T R A N S C R I P T

PUBLIC ACCOUNTS AND ESTIMATES COMMITTEE

Inquiry into Budget Estimates 2018–19

Melbourne — 15 May 2018

Members

Mr Danny Pearson — Chair
Mr David Morris — Deputy Chair
Mr Steve Dimopoulos
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Ms Fiona Patten
Ms Sue Pennicuik
Ms Harriet Shing
Mr Tim Smith
Ms Vicki Ward

Witnesses

Mr Tim Pallas, Minister for Resources,

Mr Peter Betson, Deputy Secretary, Resources,

Mr Anthony Hurst, Executive Director, Earth Resources Regulation,

Mr John Krbaleski, Executive Director, Earth Resources Policy and Programs, and

Mr Justin Hanney, Head, Employment, Investment and Trade, Department of Economic Development, Jobs, Transport and Resources.

The CHAIR — I declare open the public hearings for the Public Accounts and Estimates Committee inquiry into the 2018–19 budget estimates. All mobile telephones should now be turned to silent. I would like to welcome the Minister for Resources, the Honourable Tim Pallas, MP; Mr Peter Betson, Deputy Secretary, Resources; Mr Anthony Hurst, Executive Director, Earth Resources Regulation; Mr John Krbaleski, Executive Director, Earth Resources Policy and Programs; and Mr Justin Hanney, Head Of Employment, Investment and Trade.

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All evidence given today is being recorded by Hansard. You will be provided with proof versions of the transcript for verification as soon as available. Verified transcripts, any PowerPoint presentations and handouts will be placed on the committee's website as soon as possible.

Witness advisers may approach the table during the hearing to provide information to the witnesses, if requested, by leave of myself. However, written communication to witnesses can only be provided via officers of the PAEC secretariat. Members of the public gallery cannot participate in the committee's proceedings in any way. Members of the media must remain focused only on the persons speaking. Any filming and recording must cease immediately at the completion of the hearing.

I will now invite the witness to make a very brief opening statement of no more than 5 minutes. This will be followed by questions from the committee.

Mr PALLAS — This budget is about getting things done, and we are building the projects, both big and small, that our state needs. This budget invests now to keep the cost of raw materials down as we roll out the strongest infrastructure pipeline in Victoria's history. We are investing $12.7 million in improving the earth resource regulator to ensure access to the rock, gravel, sand and other resources required to build the projects that our state needs. We are also investing $3 million in a proactive earth resources strategy to address Victoria's growing and extractive resources demands. This budget takes a long-term view on the challenges ahead for this state, including mine rehabilitation. We are providing $5 million to the Latrobe Valley mine rehabilitation commissioner, Professor Rae MacKay, to ensure he is fully resourced to deliver on his role. We have allocated half a million dollars towards a strategic review of coal resource overlays to promote economic development within the Latrobe Valley.

Without a ready supply of raw construction materials and extractive resources like sand, clay and stone, we cannot build the infrastructure that Victoria needs, we cannot build the housing that we need and we cannot build the hospitals, the roads, the schools and the playing fields. Demand for raw materials is increasing and will continue to increase. Current forecasts show that our annual demand for raw materials is on track to double by 2050, growing from the current demand of approximately 50 million tonnes to over 100 million tonnes. Much of that demand is concentrated in and around Melbourne, with strong demand in growing urban centres like Geelong, Bendigo and Ballarat.

While demand is at an all-time high, the supply of extractive resources is constrained due to delay in regulatory approvals. That is why the government is announcing new investments in the extractive sector to support low-cost infrastructure and affordable housing. We have invested $12.7 million in improving the regulator. Better regulation means both greater certainty for industry and strengthened community confidence. This is about unlocking new supply of construction materials in a sustainable and, might I say, responsible way without compromising the community's expectation around safety, the environment and local amenity.

We are also investing $3 million in a proactive approach to securing extractive resource needs. This approach commenced earlier this year in a pilot project with South Gippsland shire and Wyndham city councils. These pilots are focused on securing our long-term supply needs, identifying high-quality resources that we can use to build our rail projects, our roads, our schools, our hospitals and of course new homes. We are building and working in partnership with local communities so that we can enhance livability so that there is a clear plan for the future.

Australia's east coast gas market has fundamentally changed. Introduction of LNG exports has had a material impact, and gas prices across household and industry have jumped. As you can see from this chart, the east coast gas market exports two-thirds of the total gas produced, leaving about one-third for domestic consumers. The sheer volume of gas exports has tightened available gas and has increased prices for domestic consumers.

Off the coast of Victoria we produce twice as much gas as we consume — 435 petajoules compared with domestic demand of 218 petajoules. Data from the Australian Energy Regulator shows at the time the Victorian fracking moratorium was put in place, which was August 2012 under the previous government, the gas price was around $4 to $5 per gigajoule. The gas price stayed around that level until the start of 2016, when LNG exports commenced from Gladstone in Queensland. Average Victorian gas prices jumped $4 to $5 per gigajoule at the start of 2016 to around $8 to $10 per gigajoule for early 2017. So the government's ban on fracking and onshore gas moratorium has not driven an increase in Victorian gas prices, quite emphatically.

The government announced the Victorian gas program last year. The program is now well advanced. The first progress report has been released by the lead scientist and it demonstrates that there are no proved or probable reserves of gas onshore in Victoria. It is a trivial amount; best known in terms of onshore resource is about 110 petajoules compared to the 10 000 petajoules offshore. So, taken together, we have had an exciting program of work which will continue to contribute to the long-term sustainable development of Victoria's earth resource sector.

The CHAIR — Thank you, Treasurer. I might lead off, if I may. Minister, I refer you to budget paper 3, page 10. Under the 'Resources' heading down the bottom there it has got, 'Support low-cost infrastructure and affordable housing' — $9.1 million in 18–19 and $6.6 million in 19–20. Minister, are you able to outline to the committee the purpose of that expenditure and what it is seeking to do? Why is this spending necessary?

Mr PALLAS — Yes, absolutely. Look, the government approved that $12.7 million in the 18–19 budget for improved regulatory performance to reduce investor uncertainty and also to deliver on the recommendations of the continuous improvement project. A 2016 demand and supply study by PwC forecasts that Victoria's demand for extractive resources, as I have indicated, is expected to double by 2050. In 2018 demand for extractive resources in Victoria is tracking at levels higher than was forecast in 2016, so you can see an acceleration occurring on the demand side of extractives, bearing in mind on our infrastructure side about 32 per cent of our infrastructure costs are associated with the raw materials component. If this demand trend persists — demand for extractives, as I said, is likely to increase to 100 million tonnes per annum by 2050 — if we fail to secure those extractive resources and improve our regulator's performance, the cost of housing and other infrastructure will increase. In fact we are already seeing shortages of extractives or insecurity of supply likely to drive up costs for infrastructure.

There is no way around this. If we fail to secure supply, then contractors will be forced to pay more for materials. We will have to transport them from further away. Both of those costs will be passed on to the state and, might I say, obviously consumers. That is why the government is taking the action that it is to ensure that Victoria's quarries can provide the materials needed to build homes, houses, roads and other major infrastructure to support Victoria's growing population. That funding will carry out the recommendations laid out by the commissioner for better regulation, who has done a terrific job in this area at the request of the government.

So the broad areas for reform: undertake long-term resource, land use and transport planning to secure Victoria's strategically important extractive resources before they are built over and lost forever; secondly, to implement much-needed improvements in the earth resource regulator system, as recommended by the commissioner for better regulation and also the 2017 inquiry into the regulation of mines and quarries; thirdly, to better inform communities of extractive resources planning to enable community participation in decision-making; fourthly, to promote environmental sustainability throughout the sector; and fifthly, to foster innovation approaches to end land uses for quarries to enable old quarries to transform into lasting community assets. This is one of the more vexing policy issues that government has to deal with. To get social licence around quarrying we need to come up with a model so that the community have some desire to actually see that what is left is an enhancement in their community, not an encumbrance upon it.

The CHAIR — So just coming back to the review that the commissioner for better regulation did into the earth resources regulator, there is funding obviously available that has been allocated in the budget. Can you talk a bit about what some of those changes are from that review and how they going to be implemented as result of the funding profile in budget paper 3?

Mr PALLAS — The funding which is contained within the $15.7 million initiative the government provided to carry out the recommendations of the review by the commissioner for better regulation, which essentially identified those essential five areas that I took you around, the five broad areas of reform: long-term resource needs, implement much-needed improvements in the regulatory system, better informed communities, promote environmental sustainability and foster innovative end of land use for quarries. In simple terms one of the main elements of that reform is to recognise that in the outer suburbs, in the peri-urban areas, there will often be a tension between land use for housing and extractives. We have to accept that and we have to manage that and make sure the communities have some ownership and licence around siting and long-term use of quarried areas. Clearly many people would be disturbed to buy a house and then have a quarry built next door.

This is one of the difficulties that the industry faces, and unfortunately the answer cannot be, 'Build it somewhere else', because the transport costs of extractives are prohibitive the further away they are located. Indeed if you look at the situation in Sydney and New South Wales, they have concentrated locations for quarries, and their cost of raw materials of course substantially increases as the transportation costs are factored in. So the answer is to ensure that we get strategic extractive resources that ensure that our resources are not built over and are protected from encroaching development and we also reduce land use conflicts to ensure that industry and investors have a secure pipeline of extractive resources.

Ms SHING — Thanks, Minister, for your presentation and for the discussion of the call to find the most appropriate balance between the demand for resources on the one hand and issues around social licence and community engagement on the other, particularly as our population grows. I would like to talk to you about the Hazelwood rehabilitation focus as well as the work going into earth resources regulation within the Latrobe Valley. We know that the mine fire inquiry has delivered a number of recommendations, and there was $85 million reserved to implement those recommendations. How are we positioned in relation to budget paper 3, page 10, to manage mine rehabilitation risks with this allocation of, I believe, $5.4 million? If you could then talk me through how that will go to the detail of applications for mining licences that have been made — I do not want you to pre-empt the outcome — for extensions of those licences.

Mr PALLAS — The government has allocated more than $85 million to the implementation of all the recommendations of the Hazelwood mine fire inquiry. That $85 million, to break it down, includes — specifically relevant to the question — 12.6 million for the Latrobe Valley regional rehabilitation strategy, and that provides a further $1.2 million to be managed by DELWP; 6.9 million for a dedicated mine fire and emergency unit, which commenced in March 2016; and $5 million really to fund the Latrobe Valley mine rehabilitation commissioner. What we have done is we have undertaken a review of the rehabilitation bond policy, which related to Latrobe Valley coalmines, so we updated that policy in late 2017. The updated bond policy informed a third-stage bond increase for the Latrobe Valley mines.

Ms SHING — Because there are a number of different methodologies used to calculate bonds and the way in which rehab bonds were to be applied to the various sites, that is obviously going to have a direct impact on an accurate assessment of the risk going forward, but how is that being factored in as part of work on bond assessments and understanding of the proper risks associated with overlays?

Mr PALLAS — So in terms of the rehabilitation bonds for the Latrobe Valley mine operators, the rehabilitation liabilities were calculated by an independent expert, AECOM, using a probabilistic methodology — if I sound a bit wonkish, I apologise — to identify the known and the potential rehabilitation activities and their costs. The costs are calculated based on the currently distributed footprint, the use of third parties or contractors to undertake rehabilitation activities and the assessment of those risks, so the rehabilitation bonds for the Latrobe Valley mine operators are set down at $148 million for Yallourn, and that is owned by EnergyAustralia; $154 million for Loy Yang, owned by AGL; and $289 million for Hazelwood, which is owned by Engie and Mitsui. As of April 2018, $760 million is held as rehabilitation bonds, including the bonds as described in this. It does not include the parent company guarantee for the remaining 20 per cent of the bond for the Hazelwood mine, which is about $57.8 million.

Ms SHING — Thank you. In relation to the government's approach to abandoned mine sites, I am keen to understand what the approach is to rehabilitation bonds for those sites, noting of course that we have a number of issues there around responsibility, the calculation of risk and the management of potential areas of concern for the community.

Mr PALLAS — Historic mine activity has left a legacy of abandoned mines. There are something like 19 000 mine features across Victoria. For several parts of that, government work collaboratively to manage those historic mines. For mines approved since 1990 licence-holders are required to rehabilitate land according to an approved rehabilitation plan, and they must enter into a rehabilitation bond. The government rehabilitation of recently abandoned mines on Crown land focuses on an economic approach which aims to rehabilitate the site to a condition that also ensures public safety.

Mr T. SMITH — Minister, budget paper 3, page 128, demonstrates that your department has failed to meet key milestones required by the agreed time lines of the Victorian gas program, which concludes with the 2020 moratorium for onshore gas. What key milestones have been missed?

Mr PALLAS — I might just throw over to Mr Betson for that. As you can see, the target was 100 per cent of the delivery of key milestones within agreed time lines. The expected outcome is lower than the 17–18 target, according to the note, due to the revised timing of the underground gas storage work program. Expected completion of these milestones is now planned for the end of 2018, so it is simply an issue of timing of the commencement of the program.

Mr T. SMITH — So no other issues that you can advise the committee on? No? Okay.

Given the ACCC has warned of gas shortages for this coming winter, why has the conclusion of the Victorian gas program been set at 2020, two years after the shortages are first predicted to hit Victoria?

Mr PALLAS — Of course I suppose the substantive answer to that is that the government hopes that strategies that are put in place will provide greater access to gas resources. The program which is in place aims to work directly with industry to identify ways that we can reduce their gas dependency. Of course those programs, once implemented, will reduce gas dependency going forward at those companies, so you would anticipate that there would not be a continuing requirement for them even if the price were to peak.

What we are seeing is that the price of gas is coming down from the levels that we have seen historically. As I indicated in my opening address, at the time that the previous government put the moratorium in place it was $4 to $5 a gigajoule. We saw that number rise to $8 to $10 a gigajoule by early 2017. There is no doubt that the cause of this issue is the exportation of gas overseas. We are seeing a world market price being put in place, and quite frankly we need more substantive action from the commonwealth to put in place measures to reserve that entitlement.

Certainly significant new gas production has commenced. We are starting to see that commencement off the coast of Victoria. New developments in the Gippsland Basin, including the Kipper, the Tuna and the Turrum fields in commonwealth waters, are also bringing in gas — 24 petajoules of new production is forecast to come in by 2019 — and the Cooper Energy Sole field, within commonwealth waters in the Gippsland Basin near Orbost, with a possible increase for the further offshore gas fields at Manta in 2021. Really that is the point that we make to the commonwealth and others when I think there is a largely misinformed discussion about the impact of the previous government's moratorium on gas —

Mr MORRIS — In fact it was your moratorium.

Mr PALLAS — It did not —

Mr MORRIS — The impact of your legislated moratorium —

Mr PALLAS — The practical consequence is since 2012 the state of Victoria, regardless of who was in government, has put in place a prohibition on both —

Mr MORRIS — On unconventional.

Mr PALLAS — conventional and unconventional gas, and as a consequence there has been misinformation about what that has done to gas pricing. As the graph I showed you demonstrates —

Mr MORRIS — The moratorium that you have extended —

Mr PALLAS — it is export gas that has led to the peaking of the price.

Mr MORRIS — well past the forecast gas shortages in this state. It is your decision, not anyone else's — yours.

Mr PALLAS — The point I am making is, as you can see from this graph, it is export that is actually driving the price up — nothing to do with the domestic capacity.

Mr MORRIS — It was your decision to run the Victorian gas program through to 2020 when we know there are going to be shortages from this year on.

Mr PALLAS — So you think your previous decision was wrong?

Mr MORRIS — Your decision, your government, your legislation.

Mr PALLAS — Let me be very clear: the government has a very firm view that there will not ever be a change on fracking. We have not put in a moratorium; we have put in a ban.

Mr T. SMITH — Treasurer, if I could, we are relatively short on time. Is depleted gas reservoir storage being considered as a storage method under the Victorian gas program?

Mr PALLAS — Sorry?

Mr T. SMITH — Is depleted gas reservoir storage being considered as a storage method under the Victorian gas program?

Mr PALLAS — Peter?

Mr BETSON — Underground gas storage is one of four key components of the gas program where the Victorian government is, where you have depleted reservoirs in and around the Otway area, investigating opportunities about the safe and technical injection of gas to enable gas storage to occur, as currently occurs with the Iona gas storage.

Mr PALLAS — And just to make the point, since our Paris protocols were instituted it has been identified by I think pretty much well everybody — every serious climatologist — that to meet those obligations we need improved energy efficiency, more renewables and we need CSG to be a key component of it.

Mr T. SMITH — Treasurer, I am sorry to cut you off. Another question, and then I will hand over to Mr O'Brien.

Mr D. O'BRIEN — We need CSG, did you just say?

Mr PALLAS — We need carbon capture and storage — CCS.

Mr D. O'BRIEN — Not CSG?

Mr PALLAS — No, CCS.

Mr D. O'BRIEN — Okay, just checking.

Mr T. SMITH — Can you explain the effective difference between conventional onshore gas extraction and the storage and removal of reinjected gas from depleted gas reservoirs that is being considered in south-west Victoria?

Mr PALLAS — Well, I can confirm the CarbonNet program which the government is undertaking — and I am happy to run you through the proposals. The first thing is that carbon capture and storage is integral to —

Mr D. O'BRIEN — Sorry, Minister — the question was not about carbon capture and storage; it was about gas storage in reservoirs.

Mr T. SMITH — Conventional onshore gas extraction.

Mr PALLAS — I will leave it to Mr Betson to direct.

Mr BETSON — As I mentioned, there are four key components of the Victorian gas program. One is in relation to the investigation of underground gas storage. The other one is in relation to the safe surveying of the risks, benefits and opportunities of onshore and then offshore conventional gas exploration. In relation to onshore and to gas storage, the key difference is that it is storage and it is not the extraction of gas, which is subject to the moratorium.

Mr D. O'BRIEN — When you take it out again, though, is it the same process?

Mr BETSON — Technically you have depleted reservoirs and wells that exist and have been existent in relation to wells that were explored previously. Technically in terms of the machinery, yes, there are similarities, but in terms of the process it is a different activity. One is banned in relation to the moratorium and the potential impact in relation to that extraction and the intersection with groundwater and the potential impacts. The other is in relation to injection of gas in relation to underground storage facilities.

Mr PALLAS — And I might make the point that the reinjection of gas into stored reserves is not new; I think it has happened offshore on a number of occasions. It is used as a market moderating method so that you can deal with the peaks and troughs in demand.

Mr BETSON — And the Victorian gas program, if I may, is around partnering in relation to technical and scientific studies, working with the CSIRO and potentially private partners in relation to those scientific studies —

Mr MORRIS — Chair, the information is useful, but we have got very limited time, so we need to move on.

Mr D. O'BRIEN — Could I just move on to coal royalties — 2018–19 BP5, page 162. What is the expected brown coal levy reduction due to Hazelwood's exit from the market? Could I ask while you are answering the question, Treasurer, whether you will increase the levy to offset any loss there might be?

Mr PALLAS — So the new brown coal royalty rate came into effect on 1 January 2017, increasing from 0.0776 to 0.2324 dollars per gigajoule, which was a threefold increase. The royalty —

Mr D. O'BRIEN — Treasurer, I am sorry. Could I get to the point because we are short on time. Will there be any reduction in royalty take because of the closure of Hazelwood?

Mr PALLAS — Well, we expect most of that reduction — there will be a marginal reduction in the royalty take.

Mr D. O'BRIEN — Do you know how much?

Mr PALLAS — I can take that on notice and provide you with the numbers. The reason it will not be proportionately the same as the demand that Hazelwood had been drawing down in terms of their payments, or foreshadowed payments, is largely due to the take-up of extra demand from the remaining generators, but I will find you the numbers.

Mr D. O'BRIEN — So is there any intention to increase the rate to make up for that reduction?

Mr PALLAS — No, not at this stage.

Mr D. O'BRIEN — Can I ask if you — your department or Treasury — did any modelling, though, to see whether had they not been a tripling of the rate there —

The CHAIR — Order! We will come back to that. Ms Pennicuik till 12 45 p.m.

Ms PENNICUIK — Thank you, Treasurer, secretary and department secretaries. My question relates to — budget paper 3, page 20 — the hydrogen energy supply chain pilot project. Victoria is aiming to spend $53 million on a coal-to-hydrogen project in the Latrobe Valley that will process up to 160 tonnes of brown coal but produce only up to 3 tonnes of hydrogen. This is a joint project with the commonwealth costing over

$100 million. In South Australia the government is instead planning to support a project at Port Lincoln for $117.5 million. That is called the renewable hydrogen electrolyser plant, totally fuelled by solar and wind and producing 10 megawatts of hydrogen fuel — more than three times the Victorian project. So why is our project so much more expensive per tonne of hydrogen produced?

Mr PALLAS — Oh well, because this is at a stage where the technology is still necessarily being proved up. The hydrogen energy supply chain is a world-first project. It is worth half a billion dollars in fact, not a hundred million. That is essentially the collective cost of the commonwealth and the state of Victoria. It has got the backing not only of our two governments but also the Japanese government and, of course, Kawasaki. So the pilot project launched last month, which will see liquefied hydrogen produced from brown coal in the Latrobe Valley and shipped to Japan to support their ambitious hydrogen-powered economy.

Of course we would expect the state, once we get to a point where the technology is — if and when it is — proved up, to be a beneficiary of that energy source. But the project will see around $230 million of economic activity expended in Victoria and create around 400 jobs in the supply chain. In terms of the comparative performance, I suppose the key from our perspective is that the project does not use the volume required to trigger the emissions standards under our brown coal policies, but nonetheless the government is very conscious of the need in the long term to have a sustainable strategy that has no adverse impact upon CO2 emissions, and of course developing up these technologies will be quite taxing. It will require not only the technology to extract the hydrogen, but also to ensure that the CCS strategies and solutions adequately meet them. So this is in its early stages of a pilot program and that is essentially why the costs are obviously more expensive than established technology.

Ms PENNICUIK — Thank you for your answer, Treasurer. The rest of the world seems to be looking at renewable fuels such as wind and solar when thinking of hydrogen. So we seem to be building in obsolescence — to steal one of your phrases with regard to this particular project — using brown coal. You mentioned CO2 emissions. Has the government estimated or does it know what the emissions will be with relation to this project?

Mr PALLAS — Well, I think there is no doubt that in terms of large scale production this project is going to need to have a carbon capture and storage solution, which will be a necessary condition of the HESC pilot project to progress to full commercial scale. The CarbonNet project was clearly funded by our government together with the commonwealth and other partners. The exploration —

Ms PENNICUIK — Sorry to interrupt you. Is that solution built into this $53 million, or the $100 million — the carbon capture and storage?

Mr PALLAS — Sure. In terms of the substantial numbers, I have them here but I will hand over to the deputy secretary to just take you through them.

Mr BETSON — In terms of the coal for the trials, 160 tonnes of coal will be processed. I do not have the exact figures in relation to the emissions, but relative to the coal policy, which —

Ms PENNICUIK — Sorry, you do not have them — or you could get them, on notice?

Mr BETSON — I do not have them in front of me? We can take that question on notice.

Ms PENNICUIK — Yes, can I take them on notice, then? Thank you.

Mr BETSON — The coal policy stipulates a threshold of 27 000 tonnes in relation to the emissions and it being activated for new coal projects. So, in relative terms, the emissions for the project are relatively low and the consortium has agreed to fully offset all emissions for the project.

Ms PENNICUIK — Thank you for that answer. I may follow this up at another date, but I just want to ask another question and it is one I have asked before with regard to the Advanced Lignite Demonstration Program, which seems to have fallen over. There was $90 million assigned to that project. I wonder what has happened to it — you might have to take this on notice — why did it come to an end, where is that funding in the budget and where is it going to?

Mr PALLAS — That program was established in August 2012. It was aimed to fund the development of pre-commercial brown coal upgrading technologies.

Ms PENNICUIK — Yes, I have been following it all that time.

Mr PALLAS — That is good.

Ms PENNICUIK — Nothing is happening.

Mr PALLAS — The program was equally funded by both the Victorian and —

The CHAIR — Order! We might take that question on notice.

Ms PENNICUIK — Thank you. A question on notice.

Mr PALLAS — I will take it on notice.

Ms WARD — Thank you, Treasurer. Could I please ask you to go to budget paper 3, page 129. There is a footnote at the bottom that talks about the higher 2018–19 allocations in the resources portfolio. Could you please talk us through the motivations behind that?

Mr PALLAS — Could you just repeat the question?

Ms WARD — Yes. It is budget paper 3, page 129. There is a footnote reference to the higher allocations in the 18–19 budget for the resources portfolio. Could you just talk us through that, please.

Mr PALLAS — Sure. As I have indicated, we have had a very substantial increase to this budget, the aim being to ensure that the 12.7 approved in the 18–19 state budget for regulatory performance will reduce investor uncertainty and also to deliver on the continuous improvement project. One of the things that we found, importantly, is that as a state we have had increasing obligations to improve the commitment that the state has made to being both more responsive to the needs of industry and appreciative of the concerns of local communities and councils being able to get adequate approvals for their projects. Earth Resources Regulation will be receiving substantial funding. If I went to the 18–19 planned expenditure, we have got $10.9 million in funding approved for new resource initiatives, 4.9 for continuous improvement in the regulatory improvement program, three for additional capacity for the regulator, 1.3 million for extractive resources, 1.7 to support the functions of the Latrobe Valley mine rehabilitation.

There is $67 million for the CarbonNet project in 18–19. These are higher allocations, so additional funding for the CarbonNet project, which reflects the next phase of that work program that involves the drilling of offshore appraisal wells *****in Bass Strait. There is $14.4 million for the Victorian gas program, which reflects a rescheduling of the underground gas storage works in 2018–19, and the continuation of the onshore geoscience works. That is aimed at improving the understanding of the risks, the impacts and also the benefits of potentially extracting resources. That is pretty well much a run-down on it.

Ms WARD — Thank you. Treasurer, you mentioned in your response to me then the Victorian gas program. It would seem to me that the science is clear, and I am happy for you to correct me, but the science does seem to be clear from what we are learning — and I do understand that there are those who do not seem to be comfortable with science, but when the science is clear it is hard to argue against it — that there are very low quantities of recoverable conventional onshore gas in Victoria. Can you talk to us about these findings in a bit more detail, and how the ongoing work that the program is doing is likely to change these findings?

Mr PALLAS — Sure. The Victorian gas program is a science-led innovation. It is a process that is being led by the lead scientist, and the government's comprehensive program of research and geoscience includes building 3D geological models of the Otway Basin, which will provide the foundation of gas resource estimates, undertaking some rock characterisation studies. I can have Anthony here take us through why that is important, but it basically tells you whether or not there is a storage capacity in the rock for the purposes of giving it the characteristic of an extractable resource. We are conducting environmental benchmarking samplings of groundwater in the Otway Basin and assessing options for additional onshore underground gas storage, which the CSIRO and industry are involved in. It is about ensuring that we support offshore development of gas, that we understand the opportunities for underground gas storage and that we understand the risks and the benefits of onshore conventional gas. So put this into perspective: so far the first report that the lead scientist has produced has identified about 100 petajoules of potential resource in the Otways area.

Ms SHING — The Leader of The Nationals reckons it is going to bring everything home — 110 petajoules!

Ms WARD — What would 100 petajoules do?

Mr PALLAS — About six months of domestic supply.

Ms WARD — That is all it would supply?

Mr PALLAS — Yes. Whereas you compare that to the commonwealth's Offshore South East Australia Future Gas Supply Study, which has estimated there is 3.8 trillion cubic feet of gas reserves offshore near Victoria and a further 3.7 trillion standard cubic feet of contingent resource. Most of these resources are likely to be located, to put it more directly, in commonwealth waters, but —

Ms WARD — So you talked about 110 petajoules only lasting us for six months. How much would this trillion be, that you have just mentioned?

Mr HURST — I think it is 20 years.

Mr PALLAS — It is about 20 years of known resource and probably another 20 of the additional estimates, if I could put it that way. But I think the —

Ms WARD — So it is a bit chalk and cheese.

Mr PALLAS — Yes, absolutely. If you look at the AEMO report in March of 2018, the *Victorian Gas Planning Report*, there were 435 petajoules of gas produced in waters offshore from Victoria in 2017; a total of 218 petajoules was actually consumed within this state and the rest was exported to surrounding states. It was a small amount that went externally — overseas exports — but basically the message here is we have more than sufficient to meet our needs. It is the peaking of the price through the export that has led to the so-called shortage of gas.

Ms WARD — Thank you. If I can get this right, Victoria is unlikely to have substantial reserves of conventional onshore gas, so what then is the future for offshore reserves and production in Victoria, and what is the government going to do to support this production?

Mr PALLAS — The first thing I would say is I would wait to see what the final conclusions of the lead scientists are.

Mr D. O'BRIEN — He has been sprouting it all morning.

Mr PALLAS — We have been pretty anxious to ensure that —

Ms WARD — So you are actually wanting to rely on the science. As opposed to conjecture or crystal ball gazing, you actually want to rely on the science?

Mr PALLAS — With the first report — there are a number yet to come, and we are expecting a final report by 2020 — we will have a full appreciation of what is an extractable resource and whether there is any commercial viability for that resource. Might I say, given that the standard time to actually tap into a newfound resource is somewhere between seven and 15 years, the obvious value is to look at our known offshore production and its reserve. The Victorian gas program is undertaking a series of geoscience and environmental studies into the risks, benefits and impact of onshore conventional gas, and that will be completed around about 30 June 2020, as well as promoting further exploration of offshore gas and gas storage.

The Gippsland Basin has produced approximately 90 per cent of Victoria's and nearly 50 per cent of the eastern Australian gas market. That is in offshore reserve. The Otway Basin has produced gas since 2005, and it currently provides about 20 per cent of gas produced annually in Victoria, so that gas program is focusing on assessing the resource available within the Otway Basin. It will build a 3D model, and it will provide a foundation for a credible gas resource estimate. We are conducting that environmental benchmarking, sampling of groundwater in the Otway Basin and data on ground chemistry and methane concentration.

So to cut a long story short, there is about 24 petajoules of new production forecast to commence in 2018 at Cooper Energy's Sole field within the commonwealth waters in the Gippsland Basin, near Otways and with a possible increase for future offshore gas near Manta in 2021.

Ms WARD — So it would be safe to conclude that, for our friends opposite, there is a fair bit of scaremongering going on in this space.

Mr PALLAS — The problems are genuinely real, but they are supply and demand, and the demand is not a domestically inspired demand. It is an offshore demand. There is no doubt that businesses are seeing a problem associated — and households — with peaking of the price, but the fault lies at the failure to adequately protect domestic reserve.

Ms WARD — Briefly, Minister, you mentioned the CarbonNet program in your response. Can you try and smash something out for me quickly and then give me the rest on notice?

The CHAIR — Order! Just take it on notice.

Mr PALLAS — I will take it on notice.

Ms WARD — I appreciate that, Treasurer.

Mr D. O'BRIEN — Minister, could I confirm, did you just say that it would take seven to 10 years to bring onshore gas onto the market? Is that what you just said?

Mr PALLAS — It is seven to 15 years, and in fact I can ask Mr Betson to take you through that. That is from the point of discovery of the resource.

Mr D. O'BRIEN — Seven to fifteen years, did you say? I just wanted to clarify that that is what you actually said. That is not actually my question.

Ms WARD — You need to have context.

Mr D. O'BRIEN — Context was given in the response to your answer; I just wanted to clarify that that was what you said.

Mr PALLAS — This is at the point of discovery of the resource, yes.

Mr D. O'BRIEN — Can I go back to my question before. Did the department or Treasury, Minister, undertake any modelling on what the coal royalty revenue would have been had you not tripled the tax and led to the Hazelwood closure?

Ms SHING — Is that a hypothetical, Mr O'Brien?

Mr D. O'BRIEN — That is what budgets and modelling are, Ms Shing — hypotheticals.

Mr PALLAS — So what was your question, Mr O'Brien?

Mr D. O'BRIEN — What would the coal royalty revenue have been had you not tripled the tax and Hazelwood closed?

Mr PALLAS — Well, look, Treasury has done a bit of work around that. While the end of the Hazelwood operation would reduce the brown coal royalty to the state, it is likely to be partially offset by the increased output from the remaining mines and the associated power stations. Exactly what those numbers are I will have to take on notice and give you the answer.

Mr D. O'BRIEN — Perhaps to assist you, Treasurer, if you look at your 16–17 budget, for 17–18, for example, the royalties are forecast to be 122 million, and yet this year they are forecast to be 100, so that is $22 million. It is hardly a marginal reduction based on the previous budget.

But anyway, can I also ask you to take on notice the company breakdown, so the breakdown of payments made by the various companies under the coal royalty since the rate was increased in 16–17?

Mr PALLAS — Sure.

Mr D. O'BRIEN — Can I move on. You talked about the Latrobe Valley mine rehabilitation commissioner. Has the additional $5.4 million been allocated for tasks that might consider the closure of additional brown coal mines such as Yallourn?

Mr BETSON — The 5 million allocated in the budget is to enable Rae MacKay to exercise his statutory functions, which involves the employment of staff to enable him to work with the department and operators to consult with communities around the preparation of the Latrobe Valley regional rehab strategy, which is due for completion in 2020. The regional strategy is just that — it is a regional strategy that covers the three mines, considering the interconnected issues associated with that and also the technical feasibility of issues associated with rehabilitation, including geotechnical and water studies, which our colleagues in the environment department are leading.

Mr D. O'BRIEN — So that will be completed when, 2020?

Mr BETSON — June 2020.

Mr D. O'BRIEN — June 2020. The budget also says that the funding will be for the commissioner to promote economic development within the Latrobe Valley. What does that mean with respect to mine rehabilitation?

Mr BETSON — As part of the Latrobe Valley regional rehab strategy and the work of the government, there are opportunities in relation to the regional rehab strategy and what can be left for the community post-rehabilitation. So part of that consultation with the commissioner, but also government more broadly, will involve considerations around future land use, both for the mines themselves and for the land adjoining the mines.

Mr D. O'BRIEN — Can I move on to the issue of mining and exploration licences. In 2016–17 the expected outcome for exploration licence applications for mining industry work plans and mining licence applications processed within the regulatory time frames was meant to be 95 per cent, and yet in the budget papers this year the actual outcome for 18–19 is predicted to be 68 per cent. Why has that fallen so dramatically?

Mr PALLAS — Sorry, could you give us the budget paper reference?

Mr D. O'BRIEN — It is BP3, page 128. In short, the regulatory approvals have fallen dramatically, and it is holding things up, Treasurer. That is what I am asking: why has that happened?

Mr PALLAS — We have seen a fall in 16–17 from the 15–16 actual, from 71 to 68, but what we are seeing in terms of expected outcome in 17–18 is 80. The lower than expected outcome in 2017–18 reflects —

Sorry, I thought I had an answer to that. The actual volume of mining licence applications and the mining work plans of the variations received in 16–17 and 15–16 was 69. The total applications and the work plans and variations received jumped to 128 in 16–17, which was an increase of 86 per cent. This increase in the volume of regulatory requests has contributed to the regulatory approvals backlog. So we have had this increase in applications, and that has led to a backlog. We note that the regulatory request process within that statutory time frame has increased from 49 to 87 over that period.

Mr D. O'BRIEN — For example —

Mr PALLAS — Just a volumetric thing, Mr O'Brien.

Mr D. O'BRIEN — Well, it has been a significant backlog, as you have alluded to. Some of the companies were affected by this. For example, Boral were forced to wait almost 12 months to get a permit to construct a road in their own Deer Park facility. How much has that contributed to shortages and cost blowouts in infrastructure projects in Victoria?

Mr PALLAS — There is no doubt that there have been issues at the Earth Resources Regulator, and the government is making very substantial efforts and investments to make sure that those backlogs are adequately addressed. If I can give you an appreciation that, as of 2 August 2017, the total number of applications on hand was about 238. We have now reduced that number as of 3 May to 156, so very substantial inroads are being made. That is why the additional resourcing is being put into the Earth Resources Regulator. I accept fully that the obligations on the state are to provide an efficient and responsive regulator, and that is why the applications — the plan applications on hand — have dropped from 48 in August 2017 down to 23 and the number of applications exceeding statutory time frames have dropped from 33 down to 9. We are making quite considerable progress in addressing that backlog. It will require a resourcing commitment from the state. That is why the funds have been directed as they have.

Mr D. O'BRIEN — Likewise, Treasurer, the Hoddle Street streamlining project has blown out in costs by over 100 per cent from an estimated total investment of 56 million in 17–18 — bear with me — to over 108 million in the 2018–19 budget. How much of this blowout has been due to raw material shortages?

Mr PALLAS — I do not have the specific figures, but I have made the point earlier, Mr O'Brien, that when it comes to the peaking of price, our raw materials and raw material shortages play a substantial role. They represent about a third of the cost of our construction materials. One would expect that it would have a comparable impact.

Mr D. O'BRIEN — So that a third overall?

Mr PALLAS — About 32 per cent of our total infrastructure costs are raw material related, so to the extent that those prices peak they will play a significant role in adjusting upwards the cost of existing and future projects.

Mr D. O'BRIEN — What would be the dollar figure of additional costs to taxpayers then if every announced infrastructure project in this year's budget experienced similar raw material shortages to the Hoddle Street project?

Mr PALLAS — Of course the state needs to put in place appropriate strategies to address that, and that is exactly what I have taken you through. Make no mistake, this is a challenge, and it is challenge of success. The state is now placing considerable demands on our raw material providers. Our expectation is that we need to work a lot more constructively with industry, the regulator and the communities, particularly councils, to ensure that we get those resources made available.

Ms PATTEN — Thank you, secretaries. I just wanted to get some more information about your brown coal initiatives that were announced in July 2017. Could you give me an update on how many projects there are? I was also wondering if you could also touch on how these new brown coal initiatives will meet our zero targets for 2050. I noted when the minister was announcing it last year, he said:

> The Victorian government said its new brown coal policy would focus on using coal reserves in a 'low emissions setting' —

and presumably contributing to our 2050 target of net zero emissions.

Mr PALLAS — I think we have been pretty clear that when it comes to Victoria's brown coal deposits they remain a significant public asset and they deserve to be considered as part of the future. In July 2017 the government released the *Statement on Future Uses of Brown Coal.* That statement was aimed at providing some certainty, both for the community and industry, around our stance on future brown coal usage. We are working to implement key commitments listed in that statement. Through the coal statement the government is committed to maximising the value of Victoria's brown coal in the low emissions context and consistent with our zero emissions strategy by 2050. The government has also adopted an open-for-business approach to supporting new coal projects. We are considering new opportunities on a case-by-case basis. That is why the government is supporting world-class demonstration of an international supply chain converting Victorian brown coal to hydrogen liquefaction for export to Japan.

Ms PATTEN — Have any projects been funded?

Mr PALLAS — If we are talking carbon capture and storage, no. No projects.

Ms PATTEN — So there are none to date.

Mr PALLAS — Yes.

Ms PATTEN — Have we issued any more brown coal licences in this period? New licences.

Mr PALLAS — No.

Ms PATTEN — In a nutshell, the announcement in July 17 is still in the pipeline and we have not seen those new projects.

Mr PALLAS — No, and we may not see them because the government has pretty rigorous obligations in terms of emission standards around brown coal. I have been pretty clear about this. The advanced lignite funding — we terminated that program largely because they were failing to meet their performance obligations. From our perspective, either you meet the obligations contained in those arrangements or the funding will not be made available.

Mr BETSON — In addition to the project focus, also there are other deliverables under the coal statement in terms of setting the emissions standard, the EPA regulating that emissions standard, having an offset policy in place and fully implementing the Hazelwood mine fire inquiry recommendations, as well as continuing to deliver the CarbonNet project.

Ms PATTEN — If I could just touch on another area — and I did speak to your colleague Daniel Mulino about this — I would love to get some more information on the support for localised infrastructure and affordable housing. This is through the growing extractive resources. I think I understand how that links to affordable housing, but I am wondering if you could elaborate for me either now or on notice, and how that is going to make the housing more affordable.

Mr PALLAS — Can I just clarify quickly that KHI have used an existing licence arrangement — that is the AGL licence for access to the coal — so that might have caused some confusion.

Mr BETSON — In relation to the link to extractives, the minister mentioned the 35 per cent contribution of costs of raw materials. Those raw materials can make up cement, concrete, tiles, bricks — a number of attributes that houses are built on, pardon the pun. Therefore those costs are important as is ensuring that we have access to the raw materials as close to the market as possible, hence the link in terms of the cost and access to raw materials and its importance to housing affordability and then major infrastructure projects.

The CHAIR — Order! I would like to thank the witnesses for their attendance: the Minister for Resources, the Honourable Tim Pallas; Mr Betson, Mr Hurst, Mr Krbaleski and Mr Hanney. The committee will follow up on any questions taken on notice in writing. A written response should be provided within 10 business days of that request.

Witnesses withdrew.