1.32 HYDRO)** located in the **George Town** node

Initially this project was rated a **Moderate** likelihood of proceeding, which was deemed to correspond to a **30% probability of proceeding**

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 **46.65% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2							YES					33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2												7.57%	
Scenario 9	H10	AVG H2O	Low CO2												3.48%	
Scenario 10	H10	AVG H2O	High CO2							YES					6.12%	
Scenario 11	H10	LOW H2O	Low CO2												0.79%	
Scenario 12	H10	LOW H2O	High CO2												1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%		
Cumulative Probability				0%	0%	0%	0%	0%	0%	40%	40%	40%	40%	40%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	0	**0%**
M10	4	1	**25%**
H10	4	1	**25%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	2	**33%**
LOW H2O	6	0	**0%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	0	**0%**
High CO2	6	2	**33%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

14 **Huon Wood Centre 1 (35 BIOMASS)** located in the **South** node

Initially this project was rated a **Low** likelihood of proceeding, which was deemed to correspond to a **5% probability of proceeding**

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 **24.67% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2												33.4%	
Scenario 7	M10	LOW H2O	Low CO2						YES						5.22%	
Scenario 8	M10	LOW H2O	High CO2						YES						7.57%	
Scenario 9	H10	AVG H2O	Low CO2							YES					3.48%	
Scenario 10	H10	AVG H2O	High CO2					YES							6.12%	
Scenario 11	H10	LOW H2O	Low CO2					YES							0.79%	
Scenario 12	H10	LOW H2O	High CO2					YES							1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	0%	8%	13%	3%	0%	0%	0%	0%		
Cumulative Probability				0%	0%	0%	0%	8%	21%	25%	25%	25%	25%	25%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	0	**0%**
M10	4	2	**50%**
H10	4	4	**100%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	2	**33%**
LOW H2O	6	4	**67%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	3	**50%**
High CO2	6	3	**50%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

15 **Granville Harbour 1 (30 WIND)** located in the **West** node

Initially this project was rated a **Moderate** likelihood of proceeding, which was deemed to correspond to a **30% probability of proceeding**

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 **0.0% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2												33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2												7.57%	
Scenario 9	H10	AVG H2O	Low CO2												3.48%	
Scenario 10	H10	AVG H2O	High CO2												6.12%	
Scenario 11	H10	LOW H2O	Low CO2												0.79%	
Scenario 12	H10	LOW H2O	High CO2												1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
Cumulative Probability				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	0	0%
M10	4	0	0%
H10	4	0	0%

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	0	0%
LOW H2O	6	0	0%

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	0	0%
High CO2	6	0	0%

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

16 **Jims Plains 1 (60 WIND)** located in the **North West** node

Initially this project was rated a **Low** likelihood of proceeding, which was deemed to correspond to a **5% probability of proceeding**

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 **0.0% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2												33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2												7.57%	
Scenario 9	H10	AVG H2O	Low CO2												3.48%	
Scenario 10	H10	AVG H2O	High CO2												6.12%	
Scenario 11	H10	LOW H2O	Low CO2												0.79%	
Scenario 12	H10	LOW H2O	High CO2												1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
Cumulative Probability				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	0	0%
M10	4	0	0%
H10	4	0	0%

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	0	0%
LOW H2O	6	0	0%

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	0	0%
High CO2	6	0	0%

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

17 **New Entrant Wind Farm 1 (150 WIND)** located in the **North East** node

Initially this project was rated a **Low** likelihood of proceeding, which was deemed to correspond to a **5% probability of proceeding**

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 **0.0% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2												33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2												7.57%	
Scenario 9	H10	AVG H2O	Low CO2												3.48%	
Scenario 10	H10	AVG H2O	High CO2												6.12%	
Scenario 11	H10	LOW H2O	Low CO2												0.79%	
Scenario 12	H10	LOW H2O	High CO2												1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
Cumulative Probability				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	0	0%
M10	4	0	0%
H10	4	0	0%

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	0	0%
LOW H2O	6	0	0%

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	0	0%
High CO2	6	0	0%

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

18 **Robins Island 2 (240 WIND)** located in the **North West** node

Initially this project was rated a **Moderate** likelihood of proceeding, which was deemed to correspond to a **30% probability of proceeding**

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 **15.19% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2												33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2								YES				7.57%	
Scenario 9	H10	AVG H2O	Low CO2												3.48%	
Scenario 10	H10	AVG H2O	High CO2							YES					6.12%	
Scenario 11	H10	LOW H2O	Low CO2												0.79%	
Scenario 12	H10	LOW H2O	High CO2							YES					1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	0%	0%	0%	8%	8%	0%	0%	0%		
Cumulative Probability				0%	0%	0%	0%	0%	0%	8%	15%	15%	15%	15%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	0	**0%**
M10	4	1	**25%**
H10	4	2	**50%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	1	**17%**
LOW H2O	6	2	**33%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	0	**0%**
High CO2	6	3	**50%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

19 **New Entrant Intermediate 1 (50 CCGT)** located in the **North** node

Initially this project was rated a **Low** likelihood of proceeding, which was deemed to correspond to a **5% probability of proceeding**

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 **6.01% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2												33.4%	
Scenario 7	M10	LOW H2O	Low CO2							YES					5.22%	
Scenario 8	M10	LOW H2O	High CO2												7.57%	
Scenario 9	H10	AVG H2O	Low CO2												3.48%	
Scenario 10	H10	AVG H2O	High CO2												6.12%	
Scenario 11	H10	LOW H2O	Low CO2										YES		0.79%	
Scenario 12	H10	LOW H2O	High CO2												1.5%	
Probability of Proceeding in this Year:				**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**5%**	**0%**	**0%**	**1%**	**0%**		
Cumulative Probability				**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**5%**	**5%**	**5%**	**6%**	**6%**		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	0	**0%**
M10	4	1	**25%**
H10	4	1	**25%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	0	**0%**
LOW H2O	6	2	**33%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	2	**33%**
High CO2	6	0	**0%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

20 **White Rock Ridge 1 (100 WIND)** located in the **North East** node

Initially this project was rated a **Low** likelihood of proceeding, which was deemed to correspond to a **5% probability of proceeding**

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 **8.91% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2					YES							7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2						YES						1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2												33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2												7.57%	
Scenario 9	H10	AVG H2O	Low CO2												3.48%	
Scenario 10	H10	AVG H2O	High CO2												6.12%	
Scenario 11	H10	LOW H2O	Low CO2												0.79%	
Scenario 12	H10	LOW H2O	High CO2												1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	0%	7%	2%	0%	0%	0%	0%	0%		
Cumulative Probability				0%	0%	0%	0%	7%	9%	9%	9%	9%	9%	9%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	2	**50%**
M10	4	0	**0%**
H10	4	0	**0%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	1	**17%**
LOW H2O	6	1	**17%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	0	**0%**
High CO2	6	2	**33%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

21 **Brighton 1 (40 OCGT)** located in the **South** node

Initially this project was rated a **Low** likelihood of proceeding, which was deemed to correspond to a **5% probability of proceeding**

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 **3.48% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2												33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2												7.57%	
Scenario 9	H10	AVG H2O	Low CO2											YES	3.48%	
Scenario 10	H10	AVG H2O	High CO2												6.12%	
Scenario 11	H10	LOW H2O	Low CO2												0.79%	
Scenario 12	H10	LOW H2O	High CO2												1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%		
Cumulative Probability				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	0	**0%**
M10	4	0	**0%**
H10	4	1	**25%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	1	**17%**
LOW H2O	6	0	**0%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	1	**17%**
High CO2	6	0	**0%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

22 **New Entrant Peaking 1 (100 OCGT)** located in the **North** node

Initially this project was rated a **Low** likelihood of proceeding, which was deemed to correspond to a **5% probability of proceeding**

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 **3.48% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2												33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2												7.57%	
Scenario 9	H10	AVG H2O	Low CO2									YES			3.48%	
Scenario 10	H10	AVG H2O	High CO2												6.12%	
Scenario 11	H10	LOW H2O	Low CO2												0.79%	
Scenario 12	H10	LOW H2O	High CO2												1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%		
Cumulative Probability				0%	0%	0%	0%	0%	0%	0%	0%	3%	3%	3%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	0	**0%**
M10	4	0	**0%**
H10	4	1	**25%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	1	**17%**
LOW H2O	6	0	**0%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	1	**17%**
High CO2	6	0	**0%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

23 **Smithon 1 (30 BIOMASS)** located in the **North West** node

Initially this project was rated a **Low** likelihood of proceeding, which was deemed to correspond to a **5% probability of proceeding**

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 **3.48% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2												33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2												7.57%	
Scenario 9	H10	AVG H2O	Low CO2										YES		3.48%	
Scenario 10	H10	AVG H2O	High CO2												6.12%	
Scenario 11	H10	LOW H2O	Low CO2												0.79%	
Scenario 12	H10	LOW H2O	High CO2												1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%		
Cumulative Probability				0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	3%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	0	**0%**
M10	4	0	**0%**
H10	4	1	**25%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	1	**17%**
LOW H2O	6	0	**0%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	1	**17%**
High CO2	6	0	**0%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

24 **New Entrant Wind Farm 3 (150 WIND)** located in the **West** node

Initially this project was rated a **Low** likelihood of proceeding, which was deemed to correspond to a **5% probability of proceeding**

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 **0.0% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2												33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2												7.57%	
Scenario 9	H10	AVG H2O	Low CO2												3.48%	
Scenario 10	H10	AVG H2O	High CO2												6.12%	
Scenario 11	H10	LOW H2O	Low CO2												0.79%	
Scenario 12	H10	LOW H2O	High CO2												1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
Cumulative Probability				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	0	0%
M10	4	0	0%
H10	4	0	0%

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	0	0%
LOW H2O	6	0	0%

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	0	0%
High CO2	6	0	0%

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

25 **New Entrant Wind Farm 4 (150 WIND)** located in the **Central** node

Initially this project was rated a **Low** likelihood of proceeding, which was deemed to correspond to a **5% probability of proceeding**

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 **0.0% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2												33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2												7.57%	
Scenario 9	H10	AVG H2O	Low CO2												3.48%	
Scenario 10	H10	AVG H2O	High CO2												6.12%	
Scenario 11	H10	LOW H2O	Low CO2												0.79%	
Scenario 12	H10	LOW H2O	High CO2												1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
Cumulative Probability				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	0	0%
M10	4	0	0%
H10	4	0	0%

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	0	0%
LOW H2O	6	0	0%

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	0	0%
High CO2	6	0	0%

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

26 **Bridgewater 1 (200 OCGT)** located in the **South** node

Initially this project was rated a **Low** likelihood of proceeding, which was deemed to correspond to a **5% probability of proceeding**

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 **0.79% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2												33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2												7.57%	
Scenario 9	H10	AVG H2O	Low CO2												3.48%	
Scenario 10	H10	AVG H2O	High CO2												6.12%	
Scenario 11	H10	LOW H2O	Low CO2					YES							0.79%	
Scenario 12	H10	LOW H2O	High CO2												1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%		
Cumulative Probability				0%	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	0	**0%**
M10	4	0	**0%**
H10	4	1	**25%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	0	**0%**
LOW H2O	6	1	**17%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	1	**17%**
High CO2	6	0	**0%**

Other Comments:	

Potential Project # ***(This is a potential New Plant)***

27 **New Entrant Peaking 2 (100 OCGT)** located in the **George Town** node

Initially this project was rated a **Low** likelihood of proceeding, which was deemed to correspond to a **5% probability of proceeding**

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 **0.79% probability of proceeding**

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

				2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	Final Scenario Probability	Scenario-specific comments
Scenario 1	L10	AVG H2O	Low CO2												5.99%	
Scenario 2	L10	AVG H2O	High CO2												7.13%	
Scenario 3	L10	LOW H2O	Low CO2												1.44%	
Scenario 4	L10	LOW H2O	High CO2												1.78%	
Scenario 5	M10	AVG H2O	Low CO2												25.58%	
Scenario 6	M10	AVG H2O	High CO2												33.4%	
Scenario 7	M10	LOW H2O	Low CO2												5.22%	
Scenario 8	M10	LOW H2O	High CO2												7.57%	
Scenario 9	H10	AVG H2O	Low CO2												3.48%	
Scenario 10	H10	AVG H2O	High CO2												6.12%	
Scenario 11	H10	LOW H2O	Low CO2											YES	0.79%	
Scenario 12	H10	LOW H2O	High CO2												1.5%	
Probability of Proceeding in this Year:				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%		
Cumulative Probability				0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%		

Load Growth Theme-Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
L10	4	0	**0%**
M10	4	0	**0%**
H10	4	1	**25%**

Water Availability Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
AVG H2O	6	0	**0%**
LOW H2O	6	1	**17%**

Greenhouse Theme Set

	Number of scenarios with this theme	Number of scenarios in which project proceeds	Percentage of relevant scenarios
Low CO2	6	1	**17%**
High CO2	6	0	**0%**

Other Comments:	