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Keep Tasmania's Highlands Unique - No Turbine Action Group (NTAG) is a diverse community group with some 270 members and supporters, and is at the 'pointy end' of the new era of energy development in Tasmania.

We support renewable energy in the right location and have identified more suitable sites.

NTAG is a research-based group with specific areas of investigation, which include Marinus and the Tasmanian energy network. Committee members have developed a comprehensive understanding of the history, infrastructure, operation, community views, and 'the numbers' involved - not only relating to the energy network but also the nascent wind and hydrogen sectors.

This has come through open discussions with potential investors, technology developers, wind farm operators, large scale battery proponents and energy analysts. However, NTAG's attempts to elicit accurate information from politicians at both State and Federal level have been less productive.

Public energy policy in Tasmania would be well served by having transparent and accountable interactions with those politicians who act as shareholder representatives in Government Business Enterprises.

The spotlight of this Parliamentary Committee on energy matters is timely. We would welcome the opportunity to make an in-person presentation at public hearings and/or to the Committee if that would be of assistance.

COMMENTS ON SPECIFIC TERMS OF REFERENCE

(It is inevitable that similar information may be repeated under various sub-headings in the Terms of Reference. We apologise for any duplication.)

(a) challenges related to energy supply in Tasmania including —

(i) structure and operations of State-owned energy entities

Despite running with the pack in 1990s, the Tasmanian Labor Government was not able to divest publicly-owned energy assets to the private sector, as had been done in other states, as the National Electricity Market was being established.

Even with the split-up of the omnipotent HEC into generation, transmission and retail entities, no-one thought the tiny Tasmanian energy business worthy of development. Therefore, **it was corporate reticence, not government foresight, that left the assets in public hands.**

No-one could deny the angst which both federal and state governments have felt over the past few years as private power generators have either abruptly shut-up shop, or extorted huge returns through gouging, with inflated coal and gas prices. **Governments are now re-investing in state energy corporations** - eg Victoria's SEC in October 2023, and the Commonwealth Government has stepped in with a takeover of Snowy Hydro in 2018. WA has a ballooning crisis, with delinquent Griffin Coal requiring government grants to maintain one third of the state's electricity production.

Tasmania was at the forefront of wind power development, when, in 2013 the government cashed-in the last of its large wind assets, selling 75% equity to China's Shenhau Clean Energy. In what seems to be the default position when relinquishing public assets, our negotiators made Hydro Tasmania guarantee the joint venture a base power price, which netted a $34m windfall in 2021.

This followed in the footsteps of the Basslink debacle, where the only way the Tasmanian Government could find a buyer was to leave in $100m in equity and capital to land the new buyer; sign truly detrimental forward contracts; and complete the travesty with an interest hedging agreement that netted Macquarie Bank about $60m per year until the arrangement was nullified by Singapore owner's bankruptcy in November 2021.

Marinus could replicate the government's ineptitude in a high risk and costly energy environment.

(ii) energy requirements

Currently, Tasmania's consumption of 11,000GWh (gigawatt hours) roughly equals its production, with 2455MW (megawatts) of hydro and 568MW of wind generation capacity situated on mainland Tasmania.

Exports and imports via Basslink are roughly equal, giving rise to the government's claim that we are "in balance". However, **around 600GWh of that power can be attributed to imported Victorian production - mostly from surplus coal generation at night**.

With the passing of the 2020 200% TRET there came a slew of claims that this state could underpin renewable energy needs for the National Electricity Market by exporting through two 750mW undersea cables.

Early claims that our island is uniquely "wind rich" can now be demonstrated as baseless, with comparative capacity figures from every wind farm in the country showing that while Tasmanian efficiency is generally high, it is more often equalled or surpassed. Kiata in Victoria topped the energy output figures for 2022 with an average capacity factor of over 45%. There was not a Tasmanian ranked in the top ten. (RenewEconomy, 2023)

In addition**, promotion of Bell Bay as a world-leading hydrogen manufacturing zone had the likes of Forrest Future Industries, Woodside Energy, Origin and ABEL touting 250MW – 600MW pilot plants**, and the government signing MOUs with the Port of Rotterdam and Flanders for shiploads of the gas.

Before manufacture and export can begin**, the actual energy requirements of electrolysis need to be addressed. Just one 300 MW hydrogen plant consumes 2,628 gigawatt hours of electricity per year – which is 24% of the State's annual production, or over 30% of hydro production.**

(The calculation used is: 1 MW of power x 8760 hours per year = 8760MWh of energy)

Output of 250,000 tonnes of gas is continually cited as initial annual production from just one facility. One tonne of hydrogen requires 49.5 megawatt hours of power to produce and compress, which **means an annual consumption of 12,375 GWh – 20% more than the entire State output**.

These PR bubbles have burst, and the reality has been recently acknowledged that **there is no way this state could supply as little as 50MW to existing paper manufacturer Norske Skog** to enable it to switch from gas to electricity in a bid to claim sustainability for their production methods.

(iii) expansion of State-owned renewable energy generation including associated community and economic benefits

The only expansion of State-owned generation has been in the upgrades of turbines at existing Hydro power stations. While this is welcomed, one wonders whether much of this ageing infrastructure should have been periodically upgraded as part of Hydro Tasmania's ongoing maintenance schedule.

In regard to community and economic benefits it needs to be recognised that **most economic benefit for wind farms occurs internationally - such as Chinese turbine manufacturers.**

Construction employment is mainly Fly-In Fly-Out workers from the mainland or overseas. No guarantee is given to reserving specific jobs for Tasmanians.

A few ongoing operational jobs are created with some being filled by overseas technicians – about the same number as a good coffee shop. Managerial and technical roles are carried out interstate. NTAG is yet to see predicted employment numbers for new projects based on the experience of operational wind farms in Tasmania, with these figures independently verified. The industry relies on an out-of-date Clean Energy Council report, which calculated operational and maintenance jobs at 0.13 per MW. (UTS Institute For Sustainable Futures, 2020).
For Cattle Hill Wind Farm that would be 19 full-time jobs. Claims like this have never been substantiated, with sceptics reckoning six is a "generous" number.

Wind farms operators avoid paying Council rates because the capital development is only for 25 years, and on leased land. What councils should provide from rate income is dressed-up as goodwill in the form of a Community Benefit Program. This funding is really a PR exercise and a part of normal promotional activity.

Operators are not required to pay a rehabilitation bond. Using the Australian Energy Infrastructure Commissioner's figures, around $30M will be required to rehabilitate the 47 turbines at St Patricks Plains. (Australian Energy Infrastructure Commissioner)

What happens if a $100 company like St Patricks Plains Wind Farm Pty Ltd becomes insolvent? Will this result in derelict turbines, or disposal of blades at Council tips?

The massive concrete foundations will never be removed, with unknown consequences for the surrounding hydrology.

The promotors of Marinus and associated wind generation fail to disclose associated community burdens, including community division; increase in rents to locals during the construction period of the Cattle Hill Wind Farm (Miena rents went from $150 per week to $700/week); loss of local amenity including the end of silence for immediate neighbours (turbines as close as 1.8km in the Central Highlands); and landscape destruction from inappropriately located turbines and transmission towers.

(iv) private energy generators

All new generation, since Musselroe Wind Farm and the two Woolnorth facilities were sold to Shenhau Clean Energy in **2013, has been undertaken by the private sector.**

First, **Cattle Hill Wind Farm's** 144 MW capacity was commissioned in August 2020 by Goldwind Australia, followed at the end of that year by 112MW operated by Palisade Investments at **Granville Harbour.**

Neither of those two installations – both supported by NTAG - was controversial, as they are situated in relatively remote locations, with little effect on public amenity.

However, their **construction was only guaranteed after onerous off-take agreements were forced onto Aurora and Hydro by the Energy Minister**. These arrangements are disclosed in relevant Annual Reports from 2019 and 2020, with consequent liabilities noted in the accounts.

Subsequent wind proposals at Jims Plain, Robbins Island, Stanley and St Patricks Plains have aroused deep resentment in local communities, particularly due to the low bar set by tick-box procedures for their establishment. Disingenuous claims are made by proponents that they employ only world's best procedures for protection of the flora and fauna, and provide generous recompense for the communities which must host them.

A similar "public benefit" stratagem is employed where swathes of country must be cleared for massive transmission corridors, or where high value agricultural land is dissected.

Renewable generation is "industry-centric", and certainly not "place-centric" or "people-centric".

The most recent generation project **is a 300MW solar farm on the Connorvale property**. It is to be sited on marginal land, close to the Palmerston sub-station. It is away from the public gaze, with no vocal opposition, and **will be a valuable addition to Tasmanian generation capacity.**

Also adjacent to Palmerston **is Neoen's Great Lakes Battery.** When completed it will have a 280MW capacity, able to deliver 560MWh of power. **The first stage is expected to be completed in 2026. The business model is to provide grid stability,** saving Hydro Tasmania millions as it increases or shuts down capacity to meet fluctuating demand.

Marinus Link is also promoted as reducing 140m tonnes of carbon emissions by 2050 – said to be the equivalent of taking one million cars off the road**. But it is not an electricity generator – merely a conduit**. Once more, a spurious argument: this time hoping to convince us that a cable is replacing a coal or gas generator.

What is not announced is that **Tasmania imports Victorian power daily from undisclosed sources – but inevitably surplus coal-fired.** This means that Marinus Link, along with Basslink, will still see Tasmanians consume this cheap, "dirty" energy to enable exports of desirable "green" hydro power until Victoria closes its last coal fired generator around 2047.

(v) energy generation, storage and transmission capacity

While government policy guarantees that new energy projects are "in Tasmania's best interests" it's hard to see this as fundamental when so much assistance is given to (often) foreign investors to ride roughshod over local concerns.

Elsewhere in Australia new generation is being located close to demand and is supported by big battery storage. This means Battery of the Nation is an outdated and high-risk model.

(vi) energy security considerations

Rather than thinking of energy security as a national issue, it's obvious from policy decisions that individual states put their own interests first. This was the model of power production up until the1990s when the National Electricity Market (NEM) was instigated. Tasmania was connected with the opening of Basslink in 2006.

Interconnectedness is seen as vital, but **the cost and destruction caused by massive transmission networks is a hangover from the days of centralised power generation**. Today we can build generation and large-scale battery storage close to demand centres, so **why the continued calls for an expanded interstate web?**

(b) opportunities related to energy supply in Tasmania including —

(i) structure and operations of State-owned energy entities

Tasmania has squandered a unique advantage to implement a world's-best integrated energy system. Our government has been focussed on talking the big game instead of focussing on the reality of a small island with a small (but effective) energy generation system. **There is potential to expand sustainably, but we cannot be the saviour of the mainland's energy woes**. Our output is less than 4% of the energy on the NEM.

We had a natural advantage as the only state powered by close to 100% renewables. While this government still brags of a carbon-neutral economy, **other states produce far more green energy than we do**, and are attracting industry based on that capacity for expansion. (Dept of Industry, Science, Energy & Resources, 2022)

Hydro Tasmania has sold off wind farms and relies on the private sector to build new generation capacity**. Affordable power should be a right in this country, and yet we have seen corporate profit either remove generators from the grid (e.g., coal) or force unheralded price rises (e.g., gas).**

(ii) energy requirements

As stated elsewhere, it is fair to say that Tasmania will need to double its current output to around 20,000GWh per year to facilitate a total "electrification" of its own economy.

(iii) expansion of State-owned renewable energy generation including associated community and economic benefits

There appears to be Federal investment funding available**.** Why should public funds largely go to financing transmission infrastructure (NWTD, Marinus, the Waddamana to Palmerston line upgrade) which benefit new generators, which are all private entities?

There may well be a more amenable response from communities if they are stakeholders in large-scale renewable projects, rather than just seen as an obstacle which must be overcome by developers supported by a "visionary" government.

(iv) private energy generators

From the first days of Tasmania's hydro development, the innovation has come from individuals identifying a need to support industrial development with cheap and reliable electricity, with a flow-on to households. However, in a lesson forgotten over the decades, these enthusiastic entities folded. The Hydro-Electric Power and Metallurgical Company's assets were bought out by the State Government in 1914 – and so the Hydro-Electric Department was founded. (Felton, 2013)

The expertise and innovation embodied in the current Hydro Tasmania became a global standard, but has gradually dissipated, especially after the Gordon-below-Franklin power scheme was (rightfully) abandoned. Hydro's innovative technical arm, Entura, was bolstered by selling its expertise nationally and overseas, but even it came perilously close to extinction in 2013 when the government considered a joint venture with Power China.

Hydro now seems a very blinkered, risk-averse business. Whether this reflects the make-up of its board, or the undue political interference from its shareholder ministers, is difficult to ascertain. Whatever – there is no doubt it is a handy cash-cow for government coffers.

Where Hydro was once very bold (and very powerful) the sell-off of its wind assets marks a conservative change. **Nowhere is this better illustrated than the Wave Swell power generation trial on King Island** – and this saga, in itself, shows a reluctance to embrace evolving technologies.

Wave Swell is a technology which harnesses energy from coastal waves. A small 200kW wave energy converter (WEC) was anchored about 100 metres offshore at Grassy, on King Island in late 2020.

During its 12-month trial period, it underwent a variety of adjustments, all the time contributing to the island's power needs.

King Island is a perfect place to conduct an experiment like this – and it is easy to translate the results of Wave Swell's success to the larger Tasmanian grid.

After the trial ended, not only Hydro lauded the results. John Brown, Chief Operating Officer, Wave Swell Energy said: "The project data has been independently verified and assessed by notable institutions including the US Department of Energy, CSIRO and the Australian Maritime College, UTAS". (Brown, 2023)

However, the proponent could not interest Hydro nor the State Government into scaling up the project to provide sufficient generation to replace the island's backup diesel generators.

CEO Paul Geason told the ABC: "We are an Australian, a Tasmanian invention. Australia's an important market for us … we'd dearly love to set up here. Ideally, Australia would become home to a world-leading manufacturing capability for these wave energy converters." (ABC News, 2023)

With a staid focus on wind and solar generation, Tasmania is in a policy dead-water, and has lost an opportunity to be a shareholder in an innovative, alternative energy production technology, which has manufacture and export potential.

(v) energy generation, storage and transmission capacity

As stated elsewhere in this submission, new generation opportunities should be focussed on Tasmania's needs before the "national interest". **Public ownership of infrastructure should be a predominant theme.**

(vi) energy security considerations

Opportunities for energy supply in Tasmania are outlined in earlier discussions in this representation but need to be consistent with the constraints that have been identified. Off-shore wind is being investigated and increasing household rooftop generation should be actively pursued. New wind generators need to be in the right place, consistent with an improved planning system that includes 'No-go Turbine Zones' (or "Red Zones") without taxpayer subsidies and with foreign business enterprises paying their way.

The term "energy security" usually invokes images of a nation at risk, but it should be considered at the individual level.

We are aware that upward spikes in the cost of living see many Tasmanians subjected to "energy debt". The current figure is **14,000 customers, owing Aurora around $15 million**. (The Mercury Newspaper, 2023)

Transitioning to clean energy devices – whether buying electric appliances, installing rooftop solar, or buying an electric lawnmower or passenger vehicle **- is, at the moment, a discretionary choice for those with sufficient capital.**

This State government, with co-operation from our Federal leaders, needs to **implement funding assistance which ensures those who rent, those in public and low-income housing, or those economically disadvantaged, are able to share in the new renewables economy**. The state Energy Saver Loan Scheme and No Interest Loan Scheme, along with a variety of Federal solar rebates is a good start. But **more targeted assistance will be needed to prevent rising numbers of disenfranchised citizens causing fractures which may threaten the security of our society – not just the energy sector.**

(c) the operation of the National Electricity Market including —

(i) current and future energy demand for participants

Tasmania will need to double its current annual output of about 11,000GWh just to accommodate the "electrification" of our domestic, industrial, agricultural and transport sectors. e.g. The entire government vehicle fleet was promised to be electrified by 2030.

"…the Government has also set an interim target of 15,750 GWh of electricity generation from renewable energy sources by 2030 (a target of 150 per cent)." (State Growth, 2020)

This begs the question**: Is this island state capable of generating sufficient energy for its own needs in 2030, in 2050, and in 2100?** If this is an underlying reason for building Marinus Link, it has never been revealed by the State Government.

Much has been made of Tasmania's self-sufficiency, with Guy Barnett bragging in March 2023: "Tasmania is 100 per cent self-sufficient in renewable electricity and was the first Australian jurisdiction to achieve net zero emissions and has done so for the past seven years".

Why, then, have we set a 200% Renewable Energy Target which is based on export when our domestic demand will rapidly increase?

Why not invest public funds in new energy generation? It appears there is cash available from Canberra at "concessional rates", so why not continue to provide energy security without massive spends on import/export conduits?

(ii) costs, benefits, opportunities and risks associated with the renewable energy transition

In Tasmania the "renewable energy transition" is not a radical departure from 100 years of hydro-industrialisation. However, that "taming nature" attitude was deemed no longer acceptable with the Franklin Dam decision, and our wind, solar and new hydro generators need to be environmentally sustainable, and accepted by the public.

We have local industries which still use coal and gas in their processes – and these need to be prioritised for conversion. Given the Liberals' assurances that we can become a "global hydrogen superpower" – an industry which requires massive amounts of energy - producing new power for existing business should be a cinch. But it's not.

The major risk associated with replacing fossil fuels in vehicles, and the electrification of homes, will be an inequitable roll-out. Those on lower incomes or welfare support payments will find it difficult to take advantage of reduced running costs if they cannot buy electric vehicles or appliances.

There must be taxpayer-funded subsidies to avoid social discrimination and subsequent unrest caused by inequity.

(iii) Tasmania's past and future participation in the National Electricity Market including costs and benefits to Tasmania and resource opportunity

The basic question here is: Should Tasmania continue to be linked to the NEM – or if so, to what degree?

Professor Bruce Mountain from the Victorian Energy Policy Centre has argued that with the decentralisation of power generation, the need for interconnectivity has lessened. He says the AEMO model is a costly mistake, when states, and regions within states, can generate to meet local demand.

He does not advocate dismantling the NEM with its cross-border transmission, but says the billions going into transmission infrastructure are not financially sensible investments. (Mountain B. (., 2023)

As customers of the NEM, Tasmanian power users pay for this mainland interconnection.

Regarding Marinus Link specifically, Prof. Mountain says the TasNetworks costings to build Marinus show it is double per megawatt than Basslink.

"[Marinus] will raise electricity prices by increasing transmission charges by between $400 million and $450 million per year for about 50 years, divided in some way between Tasmania and Victoria. **To put that number into perspective, it is more than three times – yes, you read correctly – three times, transmission charges in Tasmania today**. How ridiculous! And that's before counting the additional billion or so of transmission expansion in Tasmania needed to get capacity to the coast." (Mountain B. (., 2023)

(d) Marinus Link Pty Ltd and associated energy power developments (Battery of the Nation and North West Transmission Development) including—

(i) likely beneficiaries

The most obvious beneficiary of Marinus Link Pty Ltd and its cable build will be AEMO (Australian Energy Market Operator).

With one of its core functions being the distribution of electricity along the eastern seaboard and South Australia via the National Electricity Market (NEM) AEMO sees an obvious benefit in any form of interconnection which allows energy to be shuffled around this vast network.

With Marinus Link, it does not make a case for the viability of the project. It states in early versions of its Integrated System Plan that the business case for the project is to be made by the proponent. This was once Tasmania. However, this delineation of responsibility has been blurred by the Federal Government (both under Morrison and Albanese) stepping in with cash grants and "concessional" loan funds to keep Project Marinus alive. Tasmanians will learn "in due course" what a federally-controlled activity will mean to this State. (News Corp, 2024)

Once promoted heavily by the Tasmanian Liberal Government as an exemplar of State initiative and an export-driven financial business**, 2024 will see Marinus Link Pty Ltd removed from TasNetwork's control, to become a stand-alone entity with Tasmania becoming a minority partner to the Federal and Victorian Governments**. (Marinus Link Pty Ltd (a), 2023)

What was spruiked as a specific boon for Tasmanians has been diluted to a "national interest" necessity, with decisions no longer focussed on benefits to Tasmania. With the largest stake in the soon-to-be-announced entity, and as the banker, the Commonwealth will not fail to make Marinus an asset for AEMO. Its Rewiring the Nation policy guarantees that.

Our involvement with the NEM is cemented with this deal, and Tasmania's century-old lead in cheap, renewable energy production will be lost as our output, already exceeded by NSW, Victoria and Queensland, will become miniscule as mainland generation fast-tracks to wind and solar backed up the large-scale battery storage.

In fact, **the definition of what Project Marinus entails has been equally muddied.** It is conflated with "battery of the nation", "powerhouse of Australia" and "hydrogen super-power" concepts.

It was once just two sub-sea cables, with the stated aim of exporting latent electricity from hydro storage to be delivered to Victoria. However, in a circular argument, the second cable relied on a pumped hydro scheme to enable this "battery of the nation" vision to be realised (and with the introduction of pumped hydro, the cable was justified).

A massive transmission upgrade by TasNetworks is proposed to enable proposed private wind farms in the North West of the state to provide wind energy at (apparently) give-away prices to reticulate water for pumped hydro (another piece of circular justification).

What is not advertised is that the publicly-owned transmission entity is spending over **a billion dollars of taxpayer funds to get wind-generated energy to the pumped hydro scheme**, or that it gives these privately owned generators access to the NEM, in direct competition with Hydro Tasmania in the energy market. The cost of this transmission will be recouped by increases in power charges.

(ii) funding arrangements, including the potential for private sector contribution

One of the early questions asked when the Marinus Link was first touted was this: "Why doesn't the private sector invest in the project if it's such a winner?"

With every new energy generation project in private hands, why wouldn't these entities jostle for the right to invest in the means to export their product?

Two years ago then-Prime Minister Morrison said he expected there to be significant private investment in Marinus Link. "By the time we get this to final investment decision, investors will be lining up, we'll have to be beating them away." (Government News, 2022)

Perhaps the captains of industry had a close look at the dismal financial returns of Basslink in its short 16 years of operation, and made an easy decision to let the taxpayer assume the risk**. There is no private funding contribution to the Marinus Project.**

(iii) impact on Tasmanians' energy bills and concessional pricing arrangements

The development cost of the NWTD and Marinus, along with the annual maintenance bill, will be recovered in the only way possible for a GBE – and that will be by passing on those costs to Tasmanian electricity consumers. **Network charges currently make up 38% of a domestic power bill.** (The Office of the Tasmanian Economic Regulator, 2023)

How will that decrease (as claimed) with costs in the billions projected for these new projects? Current estimates are**:** Marinus cable #1 $3.3b; NWTD $1.0 b; Tarraleah upgrade $1.0 b; then Cethana pumped hydro $3.3b; Marinus #2 cable (AEMO estimate $2.7 b) - without which the "battery of the nation" vision is dead.

Once renowned for our lower energy prices, **it is indisputable that Tasmanian's electricity bills are higher due to our linkage with Victorian power prices** – and information of how the construction of Marinus + NWTD + pumped hydro will lower those costs has never risen above political rhetoric.

In a communication to the Tasmanian Treasurer in 2022, Renewables, Climate and Future Industries (ReCFIT) head Anton Voss stated: **"Tasmanian wholesale electricity prices (both spot and contracts) are necessarily linked to Victorian prices as Tasmania is connected to the National Electricity Market (NEM) via Basslink, and will increasingly be so with Project Marinus. [H]igher wholesale costs will place strong upwards pressure on retail prices across the nation, including in Tasmania".** (Renewables, Climate and Future Industries Tasmania, 2022)

Much was made of the "concessional loans" which underpinned the salvation of the Marinus Project.

While energy minister Guy Barnett seemed unaware that his ebullient statements - that these cheap loans now halved the cost of the project and guaranteed its viability - seemed to contradict everything he'd said up to that time about how the numbers stacked up**, we must wait until the end of this year for the "final business case" to be presented. No doubt it will be a "done deal" by then, given the hundreds of millions in sunk costs already incurred, combined with the "energy web" zeal emanating from Canberra.**

(iv) alternative options and associated costs and/or benefits to Tasmania including costs and cost of a 'do nothing approach'

Since the intervention of the Morrison Government in 2019, a "do nothing approach" seems to have been removed as an alternative for the Tasmanian people. That conclusion has been strengthened by application of Federal Energy Minister Bowen's "Rewiring the Nation" $20 billion fund.

An announcement in October 2022 that the Federal Government would step up to be the largest stakeholder in Marinus Pty Ltd has been confirmed. The Commonwealth will hold 49% of the equity, followed by Victoria's 33.3% and Tasmania contributing just 17.7%. (Marinus Link Pty Ltd (b), 2023)

Years of blustering by then-energy minister Guy Barnett that Marinus was a visionary project, which would return untold financial benefits to Tasmania, is inconsistent with a 17.7 % stake – complete with a sell-out option.

Far removed from all the political posturing of the "200% Tasmanian Renewable Energy Target", along with its "battery of the nation" and "powerhouse of Australia" hyperbole, **this State now finds itself no more than a sub-station in the NEM,** with its natural environment and energy production under serious threat from dogmatic Federal policies.

That our politicians are influenced by industry heavyweights (notably from the coal, gas and mining sector) is of further concern. These corporations are the backbone of the new, "born-again", green energy profit centre.

Although we have now seen Forrest Future Industries, Origin and Woodside back away from their nebulous predictions of a world-leading hydrogen production hub at Bell Bay, Tasmania's hydro firming power is still an essential element for 24/7 electrolysis. Whether that capacity is used to back up a multitude of wind turbines here, or whether it is merely exported via Marinus, swapping Tasmanian energy security for a dependence on importing cheap Victoria power, appears to be a decision slipping from our hands.

We should compare Energy Minister Barnett's rhetoric of December 2020, when the whole deal was spruiked to bring in billions, to the off-loading of a dud Marinus scheme: "We're leading the way. Tasmania has the trifecta; affordable, reliable and clean electricity. We have what the rest of Australia needs and wants. We have what the rest of the world needs and wants, and Tasmania has natural assets with our world-class water resource, our world-class wind resource, and we're delivering jobs on the ground here in Tasmania."

It appears our treasures are set to be plundered.

We also need to look at the "hydrogen superpower" rhetoric – especially in light of the Federal and State Government commitment on January 18, 2024, of yet another grant of $70m to get stalled hydrogen manufacture happening at Bell Bay. This is in addition to millions of dollars in annual grants doled out from State coffers to assist massive corporations undertake what should be basic due diligence when undertaking a new venture. The $8 million Green Hydrogen Price Reduction scheme is the latest in inducements offered in Tasmania.

The important question here, is: What is the price that the only large active venture - ABEL / Iberdrola (trading as Bell Bay Powerfuels)- can pay to make their hydrogen and biofuels viable? Andrew Forrest was touting for $20 a megawatt hour – which is half what our current "big industrials" are reputed to pay. Even at $40 a megawatt, is this a price that can be sustained without subsidy when importing via Marinus Link?

At $40MWh, this would make energy to produce a tonne of hydrogen around A$2000 – or $2 per kilogram. With added production costs, a profit margin, and a return on investment, it means a very expensive fuel, which then has to be shipped.

"Former chief scientist Alan Finkel recently said he was confident of green hydrogen costs falling to an "incredibly low" $US1 ($1.53) a kilogram – or $US2/kg post shipping – by the 2040s.
The US Department of Energy has a green hydrogen target cost of $US2 per kilogram by 2026.
Bahador Tari, an energy expert at consultancy Energetics, cites "challenging" green hydrogen economics of up to $US10/kg.

In stark contrast, RMG Hydrogen believes it can achieve a cost at the electrolyser of $A1.25/kg and $A2.38/kg at the "bowser" before taxes." (Australian Financial Review, 2023)

By applying simple economics, why would a hydrogen manufacturer set up in Tasmania – reliant on energy imported at cost via Marinus – when the same energy could be utilised in Victoria? The product is close to a large domestic market, and would not require off-island shipping.

If profitable electrolysis means "race to the bottom" pricing for green energy, a large scale, competitive industry here could only exist with subsidies.

Smaller companies like Countrywide Hydrogen and LINE Hydrogen are now moving ahead with electrolysers around 10MW - a far cry from the 250 to 600MW "pilot plants" the big players were envisaging.

Hydrogen should be a part of the Tasmanian energy future – at a scale which can be powered by locally generated renewables, and with Tasmanian heavy transport as its market.

OBSERVATIONS AND RECOMMENDATIONS FOR MARINUS AND ASSOCIATED ENERGY DEVELOPMENTS

Marinus should not proceed because an alternate option better suited to Tasmania is required. It involves a new paradigm for Tasmania and replaces the outdated Battery of the Nation concept, which has been superseded by advances in energy technology coupled to accelerated Mainland expansion.

1. Not enough information (financial, social and environmental) is known for such a project of high cost and high risk.

2. No business case for the whole project (Marinus, transmission infrastructure, hydro developments, pumped hydro, price subsidies, interest payments, funding, impact on GBE's) has been provided for independent analysis.

3. State investments should be used to provide Tasmania with renewable energy generated in Tasmania for Tasmanians.

4. Marinus will inflate the cost of household electricity in Tasmania

5. The financial implications for Hydro Tasmania and TasNetworks under the 49%/33.3%/17.7% Marinus Link Pty Ltd equity arrangement are unknown.

6. The extent of State debt is unknown but expanding. How this will be repaid is unspecified.

7. Marinus should not be built because there is no assurance that it will become a profit-making enterprise, able to service its borrowings.

8. Marinus should not be built with public money for the benefit of private wind farm generators and multinational business enterprises (including foreign government business entities) to facilitate access to National Electricity Market. Energy generators, rather than the taxpayer, should be the major funders of the project as they are the major beneficiaries.

9. Marinus should not proceed because the current planning and environmental assessment regime is not fit for purpose. It continues to look at each piece of infrastructure as an isolated development – not as part of a whole. This does not afford adequate protection to key Tasmanian features, nor help with investor confidence.

10. **No-go turbines zones should be quickly established. Until then, industrial developments in the wrong places** such as Stanley, Robbins Island, and St Patricks Plains Wind Farms will still be determined by industry alone.

    The ReCFIT Stakeholder Reference Group process is a sham, as indicated by Ms Romy Greiner, a community member of the Central North West SRG. This eminently qualified academic concludes**: "I also conducted a review of the international literature on GIS-based methods for determining areas suitable for wind development. This has further heightened my concerns and led me to conclude that the methodology currently used by ReCFIT to determine the NW REZ would not pass peer review as it is neither conceptually valid nor methodologically defensible."** (Renewables Climate Future Industries Tasmania, 2023)

11. It is recommended the Project of State Significance process be adopted for the total Marinus initiative rather than use of the Major Projects pathway for the Marinus cable part of the total proposal.

Yours sincerely

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