

**LEGISLATIVE COUNCIL**  
**ECONOMY AND INFRASTRUCTURE COMMITTEE**

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Inquiry: Inquiry into the closure of the Hazelwood and Yallourn power stations

Hearing Date: 16 February 2022

Question[s] taken on notice

Directed to: Brian Davey, Chief Executive Officer and Gerry Morvell, Chair,  
Australian Carbon Innovation

**1. MS BATH Page nos. 30-31**

**Question asked.**

I have got two lines of questioning. The first line looks at your submission to the inquiry and speaks about the Latrobe Valley Authority. That is part of our terms of reference. And as part of it you say:

*The early response has seen the 'low hanging fruit' having been harvested. The stated investment of \$288m by the state government does not appear to have represent good value for money ...*

Then it goes on, and then:

*... a more fundamental and strategic approach will need to be taken that incorporates all the region's natural ...*

resources.

**Response:**

Firstly, ACI would like to acknowledge that the transition funding announced by the State Government was \$266m not \$288m. The report by the LVA to 2019<sup>1</sup> details the activities from November 2016 to November 2019 although actual expenditure is opaque it appears to be in the order of ~\$150m allowing for some assumptions on operational cost and actual figures where quoted. There is little data on activities from 2019 to 2021. It is also noted that activities include actions by other departments including RDV in the transition space.

It is understood that immediate actions needed to be taken to support severely impacted businesses at Hazelwood closure and expenditure in this area appears to be in the order of \$12m

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<sup>1</sup> LVA Transitioning to a strong future – November 2019

to \$13m with most of the funding provided by the RDV Supply Chain Transition Program and Economic Growth Zone reimbursements.

The worker Transition Scheme had a budget of \$20m and resulted in ~ 90 workers being relocated. If the budget was expended in this space that is the equivalent of \$220,000 per relocated job. This worker transition scheme is unlikely to be as successful next time around with the closure of Yallourn, or the cost will be higher.

\$78m (or more than half of the estimated expenditure) appears to have been spent on sporting facility upgrades and whilst are probably worthwhile the projects are not strategic transition activities. They are unlikely to attract high employment, high paying industries to the Latrobe region in of themselves.

Similarly, home energy upgrades, sports and active participation grants, Latrobe Youth Space and Community halls upgrades are also worthwhile but cannot be called strategic transition activities.

There was one industry in the report that was feted as a large-scale employer – SEA Electric whose business model involved replacing internal combustion engines with electric motors in small trucks and this project did not prove to be successful. A lack of due diligence appeared to be a problem here.

The activities associated with 'New Energy' were small scale and could be best described as opportunistic, not strategic.

Based on published information, the LVA has made no attempt to develop a transition plan to address the need for long term employment opportunities in industries that could replace those lost or about to be lost in power generation sector.

ACI has identified carbon-based products and technologies that could be develop from lignite and biomass carbon resources and which are essential for the renewable energy, transport, agriculture, construction and electronic industries. These could form the basis of new industries in the Latrobe Valley in a manner that is consistent with the Government's low emissions, climate change and resource management policies. A domestic industry based on the extensive Latrobe Valley carbon resources rather than continuing to import products and technologies would generate employment lower global greenhouse gas emissions.

For the past century the Latrobe Valley power generation sector has provided employment and contributed very significantly to local, state and national economies.

By failing to develop a long-term transition plan and focussing solely on short-term job creation projects in the three LGAs covering the valley, the LVA has not recognised the role the region has played, and could continue to play, in the State and National economies.

**Ms BATH follow up question:**

ACI nominated a number of products that can potentially be manufactured from brown coal and other carbon sources in the Latrobe Valley.

Do you have an estimate of the size of the potential industries and the ongoing jobs that might be possible if the state govt provided some level of support for their development?

**Response:**

ACI has not been funded to undertake detailed assessments of the employment and economic potential of new carbon-based products and technologies. The indicative figures shown below are therefore based on estimates of commercial scale entities of industries located in Australia and other parts of the world.

<b>Product</b>	<b>Growth Potential (Compound Annual Growth – CAGR) where known</b>	<b>Direct Operational Jobs<sup>2</sup> (not construction) These estimates do not include job multipliers</b>	<b>Comment</b>
Carbon Fibre	CAGR 10.6%	500	There is no carbon fibre manufacturing capability in Australia at commercial scale. Using brown coal cost of manufacture will drop significantly
Activated Carbon	CAGR 9.6%	100	Brown coal and biomass produce a low ash activated carbon very suitable for the water and chemical clean up market
Fertiliser Production Urea and blended fertilisers	CAGR 2.7%	500	Whilst CAGR is lower this is a sovereign manufacturing opportunity to reduce reliance on China
Fulvic and Humic Acids	CAGR 7.0%	200	Export market with high growth opportunity for coal derived product
Char	CAGR unknown	100	Reductant product for silicone, steel, mineral sands. Soil remediation and upgrading
CO2	CAGR 6%	1,000	Utilisation of CO2 in greenhouses as a plant growth stimulant

<sup>2</sup> All estimates are scale dependent and based on published and unpublished data. Market size and the economics will determine the ultimate job potential, not the size of the raw material resource.

Diesel	CAGR 5.5%	1,000	Sovereign manufacturing opportunity to reduce reliance on extended supply chains
Hydrogen	CAGR 12%	500	Fuel of the future. Note that a coal to hydrogen industry would enhance a renewable hydrogen industry in the Latrobe region.

Note that these are a sample of the potential product streams from brown coal and do not take into consideration some of the newer product streams such as carbon quantum dots, graphene oxide, metallurgical electrodes that could be developed in parallel with some of the above