VERIFIED TRANSCRIPT

PUBLIC ACCOUNTS AND ESTIMATES COMMITTEE

Inquiry into budget estimates 2008–09

Melbourne — 22 May 2008

Members

Mr G. Barber	Mr G. Rich-Phillips
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Witnesses

Mr P. Batchelor, Minister for Energy and Resources,

Mr R. Bolt, Secretary,

Ms M. Lourey, Executive Director, Energy and Earth Resources,

Dr P. Redlich, Director, Energy Technology Innovation, and

Mr C. O'Farrell, Chief Financial Officer, Department of Primary Industries.

The CHAIR — I declare open the Public Accounts and Estimates Committee hearing on the 2008–09 budget estimates for the portfolios of energy and resources and community development. On behalf of the committee I welcome Peter Batchelor, Minister for Community Development and Minister for Energy and Resources; Richard Bolt, secretary; Marianne Lourey, executive director, energy and earth resources; and Chris O'Farrell, chief financial officer. Departmental officers, members of the public and media are also welcome.

In accordance with the guidelines for public hearings I remind members of the public that they cannot participate in the committee's proceedings. Only officers of the PAEC secretariat are to approach PAEC members. Departmental officers, as requested by the minister or his chief of staff, can approach the table during the hearing. Members of the media are also requested to observe the guidelines for filming and recording of proceedings in this room.

All evidence taken by this committee is taken under the provisions of the Parliamentary Committees Act and is protected from judicial review. There is no need for evidence to be sworn. However, any comments made outside the precincts of the hearing are not protected by parliamentary privilege.

All evidence given today is being recorded. Witnesses will be provided with proof versions of the transcript. The committee requests that verifications be forwarded to the committee within three working days of receiving the proof version. In accordance with past practice, the transcripts, PowerPoint presentations and any documents tabled will then be placed on the committee's website.

Following a presentation by the minister, committee members will ask questions relating to the budget estimates. Generally the procedure follows that relating to questions in the Legislative Assembly — in other words, no supplementaries and responses of around about 4 or 5 minutes. I ask that all mobile telephones be turned off. I invite the minister to give a brief presentation of no more than 10 minutes on the more complex financial and performance information that relates to the budget estimates for the portfolio of energy and resources.

Mr BATCHELOR — Thank you, Chair. It is a pleasure to be here today. I notice that you are saving energy with the nice cold room.

The CHAIR — I will just go and get my coat. You ought to go out to the chookhouse; it is so cold out there it is not funny.

Ms MUNT — The chookhouse is worse. I cannot stand it!

Mr BATCHELOR — You will be pleased to hear that Parliament House will be driven green power shortly. That will be much warmer.

Overheads shown.

Mr BATCHELOR — I want to make a presentation today and give an overview on the energy and resources portfolio. I will really seek to highlight some of the challenges that are facing the sector and to comment on the government's response. The energy and resources sector really continues to contribute significantly to the Victorian economy, particularly in provincial Victoria. The resources sector alone has had revenues valued at more than $5 billion to the state's economy and employs some 10 000 people, although it is not as significant, of course, to our state economy as the resources sector is to Western Australia or Queensland, but what that means is that we have got to try a little bit harder, and we certainly do that. Some of the projects are listed on the map. I do not propose to go through those, but there is a range of significant ones, both to resources and energy projects.

I will just give an overview quickly on our resources side of the portfolio. Mineral exploration is at record levels. During 06–07 spending in Victoria increased by some 11 per cent to $82.5 million. As a government we are trying to drive this new growth in the resources centres, and we do a number of things as shown in the four key areas on this chart. We try to attract exploration, facilitate projects, improve regulation and encourage innovation. They are the drivers behind the policies that we have put in place. In a number of those areas we have not only contributed new investment through the budget but we have also provided, of course, facilitation to the private sector, largely around our resources capability.

If you go to the next slide, this is a three-dimensional map of the Gippsland Basin. It does not translate well to the two-dimensional overhead scale, but if members were interested they could come down to our 3D visualisation room at the Department of Primary Industries and they could see the full impact of it. What it shows is a beneath

the surface map in three dimensions of our resources, and, of course, in the Gippsland Basin the resources we are talking about here are threefold. They are oil, which is the red; gas resources, which is the yellowy, gold colour; and the other resource, of course, is the potential for carbon capture and storage resources. Essentially, we see here nature being successful in storing both oil and gas beneath the surface for millions of years. We extract it and, of course, CCS or carbon capture and storage or geosequestration seeks to mimic that, and we must now see the Gippsland Basin as not only being a resource for gas and for oil but also as a potential storage site for carbon dioxide.

This 3D visualisation room is the first of a state-run facility of its kind in Australia, and it helps us understand the complex geology that geologists have been dealing with. Part of our system in Victoria is that during the exploration phase — whether you are looking for water or for oil or gas or other base minerals — that information is kept, it goes into the public domain and is now being reconfigured to produce three-dimensional maps. This technology is quite amazing and it is able to produce four dimension maps. In the case of the Gippsland Basin it produces the fourth dimension, that of time; it is able to map the development of resources over time, and that is quite an interesting thing in itself.

If we go to the next slide, talking about our electricity output, brown coal accounts for about 90 per cent of the electricity that is generated in Victoria. We have got vast reserves of brown coal still. We have got about 33 billion tonnes that is accessible. It is about 500 years worth at the current rate, so it is quite a significant resource. That has really provided the backbone of affordable and reliable electricity in Victoria, and we have got a bundle of reserves to go. Of course, the big challenge in the carbon constrained future is how you use that in a more environmentally friendly way, and how you can reduce the carbon dioxide emissions as a result of using it.

That takes us to the next slide — that is the climate change challenge. Our response to this will be a really significant task, and that is because of our existing dependence on brown coal. We do not want to go from having the cheapest electricity source to having the most expensive electricity source overnight, and this is part of a many-pronged challenge that the state faces. We have been getting ready for this. Eight years ago we saw that there was no escaping the fact that Victoria as a community, and all areas of industry within Victoria, the government and the broader community would really need to do their bit to cut greenhouse gas emissions, and the stationary energy and the transport sector are really central for Victoria achieving its share of the greenhouse gas abatement.

As you know, the state and now the nation is committed to reducing greenhouse gas emissions by 60 per cent by the year 2050, and we face a national emissions trading scheme from 2010. This national emissions trading scheme will not only deal with abatement issues but it will have a very significant economic impact on the Victorian economy; an economic impact that will be greater than the bank deregulation, greater than the tariff adjustments, greater than the impact of the GST. We understand that and that is why we have been taking practical steps to reduce greenhouse gas emissions for some time and to get ready for that carbon-constrained future.

How do we propose to do that? This is a diagrammatic way of our portfolio response to dealing with climate change. Here is the business-as-usual case where we see emissions increase over time, and the first such measure will be energy efficiency. It captures the low-hanging fruit but also in bringing about particularly household efficiency you not only reduce greenhouse gas emissions but you also reduce the cost of energy. We are hoping to help households get ready for the introduction of the impacts of the emissions trading scheme.

The next contribution to our response is renewable and sustainable energy. The major driver of renewable energy investment in Victoria will be our Victorian renewable energy target (VRET). We are the only state to have legislated for this type of scheme and it will save around 27 million tonnes of greenhouse gases by its full implementation in 2016. That will be achieved by mandating that 10 per cent of electricity consumption has to come from renewable sources: it can be wind, it can be solar. We are not mandating what it is, but it is already leading to an investment boom where we have seen more than $2 billion worth of investments committed to, and it is providing about 2000 jobs, mostly in Victoria.

The other element of this government response to achieve the target will be through clean coal technologies and low emissions technologies, which include clean coal, coal drying, carbon capture and storage. You will see schematically here that this is the most significant of any of the individual ones, and they all come together under our support for an emissions trading scheme at the national level. The best way of bringing all of these individual initiatives on is through an emissions trading scheme where the abatement requirement will be met at the least-cost pathway, and that is very important for the economy to achieve that least-cost — —

The CHAIR — I am not sure what the horizontal and vertical is.

Mr BARBER — I am just wondering what this date is here?

Mr BATCHELOR — It is over time. It is the time axis. I described that earlier on.

Mr BARBER — Have you got a date here?

Mr BATCHELOR — No, it is a schematic.

Mr BARBER — A schematic!

Mr BATCHELOR — Weren't you listening?

The CHAIR — You know it is a schematic.

Mr BATCHELOR — It is a schematic to help people understand.

This year's budget identified a number of initiatives. They are contained on the report. The other comment I want to make is in relation to the energy industry here in Victoria, where you can see that the system in Victoria since its privatisation has been able to achieve a number of benefits for the whole of the community. It has been able to maintain a secure, efficient and affordable, safe and sustainable supply of energy. That is quite a complex task of objectives to achieve, and one measure of that is measuring its 'minutes off' supply. Since the privatisation the amount of the time of disruption to the network, or the number of minutes that individual consumers have faced without supply, has steadily and systematically reduced over time.

Mr WELLS — Privatisation has actually improved the service?

Mr BATCHELOR — That is correct. You doubt that, do you?

Mr WELLS — Pardon?

Mr BATCHELOR — You doubt that?

Mr WELLS — We supported privatisation and you did not. That is why we are surprised by your comments.

Mr BATCHELOR — I am just telling you what the facts are.

Mr WELLS — That's good.

The CHAIR — Okay. Keep going, Minister.

Mr BATCHELOR — This is from the Essential Services Commission. They track this.

The CHAIR — I have asked the department previously about any concessions subsidies and revenues foregone. If there is anything further to add to that, can you take it on notice in respect of your portfolio, Minister?

I just want to start off by saying I was fascinated by this 3-D which you said can end up being 4-D. It is certainly a bit more sophisticated than what we used to have in the geography and environment department at Monash when I was there. They sort of had map info which is really only 2-D. On this climate change initiative regarding major emissions reduction and carbon capture and storage (CCS), and of course you have the Clinton initiative as well for which we have signed an MOU, can you tell us a bit more about CCS in Victoria and when you are going to go forward with this because I noticed also Tim Flannery said the other day he supports it? But he obviously supports it being done very quickly.

Mr BATCHELOR — Carbon capture and storage, CCS or geosequestration as it is known, has a wide basis of support. I had not seen Tim Flannery's comment, but it is supported by the inter-governmental panel on climate change, it is supported by Garnaut, it is supported by environmental groups and it is supported by scientists. In effect, in its most simple dimension it mimics what nature has successfully been able to achieve in storing carbon underground in the form of hydrocarbons, a form of oil gas. There are even instances of carbon dioxide that

have been successfully stored underground. We are using one of those in the Otways. In our trial of carbon dioxide sequestration in the Otways we are taking the naturally-stored and occurring carbon dioxide that has been stored underground, through a pipeline and re-injecting it into a depleted hydrocarbon field.

This year in the budget we have provided over $100 million for a large-scale demonstration project in the Latrobe Valley, building on the lessons that will have been learnt and understood from this pilot project in the Otways and taking it to a more commercial-scaled operation in the Latrobe Valley, to try to make sure that we understand what technology is required and to demonstrate that the technology risks can be reduced so as to encourage its uptake, in the context of an emissions trading scheme, by the producers of carbon dioxide emissions, largely brown coal generators. We need to do that because we will have a much harder task in Victoria because the amount of carbon dioxide from brown coal in making electricity is much greater in producing greenhouse gas emissions than it is from black coal or other forms of fossil fuels. The impact of an emissions trading scheme in Victoria will be much greater, so we are concerned to try to find those technologies and systems that will provide the biggest abatement possibilities. Clearly that comes from CCS.

The CHAIR — Are federal government funding and commercial funding going into these trials?

Mr BATCHELOR — Part of our ETIS strategy — this will follow a similar pattern we used to roll out ETIS initiatives in the first round; there was the solar power station, for example — is to go out to the market and call for expressions of interest, to do that internationally. We would see what proposals come back to the government through this expressions-of-interest-type project. The success of ETIS in its first stage is that it not only attracted private sector but also was able to attract commonwealth government investment. The commonwealth government currently has funding streams available for large-scale demonstration projects, and we would be hopeful that at the end of this calling for expressions of interest and evaluation process we would have not only private sector contributions but also commonwealth funding.

The CHAIR — There is a discussion of ETIS1 in our latest report of performance outcomes. I am sure you did a bit of bedtime reading on that one, Minister.

Mr BARBER — Chair, what does the Minister refer to as large-scale CCS?

The CHAIR — They are putting $100-and-something million into it.

Mr BARBER — Large scale in terms of carbon stored, though.

Mr PAKULA — Why don't you ask him when it comes around to your question?

Mr BARBER — He's probably bursting to answer!

Mr BATCHELOR — Is that your question?

Mr BARBER — I only get one!

Mr WELLS — Minister, I would like to ask you about smart meters, especially your attempt to introduce a mandatory statewide rollout. Is it correct that the introduction of the smart meters will cost Victorian power consumers about $2 billion, and are the media reports correct in that if or when they are installed they will soon be obsolete? Is it also correct that the government's proposed mandatory rollout for smart meters is actually inconsistent with the national electricity market rules? Lastly, is it correct that the technology being considered will not actually give consumers the ability to automatically manage their appliance, but rather they will assist the power companies in those remote areas to be able to read power meters, so they are not actually there for efficiency; they are there for convenience for the power companies?

The CHAIR — There was a range of questions there, Minister, that relate to your portfolio going forward in the estimates.

Mr PAKULA — He asked Richard's and Gordon's as well.

Mr BATCHELOR — We have a proposal to introduce smart meters by way of a mandated rollout. Under the Victorian proposal we are requiring that to be undertaken by distribution companies, as opposed to electricity retail companies. There is a proposed rule change going through the national processes that would allow

that to occur in Victoria, that being that the rollout occur by distribution companies rather than retail companies. The rationale for that is that under the structure of the privatised system in Victoria there are split incentives at different levels of the industry structure in a smart meter rollout, and the most efficient way of delivering smart meters across the network is for that to be undertaken by the distribution companies. When the national market was first established, this realisation had not occurred and, as I said, we have in place a process to allow the Victorian model to occur here.

We are also working in the national market with the other jurisdictions to get national consistency on the specifications for the technology rollout. What we want in Victoria is to have — to the extent that you can — a nationally consistent set of specifications. They are being worked through with working parties, which of course Victoria is participating on. They have yet to be finalised. I am expecting that they will be finalised at the end of this calendar year, but that is outside our control; that is in the control of that national process.

This issue about meters being obsolete is a furphy that you should not fall for. It is a furphy being spread by some meter companies that are seeking to pursue their own commercial interest. We are not trying to pick a particular brand or type of commercial product, but rather allow the market to determine that by requiring the distribution companies to roll it out. So claims of things being obsolete before they are put in is farcical, because all you need to do is to think about the sort of electricity meters we have now and what is being proposed, and clearly they will be a technologically advanced form of metering. Why do we say that? It is envisaged that with the use of smart meters both the customer and the retailer and the distributor will be able to monitor energy use in a much more frequent time. Particularly from a customer's point of view, what we would like to see happen, as the Victorian government, would be the ability for customers to be able to monitor their energy use as they use it.

As you know, the retail market is set up on a price distribution of every 5 minutes. We probably do not need that level of information, but we are envisaging that you would be able to monitor what you are using and the cost every half hour. So if you wanted to take steps to reduce your energy use, to increase your energy efficiency or to reduce your impact on the environment, you would be able to do that. That would require you getting an in-house display that would be plugged into the smart meter, and that would enable you to take those sorts of actions yourself. It would also provide advantages for the distributors and also for the retailers — for example, there would be able to be remote readings so you would not have to send out people who go house to house to read meters, as you do now, or rely on the system of estimates backed up by visual readings if there is a dispute, so you would be able to make savings along those lines. We would expect in a competitive market such as we have got in Victoria that you would be able to have some retail companies being able to offer varying forms of retail products that could only be introduced with the use of smart metering. So you might choose to reduce your energy consumption during peak periods by deferring the use of appliances — you could wash your clothes at night if you chose to — and we expect under a range of scenarios similar to that you would get a better pricing outcome.

But the government is not undertaking this investment themselves; it is being undertaken by the distribution companies. So on the cost of it and the implementation detail we are awaiting on an industry response. It is being worked through at the moment. That has not been concluded, so many of the details which you are seeking have yet to be concluded in the negotiations between the distribution companies and the government.

Mr WELLS — So the $2 billion cost we are unsure of at this stage until that response has taken place?

Mr BATCHELOR — Until that is concluded, and that will be assessed by the Essential Services Commission.

Mr WELLS — Finally, just to follow up, have you received written advice that the rollout timetable is no longer achievable?

Mr BATCHELOR — As I said, we are awaiting a final industry response to the government's requirements. The industry response will include issues of cost, it will include issues of functionality, it will include issues of delivery times, starting and completion times. There are five distribution companies, so there is likely to be a variety of different enterprise responses to it. That is why we have asked to see if it is possible for the individual distribution companies to come back with an industry plan. But at the end of the day this is not a government rollout; it is a rollout by private companies whose costs would be recouped through the normal way and who would be in control of their investment.

Ms MUNT — Minister, the Australian Energy Market Commission has been conducting a review of Victoria's effectiveness of competition in the electricity and gas markets. Could you tell the committee what the findings have been.

Mr BATCHELOR — The AEMC has finalised its review into the effectiveness of competition in Victoria. This is the first of the reviews that are being undertaken by the AEMC to test competition in various states and jurisdictions. In Victoria they have undertaken two reports, and it has concluded — I guess what probably most people who understand the nature of the electricity market already knew — that in Victoria energy retailing is very, very competitive. They have concluded that around 60 per cent of households and small businesses have already moved from the standing offers to competitive market contracts for their gas and electricity and that, according to the AEMC, the majority who have made that change have said that the change has met their expectations. The AEMC has found that Victorian households are also benefiting from the competitive nature by being able to get lower prices. Those lower prices range from about 5 to 10 per cent below the standing offer.

The reason this review was undertaken was that in setting up the national electricity market it was envisaged that government oversight or control of retail prices would diminish over time but that process would be determined by the competitive nature of the market. We see that we have a very competitive market. According to the AEMC, it has also been confirmed by other independent analysis. There is a report that is carried out by the First Data Corporation, and in the third edition of its World Energy Retail Market Ranking it put Victoria at the top of the league table in having the most competitive market, measured by the number of customers who change from one retailer to another. We have got about 13 retailers in the market in Victoria. The most recent of those entries into the Victorian market was Energy Australia, and that is owned by the New South Wales government.

Mr RICH-PHILLIPS — I would like to go back to the CCS. You mentioned the fund and that $100 million has been allocated this year for demonstration projects. Have you at this point identified specifically which projects in the Valley will be funded through that fund; and in relation to the use of CCS, in the budget last year there was a note that Victoria will need new baseload generation capacity — 2010 to 2015 was the estimate. Are you confident that the CCS technology will be available for that baseload capacity when it is required in 2010 to 2015? What will the government do to fast-track the development of that baseload technology? What contingency plans exist if the CCS technology does not stack up by the time that baseload technology is required?

Mr BATCHELOR — The additional baseload component to our electricity capacity is likely to come from a number of different sources over time. At the moment we are waiting on Origin Energy, which has been permitted to build a 1000 megawatt power station in Mortlake to conclude an internal assessment of market conditions and how its proposal might fit into the total demand of the Victorian system. But in the annual statement of opportunities, in which NEMMCO does an assessment of the current and ongoing needs of the market — the total demand — it is not envisaging additional baseload for some years beyond the time frame that you outlined. I do not know where that figure comes from.

Mr RICH-PHILLIPS — It was in budget paper 2 last year.

Mr BATCHELOR — It is a bit hard to ask 12 months after the event when we do not have those budget papers here.

Mr RICH-PHILLIPS — I can give you a copy, if you want to see it.

Mr BATCHELOR — In any event, the demand for additional generating capacity is signalled in the statement of opportunities. That is a statement that is put out by the market operator, NEMMCO. It envisages that Victoria will have sufficient capacity in that period of time. In parallel to that, however, as I indicated to you, Origin Energy is developing a commercial proposal to build a 1000 megawatt station in Mortlake, which will be gas powered and will take advantage of the transmission lines that currently exist between Melbourne and Portland. When it brings that on-stream is a function of its commercial decisions.

However, I would say that at this moment in time, in the 3 minutes before the detailed design of the emissions trading scheme are known, it is unlikely that we would see big, expensive investment opportunities being finalised in that climate. The uncertainty of not knowing the design details of the national emissions trading scheme is having an impact on investment decisions in the coal, gas and renewable energy sector. People are waiting to know what the price of carbon is likely to be.

Mr RICH-PHILLIPS — And on the first part of the question, the $100 million fund?

Mr BATCHELOR — The $100 million fund has not been allocated to a particular project. It is a fund that will call for expressions of interest, for people to put forward proposals, and we envisage that there may be a range of different proposals that would come forward. We would then evaluate those against a set of government objectives to make sure that the proposal that is chosen meets a range of objectives.

Mr RICH-PHILLIPS — What is the time line to do that — to actually put in that process?

Mr BATCHELOR — We envisage that we should be able to conclude that — during 2010, I think. Is that right?

The CHAIR — You will need to identify yourself, come up to the table and give us the answer.

Dr SYKES — We like to see the whites of your eyes.

The CHAIR — We are trying to help Hansard.

Mr BATCHELOR — This is Dr Peter Redlich from the Department of Primary Industries. I want to know when the evaluation and expressions of interest process is likely to be concluded.

Dr REDLICH — It is likely to be concluded by the very beginning of 2010. We will be targeting commonwealth and industry funding.

Mr BATCHELOR — Thank you.

Mr PAKULA — Page 350 of budget paper 3, under the heading 'Clean Coal Authority' it says, 'The authority, to be known as Clean Coal Victoria will be situated in the Latrobe Valley '. My query is whether you could for the benefit of the committee expand on what the location of that authority in the Valley will mean for the future of the Valley.

Mr BATCHELOR — We have decided, as announced in this year's budget, to provide funding for Clean Coal Victoria as part of the Department of Primary Industries. It is a division that will be located in the Latrobe Valley. It will be dedicated to try to maximise the value of Victoria's brown coal assets. As I indicated to you before, we have got about 500 years worth of brown coal. We are entering a period where undoubtedly we will have a carbon-constrained future, and we need to work out what ways there might be of using that coal in a clean way into the future.

We want to have people who understand the vision, how they might use coal into the future to produce electricity or perhaps other products, and how they could only do that in the context of a more environmentally sustainable way. Clearly at the centre of that will be carbon capture and storage. For its task to be fully understood Clean Coal Victoria will need to analyse what the resource is, where it is, what the strategic value of it is, what are the land use and planning issues associated with its location and its use not only now but in the long run and where you might site the various facilities that will use it, and those facilities that will make clean and responsible environmental use of that resource.

In undertaking that process we also want to talk to the local community in the Latrobe Valley, because I know there are people around who would like to see the closure of electricity generation in the Latrobe Valley. We do not see that as being an appropriate response, but we do need to take the Latrobe Valley through the various environmental and economic issues to make sure that they have got a sustainable economic future going forward. It will be the task of Clean Coal Victoria to do that.

We foreshadowed this as an election commitment. We are calling it the clean coal authority. It has gone through a bit of a name change, but essentially it is the same body that was envisaged being set up in our election commitment. It will do things like develop detailed information of the breadth and extent of the resource, the quality of the brown coal, what order it should be used in to maximise its use. Already we know that, with the use of carbon capture and storage, there are other industrial purposes you that you could use the brown coal for in addition to the clean production of electricity — things such as turning it into diesel for transport fuel, turning it into fertiliser in a world where the price of fertiliser and food prices are going up quite substantially, and there are a

number of other industrial uses. We believe that it is important to explore these opportunities and not let them go by and be passed up through the introduction of an emissions trading scheme.

Dr SYKES — My question relates to the solar power feed-in tariff. There are two parts: one relates to the benefits to those who install solar panels; and the second part relates to the cost to other energy users. It is my understanding that you have announced that households that install solar panels will be paid a feed-in tariff of 60 cents per kilowatt hour per net energy fed into the grid. You further claim, as I understand it, that the average Victorian household taking up the federal government grant of the $8000 solar panel rebate along with the feed-in tariff could pay off the installation costs within less than 10 years. I have two constituents who strongly disagree with that. One is Piers Hartley from Mount Beauty. He states that amounts paid to domestic generators under the scheme will be paltry. Royden James is a bit more forthright and says he has evidence to prove that the claim is patently false. The issue is that these people, like Royden James, are saying that, based on their experience with their solar panels, it would most likely take 17 years to recoup the costs. Can you justify why you have arrived at 10 years, whereas the personal experience of Mr James is that it is more likely to be 17?

Mr BARBER — It is quicker than you will get your clean coal money back.

Mr BATCHELOR — I have also received letters from people who have said that this is a terrific announcement. They have currently got solar panels installed and the introduction of the feed-in tariff, because of the excess power that they feed back into the grid, paid at a premium rate, will help them pay off their investment quicker than it would otherwise.

Dr SYKES — Yes, but within 10 years or just quicker than otherwise?

Mr BATCHELOR — I can provide a series of individual testimonials supporting this, just as you can apparently provide a couple of testimonials where people are querying it. But as with all things, the exceptions do not prove or disprove the rule. We have undertaken an examination of feed-in tariffs. We think feed-in tariffs should be paid at a fair rate to people who produce excess electricity from their solar panels and feed it back into the grid. We do not think it is fair that people should be paid to use their electricity, certainly not at a premium rate. It is a pretty strange system that your letter writers are talking about where people are paid to actually use electricity. Most people would think that you pay to use electricity rather than the other way around.

Dr SYKES — I think in Germany they do it that way and I think there is a very good uptake of solar panels in Germany.

Mr BATCHELOR — If you just let me answer.

The CHAIR — I ask the minister to continue.

Mr BATCHELOR — We gave an election commitment to introduce a fair feed-in tariff and we have delivered on that election commitment in two stages. We have extended the sources of renewable energy that are eligible to receive a fair feed-in tariff. The legislation was passed, and if I remember rightly you actually spoke on that bill in the house. That extended it to go from what it was previously — just at solar — into a range of other defined renewable sources of energy. I said then that it was the first stage.

We have now announced what the second stage will be, and the second stage will be to provide a premium feed-in tariff of 60 cents for people who have solar panels up to a maximum of 2 kilowatts. It only relates to households. The work that we undertook showed that if they got the $8000 installation subsidy from the commonwealth government and they were an average user of electricity, they would be able to have it paid off within 10 years — less than 10 years. But these are average calculations and clearly there will be people who will be able to get it paid off more quickly, and there will be some people who will take a little longer to pay it off. That is the nature of an average.

You mentioned Germany. Germany has relied on a different form of feed-in tariffs from what we are proposing here in Victoria. It has done that because it does not have a renewable energy target like that we have already established. We have the Victorian renewable energy target, which is a much more efficient way of delivering renewable energy into the grid. It is more efficient, it is at a lower cost, it delivers a much higher level of greenhouse gas abatement than the sorts of solar feed-in tariffs that you were suggesting, and it is a much more effective way of delivering a better outcome.

Dr SYKES — Just closing off the difference of opinion about less than 10 years versus more, I will pass on to you the two emails that have been sent to me and ask if you can pass it on to your departments to address the very detailed arguments put to me. The second part relates to the cost to other consumers. Is it going to be in the order of $10 per household for those not using solar power for payment of the net feed-in, or is it compared with what may have been $100 per household if you had done a payment on gross feed-in; and how is this cost, whatever it is, going to be distributed to other consumers?

Mr BATCHELOR — Our proposal for a net feed-in tariff of 60 cents, once the 100 000 maximum installations are taken up, in current prices will cost about $10 per household across the system. If you were to provide, as Environment Victoria was proposing — I think the Greens were proposing it as well — a 60 cent gross system it would cost on average the reminder of the consumers who did not have panels on their roof about $100 a year. People cannot believe that you would put forward a system where a few people would be paid to use electricity under a gross metering system and that everybody else who was not participating in that system would have to pay $100 a year on average to allow that to happen. We rejected that proposal. It would be like trying to sell a half-eaten apple; you would not be successful at it.

Dr SYKES — You are trying to sell a north–south pipeline and you are not very successful on that.

The CHAIR — Okay. Mr Scott, your question.

Dr SYKES — Sorry, I just did not finish the last part of the question. How is that — —

The CHAIR — I think you have had a fair go.

Mr SCOTT — Minister, I would like to ask about the energy technologies innovation strategy, which is referred to on page 28 of budget paper 3, where new funding has been provided for large-scale sustainable energy technologies. Can you explain the purpose of this initiative and the overall objectives of the government's energy technology innovation strategy?

Mr BATCHELOR — Certainly. The ETIS, as we call it, or the energy technology innovation strategy, in its second round not only provided the funding for carbon capture and storage, as the opposition has questioned, but it also provided some $72 million for a large-scale sustainable energy project. It will provide, if you like, a breath of fresh air into the renewable energy sector in a way that the first round of ETIS provided funding for a large-scale solar powered station. Under ETIS1 we provided some $50 million to solar systems, and that has encouraged TRUenergy to become a partner in it and to begin the process of, firstly, developing a pilot program up near Bridgewater, with the longer strategy of developing a large-scale power station up in the north-west.

What we want to try to do is to continue that technological development. We are trying to have the projects developed at the large-scale deployment level rather than the base research and development. There has been a lot of research and development. The area where assistance is needed at this stage of our developmental cycle is in the deployment stage. This project is to try to call on the suitable additional large-scale projects. They could be in solar energy, they could be in geothermal or wave power. We are not prescribing it, but again we will go through a similar process as I described before, where we will call for expressions of interest, and they will be placed before the government and then we will choose which of those is likely to be the most efficient to deliver the best outcomes, attract the largest amount of private sector funding and provide the largest amount of commonwealth assistance.

It is interesting to note that our ETIS funding has leveraged so far $250 million from the commonwealth and $1.2 billion worth of co-investment, largely from private industry. We want to be able to try to build upon that sort of leveraged program to help renewable energy activity here in Victoria, but at the large scale in developing large amounts of renewable energy. It is a very timely intervention because of the new commonwealth government's increasing of its mandatory renewable energy target, which will require 20 per cent of energy used in Australia to come from renewable sources by the year 2020. So for the commonwealth to achieve that type of scaling up of renewable generation, it is going to need some scaling up of large-scale projects.

Mr BARBER — Minister, with the HRL project, which your presentation describes as a $750 million project — I think the CEO is now calling it a $800 million project, and I do not believe it has actually started yet — can you just tell us how much of the $150 million state and federal money that is going into this has already been transferred? Can you also tell me the specific trigger points — the outcomes, the deliverables, whatever it is — that

this funding is tied to as each amount of money might be transferred over to that project? The last bit is: does the government as a result of that funding retain any ongoing rights over any of the outcomes, any of the intellectual property or anything associated with the project?

The CHAIR — I also might note that in our report on the outcomes on pages 552 to 553 there is an extended discussion on the framework, which covers this particular program as well.

Mr BATCHELOR — I can only talk in terms of the state government's contribution.

The CHAIR — That is what this question was about. He wanted to know how much of the 150 of state and federal money has been transferred.

Mr BATCHELOR — I can only talk about our state government contribution.

Mr BARBER — I am sure you are au fait with the federal contribution.

Mr BATCHELOR — On the federal contribution, you can get your colleagues — it is a similar process at the national level — to ask the complementary question. No money has gone from the state at the moment because a number of milestones, as you described, have yet to be achieved. We have set in place a process of making an offer of a grant, and the commonwealth made an offer of a grant as well. So in the terms of what we own at the end of that, it is a grant; it is not an equity investment in this, and the intellectual property for this remains owned by those who currently own it, HRL.

We will progress the project, but the next major milestone that needs to be met is for HRL to convince this government that they have got the rest of the scheme adequately funded. They have indicated to us that they have, through their Chinese partner, Harbin Power Equipment, the likelihood of being able to attract Chinese investment in this. So it is now, in terms of the process, up to HRL to deliver on that component of the agreement. From the Chinese point of view, the company that they are in partnership with, with HRL, supplies power equipment, and they are a very large supplier of power equipment to the Chinese market. Harbin tells me that it supplies on average about 30 000 megawatts into the Chinese market annually. That is almost the entire output of the Australian energy system.

The advantage from the state government's point of view is that it is not only trying to assist this development with Victorian developed technology, the HRL technology which was developed here in the Latrobe Valley, and getting it up to a commercial-scale project — the 400-megawatt power station that we are proposing here in the Latrobe Valley — but it also offers the opportunity of being able to take that technology into the Chinese and other markets through the partnership with Harbin Power.

Of course the technology that is used makes a significant reduction in the greenhouse gas emissions using brown coal. It reduces greenhouse gas emissions by some 30 per cent, and it is 50 per cent more water efficient. We understand that these sorts of savings, both in abatement and in terms of water, are very appealing in the Chinese market, and we would be quite pleased to think that this Victorian-based technology, in collaboration with the Chinese, would be helpful in not only exporting IP but also helping to tackle the much larger task of getting the PRC to address its responsibilities for abatement. This is one small way — likely to be a very significant step — in getting China to do that.

Mr BARBER — So what are the remaining trigger points, apart from their getting funding?

Mr BATCHELOR — The next major one is the establishment that they will be able to provide the capital that they have said they would be able to. We are not handing over money until they have reached that phase. Then they would need to go through approvals processes in the local environment, and they would need to meet those.

Mr BARBER — So when do they get the money?

Mr BATCHELOR — When they meet the requirements.

Mr BARBER — What are their requirements?

Mr BATCHELOR — I think I have said.

The CHAIR — The minister has probably answered the question. If you wish to seek more, you can seek it — —

Mr BARBER — No, I do not think he did, Chair. You could actually press him and help me out a bit, if you like.

The CHAIR — Normally there are 4 or 5 minutes allocated to each question, Mr Barber, so I think you have had enough.

Mr BARBER — What are the key trigger points for this 150 million of taxpayers funds handed over? Apart from increasing our emissions by 2 per cent in Victoria, what are the trigger points?

The CHAIR — I think you have had your question. You can follow it up with a question on notice, if you wish.

Mr BARBER — It is a secret what this money is being spent on.

The CHAIR — The minister answered that one pretty straightforwardly, I think. We should not be making those sorts of statements here as members of the committee.

Mr NOONAN — Minister, returning to the carbon capture and storage issue again and positioning Victoria as a leader in this area in terms of technology development, you referenced earlier the Otway Basin trial, and my question goes to whether you can tell us what the Victorian government is doing to ensure that carbon capture and storage is developed in a safe and secure manner.

Mr BATCHELOR — Certainly. The trial in the Otways is really a significant event because it has a number of objectives, one of which is to demonstrate to the public that geosequestration is technically possible, that it achieves large-scale abatement through storing carbon dioxide underground rather than in the air, as we currently store it, and that it will play a significant role in achieving our greenhouse gas reduction target.

We have invested over $6 million in the CO_2 CRC, the Cooperative Research Centre. They are running this project, and we have invested directly into the project along with the federal government and industry. We are doing that so not only the public can be assured but the scientific and academic community can learn lessons from it. Essentially, as I think I mentioned before, there is a naturally occurring reservoir of carbon dioxide in the Otways. There is only so much you can put into Coca-Cola and other carbonated drinks, so this provides us with a source of carbon dioxide for this trial.

It is going to be taken from the storage basin, transmitted via a pipeline to be compressed, and it will also be tagged with an identifier and then injected into a depleted hydrocarbon basin. The purpose of putting an identifier in there is to improve the monitoring and evaluation process so we can establish whose carbon dioxide it is above the ground. They are proposing to put 100 000 tonnes of carbon dioxide underground as part of this proposal. It will take place over a two-year time frame, and it will be evaluated and monitored. They are injecting at the moment, and they are up to a considerable amount. I have not got the latest figures, but many thousands of tonnes of carbon dioxide have been reinjected, and the monitoring process is under way. So, if you like, it is to explain to those who are somewhat sceptical, to demonstrate that it can be done and that it is safe. It is also to allow the scientific community to monitor and evaluate; to learn what the monitoring technologies are and to learn what the evaluation processes might be. As I said it will lay the foundation.

Carbon sequestration has occurred previously. It is currently undertaken as part of an enhanced oil recovery process in places where they are drilling for oil. Often the last little bit of oil is hard to get out of a hydrocarbon basin, and they use the injection of carbon dioxide into an oilfield to raise the oil and make it easier to extract. So it is occurring under those circumstances and it is occurring in one or two places around the world as a disposal for carbon dioxide through industrial processes that are currently under way. The advantage of the Otway project is that this is the first scientifically monitored trial in the world, and it has attracted an enormous amount of international scientific and academic interest because of that unique characteristic.

Mr DALLA-RIVA — Minister, I refer you to the 'Service delivery' budget paper, pages 217 and 218. The significant challenges you have also outlined during your presentation and some of the questions. You say here the significant challenges facing the department over the next three to five years in the energy industries include

climate change and water scarcity. It then says the DPI's strategies for 2008–11 reflect these challenges and opportunities. Turning over, it talks about managing emergencies promptly and effectively and says:

> DPI will advise and implement government's response to a wide range of … energy supply shortfalls.

This is a longwinded way of getting to the issue about ensuring the ongoing level of energy supplies, given that you do see it as one of your key challenges and one of your key decisions and directions moving forward. I understand that there were recommendations in the reports from the ESC following some blackouts in 2005 and 2006. I just want to know, from your perspective, Minister, in terms of the funding outputs summary that is on that same page, 218, how you are applying the funds in terms of ensuring there is a maintenance of energy supplies, given climate change — even the Premier mentioned climate change is one of the impacts — and how you are going to provide some of those funds towards ensuring there is continuity of energy to Victoria into the future?

Mr BATCHELOR — In terms of the output summary there, I suspect that the activity we are undertaking is incorporated in the second line there — 'Regulation and compliance' because these issues are addressed not by direct government ownership or direct government operation but through a series of regulatory measures, of which the Essential Services Commission is but one. I would doubt the Essential Services Commission's costs were contained within that budget line item but they would be contained elsewhere in the budget papers.

Essentially what that reference above about energy shortfalls, which was your segue into that table, relates to is the occurrence of shortfalls of energy supplies through emergency situations. We have had a couple of those of very different natures in recent years. We have had the bushfires interfere with the transmission lines from the Snowy hydro scheme, back in January 2007; we have had more recently the severe wind damage caused to the local network; we have also had some reviews undertaken of a wind event in 2006; we have also seen the loss of power — it did not cause outages but it had the potential to — when the Latrobe River entered the open-cut mine.

What we are keen to do where there is the potential for naturally occurring events, natural disasters, to impact on the reliability and security of supply is learn lessons from those impacts. We have asked the emergency services commissioner, Bruce Esplin, to undertake a review of the circumstances of the more recent interruptions to power because of the wind event. We recognise that there is an obligation or a requirement on government not only to deal with the day-to-day components of security of supply but also to respond to special one-off events that occur — they do not occur every weekend but they occur when a natural set of circumstances arises. It is interesting to note that they have all been different types of events, but nevertheless we need to learn the lessons from those, and that is what that refers to.

Mr DALLA-RIVA — Previous ministers have given evidence of a significant population growth and the impact that it is having on their respective portfolios in terms of service delivery. That is something that is not going to be unexpected, and obviously with a greater population there is going to be a greater dependency in terms of electricity usage. As part of that, I guess, review and some of those things, have you actually modelled in the forward period how you are going to deal with the population growth, given that all of the evidence has been quite substantial on the growth?

Mr BATCHELOR — Yes. That is not what that is referring to, but what you are referring to is just as important as sudden and unexpected threats to security of supply. It goes to the question that was asked earlier. That was: how does our system here in Victoria deal with growing demand and how does the system, under a privatised model, ensure that there is sufficient capacity to meet not only growing population but also in the energy industry that we have got increasing consumption per head of population as well. People are buying bigger and better television sets, and air conditioning is much more common these days. We do that under a privatised system, through NEMMCO predicting future demand and then making that available to the investment community in order to identify the investment opportunities so that those who are interested can make the right investment decisions. That is how we provide for meeting future capacity, and we have done that successfully since privatisation occurred. There has been a whole series of additional power stations built because of the observation of growing demand and the need to meet that capacity.

In more recent times they have related to gas-fired power stations. There have been gas-fired power stations built in the Latrobe Valley and out at Laverton. There has also been the contribution made to the grid of renewable sources — the currently and increasingly significant contribution from, typically wind, but there is a range of renewable resources also that will add to it. We are also looking forward to the contribution that will be made from the HRL new combined cycle and gasification project in the Latrobe Valley.

The CHAIR — I have two quick questions: firstly on VRET — there is 14.4 million for it. How is that going to drive renewable energy investment and emission reductions in Victoria?

Mr BATCHELOR — Sorry, what were your references for the $14 million?

The CHAIR — VRET. You will find it on page 350 — Victorian renewable energy target scheme — 3.1 in 2007–08; 4.6 in 2008–09 and 4.5 in 2009–10.

Mr BATCHELOR — The cheapest and cleanest power station available to us is the one you do not have to build. VRET you are talking about; sorry, I heard VEET.

The CHAIR — VRET. Yes, renewable energy investment.

Dr SYKES — Crank up that random access memory, minister. Got some briefing notes? It is page 145.

Mr BATCHELOR — I thought you said VEET but it is VRET. Anyway, the answer is still the same, because the budget amount that you refer to is to build the information technology required to administer both the VRET scheme and the VEET scheme. These are market-based certificate schemes dealing with, one, renewable energy — VRET — and VEET, dealing with energy efficiency. They are developing a new internet-based management program that will enable both these schemes to be operated in an efficient way over the internet. That funding that you referred to, the $14 million, is to provide for exactly that, but it will be a common tool for both VRET and for VEET.

The CHAIR — And also meld in with the commonwealth one. We have got time for another quick question. You have got 45 seconds.

Mr WELLS — Minister, do you and your department support Professor Garnaut's recommendation in his interim report, which he handed down in February, that Australia should make a firm commitment this year to the 2020 emissions target that embodies similar adjustment costs that are accepted by other developed countries, and Australia would need to go significantly further in reduction of emissions than the government's target of 60 per cent by 2050 as part of an effective global agreement in order to reduce risks of dangerous climate change to acceptable levels?

Mr BATCHELOR — To comply with the Chair's ruling, we have made a commitment to a 60 per cent reduction by 2050. That is our position.

Mr WELLS — Do you agree with it?

The CHAIR — Okay, if you wish to pursue an issue further, you can take it on notice or ask him in the house. Thank you.

Witnesses withdrew.