

ECONOMIC DEVELOPMENT AND INFRASTRUCTURE COMMITTEE
Inquiry into greenfields mineral exploration and project development in Victoria

Melbourne — 14 December 2011

Members

Mr N. Burgess
Mr M. Foley
Mr W. Noonan

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Witnesses

Dr J. Hamilton, Chief Executive Officer, and
Mr S. Manallack, Consultant, Exergen Pty Ltd.

The CHAIR — Good morning, gentlemen. My name is Neale Burgess, I am the Chair. On my right is Martin Foley, the Member for Albert Park and Deputy Chair. On his right is Wade Noonan, Member for Williamstown; Inga Peulich, Member for South Eastern Metropolitan and on Inga's left is Geoff Shaw, who is the Member for Frankston.

This is an all-party committee that is hearing evidence today on the Inquiry into greenfields mineral exploration and project development in Victoria. All evidence taken at this hearing is protected by parliamentary privilege; however, comments you make outside of the hearing are not afforded such privilege. Could you each please state your name and business address.

Dr HAMILTON — Jack Hamilton, I am the CEO for Exergen Pty Ltd. As of this morning we are at Level 27, 101 Collins Street; we moved last night.

Mr MANALLACK — Steve Manallack, Manallack Pty Ltd, consultant to the Exergen Group, at 24 Glenferrie Road, Malvern.

The CHAIR — And you gentlemen are appearing on behalf of your businesses?

Dr HAMILTON — Yes.

Mr MANALLACK — Yes.

The CHAIR — Thank you. Would you like to present your submission.

Dr HAMILTON — Thank you, Chairman, ladies and gentlemen. By way of short background before I then turn to the actual submission, Exergen is a Melbourne-based company developing Australian intellectual property originally developed out of Queensland University and working to take that through to commercialisation. The primary focus over its 10 years of development so far has been on dealing with the moisture issue for high moisture coals, thus we have a strong interest in Victoria given its world-class resource of Latrobe Valley with high moisture coals, it is a very low energy process designed at trying to see those coals developed in a sustainable way with minimal emission impact from its development. Our shareholders include Tata Power, India's largest private utility; Itochu, one of the major trading houses from Japan; Thiess from the Leighton Group; and Sedgman, who is a listed engineering coal development specialist, so we have very strong backing. We are a private company, we are not listed at this stage.

Turning, if I then could, to the submission. The focus of my comments is very much around the future development of the State's Latrobe Valley resource so comments are not directed at your full range of criteria — it is very much directed to the coal in the Valley. As a state asset it is a world-class resource in energy terms. DPI put the economic resource at about 33 billion tonnes and traditionally say that there is 500 years of mine life at current use. I tend to dismiss the 500 years; the world will have found an alternate energy source well and truly before it ever sees 500 years of resource so the State actually is sitting on an energy asset that, in my personal belief having worked in the energy sector for 30 years, has a window to be sustainably developed and of economic benefit for the people for about the next 50 to maximum 100 years and then hopefully the world — on one of my other projects of geothermal — will actually replace it on a low emission basis. To convert that in energy terms, 33 billion tonnes is equivalent to 250 trillion cubic feet of gas. That is twice the size of Australia's current proven gas reserves, that is how large an energy resource this state is sitting on. My personal interest as a Victorian is to see that energy develop for the benefit of the people of Victoria.

As a coal it has excellent features: it is low in ash, it is low in sulphur, it is very economically mineable so they are all its positives. Its drawback — and particularly with shift in community expectations around emissions — is its high moisture content and water content. To see it develop sustainably, that emission impact needs to actually significantly improve from its current applied usage for seeing that benefit develop, and obviously that is Exergen's focus in where we are converting our technology.

The way I tend to think the Latrobe Valley, as we have outlined in the submission, is that it is not about exploration in the traditional sense of minerals — as you are probably dealing with in another aspects of this Inquiry — the resource is actually very well-known, it has been drilled to death down there, so it is not about exploring it for the resource there, it is about exploring it for technology that will allow it to develop.

The CHAIR — So we know where it all is?

Dr HAMILTON — We know where it all is.

The CHAIR — Do we know the quality of it all?

Dr HAMILTON — We know the quality of it all. The SECV has put so many boreholes in there it is very well identified so there is no exploration, and even the likes of those that got an allocation back in 2002, Anglo and Loy Yang have done no drilling on their exploration, what they are doing is technology investigation. So think of the technology as the aspect of exploration risk that you would deal with if you are talking to a gold prospector or mineral sands, actually the technology is the same aspect in the thought process of where it sits on the risk.

The last commercial development in the Valley was effectively the late '80s, so it has almost been 20-odd years since any commercial development has happened down there. Victoria is my home state where I grew up so I did make a comment to the Secretary of DPI that it has not changed since I was a kid in terms of technology, not for want of trying but that just puts the technology development issue at the core of seeing how can you find a technology to develop this responsibly.

In terms of state benefit, the State has enormous opportunity to see its continued development. At Exergen alone, we had independent economic modelling done for us and it has been provided to the respective relevant departments so it is available inside the government system, but in simple terms that modelling showed for a project that would see about one billion tonnes of the resource developed over a 30 to 40 year life would return something like \$34 billion in money of the day — about \$15 billion in today's dollars — to the State and Federal Governments. It would increase Victoria's gross industry output by some \$12 billion over its first 10 years of development life and would create 5000 jobs in regional Victoria, basically in Exergen's case split between Latrobe Valley and Western Port. If that is just one small example of how \$34 billion could actually get accessed, it is a tremendous economic resource that is currently not being actively developed.

Turning to perhaps some suggestions the Committee may consider in its deliberations. In the way the regulations are set the Latrobe Valley is exempt, it is an exempt area, so the only person that owns and controls and decides on that is actually the State of Victoria; you cannot apply for ELs, there is no process in government that allows you to actually access coal in the Latrobe Valley. The last time an access process was run was 2002, so for anyone developing something there is no process currently in government that allows you to actually seek coal or get coal support for seeing future development.

The majority of that coal asset is actually held by the Government, there is a limited amount out in private hands. I cannot go into those limits but they also have restrictions on what they can do in the way they have been allocated so on something we are doing, for example, one of the largest holders cannot actually talk to us because it is not in their rights of how it was granted to apply. There is a tremendous asset with no way of actually currently getting access to it as an industry development, so the State itself is therefore the largest resource developer but actually does not view itself as one. The exempt nature of that resource actually puts the State in that position and our suggestion is it needs to actually think of itself as a resource developer and how as a developer would actually see that asset leveraged responsibly.

Thoughts to that and suggestions are the encouragement of programs that are in place for that early stage, which are things that the Government is doing through Brown Coal Innovation Australia, that small scale research and early stage development support. From there, one of our suggestions is a much stronger collaborative approach with private sector in terms of how it could develop this. The State as a resource developer has tremendous coal assets, it obviously has some financial resource but it is not a financial resource that typically from a state you would look to leverage into early stage exploration risk, if I put that around the technology. That is actually what the private sector does, it has done it for 150 years in exploration and this is no different than exploration, so the equity markets will support it and we have had that at our example with our investors behind us but the way it gets supported is if the technology develops the same as if you were doing it in minerals, in gold, the technology is there to develop it, you do not know whether the gold is there so you explore the risk. In Latrobe Valley's case you know the coal is there but you explore the risk through technology. If the technology works you need to understand you can roll it out into some commercial development, and currently there is not a process to allow that in the state.

One of the avenues that the State can have is to actually use the coal allocations in a responsible manner where the private sector can actually leverage access. A number of these projects and the nature of technology in this stage do fall over; it is certainly not bankable by any means and even I would not represent that at Exergen we have proven a pilot scale, we are ready to demonstrate at commercial scale. Commercial scale for us, for example, requires \$80 million of investment over the next three to four years. To attract that investment our investors obviously would like to have certainty that if that works and its proven then they are able — still going through normal regulatory process — to have confidence they could develop it to a commercial project. But that money is available on a risk basis, the State benefit of course is that basically it could loan the coal in terms of the commitment on a very strong ‘use it or lose it’ principle against a certain timeframe if that is proven up and the industry delivers what it says then the coal would be there to support commercial development and that way the State leverages future income with very low- to no-cost out in what it is doing in day one. That is, I think, step one — a typical resource developer would do that, they would go out having a resource and farm in other money to see the development of that and that is effectively what the State would be doing on a commercial risk basis.

Things like ETIS funding, the programs are there again and we would certainly strongly encourage that. They effectively focus on commercial type deployment. One issue we would suggest to the Committee to consider is ETIS over its six- or eight-year life has announced something close to \$410 million of funding awards. Our information is there is less than 20 per cent of that being drawn down. Of course it is not drawn down, we know one party has returned \$50 million who was not able to draw it and goes back into general treasury so that program is good for announcements. Not wishing to be sceptical, but its purpose is to see the asset in the State develop and if the money is actually returning back to general purposes you are not investing in supporting what you think.

The same comments that I make about coal — which are very much ‘use it or lose it’, so against what you promise you deliver or it falls away — and ETIS funding should sit with very strong similar type of guidelines. I will not go into how Treasury works of how it would return back but that program is very effective in obviously what it does support but it is actually not coming through to things on the ground. We would encourage consideration of the stronger use of effective funding as again introduce ‘use it or lose it’ principles around that but with a life that it continues to be available to develop the asset of its intent.

The resource itself, as you move forward into commercial demonstration or even commercial, one of the things would also obviously be seen it develop in its most optimal way. The Chairman of my company would probably kill me for suggesting this but you do not want to see multiple mines develop down there. The suggestion would be that the State would be considering the development of either a super pit-type concept where multi users would actually draw from it. That is not necessarily commercially easy, as outlined in the submission, but it has actually been achieved in mega projects in at least a couple of places in the world. Kalgoorlie’s super pit is actually one where it is a shared development resource where multi owners actually own that. It developed out of something that was already there but my background is gas, and Atlantic LNG, which has now had over \$16 billion of investment going into develop that, has developed on the same basis where there are different ownership in each of the expansion phases of that project and was set up that way from day one to facilitate the development of the gas resource in the vicinity Trinidad. I am not suggesting it is easy, and there are probably better commercial minds that could help turn their attention to a solution, but it is something that would be well worth exploring to develop a commercial model that would see an optimal use of that resource so that the State does not strand part of it or then facilitates multi accesses technologies to develop or they fall over on the way that that can be reallocated.

Thinking about that now, there is nothing in front of the State at the present stage for that is the time to do it when you are able to set up that structure that then for investors, such as ours from India and Japan, actually do see that open commercial nature from the State that is actively interested in seeing its resource developed. Going a step beyond that, one of the other challenges after commercial demonstration is first commercial deployment and, again, the State does have potential to leverage either through use of financing, power offtake contracts, things that help get the first deployment of technology at scale away because that is still a high risk.

I see comments at federal level at times about ‘Why would government do this when banks do not?’. One thing to think about, the banks just get the interest rate, so if they loan you \$500 million they will get eight or nine per cent return on it. So they will look at it that they can loan it to you at eight or eight and a half, the difference is only half a per cent on the risk. The State would get a similar commercial interest rate but it actually also gets

job creation, economic development, royalty return; its economic return on that asset is significantly greater than a bank. It can take that into account in how it views getting a risk return on anything it may decide. Again, there is nothing in front of the State but it is an opportunity of things that could be developed.

In closing, just to reiterate, it is a world-class energy asset. I have worked this business for 30-odd years in different sectors. It is an asset that has helped underpin the economic development of Victoria for the 90 years since General Monash was appointed into the SECV in 1926 to kick it off. To see it develop for the next 90 years and doing it sustainably and meeting community expectations, it is about exploring the technology and putting the building blocks in place that the State can leverage its asset whilst minimising its risks and let the private sector actually assist in seeing that development. Thank you for the opportunity.

The CHAIR — Thank you. You have finished? Okay, thank you very much. To either one of you: where do you think we are at as far as developing low emissions technology?

Dr HAMILTON — There are a number, Mr Chairman, that are developed at different scales. We have some that are still in to be shown a pilot scale, and one of the key issues is in the dewatering drying space, and I think DPI will actually acknowledge the technology. If you can not take the water out with minimal emissions then however you use the coal subsequently becomes a secondary type thing. There are probably 30-odd technologies around in that space, probably only less than five would be ready to go to commercial demonstration, and Exergen is one of those five at this point.

With these technologies there has been a lot of effort. One of our board members worked on one version of it, worked very well at pilot scale, but you could not actually scale it up. I ran the North West Shelf, South Australia's largest resource project, so I always tended to think big so three years at Exergen has been very focussed on you have got to be able to take this for a scale because if we are actually playing into the power game or the large energy export game you are doing it at scale, you are not doing it at half million tonnes per year or things like that. It is not saying they are not economic but they just do not make an impact, they do not make an impact in the sense of the scale of the resource. Commercial readiness for deployment, very few. As I said, a handful of probably ready to commercially demonstrate, of which we are one, so it is still a challenge, it is exploration risk through technology.

The CHAIR – What is your assessment of where we are heading with this?

Dr HAMILTON — I think there is a general willingness through branches of government to see it develop but, to be honest, having lived a number of years in resource states, Victoria — not to be derogatory about my home state — is not a resource state; it struggles to actually understand resource projects. In an economic sense, Victoria has not had very many large commercial projects in any sense. EastLink has been quoted but, to be honest, that is a government project and private sector large scale projects — I actually struggle to remember the last one, I think it was about 15 years ago. When you are talking mega project, in my language it is anything \$1 billion or above. There have not been very many of those investments in recent times. I think there is a willingness but there is a lack of understanding of what it takes.

One of the things we do comment on in the submission is a need to a degree for a whole-of-government, because you do cut across almost every branch of government. Obviously DPI is the resource holder but — I forget what it is called now — Invest Victoria; DBI; obviously EPA eventually; sustainable development; transport; infrastructure, every branch of government will be touched. The understanding of what it takes is not there at the moment. Willingness, perhaps yes, but it needs a significant push to get across the inertia.

Mr FOLEY — If I could ask a couple of questions. Thank you very much for your submission. As you said, the Committee has got a very broad range in terms of reference into the idea of greenfields development in what you have described. I think we have found the general industry perception that we are not a big resource state in the terms of Queensland, Western Australia, and I think increasingly South Australia, but your model of the collaborative approach and the shared resource based model got me intrigued and it took me back to, as you said, the last coal allocation of the state resource in 2002, and from what you said I think it might have been before your time — I am not sure Exergen was in that race?

Dr HAMILTON — Exergen was literally registering its patents at the time. From what I am told by my Board, they had the dilemma of did they apply, given they were far too premature at the point of development,

or if they did not apply given the State had not run one in at least 10 or 15 years before that, therefore when is the next one? So they did apply but they were literally registering the patents at the time.

Mr FOLEY — I recall in the last parliament, the last term of government, Firecone produced in 2007 a report for DPI about the whole public coal allocation process and the amount was out there. If my friend Dr Google — I had a quick look after reading your material, and I am pretty sure that that suggested there was 13 billion tonnes of brown coal allocated in the Latrobe Valley and from their view — I am quoting here — there was potentially 40 years in current rates of resource, and that sort of equates with your timeframe of what you think the resource is out there for. And they recommended, and I quote:

‘The Government should not allocate all available coal now, as has been suggested. Private companies already have coal allocations well above their medium terms requirements. Anyone with a commercially viable coal project should be able to negotiate an offtake arrangement with one of those companies’.

Given your views on the ‘use it or lose it’ model and the arrangements of a collaborative approach, how do you see the fact that government has allocated, if Firecone and DPI are right, substantial amounts for the next 40 years on current — then 2007 current rates — how does that impact on the sort of approach that you guys have taken, as I understand it, from the brief we have received from our Committee staff, essentially an export focused approach?

Dr HAMILTON — That is where we started, we have actually also added a domestic power side based on the work — we have just finished two years of collaboration with CSIRO that is looking extremely encouraging for low emission power application at emissions sub 700 kilograms per megawatt hour dispatch.

Mr FOLEY — I suppose the first things that intrigue me in terms of your collaborative shared resource argument based around the exploration retention mining licence approach, how would you see that working in a resource like Latrobe Valley brown coal where the agency of government that holds the resource — which is also the regulator — has supported advice that says there is enough allocation out there in the market now? How it is in the market is the question for the next 40 years.

Dr HAMILTON — There were three allocations made in 2002. One of them is about 0.2 to 0.3 billion tonnes. That project is still seeking to move forward but it is tied up in the courts. The other two are both dead. There is no development on either the other two; one is a nominal one billion tonne allocation, and the other one is headlined at 10, that is how it gets to 14, but it is actually closer to four in real terms. That project died two years ago. I have been in this role for three years and we have sought to commercially negotiate with two out of those three allocations. We are still here today with no means forward and that gives you an idea perhaps of commercial reality of statements like that.

In one participant’s case — in fairness to them — against a scheme of what we have, we would take all of their allocation, and given we are still in early stage you get into a chicken and egg: they would not want to commit too early because we take away all their optionality — I can understand their position — but from our side is you need that sort of coal to develop the sort of project infrastructure and risk that we talk about for development. So you get into a chicken and egg situation. For the other player, we have had a number of attempts and have never been able to get beyond a first two or three meeting. We are trying to have a further attempt at the present stage but that gives you an idea of commercial reality. The retention licenses — which have only been regulated and due for gazetting in February next year — do not apply to the large holder; they have a mining licence to 2056, so that gives you an idea of commercial reality. Maybe there are non public disclosed restrictions in that, which we are not privy to, but if you are holding at 2056 from public domain we do not see a withdrawal. It may be a hint of what drives commerciality.

DPI, in fairness, is trying to seek and put in place a retention licence, which was missing for the Valley between an EL and an ML, so that is an encouraging step because it does set up the ‘use it or lose it’ mechanism, whether that applies retrospectively so commercially there is actually very limited coal out there; the Government is sitting on a lot of it. In fairness, it could be the same for us, Deputy Chair. We have a number of risk steps ahead of us, our investors are willing to take those risks, but they can also fall over. Technology, whilst proven at pilot stage, a lot of these technologies do fail to commercial stage — and I will get that recorded because we will be able to get an R&D tax claim. We are obviously very confident, our investors are confident, for example around our technology, but the reason we do a commercial demonstration is to actually see that it works at next scale, and things do not always work.

Mr NOONAN — Thanks, Chair. One of the terms of reference for this committee is to look at the success and failure of projects in Victoria's mining development pipeline. We understand that Mantle Mining has recently announced to the Australian Stock Exchange that it entered into a preliminary joint venture agreement with Exergen. Whilst you have not covered that within your verbal submission, I just wonder whether you are in a position to better explain to the Committee the details of that particular agreement, firstly, and, secondly explain what support, if any, that you have sought from the Victorian Government and the details of that support?

Dr HAMILTON — Around the Bacchus Marsh development?

Mr NOONAN — Yes.

Dr HAMILTON — Relative to the agreement, I can only share obviously what is in the public domain, given that Mantle Mining is an ASX listed company. We have an non-binding Memorandum of Understanding that, under a number of terms and conditions, would see us move to binding agreements to do a joint development of Bacchus Marsh, should that prove up through the exploration phase. We are still in discussions around moving to binding agreements, that is the sort of current arrangement. That could see the development of Bacchus Marsh into a commercial resource but it is still very early stages — just finished four holes of drilling and results were released two weeks ago. I think they have 11 more holes to drill but in a typical exploration to commercial decision, that still has a number of years of journey ahead of it.

It has a number of issues: is the coal quality acceptable? Are the overburden ratios and type acceptable? That is what the drilling program is trying to confirm, obviously community acceptance. What is the application that you would develop for it? Would it be thermal coal exports? Would it a power generation application or some other nature? Obviously from an Exergen perspective we do look at it, it does have some advantages in the logistic infrastructure — the Melbourne – Ballarat railway line runs over the tenement so that gives you rail access to Port of Geelong as effectively there is no rail access out of Latrobe Valley of any sort of capacity. My competitors do tell me you can do rail access but I just make the comment: let me know when the first coal train is going through, I will stand at Federation Square and watch it go through Flinders Street. It will probably be the last coal train through Flinders Street.

Mr FOLEY — If that moves to a joint venture for all of that kind of work, you would be looking to export?

Dr HAMILTON — That is one of the options, Deputy Chair. It obviously has export infrastructure capability where you could start smaller. In the Latrobe Valley you do have to start larger because you actually have to overcome the logistics investment issue. For the export side — not so much for the Bacchus Marsh but for Latrobe Valley — we have a rather unique element in the way we process. We never boil the water, that is why we are a very low emission process, the water never boils so we do not waste heat boiling water, which if you look at existing generators for every two tonnes of coal they dig up they would have to burn that two tonnes to dry the third tonnes of coal, which is the actual tonne of coal that produces power, so that is why it is very high-emission. Exergen has a slurry process, so we can actually use pipeline technology to get from Latrobe Valley to Western Port or another port.

Mr NOONAN — I am also conscious when you ask a two part question that the second part gets lost. I just wonder whether you can explain to the Committee what support, if any, you have sought from the Victorian Government, even though it is early stages, but that would be useful to the Committee because it is part of our terms of reference?

Dr HAMILTON — For Bacchus Marsh at this stage I do not believe Mantle has sought any support so it is just normal exploration licence and consultation support, they need to move through their consultation processes as things develop. Exergen itself as a company — not specifically for Bacchus Marsh — but we have received over our journey \$2 million as support from the Federal Government.

Mr NOONAN — Not for this project, though?

Dr HAMILTON — Well, for the development of Exergen technology, which is then applicable back to Victorian coal projects.

Mr NOONAN — Broadly.

Dr HAMILTON — Broadly. We are high moisture coal; Victoria does not have much low moisture coal. Through Brown Coal Innovation Australia, we have been a recipient of \$1.3 million of support for a project that kicks off effectively now for the next two years, which is the follow-on of \$500,000 that ourselves and CSIRO have already spent developing low emission power applications for Victoria so we have already put significant risk money in place before we have actually had even BCIA funding.

Mr NOONAN — I just want to be really direct on this. Have you not had discussions with the Victorian Government about this particular project as a company?

Dr HAMILTON — Bacchus Marsh? No. Because we have no binding right to Bacchus Marsh at this point.

Mr NOONAN — That's fine.

Mr SHAW — Just really quickly, at federal level, the carbon tax and mining tax: how does that affect the people in the Valley, your business and consumers of the product at the end?

Dr HAMILTON — Carbon tax in two ways. One from our side is actually a help to Exergen because we are a low emission technology company, so carbon pricing signals actually help drive the use of these types of technologies, so that on one side is a positive. The power emission technology we are developing collaboratively with CSIRO would see from coal in ground to power dispatched numbers using Exergen feed technology around 675 kilograms per megawatt sent out, about 55 per cent lower than Hazelwood today. So actually carbon price signalling which pushes towards gases will see the next commercial price signal and will make that technology very commercial and we believe on the numbers that we have modelled, and CSIRO has verified, that we can put power out at about \$55 per megawatt hour out of Latrobe Valley, which is significantly lower than any gas forecast that is coming.

Mining tax, I do tend to make tongue-in-cheek references. I did make a comment back when MRRT was very political about 18 months ago that if Exergen is needing to pay MRRT I will be quite happy; we will have commercialised. It did, though, at the time certainly disturb a couple of my international investors, more so my Japanese investor who is also an existing black coal resource investor in Queensland. That was more around the mechanism of how it was approached, not necessarily the principle that if there is a super profit to be paid that it would see the retrospective nature of it, which has been dealt with in the subsequent revisions.

Mrs PEULICH — Thank you for your verbal presentation and your submission. Just to crystallise, what would be the three recommendations that would be at the top of your list for this committee to consider making to the Parliament?

Dr HAMILTON — One, Victoria to move proactively to adopt the nature of a resource developer and actively recognise the development of this energy asset for the State. Use leverage, the fact that it holds coal, to actually collaboratively seek private investing cofounding to get through the technical demonstration risk, so that the State can minimise the amount of money it actually has at risk by using the actual promise of the asset in ground with a very strong 'use it or lose it' principle to apply to both any funding support as well as coal support.

Mrs PEULICH — That is two.

Dr HAMILTON — That was two. The final one then for a third would be to actively develop a commercial model that would see the resource developer optimally for the State and start thinking now about how to do a super pit type consent, because commercially it is not easy but it is doable.

The CHAIR — Nothing more?

Mr FOLEY — If I could. Thanks, Chair. Working on that basis and the collaborative approach from the State and the private sector through a version of opening the system up a bit more, how do you see the current coal allocations that have not been used that are tied up, how do you see the mechanism of your model, or indeed any other models in that 'use it or lose it' approach, getting into that? Our terms of reference, whilst broad, are really mostly around the greenfields development.

Dr HAMILTON — All of them are greenfields that have been allocated because nothing is developed.

Mr FOLEY — That's right; you took the words right out of my mouth. But people know where the resource is and there are no surprises in that regard. Most of the terms of reference are kind of focused elsewhere so in that area where it is all established, and for want of a perhaps inaccurate term, a brownfields area we are really talking increasingly about coal policy, infrastructure, support and that kind of thing. From reading the material on the record about your company and its activities, its technology and its focus, you are essentially seeking access to what is, in my terms, kind of locked up or unavailable resource essentially. You have got Bacchus Marsh potentially and you are looking to the dewatering technology and you are looking to the State to partner with you in one way or another or facilitate any excess to the resource, but if it is predominantly export focused, like you said you have got to get it through your export markets, what do you see as the contributions from the State, or indeed the private sector, to develop what would need to be a substantial amount of infrastructure for a strategic statement of your website that said 12 billion tonnes of coal as an export facility?

Dr HAMILTON — 12 million per annum.

Mr FOLEY — How do you see the broader role of the State in all of those activities and who pays?

Dr HAMILTON — One of the things we have actually been crystal clear in all our discussions for the last three years with the State is the Exergen plan does not require state investment in infrastructure. As I mentioned, part of the trick of the technology is we are in a slurry so we can use pipeline, so you can actually pipeline from Latrobe Valley to, for example, Western Port; you have got your port access. Capital cost for that in our project plan is \$450 million, significantly lower than if you needed rail investment, and the problem with rail is you need massive volume and who is going to do the underwriting — leave aside who pays — but who is actually going to underwrite the project? My approach is I always welcome somebody else putting in infrastructure to get me there, it is purely commercial.

Mr FOLEY — You are a practical man.

Dr HAMILTON — Tariff. But I also like to have a plan that you can actually do yourself, and the Exergen plan is built around — because we have this pipeline in nature, there is an existing pipeline easement runs five kilometres north of the Yallourn mine, about 15 kilometres north of Loy Yang, and it finishes actually at the old BP site at Western Port.

Mr FOLEY — So you would run that on the gas line?

Dr HAMILTON — Same easement. Wherever the existing process facility would be, there would be a short amount of new pipeline easement to get connected to that, 15 kilometres.

Mr FOLEY — And you would pay for it?

Dr HAMILTON — Run in the existing pipeline easement, which is already a gazetted pipeline easement, and there will be some short end at the Western Port end, depending on final solutions down there. The only potential infrastructure might be, as I discovered when I was doing some preparation, if there is a plan to cease industrial development south of Hastings that will potentially take out access to a deep port existing Victorian asset and jetty, which sits off Crib Point at the moment, which had been our plan. So we would need to actually understand what the Western Port deep water access port plans were if we are north but we are actually also working on other options with the solution that might actually still allow us back to that through liquids export.

Mr NOONAN — What is your view of that, Chair?

Dr HAMILTON — Just being politically correct.

The CHAIR — I must declare an interest.

Mr NOONAN — Put something on record.

Mr FOLEY — Your supporters would be able to — would your business model deliver that?

Dr HAMILTON — Yes, that's right. But, of course, you are doing it at scale so we have to be at that large scale because that actually helps underpin that significant investment.

Mr FOLEY — I am no geologist and no project planner but — —

Dr HAMILTON — 12 million tonnes of export, very simply, is 26 million tonnes of raw coal mining, because the balance is water that we take out.

Mr FOLEY — Before you put it in the pipe, so this is dried up — —

Dr HAMILTON — We take coal and water from Latrobe Valley to Western Port, we would take the water away from the coal at that point by physical separation. The water has two pathways, three pathways possibly. One is that it gets returned and displaced as potable water for use in cooling towers back in the Valley, because we are laying the pipeline that is relatively economic to actually run the return line in the trench at the same time, so that is one possible way, and all future use of power is very high water demanding on all these new technologies. Another one, which does become political, is Victoria is building the largest reverse osmosis plant 80 kilometres away from Western Port, which you could actually feed this water to clean it up, and it would be done at the much lower operating cost and emission profile than seawater, so that is another solution. The third one is you develop an irrigation or alternate scheme for its use on Mornington Peninsula, but the two we work on is primarily the return to the Valley to displace potable water, cleaning it up with reverse osmosis, or you could feed it to the reverse osmosis plant.

Mr FOLEY — You would presumably cut the pipeline somewhere coming from Wonthaggi?

Dr HAMILTON — You would run subsea from Western Port around the bottom of French Island and bring it straight into the inlet.

Mr FOLEY — If I can ask one more.

Mrs PEULICH — Mr Chairman, we are over time.

Mr FOLEY — Just given our friends who are the next submission on the proposed joint venture with Mantle Mining — you are aware, now doubt, of the significant controversy associated with that, it has been in the media, and we have had some significant submissions on that. How would you see as a joint venture partner, and your preparedness to come and be upfront with us has contrast with the, quite frankly, difficulty we have had with Mantle Mining wanting to participate in any open way with this committee, and by the evidence that has so far been unchallenged with its community in dealing with those issues around exploration and development there, what does that say to you?

Dr HAMILTON — I am not going to venture to comment on how Mantle approaches things. We are a possible potential joint venture partner on a non-binding agreement that we are discussing converting to binding, at this stage it is really up to Mantle, the holders of that EL, following the process and they will decide how they will approach it.

Mrs PEULICH — But apart from that, it is not a part of the Inquiry.

Mr FOLEY — I would dispute that. Given I am not on Inga's Christmas card list, I will cop that.

Mrs PEULICH — And you know what the major reason is.

Mr FOLEY — I have no idea what you are referring to.

Mrs PEULICH — Yes, you do.

The CHAIR — Thank you very much for your submissions. The evidence that has been given today will eventually become public record. Within a couple of weeks you will be sent a transcript of today's proceedings, feel free to change any errors that you believe occurred grammatically but not with the substance of the document. Thank you very much again for your time.

Dr HAMILTON — Thank you very much to the Committee.

Witnesses withdrew.