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STANDING COMMITTEE ON ENVIRONMENT,
COMMUNICATIONS AND THE ARTS

Reference: Save Our Solar (Solar Rebate Protection) Bill 2008 [No. 2]

MONDAY, 11 AUGUST 2008

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**SENATE STANDING COMMITTEE ON
ENVIRONMENT, COMMUNICATIONS AND THE ARTS**

Monday, 11 August 2008

Members: Senator McEwen (*Chair*), Senators Birmingham, Ludlam, Lundy, Parry, Pratt, Williams and Wortley

Participating members: Senators Abetz, Adams, Arbib, Barnett, Bernardi, Bilyk, Bishop, Boswell, Boyce, Brandis, Bob Brown, Carol Brown, Bushby, Cameron, Cash, Colbeck, Collins, Coonan, Cormann, Crossin, Eggleston, Ellison, Farrell, Feeney, Fielding, Fierravanti-Wells, Fifield, Fisher, Forshaw, Furner, Hanson-Young, Heffernan, Hogg, Humphries, Hurley, Hutchins, Johnston, Joyce, Kroger, Ian Macdonald, Marshall, Mason, McGauran, McLucas, Milne, Minchin, Moore, Nash, O'Brien, Payne, Polley, Ronaldson, Ryan, Scullion, Siewert, Stephens, Sterle, Troeth, Trood and Xenophon

Senators in attendance: Senators Birmingham, McEwen, Parry, Williams and Wortley

Terms of reference for the inquiry:

To inquire into and report on: Save Our Solar (Solar Rebate Protection) Bill 2008 [No. 2]

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Committee met at 9.33 am

CHAIR (Senator McEwen)—I declare open this public hearing of the Senate Standing Committee on Environment, Communications and the Arts in relation to its inquiry into the Save Our Solar (Solar Rebate Protection) Bill 2008 [No. 2]. Today the committee will conduct its fifth public hearing for this inquiry. The committee's proceedings today will follow the program as circulated. These are public proceedings. The committee may also agree to a request to have evidence heard in camera or may determine that certain evidence should be heard in camera. I remind all witnesses that in giving evidence to the committee they are protected by parliamentary privilege. It is unlawful for anyone to threaten or disadvantage a witness on account of evidence given to a committee and such action may be treated by the Senate as a contempt. It is also a contempt to give false or misleading evidence to the committee. If a witness objects to answering a question the witness should state the ground upon which the objection is to be taken and the committee will determine whether it will insist on an answer having regard to the ground which is claimed. If the committee determines to insist on an answer a witness may request that the answer be given in camera. Such a request may, of course, also be made at any other time.

[9.35 am]

SYNNOTT, Mr David, Private capacity

Evidence was taken via teleconference—

CHAIR—I would now like to welcome via phone conference Mr David Synnott. The committee has received your submission as submission number 65. Did you wish to make any alternations or amendments to your submission?

Mr Synnott—I have sent a supplementary submission which I presume you already have.

CHAIR—Yes, we have that. Would you like to make a brief opening statement before we go to questions?

Mr Synnott—I do not represent anybody except myself. I have put in an opening statement which I can read to you if you think that appropriate.

CHAIR—No, I think senators have read that statement. Is there anything you wish to add to that?

Mr Synnott—No.

Senator PARRY—Thank you very much for your submission and your opening statement. In essence you are asking for the means testing of the rebate to be totally scrapped. You do not have any views about the means testing to be at a higher threshold?

Mr Synnott—No. One of the points that I have made in the supplementary submission is that the more powerful a system that can be installed by a household the more the greenhouse gas reduction is effected. The rebate really becomes more efficient if it is used to put in a larger system on a household.

Senator PARRY—Yes, that seems to be the consensus of a number of witnesses who have given evidence before this inquiry. Instead of having a flat rebate would you see a proportional system where maybe a percentage of the cost being rebated to you as being more effective?

Mr Synnott—Without putting figures on it, I did think of that when I was actually first considering putting in the system. I have thought of it without actually putting figures on it. It seems to me that the larger the system, the smaller the percentage is probably reasonable. You still want to encourage people of limited means to put in these systems. I really cannot give you a positive answer on that.

Senator PARRY—But you are of the view that it would be a better incentive if it were not just a flat figure?

Mr Synnott—No, I really do not know that. I think the incentive is very important. It depends on what people can do with their money in alternative ways of spending it. If the rebate is on a proportional basis you are still looking at what is the net figure that the household receives and what would the household do with the money if they did not spend it on putting in a solar power system.

Senator PARRY—If you do not mind me referring to your age, I think you are the oldest witness that we have had give evidence to us. In your experience with others in your age and income bracket, do you feel it is a more difficult aspect to expect people under the \$100,000 threshold to be able to afford solar PV systems?

Mr Synnott—I am sorry, could you ask that question again?

Senator PARRY—I am just looking at your age and income demographic and am just interested to know your views and whether you can give indications of people in similar age and income demographics?

Mr Synnott—None of our contemporaneous friends have considered this. Our son certainly has. He has put in a one kilowatt system. I am not too sure if it has arrived yet, but that was appropriate. This is where I got some of the information from in discussing with him what he has done. I think it depends really on what is the personal incentive of people who produce greenhouse gas emissions.

Senator PARRY—We have heard evidence that there has been a slight increase in the number of installations from people who are retired and under a \$100,000 income. I am just trying to get a reason for that. Your intention in installing your system was primarily to assist in reducing greenhouse emissions?

Mr Synnott—Yes, of course, all our children are gone. As a household we try to live conservatively. I have heard it described as being frugal because you only put in two cups of water in the kettle when you boil it. We recycle. We use compost bins. We try to be conservative as a way of living. And this approach dictates to us anything we can within reason do as individuals to reduce greenhouse gas emissions is worthwhile doing. I guess there are other people who share the same point of view.

Senator PARRY—You indicated a moment ago that your contemporaries, as you described them, have not installed the PV cells. Can you indicate why?

Mr Synnott—I have to tell you I have never discussed with them why they have not done it, I am sorry.

Senator BIRMINGHAM—Thank you for your time today and particularly for the very detailed submission you have put in. It is much appreciated. Can I just go through with you the merits you find of the system you have put in? You have provided some data as well in terms of the types and sizes of systems and what they cover. You have a system that is about two and half kilowatts; is that correct?

Mr Synnott—It is 2.52 kilowatts.

Senator BIRMINGHAM—In terms of your household energy consumption, can you explain what benefits that provides?

Mr Synnott—I only have figures for six months of the year, so I do not know what the whole year is going to be like. In those six months we have pretty well generated as much electricity as we are going to use. The thing is we generate it at different times. During the day we are largely over self-sufficient. During the night with hot water heating and so on, we are obviously energy deficient. The only effect we can see is in the bill from our retailer and the bill has certainly been positive. We have actually had credit for the first six months which, of course, included summer time and the best solar generation time for the 12 months. Does that help?

Senator BIRMINGHAM—Yes, that certainly helps. In terms of your understanding of your energy consumption, has the process of installing a PV system aided you and your wife in better understanding how much energy you use and taking appropriate measures to try to conserve that energy?

Mr Synnott—I guess it really confirmed our approach which, as I said before, is a conservative approach to living. We turn lights out when we leave rooms and this sort of attitude to using energy. I guess it has merely confirmed that what we are doing is reasonable. The meter which has been installed as part of our system is one of these time-of-use meters. It really does not affect what we do. That is seen by the retailer as being the major influence on helping people conserve energy because they now know that energy used during a peak period is really very expensive compared with off peak. I guess, all I can say is that it has confirmed our approach.

Senator BIRMINGHAM—You talked about the impact on your electricity bill. You are in New South Wales where the government does not have a mandated feed-in tariff regime in place unlike some other states. What relationship do you have with your energy retailer in this regard in terms of the payments they make to you and how is this struck?

Mr Synnott—We are on time-of-use metering and the bill we get from our retailer records the amount of electricity we buy from them for each of the three periods of the day and the amount of electricity we sell to them for each of the three periods of the day. I do know the value of the electricity we are generating in terms of the money we get back. It does raise an issue which I am not too sure it is relevant for your inquiry and that is the GST effect. The electricity we get from our retailer, of course, includes GST which is the cost of the electricity plus 10 per cent tax. The electricity we supply to the retailer is without that 10 per cent, without that GST. So, we are effectively selling electricity to the retailer at a lower price than we are buying it from the retailer. None of the papers I have read on the feed-in tariff mention the GST effect and the complication that is going to ensue sooner or later. I have written to the federal Treasurer pointing out that I think this is an anomaly. I have a letter back from the liaison officer in the Treasurer's office which says effectively, 'Stiff cheese, the GST law is this,' and the government does not want to introduce, if you like, further modifications. But, in fact, the tax office already has. Of course, it recognises that and it then says the retailer does not have to separate the two supplies. I think there is a case which I will follow-up with the federal Treasurer to look at this question of GST in more depth.

Senator BIRMINGHAM—I would love to say that the comprehensive review of taxation being undertaken by the federal government might provide you with some relief there but, unfortunately, it is comprehensive minus the GST review, so you are not going to get much hope from that one. You raise a valid point. You seem to have looked at a range of issues in regard to solar rebates and PV systems. Have you looked at the feed-in tariff models applied in other jurisdictions, either in Australia or overseas, and considered whether there may be better approaches than the type of relationship you have with your supplier?

Mr Synnott—I have looked at it and I have looked at the effect on the two-for-one situation in South Australia. I have looked at that in terms of the favoured gross metering and the essential net metering system. In both cases, if I compare it with my estimate of the opportunity cost of \$1,244—and I am assuming now that

what has happened for six months is roughly going to happen over 12 months if I double it—if I take the gross metering figure the household will loosely get something of the order of \$600 less than the opportunity cost. If I calculate it on net metering, we lose about \$700 compared with the estimate of \$1,244 opportunity. Does that help at all?

Senator BIRMINGHAM—Yes, those sorts of practical examples are very useful. You have only had your system in place for about six months; is that correct?

Mr Synnott—It was actually connected to the retailer on 31 October last year.

Senator BIRMINGHAM—You received the \$8,000 rebate for the installation of your system?

Mr Synnott—And I was very pleased to do so, thank you.

Senator BIRMINGHAM—The cost of the system was offset by a renewable energy certificates as part of the system?

Mr Synnott—I sold about just over \$2,000 worth of those. I sold them for the 15-year period. I did consider maybe selling them for five years and then looking at the market again in another five years. It was easier, I regret to say, to say, ‘Okay, let’s take the 15 years and run.’ I am 82, anyhow, and I am not too sure where I am going to be in 15 years.

Senator BIRMINGHAM—We hope you are still giving aggressive evidence to Senate committees. So, that is about a \$10,000 offset through the different federal government mandated programs?

Mr Synnott—Yes.

Senator BIRMINGHAM—How much did the 2.52 kilowatt system you installed cost you over and above that?

Mr Synnott—I think the figure was about \$12,000.

Senator BIRMINGHAM—That is how much it cost you over and above the \$10,000?

Mr Synnott—Yes. I think my submission has a more precise figure. The net cost was \$20,735.

Senator BIRMINGHAM—That is the total cost?

Mr Synnott—Yes, that was the net cost, \$20,735. That was after the \$8,000 rebate and the sale of the RECs because the gross cost was \$30,763. I am reading from my initial submission.

Senator BIRMINGHAM—You are looking at a system that would have cost you about \$30,000 had you not had those offsets.

Mr Synnott—Yes.

Senator BIRMINGHAM—Would you still have installed at 2.5 kilowatt system without that \$10,000 in offsets?

Mr Synnott—Probably not. It was one of things, if you like, on our horizon, like putting in solar water heating which we have not yet done and there are reasons for that. When the rebate was changed from \$4,000 to \$8,000, all of a sudden it became something we could do. And then I discovered the RECs and the fact that they were marketable, so we went ahead but we went ahead really because the \$8,000 rebate was suddenly flashed up sort of in bright lights in front of us. I do not think we had so strongly considered it before that \$8,000 figure appeared.

Senator BIRMINGHAM—You could have received the \$8,000 for a much smaller system, one even less than half the size of the system you installed?

Mr Synnott—Yes.

Senator BIRMINGHAM—That, of course, would have cost you much less than the \$20,735 that you paid out of your own pocket. Why did you choose a larger system?

Mr Synnott—As I said in my opening statement, I am 82 and we live in a house and we really do not know how long we are going to continue living in this house. My feeling was we are installing this system for a new owner of the house and what is that new owner going to want. We could not anticipate it, so I have got a roof of a given size, let’s install the largest system we can and that puts us in the best position when we ultimately sell the house.

Senator BIRMINGHAM—Thank you very much for your time and, indeed, your commitment to this cause.

CHAIR—Clearly, you are a gentleman who has studied the ins and outs of this program very well. Could you tell us your understanding of what the actual bill that we are looking at today does?

Mr Synnott—I have it here among my papers. I would have to go back and look. I did download it from the internet. My understanding—and please accept it is not as good as yours—is that the idea is effectively to force the government to cancel the means test and allow the rebate to function as it did before the means test was applied.

CHAIR—That is not quite what it does. What the bill does is to require the parliament to determine the guidelines for the program so that it would be the government of the day that determines any rebate or any means test level. In the current configuration of the Senate, assuming the government of the day supported any changes to the current legislation then it would be up to the Senate of the day to determine whether or not that legislation proceeded. Do you have a view about that process?

Mr Synnott—You are asking me, I think, to say what I think the Senate might decide to do or recommend to the government in terms of the ongoing management of encouraging the population or not to install solar power systems; is that true?

CHAIR—Some people have made submissions to the inquiry saying that they do not believe a rebate system is the ideal way to go to encourage people to adopt new technologies and renewable technologies at the domestic level, that there might be better systems, such as feed-in tariff legislation in particular.

Mr Synnott—I am aware of some of those. Also, going back to the South Australian government's proposal of about six years ago for a feed-in tariff and I understand Germany, which I believe is a leader in this field, does not have an up-front rebate but does rely solely on a fairly significant feed-in tariff. Unfortunately, there seem to me to be differing views on the feed-in tariff. Some of them, if I understand it correctly, say, 'Let's have a feed-in tariff at a given rate for all the people who put in systems over the next five years. Then having a look at how the rate of installation is going for the next five years we might have a different level of feed-in tariff but whatever the feed-in tariff is at the time it continues for the life of the system for each of the people.' I have not thought deeply about that. I did a little sum to find out if I applied a two-to-one feed-in tariff to our bill on a gross metering or a net metering basis, we were out of pocket with both of them. I have not calculated just how big the feed-in tariff would have to be so we were not out of pocket and that was out of pocket after the initial \$8,000 rebate. I am not sure that I think in the end that a tariff system is the best answer, and that is the best answer I can give you.

Senator WILLIAMS—You have made it quite clear in your report here that you encourage the Senate as a whole to cancel the test.

Mr Synnott—yes.

Senator WILLIAMS—What would be your reaction if the decision was made to, say, raise the test to \$150,000, \$200,000 or \$250,000? What is your opinion on that?

Mr Synnott—You are getting me into a level of income I do not have—

Senator WILLIAMS—That is two of us.

Mr Synnott—I live in a wealthy suburb of Sydney, Northbridge. One of the things that appears to me is that a lot of wealthy people are working so hard they do not have time to consider lots of things. I am not too sure that the level at which the means test could be applied has as much impact as the dramatic effect of saying, 'Hey look, there is an \$8,000 rebate.' I am sorry I cannot give you a prediction.

Senator WILLIAMS—To put it another way, if that means test was raised to, say, \$200,000, what would be your personal reaction to that decision?

Mr Synnott—I would think it probably is a good decision if it encourages more people to install the system but install larger systems, because I really believe larger systems are of more value to the community as a whole than the smaller systems. That, I think, follows from my supplementary submission.

Senator WILLIAMS—Thank you. I think your input has been terrific.

Senator PARRY—I just wanted to refer to a matter raised by the chair. This is the great thing about bipartisan committees; you get a very balanced view. I wanted to clarify the purpose of the bill. Whilst, technically what the chair has said is that it actually puts the decision-making process into the hands of the Senate to either disallow any form of means testing or any other aspect in relation to the solar panel rebate, that that is the fairest process. It is a senator from my side of politics, Senator Johnston, who has introduced

this private members bill and it doesn't reduce the means test which is correct. But it says to the Senate, 'You can decide.' I think you would find that the Senate would most likely decide to remove the means test. In effect, it does do that even though Senator McEwen was quite correct with a technical interpretation of what the bill does. Nevertheless, the practical application would still have that effect. I just wanted to make sure that was on the record rather than just leaving that unsaid.

Mr Synnott—Thank you.

CHAIR—I am amazed at Senator Parry's predictions about how the Senate may vote in its new configuration, but we shall see.

Mr Synnott—I must admit, I thought, 'Now, if that is true, it is good news.'

CHAIR—All will be revealed, I am sure. We would very much like to thank you for putting in your submission and your additional submission and also for taking the time to appear before us today. The committee members appreciate it very much.

Mr Synnott—Thank you for those words.

[10.02 am]

RICKARDS, Mr Mark, Private capacity

Evidence was taken via teleconference—

CHAIR—Thank you very much for your submission to the inquiry and for talking to us today. The committee has received your submission as submission number 117. Do you wish to make any amendments or alterations to your submission?

Mr Rickards—No, not at this stage.

CHAIR—Would you like to make a brief opening statement before we go to questions?

Mr Rickards—I have been working in the solar hot water industry for the last 12 months. I am a small business owner and distribute solar hot water systems around Tasmania. I am also dealing with a major brand and so I guess I am having input from what is happening around Australia. I am very interested and concerned to see where the solar industry is going.

CHAIR—Your submission talks a lot about installing solar hot water systems. Do you actually install PV cells on roofs as well?

Mr Rickards—No, we do not. I am actually only a distributor. I am not a tradesperson. I work with tradespeople. I refer tradespeople to my customers. A lot of customers are looking for both systems and so I have been dealing with PV tradespeople as well.

CHAIR—Could you give us a snapshot of how the PV energy systems are going in Tasmania?

Mr Rickards—I think there is great concern with the introduction of the means test. Most of the people who are installing PVs are similar to the people who are installing solar hot water systems. I would say their incomes are probably in the vicinity of \$70,000 to \$120,000. Obviously, a large number of those are missing out now because of the change to the means test. In most cases, it is certainly not, as I have heard them described, the millionaires that are installing them. It is actually, in most cases, families, people like myself because they want to make a difference; they want to contribute to reducing climate change. They have been concerned that their only option to do that has been taken away when the means test was changed.

CHAIR—The figures from the department of the environment indicate a very, very small number of applications in Tasmania for rebates both pre and post the budget in February. Is that because there is not a lot of sunlight in Tasmania? Compared to other states there is a small take up. What are the reasons for that?

Mr Rickards—There is an idea by some that Tasmania is no good for solar energy because they think we do not have as much sunlight. In fact, Tasmania is excellent for solar energy. Particularly, in winter, we get those really clear, cool, crisp days with sun almost all day and it is fabulous. That is why I operate. I distribute evacuated tubes and they are ideal for a cool climate like Tasmania. I think the other thing is that even with the rebate it is still quite expensive to put in PVs and I guess the average income in Tasmania is a lot lower than the average income in some of the larger states. I guess there is less likely to be people who can actually afford it even with the rebate. I think the other thing is the lack of a feed-in tariff and the fact that you are only getting back what you put in is really prohibitive because you are looking at figures of around about a 20-year pay back, and for a lot of people that just seems not quite worth it.

Senator PARRY—You indicated in your submission that the number of potential PV customers has definitely been markedly reduced. Can you put figures on that, percentage-wise or number-wise? Can you also give anecdotal or direct evidence from any other suppliers or installers that you are aware of?

Mr Rickards—I could not put figures on it exactly. There have been quite a number of customers that I have spoken to who were intending to put in PVs and because of the change of the rebate they then decided that they could not afford it any more, so a cheaper option for them was solar hot water. That is why I have come into contact with them. There have been quite a number of those.

Senator PARRY—Just so that we have something indicative for the record even if it is only anecdotal, when you say there has been a significant number of those—

Mr Rickards—I would have had at least half a dozen.

Senator PARRY—Would that represent over 50 per cent maybe of the orders you had, or something less than 50 per cent?

Mr Rickards—I generally do about 15 to 20 systems a month. It would be maybe 15 or 20 per cent of my customers since the rebate changed, or something like that. Then the other thing is that there are a couple of PV operators that I am familiar with have commented to me how the work has dried up for them and both are actually looking to getting into solar hot water as well to supplement their business because they did not think they could survive just on PVs any more. That is the anecdotal effect on them.

Senator PARRY—With the income level you indicated of \$70,000 to \$120,000 that seems to be the level you are dealing with, can you indicate what percentage of those, if you do have that knowledge, would be over the \$100,000 limit?

Mr Rickards—Out of, say, my last 50 customers, I would have had perhaps five who did not qualify for the \$1,000 federal government rebate on solar hot water because their income was over the \$100,000, and the rest would have qualified. So, that would be about, I would say, 10 per cent.

Senator PARRY—You are based in Hobart. Do you cover just the southern part of Tasmania?

Mr Rickards—No, I cover the whole of Tasmania. I distribute a particular brand of system right across Tasmania and work with local plumbers.

Senator PARRY—That is on your solar hot water. What about the PV side; where are most of the distributors from?

Mr Rickards—The ones I have been dealing with are Hobart based, although there is one in Launceston.

Senator PARRY—With the typical installation, are they for new homes or existing homes?

Mr Rickards—For PVs or solar hot water?

Senator PARRY—Your knowledge of both.

Mr Rickards—I would say probably about 70 per cent would be existing homes and maybe about 30 per cent new homes. With PVs I would say that the ones that I have got to know about would be more like 95 per cent for existing homes and five per cent for new homes.

Senator PARRY—Are you aware of a lag period? Since the announcement in the May budget, are you aware that people who have applied who were still eligible for the rebate are still waiting for installations. We are looking at timeframes for installation in Tasmania as to how quick that is, what the turnaround is?

Mr Rickards—There are none that I know of but I can give you the evidence from solar hot water where there was a huge number of systems that we sold in the last 12 months. I would say probably at least 50 that we have sold at least three to six months ago are still sitting around waiting to be installed. From a hot water point of view there is certainly a big lag. I am not sure if that is the same for PV or not.

Senator BIRMINGHAM—Thank you for your time today. We trust you are getting close to your destination. Senator Parry has touched on most of this. Can I just go to the importance of the renewable energy certificates for a moment? We have focused on the rebate. How important are RECs in the framework of stacking up a financial model to install either a solar hot water system or PV cells?

Mr Rickards—Primarily I can speak from a hot water perspective, if we did not have the RECs I would say I would be out of business in a minute. Obviously, particularly for those people who do not qualify for rebates, the RECs are the only contribution they get. A typical system is about \$4,000 and RECs generally provide another \$1,000 back, so it reduces the cost by about 25 per cent, keeping in mind that in Tasmania we do not have any form of state rebate. If you do not qualify for the federal rebate and there is no state rebate, then obviously the RECs are the only rebate you are going to get except for those people who are within the Hobart City Council where they have a \$500 rebate. For people who do qualify for the federal rebate, usually RECs are about the same or just a little bit more than a rebate, so it makes quite a big contribution. I think if RECs were to disappear, so would my business would be my guess.

Senator BIRMINGHAM—Do customers understand how RECs work? Do you have to coach them through how it works and how a household goes about selling certificates, do you undertake to sell those certificates for them, or what is the process?

Mr Rickards—Usually, they are generally aware that there are a number of ways of getting some money back on the system. A lot of them do a fair bit of research themselves but the RECs concept gets a few of them. I usually explain it to all of them. I generally provide them with a form that they complete after the installation. I provide a form to a group called Greenbank Environmental, just because I found them to be really good and that is who the supplier of my hot water systems had been dealing with in the past. So, I

provide them with the form. They actually fill it in and send it off. That is my involvement with RECs. I obviously keep people in touch with what the RECs trading price is as well.

Senator BIRMINGHAM—Have you been looking at increasing the scope of your business in PV systems in recent years?

Mr Rickards—Yes, I am. There is a new technology which I am interested in trying to get into Tasmania. There is a thing called, I think, the SunCube, or something which was invented by an Australian and is now being mass produced in India. It is very modular and small, so you are able to do one cube, six cubes, 12 cubes. It is a very modular thing. Usually, I think it is a couple of thousand dollars per cube. I do not think they have started selling them in Australia but I have been talking to them trying to get the distribution rights for Tasmania for that product because I think for a household installation it is something that could be a little bit cheaper and therefore more extensive, particularly in light of what has happened with the rebates.

Senator BIRMINGHAM—You believe that that product would meet the eligibility standards and the accreditation standards and so on to receive the rebate?

Mr Rickards—No, I do not think they would because they are quite a small system. But it is more about the fact that the unit itself, which is sort of very compact, small and almost everyone could get one for a couple of thousand dollars which would make some small contribution, perhaps broadening the market.

Senator BIRMINGHAM—How much power would those systems generate?

Mr Rickards—I could not give you that figure off the top of my head. I think they might be 300 kilowatts, or something like that, per cube.

CHAIR—If I could just ask you a question before I go to other senators? You are obviously a small business man. Could you just give us a comment on the wisdom or otherwise of small businesses relying on government rebates to sustain their business given that a rebate can be changed by the government of the day or, indeed, if there is a change of government the whole program of rebates can be altered. Indeed, this bill puts in the hands of the parliament the ability to do just that. I wonder whether you think whether that is a sustainable model or whether you think there is an alternative way to give security to small businesses.

Mr Rickards—It is a scary thought, I must admit. I think there is a certain percentage of population who would always want the technology because they have a strong belief that they want to make a contribution to reducing climate change. And there would be those who would do that regardless of what the market model was. If the rebate did change, my market would be significantly reduced and I would obviously have to look at what other things I would need to do to stay viable. I give 5 per cent of my turnover, not 5 per cent of my profit, to a not-for-profit group who promote sustainable living solutions. I guess, I am not just in it as a business but I am also in it to make this technology available to Tasmanians at hopefully a lower cost than it has been otherwise. But it is something that I would have to look at if the rebates were not there as to whether I would be able to continue in business. Therefore, for a purely profit-driven business, it is a significant thing to think about.

CHAIR—What is your view on alternative ways of encouraging business investment and domestic household take-up of sustainable and environmental solutions?

Mr Rickards—I have been working a lot with small community groups, little area focus associations and things like that, and encouraging bulk purchases which then enables me to reduce shipping costs, reduce distribution costs and, hopefully therefore, to keep the overall price down and that obviously makes it more affordable and more people can do it.

Senator WILLIAMS—By the year 2020, the target has been set that 20 per cent of Australia's production of energy will be renewable. Have you ever installed solar hot water systems in the floor of housing for heating during the winter and colder months?

Mr Rickards—Are you talking about hydronic heating?

Senator WILLIAMS—Yes.

Mr Rickards—As I said, I do not install systems, I provide systems. I have had a number of questions about them. At the moment, the particular technology that I have is relatively expensive but only really applicable to brand-new homes. It is certainly feasible. In fact, I did have a meeting in Melbourne on Thursday night, which was part of the reason I was over here, with a supplier of a hydronic heating system, mostly for commercial use, and I would be providing the solar collectors for that. But they are working with people who are providing domestic solutions. I think it is getting more affordable. There is a significant cost involved. If

you are building a \$500,000-plus house and it is starting to look like you might spend \$30,000 on heating it, it becomes worthwhile, but for those who are building a less substantial house then the cost involved is probably prohibitive. But you would be correct in assuming that there is a quite a deal of interest in it.

Senator WILLIAMS—That is what I wanted to know, how much interest there is in it. Thank you.

CHAIR—Thank you very much for your submission to the inquiry and for taking the time to join us by telephone today.

Mr Rickards—Thank you very much for allowing me to make a submission and to discuss it with you today. I greatly appreciate the opportunity.

Senator PARRY—Thank you very much for clarifying to my colleagues that the sun does shine in Tasmania profusely.

Mr Rickards—My pleasure, thank you.

Proceedings suspended from 10.21 am to 10.29 am

[10.29 am]

LU, Ms Jia Ying, Regional Manager, Suntech Power Australia Pty Ltd

RYAN, Mr Warwick, Suntech Power Australia Pty Ltd

CHAIR—I welcome Ms Jia Lu, Regional Manager, Suntech Power Australia, and Mr Warwick Ryan from KPMG. Thank you for coming along to talk to us today. The committee has received your submission as submission No. 96. Do you wish to make any amendments or alterations to your submission?

Ms Lu—No.

Mr Ryan—No.

CHAIR—Would you like to make a brief opening statement before we go to questions?

Ms Lu—Yes.

CHAIR—Please do.

Ms Lu—Good morning, Madam Chair and Senators. Thank you for the opportunity to offer our comments in response to the save our solar bill 2008. As we do not sell directly to retail consumers in Australia we cannot provide an accurate projected impact for the means test on ourselves at this stage. However, as the world's largest solar panel producer we can provide some insights based on our extensive experience in solar markets around the world. Firstly, I would like to re-emphasise that Suntech Power Australia understands the budgetary circumstances that led to the introduction of the means test on the solar panel rebate. Suntech supports the government's efforts to curb inflation and put downward pressure on interest rates. A strong solar power industry is dependent on a strong economic environment for Australian families and business. As the world's leading manufacturer of modules, Suntech Power has experience from our applications across residential, commercial, industrial and the public utility sectors. Suntech Power also has strong Australian roots. Our founder and CEO, Dr Shi Zhengrong, is an Australian citizen and he developed many of his innovations during his time at the University of New South Wales.

Suntech Power was delighted to open our flagship office in New South Wales in December 2007. We have our own international R&D cooperation agreement with the University of New South Wales. Now we are examining the feasibility of establishing our own R&D facility in Australia in the coming years. Suntech may consider manufacturing or assembling in all regions to be closer to our markets, based on the level of supportive policies at the national and local levels.

We fully understand the importance of ensuring that solar power is as affordable to consumers as possible. Suntech is doing our bit to reduce prices. For the benefit of senators, I have brought some presentation slides that document our growths in production capacity, our efforts to lower costs, and our expectation of future prices.

Slides were then shown—

We are investing heavily to build additional production capacity and working to reduce costs upstream. It takes the economies of scale of rising consumer demand in Australia and the rest of the world to drive those prices down, and of course manufacturers like Suntech to make those investment decisions to expand the capacity as shown in slide 1. Partnering, as we have, with new silicone suppliers in long-term supply contracts, we hope that the price of silicone, currently 70 per cent of costs, should fall sharply by 2012.

Suntech's combination of low-cost silicone, increasing efficiency and significant economies of scale are expected to enable significant reductions in module pricing by 2012, as shown in slide 2, of US\$4 per watt system cost in 2012, with a radiation of 1,600 hours per year, leading to a solar electricity cost of 18c to 20c per kilowatt hour. That means the price of solar electricity cost will equal the cost of electricity generated by fossil fuel when it reaches grid parity without any government incentives. Once solar achieves grid parity the market for solar is boundless, as shown in slide 3.

In slide 4, by year 2010, we plan to have production capacity at two gigawatts, which equals four medium sized nuclear power plants. We feel the means test may create a market disruption in the long term and potentially harm the frontline solar industry's reputation. Recently we have noticed that the environment minister's recent press release stated that there have been over 500 applications for the solar rebate since the budget announcement. We are pleased to see it continued growth in applications. The solar rebate is a

relatively new program and many solar consumers are only just becoming aware of the rebates as the profile of solar power grows under the new government.

In addition to our submission, we would like to give further information about Californian low-income solar programs, where a relatively high proportion of affluent residents voted not to impose a means test. We would like to take question on that. We are looking forward to answering all of your questions.

CHAIR—Thank you very much. Mr Ryan, do you have anything to add?

Mr Ryan—No.

CHAIR—Senator Birmingham?

Senator BIRMINGHAM—Thank you very much for your time today and for the detailed information that you have put before us, particularly in relation to the future of the solar industry. You mentioned in your opening statement the potential market disruption that has resulted from the means testing of the PV rebate. One of the key goals of the rebate was building capacity within the industry, particularly on the installation side. As a major manufacturer, what has your experience been in terms of that success in building capacity and do you have any feeling to date on what impact the means testing may be having on the number of entrants into the marketplace?

Ms Lu—We set up our organisation in Australia last year, so at the current stage we do not have an exact figure to provide a comparison. We have international experience with other countries, such as the United States. We feel that changes to government assistance programs in this emerging sector can have an adverse effect in the long run. For example, the US Congress is close to allowing a federal tax credit, which pays for 30 per cent of a solar system, to expire in December this year. As a result, projects are beginning to stall and producers are focusing on European markets and installers are facing layoffs. That is our experience from the US.

Mr Ryan—Suntech Power does not sell directly to consumers. It only sells to distributors. Because of the effectiveness of programs in Europe, a lot of the stock is forward sold already, and so Suntech Power has not really noticed any decrease in sales as a result of the means test in the last couple of months.

Senator BIRMINGHAM—I understand that. Certainly, that is why the question was pitched more to what you have seen in terms of the growth of installers in the industry and those distributors with whom you deal. I understand that it is a relatively new company in Australia and that your experience of that growth is somewhat limited. I turn to what I see very much as your pitch for certainty and market stability in a sense within the industry. You have cited concerns in the US about the change to their tax credits arrangement, and obviously the rollercoaster ride, as many witnesses have put it here, in terms of the way the rebate has operated. What do you see as the ideal type of structure to support the growth of the solar industry in Australia?

Ms Lu—We think that a national feed-in tariff will be a good message to generate interest from consumers, investors and from expertise in industry. It will also generate interest from suppliers like Suntech Power. In the long run we think we will have a carbon trading scheme, which will be the long-term solution. That is my own opinion.

Mr Ryan—So, the great majority of Suntech Power's PV modules, which are produced in China at the moment, are sold into Europe, Germany and Spain, where there are national feed-in tariff regimes, and those regimes, as the committee knows, provide long-term certainty because you have long-term contracts, of in the order of 20 years-plus. Although Suntech has not finalised its submission to the committee's inquiry into feed-in tariffs, certainly its global experience is that national feed-in tariffs provide the level of long-term certainty that the industry sees as necessary to get an increased uptake of solar power in distributed systems.

Senator BIRMINGHAM—By 'feed-in tariffs' I am assuming you mean the German model in terms of gross feed-in tariffs? Is there a rate of tariff that you think would be appropriate to provide that long-term certainty and an ideal payback period for customers?

Ms Lu—Yes, we do think so.

Mr Ryan—The German rate of four times, as you know, is a very generous rate. The ACT, as the committee would know, has passed legislation to have a gross feed-in tariff rate at 3.88. Suntech has not yet finalised any modelling that it might choose to do to see what the best rate would be for Australia. We are aware that a number of state governments have chosen not to implement feed-in tariffs on a gross basis, so obviously those state governments in Victoria, South Australia and Queensland have been concerned about the

costs to other electricity consumers of having a high formula feed-in tariff. Suntech wants to look at the Australian market as a separate market and possibly undertake modelling just to see exactly what the best rate would be in Australia. We do not actually have a rate in our pockets at the moment to share with you.

Senator BIRMINGHAM—In reviewing *Hansard* you may have noted we had an academic in Canberra who described a four times feed-in tariff as a licence to print money.

Mr Ryan—Yes, we did see that.

Senator BIRMINGHAM—I would like to pursue the impact on other consumers. In terms of the European experience, what impact has that had on the overall price of electricity within a country such as Germany and the significant take-up of solar that has been experienced, and therefore of course the significant subsidies within the system being paid through the feed-in tariff regime?

Mr Ryan—We do not know what the impact on electricity prices has been in Germany. KPMG has only been working with Suntech Power quite recently, so we have not had the chance to undertake that detailed analysis. Dr Shi Zhengrong, who is the CEO of Suntech Power, we hope would be available to appear, whether in person or by teleconference, before this committee in relation to the feed-in tariff inquiry and we would be able to provide more global information from him.

Senator BIRMINGHAM—I will move off the feed-in tariff. I would like to go to the potential you see in the solar industry. You have tabled some documentation today, including a chart titled ‘Long Term Solar Outlook’. Could you take the committee through the understanding of Suntech in terms of how and why you see solar and PV as such a growth segment into the future?

Mr Ryan—Chart No. 3 comes from the German Advisory Council on Climate Change, so it is not authored by Suntech but is reproduced by Suntech. As we understand it, the Advisory Council has projected the likely increases in fuel prices. As we know, oil and gas and coal prices have increased dramatically over the last couple of years, and our understanding is that the econometric modelling that the German Advisory Council has undertaken effectively forecasts that with ever-increasing prices of fuel, gas in particular, over time those forms of electricity will become more expensive. The single most important contributing factor to the increased take-up of solar PV, which is included in this graph, is the proposition that solar PV will achieve grid parity at some stage in the next five to 10 years. This graph goes out to 2100, so it is a long period.

Senator BIRMINGHAM—We will not hold you to the figures for 2100.

Mr Ryan—Thank you. Even if you look forward to 2020 and 2030, you can see that solar PV is one of the smaller components of the entire power mix, but the key contributing factor to that long-term expansion in solar PV is actually set out in slide 2. I will speak to slide 2 just briefly. This is a forecast by Suntech Power regarding the system cost of producing a PV module, if I can put it that way—this is per watt—out just over the next four years. The committee can see that Suntech is effectively forecasting roughly a 50 per cent reduction in the cost of producing a system. This is not the installation cost, this is the supplier cost. You can see that the four key components to the system cost include the silicone, which is the green bar in the chart. Suntech Power is forecasting a significant reduction not only in the cost of silicone but also the costs of the other components of a system. These dollars are in US dollars and not Australian dollars and the cost of installing a system in the US is actually slightly less than in Australia. At some point between 2012 and 2015, depending upon take-up, Suntech Power forecasts that solar PV will achieve grid parity, which means that a consumer who chooses to take up a solar PV system will be paying effectively with their investment in their installation cost basically the same price that electricity will cost off the grid.

This chart assumes an annual increase in the rate of electricity cost of about three per cent per year. With an emission trading scheme it is likely that electricity prices in Australia may increase by more than that. It is actually achieving grid parity that leads to the potential explosion in solar PV as a component of power.

Senator BIRMINGHAM—Why does Suntech believe the cost of silicone will come down so much? Is that demand driven or a combination of other factors?

Mr Ryan—Ms Lu will also comment here. The simple fact of the supply chain is that there have only been a limited number of suppliers of refined silicone in the world until recently. In the last 18 months a significant number of new entrants have entered that market, particularly in China. As the number of entrants increases the amount of supply will increase and therefore the prices will fall. As is summarised on slide 1, Suntech Power has been able to enter into a number of very long contracts to guarantee the supply of refined silicone. These are 20-year contracts, which have not come on stream yet because the silicone refiners have not yet

been able to produce their asset. But as they come on stream, particularly in China, the price of silicone will fall.

Ms Lu—As in slide 1, 800 megawatts of silicone has been secured for 2009 at 20 per cent below average silicone cost in 2007. This is because of the more than 10 new players coming into the silicone refining/factories market. It will increase the supply of the silicone dramatically, particularly in the year 2009.

Senator BIRMINGHAM—As a long-term outlook, ideally you would see price parity driven by reduction in costs for PV and the increasing cost because of carbon pricing and other mechanisms as well as reducing supply in some instances for traditional forms of energy. Medium term you see national feed-in tariffs ideally as the way to provide industry stability to get through there. I note in your submission and so on you also see a role for rebates, particularly in relation to low-income households, and you have cited the Californian model. Can you please explain the merits that you see in that model?

Mr Ryan—Yes. I will draw the committee's attention to the handout that we provided in relation to that. The way the Californian model works is that in the US there is a \$2,000 federal tax credit, as we understand it, which is provided to anybody who installs a solar PV system. What has happened in California is that they have realised that for low income earners who pay no federal tax that tax credit is worthless; they have nothing to offset it against. As we understand it, California has a \$2.2 billion 10-year program that funds a range of initiatives in the solar PV area. One of those initiatives is just over \$200 million of this low income earner subsidy. The table at the bottom of page 1 shows that, in effect, there are two groups of qualifying low income home owners and, depending upon their federal income tax liability, they become eligible for a decreasing level of subsidy as their federal tax liability increases. The objective is that those who pay no federal tax get the greatest subsidy and, as they pay small amounts of federal tax, they get a reducing subsidy, which tapers out. Our understanding is that there are about 5,000 homes in California that will effectively benefit from this low income earner subsidy and of those 5,000 homes, as it says on the top of page 2, about 1,800 will be given almost a complete subsidy. There is a process of selection of eligible homes based on income earning capacity and capability. As I said, people will either be eligible to a full subsidy or a partial subsidy that tapers out based on their tax liability.

Senator BIRMINGHAM—As Australia moves to the implementation of an emissions trading scheme and there is a lot of discussion about how best to offset rising power costs and so on for particularly low income households, what is Suntech's perspective in terms of either government simply providing tax breaks or other types of financial pension increases or other arrangements to householders versus possibly supporting households through mechanisms such as this to reduce their reliance on traditional forms of energy and therefore their exposure to those increased power costs?

Mr Ryan—That is a great question. We do not have a silver bullet answer on this one unfortunately. Clearly, we have seen evidence from other witnesses before this committee who have said that households should be encouraged to reduce their overall energy consumption by other means before they look at getting assistance to put on a solar PV unit. Reducing their energy usage almost as a prerequisite to getting the Rolls Royce add-on is a clever strategy. In California this applies as well. In that table you will see that the CARE eligible homeowners, which is the California Alternate Rates for Energy program, actually receive a higher rebate or subsidy than those who are not eligible. There is actually a complementary system. If you are showing that you are taking other initiatives to reduce your energy use in your home, you fit into one category and you receive a higher subsidy. It is effectively saying that there are complementary measures to encourage low-income households to reduce energy in other areas of their house before they get eligibility.

One of our concerns at a very general level is that the rebate that we have in Australia is a very generous rebate of \$8,000. It is a higher percentage of the total installation cost than applies in California, for example. If you add the federal tax credit plus the subsidies together, apart from the full subsidies, you are only up for around 50 per cent of the cost. Whereas in Australia with an \$8,000 rebate, as the cost of installation comes down, that is a very high rebate, but there is no component of the Australian incentive system at the moment that rewards energy efficiency initiatives of a complementary nature. We are contemplating in our submission to the feed-in tariff review conducting a review of low-income earner initiatives around the world to give the committee some insight into what is happening in other countries.

Senator BIRMINGHAM—If the Australian government is to maintain a rebate system at least as a transitory measure until we get to potentially a national feed-in tariff, were that to be adopted, what structure does Suntech believe that rebate would best take to provide the best outcomes for the industry and particularly for the environment?

Mr Ryan—We do not think the means test should be a dead stop at one income level point. We think there should be some tapering. Perhaps if the means test tapered out at \$150,000 you might be eligible for slightly reducing amounts of rebate up to \$150,000. We think \$100,000 is too low. At the moment, as this committee knows, it just stops. If your income is over \$100,000 you get nothing. If your income is \$99,000 you get \$8,000. We think that is less desirable than it could be.

We are concerned about the overall budgetary cost of the rebate. We know that the government has to factor that in. We are very surprised and encouraged by the minister's data about an average weekly application level of about 500 applications a week, because on our maths—unless we are getting it wrong—at 500 applications a week for 50 weeks at \$8,000 a rebate that is close to \$200 million a year, and we do not think that is the amount that is actually budgeted for the program. From one point of view we are really encouraged to see that level of interest notwithstanding the means test. That is a very interesting set of data in terms of the numbers of applications, and we are quite surprised by it. It is very encouraging from that point of view.

Senator BIRMINGHAM—Do you think that \$8 per watt is too high?

Mr Ryan—That is a very good question.

Senator BIRMINGHAM—In terms of stretching that government allocation as far as you can.

Mr Ryan—It is quite generous and it is interesting that it works in the way that it does and then stops without any taper. At one level, depending upon the budgetary circumstances of the government, it might be considered to be a little bit high, but we are in a situation where we have a transitory period where we do want to encourage as much take-up as possible, and obviously the data is saying that there are 500 applications a week. Perhaps you need \$8 to get the level of interest to get the industry up and running. It is a little bit hard to say. We have not done any detailed cost-benefit analysis of whether it is too high or not, to tell you the truth.

CHAIR—Do you have a view about what would be the optimum size domestic installation? We have had a lot of evidence saying that the \$8,000 has encouraged people to install one kilowatt installations when really for the average domestic Australian household two kilowatts would probably be better.

Ms Lu—I have some data from the Australian PV Association's national survey report of PV power application in Australia in 2007, the executive summary of which states, under 'Installed PV power', that a total of 12.2 megawatts of PV was installed in Australia in 2007. That is two megawatts more than in 2006. It also states that this was largely the result of higher grants for residential systems. Grid systems accounted for 50 per cent of installations and now account for 18 per cent of installed capacity. A total of 4.6 megawatts of PV was installed under the PV rebate program in 2007. That is up from 1.8 megawatts last year. Under the PVRP the \$8,000 rebate started from July 2007. That means that from July 2007 approximately a total of 4.6 megawatts of PV was installed. The average size of installation for residential is a one kilowatt system.

Mr Ryan—That is the average.

CHAIR—Yes, but do you have a view whether that is adequate for the average Australian household?

Ms Lu—One kilowatt could not cover all of your electricity for that one household. We think the average household would need three to four kilowatts.

CHAIR—Do you believe that the \$8,000 rebate has encouraged people to build a system that is probably inadequate?

Mr Ryan—That is hard for us to answer. We are really not sure. I cannot remember exactly where it is stated, but in California they have capped the size of the system for you to be entitled to the subsidy and I think it is a one kilowatt cap. One would assume, if it is good policy, that they have decided in California that a one kilowatt system is an appropriate size to be eligible for the subsidy. As we understand it, in California if you put on a bigger system than that you do not qualify for some of the rebates or subsidies. We would have to look into that in more detail.

CHAIR—I do not know whether you can answer this. You manufacture the panels, don't you?

Ms Lu—Yes.

CHAIR—Submissions made previously to the inquiry have suggested that there is evidence that installers or retailers are encouraging people to buy invertors saying that they can put on their one kilowatt but down the track they can add panels and increase the capacity. Other people are saying that the invertors they are selling in fact do not have the capacity to accept more panels. This is my highly technical explanation of how it

works. Do you have any understanding or view about whether people are selling invertors that are useless in terms of increasing capacity down the track?

Ms Lu—From my understanding, the invertors have different types. If the installer is experienced, from my understanding, they should use inverters that can handle expanded solar PV. From my discussion with some of our distributors and installers they normally do it this way. For example, the invertors can convert to more than one kilowatt system, say, to a two kilowatt system, in future. Although now the household only installs one kilowatt, in future they have the ability and the inverter has the capacity to enlarge the PV panel system.

Senator WILLIAMS—According to the departmental figures, applications have grown to about 500 a week, yet we have had people before the committee, especially those involved in the industry who are actually fitting the PVs and the systems, for example, Mr May from Solartech Renewables, who had five working in his business and is now down to two; he has had to put three off. It is a stark contradiction if businesses are saying they are putting people off, their business has really deteriorated and dropped down to lower levels, and yet the statistics here show that it has increased markedly.

Mr Ryan—I do not know whether we can explain what appear on the face of it to be differences between the data and the anecdotal evidence that the committee is receiving. The data in the minister's press release must be correct. They are extraordinary numbers. We wonder whether the level of publicity that has been given to the issue has raised awareness about it in a way that did not exist before. We are not sure whether that is a possible explanation. We do not have a simple explanation as to how we can resolve those two apparent contradictions.

Senator PARRY—Just on that point, would it be feasible to consider that there might be a lag effect and the data being used by the minister might include applications that have been in the system prior to 13 May?

Mr Ryan—I am not in a position to comment on that. All I can observe from the press release is that it talks about applications received, and so we would assume this is measuring the applications actually lodged or received in each of the weeks that are identified rather than processing times or any lag effect like that.

Senator PARRY—Do you receive the same evidence that we do that business is in decline? This is not just in a particular pocket or set areas of Australia but seems to be Australia-wide.

Ms Lu—As I mentioned, we are a new organisation, which started last December. From earlier this year our business has been growing substantially.

Senator PARRY—When you say your business is growing, is that in the sales of PV cells?

Ms Lu—Yes, sales of PV cells. That is based on—

Senator PARRY—I am sorry to cut you off. I would like to get the crux of this. Are those PV cells sales—

Ms Lu—PV modules; we are selling the PV modules.

Senator PARRY—You do not sell direct to single installers, you sell to larger groups?

Ms Lu—We are distributors. That will include two areas. One is the domestic/residential market and the other one is for the commercial market. There is a mixture. Our sales are increasing, but we have no historical record. From the installer side, we did not directly sell to the installer. From the distributor, as we discussed, some of our national distributors have the residential market and the businesses as 30 per cent of their business, and the other 70 per cent is from the commercial off-grid market. From their point of view, in talking to them, the residential and the business were affected by the means test, but commercial off-grid business is still increasing.

Senator PARRY—We received information or evidence that there has been a difficulty in getting product from wholesalers outside of Australia. Could this account for the fact that applications have been received prior to the May budget and this is now backfilling orders that have exponentially increased in the months of April or May? Have these orders been longstanding orders or have they been recent orders that have explained your growth?

Ms Lu—To be honest, I am not quite sure about that.

Senator PARRY—It is possible that this could be backfilling of existing orders and it might not necessarily be an increase in recent weeks or months?

Mr Ryan—I am not an expert in the area, but my understanding is that you can only lodge an application for the rebate once the system has been fully installed. I read that in some evidence given before the committee, so I do not know independently whether that is right or not.

Senator PARRY—We have not got to the crux of exactly how the process works yet. We are yet to establish that.

Senator BIRMINGHAM—You lodge a pre-approval application and then you lodge, in a sense, an application to get paid as the installer later on. There are two stages to it. One is at the beginning to get pre-approval, to determine the eligibility for the rebate and so on. One that pre-approval is given the tick-off, you install it and then you submit your paperwork to get paid.

Senator PARRY—There is a pre-application and then verification. We will determine as we move through the inquiry what figures are applicable, but it is good to get your information on the record as well. Thank you for that.

CHAIR—I think Senator Parry was not in the room for the earlier part of the evidence for these witnesses. Mr Ryan said very early in his evidence that for Suntech the introduction of the means test has not made an appreciable difference to your sales.

Mr Ryan—That is correct.

CHAIR—In fact, your sales have increased.

Mr Ryan—As Ms Lu said, the company has been established only since December last year, so it does not have previous years to compare its sales with. Its sales have been growing since it started late last year. About 75 to 80 per cent of its business is in the industrial/commercial sector. There is an issue about supply coming out of China, because so much of it is being drawn into Europe that it is quite difficult to get stock.

Senator PARRY—Again, we are not discounting the possibility that you are filling orders from months ago and not just recent applications?

Mr Ryan—That is a possible situation.

CHAIR—Except that the company did not exist before December and so you would not have had orders before December.

Mr Ryan—No.

Senator PARRY—We are talking about between December and May, and there could have been a lot of orders between December and May. It is a possibility. We are not locking you into a position, but we are not excluding that possibility.

CHAIR—You mentioned that the company is reliant on panels being manufactured in China at the moment. Is there any intention of the company to invest in manufacture in Australia or is that a possibility in the future?

Ms Lu—Yes. We do think that is a possibility. Now we are examining the feasibility of our own R&D facility in Australia. We do think that it is a possibility to have manufacturing in Australia. Of course it will depend on there being a large demand from consumers and the economies of scale and, at the same time, the government policy on incentives for the exporting of panels. It is all of these combined.

Mr Ryan—Dr Shi, with whom I have met on a number of occasions, is certainly very impressed with the ACT government's feed-in tariff legislation, and Suntech Power is extremely interested in exploring opportunities in the ACT once that tariff starts on 1 July next year. We know that the ACT government is looking at the feasibility of having a solar power station in the ACT, and Suntech Power is very interested in exploring opportunities there. The fact of the matter is when you create incentives like that, which attract investment, that creates an environment of particular interest to a global player like Dr Shi.

Senator WORTLEY—The government is committed to a target of having 20 per cent of our electricity supply powered by renewable energy by 2020 and as part of that has initiated programs such as the Solar Schools program. Are these all positives for the solar industry and is that part of what you see as the future for your company in Australia?

Ms Lu—Yes, we think the \$480 million solar program for the community is encouraging, as is the \$150 million for solar research and development. All of that is very encouraging and will be very good for the solar industry.

CHAIR—If there are no further questions, I thank you very much for your submission to the inquiry and for appearing before us today.

Ms Lu—Thank you.

Mr Ryan—Thank you.

[11.13 am]

CARTER, Mr Ross, First Assistant Secretary, Renewables and Energy Efficiency Division, Department of the Environment, Water, Heritage and the Arts

OXLEY, Mr Stephen, Assistant Secretary, Renewable Energy Branch, Department of the Environment, Water, Heritage and the Arts

CHAIR—Thank you for coming along to talk to us today. As is usual when the Senate committee is taking evidence from officers of a department, we need to be mindful that the officers be given the opportunity to refer any questions to the departmental head or to a minister for answer, and we also need to be mindful that officers of the department may not be asked questions about policy but merely implementation of the policy of the government. The committee has received the department's submission. Do you wish to make any amendments or alterations to that submission?

Mr Carter—No.

CHAIR—Do either of you wish to make a brief opening statement before we go to questions?

Mr Carter—Yes.

CHAIR—Thank you.

Mr Carter—Firstly, I would like to run briefly through the submission. The submission provides an overview of the program, a summary history of the program from 1999-2000 to the present time, an overview of program administration and data on application rates, including weekly aggregate and by state/territory breakdowns. I might just emphasise some of those points briefly. There has been an upward trend in applications since the 2008-09 budget, with a highest weekly total to date of 794 applications in the week ending 26 June. We have provided three illustrative snapshots of the trend in growth in applications. For the six-week period up to 8 February 2008 the average number of applications received weekly was 178. For the six-week period leading up to the 2008-09 budget the average number of applications received weekly was 324, and for the six-week period up to 11 July 2008 the average number of applications received was 544. We have also provided in the submission calculations on abatement and tables on costs.

CHAIR—The most recent information that you have is to the end of June. Is that right?

Mr Oxley—No.

CHAIR—I am sorry, the end of July.

Mr Oxley—The end of July.

CHAIR—Is the information about the carbon abatement cost also to the end of July or to the end of June? That is the \$424 per tonne.

Mr Oxley—That is an estimate over the life of the \$150 million envelope.

CHAIR—Senator Parry?

Senator PARRY—I just want to go back to the original appearance of the department at this inquiry, which was cancelled at short notice. Would you like to give an explanation as to why?

Mr Carter—Firstly, I apologise on behalf of the department for the late deferral of our attendance. The minister instructed us that he wished to provide further consideration to the nature and scope of the department's submission and asked that we defer our submission and appearance until he had had time to do that.

Senator PARRY—Why was that not communicated to us in that detail?

Mr Carter—My understanding was that the statement provided did go to those issues.

Senator PARRY—It is no good trawling over that. I would like to get a very clear understanding of your figures, about which there will probably be a lot of questions by Senators. What factor determines whether an application has been received, as reflected in the composite tables that you have given us? For example, if I had made a pre-application at 11.59 pm on 13 May, is that held over until such time as it is finally approved? What is the key piece of data that determines when that appears in whatever week of whatever month?

Mr Oxley—Very simply—and to give you an updated figure—last week the department received 711 applications for the rebate.

Senator PARRY—Pre-applications?

Mr Oxley—We received 711 applications for preapproval under the program last week. Each day we opened the mail and tallied up the number of applications for preapproval. They are counted on a daily basis and aggregated on a weekly basis.

Senator PARRY—Has the consistency of your data representation not changed in terms of the method of reporting and tabulation?

Mr Oxley—Our method of tallying up the number of applications received has remained consistent, yes.

Senator PARRY—Was the peak of 794 in a July week?

Mr Oxley—The week ending 27 June.

Senator PARRY—I have just noticed from the limited data since then that it has declined slightly. You are saying that the last week has seen another peak. How does that compare with the weeks immediately prior to that?

Mr Oxley—The number of applications received bumps along from week to week. It goes up and down, so what we do is run a rolling average of the number of applications received. Without including that number for last week of 711, for the week ending 1 July the rolling average since the introduction of the means test was 528 applications per week. But since that week of 794 we then had a 713, a 448, a 575, a 543, a 604 and then the 711. You can see there is quite a variation, although at a higher level.

Senator PARRY—Can you break it down by age demographic?

Mr Oxley—No, we cannot break it down by age demographic. That is not data that we collect.

Senator PARRY—Do you have a view as to why the applications have continued the way they have continued or presented the way that they have presented?

Mr Oxley—We do not have any evidence that we would be comfortable putting in front of the Senate as to why the demand has continued at a high rate. However, I can make a couple of observations. It is clear that at some point in the past 12 months we have crossed a threshold where the installation of solar power has moved probably from the green market more towards the mainstream market as the community has become more aware of the challenges facing us in terms of climate change. But what we do not have is any clear picture as to what is the threshold point at which it crossed that line.

Senator PARRY—What about the size of unit? Do you record data on the size of unit that has been pre-approved?

Mr Oxley—Yes, we do record that data. Over the life of the program the average size of system installed has been about 1.57 kilowatts. To anticipate your next question, since the introduction of the means test the average system installed is at approximately 1.24 kilowatts, but that would not include the last couple of weeks data. But that gives you an indication.

Senator PARRY—You correctly anticipated the next question. Thank you. I will leave it to my colleagues to ask further questions.

CHAIR—Of the number of applications for pre-approval, do you have any information about what percentage of them are pre-approved for pre-approval? Does that make sense?

Mr Oxley—Yes, that does make sense. I do not have any data at hand but my feeling is it is a very significant proportion of applications that receive pre-approval and then go on to installation. There would be the occasional one that drops out for whatever reason, for which the applicant would be responsible. Maybe they decide not to go ahead and do it for personal/financial reasons or whatever it might be, but the very large majority of applications do proceed through to installation.

CHAIR—Have they still got nine months?

Mr Oxley—Yes, it is nine months.

CHAIR—Has that increased?

Mr Oxley—Yes, that has increased. I cannot give the exact date, but two or three months ago we were working on a six-month window between a pre-approval and the requirement for an installation. What we were noticing is that with the increasing demand for the program hitting the six-month time frame seemed to be becoming more difficult for installers. We were getting more inquiries from installers wanting extensions of

time frames, so we took the view, supported by the minister, that it was better to provide a nine-month leeway to allow installation.

CHAIR—Do you know why? Was the nine-month agreed to because the industry could not supply the panels?

Mr Oxley—The reasons for that are not entirely clear to me and it was not uniformly the case. We would generally expect a period of two to three months between a pre-approval being lodged and an installation occurring, but there were some individual companies that seemed to be having difficulty in meeting those time frames. I do not know whether that was because they were out seeking more business and a different balance/mix in how they were approaching their business. What the underlying reasons were is not clear, but they were coming to us with this issue. From the department's point of view, it was creating an additional administrative workload for us in managing applications whose preapproval was lapsing, so we took the view that in those circumstances it was better to allow an extended period of time to save ourselves and the industry the administrative cost.

CHAIR—One of the issues that has come up in this inquiry is that some installers and retailers have said that there has been a delay in getting their rebates, up to eight weeks, and I know the department's guidelines or KPI is six weeks. Is the anecdotal evidence we are getting correct, and is there a reason for it, or are you meeting your guidelines?

Mr Oxley—The anecdotal evidence is correct to a degree. You are correct; in our guidelines we state that we will turn around a preapproval within six weeks of application and that we will turn around the payment of a rebate within six weeks of submission of an installation report that meets the requirements. We have been running up hard against that six-week time frame now and in some circumstances we are out as far as eight and perhaps even nine weeks. What you are seeing there is a reflection of the increased demand for the rebate and the administrative workload that is placing on the department, and the reality that it takes us time to catch up in terms of increasing our human resources available to manage and administer the program relative to that demand. Just to give you an example, in April I had 14 staff working on the program. That is now up around 22 staff with a bit of supplementation, and the program manager is saying to me that he would like a couple more in order to get us back as quickly as we can to the time frames that are outlined in the guidelines.

CHAIR—Has the proportion of applications that you have received from states that have either introduced FITs or are intending to introduce FITs gone up more in relation to states or territories that are not planning FIT schemes?

Mr Oxley—That is a good question and not one I anticipated in those terms. What we have done—and I will provide this to the committee—is that in the same way that we had that overarching snapshot of six-week rolling averages of applications from the beginning of the year, the pre-budget period and since the budget, we then did that analysis down at the state and territory level, and it shows across-the-board an increase in application rates in all jurisdictions. I would not be confident to ascribe that one way or another to the introduction of feed-in tariffs. In relation to FITs, it is very early in the piece to understand how the market will respond to feed-in tariffs and they are not uniform across all jurisdictions. Again, there is that factor at play as well, so it would be difficult to make conclusions.

Senator PARRY—Could you clarify again that the percentage increase was uniform across the country? There were no outstanding peaks or troughs?

Mr Oxley—No, it was not uniform but the picture was one of—

Senator PARRY—Consistent?

Mr Oxley—There was a consistent picture of increasing demand. Although if I did a comparison across those numbers, it might show up a little bit of variation from jurisdiction to jurisdiction.

Senator PARRY—Can you provide those figures to the committee?

Mr Oxley—Yes, happily.

Senator BIRMINGHAM—Thank you for appearing today. I realise that it was not your fault, but better late than never. I turn firstly to the objective of the means test. Why was it introduced?

Mr Oxley—The means test was introduced essentially because we had demand in the program running at a significantly higher rate than was capable of being met under the parameters for the program—the funding envelope for the program. The means test was introduced with the objective of bringing that demand more into line with the available program resources. The view that the government took was that, if it was in a situation

where it needed to put some sort of constraint on that demand, its preference was to constrain that demand by focussing it on the lower income demographics, or the households that were judged to be most in need of assistance in meeting what are high upfront costs associated with installing PV systems.

Senator BIRMINGHAM—I will not argue with you as to whether it was wise or not to put some constraint on the demand for the installation of what many have told this committee is an environmental good. At the same time the means test was introduced the government brought forward funding as well. Is that correct?

Mr Oxley—That is correct.

Senator BIRMINGHAM—In doing so, did that shorten the life of the program?

Mr Oxley—That is correct.

Senator BIRMINGHAM—From five years to three years?

Mr Oxley—Yes.

Senator BIRMINGHAM—Would you say that the objective behind the introduction of the means test is being met?

Mr Oxley—It is difficult to draw that conclusion one way or the other. What we have seen, as the data attests, is an increase in the overall application rate, but what we do not have any capacity to do is forecast what that application rate might have been had the means test not been introduced. It really is difficult to estimate the demand dampening effect of the rebate without having had that previous experience of implementation.

Senator BIRMINGHAM—So that we are absolutely clear, can you clarify that of the applications that you are receiving I assume the overwhelming majority, if not all, are for the full one kilowatt system, the full \$8,000 rebate?

Mr Oxley—Pretty close to all of them, yes.

Senator BIRMINGHAM—In terms of the sustainability of the program, you answered that this was about ensuring that demand did not run higher than the funds available. We obviously have some questions given the data that you and the minister have released. To date, from the data that you have given to us, there have been some 2,279 applications in the four weeks of data you have provided?

Mr Oxley—I have not done that particular piece of maths, but I will take it that that is correct.

Senator BIRMINGHAM—It looks about right to me. Of the \$52.8 million allocated to the program this year, how many installations will that support at the \$8,000 rebate?

Mr Oxley—That is the one piece of maths I have not done.

Senator BIRMINGHAM—I think it is 6,600. Does that sound right?

Mr Oxley—Yes, that would be in the right order. I would qualify that. There is also the community buildings component of the program. Part of that 6,600 that you calculate would be taken up with the community buildings component.

Senator BIRMINGHAM—Is that the schools?

Mr Oxley—No, it is more surf lifesaving clubs and those sorts of things.

Senator BIRMINGHAM—Is it a significant component?

Mr Oxley—No, it is not a significant component.

Senator BIRMINGHAM—Of the 6,600 that are available if it were all to be expended on this—and you have just told us that it will not, so it is somewhat less than that; we will call it 6,000 for round figures—we have had applications for more than a third in the first month of the financial year, with more than 2,200 applicants. Given what you have told us, that it does not sound as though applications are easing at all, and there were 711 last week as we move into August, this would suggest that the 6,000 available spots will be exhausted within the first quarter of the financial year. Is that correct?

Mr Oxley—Yes, that is approximately correct.

Senator BIRMINGHAM—What contingencies does the department have in place to deal with that?

Mr Carter—At the recent ATRAA conference the minister indicated that the government will continue to meet demand for the program and he has requested us to continue to provide regular information on how the program is proceeding.

Senator BIRMINGHAM—When you say the government will continue to meet demand for the program, is that a guarantee that for the duration of this financial year all applications that qualify will be approved and met?

Mr Carter—I cannot go further than the statement than the minister made at the ATRAA conference.

Senator BIRMINGHAM—What instructions has the minister given you to actually interpret what that statement means?

Mr Carter—The minister has made that statement and asked us to continue to provide regular information and updates to him.

Senator BIRMINGHAM—Could you just read the statement again?

Mr Carter—The minister said at the ATRAA conference that they would continue to meet the demand.

Senator BIRMINGHAM—Would ‘continue to meet the demand’, but you cannot tell us whether he will continue to meet the demand beyond the 6,000 places running out?

Mr Carter—No, I cannot.

Senator BIRMINGHAM—What do you think that does for industry confidence and stability?

Mr Carter—It would be of concern to industry if they thought the program was coming to an end.

Mr Oxley—I might just backtrack for a moment. At the ATRAA conference the minister, when he said that demand would continue to be met under the program, he also indicated that further funding would be made available.

Senator BIRMINGHAM—You have come along today and obviously these questions should surely have been expected by the minister and it might be the reason why he stopped you both from attending some several weeks ago when we were having hearings in Canberra and caused you to come to the warmer climates of Queensland for today’s hearings instead, where we are enjoying warmer weather than the southern cities. He has given no further clarity as to how much funding, what will happen, how the government may address these issues to you both to provide us today for an expectant industry that heard his words at the conference the other weekend and are actually now waiting to see what his words mean; he has provided no clarification for you to offer us today as to whether or not, if this program is exhausted in the space of the next few weeks potentially, the industry will see all demand dry up?

Mr Carter—No, there has been no further advice to that.

Senator BIRMINGHAM—I find that component particularly remarkable but I understand it is not your fault. We shall move on from there. I will return to Senator Parry’s questions, just briefly, about the average size of the system. You indicated that over the life of the program—I assume that data goes back to 2000—the average size of system installed was 1.57 kilowatts. Is that right?

Mr Oxley—Yes, that is approximately correct.

Senator BIRMINGHAM—Since the means testing was introduced, 1.24 kilowatts has been the average size of system?

Mr Oxley—That is correct.

Senator BIRMINGHAM—By my calculations, assuming they all received the \$8,000 rebate—and I realise that earlier ones may have received only \$4,000 under the previous system, but using it for the point of comparison—we have gone from the government spending about \$5.10 per watt to the government having to spend about \$6.45 per watt in terms of the amount of renewable energy generated. How is this a better use of taxpayers’ funds?

Mr Oxley—I am not sure that that really is a question that is appropriately directed at the department.

CHAIR—I think that is a question of opinion.

Mr Oxley—I would be happy to refer that on, but I am not sure that we can really answer that one.

Senator BIRMINGHAM—However, you do continue to keep data in terms of the size of systems. Was consideration given to an alternative to the means testing that may have instead encouraged installation of large systems that provide greater environmental benefits, rather than the means testing that was introduced?

Mr Carter—I would refer back to evidence that I gave in estimates, that the department provided a range of advice on a range of options to government, and essentially that was policy advice.

Senator BIRMINGHAM—Given the minister's so-called assurances, which are hard to determine, to the conference the other day, has the department provided options or is the department working on options for alternatives to this means testing arrangement that may perhaps provide a better environmental output and enhance the sustainability of the program, which obviously the means testing has rather miserably failed to achieve?

Mr Carter—It is inappropriate for us to provide advice on the nature of policy advice that we would be providing to the minister.

Senator BIRMINGHAM—What research is the department undertaking into installations of systems by people who are not eligible for the rebate?

Mr Oxley—I do not believe that we would be undertaking any such research.

Senator BIRMINGHAM—You are not looking at all to see whether anybody above the \$100,000 gross household income means test limit is actually still installing systems?

Mr Oxley—No, that is not something that we are doing. Our concern is with the administration of the program as it exists now.

Senator BIRMINGHAM—Would such data be useful in terms of making policy decisions about future support for this industry?

Mr Oxley—Such data would be useful and should we have a desire to obtain it then we would go to an independent party and seek that information. I am not sure that it would be the best use of our departmental resources to be undertaking that work in a direct sense, but it is something that we could procure should we need it. There are various organisations that would readily be able to provide that information to us.

Senator BIRMINGHAM—Can you tell me what level of standards or accreditation is required in terms of the types of systems that are installed or the installers of systems for households who are not eligible for the rebate?

Mr Oxley—I am not aware of any requirements that may apply at the state or territory level in relation to the standards of systems that are required to be installed. All I can do is advise the committee that systems installed under the program and that receive the rebate must comply with all the relevant Australian standards and must be designed and installed by a BCSE accredited installer.

Senator BIRMINGHAM—Some of those who have come before us during this inquiry suggested that households above the means test might still be installing systems, and that there is potential for growth in cheaper inefficient systems being installed there because there is no government standard in a sense now regulating those sectors, and that could well be the case. I turn to renewable energy certificates. We have heard that they are an important component in terms of the installation of PV systems as well as solar hot water systems. The role of REC is under review by the COAG working group. Is that correct?

Mr Oxley—That is correct.

Mr Carter—That is correct.

Senator BIRMINGHAM—Does that include all RECs as they apply to solar hot water systems, PV cells and so on.

Mr Carter—My understanding is that the breadth of the renewable energy target scheme is under review.

Mr Oxley—The process is under way at the moment, and to be clear it is a process that is being led by the Department of Climate Change. Through COAG there is a COAG working group on climate change and water and it currently has out for public consultation—I think the submissions closed the week of the ATRAA conference, the week before last—a paper on the national renewable energy target. That consultation paper was developed by the COAG working group and essentially it is a paper seeking public input on essentially two options for increasing the mandatory renewable energy target from 9,500 gigawatt hours to 45,000 gigawatt hours by 2020. As part of that process all of the parameters of the mandatory renewable energy target are being considered.

Senator BIRMINGHAM—RECs are worth a couple of thousand dollars or even more for larger systems in terms of the installation of solar. The question mark hanging over the continued support of government for RECs applying to individual solar systems, be they hot water or PV cells, seems to be creating another level of angst within the industry in terms of confidence and future stability. Has the department of environment made submissions to the Department of Climate Change about this?

Mr Oxley—Our department has not made submissions to the Department of Climate Change as such, but we have been a participant in the Commonwealth interdepartmental committee that has been coordinating Commonwealth input into that COAG process.

Senator BIRMINGHAM—Has the department received representations from industry concerned about RECs?

Mr Oxley—I have not had any concern expressed to me personally. I am not sure across the department in relation to the future of RECs. The point to make is that without RECs there is not a national renewable energy target, so I do not think there is any risk to RECs continuing to be available. What there generally is, is an apprehension or an eagerness on behalf of the industry for the new targets to be introduced and for the legislation to be amended so that they can get on with the job.

Senator BIRMINGHAM—When does the department think that in relation to RECs, as well as in relation to perhaps the COAG review of feed-in tariffs, it might be able to provide the industry with some longer term certainty?

Mr Carter—That is subject to the COAG process, and my understanding is that the report will be later this year back to COAG.

Senator WILLIAMS—There has obviously been huge growth according to your figures for applications for the rebate. Why do you think this is the case? Is it advertising on TV or people's awareness of trying to reduce greenhouse gas? Why has there been such a huge growth?

Mr Oxley—This will only be speculation on my behalf as to the factors that are contributing to that growth. Taken on that basis, I am happy to speculate just a little bit.

Senator WILLIAMS—That is fine.

Mr Oxley—The point I made earlier in evidence today was that at some point in the past 12 months the solar PV industry crossed a threshold from being more in the green market to more in the mainstream, but it is difficult to know what key factors have driven that. Quite obviously the increase in the level of the rebate has been a significant contributor, but more generally we do not really know the extent to which public awareness and concern to take action in relation to climate change has also been a factor in increasing that uptake. Certainly we have seen in the past 12 months a significant expansion or increase in the number of accredited installers with the BCSE who have gone through the training, which is supported financially by the government. The number of accredited installers has doubled in the past 12 months. Therefore, you would expect that there would have been significantly more presence in the market, more companies out there doing business and raising public awareness, and we have certainly seen emerging new business models, and I think you will receive evidence later today from one such company. These are cluster-type developments where solar PV companies are going out and targeting neighbourhoods or towns and actually getting an economy of scale in the way they do their business, and I think that is also contributing. Changing business models in response to heightened public awareness and a more generous rebate program I think are the key factors.

Senator WILLIAMS—What is the maximum number of applications that you have seen to date?

Mr Oxley—Seven hundred and ninety four.

Senator WILLIAMS—Is the departmental budget this financial year \$52.8 million for these rebates?

Mr Oxley—Yes, that is the order of it.

Senator WILLIAMS—In doing some quick figures, if it were to average 500 a week at \$8,000 that is \$4 million a week. If you multiply that by 50, or roughly a year, you are looking at \$200 million. That reminds me of my cash flow for my piggery when we allowed the importing of pig meat from overseas. If it stays at around 500 a week you are going to be about \$150 million short for this financial year. If it goes up to 700 you could be \$200 million to \$250 million short. How do you think that money is going to flow into your department? Do you think it will keep up?

Mr Oxley—As an aside, I read with some nostalgia the *Hansard* transcript the other day when you talked about your experience in the piggery, because a long time ago I actually worked in one for a while, which was a lot of fun. Mr Carter has already indicated, as I have indicated, that the government has indicated through the minister at the ATRAA conference that additional funding was being provided to the program, although that number has not been specified, and that demand would continue to be met. I do not think that we can really add any more to the answer that we have already given in relation to the funding for the program.

CHAIR—Could the number of installers and accredited installers coming in to the industry be a possible reason why some other installers are not doing as well as they were or are not getting as much business as they were?

Mr Oxley—There is a fair bit of risk in our speculating on industry dynamics, but I can say that at the very beginning of the year we were concerned that there would not be sufficient installers around to meet the demand we were forecasting at that time. It is difficult to know.

CHAIR—When you get the applications for preapproval do you keep any records of whether they are coming from a particular business? On our understanding, the retailers and installers might put in a number of applications and, if you are saying that there is this new business model where a business or organisation might target a community so that they all put in their applications together, in the stats that you collect is there any evidence to support that notion of a new business model?

Mr Oxley—Certainly in terms of sheer volume of applications. Our database, thankfully, is sophisticated enough to be able to give us aggregate numbers for individual companies. I am not sure that we have actually run the analysis on that basis.

CHAIR—I am just curious. Say, Acme Solar Panels came into it with a good advertising campaign and manage to get a lot of business, and so they put in an application. Of the 700 that you got last month they might account for 70 of them. Do you keep any statistics like that? Where I am leading is that as the industry matures maybe it is a natural thing that the larger, better organised companies with a good business model are going to take the business away from smaller one-off operators.

Mr Carter—We certainly collect the information on where the applications are coming from. As Mr Oxley has indicated, we are having to put additional resources in to meet the program at the moment and we have not done any analysis along those lines. Another issue that comes into that is that a number of companies as they evolve also change their company names and we have had a number that have done that recently. It would be a difficult analysis but there would be the information available to us if we were to look at it in that way.

CHAIR—That could be useful. Thank you. Senator Wortley?

Senator WORTLEY—You have included a table in your submission on the cost of greenhouse gas abatement and government assistance per tonne of CO₂ for solar homes and community. Can you take us through that?

Mr Oxley—I will give it a go. Just bear with me while I find it.

Senator WORTLEY—I have it on page 5 of the department's submission.

Mr Oxley—I have it now. Essentially the first column, with the 0.821 million tonnes in it, represents the total abatement we estimate will be achieved under the program—under the \$150 million. That is based on, as the notes say, a useful system life of 20 years and based on the long-term average 1.5 kilowatt photovoltaic system being installed. The total cost per ton of CO₂ there shows what the cost per ton of abatement is. What that suggests is that solar PV actually is quite a high-cost abatement option. Lastly, in terms of what the government contribution is there, of that \$424 per tonne, the rebate contributes \$274. As to the average system installation abatement, 44 tonnes are abated by the installation of an individual system.

Senator WORTLEY—Can you tell us how that compares with other carbon abatement programs?

Mr Oxley—Mr Carter has some numbers here that may be helpful.

Mr Carter—I do not have them in that form. We did do some examples under some treatments, but it is an area that I must admit I am a little frustrated with. I get questions from senators and I have been trying to get some methodology in place so that we can provide with apples to compare with apples in this area. As to some numbers that might be useful, we have looked at, for example, ceiling insulation for treating 120,000 homes with an effective life of 40 years, and that would generate 7.91 megatonnes. I do not have the dollar per tonne cost available. From our information, the most cost-effective interventions that can be made really rank in order at a household level to insulation. Space heating is about 38 per cent of the energy usage in a house, with

cooling at about three per cent. Hot water runs at about 25 per cent, with appliances at around 26 per cent. The most cost-effective intervention is around insulation, then hot water, followed by lighting, heating and cooling, and then it is quite a mix and very house specific. Appliances are a fairly high user as well overall, and within that clearly the highest user is refrigeration by quite some extent. One of the concerns there is replacement of refrigerators. I think the pre-1992 refrigerators are particularly poor in an energy efficiency sense. Post-1992 tend to be improved and then there is a spectrum in the market around that as well. Also of significance is the use of second and third fridges in households, which often tend to be older refrigerators as well.

Senator WORTLEY—Do freezers rate on the same level as the refrigerator itself, because some people have the freezers separate? Is that included in those figures?

Mr Carter—It is bulked up and aggregated into those figures. We recently published a residential baseline study, which is a very comprehensive examination of end-use demand in households that goes down to the appliance level and then projects that usage through to 2020. It is available on our website and I am happy to provide a copy to senators. It certainly has detailed information right across all of that data. If you are examining that, I would draw your attention to the interesting expansion of televisions in the Australian market and the projection of that through to 2020, which is of quite some concern. We are very interested in the application of minimum energy performance standards and better labelling for TV products.

CHAIR—Do you have any international comparisons between the cost per tonne of carbon abatement for this particular scheme that we are examining today and other schemes that are intended to deliver carbon abatement of a similar nature?

Mr Carter—I am not aware of international comparisons. We have been trying to improve our methodology on doing the dollar per tonne abated. Getting a consistent methodology is a priority for us, particularly out of last estimates where I was asked that question across a number of programs and was not able to give an apples to apples answer for you. We are looking closely at that at the moment. Part of the difficulty is that we end up averaging across states and territories because of the different electricity sources and then predicting what is the different mix of uptake per jurisdiction. There is always a range of assumptions built into it. Any time we give an answer we seem to have to list off quite a range of assumptions, but I would like to get a single methodology in place so that we can do that better.

CHAIR—On the face of it you look at it being \$424 per tonne of carbon abatement from this scheme and you think that is hugely expensive, but we do not really know whether it is in comparison whether other things.

Mr Carter—Our view is that it is expensive abatement and that there are others that are cheaper dollar per tonne. I could seek to get some information to the inquiry on that as soon as I can.

Senator PARRY—Mr Oxley, I gather from your response to Senator Williams you are an avid reader of *Hansard* and in particular this inquiry. How would you explain the anomaly we are getting in evidence, if you have looked through the *Hansard* transcripts where retailers and installer after installer, even including the Electrical Trades Union, have indicated there is a dramatic decrease in installations, yet your figures are saying there is a continuation, if not an increase, in applications? How do we explain that?

Mr Oxley—It is difficult to explain and I share that sense of confusion as the previous witnesses did that there is a contradiction between the hard data that we have provided to the committee and the anecdotal evidence that has come before the committee.

Senator PARRY—It is not anecdotal. A lot of it has been direct from installers themselves in terms of a reduction in employment and sales. We have had some dramatic evidence, which we could trawl through. It is a really contrasting anomaly.

Mr Oxley—I am sorry; that was probably a poor choice of words. They are contradictory. It was the Clean Energy Council that made the observation that the impact—and there quite obviously has been an impact, when you read the submissions and look at the testimony—has been variable. There have been some installers who have been quite significantly affected by the introduction of the means test and there have been others who have not been so significantly affected, and in fact there has been some speculation that there have been some that have benefited, and I have heard others attributing that to the amount of public awareness that has been raised simply by the public debate around the means test. We aggregate our data at the national and at the state level, and when you look at the data at that level it is saying that overall the picture is a positive one, but of course when you aggregate data it hides what is happening at the micro scale. There quite obviously is a bit of variation within the sector itself.

Senator PARRY—Your evidence to us earlier in response to some of my questions was that your data is accurate and that there is no lag effect.

Mr Oxley—That is correct.

Senator PARRY—Is there a possibility at all that there is any inaccuracy in your data?

Mr Oxley—If you are talking about our data on the number of applications received, unless I need to send all of my staff to remedial maths classes the number of applications coming in and being recorded in our database is correct.

Senator PARRY—You are confident with the accuracy of your data. Could you ascribe it to the possibility of fear that the scheme will cease and people who are eligible for the rebate are quickly getting in? Could that be a potential reason for the continuation of applications at the height that they are at?

Mr Oxley—I could not speculate on that proposition.

Senator PARRY—I suppose we will be receiving submissions for some time. I am just wondering whether it might be possible to have the department back for an update on numbers, as you seem to be able to get them fairly readily now. We might seek further evidence towards the end of the committee's inquiry if possible.

CHAIR—We are suppose to issue a report on this inquiry on Friday of this week, so that does not give us much opportunity to have the department back, but I am sure you will be able to investigate them further during the budget Estimates process.

Senator PARRY—Yes, there might be a possibly there.

Senator WORTLEY—With the preapproval applications, you said that there is a six-week turnaround. Is that how long the preapproval is taking?

Mr Oxley—It is taking up to about six weeks. Let me be clear that the data that we have been talking about with the number of applications is actually the number of applications received in any week. They then go through the preapproval process.

Senator WORTLEY—That work would not have gone to the installers; so they would not be installing them at that time? It is up to nine months?

Mr Oxley—Yes. That business will not be out the door happening on the ground yet. There is that lag between receipt of an application. Let me be clear that when the application comes in the system has been designed already by the installer, and so they are now applying to lock in that business. But then there is that lag of six weeks and then however long it takes them after they receive that preapproval to get that system in and to make the claim for payment.

CHAIR—Do you keep those stats? Do you match up the preapproval and the application for the rebate after the installation?

Mr Oxley—Could you just be a bit clearer about what you are seeking?

CHAIR—You get your application for preapproval and then some time in the nine-month period the installation of the PV system goes ahead and then the installer applies for the actual rebate?

Mr Oxley—Are you asking me the aggregate time between an application and a payment?

CHAIR—Yes. Is that getting longer?

Mr Oxley—I would suggest it is getting longer, and what we are seeing is a divergence between the preapprovals, applications and installation. The installations are happening at a slower rate than applications are, which in part answers Senator Parry's earlier question about whether we are seeing some sort of strong move to get the applications in. If you look at the divergence in those two, clearly there is a strong focus in the industry on locking in business.

Senator BIRMINGHAM—We have seen a significant uptake in bulk purchasing schemes, and indeed here in Queensland the state government, which we had hoped to have with us today but do not, has initiated a scheme that you make mention of in your submission that provides one kilowatt systems at an out-of-pocket cost to the household of less than \$200. Have you done any research in terms of the number of applications that you are receiving at present as they relate to such bulk application schemes?

Mr Oxley—The little bit of analysis we did in preparation for today's discussion suggests that currently about 10 per cent of applications are for systems down in the price range below \$10,000 and they would all be

one kilowatt systems. A snapshot of the market is about 10 per cent currently, but we do not know what is coming down the pipeline.

Senator BIRMINGHAM—Do you measure the private investment component of the installation cost?

Mr Oxley—It is possible to distil that from the figures, yes. We do not measure it as such, but part of the application gives us an indication on what the price to install is, so we have that data available. That is how we then go on and work out in the data that we provided the cost per watt installed.

Senator BIRMINGHAM—That cost per watt installed that you provide in the data is the grossed up cost inclusive of the government rebate component and the private investment component, and anything that the household may get back through RECs or anything else?

Mr Oxley—That is correct.

Senator BIRMINGHAM—Do you have data that you can provide in terms of what is happening to that level of private investment?

Mr Oxley—We have already given you one indicator of it, which is the fact that the number of watts installed per rebate has reduced from the average of 1.57 down to 1.24. That would correlate with a lesser investment in overall system size. I think we could probably run that data for you and provide it to the committee.

Senator BIRMINGHAM—If you could provide the data that would be great, but obviously what you are saying is that we can fairly safely conclude that as the size of the system has decreased, even though the government is maintaining its \$8,000 share from the taxpayer, the private investment component has actually been steadily decreasing over time?

Mr Oxley—That is a clear implication of the information provided today, yes.

Senator BIRMINGHAM—What research is the department undertaking in terms of the impact on industry? Senator Parry was mentioning companies that are laying off staff and there are different stories that we are getting from various companies with regard to the impact. Has the department initiated or has it undertaken any research in terms of what is happening in the industry?

Mr Oxley—That is not an area of analysis that the department has undertaken. Our disposition when seeking that sort of information would be to go to a body such as the Clean Energy Council and obtain its advice as to how it sees the impact on the industry across its members. I understand it has done some of that survey work from the evidence that they have provided.

Senator BIRMINGHAM—The only data that the department is collecting for the minister since this significant policy change was introduced is the application data that you have provided and what comes in on the application. There is no research being undertaken into the industry impact and what households above the means test might be doing. Many industry installers are telling us that basically nobody installs a system without the \$8,000 rebate. There has been no research on any of those things that the department has been asked to undertake?

Mr Oxley—No. As I have indicated, in both of those areas that you have outlined we have the capacity to go to industry advisers and obtain that sort of information should it be needed.

Senator BIRMINGHAM—Has the minister asked you to do that?

Mr Oxley—I would have to take that one on notice because I was away for a few weeks recently and I could not confidently answer that without first checking.

Senator BIRMINGHAM—Has the department done that, or do you need to check that as well?

Mr Oxley—I think it would be wise for me to check that as well, in light of the answer that I have just given.

Senator BIRMINGHAM—It always pays on this side of the table to ask the question a few different ways sometimes just to ensure that we get the answers. Finally, I return to the feed-in tariff arrangement. I have had a chance during other questioning to look at the data you tabled. It does stand out to me that in the six-week average for the period since the budget, since the means testing came in, Victoria has had the highest number of applications, followed by South Australia and followed by Western Australia, which appear to be the three states that have or are introducing feed-in tariffs. Without jumping to too many conclusions, there does seem to be some evidence of support for feed-in tariffs encouraging investment, particularly given, as Senator Parry has pointed out to me, that on a population basis New South Wales is way down on the list.

Mr Oxley—If you are seeking a response, I think that is one way to interpret the data. I would want to do some analysis and understand whether in fact it is a business model thing that we are seeing at play here also. So, whether in fact the significant spike in Victorian applications can be attributed to the cluster business model or some other factor.

Senator WORTLEY—Given that there has been an increase in the number of applications and that you have had to increase the number of staff that you have working on it, do you have figures of the accredited installers? I am just asking in relation to the number of installers who have raised concerns and also the fact that you had to increase the time frame from six months to nine months because of concerns about whether or not there were going to be adequate installers to install the systems.

Mr Oxley—We do have some figures on that. We jumped on the Clean Energy Council website on Friday. As at the start of August there were 580 accredited installers, compared with 280 in July 2007.

Senator WORTLEY—Can you repeat those figures?

Mr Oxley—As at the start of August this year there were 580 accredited installers, compared with 280 in July 2007, so there has been a doubling in the number of installers in the sector in the past 12 months.

Senator WORTLEY—Do you think that is sufficient to meet the increase in applications?

Mr Oxley—I am not in a position to be able to make a comment on that. I think that is for industry to provide that.

Senator WORTLEY—You have concerns regarding that, which is why you increased the time frame from six months to nine months?

Mr Oxley—We had concerns earlier in the year that there might not be enough accredited installers around to do the job, but quite obviously there has been a strong interest in accreditation and that seems to be a continuing positive trend.

CHAIR—I do not think there are any further questions. Thank you very much for appearing before us today and for accommodating the change in the committee's program.

Proceedings suspended from 12.17 pm to 1.06 pm

BAILEY, Mr Andrew Rowland, Private capacity

GRANT, Ms Susan Janne, Private capacity

ARDRON, Mr Mitra, CFO and General Manager Energy, Beyond Building Energy

CHAIR—Thank you for coming along to talk to us today. The committee has received your submissions as No. 5, Mr Bailey; No. 10, Ms Grant; and No. 88, Mr Ardron. Does anybody wish to make an amendment or alteration to their submission?

Mr Bailey—No.

Ms Grant—No.

Mr Ardron—No.

CHAIR—Would any of you like to make a brief opening statement before we go to questions?

Mr Ardron—About a year ago we set out to increase the uptake of solar by bringing the cost down. We felt it was necessary to do that in order to achieve sustainability. We believed that in order to do that we needed to change the business models and we did that by bringing together bulk purchases and aggregating customers. For example, we are installing into 100 homes in the town of Mullumbimby where there is a total of about 1,000 homes and we are doing a similar number in Samford of a similar proportion. At Beyond Building, we believe like most of the solar industry that subsidies and support are essential to enable us to reach true parity. The speakers from Suntech indicated the predictions that show good parity is possible, but support is needed to get to that point to compete against the heavily subsidised fossil fuel industry. We have shown in the last year that it is possible to drop our installation costs by 25 to 30 per cent compared to what the industry was charging a year ago, as have other bulk purchase schemes.

It was interesting to hear Mr Ryan from KPMG presenting the figures for California. I think senators should notice that California has a similar population to Australia and their target for solar on roofs is one million roofs over 10 years compared to Australia's target of 16,000 over three years, with a similar population and similar solar access. We believe that the way to achieve this would be by way of a gross feed-in tariff, a feed-in tariff similar to the ACT model, not as done in Queensland, Victoria or South Australia which, on our analysis, are worth exactly zero to most customers because they will never actually feed power back to the grid.

In order to achieve a solar industry that is going to have an impact, it is necessary to build capacity. That means training, laying down manufacturing contracts and putting in place sales campaigns, but investment requires predictability. In New South Wales we have created about 30 jobs in this last year from scratch and a similar number in Victoria. The New South Wales office covers south-east Queensland as well. But at the moment we do not know whether we should be laying people off or hiring them. Those two options are equally likely in our mind. That is because we do not know how long the rebate is going to last. In fact, at the ATRRA conference there were rumours going around that the rebates had already run out. One installer had been unofficially told, 'Do not bother sending in your application because there are not any left.' That may have changed. The gentlemen from DEWHA here actually said that is not the case. But when you are trying to build an industry on that kind of information, it is impossible. In fact, the department of environment staff have been given instructions not to tell the industry how many rebates are left. It was a pity that Mr Oxley had to leave and is not able to confirm that but my understanding is that the staff have been given direct instructions on that. I should say this is not a criticism of DEWHA staff, who have been absolutely wonderful to the industry, but they are working under the constraints that they are put under.

Unpredictability and the barriers to entering the Australian market have, in our case, meant that we have shifted a lot of our attention overseas. I believe that is the case for all of the international businesses in this space. We were looking into manufacturing but there was no way we could do that in Australia given the uncertainty of whether there is actually going to be any solar industry around next year.

In conclusion, we have a person at the moment who is in the Samford neighbourhood doing pre-inspections. We did not really know last week whether we were going to have to throw away all the applications he did because we did not know if the rebates were going to be there by the time he got back with them. That is no way to build an industry that is crucial to Australia's sustainability.

Mr Bailey—I am up at Mount Nebo, above Samford. My wife and I made a conscious decision to move to that particular area in order to set ourselves up for retirement. We built ourselves a fairly sustainable house. It

has big eaves; we have low energy lighting; we rely on rainwater; we recycle our grey water; we use worm farms, and so forth. One of the next steps we wanted to take was to move into solar energy and, in fact, create our own little network so that we could then become self-sustainable in our own right and, if need be, one day actually turn ourselves off from the grid so that we are totally reliant on our own resources in order to survive.

My wife and I did a lot of research on the different types of systems that have been made available and looked at the rebate structure. And then this one appeared in Samford which we went to a public meeting on. The price offered when I compared it to other systems was a very, very good offer. I did further research into the actual products that they were offering within that particular offer, which was from Beyond Building. We then made a conscious decision that, yes, we would run with this particular program and we paid in full expecting that we would then see the fruits of our labour being a fully installed solar photovoltaic system on our roof. However, come budget night our \$8,000 disappeared with no pre-warning, no anything. We then weighed up the facts: is it going to be cost effective for us as private citizens to continue to support the party that we voted for. We are now making a conscious decision as to whether or not we should change our minds. In the meantime, we also looked at the costs of that particular solar system and the return with or without the rebate and we made the decision to withdraw because we felt that with no rebate it was no longer cost effective. If the means test were lifted to a higher value, that would then make it much easier for us to further engage in that particular program. We would like to be able to support the solar system in Australia but at this stage we cannot. Thank you.

Ms Grant—I am sure that others have represented the impact on the environment and the solar industry, so I will not dwell on those today. I am here basically as somebody who was going to put solar panels on our roof. I will just talk from that perspective. We had signed a contract and paid a deposit with BBE to install solar panels prior to the May budget announcement as part of the Samford Valley solar neighbourhood scheme. The means testing being applied from budget night basically meant that the new means test would apply to us because, even though we had signed the contract with BBE and paid the deposit, the actual paperwork for the rebate had not gone through.

We do not consider ourselves to be wealthy but we do miss out on this means test by a small amount of money. We have been clinging to the hope that the government would reconsider its position but evidently that has not happened at this point. It is highly likely that we are going to have to withdraw from the scheme over the next week or so. We are bitterly disappointed that we are going to have to do this as we strongly believe in doing our bit for the environment. We have done what we can afford. We have already put solar hot water on our house. We have done the rainwater tank. We have done a lot of energy efficient things within our home and we were really hoping to be able to do this as well. However, the means test that has been introduced now means that we will be unable to do this.

What I would like at the very least is the means testing measure to be basically reviewed. I strongly believe that there should not be a means test on something like this. It is just so critically important for this nation's future that we do switch over to renewable energy sources. However, if there were going to be a means test it needs to be much higher than what it currently is because a \$100,000 household income is not high in today's world. The price of houses has gone up significantly over the last few years. You have got rising interest rates and the cost of filling up your car with petrol. It is expensive. The introduction of this has basically shattered our dream of having solar energy. The other thing as well which we believe is very inequitable is that this measure was introduced and if you did not have your paperwork in come budget night or the next day, or whatever it was, then you were out with absolutely no warning whatsoever. At the very least if they would consider people who had actually entered into contracts and allow these people through the door, that would be a very positive thing as well.

Senator PARRY—Thank you for your submissions and your opening remarks. To make an observation, obviously, there is a direct link with Mr Ardron's business and the two of you in that the business deals were going to be through your business; is that correct?

Mr Bailey—Yes.

Ms Grant—Yes.

Senator PARRY—It is just good to have that on the record so that we know what the connections are. Do you mind indicating the total cost you were prepared to spend on your systems prior to the rebate being means tested?

Mr Bailey—The advertised cost is \$8,500?

Senator PARRY—For your system?

Mr Bailey—Yes.

Senator PARRY—That was a one kilowatt system?

Mr Bailey—Yes.

Ms Grant—The same here.

Senator PARRY—What you are indicating to the committee is that you were reliant on nearly total funding for the systems? What was your outlay going to be?

Mr Bailey—Five hundred dollars?

Ms Grant—Five hundred dollars.

Senator PARRY—You were totally reliant upon the systems being heavily subsidised by government?

Mr Bailey—Yes.

Ms Grant—Yes, because I guess BBE were doing the bulk purchases, they were able to cut their costs significantly, which made it affordable to households.

Senator PARRY—It is similar evidence that we have received from installers. We have not had as much evidence from people who have been directly impacted upon as a result of the means testing. You are indicating that your income is modestly over \$100,000?

Ms Grant—Yes.

Mr Bailey—Yes.

Senator PARRY—And it is not within your means to fork out a huge capital sum for solar panels on your roof?

Ms Grant—That is right.

Senator PARRY—In your community, anecdotally, how many other people do you think would be affected in a similar way?

Mr Bailey—I believe that there some 200 people who went to the initial meeting in Samford. There is a little hall where the first meeting was held and it was overflowing. On that one particular night I think there were some 120 people that actually committed to take up the offer. From that, I think there was a further 50 or 60 on top of that again. I would not know the total number but of that I would suggest probably 50 per cent have pulled out.

Senator PARRY—Just to be clear for the record, Mr Ardron, your company sponsored and hosted this meeting?

Mr Ardron—The local community sponsored and hosted it. We attended as a supplier.

Senator PARRY—Who set the meeting up?

Mr Ardron—A local climate change activist in Samford.

Senator PARRY—Were you the only supplier and installer there at the meeting?

Mr Ardron—Yes. My understanding is that the local contact investigated a number of opportunities to get people to tender on it. They selected ours as being the best offer, so they invited us to come along and present to the meeting.

Senator PARRY—Prior to the meeting, the local community had organised inquiries or even a more formal approach to work out the cost per unit for X number of households?

Mr Ardron—Exactly. Yes.

Senator PARRY—And you were the successful person and you then attended in that capacity. We go back to the evidence given by Mr Bailey. Could you just firm up those numbers?

Mr Ardron—I do not know the exact numbers for Samford. I know that as of budget night we had 150 people withdraw from our scheme; that is, New South Wales and Queensland. I believe Victoria had a slightly higher percentage. That means 15 per cent of the people who had previously paid deposits dropped out of the scheme. I should say that we believe we were less affected than almost anyone in the industry because our bulk buy scheme made it available to all income ranges, not just high income ranges, which most of our competitors have to deal with.

Senator PARRY—Do you know the income bracket that you were dealing with? Was it everyone over the \$100,000 combined income who were withdrawing or were you getting a mixture?

Mr Ardron—No, nobody under \$100,000 withdrew but I believe of that 150 people, give or take a couple, there was, I think, one who elected to continue to install solar without the rebate off their own bat.

Senator PARRY—Out of approximately 150 people, 149 did not continue?

Mr Ardron—Exactly.

Senator PARRY—They are fairly heavy numbers.

Mr Ardron—I should say that is of the people who were subject to the means test.

Senator PARRY—Yes.

Mr Ardron—There was another significant number, 850 who—

Senator PARRY—Who stayed within. In your composite package, were you offering one kilowatt systems and that was it? You were not offering a variation? It was simply for that price of \$8,500 was a one kilowatt system fully installed?

Mr Ardron—Yes, but we also offer a two kilowatt system but I should say that maybe two per cent of people go for it, so 98 per cent choose the one kilowatt system.

Senator PARRY—Do you feel as though they are choosing that system because of the cost?

Mr Ardron—Because the way the rebate scheme is pitched there is really no choice.

Senator PARRY—It is a dollar and cents issue and I think the evidence before us suggests that the dollars made the decisions of the two other witnesses at the table.

Mr Ardron—We should put on the record that we consider a two kilowatt system would be much more suitable to Australia's needs and houses, but we supply one kilowatt systems because that is where the rebate is pitched.

Senator PARRY—And that is where your market is?

Mr Ardron—Exactly.

Senator PARRY—You indicated in your opening statement that you just do not know whether you can continue with the people you currently have employed? Are there any other direct impacts on your community since the introduction of the means test?

Mr Ardron—I should be clear it is not the means test that creates the uncertainty as to whether we have to lay off staff, it is the uncertainty about how long the rebates will last. In fact, that is a much bigger issue than the means test from our perspective. It is not knowing from one week to the next whether the rebates are going to be there.

Senator PARRY—It is total uncertainty as to the entire scheme in relation to any form of government assistance?

Mr Ardron—Exactly.

CHAIR—The minister has indicated that support for the program will continue but, surely as a businessman, you would understand that rebates are usually capped at some level? The numbers of rebate have to be finite.

Mr Ardron—I understand that but I also see that in other countries like California they have come up with plans which lead to a certain amount of predictability. Predictability and forecasting are essential to be able to make investment. In the circumstances where you do not know, literally from one week to the next, whether the people who are out there photographing roofs today will be able to lodge those rebates tomorrow, it is very hard to build a business. I understand the need to cap rebates. In California they have a rebate which goes down over time based on the number of systems that have been installed so that the industry there is not faced with a situation of, 'Oh, we have got three months of rebate,' and suddenly the 6,000 is used up. It goes to zero for nine months and it goes back up again. Some of the questions that were being asked earlier clearly alluded to the fact that everybody in the industry is running around trying to lock in their business for the rest of this year.

Senator PARRY—Can we go back a step? You would have been aware—and tell me if you were not aware—that the then Prime Minister, Mr Howard, and also the then opposition leader, Mr Rudd, in the election

campaigns gave a positive indication as to the continuation and the support certainly for green energy but in particular they indicated that solar panel PV cells on rooftops would be something that would be highly desirable to continue. Do you disagree with those comments that I am making? Are you aware of the comments that were made during the election campaign? You would have been left with an impression that there would have been some form of security, whichever way you voted, going forward?

Ms Grant—Absolutely. Particularly with the ratification of Kyoto protocol as well, there was absolutely no indication that the government was going to change the scheme.

Senator PARRY—One of the serious impacts in this is the suddenness of the introduction of the means test without warning?

Ms Grant—Absolutely. It was a complete shock. We did not even find out on budget night. It was only two days later once all the detail filtered through. And we were just totally surprised.

Senator PARRY—Now the industry and consumers are in some sort of doubt as to where we are going next?

Mr Ardron—That is true. Senator McEwen referred to the talk by Peter Garrett at the ATRAA conference. I was actually there at that talk. To be honest, the industry spent the rest of that day—the last day of the conference—trying to understand exactly what had been said. I am sorry; I do not have the exact quote. Someone would have to find it for me. But the statement was: we expect to meet demand in the current program. Unfortunately, you can interpret that in a multitude of different ways, including the current program, meaning 6,000 people. I speak for everyone in the industry, our competitors as well I believe, in saying everyone was in turmoil and nobody knew whether that statement actually meant the rebates would continue beyond the next week.

Senator PARRY—I am conscious of time, so I will conclude with this question. What certainty then does the industry need to ensure that we have a continual uptake of PV cells for roofs? And also, do you feel as though the current surge in uptake that the department indicated—and I am aware that you were in the room earlier when the evidence was given—is simply because people are panicking and rushing to get everything done now in case nothing exists further down the track?

Mr Ardron—I really do not know. I can say that we are rushing to try to lock in business. I believe everybody else is. Whether that demand will then drop off, who knows? We certainly think the demand will drop off if the rebates disappear. That is very clear. But whether the demand will drop off if the rebates continue, I do not know. I have a feeling it will not. I have a feeling that the demand is still there. I think we need that demand because Australia's target is minuscule compared to others, given our population.

Senator BIRMINGHAM—Thank you all for your time today. Firstly, as to the process leading up to the budget, you both signed on to the program with BBE to have systems installed. Had Mr Ardron or anybody else suggested along the way when you might need to put an application in for the rebate?

Mr Bailey—There is a process that needs to be followed there. There was a list of actions to take by myself in order to continue the process. We were at the stage of submitting an application form to BBE which we had duly done. We then paid in full. We were then waiting for the next step which would have been an inspection of our property. That has not taken place because we have since withdrawn.

CHAIR—Was the application form the department's application form?

Mr Bailey—No, the application to Beyond Building.

Ms Grant—So, that was the contract with Beyond Building. The application forms were not going to be filled in until the pre-inspection had taken place. That was actually to make sure that the roof was actually suitable for the installation of solar panels.

Senator BIRMINGHAM—You were going through the thorough process there of ensuring a suitable structure, trees not blocking it and those types of things to ensure suitability?

Mr Ardron—There is actually a legal requirement by the department of the environment as to what you have to do before you put in your application, which is quite complicated.

Senator BIRMINGHAM—Even with that requirement in mind, I guess the attitude prior to the budget, when you saw no immediate threat to the rebate and were therefore working through things systematically within the industry in terms of ticking all the boxes and getting applications in a timely manner, to the attitude post the means testing where there are the concerns that you have voiced today about the future of the rebate, I

assume you work with your clients as quickly as possible to tick the boxes to ensure they get their applications in.

Mr Ardron—Exactly.

Senator BIRMINGHAM—It has driven very much a change in culture, I guess, certainly in your business, and you would expect also elsewhere, focused on the potentially finite availability of rebates?

Mr Ardron—It has produced a culture of uncertainty.

Senator BIRMINGHAM—That is a very apt phrase indeed. You mentioned that of the 850 people who are continuing, about two per cent or so of them were putting in the two kilowatt units, I think you said, so that is only a small number. Do you have any indication of the 150 people on higher incomes who did not continue; was there a higher uptake of putting in larger systems by those households?

Mr Ardron—The large systems are almost exclusively put in by higher income people. Obviously, I do not have the numbers in front of me but I would guess that more of our two kilowatt systems were cancelled than one kilowatt systems because, of course, they were the people who had discretionary income whereas the people on under \$100,000 are barely paying their mortgages, never mind being able to put a significant amount of money into a PV system.

Senator BIRMINGHAM—From your example at least, we clearly have further evidence to suggest that the means testing is hurting the size of systems being installed in particular?

Mr Ardron—Yes, I believe so.

Senator BIRMINGHAM—You were present before and you heard the departmental officials answer questions in relation to the sustainability of the program and future funding. Having heard the minister's comments at the conference where you attended and sat here and heard the departmental officials today, do you think you have any greater clarity now than you had previously as to government support for the program?

Mr Ardron—It is hard to tell because the official statement is still open to interpretation. I understand from the departmental officials that they interpret as meaning there will be some continuation of the rebates, but it is still unclear. I am certainly happier to hear that they both seem to think that there will be a continuation of the program and obviously that makes things a little bit more comfortable. But it would be good to see that in detail and in writing rather than words that are very open to misinterpretation.

Senator BIRMINGHAM—So 'continuation', as you have indicated to me, can mean possibly anything?

Mr Ardron—Exactly.

Senator BIRMINGHAM—Looking ahead then in terms of the ideal short, medium and long-term structure for support of the solar industry and installation of PV systems, do you think there is a place for rebates in that short to medium term and what other policies do you think we should be pursuing?

Mr Ardron—I believe that the only policy I have seen that stands a hope of actually achieving an industry of scale—after all, there are 8 million homes in Australia—the only thing I have seen that has worked elsewhere in the world is gross feed-in tariffs; specifically gross feed-in tariffs, not net, which are completely useless. But because there are inevitably going to be delays before we get to that point I think the rebates serve a very important function in ensuring that we build the industry. The industry has already suffered comings and goings under previous governments where the rebate has been there and then been cut out and then brought back. Each time you do that, more people leave the industry and do not come back instead of growing the industry. What we need to ensure is to be absolutely certain that there is continuity between now and the introduction of a gross feed-in tariff.

Senator BIRMINGHAM—Continuity between now and the introduction of a gross feed-in tariff. By that you mean continuity in terms of some certainty around what rebate structures would be in place so that you can get to that point?

Mr Ardron—Yes.

Senator BIRMINGHAM—I do not know how much you understand of the notion of a gross feed-in tariff and how it works, but as two people who had made the decision under the rebate to have a system installed and who have now changed their minds because that rebate was taken away, would a system driven by feed-in tariffs appeal to you both if it had a 10 or 15 year pay-back period for the life of the system, or would you still think you need some support for the up-front capital cost of the system?

Ms Grant—I have to admit I do not know enough about what a gross feed-in tariff would involve to be able to answer the question.

Mr Bailey—I think I am in much the same boat there.

Senator BIRMINGHAM—Essentially, you would be paid for the amount of electricity generated by the system and you would be paid at a multiple; for instance, the ACT model is 3.88 times going the rate for the price of electricity. In a sense, you get paid nearly four times the average price of electricity for the power that you are generating from your system which means you get a gradual return over a period of time.

Mr Bailey—That would be an incentive, yes. I have looked at my current consumption and I know that over a quarter we use approximately 10 kilowatt hours a day and a one kilowatt system would produce 4.5 kilowatt hours per day, so on a one kilowatt system that would give me a 50 per cent reduction in my quarterly bill. If we then had a gross feed-in tariff then that would be an even greater incentive to perhaps go to a two kilowatt system to become fully self-sufficient.

Ms Grant—Based on what you have explained, it would be an incentive. I still think something needs to be done just because you have got that large capital outlay that you do need to make. But I think the two combined would work quite well.

Senator BIRMINGHAM—Possibly a smaller rebate to help with the capital costs?

Ms Grant—Yes, just to help sort of ease the pain, I guess. And then if you know that you are getting that money back that would make a big difference because you are going to get a faster pay-back than what you would currently get.

Mr Ardron—Could I add to that explanation? We have received indication from a number of financial institutions that if there were a gross feed-in tariff in place they would be willing to finance PV, which they categorically will not do under a net feed-in tariff because there is no guarantee of how much the customer actually gets. Whereas with the gross feed-in tariff they can compare the savings from the generated electricity against the repayments on the loan and if the two come close to matching the financial institution will do it. Unfortunately, it has to be done with financial institutions because the green loans are structured in such a way as to not work with PV.

Senator BIRMINGHAM—Why is that?

Mr Ardron—Because of the repayment terms of 10 years. A 10-year repayment term is significantly less than the lifetime of the system and you actually need a 20-year repayment so that the interest and the repayments on the loan are close to the electricity saving. As soon as you reduce it to 10 years your numbers do not add up and you end up putting your hand in your pocket for a significant amount each year to pay out more in interest than you are getting back in electricity savings. The other thing, of course, is that the green loans, as I understand them, are repaid at three per cent of income rate. If you are a family on \$100,000, it is actually not a 10-year loan, it is a three-year loan because you have to repay \$3,000 a year.

Senator WILLIAMS—Frankly, do you think that the uncertainty in your industry is because of the fear that the rebate might be abolished totally?

Mr Ardron—That is correct, abolished or will run out.

Senator WILLIAMS—Mr Bailey, you suggested that the means test of \$100,000 should be raised. In your opinion, what do you think it should be raised to?

Mr Bailey—In my opinion, \$150,000 as with the means test that was introduced for other schemes that the government is currently running to assist families of lower income. Obviously, \$100,000 is now a different ball-park figure. A lot of us, particularly people of my ilk who are in their early 50s, have no kids and dual incomes, it is very, very easy to achieve \$100,000. If it is \$150,000 to support families, what is wrong with us?

Senator WILLIAMS—We have your situation where perhaps you are just over the \$100,000 on your gross income, what about families with two or three children who, although their income might be \$150,000, they have got kids to educate and so on? Financially, they probably have no more disposable income at the end of the week than perhaps you have.

Mr Bailey—I guess that is just an arbitrary figure that has been bandied around and I would support \$150,000. If it were to go higher, so be it. In fact, why not abolish it completely?

Senator WILLIAMS—I will not argue with you.

CHAIR—Mr Ardron, you were in the room when we were talking with the department about the number of installers and accreditation and that sort of thing. From your perspective, can you give us a view of how you think it will pan out in the industry if we take away the ongoing availability of the rebate, whether you believe there will be a consolidation of small retailers and installers into larger organisations?

Mr Ardron—Absolutely. I have spent some time looking at the industry in Europe and California where they have decent government support. In both those cases, in order to achieve the volume, the industry has changed. Australia's industry is based on a cottage industry model. It is based on mostly off-grid installations. In fact, until the current rebate system, I believe 90 per cent or so installations in Australia were off-grid. Don't quote me on that; I do not know the exact numbers. But it is of that kind of magnitude. It has been a cottage industry because of the high-touch, lots of personal attention that is required because every installation is different. If we look at Europe and California, what we are seeing is a model which is grid-tie dominated which means installations are essentially similar. They do not need nearly as much personal attention and they are industries that have organised their business model to scale that are actually achieving it; it is not the one or two-person installers where you do one or two a week. That was a long answer to your question, but we absolutely see a significant change in the industry towards an industry that is capable of supplying large volumes of solar and other renewables.

CHAIR—We have had installers and retailers come along to us and say their business has changed with the introduction of the means test. Is it possible that some of that business has gone to larger retailers and installers or organisations like your own?

Mr Ardron—Absolutely. Certainly, as the industry grows, as with any industry that changes this rapidly the people who are less efficient will either have to change and grow with it or they will be forced out of business. I see that as not necessarily a negative outcome as long as the overall industry itself is growing. But, yes, I believe we will see that kind of restructuring inside the industry.

CHAIR—And it could be happening now.

Mr Ardron—I think it is happening now.

CHAIR—Does your organisation assist people with other ways that they can reduce their energy consumption and do you have a view of the situation in California where households have to demonstrate that they have undertaken other kinds of energy reduction measures before they actually get approval for a rebate or tax incentive to install the PV solar system.

Mr Ardron—I was not aware of that provision in California. It sounds quite likely. Yes, we see that as a positive step. We see that to achieve sustainability there is the old model that says you have to get one-third from reduction in usage for things like lighting and stuff you do not need and one-third from energy efficiency and then get the remainder from renewables. I think that model is eminently sensible rather than trying to achieve all of our energy needs from renewables. In our own business we do have other parts of the business. We look at other renewables, none of which we are currently selling, so I would rather not talk too much about it. We also have a part that works with energy efficient buildings in designing energy efficient building materials to reduce the energy consumption of new buildings. We are designing and supplying the products for the government funded incubator down in Lismore, for example, which is being built with energy efficient building materials to use significantly less energy. It is a big part of our business.

CHAIR—Earlier today in the department's evidence we heard that per tonne of carbon abatement the cost of this particular scheme that we are investigating today is about \$424 per tonne. Have you got a view about whether that is an expensive investment or whether we could be spending our money better to get a better return?

Mr Ardron—Yes, I do. I think if it were just for \$424 per tonne it would be an outrageously expensive investment. However, if you look at the projections that have been done by experts in this field they show that there is a certain subsidy that is needed while the industry is small and as the industry grows it gets closer and closer to grid parity. What you are really looking at is at the moment it is \$424 a tonne and next year it is \$300 and then it is \$250 and then it is \$50 and at some point it is actually negative. Sooner or later, solar is actually cheaper than coal by the time you have spent all the money to try to store the carbon somewhere. I think that may answer your question. If we were looking at solar based only on value per dollar in storing carbon, we would not be in solar. But we believe the numbers show that in a few years solar will actually be the cheapest form of energy if it is supported to get to that volume. I think we have demonstrated that ourselves by bringing

the costs down by 25 to 30 per cent this year alone. That has shown that the industry is on a very rapid cost curve to bring the cost down to where we have.

CHAIR—We have also had evidence that the rebate scheme has encouraged people to put in the one kilowatt systems and that some inverters that are installed are not capable of supporting an increase in the number of panels to increase the capacity of the system. In relation to the ones that you are assisting people to purchase, what is their capacity for increase?

Mr Ardron—We use a number of different brands. The brands that we are currently installing are one kilowatt inverters. The reason we do this is because an inverter has a certain lifetime. If you install a two kilowatt inverter now for an upgrade you plan to do in three or four years, you are doing two things. Firstly, is you are paying for a two kilowatt inverter and those components are wearing out all the time. Secondly, inverters are electronics. We all know how much cheaper electronic goods get each year. There is very little point in a household spending money now on a two kilowatt inverter as opposed to buying in five years time a two kilowatt inverter at a much cheaper price. So, we have not advised people to go for two kilowatt inverters. We do not think it makes economic sense for them to do so.

CHAIR—What portion of the cost of a one kilowatt system is the inverter?

Mr Ardron—For a ball-park figure, sorry, I have to do the maths in my head. It is about 20 per cent of the components cost, so maybe 15 per cent of the total cost of the system, roughly. It is not the largest amount but it is a significant amount. The other important factor is that the number of one kilowatt inverters sold is much more than the number of two kilowatt so you get much better price breaks on them. People buying two kilowatt inverters are not only buying a system which is twice as big but they are not getting the economies of scale that people buying one kilowatts are doing. In fact, we have to sell two kilowatt inverters at twice the price of one kilowatt systems.

Senator BIRMINGHAM—Another witness has also said to us at some point during the inquiry that you get reduced efficiency running one kilowatt worth of cells on a two kilowatt inverter; is that correct?

Mr Ardron—Maybe. I am sorry, I do not have the engineering skills to answer that one.

Senator BIRMINGHAM—In relation to the renewable energy certificates, in the business model that you worked out for this large group, how were the RECs treated?

Mr Ardron—They are one of the components of the payment for the system, so we keep the RECs.

Senator BIRMINGHAM—In terms of how we get it down to the \$500 for household costs, it is the \$8,000 rebate but also \$1,000 to \$2,000 worth of RECs per system as well?

Mr Ardron—Yes. It was \$1,000 per system. The costs for these people were essentially \$9,500, of which \$8,000 was rebate and \$1,000 was RECs. We should say our prices had to go up because the price of silicon has blipped up quite substantially over the last six months, so our current price is quite a bit more than that.

Senator BIRMINGHAM—Finally, we talked a bit about the short and long-term arrangements that should be in place. In terms of a rebate to exist in a transitory sort of pathway between now and a feed-in tariff coming in, what structure do you think that rebate should ideally take to give the industry the certainty it needs to build capacity in the industry as it is required and to provide the maximum environmental benefits for the least amount of taxpayer costs?

Mr Ardron—The first thing, of course, is that the rebate should not be changed at short notice because that really impacts people whose business model is there. If it is being changed over the longer term, I think for example, a rebate that had so much for the first kilowatt and maybe slightly less for the second kilowatt to encourage people to put more in their roofs would be a good move, or a rebate that started off at its current level and maybe reduced a little bit over time, or if it were based on the number of systems installed, as with the Californian model, would work. But I would hope that the feed-in tariff was not more than six months to a year away because until that time it is going to be a long way for Australia to catch up with the rest of the world.

Senator BIRMINGHAM—Ms Grant and Mr Bailey, ignoring feed-in tariffs and those sorts of things, roughly speaking, how much would you have been prepared to spend out of your own pocket to get the system that was negotiated, \$1,000, \$2,000?

Ms Grant—I think we would have been prepared to have spent probably up to around the \$3,000 mark. We would have been prepared to have spent more but it is \$8,000 we really struggle with.

Mr Bailey—I would have looked at 50 per cent of the rebate cost. I would have gone to \$4,000.

Senator BIRMINGHAM—There are examples that a tapering off of the means testing in some way, shape or form, or a reduction in the dollars per watt, might have kept a lot more people in the industry—

Mr Ardron—Say, for example, \$5,000 for the first kilowatt and \$3,000 for the second might have provided both relatively little reduction in the number of people taking up the system plus an incentive for people to put the second kilowatt on, which would be good for the environment. It would also be good for business but mostly it would be good for the environment.

Senator WILLIAMS—Basically, with a one kilowatt you are virtually having it put in for you free. For something that costs \$8,500, if it costs me \$500 that is not a lot of money. If you go to two kilowatts and you could be up to \$20,000 out of your pocket. So, you go from one kilowatt, which is basically free, to two kilowatts at \$20,000. There is a big difference. There is not much incentive to go to the bigger one.

CHAIR—Thank you very much, Mr Bailey, Ms Grant and Mr Ardron, for your submissions to the inquiry and for taking the time to appear before us today; we appreciate it very much. Is it the wish of the committee to accept the documents that were tabled earlier today? There being no objection, it is so ordered. That concludes proceedings for today.

Committee adjourned at 1.52 pm