

Victorian Parliamentary Inquiry into Renewable Energy

Latrobe City Council Submission

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Introduction

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Latrobe City welcomes the opportunity to provide its submission to the Victorian Parliamentary Inquiry into Renewable Energy, we would also be happy to attend as a witness to any public hearing associated with this inquiry.

About Latrobe City

Latrobe City is one of Victoria's four major regional cities, less than two hours from Melbourne. It is home to approximately 75,000 people; the Gippsland regional population exceeds 260,000 people. Latrobe City is resource rich with abundant forests, rich agricultural land, water resources and large deposits of brown coal. Latrobe City is home to 5,000 businesses and currently around 32,000 jobs. Its Gross Regional Product (GRP) is over \$5.6 billion per annum.

Latrobe City is a significant centre of Victoria's energy industry, historically it has produced approximately 85% of the electricity for the entire state of Victoria. The low-cost electricity generated from the Latrobe Valley's extensive brown coal resources has contributed to the Victoria's economic prosperity for nearly the past 100 years.

As a result of our long history of electricity generation, the region hosts an extensive electricity distribution infrastructure that connects to the existing generation facilities in Melbourne and broader Victoria. Not surprisingly, historically this sector has dominated the economic profile of Latrobe City, with employment and economic prosperity of the region relying heavily upon electricity generation.

There is a growing interest in renewable energy as we transition away from coal-fired power generation in line with the rest of the state. Recently Latrobe City Council endorsed its Investment Roadmap which provides a high-level strategy looking at new and emerging industries and technology to aid in this transition, which includes renewables such as hydrogen and geothermal. This Investment Roadmap can be viewed here-

<https://www.latrobe.vic.gov.au/sites/default/files/2021-01/Investment%20Roadmap%20%28document%202021%29%20spreads2.pdf>

Latrobe City is ideally placed to embrace emerging new industries and leading-edge innovation to stabilise and grow the region's and Australia's economy in the midst of the energy sector transition. These opportunities are driven by the existing strengths and competitive advantages that the region has to offer due its long-standing history as the hub of Victoria's power generation.

To this end, Latrobe City Council can play an active role in our state's renewable energy future and as such supports the Victorian Parliamentary Inquiry into Renewable Energy as well as providing the following feedback.

Submission

This section provides Latrobe City's submission to the Terms of Reference of this Inquiry.

(a) measures to enable Victoria to transition its energy supply to 100 per cent renewable energy;

One of the biggest measures to an effective 100 % renewable energy supply is that both industry and investors need long term security to make significant investment decisions.

Providing incentives to enable and encourage industry to innovate and research is another important part the Victorian Government can play.

(b) jobs and economic benefits and implications of Victoria transitioning to 100 per cent renewable energy;

As mentioned throughout our submission the risk to Latrobe City by not transitioning to renewables is with our highly skilled workforce leaving the area in search of alternative employment potentially interstate. Any loss of our skilled labour force will be a barrier to new investors in the high-tech industries such as renewables who need a readily available skilled labour force.

An economic benefit for Victoria will be more and more financial institutions will consider to potential green content of any investor and this will encourage future investment here in Latrobe City.

(c) investment, both public and private, required to achieve 100 per cent renewable energy generation in Victoria, including investment in grid infrastructure and energy storage;

The Victorian draft 30 Year Infrastructure Strategy states that;

“Victoria's electricity transmission infrastructure has historically been configured to carry power from the Latrobe Valley power stations to places with high energy use, like Melbourne.....

In some areas, weak transmission networks cannot currently carry large amounts of electricity and renewable energy generators are already having trouble exporting their electricity”.

Latrobe City has significant energy production and distribution industries and infrastructure, including an electricity grid with connections to Tasmania, South Australia and New South Wales. These assets provide Latrobe City with significant opportunities to attract alternative and new energy technology investments, leveraging not only existing infrastructure but the extensive skill base and engineering capabilities of this region. This places Latrobe City at an advantage as an ideal location to generate and transmit large-scale renewable energy, supported by its abundant natural resources.

Governments at all levels can capitalise on existing transmission infrastructure by working with local communities on the siting of suitable renewable energy projects in Latrobe City subject to appropriate siting and social licence.

Despite this significant existing and proven infrastructure, The State Government’s recent Renewable Energy Zone’s Directions paper identifies only one project for Gippsland, which connects projects further west of the Latrobe City municipality into the existing infrastructure network. This project is identified as part of the Stage 2 projects.

Therefore, the Directions Paper indicates a failure to capitalise on the existing grid network of the Latrobe Valley and the skilled workforce that currently exists here? It also failed to encourage suitable renewable projects and battery storage projects in the Latrobe City municipality and we question is enough being done to inform, consult and involve the community so that social licence is achieved. This is a missed opportunity!

(d) further opportunities for Victoria to reduce emissions, including through finding alternatives to industrial and household gas consumption;

With the era of coal-fired power plants slowly drawing to a close, and whilst there has been much to attention paid to other sources of energy such as hydrogen and we note the continued successful progress of the world-first Hydrogen Energy Supply Chain (**HESC**) Project, which aims to safely produce and transport clean liquid hydrogen from Australia’s Latrobe Valley in Victoria to Kobe in Japan. A key objective of the pilot project is to demonstrate an end-to-end supply chain between both

countries.

However, there is another source of energy beneath the Latrobe Valley—vast reserves of natural hot water.

The opening of the Gippsland Regional Aquatic Centre (GRAC) in Traralgon in early 2021 marked a significant moment in the history of the Latrobe Valley. Not only does the GRAC provide the region with a world class sporting and leisure centre, but it is also the first major facility in the region to incorporate a geothermal heating system. The pools and buildings of the GRAC are heated using naturally hot 65°C water drawn from an aquifer 650 m beneath the town.

Geothermal is now the cheapest option for heating. The price of natural gas [roughly doubled](#) in eastern Australia when LNG terminals began exporting out of Queensland in 2016, and is [projected](#) to stay high. The high price of natural gas affects the whole of Australia. Furthermore, a [2019 report](#) commissioned by the Australian Renewable Energy Agency found that 52% of energy used by the nation's industrial sector is consumed as heat. Most residential and industrial heat comes from burning natural gas, with coal the second biggest source for industry. For many heat requirements, however, natural hot aquifers offer a clean alternative to fossil fuel combustion.

Elsewhere in the world, natural hot aquifers provide renewable heat to a wide range of residential and industrial consumers. For instance, large parts of suburban Paris are heated by geothermal energy from a hot (56–85°C) aquifer 1,600–1,800 m beneath the city; industrial scale greenhouses in the Netherlands are gradually replacing natural gas with natural hot water (65–80° from 1,800-2,200 m depth) as their heat source; Beijing is one of the world's leading urban centres using geothermal energy, where wells as deep as 2,600 m produce up to 70°C water for many industrial purposes; a small town in Hungary circulates natural hot water (64–72°C from 1,450–1,700 m depth) through a network of distribution pipes to dozens of end users; even in Perth, Western Australia, natural hot water (40–52°C from 750–1,150 m) heats at least 14 leisure and aquatic centres. Importantly, in almost every case, the water itself is returned to the aquifer after delivering its heat, so water is not consumed in the production of geothermal energy.

Globally it is interesting and significant to note how shallow the hot water is beneath the Latrobe Valley; only 650 m for 65°C. The thermal blanketing effect of the world's thickest brown coal deposit results in a truly world class geothermal energy resource that has, until now, been largely under-utilised. Drilling is a major cost factor for geothermal energy, so these costs should be relatively low in the Latrobe Valley.

The remaining coal fired power stations in the Latrobe Valley are all scheduled to close in the coming years, casting great uncertainty over the future of the skilled workers and the communities that support them. Victoria's heavy reliance on natural gas for heat also presents a huge challenge for the state to meet its [legislated](#) greenhouse gas emission reduction targets of 28–33% by 2025, 45–50% by 2030, and net zero emissions by 2050. Producing geothermal energy from hot aquifers can help on both fronts, by avoiding greenhouse gas emissions and by reemploying skilled workers into new industries.

Latrobe City Council and the University of Melbourne are now working closely with the Geological Survey of Victoria, the Department of Environment, Land, Water and Planning (DELWP), Regional Development Victoria, Federation University, local businesses, and community groups to help the Latrobe Valley sustainably develop its world class natural endowment of geothermal energy. The Latrobe Valley Authority is coordinating our efforts under the [Gippsland Smart Specialisation Strategy](#). Across several projects, we are collectively mapping the geothermal energy resource; developing economic assessment tools; connecting with international experts; investigating the potential for power generation from deeper hotter rocks; testing the economic feasibility of a geothermal energy distribution network; identifying and clearing policy and regulatory barriers; and raising awareness of the economic opportunity represented by geothermal energy. The lessons we learn in the Latrobe Valley will be relevant for other regions around the state and country where hot aquifers are deeper but still very accessible.

(e) government investment or action that would be needed to support workers in impacted industries to facilitate a just transition and ensure workers and communities are not left behind as Victoria transitions to 100 per cent renewable energy;

The Victorian Government made a notable and immediate contribution to Latrobe City through a comprehensive package of funding support for major social capital projects such as Latrobe Creative Precinct, Gippsland High-Tech Precinct (which has morphed into a Call Centre), Latrobe Health Innovation Zone and Gippsland Regional Aquatics Centre.

The Yallourn Power Station and associated Mine that are scheduled to close in 2028 employs more than 500 permanent workers on site plus many more in the associated supply chain. During some years, for three to four months, the Yallourn workforce increases to 1000 when major unit outages are undertaken, along with four yearly integrity maintenance works adding an extra 150-200 workers. Each

Yallourn worker is estimated to generate an additional four to five jobs in the Latrobe Valley. In addition, at any given time, Yallourn has at least 15 apprentices on site. The Yallourn Power Station and associated Mine contracts with over 240 small businesses and contributes over \$25 million in royalties and \$3 million in payroll tax to the state of Victoria annually. ⁵

The AGL Loy Yang A Power Station and associated Mine and nearby Alinta Loy Yang B Power Station, on the other hand, have licences expiring by 2048. The AGL Loy Yang A employs approximately 600 FTE and 300 contractors, and is estimated to contribute millions of dollars every week to the local community through procurement, labour and the hiring of contractors ¹ At 30 June 2020, Loy Yang B employed 162 people ² as well as estimated up to 50 contractors ³ Loy Yang B's total FY20 economic value distributed was approximately \$339 million, including the value generated through suppliers, employees, financiers, owners and the Government ⁴ As there was (correctly) with Yallourn, there is considerable industry and community speculation that environmental pressure will result in both Loy Yang Power Stations closing well before scheduled.

In relation to securing Victoria's Energy Future, Latrobe City is ideally placed to embrace emerging new industries and leading-edge innovation such as new clean energy industries, hydrogen, circular economy, automotive technologies, carbon innovation, advanced manufacturing and defence to stabilise and grow the region's and Australia's economy in the midst of the energy sector transition. These opportunities are driven by the existing strengths and competitive advantages that the region has to offer due its long-standing history as the hub of Victoria's power generation.

With this in mind it is recommended that the state government consult with the community through Latrobe City Council on providing training and incentives, that would assist current employees transition to new skills in collaboration with the local education sector such as TAFE Gippsland and Federation University.

¹ AGL Loy Yang Mine Sustainability Report 2017 - 2018

² Latrobe Valley Power Loy Yang B Power Station Sustainability Report FY20

³ The contractor numbers can vary; e.g. an additional 500 contractors were engaged during the major upgrade of Unit 2 in April and May 2019; Latrobe Valley Power Loy Yang B Power Station Sustainability Report FY19

⁴ Latrobe Valley Power Loy Yang B Power Station Sustainability Report FY20

(f) the economic risks of not urgently reducing emissions by transitioning to 100 per cent renewable energy; and

Latrobe City Council has no comment on this particular section of the Terms of Reference'

(g) any other related matters

In addition to renewables there are other industries such as the circular economy and others that Latrobe city is keen to develop that can also go to assisting in reducing our carbon footprint such as the following.

1. Circular economy and related industries: Gippsland requires the establishment of a Regional Material Recovery Facility to improve product quality and quantity; and attract new markets, job creation and investment in our region. The Morwell Heavy Industry Precinct in Latrobe City has been earmarked as an ideal location for such a facility.

This is a key opportunity for the Gippsland region to secure regional jobs within a future circular economy. Gippsland is well placed to be leaders of the circular economy; we have a high-skilled workforce and current expertise in reprocessing of green waste, plastics, cardboard and paper. The site will also improve recycling and local reprocessing of paper and cardboard, plastics and glass, and the quality of materials for reprocessing and re-manufacturing

Gippsland councils are working together to achieve greater recovery and re-use of waste products through the establishment of a Gippsland Material Recovery Facility. This will be achieved by leveraging partnerships established through One Gippsland that brings together education, industry and local government leaders to respond to challenges and advance opportunities to support the prosperity of our region.

In association with Gippsland Waste and Resource Recovery Group (GWRRG), One Gippsland has been testing the market through the facilitation of collaborative procurement opportunities for future kerbside collection and material processing contracts.

This process consistently identified the need for a Regional Material Recovery Facility, which aligns with independent recommendations provided to Government by Infrastructure Victoria and Deloitte as part of their review of state-wide recycling infrastructure needs.

The \$30 million facility could be funded jointly by the Victorian and Commonwealth Governments, alongside with private investment.

2. Automotive technologies: Opportunities for Latrobe City to lead the advancement of automotive innovation through the proposed Centre for Australian Automotive Futures (CAAF).

The CAAF is designed to be an innovation centre for future automotive technologies and renewable energy, whilst retaining its original concept for hosting motorsport and events. To progress the project, Council committed \$60,000 for the first stage of the business case and \$1.2 million is required for business case stage 2.

The CAAF would serve as a centre for research and education, technology and innovation, and commercialisation aspects of automotive technology development, alongside attracting tourism and visitors to the region. The aim is to combine emerging technologies such as renewable energy power (electric, hydrogen), future mobility technologies including connected and autonomous vehicles, and manufacture of materials for automotive equipment and parts, into one purpose-built venue. The Centre will encompass research, development and commercialisation activities. It will have education, training and test-bed facilities onsite for industry and the development community.

The Centre will partner with government, universities, vocational training, research organisations and, importantly, industry and investors. These partners will include national and international organisations. In addition, the Centre will provide facilities and tracks for motorsport such as Formula E as well as petrol powered vehicles; driver education; and automotive company and Centre partner activities. There will be onsite accommodation, event areas and areas for commercial development and business.

Finally, for many years, Council has advocated for historical coal protection overlays that have applied to large areas of industry zones land in Latrobe City to be removed. The Department of Jobs Precinct and Regions (DJPR) commenced Coal Protection Provision Review in 2018. Some overlays south of Morwell were removed in 2018, while the redundant coal overlays, Morwell North West and Area H remain. Council is also concerned that the Review has not significantly progressed in 2020. Therefore, Council Officers requested an update on 7 April 2021 from DJPR in particular status of the review and directions on Area H and Morwell North West area. Council has received early advice that the removal of these overlays is not expected as part of the current Review.

The coal overlays continue to hamper investment in as much that investors need to have certainty about the land they wish to invest in. Currently, the lengthy delays in attempting to remove the overlay on parcels of land is dissuading investment. This is also compounded by the uncertainty of the removal being granted. This is particularly challenging given the imminent need to reboot our economy post-COVID.



Therefore, Latrobe City Council is calling on the Victorian Government to re-consider its position in relation to the Area H and Morwell North West overlays, and release publicly the Coal Policy Review alongside the exhibition of a relevant Planning Scheme Amendment so that appropriate planning controls can be put in place to support further development of this land.

ENDS