

TRANSCRIPT

STANDING COMMITTEE ON THE ENVIRONMENT AND PLANNING

Inquiry into unconventional gas in Victoria

Melbourne — 22 July 2015

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The CHAIR — I open this inquiry into onshore unconventional gas, noting that a subcommittee has been formed which consists of myself; Harriet Shing, the Deputy Chair; Melinda Bath; Richard Dalla-Riva; and Colleen Hartland. I should explain that evidence at the hearing today in relation to the inquiry into onshore unconventional gas is being recorded.

I welcome Tim Forcey from the University of Melbourne Energy Institute to the public hearings of the Standing Committee on the Environment and Planning. All evidence taken at this hearing is protected by parliamentary privilege. Therefore you are protected against any action on what you say here today, but if you go outside and repeat the same things, those comments may not be protected by privilege.

First, Tim, I am going to ask Keir to swear you in. Please indicate your address and position as well.

Mr FORCEY — My name is Timothy Forcey, and I am energy adviser at the University of Melbourne Energy Institute.

The CHAIR — I will ask you to give a short presentation, and we will then follow with some questions.

Visual presentation.

Mr FORCEY — Very good. On behalf of the University of Melbourne Energy Institute, I am pleased to present to this inquiry. I trained as a chemical engineer and worked for 30 years for Exxon Mobil and BHP Billiton. This included 10 years involvement with the Bass Strait joint venture. More recently I have worked with the Australian energy market operator, known as AEMO. These days I am a researcher with the University of Melbourne Energy Institute. I also work part-time as a home energy consultant with the Moreland Energy Foundation. Today I will not be speaking about fracking, hydrogeology or fugitive emissions; I shall leave those topics to the other experts. Rather today I will discuss our research into the future of gas demand in eastern Australia, including Victoria. That research will be publicly available in mid-August. Today I can share some preliminary results.

This is my second time appearing before a state inquiry into gas. In January I testified to the New South Wales upper house about research we did specifically for that state.

Our role at the University of Melbourne Energy Institute is to provide information so the community can make better decisions. Here are 10 points of information that I will present today. Domestic demand for gas — that is, the gas used within eastern Australia — peaked in 2012. The economics of gas have changed. As a result, gas demand in eastern Australia is declining and will continue to decline across all sectors — electricity generation, industry and buildings. That is homes and commercial buildings.

The Australian Energy Market Operator is only starting to study gas to electric fuel switching in homes and businesses. Fuel switching has the potential to be a significant phenomenon. Some people can save hundreds of dollars per year by heating their homes with their electric reverse cycle air conditioner instead of using gas. Reverse cycle air conditioners, hot water heat pumps and the induction cooktop are the big three that lead to the all-electric Australian home.

With the wide availability of these efficient electric appliances, there is no longer any economic reason to connect gas to new Australian homes and suburbs. As consumers economically disconnect from the gas grid, those that remain must pay the cost of operating that grid. This leads to what is known as the gas grid death spiral, where fixed charges go up, then some people leave the gas grid, and fixed charges go up again to cover that and so forth.

We can explore for gas savings in Victorian attics and lounge rooms, and of course I am talking about ceiling insulation, draught proofing and better windows and window treatments. This leads to improved home health outcomes for the sick and elderly. As gas demand declines, our remaining gas reserves stretch out for an additional decade, so a potential 2030 concern becomes a potential 2040 concern.

Finally, Victorians need an integrated resource plan that considers both gas supply and gas demand management options.

The eastern Australian gas market has changed dramatically over the last decade, but dramatic change will continue for another 10 years. Let me start with this map. This map shows the integrated eastern Australia gas market connected up with pipelines from Queensland through to New South Wales, the ACT, Victoria, then down to Tasmania and over to South Australia. These connecting pipelines were built over the last 20 years or more to increase penetration of what had been an economical and convenient source of energy. But, as I said, gas demand in eastern Australia peaked in 2012, three years ago. As far as gas sales volumes go in eastern Australia, the domestic gas industry has peaked, and demand is declining. The Australian Energy Market Operator, AEMO, forecast that demand for gas in eastern Australia will fall significantly in the coming years, and it is possible that even AEMO's lowest forecasts are not low enough. Let us look at a chart. Here are the figures for actual gas demand over the last few years, peaking in 2012, and here is AEMO's most recent forecast, which shows gas demand falling away at the peak of 2012, never to be seen again.

This most recent forecast differs quite a lot from AEMO's view in 2010. In 2010 AEMO's forecast showed gas demand to be going up and up, but now five years later the official forecast says gas demand will go down. What changed? Two main factors. To be fair to AEMO, back in 2010 the view was that there would be some sort of price on carbon and this would drive gas into electricity generation, displacing coal. But of course now there is no price on carbon. The other new factor is that back in 2010 AEMO did not pick that thanks to the new east coast LNG export industry the gas market would shift from being a buyer's market, as it had been for decades, to now a seller's market. As this committee will hear, gas buyers are finding it difficult to secure long-term gas supply contracts at anything like the prices they used to enjoy, prices that had been about the lowest in the developed world. Those days of cheap gas are gone.

In addition to these medium forecasts, AEMO also provides high and low forecasts. AEMO is forecasting that less and less gas will be used for making electricity and less and less gas will be used by industry. Some industries will close because of increasing gas prices. Other industries will now be able to economically justify energy efficiency modifications and so reduce their energy costs and stay in business while using less gas. The one place where AEMO is not yet forecasting falling gas demand is in the building sector — commercial buildings and homes. So far AEMO is forecasting that demand in the building sector does not change very much at all in the next 20 years. There you have AEMO's high, medium and low forecasts, which say that in 10 years time — say, 2025 — gas demand in eastern Australia will fall from the 2012 peak by 15 per cent, 26 per cent or 38 per cent, depending on which forecast you choose.

But at the Melbourne Energy Institute we think it is possible that demand could go even lower than AEMO's lowest forecast, perhaps falling by up to 50 per cent in 10 years time. Demand could fall this much because AEMO's forecast, which they published in December last year, does not take into account economic fuel switching in the building sector: people going home today and for the first time heating their homes with the reverse-cycle air conditioner they bought last summer. AEMO have noticed and reported that residential gas use per individual gas connection is already going down, and AEMO have said this decline may be because of fuel switching. AEMO have begun to look into this behaviour, but we will have to wait until late this year — probably December — to learn by how much AEMO will drop their gas demand forecast to take account of this new phenomenon of fuel switching.

In my home, given that we installed two reverse-cycle air conditioners last summer, I was keen to test the economics, comfort and convenience of using this new equipment in winter, comparing it to our old underfloor ducted gas. During several blustery days I found I could comfortably heat my house one day with gas at an average daily energy cost of \$4.80, but on the other days using my air conditioner I could do the same job at an energy cost of \$1.50. This is a 70 per cent reduction in energy costs. These savings, which for us will add up to hundreds of dollars per year, are amazing, but they are not surprising, nor are they unexpected or different to what analysts have said is possible, nor are my results any different to what people in the community are reporting on social media.

Results in other homes will depend on factors including what you pay for electricity and gas, whether you have been able to negotiate a good price for your electricity and gas, the efficiencies of your gas heater and air conditioner, where your heat sources are located within your home and individual comfort and convenience preferences, and other factors. But it will not be long before word gets out to the 4.4 million Australian homes already equipped with at least one reverse-cycle air conditioner.

Then home occupants can think about going further. Hot water can be cost-effectively produced by electric heat pumps, not unlike the reverse-cycle air conditioners I have been talking about. Should you have cheap excess solar electricity available on your roof, it can be far more cost effective to use your electricity to heat your water essentially using that hot-water tank as an energy storage battery, rather than sending your electricity out onto the grid, where you might not get paid very much for it. Add an efficient induction cooktop and then a resident can disconnect from the gas grid altogether, eliminate their gas bill altogether and avoid all the fixed charges associated with their gas bill.

A lot of people talk about leaving the electricity grid, but few are doing it, and though you may not yet have heard much talk about people leaving the gas grid, they are doing it, or, in the case of new buildings, possibly never bothering to hook up the gas in the first place. What will be the consequences of falling gas demand? Let us look at gas reserves depletion with this next chart. In AEMO's recently published *Gas Statement of Opportunities* AEMO show a chart where eastern Australia's proven and probable conventional gas reserves could be depleted around the year 2029 — 14 years from now. AEMO then go on to say, 'We need to develop new gas fields'. Unfortunately AEMO does not balance that by also making recommendations about the long list of things we can do on the demand side with more positive economic outcomes. So let us say instead that people do find out about the secret powers of their air conditioner and take other gas-saving actions, and let us assume a different, lower gas demand profile — what we call the MEI scenario that you saw before. When you do that, the gas consumption line or reserves depletion line starts to bend over, and the same developed gas reserves do not run out until a decade later. This gives us more time to see how things are going to develop.

That is one potential future we might find as we work towards using and planning our resources in an integrated way, considering both supply and demand options. To use terminology from the United States, an integrated resource plan — an IRP — would describe the costs of producing gas from gas fields that have already been developed and from gas fields that might be developed in future. But an integrated resource plan does not stop there after just looking at the supply side. It would also describe and compare the economics of saving gas — of reducing energy demand. How much gas can be economically saved and what other health and comfort benefits might we achieve by energy efficiency, fuel switching and other measures?

Apparently the last time an integrated resource plan was considered for Victoria was in 1991, as documented by a discussion paper from the former Gas and Fuel Corporation. What was old is now new. We will publish our thoughts on an integrated resource plan and the results of our gas demand research in mid-August. Now I am happy to take questions.

Mr DAVIS — I thank you for your presentation and particularly your very interesting points about gas demand into the future. By way of commenting in the first instance, I note your point that situations vary from property to property and consumer to consumer, because I must say that my personal experience is that electricity is far more expensive — but that obviously relates to a single property. The question here is, in terms of the energy efficiency options, would you outline some of those for us?

Mr FORCEY — I do not know if I will be saying anything new, but I have probably been in about 300 Victorian homes doing home energy consultations originally as a volunteer and later with the Moreland Energy Foundation, and there are so many opportunities out there.

The first thing I usually do is poke my head up in the attic, and what you will find there in terms of insulation is very patchy. Either there was never any, or there might have been some a long time ago; it has kind of depleted, and it is not as effective as it could be. Then more often people decide they want to install downlights, so they send an electrician up into the attic and then you find the insulation is just pulled up

and thrown all over the place, because people have to be concerned about the heat of those old halogen downlights and the potential for house fires. Of course these days we have the low-temperature LEDs, which use one-tenth of the electricity. We certainly recommend that people replace their halogens with the LEDs. There are state government programs that are involved with that. You put a cover over the top of the transformer up in the ceiling, and then you do a really good job of your insulation in the ceiling so it looks like your doona cover when you are in bed. You would not go to bed with a doona that has a bit of a patch there and a bit of a patch there. So that is ceiling insulation.

Other biggies — the low-hanging fruit, as they say — are window treatments. Lots of homes that I have seen have window treatments that are designed for blocking a bit of the sun in the summer. They also need to think about how they can really keep the heat in and stop it from just going right out through what are most often single-glazed windows. Of course double glazing is also an option for homes.

So there is ceiling insulation, window treatments and draft proofing. Draft proofing is the other one. We have such drafty homes. Apparently in the average Victorian home, if you add up all the drafts, there is 1 square metre of drafts — that includes the cracks and those old vents in the wall that you do not necessarily need any more. It is like you have a 1-square metre window open all the time. That is very low-hanging fruit that is very cost effective to deal with. In terms of money, it repays itself in a very quick time — a year or two — but there are also the comfort benefits and the health benefits you would see there.

Fuel switching is a big one, of course, that I spoke about that could really punch a hole in gas use and gas demand and save people a lot of money. These are the sorts of things that should be spelled out in an integrated resource plan, and we at Melbourne University will have a go at that with the time and money we have available for our study. We will have a go at adding up the potential benefits of these things. I call it mining for gas in your attic. So we will add those up and try to talk about the costs and benefits of those, but that will be published in mid-August.

Mr DAVIS — The second question is, and I will be brief so that everyone else has an opportunity to put their questions: in effect what I think you are advocating for is the likelihood of switching from gas to electricity. The fact of the matter is that in Victoria most of our electricity is generated by brown coal. There are clear greenhouse gas emission challenges there. Whatever contribution solar or other matters might make, such a shift would see us moving from a greenhouse-producing fuel, but a modest one, to a heavily carbon dioxide-producing fuel in brown coal.

Mr FORCEY — We are probably all really familiar with the popularity of solar panels. There is that combination of the solar plant panels with a hot-water heat pump. I particularly see this happening in a big way in New South Wales, and it will happen in Victoria as well, but if people have been enjoying those high feed-in tariffs and if those come to an end, then they are suddenly going to say, ‘Why am I giving my electricity away? What else can I do with it? Can I buy an electric car? That’s pretty expensive. Should I buy a battery for the garage to store my energy overnight? That’s pretty expensive’. What they will find, particularly if their gas hot-water heater is about to die, is that it is a very cost-effective way to heat their water using renewable energy because they are going to be generating it themselves. People today use electricity. They make decisions about whether they want to buy green power or not. Of course that comes at an extra cost, but it is possible for individuals to have their electricity 100 per cent renewable today if they are interested in that.

Mr DAVIS — But my essential point is that whatever add-ons we have with renewables, essentially most of Victoria’s electricity is brown coal driven, and a shift from gas to brown coal would see an increase in greenhouse emissions.

Mr FORCEY — What we are looking at in our study is the economics of it, and we think that people are going to start to understand that they can save a lot of money from this switch. So we are really just looking at it from that economic point of view. We see that that switch to gas is going to happen. Our study is not getting into the greenhouse effects of that.

Ms SHING — Thank you for that presentation; it was very useful. I would like to hear your thoughts on the way in which new builds and new growth and development for exploding population areas throughout Victoria may impact upon the way in which people more efficiently use energy within their homes and perhaps choose to take up the sorts of initiatives that you talked about in terms of maximising energy efficiency as part of fuel switching, and whether you have any particular views on that. As you know, we do have growth corridors which will mean that as the population increases exponentially in coming decades demand for particular types of energy, the way in which energy is used and the technology leaps and bounds that we will have will change. So I would like to hear any thoughts that you might have on that particular part of the energy use market.

Mr FORCEY — I guess that is going beyond our research, because the bulk of the demand we will have will of course be all the existing homes that are out there, but just from my general experience in terms of new growth corridors et cetera, ideally people should be aware of the cost benefits of spending a bit more for the eaves that block the sun, spending a bit more for window treatments or awnings and making sure they get the right insulation. Gee, it would be fantastic if people really installed the insulation properly and did all those good things for new homes.

Certainly I would advocate for getting better information out to people to understand what they are up for in terms of the long-term costs and the whole fuel switching. Do you bother to put in gas, or do you just go straight to a 100 per cent electric home from the beginning? It would be great if people had the information out there so they could make the best economic decisions. We hope that our research will start to lead to that. We hope that our calling for an integrated resource plan will start to lead to that so that better information is available to new home builders and buyers, but also for the existing buildings that are out there.

Ms SHING — Because one would presume that it may well feed into forecast changes to demand and therefore price where there are changes — attitudinal changes, reputational changes and technological changes — to the way in which energy resources are made available.

Mr FORCEY — Yes. Like I said, the Australian Energy Market Operator in their recent, December, national gas forecast — they call it national, but it is not really national; it is just eastern Australia — started to mention they are seeing this fuel switching phenomenon happen. Then they released a recent paper into emerging technologies, and they talked a lot about batteries and they talked about electric cars. A little bit down the back of that there was about half a page about fuel switching. They will be doing more modelling in that area trying to understand this phenomenon. We will be hearing more about this phenomenon, like I said, for the next one, two, five or 10 years.

Mr DALLA-RIVA — Thanks, Tim. I am just looking at your chart ‘Eastern Australia gas demand’. It excludes gas for Queensland LNG export, and obviously that has pricked my attention to now have a quick google. In your presentation you made the assumption — this is on domestic consumption — you have made it on the view that demand is decreasing. The recent report I am looking at here says that there is, as you know, huge demand for gas exports overseas. There are emerging economies in Asia and India. And I am just looking here at an APPEA report dated 6 January this year that says:

The departure yesterday afternoon of the first liquefied natural gas ... tanker from Queensland’s Gladstone Harbour marks the start of Australia’s dramatic transition to being the world’s largest supplier of this critically important energy source.

It then goes on, further on, to talk about an investment of more than \$180 billion still ongoing, saying it is the start of the first of six projects. It reports that:

In 2012–13, Australia shipped 23.9 million tonnes of LNG cargoes, earning \$13.7 billion in export revenue ... By 2018, Australia is forecast to overtake Qatar as the world’s no. 1 producer of LNG.

So, whilst we have heard about domestic consumption, obviously the evidence that we have heard here and elsewhere has been about the potential of export markets. We know that manufacturing is sort of in decline, and I understand the argument that there is going to be a decrease in gas consumption because of that, but I think in your presentation you have excluded, purposely, gas exports to present a case that is

perhaps not the true case in terms of the growth of gas exploration and export potential around the world. Do you want to make comment on that?

Mr FORCEY — Yes, sure. I am certainly not trying to leave anything out. It is a huge story, and you will probably be hearing more about that today from other presenters. The LNG industry is enormous. I used to design LNG plants — lots of fun!

Our research is just looking at the use of gas within eastern Australia, so all those numbers exclude the LNG exports, but there are plenty of other charts that you could see that show that, yes, with the start-up of the six LNG trains up in Gladstone, Queensland, they will consume and produce a volume of gas that is about three times larger than what we are talking about here, so it is an elephant. We are not studying that; we are looking at demand here, but of course you cannot look at demand here without thinking about price here, because price will impact on demand.

There is no doubt about it that the creation of this LNG industry in eastern Australia where formerly we did not have one — it was in Western Australia, then later the Northern Territory, where there were LNG exports, and then finally with the coal seam gas we have LNG exports out of eastern Australia. That has shifted from formerly, where we had about the cheapest gas in the domestic market of any developed country in the world, to now the prices that industry will have to pay, that electricity generators will have to pay — and then it flows also to our residential prices, although in terms of residential prices, the larger parts of that have to do with distribution and marketing and those issues. But still, wholesale prices do impact on residential prices. But we have shifted in eastern Australia from what had formally been a buyers' market to what is now a sellers' market, and so prices will be going up. That is driving some of this decline in demand that you see there.

Mr DALLA-RIVA — That is on the assumption, Tim, that there is no further gas produced out of Victoria?

Mr FORCEY — For these demand projections, we have analysed what the Australian Energy Market Operator has produced for gas for power generation. We understand that and can fairly agree that gas is not going to be used for much power generation in the future. Because there is no carbon price, the price of gas is going up, and there are other ways to generate electricity, whether that be through coal or whether it be through increasing penetration of renewables. The Australian Energy Market Operator is also saying there is a decline in gas use in industry. We have looked at that. We can understand why they are saying that; it has to do with various economic factors, but increasing gas prices being one of those. So we can agree with those things from the Australian Energy Market Operator and not spend a lot of our research time there. Where we think we have something that is useful and new and interesting, it has to do more about this building sector, which I have talked about, and again to a certain extent as gas prices go up that will help to drive people to look more at what options they have instead of their gas bill just going up and up, whether it is the energy efficiency options or the fuel switching options.

Mr DALLA-RIVA — I am somewhat confused because my understanding from around the world and other evidence that we have received is that the more gas that is produced the lower the price will be for consumers.

Mr FORCEY — Yes. The Australian Energy Market Operator has not shown that in these projections, where they show significantly declining demand in gas for electricity generation and significantly declining gas demand in industry. The Australian Energy Market Operator so far is only forecasting flat demand in the building sector but with the caveat, they have said in words, that they understand this fuel switching is an interesting phenomenon that they are now starting to do some modelling for.

Mr DALLA-RIVA — But if there is a reduction in demand for gas and there is a continued growth in supply of gas, I would have thought that the price of gas would therefore be reduced. It is basic economics.

Mr FORCEY — Yes. What the Australian Energy Market Operator is basing their projections on is price work done by ACIL Allen, the consultants. ACIL Allen is predicting increases in prices for gas in eastern Australia driven by this linkage to overseas prices. It used to be that gas in eastern Australia was

trapped; it could not leave, so you could debate about what the price should be, and that was just a domestic discussion. But now with the international linkage, the ability to export gas overseas, one now has to consider what can you sell that gas for overseas and what happens at the negotiation table — when gas buyers and sellers get together, what forces are at play?

If the gas sellers are able to say, ‘Look, we’re linked to overseas prices’, and there is this coal seam gas and the coal seam gas is more expensive to produce than the good old days when you just drilled a hole in the Snapper field out in Bass Strait and out came a heck of a lot of gas — so those forces are at play at the negotiation table between gas buyers and sellers, whereas in the old days the oil and gas producers like Esso/BHP were quite happy to get rid of as much gas as they could because it was actually getting in the way of the oil and the LPG production, which was far more valuable.

In former times gas was practically a waste product — but we did not waste it, we kept it in the ground until future times, so that was good foresight and planning in the decisions and the regulations that were made at that time. In other jurisdictions like North Dakota and Nigeria, you find that the gas is just flared or vented to get it out of the way for the oil production. But these days at the negotiation table you have those forces and the whole international picture now comes into play in eastern Australia.

Mr DALLA-RIVA — In continuing the discussion on this, if you are saying that the price of gas will increase, is there any evidence or are there any examples from around the world where governments have intervened to set a floor level so that the consumers — the mum-and-dad users of gas in Victoria — are not going to be stung by the global fluctuations of the sellers’ market? If you are saying there is going to be an increase in the gas price globally, is there not a way for a mechanism for the government of Victoria to keep a floor price so it does not extend beyond that — a cap, so to speak?

Mr FORCEY — What we have done with respect to gas prices is to look at what the Australian Energy Market Operator referred to. They referred to this work by ACIL Allen. We have looked at that. It seems reasonable what we are talking about, but we are not investing a lot of time and effort in our research trying to come up with better or different views than ACIL Allen, who have spent a lot of time in that area. So that is what I will say about what we are assuming for our gas prices as we look at the future of demand. Then the other issues you talk about — about what governments might do — are far outside the research that we are doing and outside of my personal experience, so I cannot really comment.

Ms HARTLAND — If I can just take you back to domestic users, because often when we are talking about these issues people will say, ‘Solar is only for rich people because it’s all the subsidies’. Yet in my electorate in the western suburbs, Hoppers Crossing has some of the highest rates of solar panel use in the state. Clearly people have done it there for utility bill issues rather than, probably, the environment. How do we make sure, though, if there is this conversion off gas, that for low and middle-income households it is actually made economical in terms of subsidies to change over to appliances? I bought my panels via a council buying scheme. Do you see that as a feasible thing for people in the future?

Mr FORCEY — In the demand projections that we are still working on, we are factoring in the idea that this message does get out to the community, that in a large number of cases electricity may well be the cheaper way to heat your home. And also I expect we will see a whole re-visioning and updating the whole energy efficiency area, so there are plenty of things that can be done in homes. In the demand scenario that we have there we will be assuming that these messages do get out to the community, the community does respond and so demand ends up in that position.

We will be assuming that governments do do some things. I am not here to prescribe what those things will be, so that is not an area that we are looking at or that I can comment on. But, yes, in our demand assumptions, because we will be showing gas demand in buildings going down, we are saying that is because the word gets out there one way or the other to people and they take economic actions.

Ms BATH — Thanks, Tim. It has been very interesting your outlining the domestic conversion from gas to non-gas options, insulation and a whole raft of issues. I guess my interest would also lie in industry and manufacturing, because there are a number of industries, particularly in rural Victoria, where they use

considerable amounts of gas in their plants. Could you comment on the feasibility of converting to non-gas options around that?

Mr FORCEY — Yes, and our report will talk more about that, and the report we did for New South Wales talks about that a bit. But mostly a lot of work has been done in that area, and we refer to the works of others — like, one example would be ClimateWorks, but there have been various government programs as well looking at energy efficiency for industry.

Yes, there is still a lot of opportunity, a lot of low-hanging fruit, because we have gone from a world where gas was cheap, and we are no longer in that world. That is going to take time for people and businesses to adjust. They need to understand what the future is likely to look like and then assess whether they can make some changes, and those would involve energy efficiency upgrades. Just like home owners can use heat pumps, a dairy is an example of where they have got an energy need for cooling — not that cold, to refrigerate milk — an energy need for heating and some hot water to clean up things. You can do that sort of thing with heat pumps these days — so again electrically driven — and some of the farmers might even generate that themselves with their own solar panels.

So that is the future, and so the old days of burning gas — the expression has been, ‘Gas is too valuable to burn’. At my house, if I am running ducted gas heating and the old hot-water heater that has got to go, the gas that arrives at my house, I immediately throw half of it away. So that is the energy that goes up the chimney and the energy that does not make it through the ducts and the energy that leaks out. So in houses you throw half of your energy away. There would be similar things still happening in industry. It may require capital investment so that they can upgrade things, but if they understand where the prices are, where the prices are likely to stay or go, then hopefully with that information they can make good economic decisions about where now they can make those upgrades that they might have been thinking about and never got around to.

Ms BATH — In the start of the year you commented on New South Wales and made some predictions around New South Wales. Have you seen your predictions borne out so far? It is only six months into the year but — —

Mr FORCEY — We do not use the word ‘predicting’, and what we produce is not a prediction or a forecast. We call it a scenario. It is something we think reasonably could happen, and that is the reason that AEMO produces three different projections, forecasts, scenarios — whatever you want to call them — because they understand nobody can predict the future adequately, and so you should predict a bit of a range and hopefully you have got it in there somewhere. We are thinking that their range is not broad enough, that we could actually see more things happening in terms of the fuel switching area.

In New South Wales when we got started we said, yes, there is potential that in New South Wales — we only focused on that state — that gas demand could fall to half of where it has been in recent years within 10 years time. Some people thought that was pretty surprising, and then right about the same time AEMO updated their forecast. They do this annually, so they come out on a schedule in January — or December — which was coincidentally when we were forecasting. There AEMO had, compared to their previous forecast, dropped their projections for gas demand in 10 years time — it was probably the number I read off the chart — by 17 per cent. So we were saying in our scenario possibly it could go to a drop of 50 per cent, so if AEMO updates their forecast another couple of times by 17 per cent each time, they will get pretty close to the MEI scenario.

The CHAIR — Tim, can I thank you for that presentation and do one thing that I should have done at the start, which is to formally accept the submission, if the committee is willing to do that. I will take that as done. Secondly, you will receive a copy of the transcript in forthcoming days for proofreading, so that would be very welcome. I note also from your submission and your earlier comments that you indicate that research will be completed. You might want to submit material and some sort of synopsis of that to the committee. We would appreciate that.

Mr FORCEY — Yes, we will definitely submit the whole report; no problem.

The CHAIR — Thank you, I appreciate that, Tim.

Witness withdrew.