



Tasmanian Energy Security Taskforce – Consultation Paper Submission

The Tasmanian Minerals and Energy Council

The Tasmanian Minerals and Energy Council (TMEC) is a legal entity which was incorporated in 1985, with membership constituted by Tasmania's oldest, largest and most influential industrial businesses. TMEC has represented its members' interests, and on their behalf has collaboratively and apolitically contributed to support and further Tasmania's best interests since its incorporation in 1985.

The Tasmanian Energy Security Taskforce (TEST) has invited TMEC to provide a submission to it referencing a number of questions which it proposed in its Consultation Paper. TMEC has produced this submission on behalf of its collective membership in order to provide an aggregated response to TEST on behalf of its major industry members. TMEC notes that the submission does not at any time represent or directly reflect the individual views, concerns or commercial imperatives of any individual member.

This submission has been compiled using various data sources, documents and reports and where the author/owner permits, have been attached hereto.

TMEC notes that in preparing this submission it has contributed to the collaborative development of the attached Energy Crisis Market Review by partnering with Goanna Energy Consulting and the Tasmanian Small Business Council on a tripartite basis. TMEC has used the information contained in the Energy Crisis Market Review as one of its main sources of reference data when making its own determinations in its responses to TEST as expressed in this submission.

Equally, TMEC is fully aware of the issues and suggestions Tasmanian Small Business Council have raised in their submission which we understand was also prepared with assistance from Goanna Energy Consulting and with reference to the tripartite Energy Crisis Market Review. We wish to confirm that TMEC are very much on the same page with regard to the issues and suggestions which TSBC have raised in their submission.

Accordingly, TMEC does not see any value will be added to its submission by reiterating the same examples and/or referencing the same data which is contained in the report/s, but prefer to note that we see far more expeditious benefit to TEST and its consultative process by using the examples and data provided by Goanna Energy Consulting as reference points where appropriate to the discussions undertaken when we meet with TEST face to face on 30 September 2016.

In further discussion between TMEC and TEST with regard to this submission or any other matters, TMEC members who are also authorised officers of TMEC may at their discretion choose to provide context by sharing examples of how issues may impact their businesses. Any contextual clarification or "on the floor" examples provided in this manner should not be regarded as being a representation made on behalf of an individual business, but as a contextual example of how industry and other businesses may be impacted by similar issues.

Context of TMEC's qualification to make a submission

TMEC's membership are primary contributors to the State's economy via their participation in mining, mineral processing and the downstream added value/manufacturing streams which are highly dependent on reliable cost competitive supplies of energy in their production/conversion processes.

The mining and added value/manufacturing sectors contributed \$2.2 billion of gross added value to the Tasmanian economy in 2015 – well in excess of the contribution made by the combined Electricity, Gas, Water and Waste Services sector.

In May 2016 the Bruce Felmingham Consultancy completed a review of the contribution which TMEC's five largest members have made and continue to make to the Tasmanian economy. The Felmingham report accumulated and assessed data provided by TMEC's five Primary Wealth Generators (PWG) who have operated over the longer term in mining, mineral processing and the downstream added value/manufacturing streams.

The aggregated data demonstrates that the TMEC PWG:

- Operate and rank third in contribution to Tasmania's Gross Value Added. (see **Error! Reference source not found.** in the attached report)
- The combined sales revenues of the five PWG companies exceeded \$2 billion in 2010-11, falling to \$1.6 billion in 2012-13. In 2014-15, revenues recovered to again exceed \$2 billion (see Figure 2 in the attached report)
- The five PWG companies employ over 2700 people, 1% of total state employment, and 12% of all employment in the Mining and Manufacturing Sectors. Three of the five companies operate in the North & West of the state. In these areas, PWG employment represents just over 2% of total employment.
- The PWG contribution alone to total gross regional income could not be directly calculated, but are likely to be higher than the employment contribution in percentage terms by virtue of the relative wage premium observable in Manufacturing jobs compared to many other industry sectors (see table 2 of the attached report).
- Beyond their contribution in pure job numbers, the five PWG companies provide work opportunities for knowledge workers in a range of fields, including engineering, finance and management.
- PWG contributions to Tasmania's exports are substantial. Nearly half of Tasmanian exports are of Aluminium, Zinc, Paper and Iron Ores and concentrates (See figure 8 of the attached report).

The data clearly indicates that businesses which operate and compete in these sectors are not "price takers". Rather they are nimble and continuously striving to optimise production output to maintain a quality focus and competitive cost profile which allows them to remain competitive in the very unforgiving global value stream markets.

In terms of the influence and/or impact of TMEC's five PWB companies on the State's electricity supply and demand continuum, the Bruce Felmingham Consultancy determined that the five TMEC PWB companies alone are responsible for around 40% of the State's electricity consumption. This has associated risks and benefits for the State and the companies:

- TMEC's PWG consumers are in a position to make individual commercial arrangements for power supply and to contribute to the State's System Protection Scheme
- The dominance of large industrial consumers makes the States power demand less "lumpy", a particular advantage given the State's high reliance on Hydro power, which cannot respond rapidly to changes in demand.

Accordingly, TMEC's membership is a major consumer of hydro generated electricity and gas as primary energy sources, and their submission to TEST should be received as being eminently representative of the "voice of the customer".

TMEC's responses to the Tasmanian Energy Security Taskforce – Consultation Paper

Submission details	
Name:	Wayne Bould
Organisation (if applicable):	Tasmanian Minerals and Energy Council
Contact (optional and not to be published):	

1. What are the specific risks to Tasmanian energy security that you think the Taskforce should consider?

Historically Tasmania has depended on, and has been well served by the electricity generated from hydro. In the 1960s Tasmania's energy "strategy, planning and management" sat firmly with the Hydro Electric Commission. It was administered by the MINISTER ADMINISTERING THE HYDRO-ELECTRIC COMMISSION ACT 1944. In 1975, Premier Bill Nielson created a Ministry of Resources and Energy. The appointment really didn't change too much – the minister and department were primarily focussed on "the Hydro", and effectively concentrated energy strategy, planning and delivery around the Hydro's internal strategies, it's "expert" status vis-à-vis all things "power", and thereby Tasmania's energy focus remained firmly wedded to the generation of electricity from hydro sources.

It would be very fair to say that not much has changed over the ensuing years and Governments – other than the NEM providing a vehicle for Hydro to be broken into 3 parts, gold plate assets and receive a protected return under NEM pricing policies. The downside of the restructure became evident in 2011 when we saw Hydro's predatory pricing for profit practices "stealing" Aurora's revenue stream, and most likely "stealing" the Aurora executives' incentive bonuses as a result. The 3 GBEs are not necessarily aligned or integrated in purpose - driven by different strategies, economic drivers, measures for success and reward.

Industry/TMEC understands the 3 GBEs have effectively become an extension of Treasury's required revenue stream, and as such Government walks a knife edge vis-à-vis its requirement for revenue to underpin social needs/infrastructure and the need for the GBEs to provide competitive supply and service to its consumers. The hydro generated electricity remains a cornerstone of the State's current economic framework - to the extent that it underpins the State's current economic viability in similar vein to which iron ore underpins Western Australia's economy, and coal underpins Queensland's economy – it is a key driver in leveraging value in the State's economy. Therefore, anything which has the potential to undermine the reliable supply of hydro generated energy – in the absence of alternate sources of competitively priced energy - is of significant importance to the performance of the State's economy.

Over the last 10 years, Tasmania's relative price of electricity in Tasmania has become more expensive and less competitive when compared to the global average price of wholesale delivered energy.

In order for Tasmania to realise its strategy to preserve an income from the sale of wholesale electricity, and at the same time realise its aspirations to transition and grow its economy by attracting new industries nationally and globally, it must implement and deliver on its State Governments Energy Strategy – it needs to deliver internationally competitively priced energy.

Feedback from the Major Industrials' stakeholders is that they now perceive that the supply of energy in Tasmania is no longer as secure as it once was and contains an element of risk previously not considered when factoring

investment decisions. Accordingly, Tasmania is now subject to the risk of investment 'leakage' wherein existing and/or prospective enterprises bypass capital away from Tasmania due to their perception that the supply of energy is subject to a heightened level of aggregated risk which may impact the existing industrial base which constitutes the State's energy baseload. When coupled with the sovereign risk issues associated with Tasmania's approval processes to existing industrial base, climate change risk, and the risk associated with the supply of gas and gas fired generation, Tasmania is not as attractive an option as it was as little as twelve months ago.

Therefore, we respectfully suggest TEST considers and identifies security measures which will ensure energy is de-risked to the extent that it is able to be reliably delivered to consumers in full, on time and at an internationally competitive price. This means implementing strategies which will not only prevent additional costs, but ultimately will ensure that the cost of delivered energy is reduced to meet or better the rates currently evident in international markets.

Specifically – the recent set of “*one-in-3000-year events*” provides an opportunity to reflect on some valuable hard data which we respectfully suggest may be used as the basis for the generation of an updated set of assumptions when calculating the likelihood of probable situations and the significance of the consequences – vis-à-vis the social, industrial, economic and reputational frameworks, e.g.

- the integrity of the current interconnector remains unknown,
- the likely time to repair a fault – given the complexity in finding the location,
- the ongoing rainfall range and distribution model, etc.

While hindsight is a wonderful thing, based on recent analysis - TMEC is of the opinion data existed throughout 2015 which indicated abnormal factors were amassing (water levels, medium range forecasts, contemplating selling TVPS, etc) which when aggregated clearly indicated an increased level of the likelihood of a failure to meet demand, and should have normally driven the implementation of prudent mitigation strategies in order to reduce the risk associated with continuing with the current water management practices and the operational status of TVPS.

TMEC respectfully suggests TEST should seek to understand why this data was not pre-eminent in the decision making and risk analysis/mitigation processes through the full operational and strategic continuum, and, accordingly - what alternate data was being used to guide decision making and risk analysis. This line of investigation is not aimed at individuals, but at the governance / processes / systems.

TMEC believes TEST as part of its scope should also consider a “*whole energy strategy*” which pragmatically addresses the loss of a competitive supply of gas to Tasmanian consumers and the real social, industrial and economic impacts which would accrue from such a loss.

If gas supply were to be interrupted beyond the time to deplete the reserves held in the pipeline, then this would have a range of impacts on TMEC Members – this could range from a least impact of switching to back-up energy right up to plant shutdown. The loss of a competitive gas supply could have the same impact on the economy as the loss of electricity.

2. What risks are acceptable to you or your business in terms of energy security and the risk/cost trade off? How well are you or your business able to manage energy supply disruptions?

TMEC's membership is constituted by Tasmania's oldest, largest and most influential industrials. Their business models in large part swing on the downstream processing/conversion of raw materials (historically sourced from Tasmanian resources) into value added products which they market into the highly competitive global value chains where a key success factor is their capacity to deliver in full, on time and at the cost and quality agreed/required - *DIFOTACQ*.

By nature, downstream processing/conversion processes are highly dependent upon energy. In many cases, energy constitutes the largest element of the businesses production cost – and if not the largest, certainly very close to the top of the hierarchy. A large number of the TMEC members decided to establish their operations in Tasmania as a result of the Reece Government marketing Tasmania as a great place to do business – with an abundance of cheap

and reliable power. It would be very fair to say that the stakeholders in these businesses still hold to the view that Tasmania is the home of competitively priced and extremely reliable hydro generated electricity. The stakeholders in the businesses make their investments on the basis that they are long life assets and they require the security of stable and reliable energy supply in order to justify on going investment for the long term. The TMEC members contribute substantially to Tasmania's Gross State Revenue, and form a substantial block in the State's export mix. They are most certainly subject to the vagaries of the same economic drivers which impact any entity competitively engaged in downstream value add processing/conversion anywhere in Australia and the world - viz. - the reliable and globally cost competitive delivery of energy, freight, labour, raw materials, taxes and services etc.

As "the largest industrials", TMEC members offtake better than 50% of the State's respective electricity and gas supply baseloads - and are all significantly reliant on the reliable and competitive supply of electricity as their prime energy source, which constitutes a major plank in their ability to reliably produce quality products at a competitive cost. Due to differing complexities in production processes, and the intricacies in line balancing their processes to optimise productivity and quality outputs to maintain their competitiveness in global value chains, the degree of flexibility in dealing with energy supply disruptions varies across the membership base - effectively - one shoe doesn't fit all. In 2016, these businesses are not simple - they are a complex set of closely managed interdependent processes which are continually tweaked to optimise every gram of productivity and quality while minimising waste. Some industrials have a degree of flexibility in their production processes where they're able to stop processes or switch them off and back on with some - subject to smart scheduling of their process controls. Other industrials have less flexibility as it takes a long period of continuous operations to achieve a line balance which optimises productivity and quality, and reduces waste - these businesses may only be able to "throttle back".

It is a folly to assume that the businesses are alike - some can turn their processes off and on and "campaign" for lengthy periods - others cannot - some can sustain a reduction in capacity/output for lengthy periods others cannot.

The key point that seems to have been overlooked as the recent events were managed is - the businesses' ongoing need to satisfy their Customer/s - and that means maintaining reputation as a reliable supplier of quality products - their customers place orders which they expect to be delivered in full, on time and at the price and to the quality they have agreed - *DIFOTACQ*.

Effectively, withn their customer's requirements at the forefront of their thinking - some TMEC members could offer load variations, which could assist in a disrupted electricity supply event - others cannot. What is important is for these strategies and solutions need to be supported by appropriate commercial arrangements, which are mutually beneficial, and which take the individual business's market and customer - and the aggregated businesses markets and customers - into consideration.

The electricity supply continuum constituted by the NEM assumes 100% supply at any cost, whereas there may be some opportunities for <100% provided appropriate commercial trade-offs are pragmatically considered and put in place - when all commercial matters which may impact the business/s are considered.

It is also important to recognise that the major industrials ongoing viability is also predicated upon decisions and approvals made by their owners/boards as they consider the acceptable trade-off between risk and reward as they allocate cash, capital and profit across their National and Global operations. In many cases, the Tasmanian businesses compete internally for cash and capital, and their owners/boards decision for allocation incorporates a "view" of the sovereign and commercial risk of doing business in Tasmania. When electricity/energy forms such a large component in the various business's production cost and competitive capability profiles, reliability of supply of energy at a commercially competitive cost - particularly electricity - makes up a substantial component of the decision making process.

The reputation which Tasmania has won over some 60 years as a reliable supplier of hydro generated energy at a reasonably competitive cost is critical to owners/boards and customers alike. This reputation was very clearly harmed following the experiences of this year, and while the response with mobilising additional generation assets

and bringing TVPS on line was commendable, the lack of clarity surrounding the return to “normal” caused serious concern in the businesses, the boardrooms of their stakeholders and their customers alike.

As the State transitions its economy in the coming years, it is vital that it presents itself to National and Global markets and business communities as one which has having learnt a valuable lesson, and has accordingly developed and implemented a clear “whole energy” strategy which incorporates a risk mitigation plan and an ongoing set of governance and management processes which will prevent a reoccurrence.

TMEC believes that a case by case understanding of each industry participant’s capability to deal with potential load variations should form a key plank in any risk mitigation strategy.

3. What level of reliable electricity supply is required by customers? Do customers consider reliability should be as close as possible to 100 per cent at all times, or would, for example, reliable supply closer to 99 per cent of the time be acceptable if the cost is significantly less?

Per question 2 - Many of TMEC’s members downstream production/conversion processes are reliant on electricity as their primary source of energy. Due to differing input and output production processes, quality and supply to market/contractual arrangements - each business has quite different degrees of flexibility when confronted with a need to consider managing a variable supply of electricity. Some processes can be stopped while others can only be “throttled back” etc. Therefore some TMEC members could offer load variations, which could assist with a disrupted supply situation. What is important is for these options to be supported by appropriate commercial arrangements, which are mutually beneficial and which take the individual business’s market and customer arrangements into consideration.

The bigger picture for many of TMEC’s members is the maintenance of their reputation as a competitive and reliable supplier in the global *DIFOTACQ* value chain, and their capacity to convince their owners/boards that this is the case on an ongoing basis.

The Major Industrials operate in the knowledge that they have high fixed costs and as such are required to operate at an efficient scale in order to be competitive. Whilst there may be scope to reduce load (contingent on customer/market risk) it is not the primary objective of these Major Industrials to operate in this way.

TMEC members are entirely willing to work with the Government and suppliers to effect a pragmatic strategy for the reliable supply of their energy requirements. These strategies by nature must take long term views, and address both individual and aggregated needs vis-à-vis commercial arrangements which includes the end customer.

4. How well are Tasmania’s energy security risks understood and communicated to the community?

The events of 2016 would suggest most energy users were taken by surprise by the extent of the disruption. It may be appropriate for energy reserves to be communicated in a more understandable way for the general community to better understand.

TMEC believes that a case by case understanding of each industry participant’s capability to deal with potential load variations would have assisted the overall planning in any risk mitigation strategy, and early intervention and early communication normally form a key plank in any risk mitigation plan.

TMEC members are entirely willing to work with the Government and suppliers to effect a pragmatic strategy for the reliable supply of their energy requirements. These strategies by nature must take long term views, and address both individual and aggregated needs vis-à-vis commercial arrangements which includes the end customer.

5. What existing frameworks for assessing and monitoring energy security might the Taskforce wish to consider?

TMEC is not privy to the modelling which is currently used by the GBEs or Government when making their assessments for developing energy security strategies. The GBEs and Governments have not historically been in the habit of adopting collaborative or communicative approaches to developing energy strategies which use the tried and true TQM methodologies which incorporate the voice of their customers.

Therefore, TMEC is unable to say whether the modelling tool/s need to change, or whether the assumptions which feed the tool/s used need to change.

TMEC members are entirely willing to work with the Government and suppliers to effect a pragmatic strategy for the reliable supply of their energy requirements – and this includes a willingness to collaborate and communicate in the process of the development of those strategies – as long as the strategies take long term views, and address both individual and aggregated needs vis-à-vis commercial arrangements which includes the end customer.

Again, TMEC believes that a case by case understanding of each industry participant’s capability to deal with potential load variations should form a key plank in any framework for assessing and monitoring energy needs and security. The availability of gas assets and their capacity should be integral to any energy security measures.

6. Which potential energy security solutions should the Taskforce consider?

TEST should consider options which start with a zero cost assumption and form part of a clear management strategy which enunciates the targets and milestones over time, and which is supported by stringent governance and reporting requirements – viz.

- Build storages such that the “normal” lower limit (prior to autumn / winter rains) still has a minimum 12 month reserve above the lower practical limit,
- Limit “power export” via Basslink in order to build storages to an effectively safe minimum – in line with targets and milestones,

Then to consider options which leverages opportunities to increase productivity and conversion efficiency which reduces waste in the current infrastructure (ie. How to generate more electricity from the same amount of or less water)– viz.

- Return to stock pumping/capture options exist between run of river to dam, spillway return to dam,
- Second generation options exist for “in spillway” and “in river” generation.

TEST should also consider gas generation assets, and/or reduce demand by moving some users from electricity to gas as an energy input, and incentivise “off grid” storage systems.

7. What international examples of water storage management practices should be considered by the Taskforce when reviewing Hydro Tasmania’s approach?

The Snowy Mountain Scheme makes use of pumping stations.

Canadian systems are both effective and cost competitive.

8. What governance arrangements might be useful to consider in strengthening water storage management in Tasmania?

With any event such as this there is often a sense that government arrangements are inadequate and that the introduction of more arduous controls and standards will provide the “much needed panacea”.

As a starting point for a review of governance processes, TMEC respectfully suggests that TEST consider whether the accountable officers exercised their authorities in line with requisite governance and probity expectations contained in the operational/authorities matrix which the GBEs Boars/s have approved. If a performance and/or compliance gap is identified, then perhaps there is a case for additional governance.

While there may be a case to separate prudent water management and export revenue functions, TMEC believes retaining a single overall accountable officer as being the most prudent approach.

TMEC believes that TEST should also consider an expanded review of all of the GBEs various governance, reporting and compliance processes.

TMEC understands that the GBEs are subject to reasonably unique governance, reporting and compliance requirements when compared to those which a listed company is required to adopt and maintain.

Regardless of what occurs in other jurisdictions, the GBEs respective Boards and their owners – the State Government – are entirely free to adopt further governance and reporting requirements which they deem appropriate such that all stakeholders are informed on a timely basis and the entity’s performance is monitored/measured to a standard which ensures competitive performance and service delivery.

A further point for consideration is whether the management of hydro storage risk needs an additional level of independent oversight - for example an independent Government body (eg the Economic Regulator) who could provide additional stress testing and risk management guidelines for water management rather than have the entire management of the risk being assumed by Hydro. Clearly the events of 2015/ 2016 highlight Hydro's deficiencies in solely managing hydrological risk to standards which it has deemed acceptable.

9. What economic opportunities and risks are there for Tasmania associated with a second Bass Strait interconnector, and how would it improve Tasmania’s energy security?

While dual redundancy of interconnectors sounds like a sensible measure, very few businesses could afford to pay for such a luxury. Inbound supply will add to the overall cost of electricity supply, and outbound supply will not necessarily result in a reduction in the cost of electricity supply when it is applied as an offset against the cost of building the interconnector, or as a revenue stream which is used for interest against a loan taken to build the interconnector.

For outbound supply from a second interconnector to provide a “windfall” reduction in overall electricity costs in Tasmania, it would require additional generation capacity on line in Tasmania and at the same time additional market demand. Assuming any additional generation capacity would be wind based, the cost of the interconnector, plus the wind farm assets would typically need to be economical based on ~35% utilisation (average wind utilisation). Based on these fundamentals, the prices charged to get a return on the investment would only increase the price of electricity.

Any state debt for the investment/s would have to be funded from the existing base of consumers in Tasmania. If the argument is mounted that Victoria or the Commonwealth will service the debt, etc, then this still drives up prices as Tasmanian and Victorian prices operate in parallel.

TMEC holds the view that a second interconnector is arguably the most expensive way to achieve energy security. TMEC remains unconvinced that this option would not lead to price increases for all Tasmanian consumers, and believes the following matters should be considered in any analysis of the need for a second interconnector:

- Clearly establish the primary objective - risk mitigation vs. NEM de-carbonization objectives – or both?

- Model the capital financing and risk/reward scenarios
 - who bears the capital risk?
 - who will underwrite a second interconnector?
- What is the best commercial operating model - regulated vs not regulated
- What rights will Hydro Tasmania have to the inter-regional revenue (SRAs) for the second interconnector - should Hydro have these rights or should an alternative "arms length" model be developed?
- Quantify the regulatory risk of RET beyond 2030 and the uncertainty of the carbon pricing policy
- De-carbonization of Victorian generation for example provides opportunities for Tas but are the economic and growth multiplier benefits greater than other opportunities such as attracting investment of new industries and/ or sustaining existing industries in Tasmania?
- The second interconnector economics must be compared against the scenario of greater utilization of gas on island...the gas transmission pipeline could be viewed as a 'pseudo second interconnector'

10. How might the Taskforce consider the role for gas generation in Tasmania relative to other options to maintain energy security and the associated costs and risks?

Unlike wind and solar, gas remains a base load source of energy.

While it is not a renewable source, it has a lower CO2 impact than coal.

Given the existing infrastructure exists, gas should be a key part of the energy security solution for Tasmania – not simply as a source of energy to generate electricity for the grid, or as a backup in the event of a system failure – but also as a single/primary cost competitive source of energy per se.

TMEC believes that it is fair to say that gas has never been leveraged strategically, and doesn't appear to be part of any ongoing strategy for leveraging into a broader domestic market, or more particularly, as a lever to attract and/or develop new manufacturing or downstream value add processing businesses into Tasmania.

Additionally, strategically leveraging and enhancing the gas supply network provides an opportunity over time to move a block of small business and domestic consumers from dependency on electricity to gas.

The Government's role is to ensure that there is nothing getting in the way of a good outcome for the long term interests of Tasmanian energy consumers – not solely "electricity consumers" – but energy consumers who derive their energy requirements from effective and competitive sources – including but not limited to electricity.

Reference - Attachment – Briefing Note – Gas Issues Paper TMEC July 2016.pdf

11. What can be done to strengthen the Tasmanian gas market without significant subsidy from Government and costs on taxpayers or consumers?

The Government should promote more conversions to gas in Tasmania, particularly for businesses of all sizes. By increasing the base load, the current transmission costs are distributed over a broader base, thereby making the individual consumer costs at least reasonably constant in a more competitive price market, and perhaps less in the longer term once the various Governments and agencies have dealt with the myriad of gas pricing and supply issues evident on the Eastern Seaboard.

The roll out of gas across the state, stopped too early. The significant and strategic asset that is the Gas Pipeline is underutilised, its potential is unrealised. The same may be said for the infrastructure and assets which exist in/on Tasmania.

The economics of a forming a strategic contract which secures the supply of gas as a competitive energy source for Tasmania should not be singularly predicated upon Hydro's "cost avoidance" drivers, and/or the singular requirement to maintain the TVPS as an asset which can be used to augment the security of supply of electricity by using gas an energy source to generate electricity which is introduced into the grid. TMEC firmly believes that in

developing energy strategies, the Government should also consider the impact of the flow on effects of abandoning or leveraging the gas supply network socially and economically -

- Hydro have stated they won't be a shipper of gas in Tasmania after roll-off in 2017,
- The impact of Hydro's stated strategy on Transportation Cost is still unclear,
- The timeline for TEST to consider "the gas issue" is unclear, and it is highly likely that it will not provide any recommendations to Government until well into 2017,
- Major Industrial and business consumers with 2017 roll-off agreements need to negotiate and secure future allocation for supply and transmission NOW,
- Wholesalers have their books open NOW, and allocation for supply and transportation is being negotiated and taken up NOW,
- Wholesale prices for 2018 are being offered and being negotiated currently in the range of \$8 to \$9 / GJ which is about a 30% increase on Major Industrial and smaller business 2017 estimates,
- Market indications are suggesting TGP are looking to raise the Transportation Cost to about \$4 / GJ which is double current rates,
- Major Industrial and business consumers will soon be in a position where they will need to go to either go to Tas Gas or direct to Wholesale Market which is relatively uncompetitive and is of concern to ACCC and the COAG energy committee,
- If Major Industrials go "wholesale" it would leave the retailers with a similar volume as that taken by the Major Industrials to resell to the remaining retail (small business and/or domestic) market, which in turn is likely to increase prices to low volume consumers,
- Hydro is affiliated with Momentum in Victoria, and would be able to absorb more risk than the local retailer as they can utilize/sell the gas into the Victorian market,
- Hydro play an important role in providing aggregation and losing this will affect the purchasing power of the remaining consumers,
- Market indications are that TGP are marketing a "distance based" pricing scheme which will negatively impact/disadvantage the consumers located at the furthest extents of the transmission pipeline.

If Hydro don't commit to any gas offtake, it will cause a disaggregation of customers in Tasmania.

If the cost of gas as an energy source becomes prohibitive in the industrials cost of production mix, they will need to consider migrating to alternate energy sources. While the alternate energy source may be competitive in itself, the cost of migration is highly likely to be prohibitive and a drain on the capital the industrials rely on to stay competitive and to simply stay in business. The most likely outcome is that they will approach the Government for assistance or relief as a "distressed" business.

The irony could well be that the assistance which Government needs to supply to "distressed" industrials could well exceed the cost of Hydro committing to gas offtake as the "lead" consumer. And, then there's the flow on into the smaller consumers and the "mum and dad" market – which will once again seek assistance in one form or another. TMEC firmly believes that the development of a strategy for the supply and distribution of gas as an energy source in Tasmania needs to be escalated to the top of the list – prior Governments promoted and supported bringing gas to Tasmania and were integral in the approval and provision of the pipeline and incumbent land based infrastructures – all based upon the argument that gas was/is a viable alternative energy source. They hooked business and consumers alike on their argument – perhaps it's the right time for the Government to stand up and support gas. There are some very simple ways for the Government to attract new users to gas – either locally or from interstate or international relocation – and to incentivise them to make the choice via investment allowances or tax/royalty holidays.

We need to deal with the "gas issue" in a very timely manner ...or we just might be fiddling about while "Rome burns".....

12. How could the potential expansion of renewable energy generation in Tasmania help long term energy security without creating increased costs for consumers?

Until technology and innovation overcomes the current operational constraints and cost effectiveness of wind / solar, the lowest potential cost pathway to increasing renewable generation is via more efficient hydro generation assets, supported by gas as a direct energy input alternative where applicable.

TEST and Hydro Tasmania would be better placed to model the use of infrastructure which can provide a more direct and immediate result through increased productivity, increased unit output value and reduced waste in the existing system, viz.

- higher efficiency turbines,
- smaller outflow generation infrastructure,
- return pumping assets could be a solution to the assets where water is spilled regularly.

13. Which renewable energy technologies and products present the best opportunity for Tasmania and why?

More efficient hydro generation assets together with pumping assets would see better returns from existing assets. These “proven technologies” are low risk solutions and allows Tasmania to monitor the development of wind / battery / solar technology, so as to avoid investing in technology which today does not meet the total reliability needs of consumers.

14. Is there a limit on the level of intermittent renewable generation that Tasmania can sustain without affecting the reliability of the network, or requiring significant cost to strengthen the network?

TMEC holds the view the current generation capacity augmented with energy sourced from gas and wind is already often stretched to meet the peak needs of the standing industrial baseload and the retail market.

Basslink has proven to be a double edged sword which affords a modicum of comfort as security and an overly opportunistic tool used to generate income for the State.

Tasmania needs a totally reliable electricity network which fully meets the needs of its users – effectively the capacity to always meet demand in full and on time – and at a competitive cost.

The risk associated with electricity generated intermittently by renewable energy suppliers should not form part of the totally reliable network performance requirements.

Any performance/supply risk associated with the intermittent performance of renewable generators should be for Hydro Tasmania and form part of the considerations surrounding a second Basslink interconnector’s income generation capacity – viz.

if the renewable generators are performing then the volume which they generate should be in excess of the ongoing capacity required to meet the requirements of Tasmania’s “totally reliable” electricity network, and therefore is available for export via Basslink/s

The South Australian example of a high degree of reliance on wind generation and the 'squeezing' out of thermal generation and associated frequency and inertia control issues shows why limits on the proportion of intermittent generation must be enforced. If no limits are enforced then at least the corresponding volume of intermittent generation must be matched with increased interconnection capacity with an adjoining state of the same volume to de-risk supply volatility.

TasNetworks has shown interest in considering zero / low cost solutions and should be encouraged to continue this.

15. Are there material barriers to the take up of emerging energy products and services in Tasmania?

TMEC understands that there is a constantly emerging range of new products which have been designed and built to innovate effectiveness in the generation and supply of energy. Some are practicable and others altruistic. As per the sentiment expressed in a number of responses, the key driver for businesses and consumers alike is – *What's in it for me - what do I get for my buck? What is the cost, and, if I can't afford it - who will pay for it?* TMEC's members are in the business of staying in business - in a very competitive global value chain. They innovate and continuously improve to stay in front, and have in large part implemented initiatives to manage and optimise their consumption of energy. The TMEC members are not in a position to be funding experimental products and services per se, but are certainly very willing to collaboratively participate in trialling opportunities to use emerging products and services when it is clear that the end result is most likely increased efficiency or reduced cost.

16. Is there a timeframe where renewable energy developments could be more favoured in Tasmania than elsewhere?

When renewable energy developments result in products and/or services which provide a reliable and cost effective alternative to part or all of a totally reliable network. The largest barriers are securing PPAs for renewable generation investments to support attractive financing terms. The 2030 RET regulatory timeline and the regulatory risks for LGCs in general create uncertainty for long term transactions and the financing of these types of projects.

17. What impact will the national commitment to reduce carbon emissions have on renewable energy development in Tasmania and in the wider NEM?

TMEC's members are concerned with any policy which has the potential to increase the cost of energy to any consumer in Tasmania. Therefore any federal government policy proposal will need to pass this test before TMEC would be supportive.

18. Are there other climate change related implications for energy security in Tasmania?

With due regard to stating the obvious - Changing weather patterns impacting rainfall patterns, bushfire and flood risks to transmission assets.

19. Are there other scenarios with energy security implications in Tasmania that the Taskforce should be considering?

A loss of gas supply, or a major reduction in gas offtake should be considered – if this were to occur, then a number of TMEC members would need to consider the economic implications of migrating to the next most practicable source of energy, viz. electricity – thereby potentially placing a far greater demand on the current supply capacity. In the event of such a migration proving uneconomical, they would reduce or stop their operation and seek support from the Government as a “distressed business”. While this may not be a direct issue for energy security, it could well impact network stability and could be a major concern for the Government's socio economic credibility.

Are there any other comments or input that you would like to provide to the Taskforce?

While TEST has a defined scope, TMEC reconfirms its previous support of the timely implementation of the State's Energy Strategy. We believe that all recommendations and derived action/s should be filtered in terms of their alignment and consistency with the State's Energy Strategy.

The Strategy makes the case for ensuring energy is not used only as a source of revenue for the State, but that energy forms a core strategic lever in transitioning the State's economy to one with a foundation based firmly on industries and industry sectors which generate ongoing growth in employment and wealth for the broader Tasmanian community. Any recommendations should support this objective.

TMEC believes that cornerstone planks in the initiation and success of this Strategy are:

- The timeliness of a strategy for gas supply and transmission which recognises gas as another energy source which can be leveraged to Tasmania's advantage,
- A pragmatic "non-partisan" review of the governance and reporting requirements of the GBEs which incorporates the consideration of the inclusion of ASX and ASIC reporting requirements for the GBEs,
- A pragmatic and "non-partisan" review of the value of three GBEs versus an amalgamation of the three GBEs into a single high performance entity with an integrated and unified set of end to end drivers and performance criteria,
- A pragmatic and "non-partisan" review of the value of the NEM and Tasmania's place therein.
- The integrity of Basslink is an unknown and a real and prevalent risk. A contingency must be developed should another failure occur.

The hydrological risks to hydro storage were communicated by the Bureau Of Meteorology in the first half of 2015. The announcement in August to sell TVPS was an extremely poor decision that failed to take into account the wider implications on the economy and all consumers. The Hydro's officers and senior executives AND the Hydro Board failed to perform their duty of care in managing the corporation by applying appropriate skill and risk management. The costs to Hydro, the State, the economy and its people were significant and is likely to impact Hydro financial performance and its credibility with energy users for years to come. Let's face it – is there any reason consumers should continue to rely on Hydro's views on energy?

In a private organization, when facing the potential of a series of "one-in-3000-year events" the directors and officers would have been legally bound to provide timely disclose of its circumstances to shareholders and stakeholders alike. In a private organization, in the aftermath of a series of "one-in-3000-year events" the shareholders would demand answers (not politics) and ensure the consequences of failed accountability by the corporations' officers was dealt with swiftly and that systems and governance processes would be implemented to mitigate the likelihood of a similar level of failure should one arise in the future.

It is TMECs expectation that the TEST makes significant recommendations to ensure accountability and governance is increased to the betterment of the economy.

Attachments/Inclusions:

Role of the TMEC PWG Companies – Felmingham May 2016.pdf

Goanna Energy – Tasmanian Energy Security Taskforce – Market Impact Study.pdf

Briefing Note – Gas issues paper TMEC (Final).pdf