

Question and Answer

Marko Bogoievski
CEO & Director

Rob?

Unknown Analyst

Just kind of give us an idea of [indiscernible]?

Marko Bogoievski
CEO & Director

Yes, there are. And essentially it's a view about the relative attractiveness of the national electricity market versus what's happening in WA. But we've got Bruce here. I mean, do you want to come up in the podium, have a go at that question, Bruce, do you want?

Bruce James Harker
Director

I think Perth Energy, it's an interesting market over in NWA. We've done very well with [indiscernible] in the past station development there in growing quite a substantial business in terms of market share. It is commercial and industrial. There's no deregulation down to the mass market level. That was something we anticipated originally and it was on the agenda for the rest of the Australian government. So it's a market that at Perth Energy, there's further past station development. We think they're going to be a little bit measured time wise. So for us, it's a question of is that the right place for recording our energies both financial and in terms of intellectual capital. So the focus really -- we think the opportunity's bigger on the East Coast in the Lumo energy space and that Perth's maybe not on the critical list to keep. Certainly, it's a business with quite a bit of opportunity in it, so we'll just see where that review takes us in the end.

Marko Bogoievski
CEO & Director

Yes. Well, with [indiscernible] at risk. We're not dead set on selling this thing. We might still be the proud owner for quite some time but I think that rational, what Bruce outlined is -- it's a relative opportunity.

Unknown Analyst

Bruce, [indiscernible]?

Bruce James Harker
Director

Okay. This adjacent land which is secured for Perth Energy and those projects are [indiscernible] one will be built at some point. That's purely a question of return and allocation to capital. But we'd expect to secure the values what we have in those options or we'd keep them.

Marko Bogoievski
CEO & Director

Okay. So if we could just hold the remaining questions until the break or the end of the day, I'd appreciate it. We got the minister, he's here now. Tim, is that right?

Tim Brown
Chair of Wellington Airport

Yes.

Marko Bogoievski
CEO & Director

Okay. Thank you, Bruce.

Bruce James Harker

Director

Thank you.

Question and Answer

Unknown Analyst

This might have been a question, really, for the minister, but current New Zealand government policy is strongly focused on encouraging petroleum mining offshore, coal mining and so forth, and that seem to be part of driving our productivity. It struck me, as I was listening to you talk, that is that really incongruous -- it doesn't quite fit with the types of dreams that you've been talking about internationally and I just wondered if you had a perspective on that?

Tim Flannery

Well, that's right. I mean, no, the -- I guess if you look at the global carbon budget, it's conceivable that we could burn all of the oil and gas on the planet and still stay within budget. It is not conceivable that we could burn all the coal on the planet and stay within budget. So we have to develop some sort of mechanism to make sure that some of that coal stays in the ground or at least is sequestered. It might be that carbon capture and storage will come to the fore eventually, although that's yet to be seen. But I think we're in a phase at the moment where, because we have a rather incomplete agreement, people are rushing to market, trying to get these resources out of the grounds and monetized before the shift occurs. But it's a very fair and open question as to how long a strong market for say, thermal coal is going to last globally. That's yet -- I don't think anyone can answer that question. Now the conventional view in Australia is that it's probably a quarter of a century anyway. But is that a fair assessment? I'm not sure. I think in terms of what we're seeing globally, the degree of uncertainty in terms of energy generation in the future is quite significant. I guess the one area where you can be a bit more certain is that in China, we've had a recent and very large scale build of very efficient coal-fired power plants that are not going to be retired anytime soon. So that market will probably be open for some years yet.

Unknown Analyst

I was just wondering if you could elaborate on the issue of measurement and validation for whether with the countries have met their benchmarks that they've set out to do?

Tim Flannery

Sure. Look, that issue of measurement and validation is very much the center of the global negotiations at present. It was very high on the agenda for Cancun and also for Durbin and will continue to be. There are some political sensitivities around this, particularly from China. China has the view that the colonial era is not that far into the past. And I guess with Hong Kong as part of the hedge end of it, they're sensitive to interference from foreign powers as they see it. So getting a politically acceptable means of verification and measurement is a challenge. Could I say though that politically it's a challenge, technically I don't believe it's a challenge. Point source, emissions detection from satellites and so forth now is very highly sophisticated and very well developed. We can look at -- in the forestry sector, we can detect the illegal logging in a very tiny scale now in places like South America, the Amazon and so forth. So we have the tools there to do that. It's really, I think, a matter of brokering a political agreement that allows that transparency and validation to occur. And that's the macro scale. The microscale like on farm, if you're talking about on-farm validation of carbon sequestration, that sort of thing. Those -- that's a more challenging task and that's, at the moment, a great focus of Australian research in the ramp-up to the carbon farming initiative. They've already validated, I think, 4 technologies, but there's a lot of work to be done, particularly in the soil carbon area for that.

Unknown Analyst

Earlier, Minister Smith talked about what was quite a kind of conceptually pure model of an ETS, and I think what you described in Australia was some of their hence, more specific, direct interventions by government. Can you share your thoughts on whether that is kind of a transitional stage, political expediency or the end solution for the world will be a combination of both?

Tim Flannery

That's a really interesting question. I think we're still at a fairly early learning stage as to how this is all going to play out. The general wisdom I hear from economists who have studied this in the long term is that a carbon market is an indispensable tool in dealing with the issue of reducing emissions, but it's not sufficient by itself by and large. And perhaps one of the most interesting examples there, I think, concerns liquid fuels. If you've got inflexibility around your driving habits in the short term, unless you buy a new car. A price rise in terms of fuels doesn't necessarily do much. Is a carbon tax any better? The example of British Columbia is an interesting one. There, what people have done, they've put this carbon tax in place to -- it start at about, I think, at \$10, it will end to \$30 next year. It's differential in that it's only levied on the fossil fuels, the gasoline, but not on the biofuels, so it's having some impact there. It's also rebated back in terms of an income tax break to residents in British Columbia. I think we're yet to see the full details of that, but I can see the attraction of a straight tax in terms, particularly that liquid fuel sector where you try to push through, say, biofuels into the market. We shall see, but I suspect that there's always going to be a mix of things. And of course some economies like the Chinese economy where regulation is the way things are being traditionally done, it's just a hell of a lot easier to produce a regulation there than it is to establish a market. And in fact, for all that's being said about China establishing this trial emissions trading scheme, there's a big cultural barrier that needs to be overcome for that to happen. People don't think that way necessarily in China.

Unknown Analyst

Just a couple of questions. Firstly, just what's your view on New Zealand's exclusion of agriculture from our ETS? And secondly, do you see any potential for technologies that counter global warming, so not so much technology to front end the provincial [ph] emissions but at the, I guess, offsetting the emissions that are produced.

Tim Flannery

Yes, sure. Well, look, every country is different and here you've got, your agriculture sector is so large relative to the Australian agricultural sector in terms of proportion of the economy, that there's going to be different sort of solutions that are required. What's happened in Australia is we've said effectively we'll create a market for new crop, which is called carbon. We'll set the rules around that and the government will purchase this new crop in terms of certificates, right, from investments. And that works, I guess, when you've got a small agricultural sector and you've got a lot of carbon credits coming from a very highly polluting energy sector. Same sort of model perhaps wouldn't work here, but I think your Minister really had some very wise words on that. He said let's pick the low-hanging fruit effectively first in terms of the agricultural sector, so let's go through it gas by gas. I mean, he's quite right. Nitrous oxide has a warming potential 270x greater than CO₂. It's a major avoidable greenhouse gas pollutant in the dairy-ing sector particularly and, it might be a very good way to start moving into that. So I think it's probably wise to defer it for a bit, get your metrics right, make sure that what you set out to achieve is, in fact, achievable, right? So rather than just imposing a cost, you actually are reducing emissions, make sure you're doing it that way. I think it's a pretty sensible approach, I mean, from where I stand. So, yes, as long as it comes in, as long as they do not keep on being deferred forever which would be a disaster. In terms of the technologies that can reduce or mask the impacts of the warming trend, you're really getting into the realms of geo-engineering when you start talking about that. And I guess the rise of CO₂ in the atmosphere has been an unintended example of geo-engineering by our species. So if you think about countering that, I mean one of the things that people have talked about is putting sulfur into the stratosphere. And there's a little bit of scientific work now done on some of the potential unintended consequences of that sort of approach. And sure you would achieve a cooling because less sunlight will be reaching the surface of the planet. You'd also depress crop plant growth though because there's less sunlight, potentially. You're also changing weather patterns, so you'd be decreasing rainfall in some areas just because you've created a new mechanism in terms of the global circulation system. And of course, it would do nothing in terms of ocean acidification or any of the other problems that we see as a result of rising CO₂. So I guess the view, and I sit on a group at Oxford University that looks and analyzes some of these geo-engineering projects, the view is that it's sort of -- that's a bit like heroic surgery at the last minute. So if we ever got to that point where we were destabilizing a global civilization through, not

addressing this issue, it might be something the species would look at but it would be a very, very costly and high-risk venture. Much better to do what New Zealand did versus Australia, which is to tackle the issue early and slowly. That's how you get the least cost of bio.

Unknown Analyst

Could you give us a perspective on the development of the biofuels market as you see it? And particularly, the use of algae kind of generated technologies in this area, which Australia, I think, is doing a bit of.

Tim Flannery

Sure. Look, could I just preface my remark by saying I'm not an expert in this area at all. I've seen some of the algae experiments in Queensland, and they do seem to be going now from purely experimental to small-scale commercial for diesel, diesel fuel and so forth. You'd think they'd be tremendously prospective, they appear to a naïve scientist looking in, they look to be that way to me. I guess they're really heavily dependent, though, on a high oil price, and that's in the lap of the gods. I think that's been one of the things that's dogged, development of these technologies. But it'll be interesting if you -- there are some drivers for it. The airlines sector know they need to do something in terms of moving to less carbon, less fossil fuel-intensive fuel sources. The U.S. Military are certainly one of the drivers in terms of investing in those sort of approaches. So, yes, it looks interesting, but I guess I'm not an expert.

Unknown Analyst

And just on your optimism about the sort of voluntary emissions, because just my understanding of psychology and incentives, particularly when you've got such differences in the starting positions between countries is that every country in the world could think that it's doing more than its share, and you're still bound to fail because they all measure it in different ways and the sum of all the contributions will be -- if they agree on what's needed and they all think they're doing their share and it won't add up to what's needed.

Tim Flannery

Yes. Look, I think that's right, and that's exactly what we're seeing. We're seeing, in fact, pledges now are just 1/2 of what's required to deal with the problem. So you're quite right, no one's offering enough. But could I just say that, that we have seen some movement even there in recent years, with recent months, with the U.K. increasing its targets quite significantly, so bringing them more in line with what's needed for a 2-degree planet rather than what they had previously. And again, if I could just refer to your Minister's talk, which I think was really outstanding, he said legally binding in the international arena doesn't mean the same thing as it means nationally, and that is absolutely true. You have a look at Canada, which entered the Kyoto Protocol voluntarily, have overrun their allocation of permits very significantly under the protocol. They will owe \$1 billion or so at the end of this year in terms of overruns. Will that money ever be collected? Will Ban Ki-moon send in the Blue Berets to arrest President -- Prime Minister Harper? I don't think so. So we've got to work within the real practical politics of the global situation at the moment. And my view, really, is that one of the real drivers or incentivizers for people to honor those commitments is that they're self set, all right? So we set them ourselves. If we can't meet them, then it makes us look really silly. And no nation wants to be in that situation where that lack of -- loss of face and credibility is there. So I don't see this being a total solution. I think it's just -- I was trying to describe to you what's actually happened. I do take heart from it, though, and I do take heart particularly from some of the changes I described in terms of energy futures for places like India.

Unknown Analyst

[indiscernible] In terms of the 2 approaches, the ETS-type approach, the pricing carbon on the one hand versus direct subsidy and incentive-type model, do you feel that the balance is going to change and do you have a view about where emission prices may go over the longer term, because if I go back to the Stern report I think he sort of predicted to go to something like \$100 as necessary level to achieve the type of reductions. But I guess it all depends on how much money goes into the \$20-odd billion that the Australian government's spending, for instance, as an example. How do you see the balance of those 2 things working over time?

Tim Flannery

That's a really interesting question. And there are so many factors feeding into that, but I think it's really hard to see what the outcome is from the current vantage point. But could I just say that one of the trends we are seeing is that with the assistance of feed-in programs in places like Germany and Spain, the cost of PV, photovoltaics, is coming down very dramatically. In fact, in Australia, the cost of PV halved last year effectively. And you can see the trend, it won't continue with that strong rate of decline, but even if it continues for another decade at that rate, you're starting to see there that subsidies have done their job effectively, in terms of creating this market and with China bringing in its photovoltaic feed-in last year, that drive will continue. So perhaps in some industries that, that job is being done and we will start seeing a natural uptake although, again, I think it's a bit too early to see where the -- just based on price alone where the PV is going to continue to penetrate at the rate it has in the past. I don't think I can say any more than that.

Unknown Analyst

[indiscernible] The question of universality is one that bugs the public debate in countries such as New Zealand and universality across nations. And I wonder just how important that actually is because the cost of success for some developing nations is both more immediate and greater than the cost of failure may be to us. And it seems that the economies absolutely stopped growing if subject to the same regime that's imposed on international -- on developed economies. So how much do we need to get that particular distortion of an argument of equity out of the debate in countries such as our own?

Tim Flannery

Well, I think it's important to recognize that there's common but differentiated responsibilities, and to expect everyone to be doing the same thing is just silly. The economies are fundamentally different and opportunities are fundamentally different. So I think we need to, we do need to get that argument out and we need to start looking more at the fine fabric of what's happening. And part of my role as the Climate Commissioner in Australia is just to get out into the community and explain what's happening internationally. And people are often surprised that the breadth of opportunities that are out there and the different ways different countries are acting. So I think -- to be honest with you, I think in most of the world we're sort of over that debate now. You can start seeing the developed versus developing world being broke down a bit. I mean one of the horrors of my life was being in Copenhagen and having President al-Bashir of Sudan heading up the J77[ph], especially when Amnesty International called for him to be arrested the moment he set foot on Danish soil. It was a very bad beginning for trying to introduce something about that developing world theme. It shows you how deep it was. And it also didn't help that there was no facilities to allow people to smoke in the Bella Center at Copenhagen. Maybe the developing world delegates would have liked a cigarette, and it might have helped the negotiations along, I mean, if they could've had one. But going from a very, very trivial and silly through to the sort of the deeper questions that you raised, I think, yes, there's -- we are moving on from that gap, we're recognizing that things are different. And I -- yes, it is something that needs to be addressed, but I think it's being addressed.

Unknown Executive

[indiscernible]

Tim Flannery

Thank you.

Shaun Dennison

Hi, my name is Shaun Dennison, I'm a founding Director of Farrier Sweir Consulting. We're a small multidisciplinary consulting practice, specializing in economic regulation and reform of utilities. By way of background, I'm giving you an overview today of smart meter experience in Victoria. My experience with smart meters is that I've done a couple of risk analysis on behalf of 2 of the Victorian distribution businesses back in 2008 and 2009 prior to the implementation of their rollout program. I've also assisted

those 2 businesses in putting forward some charges -- their first set of charges for the smart meters for 2010 and '11. And more recently, I was engaged to head up a group that was responsible for developing national procedures and processes around the use of smart meter information, and I was acting between federal and Victorian policymakers in the industry.

I've been asked to cover an overview of what has been done in Victoria should retailers or customers specify the meter they need: Who is paying in the associated charges, how the meter's being used and what is their intended use, what is working well and not, and whether the mandatory program is still seen as the right thing and a good investment. I thought it'd be worthwhile by just giving a quick chronology, a bit of background to what has happened in the Australian market. One of the points I just wanted to bring out is there is quite a little bit of tension between Victorian and the federal policymakers. The Victorians have always seen themselves as being the innovators, the leaders in development of energy policy. Federal government policymakers have been frustrated by Victoria going out on a limb and doing its thing and enforcing the rest of the jurisdictions to follow suit. That is absolutely the case with smart meters, so I think one of the reasons why we've had some hiccups along the way is that the relationship between federal and the state policymakers is not particularly good at this point in time. In terms of the Victorian experience, the previous government, which is the Labour Government, completed a cost-benefit analysis in 2005, which said there is a net benefit should we proceed. Of course, there are lots of different views about that. As we all know, the assumptions underpinning a cost-benefit analysis are fairly critical, and there were questions both in terms of the benefits and the costs. Talk about some of that a bit later. The government decided to proceed what was known as AMI, the Advanced Metering Infrastructure project was established in February and it provided for a mandated rollout to the distribution businesses, which is an important point. The distribution businesses in Australia are responsible for installation of meters, and it was decided to continue that in the rollout of smart meters, and that is a bone of contention within the industry, particularly from retailers. That's a result of Victoria jumping the gun. The council of Australian governments decided they needed to do a cost-benefit analysis and look at the benefits across Australia of rolling out the smart meters. So and again, I just wanted to point out that at this point, it was very much based on smart meters. And there was always debate around that time that it should be more than that, it should be looking at smart meters as an enabler of the smart grid and it's only in more recent times, I think, that definitely on a federal level anyway, they've been looking more at the smart grid solution rather than that smart meters, and I think that's quite an important shift. So the smart -- so the cost-benefit analysis was completed, not surprisingly it showed there were net benefits for proceeding. Interestingly at that point in time, so it's 2 years later, Victoria's net benefit was around \$200 million from memory, and in fact I think there was a range where it was positive about that but negative a similar amount of money, depending on what assumptions were underpinning the cost-benefit analysis. In some of the other jurisdictions like Queensland and New South Wales, the numbers were a lot larger and that was still in public ownership and there was a view that some of the benefits that could be achieved, particularly through a meter reading, were a lot greater in those jurisdictions.

An important move forward, I think, was in 2009, when the Smart Grid, Smart City demonstration was awarded. It's a federal government initiative, \$100 million program that's being increased to \$200 million. Very sensible testing, what can and can't be done with smart meters and other technologies. Ideally should've been the place that Victoria started, and not that -- there were some other fairly significant programs happening in the world along these lines. South Korea power, I think, is a good example, I think USD \$300 million. And the interesting thing about it, it's got the ability to go not only from supply through to consumption, but also in terms of appliance development.

In November 2009, the Auditor General reviewed the decision of the previous government to proceed. The fate of the outcomes were not favorable at all, basically concluding that the whole program was flawed and the value with the financial benefits flying to power companies rather than the consumers, and basically said if I don't get on and get on with it, then there were going to be more costs to society. The Liberal Government, which came into power in 2010, decided it would do a review of the smart meter program. It was a fairly significant part of its election platform. It took a year for that review to be completed. I think it was very touch-and-go at times. Basically the cost-benefit analysis came out and said, yes -- well, it said it wouldn't have been a net benefit had you proceeded from scratch, but there is still a net benefit of proceeding, given the high level of sunk costs. Not a great report. The government

obviously had no choice but to continue. I mean, it was always going to be that outcome. I think by this point in time about \$1.5 billion of \$2.3 billion had been incurred. So as of a couple of weeks ago, there are just over 1 million of the smart meters installed, 2.7 million to be rolled out in total. That program is to be completed by the end of 2013. I understand about 40% of those are communicating of the ones installed to-date. One of the businesses is using WiMAX communication, so I believe that's not working. And the other 4 are using a less expensive proven mesh radio communication solution. It was quite difficult to get statistics about that, and the government's finding it hard to get the truth about what really is going on. Just wanted to quickly mention the regulatory framework, which is a fairly important part for the rollout of the smart meters. It's what we call a CROIC, Cost Recovery Order in Council. It's a published ministerial order. A key part of that, it was negotiated between the government at the time and the distribution businesses, and rightly so. The distribution businesses wanted to mitigate the risks of rolling out a new technology, so people critique it now and say that, really, it gave far too many benefits to the distribution businesses. I think given what they were up against, it was an entirely reasonable outcome. And at the end of the day, it really provides them with great confidence about recovery of costs, but also that recovery of cost overruns. It sets out the rollout targets, it's regulated by our Australian energy regulator under the CROIC framework and then from 2016, it will just go into a national framework, and under Chapter 6 of our national electricity rules.

Also sitting alongside that CROIC is what's known as the advancement in infrastructure Minimum Functionality Specification. It specifies the technical requirements, how the meters to be read, what's to be done with the data, et cetera. I've just listed on the side some of the more specific expectations of what's to occur. My understanding is that it was based on software application. At the time, it was simply 1.0. As for some of you might be aware, we're now looking at version 2 out in the marketplace that's being developed. And I suppose the point of that is it hasn't taken very long for things to change dramatically in the marketplace. Our current regulatory framework doesn't allow for that flexibility to be worked through.

As a result of the review by the Victorian Government, what it decided to do was to tighten up the CROIC provisions, particularly to reduce the flexibility around how the businesses would be able to recover overspends. The current arrangements basically said you put forward a budget that gets approved by the regulator, if your actual costs come in within 20% of that and it's at 20% of your cash out line of the year, so CapEx and OpEx, they have automatic right to roll that and recover it back from customers. The regulator and the current government are not happy with those arrangements and they're being pulled right back. They've decided to establish a new ministry or advisory council to give greater oversight of government and to provide consumer welfare groups with a stronger voice for rollout post this. I think that's a really positive step forward. What we saw in the past was that the previous government said to the industry, particularly the distribution businesses, we've given you a very favorable cost recovery mechanism, you should basically just go and do whatever has to be done including communicating to the customers about the benefits of this program, which is not an industry, not an industry role in my view, and just get on with it. And that was a great tension to the industry because it recognized that it was not its role to do. It was difficult for some of them to even get agreement on these things. And as a consequence, basically, consumer groups and customer education was lacking, and it's only exacerbated in the negativity around the rollout of smart leaders. The other interesting thing they've decided is to delay time of use flexible pricing. At that time, the elections were occurring in November 2010, the labor government put a moratorium on the introduction of flexible pricing at the time of these tariffs. Quite surprising, even one of the main benefits for rolling out smart meters was in fact to provide greater price signals to consumers. That has been pushed out now, at least to 2013, so we're sort of wondering how benefits are going to be delivered to consumers. Their key focus is on subsidizing in-home displays, saying that sometime this year, we're going to see some subsidized in-home displays that are available.

Just at a very quickly -- just a note, based on the 4 areas that the government's got priority focus on: So daily into formatted [ph] data, remoted-in home area networks, so better use of appliances and the national meter to identify which is to facilitate customer switching. So it's basically revamping the program at the moment, noting that really it's been on hold for the last 12 to 18 months, while of all those indecisions been going on.

This is just my take on where things are up to. So in 2005, there was a decision, a policy decision to proceed. The supporting policy, there was some of that happening through 2006 to 2009, as I said, the previous government took a very passive role to that. There's been more work on that happening in 2010 and '11, particularly at a national level, there's been more interest in smart meters and there's been greater interaction between Victoria and the federal policymakers. I still think there's a lot of work to be done and that in fact, we're not going to see an outcome of that till 2013 at the earliest.

Having said all that, meters have been installed from the beginning of 2010. Consumers have been paying from 2010. And just to note that consumers, regardless of whether your meter's been installed or not, have been paying since 2010. So in some cases, consumers will be getting a bill of some \$150 to \$200 per annum, and might not well get a meter until 2013. And the reason for that, the database argue that a lot of it costs in establishing with smart meter program were about setting up the initial communications, and that was an upfront cost and everyone should be paying for that.

The benefits achieved see nothing to date. The promise that we'll see something this year, maybe next year and I don't think it'll be till 2014 and beyond, more likely beyond 2016 that we'll really start to see benefits being delivered to consumers.

In terms of specifying the meter, the Victorian and national framework is very much to say, well, here's the national minimum functionality specification. It basically says the smart meter needs to do all these things. And as long as the meter complies with that, it's up to the business team to decide what type a meter it installs, it can provide more functionality and the regulatory models supports recovery of cost if it meets that minimum functionality. As I mentioned, the network service providers in Victoria have exclusivity until the end of 2013, that's one of the big policy debates that's happening in the federal arena, we're expecting to see that happen, we're hope it would start happening sometime this year and conclude next year. The retailers are quite keen in particular to seeing contestability of smart meters.

In terms of who is paying, in the Australian model, network charges get passed through to retailers which sort of get charged to retailers who then pass those through to customers. The aim in charge is no different, it follows that suit. Because of the very broad nature of the CROIC, pretty much any cost that the distributors thought would be incurred with the rollout of smart meters as specified, so there's rather an exhaustive list of what can be recovered and which has resulted in the initial estimate of \$800 million back in 2007, being looking more like \$2.3 billion by the time it's finished.

It's just an overview of what the charges are looking like, and so I haven't included the first usage from 2011 which were the actuals last year through to what's just been approved for 2013 -- sorry '12 to '15. Generally, the reason we aggregated other than Jemena, and my understanding with Jemena is that it's a small network, it's only about 330,000 customers, not dissimilar to City Power which happens to be the lowest cost per meter. But it's saying that because of communications has a bit to such a significant part of the total cost and has to be recovered from a lower group of customers, hence, the reason why you to have their per-unit cost being a lot higher. But when you look at City Power, that argument doesn't stack up pretty well -- that well, but it's up to each company to work out how they deliver against the minimum functionalities specification, maybe City Power's been more efficient in its communications.

I think, the other thing to note from that is that it's on an upward trajectory. And I think everyone's been quite surprised, particularly maybe from 2012 onwards, how that's continued and the level of the trajectory. To say that there, what the dollars are for a single-element meter. I've just pulled out some information about City Power Corp. and the only reason I stopped there was that they were the only 2 entities that made all of their information publicly available in the recent price review. The other 3 entities chose to claim confidentiality, which meant that you can't actually get a breakdown to a level that's meaningful. But I thought it was interesting that over the next 3 years, CapEx is still representing 2/3 of total cash out. I suppose it's not unexpected given the rollout goes through to 2013 and that fixed the other 1/3, and about 50% of the CapEx is for meter supply. But communications on IT was a significant component for both CapEx and OpEx.

I've been asked the question how they're currently being used, and what's the intended use? So our current use provide the communications as working meter reads, offering remote connections when moving house from the 1st of January, assisting in identification of blackouts and restoring power.

Intended uses here is like management through the hand devices, yet to be seen. Time of use pricing, sometime 2013, maybe beyond. We think that any government is going to find that a difficult decision to make, because there's already been a lot of negativity about smart meters in the Victorian environment, people have blamed it on consumption going up. In other words, they're saying it's the faulty readings and they're blaming it on the cost of their bills going up. And in any case, the government has announced that it's still going to commit to collect tariff pricing, which sort of undermines the whole basis of introducing time of use test, because I suspect most people would take that option if they really knew what they're talking about. And eventually there'll be other specification requirements, there've been a little bit silent on exactly when that's going to occur.

In terms of what's working well, I think the deployment of the meters has worked quite well. The program has been keeping up with the intended rollout. There is quite a public involvement of the current government, I think it's a major step forward and long overdue, now I shame that, that didn't happen sometime ago. The mandate was given to the distributors to provide timing certainty and a focal point to develop the technology. And also, the regulatory framework provide the necessary certainty to trigger the rollout. So look, they're all positive things. As a sort of outworking the rollout has identified some safety issues in all the buildings, and so that's being seen as a real positive as well.

In terms of things that are not working well, the initial approach of looking at the smart meter as a solution rather than an enabler. I think it still needs more focus. I think as I've said before, we're starting to get in the right direction, we're starting to think about smart grid. I think for Victoria, it's all a little bit too late, because the regulatory framework we set up on the basis of smart meters. Level of actual cost versus what was initially estimated has very poor outcome. There's a lot of negative publicity about increased bills, as I mentioned before, both the charge for the meter which is both the size of the charge, the fact you're getting charged whether or not you have a meter in place. And supposedly increased consumption, that's resulting from the meter reads, high faulty reads. And also, there'd been quite a lot of media about safety concerns. So we've seen examples in the Victorian made on quite a regular basis about meters blowing up. It doesn't seem to end.

I think there's many significant policy questions that need to be answered, particularly on the issue of contestability. And I think that, unfortunately, from a federal position, they expected the industry to about answer that question for them. That was a big failing in the process, because, of course, each had their own vested position. We need a uniform national approach that gets more difficult as the Victorian program continues on. There is a lot of big push by retailers and other parties to break up some of the monopoly distribution services. And so we're seeing that they really would like to get some policy direction about carving out some aspects of what's currently provided by the distributor associated with meter services and allowing that to be open to the market. I think also there's not much work that's being done on protecting disadvantaged customers.

Communications hasn't been working particularly well either. Also in terms of what the program means and what benefits, they're likely to get out of it. But at least there is a change in focus on that, so hopefully, we'll see over the next 12 months, greater consumer awareness of the issues and what it all means. I think also one of the -- from the Victorian experience anyone, probably a danger at the virtual level going down the same track is that the regulatory framework, I think, has been a bit too prescriptive and not being flexible enough to deal with the rapid technology. So for example, in Victoria, it's all about what the smart meter is expected to deliver. And I think it's fine to have expectations about what is delivered, but not prescribed, that it necessarily has to be a smart meter. There are other emerging technologies that are starting to come out that could possibly do those things. And in fact, I think that very issue is something that the Energy Association of Australia -- Network Association of Australia has started to push out a bit more and saying, "We really shouldn't just be pushing out smart meters for the sake, but we should be more aware of what else can deliver some of these benefits."

I asked the question whether the mandatory program is still seen as the right thing. We haven't seen anything that's been publicly made on this but, generally, the consensus through discussions is that you will not see another mandate rollout in Australia in the medium term. And definitely, even federal policymakers have been stating that I just haven't seen that in written form yet, other than the recent Australian Energy White Paper in 2011 which pointed that other jurisdictions will take account of what's

happening in Victoria and maybe be a lot more capable in deciding whether that would proceed down the same path.

And as I mentioned before, even the Victorian government has said that if it was going to do a rollout from scratch, it wouldn't be doing it based on a net benefit analysis. Is it a good investment? Well, I think for Victorian distribution companies, yes, it's been a great investment. There's been quite a lot of risk associated with it, but they've definitely managed to get full-cost recovery for a significant number of -- significant cost. It has come at a bit of a cost though, because there've obviously seen quite a lot of negative publicity about it. Bit on the nose with some of the policymakers. It is quite a unique situation for Victoria, because we had this ministerial order that basically set to aside. I think if anyone else, any other jurisdiction rolls out, they'll be subject to the Chapter 6, the normal Chapter 6 electricity provisions, which will mean that they won't have that same favorable ability to recover cost. From a retail's and customer's perspective, I don't believe at this point in time that anyone would say that it's been of any benefit. Paying for meter upfront, when it's installed or not, is hard for our consumer to swallow and we've not seen any benefits. I think, personally, I had a meter installed in 2010 and it's doing nothing different from my previous meter. And I think the reality of -- there is great concern about what is going to happen to vulnerable customers once we get ton of these pricing in place. And I think that there is great nervousness out there, particularly in an environment when vulnerable customers are feeling the pinch from many different areas.

My view is that it's hard to see any net benefit in the short term. I think it's going to be difficult until we've had a passage of that 5 or 10 years and look back and really say, "Yes, that was a great decision that you made and it's really resulted in a significant change in way the electricity industry operates, it's delivered real benefits to the consumers." I suppose the question will always be, but could've been done smarter.

So that's it for me. I think Vince Hawksworth was just going to give you an outline of how maybe the Victorian framework relates to New Zealand.

Unknown Analyst

[indiscernible]

Shaun Dennison

Sure. Well, I think at the end of the day it's got to come down, a few things, but definitely reduce cost to customers, that's got to be our #1 criteria. And I think, if you look at that, then basically, you can capture off things like lower consumption, which means lower investment in infrastructure. I think that's ultimately the way that you should be looking at it. I don't think it's particularly difficult, other than my view is that today, that really the way that the benefits are being looked at holistically has not been broad enough. And I don't think it's being particularly clear just who's going to deliver some of those benefits.

Unknown Analyst

[indiscernible]

Shaun Dennison

I think, I don't have a problem in terms of the idea of a mandate, I think, is if you want to retrieve math for all that, it's a good thing, I don't have any problem with that. In terms of the technology, I just think the way that the framework has been done is it sort of specified a solution to the technology rather than just saying, "Well, this is what's required and let people come up with the technology that's going to deliver that." If that make sense.

Unknown Analyst

[indiscernible]

Shaun Dennison

Well, I think so. Yes, definitely. I think, whatever you should, you shouldn't be closing your options. You should be, I mean, be very clear about what you want to have delivered, make sure you want to be very

clear about who's going to get access to the information, who's going to provide it on what terms and conditions. But then let the market work out how that really happens.

Unknown Analyst

[indiscernible] With the benefits that are being solely on the cost side rather than any demand shifting from...

Shaun Dennison

No, there's -- look, it's quite complex. There is -- so, yes, there's in terms of cost, the 2 biggest ones were re-en and de-en, because the remote re-energization and de-energization supposedly saved \$100 a ton. So, yes, that's a fairly significant cost saving. In terms, also -- in terms of shifting capital expenditures, so that you, hopefully, you shift your peak and don't have to build to your peak as much as you're at the moment, so that was the key. In terms of the consumers perspective, where they have greater control was through the home area network and through appliance usage. Again, it's more about changing your consumption patterns and consuming more in off peak periods or consuming more efficiently. But, yes, so that would be the greatest benefits. Ultimately, all of those things affect us through a lower cost ultimately to the consumer, one would hope.

Unknown Analyst

Can you give us any color on what the assumptions or the conclusions were on that demand shifting?

Shaun Dennison

That's a good question. I don't actually know, I'm just -- I can't think offhand. I think the last study I saw which was a bit marginal, it might've been in the order of about \$500 million across the Victorian businesses.

Question and Answer

Unknown Analyst

Yes. Genesis seems pretty excited about a rollout of new retail products on the back of smart meters. Do you have any view on whether there's a material appetite for innovative products?

Vince James Hawksworth

Chief Executive Officer of Trustpower

I think, once you've got the -- I mean, Genesis has obviously got the ability now to collect the data and review the data and they then included -- they're akin to trial some products, which I understand they're doing now. We still find in the terms of the customer research that we're doing is that there is not necessarily a huge appetite unless it's a way of lowering the total -- will it allow me to lower my bill? And largely, people are still in a non-engaged mode if they've got to do anything. So I do think that the real issue becomes beyond the meter. It shouldn't -- the meter is just collecting data. The real issue becomes beyond the meter. Do I end up having an appliance that is programmed so that it does things automatically? So my fridge freezer, for instance, or something like that is able to be automatically switched off to do a bit of peak lopping and I don't notice it. None of the food is going to be spoiled because it's programmed to only be off for this period of time. I think it's those sorts of things that generally consumers will be happier with. I don't think huge behavioral change happens easily, I suspect that if it's -- on Australia, an example, for my time there, if it's a 40-degree day in Adelaide and as long as you believe you can afford it, the air conditioning stays on. And I don't think sending a price signal about is going to affect everybody. Recently, done some trials where we've done some things like spa baths and stuff like that where -- and we've done it using some of our end stuff. We had them plugged in, and one particular staff made sure and a nameless had the meter taken out the first time he and his wife couldn't have a spa, one off, one evening because they've been -- so I think there's a whole lot of issues that come around there that are not about the tariff.

Shaun Dennison

And maybe I'll just add to that. I mean, definitely, in the Victorian context, Australian context, the retailers are pretty excited about that whole idea of controlled-like management. And that seems to be an area that they believe they will offer and differentiate between themselves and offer a whole lot of new services and also differentiate between themselves. So they're very much to see that they're going to have the ability to control certain products that are nominated by you, as a customer, such as air conditioning, that they will automatically turn on and off depending on what's happening with the price signals in the market. That, I haven't seen it yet.

Unknown Executive

I'd like an opportune moment to say it's now lunchtime. Thanks very much for that, that was actually -- I found it very interesting.

Vince James Hawksworth

Chief Executive Officer of Trustpower

I'm glad New Zealand is doing something right. Lunch is available, sort of, I think basically where you had morning tea. And we started again in 1 hour at 1:30 on the dot, if that's okay. Thanks very much.
[Break]

Question and Answer

Unknown Attendee

[indiscernible]

Bruce Emson

Former Member of the Management of Morrison & Co Infrastructure Management Limited

Yes, there's a couple of issues there. One is that it so happens that it's really -- some of these are always fortuitous, I guess, but it happens that the site selection has meant -- as the wind comes in across the plains before it hits the hills there, we tend to pick the wind up earlier than the subsequent wind farms further up, which like the AGL highlights and so on and so forth, so it picks up. It also -- the turbines that we selected there for the site has a lower starting wind speed, so we had a bigger yield. So this whole issue, the wind turbines might look the same from the outside but they're not all the same on the inside. Their characteristics are not all the same. There's a good turbine selection against the site on the way in. And on the way out, there are 2 things: one is where Snowtown is positioned in the transmissions system means other people get congested off if there's a congestion issue before Snowtown, so it stays in; and the second thing is this particular machine can operate at a temperature that is higher than some of its competitors could at the time it was built. So what happens on a 40-degree day in Adelaide, where it's stinking hot up in those hills. We hang on longer before -- so we have to be backed out because the electronics can't stand this anymore. And that's proven to be quite valuable. It's quite valuable. I mean, prices are at about \$10,000 or higher now, 12 or is it \$12,000 something? If they're up there, that's quite valuable to a counterparty. So in our discussions with counterparties, the one that we have with Snowtown I has recognized these attributes as being valuable to them because they can think about their portfolio differently.

Unknown Attendee

And do those attributes that you applied to Snowtown II?

Vince James Hawksworth

Chief Executive Officer of Trustpower

Yes, we've certainly understood this as we've been going through the turbine selection process. And I want to make sure that we emulate the success of Snowtown I in that respect. But one shouldn't conclude from that the same turbine manufacturer because, look, some of this is about control systems and design around those, and those things can be changed and adapted.

Unknown Attendee

Last question, actually, sorry, because I heard one at a time, so last one. Vince, just for the anchor of 90% PPA again or take it to more clusters?

Vince James Hawksworth

Chief Executive Officer of Trustpower

Notwithstanding, it wouldn't take any more price risk in the current Australian environment. I think -- I think this is a good -- we think the right model for us at this stage is to eliminate as much price risk as possible, and that's what we'll do. Yes.

Unknown Attendee

So ideally, you might get 100% or all of that?

Vince James Hawksworth

Chief Executive Officer of Trustpower

Might we'll do.

Question and Answer

Unknown Analyst

Thanks, Zane. [indiscernible] Would you mind [indiscernible] this sort of the kind of [indiscernible] process, the progress sort of around [indiscernible]?

Zane Fulljames

Former Chief Executive Officer

Sure. So we've done a competitive analysis of local players would assist those global players. We've actually modeled each of those competitors in terms of where we think their cost base sits. We've run comparison models in our own business in terms of those areas where we think there are differentials. We've developed a very, very strong relationship with our partners. We've opened the doors up to our business. And for those that want to come and have a look and have some queries and concerns, who believe that what we're telling them about our performance isn't quite so, well come and have a look. So it's an open -- there's a transparency that exists in my business, that differentiates ourselves quite significantly from our competitors. We are open to optionality, and perhaps some of the other players in the market are not. Perhaps they wish to hold on to those things that they've held on to for the last couple of years, where they go in some cases. So we're well positioned in the competitive process. I hope that answered your question in a roundabout way.

Unknown Analyst

[indiscernible]

Zane Fulljames

Former Chief Executive Officer

Okay, our modeling, it goes out -- Scottie's in the room, 20 odd years or so. It's been a defensive one initially, and we're pretty confident about where we sit in that regard. And now we're just starting to think about something which is less defensive. But among here [ph], we are in the middle of the competitive process that you say. We're ahead of the curve. As you would expect to have. Any other questions? Yes?

Unknown Analyst

Zane, can your regulatory framework of the way the situation will edge various parts of the business become profitable and funding, it's both shifted elsewhere because of moving capital problem?

Zane Fulljames

Former Chief Executive Officer

Sorry, does it prevent it or was it...

Unknown Analyst

Yes. What I mean, my perception was these things has been as profitability builds up on the relationship with people, the funding component, a lot of money reaches its fold, and want to put it somewhere else but he couldn't because the money is somewhere else to support a new growth. Is that going to be an ongoing issue [indiscernible]?

Zane Fulljames

Former Chief Executive Officer

Yes, look, I understand your question. Actually, I think that's initiating. So from our perspective, as NZ Bus, we don't want to be subsidy junkies. Those routes that we can run on a commercial basis, we're quite happy to run them on a commercial basis. Those routes that need support, the social services, the funding needs to be applied to ensure that they stay in play. And if we actually have a look at the procurement prices and the split between those routes and negotiating those routes are tendered, those routes that are

negotiated and typically, those that have a high level of commerciality and those routes that are tendered have low levels of commerciality. So we have a fundamental position that we don't want to be subsidy junkies. If we can run it commercially, if we can run it profitably, and it doesn't require a subsidy, then we have a stronger ability to influence outcomes. And that funding needs to be shifted, and they shifted to those social services. I think that's a pretty good outcome. Did I answer your question? Rob?

Unknown Analyst

Zane, just in terms of the other areas, advertising and the pay system, obviously, could you give us an update on what happened around the Snapper and what's the progress being made?

Zane Fulljames

Former Chief Executive Officer

Okay. So what I'll tell you is this, and I think Mickey [ph] is in the room. He's right behind you. What I've got in place in both Auckland and Wellington is a stable ticketing system. For those that are underway, one of the reasons that we had to shift from the wayfarer system to an alternate, being Snapper, was that the wayfarer system was just being kept alive, so almost had the inability to collect revenue, so I had to move to a system. I had a burning platform. We had Snapper in Wellington. So it was logical transference of that product because we knew it well in our business into the Auckland environment. And I think you shouldn't really believe everything you read in the paper about what's unfolding in Auckland either, that perhaps Mickey [ph] would like to comment?

Unknown Executive

[ph]

Thanks, Zane. So a couple of things that are useful to add to that. So there is a program of work around integrating the Ape [ph] system and the Snapper system together. There are set of milestones that have to be met along the way. The first milestone was around Rugby World Cup and producing an integrated past product that milestone was met. There's a second milestone, which is due around about now, which is for our customer-facing pilot. And then there is a final milestone towards the end of this year, which is full integration, which I think Zane sort of indicated on his slides there, and we're on track to hit those milestones.

Zane Fulljames

Former Chief Executive Officer

Yes, we're absolutely on track, and that we've done nothing other than deliver everything we've committed to, to our partner on transport. So I'm pretty upbeat about the way things are hitting there. Blade [ph] didn't ask me a question. I'm just surprised.

Unknown Analyst

Zane, just a question on returns. You talked about seeking above-average returns, and you're investing heavily at the moment. How does returns compare to the previous environment? And what kind of returns are you targeting?

Zane Fulljames

Former Chief Executive Officer

So there are improvement on the previous environment. And in terms of what I'm targeting, I'd probably like not to answer that question at the moment, given that I'm knee deep in the competitive process and I could accept that.

Unknown Executive

Okay, we're slightly behind time, so it's probably a good time to call back the [indiscernible] network. Thank you very much, Zane.

Zane Fulljames

Former Chief Executive Officer
Thank you.

Question and Answer

Unknown Analyst

Steven my impression from your presentation in regard to the pricing at Wellington, if there is no change, if there's no change out of the merits you happy to go head-to-head with a Com Com over pricing? Is that the view?

Steven John Fitzgerald

Former Chair of Perth Energy, Director of RetireAustralia, Trustpower & Perth Airport

I think head-to-head is exactly the wrong terminology. I think that is not what we'd be doing. I think there are differences between us disclosing a set of information and them forming a view, and we'll get to see what they're saying about our actual returns versus where they think the benchmark should be done prior to that. And then we'll have a discussion with them about why -- all the things I said, about why we think pricing in the way we're pricing is the best way to do it and the sensible way to do it, and we'll -- we hope to engage in a dialogue with the Commerce Commission and the government through that process.

Unknown Analyst

I guess, I just struggle with the idea you're engaging them in a dialogue after they've just -- they've reviewed pricing twice in the last 10 years, it's just been through an extensive pricing process and come up with an approach to pricing. The idea of them reengaging with Wellington airport post all of that seems -- I don't know, it doesn't seem conducive to a positive outcome.

Steven John Fitzgerald

Former Chair of Perth Energy, Director of RetireAustralia, Trustpower & Perth Airport

Yes. Well, I think -- look, you may think I'm splitting hairs, but they haven't been talking about pricing. They've been talking about information disclosure. And they've been talking about transparency of information for people to form views about, whether a whole lot of things happened. The last of which is whether there's excess returns, but it's about is investment being made, are there the right incentives in place, et cetera. So that I think it is a equally big leap for a government to instantly say you're few basis points over what the commission says the cost of capital. Therefore, we will bring capital management of the airport back into public sector control. I mean, that's a leap that people are making very, very quickly, and I think to say that they've almost predetermined that outcome I think is wrong.

Unknown Executive

Okay. Thanks very much. Thanks, Steve.

Question and Answer

Unknown Analyst

What agreements do you have to get to the rest of the industry [indiscernible]

Michael John Bennetts

Chief Executive Officer of Z Energy

So those agreements are all time based. They come up periodically. Some agreements are -- cover the whole country for a particular activity and comes up on its anniversary. Other agreements are peculiar to our specific locations. So as they come up, we are negotiating them. And increasingly, we may be less -- we may be more angry in those negotiations, if I could turn it around, I'm told of what we're less, I will tell them what we're more of. We may be more angry in those negotiations around the sort of outcomes that we want. And that's a change inside the company. Because again, it wasn't that -- it was only 2 years ago that the company we bought, which was Shell, staffed by incredibly talented people, but within the mindset that you get from an oil major so we've had to do a lot of work to actually free some of those people up and supplement it with stuff from the outside. Yes, the status quo not reasonable enough. We have scale and we have to be rewarded for that.

Unknown Analyst

Michael, you think that you're positioning wrong [ph] -- have you seen that your position in the last year regarding your holding in [indiscernible] refining. You and I have talked about 3 options.

Michael John Bennetts

Chief Executive Officer of Z Energy

Yes, we still have 3 options. And for each of those options, which is to buy more, hold what we've got or to sell down or completely exit. We've got what we called conditions or things we would need to believe in for that to be the best decision. We haven't seen enough yet for that to take place but clearly the growth project is quite an important signal, but it's only one signal. So it's not the sort of thing that would lead us to conclusively decide to go 1 of the 4 ways, it's one element but there's a couple of element that we'd like to see first.

Unknown Analyst

Also you talked about seeking greater margin. You're growing your market share very strongly in the diesel side, can we see some of that market share being relinquished and greater margin in the future on the diesel side?

Michael John Bennetts

Chief Executive Officer of Z Energy

Yes. As I said, we're not focused on market share. We always get what get, so we're going to actively manage our portfolio, we are going to focus on returns if we can do that in a way that makes all of our customers happy, and they'd prefer to buy from us. Our market share will continue to grow. If we do that in a way that actually doesn't work for them or our competitors provided a better alternative in their eyes, we will lose market share, but it is simply an outcome of a set of activities, it is not a goal at all.

Unknown Analyst

Last year, you talked about joining one of the other oil companies in terms of getting style and procurement. Is that still in the cards or have you made any progress there?

Michael John Bennetts

Chief Executive Officer of Z Energy

It's still on the cards. The party we wanted to talk to have said they didn't want to talk at that point in time. But it's still on our cards.

Unknown Analyst

And just looking at more recent profitability, you talked about guidance being at the kind of mid to lower end of the range, can you just give us an idea of how trading has been more recently? Is that kind of volume that's the middle of the softer -- or is it -- or margin?

Michael John Bennetts

Chief Executive Officer of Z Energy

Yes. Volume, once we get past -- sort of the \$2 price point in retail is a really important number, and we haven't been below that for almost 15 months now. But people sort of get used to it, it's like the bowling frog analogy. But now the prices are back up around the \$2.20 a liter, we do see quite a lot of demand destruction as people choose their discretionary driving to cut it back. So volumes and retail are softer than they have been. Where -- the industry is about -- is down about 5% year-on-year. And the last couple of months we've been doing that as well, prior to that, we're actually outperforming the industry by quite a long shot in diesel and quite recently in petrol. Margins have been softer as you might have seen there's quite a lot of price competition at the moment. And for the first time in our history, small history, but for the first time I think for probably like 5 years under Shell's ownership, we led a price increase, because we always want to position ourselves in providing good value for money so we're reluctant to go up, quick to come down, we did 2 in 2 weeks, so we are already seeing a different behavior from ourselves, and that's part of that -- we're willing to be unpopular, trying to get to the right outcome for New Zealand. It's slightly volumes, mostly margin is part of the story.

So I'm probably end off now and pass you across to Marko.

Marko Bogoevski

CEO & Director

I love it when Mike, gets it riled up a bit. I think just in a reasonable way, it's a demonstration I was alluding to in the morning we -- that business is actually adopting a different strategic posture by virtue of it, I think, it's capability not just for people like Mike but his leadership team. But also it's the way he thinks about the way market should evolve and the sort of credibility he's getting from customers and I believe our competitors. So that's pretty good illustration right there of exactly what we're talking about this morning. I mean, the rest of the afternoon, I mean -- I think -- I sat back there with some pride watching Zane strutting around, wish he would keep still a bit because I think the camera guys are having trouble. And just -- it's an interesting debate around the electricity sector and the sort of the bits that are associated with it that we haven't had a lot of time to talk about in the past. Steve Fitzgerald, look -- seeing him talk about Wellington in a passionate way. I mean that's fantastic. I mean -- so I could reiterate all the messages we tried to talk about this morning about how ruthless we are in capital management and sort of strict disciplines we used to allocate our scarce capital. But reality none of it actually accounts so much when you yourself conform a judgment about the quality of people who've been in front of you this morning and this afternoon. And I think that we've -- I know you're all terribly analytical, but in my experience most of those key investment decisions get made on -- must have a personal one-on-one level once you're both a certain amount of trust and to me it's what sort of days are about.

So with that in mind, we've broken your trust and kept you behind another 17 minutes later, and we say we would not. I do appreciate it, and I hope you'd be able to join us again next year. Thank you.