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THE JOINT SELECT COMMITTEE ON ENERGY MATTERS MET IN COMMITTEE ROOM 1, PARLIAMENT HOUSE, HOBART ON TUESDAY 24 FEBRUARY 2026.

The committee met at 9.29 a.m.

CHAIR (Ms Forrest) - Thank you, everyone, for appearing before the Energy Matters committee. The purpose of this series of hearings we're having now is to try to wrap up the evidence we've been receiving. Also, we were intending to have a full briefing on the whole-of-state business case prior to the last election being called and that never happened. We're really wanting to focus on the whole-of-state business case. Implications of that obviously saw the investment decision made, so there's been quite a bit of activity within Marinus Link since then. It would be really good for you to be able to provide an update on that and anything relevant to the whole-of-state business case that flowed into that.

You're probably all aware that everything you say is covered by parliamentary privilege while before the committee. It is being recorded and broadcast as well and will be transcribed and then form part of our public record. If there was anything of a confidential nature you wish to share with the committee, you can make that request and the committee will consider it. Otherwise, it is all public. If there's anything you wanted to provide to the committee, you can table that as you go through. Do you have any questions before we start?

Witnesses - No, thank you, Chair.

CHAIR - Okay. If you'd like to take the statutory declaration and then introduce yourselves and then I invite you to make some opening comments to basically update us on where things are at now would be great.

Ms McGREGOR - Thank you, Chair. I will introduce my colleagues. I've got Prajit Parameswar, who's our Chief Financial and Commercial Officer, and to my right we have Clare Gleghorn, who's our Director of Corporate Affairs.

Ms STEPHANIE McGREGOR, CHIEF EXECUTIVE OFFICER, **Mr PRAJIT PARAMESWAR**, CHIEF FINANCIAL AND COMMERCIAL OFFICER, and **Ms CLARE GLEGHORN**, DIRECTOR CORPORATE AFFAIRS, MARINUS LINK PTY LTD, WERE CALLED, MADE THE STATUTORY DECLARATION AND WERE EXAMINED.

Ms McGREGOR - Chair, members of the committee, thank you for the opportunity to appear again before you. I am Stephanie McGregor, Chief Executive Officer for Marinus Link Pty Ltd, which I will refer to today as MLPL. I joined the company in March last year and formally assumed the role of CEO in June last year. With the committee's indulgence, I'd like to update you on some of the material progress that has been made on Marinus since our last appearance.

Marinus Link is now moving into its construction phase with preparatory work underway across the project footprint. A series of major milestones last year brought us to this point, including final investment decisions from each of our shareholders, financial close on our funding facility with the Clean Energy Finance Corporation, an issuance of notices to proceed to our major key suppliers and the selection of our major construction contractor, also referred to as the balance of works contractor.

For the committee's purpose, on funding, stage 1 of Marinus Link has a total cost of $3.85 billion. Tasmania's equity contribution is capped at $103.5 million, which has already been drawn down. This means that the Tasmanian government is funding less than 3 per cent of the project.

We've also secured primary environmental approvals from the Commonwealth and Victorian governments. In Tasmania, the EPA [Environment Protection Authority] approved the Heybridge Shore Crossing and Burnie City Council granted a permit for the Heybridge Converter Station, with one third-party appeal now before the Tasmanian Civil and Administrative Tribunal.

I acknowledge that the committee's core focus will be on what the project's completion in 2030 will mean for Tasmania's future. Today, we'd be grateful to table four documents containing the latest expert analysis, modelling and scrutiny on Marinus Link. These documents are already publicly available and draw on the Australian Energy Market Operator's most up-to-date assumptions informed by extensive stakeholder input.

CHAIR - We will receive those as the tabled documents, thank you.

Ms McGREGOR - Fantastic. This month the economic case culminated in the Australian Energy Regulator's final decision, which found Marinus Link has been managed efficiently and that electricity consumers will pay no more than necessary to develop the project.

Years of analysis has consistently shown that Tasmania's economic future is stronger with Marinus Link. Greater interconnection gives Tasmania a larger, more resilient and flexible energy market. It supports investment in renewables and new industries, gives major load customers more options and enables Hydro Tasmania to optimise its system for the benefit of Tasmanians.

By increasing competition and improving access to the national market, Marinus Link puts downward pressure on wholesale electricity prices and lowers overall systems cost. These savings will flow to households and businesses in Tasmania from 2030 onwards.

For the regions, the benefits actually begin much sooner. North-west Tasmania is expected to see significant economic activity through employment, local supply chain opportunities and increased spending. Last year, we held two industry briefings in Burnie, attended by nearly 600 Tasmanian businesses. A number of these businesses are now working on the project, alongside our 62 Tasmanian MLPL staff, with recruitment now ramping up for our major contractors since we signed up with them at the end of last year.

Marinus Link will bring rewarding careers to the regions, and we are working with skills and training providers to maximise those opportunities for Tasmanians. Our community engagement teams are currently active in Burnie, ensuring residents and stakeholders are informed early and supported as activity increases.

In closing, we welcome the opportunity to answer the committee's questions today and we would be pleased to provide further briefings whenever helpful. Thank you.

CHAIR - Thanks, Caroline. I will take you back to the total cost was $3.85 billion. The Tasmanian contribution is $103.5 million, which has all been drawn down. Correct me if I'm wrong, but as I understand it, any further call to capital will be reductions in equity in our share. Has that occurred?

Ms McGREGOR - As you've rightly identified, Chair, the Tasmanian equity has been fully drawn down.

CHAIR - Oh, Stephanie. My mistake, sorry.

Ms McGREGOR - That's alright, it's fine.

CHAIR - I'm a bit tired.

Ms McGREGOR - I will answer to that, that's okay. It's the role that matters.

Coming back to the question, Chair. The $103.5 million capped equity contribution from the Tasmanian government has been fully drawn down. As we make further calls in future on equity from our shareholders, that will dilute the Tasmanian shareholders' equity. I think that was referenced by minister Duigan in the November Budget Estimates hearing last year. Prajit, was there anything you wanted to add to that?

Mr PARAMESWAR - Thank you, Stephanie. Tasmania's equity standing in Marinus Link stands at 14.5 per cent at this stage, and as Stephanie rightly pointed out, as further equity calls are made for other shareholders, the state's equity position will decrease.

CHAIR - Just to be clear then, the $103.5 million, I thought that left us at the 17 per cent, so there's been a further call since then?

Mr PARAMESWAR - That is correct.

CHAIR - That is correct. So, there's been a further call that has down to 14.5 per cent, so by the time we get to the full capital expenditure and the full drawdown, what is our percentage share likely to end up at?

Ms McGREGOR - I think, as was indicated by Minister Duigan at the hearings last year, the equity will be diluted. Prajit, did you want to speak to specifics around that?

Mr PARAMESWAR - There are quite a few permutations and combinations that will go over the next many months, but we think the number is anywhere between 10 to 11 per cent after the equity calls have been made and before debt drawdown.

CHAIR - Okay. So how much is funded by equity and how much is funded by debt?

Ms McGREGOR - For the project overall, equity provides 20 per cent of the funding for the project and the debt facility provided by the Clean Energy Finance Corporation provides 80 per cent of the balance of the funding.

Ms FINLAY - Can I just ask, on that, as the events occur and the dilution happens, there was a statement made by the minister at an Estimates or at a previous hearing around the status

of the position on the board and the decision-making and the voting powers. Is there any dilution? Are there any triggers established as that reduces to the change of the status of the position on the board?

Mr PARAMESWAR - My understanding is that there will be a Tasmanian board member.

Ms FINLAY - Who has full rights, the same rights, and no matter how much dilution occurs, there's no dilution in the rights of the member of the board?

Ms McGREGOR - That's correct.

Ms FINLAY - Great to have that confirmed from both sides. Thank you.

CHAIR - They are just one person on the board of how many?

Ms McGREGOR - The board is seven. We have an independent chair and six other members, and the number of board representatives was agreed between the shareholders. The specifics, I think, we have three Commonwealth shareholders, two Victorian shareholders and one Tasmanian shareholder.

CHAIR - And the independent chair?

Ms McGREGOR - And the independent chair.

CHAIR - Can I go to the question you mentioned in your opening comments, Stephanie, that the wholesale energy costs will go down. What do you expect to see over time in terms of price volatility? It's going to be a challenging time between now and when it's built, but once it's built, what do you expect to see, particularly in terms of Victorian and Tasmanian prices?

Ms McGREGOR - Obviously, I can't speak with any crystal ball to the absolutes around the volatility of pricing in the market, but the extensive modelling that has been done during the economic development of the case for the project has looked at trends over time. We've obviously looked at the inputs from the regulator as well and the requirements of their process. The outcome of that is that Marinus Link is still seen as a greater benefit to consumers in Tasmania and Victoria, in the face of future trends, than not proceeding with the project. I will pass to Prajit to talk about some of the specifics of the modelling that we've done on the economic case.

Mr PARAMESWAR - Thank you, Stephanie. Thank you, Chair. I think we've covered these responses previously, but I just wanted to add that in December 2025 AEMO released a draft ISP. In the draft ISP, AEMO reaffirms that renewable energy, firmed with storage, backed up by gas and connected by upgraded networks presents the least-cost way to supply secure and reliable electricity to consumers while meeting government policies. AEMO has been consistent with that narrative over the last many years and so have we. In terms of the net market benefits, when the modelling occurs, there is a scenario with Marinus and there's a scenario without Marinus; it is very clear - and again, this is all available publicly, it's very clear that the scenario with Marinus is $3 billion better off than without Marinus. So the net benefits of Marinus is $3 billion.

CHAIR - On?

Mr BAYLEY - To the NEM?

Mr PARAMESWAR - To the NEM, that is correct.

CHAIR - That's not all to Tasmania; that's to the whole NEM.

Mr PARAMESWAR - In terms of your question itself, Chair, I think we've covered it previously, but overall - and I don't have the exact numbers in front of me, but I'm going to refer to it if that's okay - but overall, due to project Marinus, due to the renewable energy that it brings and the development that it brings, there will be a reduction in spot prices in the NEM, especially in Victoria and Tasmania - approximately, again, I don't have the numbers in front of me, but I will refer to it in a minute - approximately the numbers are close to $12 a megawatt-hour, which then translates into a reduction of approximately $100 - a typical residential consumer in Tasmania.

CHAIR - My question was more specific, I think. I did want to know from the modelling that's been done and what your expectations are - and I know that you don't manage this whole system - but we hear from Hydro particularly that they're going to better trade in high-price markets; what I hear is that the wholesale prices are going to be generally lower. My question was: is it likely that the Victorian and Tasmanian prices will be closer more often, without that price differential, without that volatility, and that the high-price peaks and the low lows will be less frequent and less sustained? Is that what's expected when Marinus is online?

Mr PARAMESWAR - Over time, Chair, there will be an equilibrium. The equilibrium will be based on the fact that you've got renewable energy, you've got backing from storage and gas. That will take time.

CHAIR - When you say take time, I mean, there must be modelling that demonstrates how long we expect to see some flattening of that - the volatility picture, if you like.

Mr PARAMESWAR - Yes. So I think - and we've got our FTI modelling - well, independent FTI modelling is available on our website. It does say that over time, approximately in the 2040s, there will be an equilibrium and that is mainly because your thermal generation or your coal generation will retire, which then means that your bidding off your wind and your solar will be based on their long-run marginal cost. As I said previously, storage will firm it, gas will firm it. In terms of the swing-to-capacity type point, I think, Chair, that you made, over time and - I haven't been watching the market over the last many years because that's what I used to do previously - but the arbitrage itself between the top 30 per cent of the prices and the bottom 30 per cent of the prices have gone up. That is something that I would personally think would -

CHAIR - Recently, you're saying?

Mr PARAMESWAR - I think they've gone up over the last three years and, effectively, until that equilibrium is met, I would say they will continue to be volatile, mainly because we are going through a transition; mainly because you will have coal generation retiring, mainly because it's not going to be a just-in-time approach, where generation comes in at the right time

when the coal retires. So, you will see some volatility and that will occur as coal generation retires.

CHAIR - So, you think we're not going to see that complete flattening, possibly up until about 2040; is that what you're saying?

Mr PARAMESWAR - That's not what I'm saying, Chair, but that's what the modelling is saying from FTI Consulting.

Mr BAYLEY - Can I just ask on that - the transition itself is pretty fluid, like we've had evidence about solar rooftop, solar farms, battery technology, battery cost and direct evidence basically to say that Tasmania won't be able to compete with batteries and largely solar and other renewables on the mainland through Marinus into the future because that technology is changing so rapidly that the transition and the assumptions that you're talking about, I guess, will change themselves. What do you say to that? What's your response to the flexibility and the uncertainty of the market going forward?

Mr PARAMESWAR - Overall, there is going to be value for deep storage and, again, we've said this consistently. The NEM at this stage does not have deep storage. The NEM at this stage has gas, which it uses for backing firmed energy. We all know that there are constraints in the gas market at Longford and Gippsland area. We all know that there could be a potential gas cliff coming. The market in the future, as AEMO has pointed out, needs deep storage. Tasmania has that deep storage.

I've provided this example before, so I apologise that I'm repeating this example, but it was in 2019 when Victoria and South Australia lost load, and it was during that circumstance where there was more than 500 megawatts of capacity and energy that was sitting behind the Basslink interconnector waiting to be unlocked, but could not be unlocked because Basslink was fully constrained. That is the opportunity that Marinus Link brings. If you had batteries - currently we've got batteries that have a storage facility for two hours; perhaps you might see a battery that comes on for four hours. On that day, we had prices and we had demand which went on for 10 to 12 hours. That is when you need deep storage and that is the advantage that Tasmania brings.

Mr BAYLEY - Six years ago; has that scenario happened regularly since?

Mr PARAMESWAR - I haven't been watching the market for the last three years, so I won't be able to provide a response to that comment.

CHAIR - But climate change may suggest that some of these challenges are going to happen more frequently; is that a fair comment?

Mr BAYLEY - Well, there are questions over our inflows and climate impacts on water inflows and therefore -

CHAIR - Storm damage and other -

Mr BAYLEY - the quality of the deep storage here in Tasmania anyway, which I think is unresolved. Hydro certainly hasn't produced that modelling for the committee to see.

Whether they seem to have some advice, but not necessarily reports as were done prior to Basslink - so, yes, climate change - there is a whole lot of uncertainty into the system.

Ms FINLAY - The modelling in terms of the benefits to Tasmanians post-2030, so when commissioning happens - given the talk about volatility, the transition, different things coming on and off and not necessarily being certain in terms of where new generational load might happen, what modelling have you seen that indicates what will happen to prices between now and 2030, I suspect much greater volatility and uncertainty with that, that will bring that benefit back to Tasmanians?

Ms McGREGOR - Look, again, I hesitate to attempt to crystal ball, but I'd refer again to my colleague, Prajit to my colleague Prajit on the modelling that has been done - obviously not just in support of our project, but across the NEM as AEMO and the AER navigate all the markets going through transition at the moment.

Mr PARAMESWAR - I would just add a very simple point there: the transition will mean volatility. We know at this stage if things are developed on time, we will have 2 gigawatts to 2.5 gigawatts of deep storage in the market by then in New South Wales. All going well, we will have interconnection from New South Wales to Victoria and vice versa. There will be more energy diversity, which then means there will be flow of electricity. When the sun is shining in the north, you will have that energy coming down south and when the wind is blowing down south, you will have that energy that will go up north. We've seen this even now when the sun is not shining and the wind is not blowing, there will be volatility.

The modelling that I was referring to, which is available on our website from FTI, there are load-weighted average prices that can be seen. We have not gone into that level of depth when it comes to the modelling that we ask FTI to do because we are not in the generation business where we look at what is the commercial business case for a generator. What I can say, based on experience, is the volatility is going to exist for a few more years.

Ms FINLAY - Likely sharper in this period from now to 2030. The volatility is likely to be more intense between now and 2030 as we move towards 2040?

Mr PARAMESWAR - From experience, I can say yes.

Ms FINLAY - Have you a question on this?

Mr BAYLEY - It's on prices. You obviously refer a lot to the FTI Consulting report that was done for Marinus and the benefits there. The whole-of-state business case had an alternative modelling by Deloitte from late 2024 and just about every scenario it countenances has Tasmanian power prices going up and the impacts on Tasmania and all the benefits to Tasmania far less than Victoria.

Can you explain the differences in the modelling, one, for the whole-of-state business case that clearly, in my mind, demonstrates the problem, challenges and the price increases? For example, Marinus Link - one cable versus no Marinus Link, a 59 per cent increase in wholesale prices here in Tasmania, a decrease in Victoria, but that's consistent. That sort of theme is consistent across this modelling.

What are the main differences between the FTI report and the Deloitte's report?

CHAIR - Assumptions.

Mr BAYLEY - The assumptions, yes. Why is there a divergence in conclusion in those two reports?

Ms McGREGOR - On the whole-of-state business case, we as Marinus Link provided inputs to the Tasmanian Treasury specifically relating to Marinus Link. We were only privy to the elements that relate to Marinus Link. We were not involved in the commissioning of the rest of the work that was done to support the whole-of-state business case. Some of that detail is more appropriately addressed towards Tasmanian Treasury and the relevant shareholding minister. We were not privy to the whole-of-state business case and haven't seen the whole document, only the publicly redacted elements. Prajit, if there's anything you wanted to add in response to that question.

Mr PARAMESWAR - Thank you, Stephanie. As Stephanie pointed out, we provided inputs. Our update and the report that you're seeing in front of you was updated late last year with latest costs and the very latest assumptions and future scenarios direct from AEMO, which is widely consulted on. AEMO is the independent market operator in Australia of the NEM.

Mr BAYLEY - You must have read Deloitte's report, though, and you acknowledge it has a different conclusion in it to the FTI one.

Mr PARAMESWAR - Well, what I would say is from our perspective, we at this stage, the inputs and assumptions that Deloitte have used are different to what FTI have used from AEMO's analysis. In terms of every individual input and assumption, we have not had the opportunity to have a look at what those differences are.

Mr BAYLEY - Did you seek to? Did you seek to analyse, understand the assumptions and the inputs so you could compare them with your own consultant's report?

Ms McGREGOR - During the preparation of the whole-of-state business case by Treasury, we were invited for a very brief moment - about an hour - to have a look at content relevant specifically to our project. That was the extent of our opportunity to look at any material relating to the whole-of-state business case.

CHAIR - They didn't get to read the Deloitte report.

Ms McGREGOR - Not in the preparation of the whole-of-state business case, no, and we were only asked to provide inputs specific to elements of our economic case. We are not really in a position to be able to comment on the whole-of-state business case and the inputs comprehensively. That's really a question better directed to the Treasurer and the relevant department.

Ms FINLAY - Can I ask a question on the status of your project now and the risk register or registers that you might be running across the project as a whole? Can you outline for the committee the top matters on the risk for the project going forward?

Ms McGREGOR - I can speak to risk, generally, to the committee. Obviously, as we're moving from the development phase of the project into construction phase, we are doing a lot

of work as we're onboarding our final major contractor on looking at a range of risks of different types in different areas of delivery. There are a number of areas, obviously, front of mind as we start to mobilise. I have mentioned a couple of relevant areas in my opening statement, particularly around consents and approvals - are an area we are still working through remaining approvals -

CHAIR - It would be predominantly on the Victorian side, wouldn't it?

Ms McGREGOR - No, we have consents and approvals to deal with across all three jurisdictions. We have secured our approvals in Victoria, which we now need to then translate into our operating plans with our contractor. We are waiting on only one other approval from the federal jurisdiction, which relates to the offshore infrastructure licence. Then, as I mentioned before, we have one approval in Tasmania that is going through an appeal process. I will pass to my colleague, Clare, if there's anything that she wanted to add on those questions.

Ms GLEGHORN - No, in terms of those risks, you've outlined those well. The mitigations are in place with regards to managing those consents and approvals. Obviously, safety and construction safety is higher now in mind and that's part of the element of working through with our balance of works contractor and ensuring that constructability and looking at that program and scheduling. We continue to work really closely with the community on engaging them on those matters.

Ms FINLAY - Outside safety, consents and approvals, are there other matters you're considering as part of your risk matrix?

Ms GLEGHORN - There's always a significant amount of things we're looking at on a regular basis. That's part of proper good due diligence and we've spoken about being able to deliver the project prudently, efficiently, safely, on time and on budget. We explore a whole range of risks in relation to all those things. Some of those, it's fair to say, would be commercially sensitive to talk openly to as on any project matters in terms of our contracts and relationships there. But, needless to say, they're all being managed and mitigated. There's nothing at this stage that suggests there's a high risk.

Ms FINLAY - And they're all at a fairly operational level, but in terms of risks to the entity or the organisation, any higher-order risks that are concerning, as the CEO, that 'keep you awake at night' moments?

Ms McGREGOR - As a corporate entity, we have a standard set of risks we need to be mindful of: solvency is always one under the *Corporations Act*; the obligations to ensure we deliver prudently and efficiently to the parameters of the regulatory environment we operate in; the importance of operating within the terms of the financing obligations. There are a range of those things we need to manage and monitor.

I wouldn't say any of them keep me awake at night as a shareholder, but delivering this project well and safely, and in accordance with the expectations of the various stakeholders and shareholders is front of mind for our organisation and therefore front of mind for me.

Ms FINLAY - As your making further calls and our equity position is diluting, is solvency a current challenge as you're bringing all this financing and funding together?

Ms McGREGOR - No, as I mentioned before, we've fully drawn down the Tasmanian equity and we have future forecasts for when we might expect to draw down subsequent equity and when we would need to draw on debt. Obviously, we're in the early stages of preparatory works for construction so we're not at full operating pelt and solvency matters are a standard obligation for any business that has to operate in compliance with the *Corporations Act*. It is always prudent for us and, not to speak on behalf of my CFO, but it's always prudent for us to make sure we keep an eye on all the elements that we're obliged to as an operating entity.

CHAIR - The approximately 3 per cent of equity reduction that Tasmania has had, how is that funded? Is that through Victoria and the Commonwealth or does?

Ms McGREGOR - The balance of equity provision is by the Victorian and Commonwealth shareholders.

CHAIR - According to their percentage split?

Ms McGREGOR - That's right, yes.

CHAIR - Okay.

Mr PARAMESWAR - I would probably just add that the percentage split will increase, their shareholding will increase, because their percentages will change based on the equity.

CHAIR - As ours goes down.

Mr PARAMESWAR - Exactly, correct. I just wanted to ensure we clarify that.

CHAIR - That's fine, a given, probably. Did you have something on this?

Mr BAYLEY - I will just continue on the risks side. Are there risks at the Victorian end? There's an election in November. Do you - have you identified any risks through that process?

Ms McGREGOR - In all the jurisdictions that we have to operate within from a compliance perspective, we keep an eye on - it's a prudent that we keep an eye on emerging dynamics. To be honest, whether that is a state election or local government change, stakeholders from an MP perspective or local councillor or mayor perspective, their interests in the project are important to us. We're aware of those cycles that would play out, and similarly -

CHAIR - The political risk.

Ms McGREGOR - Yes, the political - well, I wouldn't call it political. I mean it is political risk from a label perspective, but it is more about making sure that in the dynamic of political environments that operate around the project, that we are transparent, we're engaged, we're accessible, we're available and we're providing quality information publicly, that enables those who are going through those processes to be able to speak to what they need to regarding the project.

Obviously, we make ourselves available to speak to and brief anyone at whatever political level, whether it's local government or whether it's state government or federal

government on the development of the project. Clare, was there anything you wanted to add to that?

Ms GLEGHORN - No, I think in terms of election cycles, no. We've got really good relationships on the ground; we're mindful of operating in those environments and we've navigated through things like caretaker conventions and other things previously on this project and we've managed to work our way through that. I think we're -

Mr BAYLEY - Not very successfully from our perspective, I've got to say.

CHAIR - That was the government, their issue.

Mr BAYLEY - Yes, I know that, but as a project.

CHAIR - Let's be fair. Let's put the blame where that one lies. If I just - on the risk process, if one of the appeals or the appeal that's on foot were successful and the project couldn't proceed, what would be the implications of that for the state and for the other shareholders?

Ms McGREGOR - Obviously I can't speak to the detail of that appeal because it's before the courts.

CHAIR - No, I'm saying - if it were - I'm not asking you to speak - I'm just saying - if for whatever reason - that may be one reason, there could be other reasons why suddenly the decision was made, 'Actually, we're not going to proceed with this,' then what would the implications be?

Ms McGREGOR - Look, I think from a development and delivery point of view, we keep all our shareholders and stakeholders appraised of our progress on the project - and aware at all points that on any of the consents that we've sought to support the project, there's always the appeal risk, as there is always a compliance obligation. Depending on the conditions and outcomes that are required then we as the responsible entity will lean into what we need to. I will pass to my colleague Clare, if there's anything you wanted to add.

CHAIR - I really want to understand what the financial risk to the state is, if for some reason it didn't go ahead.

Ms GLEGHORN - I think that the first part to state is that the appeals process is actually a really normal part of the permitting process. That's baked into our programming and our planning and is baked into the management of risk with regards to construction timelines.

We're really open - I actually think, personally, it's a really important part of the process that the community has that opportunity. We can't go into the specifics of where that's up to from a - because it's before Tas -

CHAIR - That's not my question.

Ms GLEGHORN - I understand that. At this stage there's nothing to indicate to us that there is that significant risk. We always look at that in terms of our program timelines - that at this stage we're not anticipating that that is a potential risk -

CHAIR - My question is if for some reason it doesn't proceed, after - now the - the final investment decision has been made, commitments have been made, obviously money's been spent - expense, there's further expenses incurred in planning of it - what are the risks to the state and the other shareholders - I'm more concerned about us than them - if that were to be the case?

Ms GLEGHORN - We'd need to do detailed work on that if it were - if there were any indication that that was a live risk, then we would obviously undertake to do the detailed modelling and work on that but at this stage, there isn't any indication that we're in that level. We have an agreed project, we've got all our funding and we've reached financial close. We have the permits, we have the permit for the shore crossing, we have the permit for the converter station site and are currently just working through that appeals process, and likewise, on the other side, we've commenced some of the preparatory works on the Victorian side as well.

So, like I said, we would need to do the detailed modelling of what that would look like, were we in that position, but there's nothing at this stage to indicate that that's a heightened risk.

CHAIR - I guess I'm trying to understand what share of the cost would Tasmania cop if that was to be the case?

Ms McGREGOR - Look, I think as Clare's indicated, we would need to do some detailed work and analysis of what the impact of the project ceasing at this stage would look like and what that would mean for all shareholders, and we would expect to collaborate with the shareholders on looking at what the impact of that would be.

CHAIR - So, we do not really have any idea? You know, because there are people who really don't want this to go ahead, and I think it's probably important for all of us to understand what that would mean.

Ms McGREGOR - So, from an approvals process perspective, we're in the midst of the appeal process. We've obviously very openly engaged in all the obligations and requirements for information that we needed to submit and exhibit on extensively publicly on those permits. So, in light of the technical work that's been done, we're actively engaging with the appeals process and at this point our view is that the risk of the project ceasing is relatively low but if that risk did manifest. then we would work collaboratively with our shareholders and our financiers to understand what the impacts would be.

From an impact of delay perspective, at the moment, as Clare mentioned, we understood and it was recognised there was always a risk with appeals on any of our consents, and so there is an ability for us to manage that within the timeframes of the project and we will openly engage with those appeal processes and deal with the outcomes of those. If one of the outcomes of those is that we need to undertake more investigation on behalf of the shareholders because the project may look like there is a risk of it ceasing, then we'd collaboratively engage with all the shareholders and the relevant departments on the analysis that would need to be done associated with that impact.

Ms FINLAY - We've made final investment decision, financial close, you've got the contractor for the balance of works and you've put in those significant orders; in terms of other less significant supply elements and all the supply required for the project and the technology

and all the operations, how does that look because there's a lot of projects reporting difficulty and delays - particularly around, I suppose, what are smaller elements in terms of technology, availability and supply chains, that sort of thing? How's the overall project looking with delivery of critical infrastructure?

Ms GLEGHORN - Happy to answer that. So, since we appointed our balance of works contractor, TVGL, at the end of last year, they've been actively looking at their works packages effectively and how they do that. Thankfully, we had the opportunity over the last 12 months to engage really actively with the industry capability network and over the course of that, we have had some 1100 businesses register all manner of specific skills, things that I didn't even realise were necessary, and we've had really strong engagement on that and already we are starting to see that.

So, there's some seven businesses that have already been registered to pick up some of that work and there's all manner of things from an operations and maintenance perspective, CCTV, all sorts of security elements, and those have already started to play out, pleasingly, which is fantastic, as part of that work. What I can say as well is, excitingly, six of those seven are Tasmanian-based businesses and five of those are from the north-west coast, which is exactly what we were intending to do as part of having that active engagement through that meet-the-contractor process. So, effectively, the system is working.

Ms FINLAY - There was some good feedback from those sessions too, by the way, on the ground here.

Ms GLEGHORN - Yes, and that's been really important to us, to build that local capability and that's a real commitment from TVGL, as well.

Ms FINLAY - Thank you. So, that's all the positives and the upside and that's great, thank you. Has there been any individual or small number of elements that have been identified where there's a concern with the capacity to secure and deliver on time elements?

Ms GLEGHORN - At this stage, our contractor, and we're obviously working really closely with them, has not indicated any level of impact, in terms of supply around businesses. The other part of that, as well as given the long tail of our project and commissioning in 2030, we've got an opportunity also to look at the skills and capability uplift within those businesses as well. So, where you have small businesses, we've looked at opportunities for them to work together on being able to provide that capability and that supply of that particular service or goods.

Also, we've established an industry working group with training organisations and industry and business organisations, again, to look at where are those skills gaps, how do we meet and manage and align that work. You would have seen the centre of excellence and the Clean Energy Centre of Excellence on both sides of our project, which I don't think is happenstance that those two have happened in that space. So, there's really strong connections, and also, at this stage, no. But that ability to work closely allows us to identify that early, if there are any.

Ms FINLAY - They're some of the skills and capabilities - so the physical element skills and capabilities. One of the other things that we've seen, historically, when there's been challenges with projects that have an uplift in people, is then their support services around

that - so, the accommodation, transport, those sorts of things. Where are conversations and preparations for that work? One of the concerns has been, on the north-west coast, displacement - if you could talk through that?

Ms McGREGOR - Absolutely. Look, we are actively engaged with a number of bodies in the north-west around these discussions and with the appointment of TVGL at the back end of last year, they are now inputting into those conversations. But, Clare, did you want to add some specifics?

Ms GLEGHORN - Yes, I think when we last appeared before the committee, I mentioned that as part of the balance of works contracting process, we gave primacy to workforce accommodation and workforce participation strategies for both the bidding teams. That's obviously now activated, that we have our successful contractor in place. They're well advanced in terms of doing that mapping and modelling. I think for us, and what we're seeing starting to play out, is the primacy of local workforce. So, you mitigate that risk completely by being able to actually engage locally.

From the timing, in terms of working really closely with TasNetworks around the impacts of NWTD and the geography of where and how you're looking at that workforce, we've been able to give primacy to local workforce. We're really confident that in looking at that, and looking at the mapping and the timing and scheduling, that that will work quite well.

There's a whole range of other things: looking at different types of accommodation as well and what's suitable; safety is really important; displacement and understanding some of those local challenges, and we are very aware of the challenges, particularly in the north-west and around Burnie. We have really strong relationships with the local council and a lot of the local business and industry groups. We meet weekly with the Cradle Coast Authority, Business Northwest and a lot of the community organisations because our desire is to not only not make those matters worse but also look to where we can provide uplift or support and provide better outcomes as a result of our project.

CHAIR - Do you have any plans in that space yet? It takes a while to build housing. We see how that's been a real challenge everywhere - not just here.

Ms GLEGHORN - Yes, the drafting of that strategy is well advanced. We will be in a position to make some announcements about that over the next little while. Importantly, what we need to do is go through that really detailed consultation process. We're not far away, Chair, from being able to share that and I'm really happy to share that once it's finalised.

CHAIR - When you say not very far - we're talking weeks, months?

Ms GLEGHORN - Yes, within a couple of months that will be finalised.

Ms McGREGOR - Yes, so bringing on our contractor at the back end of last year, it's really important that we work practically with them on the schedule of their works to make sure that their modelling and assumptions are fully understood.

CHAIR - Is it their job to construct accommodation?

Ms McGREGOR - It is their job to ensure that they are able to provide accommodation, or support accommodation solutions, for their workforce. We've required them to engage with us constructively as part of that and engage with other stakeholders who we've been long building relationships within the region. It won't be a matter of them as the contractor going off and doing their own thing without talking to us or the other stakeholders. They're required to work through the plans and engage with us actively. Given they were just appointed in December, we want to make sure we take the appropriate care and time, and we also test their thinking and assumptions as part of developing those plans.

CHAIR - So they could notionally subcontract a building company to build some new housing for workers?

Ms McGREGOR - There are a lot of options that could be considered. Just on the weekend I was in Zeehan and I noticed coming into town, for example, there's dedicated worker accommodation to support local industry.

Ms FINLAY - Which is outside of town.

CHAIR - Which hasn't been all that effective because it is outside of town. Some of them work 12-hour shifts, too, but anyway.

Ms McGREGOR - So look, I noticed that myself when I was visiting the north-west on the weekend. We're going to make sure that in our engagement with our contractor that we've explored all options and I think, to the point that Clare made, is also about where there is the opportunity to leave improved or enhanced legacy that adds to housing and accommodation options. That is by far our preference rather than temporary solutions which then don't add anything from a long-term perspective.

CHAIR - So how broadly are you expecting them to look across the coast?

Ms GLEGHORN - They're doing that work at the moment. So effectively, when you're looking at local workforce accommodation, which again is where we see primacy in terms of managing that as part of that broader workforce participation, anything within that sort of 100 kilometres from a worksite is deemed the ability to actually engage locally. So what that means is you have a safe commute for your workers to get to and from site and there's a whole range of other considerations.

That's part of that advance work that they're doing around the strategy development, which we're weeks away from being able to actually finalise. Again, really happy to sit down with you. I know you are a local constituent; you asked about this last time. It's important that you have a level of comfort around how that's being produced as well.

CHAIR - So the access - there will be some FIFO workers, we know that. So in terms of that transport piece across Bass Strait - the most expensive body of water in the world just about - is that part of this plan and that will be featured in this report, or is that a separate body of work?

Ms GLEGHORN - That's all part of - we are obligated to produce the workforce participation and accommodation strategy. It's all part of the one. It's all about looking about how we're managing our workforce planning throughout the construction of the project and

also that's including, again, making sure that we're looking at local opportunities. We've got some team members up there deploying site offices and the like as well. So, looking at where we can have that long term, but equally in terms of managing that transport in and out.

Ms FINLAY - Is there a due date for that piece of work?

Ms GLEGHORN - Like I mentioned, that's in the next few weeks we will be able to finalise that.

CHAIR - So if it's finalised before the committee wraps up - which is highly likely I'd say - probably in both directions I'm saying that - can you provide it to the committee proactively?

Ms GLEGHORN - We can certainly look to do that as an opportunity. Yes, we'd be very open to having that conversation, sure.

Mr VERMEY - Some of the benefits - obviously there's employment, housing, there's also squeeze potentially on rentals that the FIFOs might be able to take over others, so looking at that, but giving back to the actual community, what engagements are you giving to them through the project. What engagements have you got there?

Ms McGREGOR - Yes, thank you for the question, and Clare, did you want to -

Ms GLEGHORN - Yes, thank you. It's something that obviously I'm really proud of that our community engagement team sits within my remit and we've been on the ground for quite a few years now. We're not waiting till we're operating to be able to achieve those.

As part of the sale of the Tioxide site, so the converter station site with the Burnie City Council, we have a partnership program in place with the Burnie City Council that is $40,000 per year over 10 years. The first tranche of that work has gone to Burnie Works and the STEM program. I know your passion about the GreenSTEM program as well, Chair, so they get a grant funding over the first three years of -

CHAIR - That engages children in STEM

Ms GLEGHORN - Yes.

CHAIR - It's massive.

Ms GLEGHORN - It's an amazing piece

Ms McGREGOR - It's my favourite visit when I go up there is the GreenSTEM.

Ms GLEGHORN - Yes, and we spend a lot of time with them. The other recipient of that is Burnie High School - and that is supporting a program where connecting kids with local industry coming out of high school with those students as well, so that first tranche of that work is managed through Burnie Works, and with Burnie City Council we look at that grant funding.

The other opportunity is through the community grants program. We have an active - so small sort of sub-$5000 grants that we look at to various community organisations as well - and

we've had a lot of recipients. I think Cuprona footy club has been able to build a fire pit for cold nights of training, which I know during the middle of winter - yes, not at all. So the ability to be able to support the community through those. We've had a number of recipients for that type of activity.

The third tranche which we're working towards finalising at the moment is around our community benefit sharing frameworks. Obviously, we need to go through the AER final revenue determination to understand what we've got within that and what we've set aside within that to look at that, and that's about looking at that long-term legacy in ensuring social impact.

So I believe TasNetworks has already announced their community benefit sharing program. We will have a similar approach. We've done a lot of investigation, a lot of consultation locally with that. We met with all the Cradle Coast 11 councils within the Cradle Coast, Business Northwest, community groups, ReCFIT, others and our partners at TasNetworks to build that - also with all those similar counterparts in Gippsland. We're looking at finalising that which has been drafted and we will be able to make announcements about that in a little while. There's a whole range of ways in which we're looking at those opportunities.

Mr VERMEY - It's encouraging people to look outside different industries to this as a future - something that's totally different and getting them up to speed to what's potentially coming.

Ms GLEGHORN - If I can add to that, part of the other thing that excites us about our project is the work we can do as a catalyst, which costs us zero dollars but our ability to be able to connect. We've been able to introduce the TAFEs on both sides, the TAFE in Gippsland and the TAFE here in Tasmania and they're now working together. They have a joint agreement, they're looking at opportunities to share facilities, to look at their courses, to make sure they're aligned and lined up. Rather than competing for talent, they're working closely together on teaching facilities, their teaching staff and being able to offer those opportunities, which is something that we were able to do that's cost zero dollars for us. Through building those good relationships and that trust and that network, we've been able to facilitate that, which is a great outcome for the north-west for sure.

Mr VERMEY - There will be potential uptick once the project is finished and going - you see that continuing?

CHAIR - Uptick in what?

Mr VERMEY - Well in those jobs being kept on, not just for that sort of project, but to keep the momentum going.

Ms McGREGOR - To the earlier conversation, the energy transition is we're in early doors nationally. Every state, including Tasmania, we're embarking on this journey and pretty early on the journey. Any investment in skill uplift that comes from this project we genuinely see as an investment for the entire sector. That is about enduring career opportunities, not just one-off project opportunities. I've worked in energy transition projects elsewhere in the world. I've seen the chronic shortages that can happen in the industry without enough skills. Really, it is a point of pride for us that we see this as an anchor project that creates enabling opportunities, not just for the energy industry, but for the skills that the sector needs. In our own team, we have people who have - off the skills and experience - worked in other parts of Australia and

come back to Tasmania who have benefited from growth in certain sectors that enables them to contribute back locally. We do see that as a wider opportunity beyond just one project.

CHAIR - A follow-up with that, perhaps it's a little bit tangential, but in the Project Marinus Stage 1 Final Investment Decision Assessment Report, approved by the Energy Executive Steering Committee in July 2025, criterion 5 states the Project Marinus generates an:

Acceptable impact on State finances, budget & credit rating -

That is on pages 8 and 9 of that report. However, the condition associated with that criterion states:

> These returns are modelled on the basis of a maximum of 800 MW of new renewable generation being operational in the State by 2034. Without this new generation, Hydro Tasmania will not be able to maximise the benefits of further interconnection. A future government may have to consider whether it intervenes to ensure the generation is in place and this may come at the expense of some of the forecast returns.

That part is a matter for Hydro and the government, but what's your assessment of the likelihood of this new renewable generation actually being built? Have you a probability on that because it's pretty contingent? All the modelling and that's contingent on this.

Ms McGREGOR - As Prajit mentioned, we've done some of our own modelling as part of the regulatory process which has been going on since 2019 and very much follow the assessment of the market and the market dynamics that is undertaken around projects like this by AEMO. Prajit, did you want to speak to any specifics on that?

Mr PARAMESWAR - Sure. Thanks Stephanie. Chair, Tasmania has the one of the best wind resources in the NEM. This is not only based on historical analysis that has been released very recently, but also AEMO's draft integrated service plan talks about the levelised cost of energy of Tasmanian wind being one of the lowest in the NEM.

CHAIR - We haven't had many wind farms built in recent times.

Mr PARAMESWAR - That is mainly an outcome of the supply-demand balance that we have here. When you don't have access to market, it is very difficult for you to build something new. We believe that Marinus Link provides that access to market that wind proponents will need in the future. Even if you look at TasNetworks' Annual Planning Report, it talks about approximately 5000 megawatts of prospective wind developers knocking on their doors now that Marinus Link has got FID and financial close.

CHAIR - Knocking on the door and saying, 'Hello, we are here' is a little bit different from getting approval in the state. We've seen some real challenges in getting approval, not for the wrong reasons necessarily, but it's just been a very lengthy process for a lot of proponents. To be clear, Prajit, are you telling me that because Marinus is now underway, that will change?

Mr PARAMESWAR - I won't be able to speak about changes in regulatory processes or approvals, but what I will say is we have four or five wind farms that are operating. We've

got Woolnorth, we've got Musselroe, we've got Granville Harbour, we've got Cattle Hill. What I also know is that there are three or four wind farms that are knocking on the door and are working very closely with TasNetworks. What I also understand is we're in 2026, and they've got a few years of lead time to develop. From my perspective, very simplistically, there's a lot of work to do and I don't think anyone is saying it's going to be easy. What I can say is with the capacity factors we have in Tasmania for wind, and I've personally done this analysis many years ago, the internal rate of return you have for a wind farm developer is reasonably workable.

CHAIR - If you had to give a probability from zero to 10 of the 800 megawatts being built, where would you place it?

Ms McGREGOR - It's probably not one for us to comment on. As Prajit mentioned, we won't be participating in generation trading. We are here as an enabling link. It's not really one for us to comment on probability.

CHAIR - Going back to Marcus's points, when Marinus is operational, roughly how many employees will still be based in Tasmania? I know you don't have an exact number for that, but what are we talking about in terms of employees to operate and maintain?

Ms McGREGOR - Obviously, we've identified in our public information the levels of staff and resourcing during peak construction. However, as you rightly identify, Chair, that will then revert to an operating norm in 2030 onwards. In terms of our operating numbers, at the moment, anything that we have is a rough estimate because obviously we need to see how the project progresses. From a technical perspective, it will probably be similar to what we have on Basslink. Clare, were there any specifics that we had?

Ms GLEGHORN - I don't have that specific number at hand at the moment, Chair. What I can say is there's the operation of the facility itself, but there's the ongoing maintenance and activity that goes with that - in terms of maintaining landscaping and maintaining security and operations and things that are adjacent to that. I'm happy to look at the opportunity to get those figures for you.

CHAIR - We might write to you to ask for those figures, as a ballpark. We can build up the workforce and train all these people, but unless there's another job to go to, which there may be if you're building 800 megawatts of wind or some other renewable energy.

Mr BAYLEY - Can I go back to the 800 megawatts of new wind development and put to you some evidence we heard from Bruce Mountain in Victoria, an expert and academic in this area. He told the committee, firstly:

> In terms of energy production, Tasmania has no meaningful advantage relative to the mainland on clean energy production. Its wind production has, on average, a slightly higher yield, but it's considerably more expensive to build wind farms in Tasmania than it is in Victoria.

Solar has no advantage at all, according to him. His question, and he poses it to us as an inquiry, so I will put it to you:

> The question, therefore, for this inquiry, as well as for the Tasmanian government, is: who will pay for Marinus in the first instance? Not the capital outlays.

You've got that squared away, of course.

> The critical variable is, who's going to accept the regulatory right to impose it on customers? It can't be determined by the authorities. It needs to be determined by governments. The question is: why would Victoria be willing to pay a penny for any storage service that it can meet itself at a fraction of the cost of what it can get from Tasmania? Tasmania does not have the storage resource now. There is no free resource available. Even if it was, the enormous cost of the interconnection needs to be amortised.

What do you say to his take on the meta economics of this?

Ms McGREGOR - Marinus Link is aware of the Victorian Energy Policy Centre's submission to the committee and we welcome all the scrutiny on the project, and both understand and respect the public interest in it. Marinus - we commissioned our own independent analysis of VPEC's modelling and conclusions when that report was issued. We had it done by Endgame Economics, and we've previously tabled that report to this committee, but I'll pass to Praj to comment on the specifics around that modelling.

Mr PARAMESWAR - Thank you, Stephanie. I think that report says that Tasmanian wind is 18 to 20 per cent lower than Victorian wind, but more importantly -

CHAIR - To build?

Mr PARAMESWAR - Sorry, the LCOE - or the levelised cost of energy - more importantly, to your question, the battery energy storage systems, or as we call it BESS, in Victoria are estimated to be around 40 to 70 per cent more expensive than Cethana pumped hydro in 2035. This is based on levelised cost of storage analysis, and considers economic lifetime of each asset, roundtrip efficiency and other factors, and as I previously pointed out as well, Tasmania has significant existing latent storage capacity. This was also repeated not only by Endgame, which was an independent report, but also by AEMO, and we've also seen this as part of the independent analysis that FTI Consulting has done.

Mr BAYLEY - Can you explain again the latent capacity you talk about?

Mr PARAMESWAR - Sure. I don't want to go back to the 2019 example, so I will make a simple example up: in terms of the generation capacity that we have in Tasmania, we've got approximately 2400 megawatts. If we assume 2400 megawatts as the number, the demand that we have in summer is approximately 1400 megawatts, and generally in Tasmania that's your max demand in summer.

So, the difference between the 2400 megawatts and 1400 megawatts is approximately 1000 megawatts, and Basslink can export, as we know, approximately 500 megawatts. So, when I refer to the latent capacity I refer to that capacity, which is the difference between what Tasmania can export, or could export, versus what Basslink can export; and when Basslink is

constrained, what is the capacity that can be unlocked to effectively help the NEM and to monetise the opportunity for Tasmania.

Mr BAYLEY - What were the assumptions that sit behind the 2400 megawatts, though?

Mr PARAMESWAR - I was providing an example. If you want exact numbers, I would have to go on Hydro Tasmania's website and look at what their generation capacity is. What I can say is that the numbers that I quoted are most likely lower than the generation capacity that they have currently available.

Mr BAYLEY - Yes. Generation capacity depending on dam levels, storage levels, presumably?

Mr PARAMESWAR - I think the key point that we want to get to is: you've got Gordon Power Station, which approximately sits at 430 megawatts, you've got Poatina, which sits at approximately 350 megawatts, and you've got John Butters. These are head storages, these have capacity and obviously it's up to Hydro Tasmania's risk management and trading policies to manage storages but, as I understand it, they will be looking at what will occur in the future. They will have forecasting tools and, from their perspective, it is about how they manage the storage prudently and efficiently.

Mr VERMEY - With putting cables and everything going around, I've heard having fibre optics and that sort of going through as well, and I suppose that also leads to data centres and people wanting to have things here, cooler climate, more electricity; where are we with those sort of projects, or people looking at those sort of things?

Ms McGREGOR - Thank you for asking. This is an exciting -

Mr VERMEY - You stole a couple of mine, Janie.

Ms FINLAY - No, that's okay. I thought that was taking us away from energy, so I thought I'd leave it to the last. I've been watching the clock.

Ms McGREGOR - Look, we're extremely excited about the opportunity that the project presents to provide a significant boost to Tasmania's off-island connectivity from a data infrastructure perspective. So correctly, whilst Marinus Link's primary purpose is as an electricity interconnector, we also have the separate fibre capacity. We need a portion of that fibre in order to run the control and protection systems for the interconnector. There is going to be substantial spare capacity in the project that we can commercially look at in terms of the opportunities to connect and provide additional capacity into the Tasmanian market.

You've identified data centres; it can be anything from industries that will rely on more AI or data-backed technology solutions, whether that's in health care or education. Having that additional bandwidth that is afforded by our project does have real potential for enhancement for Tasmania. The spare capacity that we will have over and above the three existing data connections between Tasmania and the mainland, our capacity will increase that by about 150 times. There is significant opportunity there. We are clear that we, in developing that opportunity, need to run that as a ring-fenced opportunity. It can't be cross-subsidised by the electricity part of our business, but we are really looking forward to developing that opportunity up further as we progress.

Ms FINLAY - What will the operating sort of status of that be? Will someone look to acquire bandwidth within your operations, or will someone lease that capacity? What will the actual ownership of the data be?

Ms McGREGOR - There are different options that we can consider and we will be -

Ms FINLAY - You're not at a conclusion yet?

Ms McGREGOR - No, we're not at that point yet. Our primary focus is actually moving into the construction phase for the project. We do know, and we have planned that we will need to look at some of those potential operating models. That is something that is in the future, and we will expect to consult with our shareholders and a range of stakeholders around what those models could look like.

Ms FINLAY - Recognising that the primary purpose at the moment is to deliver on link 1, and set that aside now, the benefit of that increased data will actually be about having Marinus 2 because there's redundancy in anyone who's going to use it. You mentioned the three that we've got - problem with people who are carrying across Basslink is, if there's a problem, there's a problem. The two Telstra cables, people can sort of operate across with the redundancy. How progressed is the internal work of Marinus Link Pty Ltd for the development of the second interconnector?

Ms McGREGOR - Stage 2?

Ms FINLAY - Yes, and therefore the second part of the data as well? Two questions in that. Recognising that your priority is this first one, but I know that you will be doing work on the second, so can you talk about that?

Ms McGREGOR - Absolutely. I might just pass to Praj on that in respect of the stage 2 work.

Mr PARAMESWAR - Thank you for the question. As you would know, Marinus Link has always been proposed as a 1500-megawatt interconnector, and in 2023 it was proposed to be delivered across two 750-megawatt packages. The regulatory investment test covers - and our modelling accounts for both stages of the project. Whilst we are committed to stage 2, at this present moment, we are totally focused on delivering stage 1 on time, on budget and, most importantly, with utmost safety. We've consistently said that the timing of stage 2 will be coordinated with the development of renewable energy in Tasmania, including pumped hydro projects.

Ms FINLAY - That goes to that question about your - out of 10 how do you - how much do you think that renewable - we could answer that question now, because you've just raised that.

Mr PARAMESWAR - I think the other key point was - this is also based on recommendations from AEMO's ISP - the AEMO ISP at this stage - the draft ISP, which was released, as I mentioned, in December, does refer to stage 2 as 'likely to be actionable'. It also says that the net weighted average benefit of stage 2 is approximately $530 million. We are working through the reports, and we are working through our next steps, but at this stage, as I previously pointed out, our focus is to deliver stage 1 prudently, efficiently and safely.

Ms FINLAY - On that 500 and other number million, is that equivalent to the - previously you mentioned that Marinus stage 1 is a $3 billion benefit; is that the comparative benefit to the system of stage 2? That's quite a lot less.

Mr PARAMESWAR - The $3 billion number that I referred to - that was the benefit that resulted from a RIT-T or a market-benefits test for 1500 megawatts. It considers stage 1 and 2.

Ms FINLAY - For the whole - that's both.

Mr PARAMESWAR - Yes.

Ms FINLAY - Okay, thank you. That answer was a good answer which responded to my statement that said, I know that you've got to deliver on stage 1; so what work is actually being done, because you're always working on things? What sort of projects are being developed, considered, researched -

CHAIR - Plans, perhaps.

Ms FINLAY - Yes, plans for stage 2?

Ms McGREGOR - We most certainly are focused on stage 1, and there's good reason for that, because I think it builds confidence in market, that the investment and energy that has gone into developing the project to this stage, the stage 1, is going to be delivered on. How we deliver on that project will speak to people's confidence in respect of stage 2. So, there are a lot of interplay dynamics there.

We are quite reliant on AEMO's view, in terms of the likelihood of the project, because every two years under the ISP they assess the evolution in the market. So we will be watching closely the response to the ISP because it's out in draft for consultation at the moment. We will be monitoring obviously what happens in terms of generation projects that may or may not proceed in both states. So, it's more of a watching brief. We have the capability and capacity within the organisation to move on the business case around stage 2, but it really, genuinely isn't our core focus.

Bearing in mind that the proceeding with stage 2 will require its own set of procurements, particularly around cable, we will be keeping a watching brief in that space. Ensuring that all of the, I guess, economic metrics that emerge as we develop stage 1, we monitor those, we report those, we capture those and we can feed them into the subsequent business case for stage 2, at the point that from an AEMO perspective and a shareholder perspective, the merit stacks up, if you like.

Ms FINLAY - Thank you. Just two clarifying questions, if I can. You did say that stage 2 is reliant on the development of renewable generation. What are your trigger numbers, in terms of how much renewable needs to be generated for you to contemplate stage 2?

Mr PARAMESWAR - Again, I think what I referred to was it was reliant on renewable energy development in Tasmania and the AEMO's integrated system plan. The ISP has its own inputs and assumptions, and the ISP looks at the Tasmanian renewable energy target being achieved - well, the 150 per cent being achieved by 2030 and 200 per cent being achieved by

2040. So that is your trajectory - there's a linear trajectory of renewable energy development as part of a AEMO's modelling. I don't believe, at this stage, AEMO has Cethana or a pumped hydro being built in Tasmania, but that is something that I believe is a work in progress. So, I would say we would be reliant on AEMO's timeframes.

But I just wanted to be clear here. I think the committee understands this very clearly: AEMO's job, as a market operator, is to come up with inputs and assumptions via discussions with thousands of stakeholders, but their job is to just identify the need. They are not there to provide the funding. They are not there to suggest regulatory models. So that is something -

CHAIR - They don't make political decisions.

Mr PARAMESWAR - That is something we are working through, and as Stephanie pointed out, there is a lot of work that we need to do with our board first, with our shareholders, with our financiers and that is really what I would say we are looking to do. But our focus has been razor sharp at this stage to look at delivering stage 1 and how do we do that in the best possible way.

Ms FINLAY - If I could ask one more. Just take a backwards step, then, back to the original - the link 1 data cable. Have you already got, and I don't know what you would call them but, agreed terms or contracts? You've got yourself for a portion of the cable, but have you already got agreements in place for any access to the data?

Ms McGREGOR - For fibre? No. To the comment before, we will be looking at what the potential operating models are for that. Our focus is really on getting all our contractors moving, making sure that we deliver on our current program. There is plenty of time in the horizon between now and when we commission the asset in 2030 to actually explore those models further.

Ms FINLAY - Is that one of the significant order contracts that's been activated?

Ms McGREGOR -Yes, so, the fibre is provided as part of the electricity cable - so the cable from Prysmian. This is a standard inclusion in cable solutions because we need it for the control and protection system.

CHAIR - Can I just ask on a separate matter - this committee is doing some scrutiny of the project, asking questions about the costs and all those other important aspects - but this committee is a sessional committee; it's a state committee, it will finish at some point. So, who overseas the project and who actually audits the books? Is it the Australian National Audit Office or who's responsible for that beyond this process?

Ms McGREGOR - Okay, so we obviously have our three shareholders, so we have obligations to our shareholders and that isn't a passive shareholding. We actively engage with our shareholders.

CHAIR - They don't always tell us everything.

Ms McGREGOR - We actively engage with our shareholders as part of an agreed governance process and also recognising that engaging with the shareholders, we also engage with arms of those shareholders wearing different hats as consenting authorities and

compliance authorities. We are governed by the *Corporations Act*, so we will have all the usual audit requirements and compliance requirements with the *Corporations Act*.

CHAIR - So who will audit your accounts then?

Mr PARAMESWAR - Deloitte.

Ms McGREGOR - Deloitte is our external auditor.

Ms GLEGHORN - In addition, with the Clean Energy Finance Corporation and the funding made available through Rewiring the Nation, there's a significant amount of oversight in terms of that as well.

CHAIR - So does the Clean Energy Finance Corporation monitor all that?

Ms McGREGOR - Yes.

CHAIR - How's that reporting visible?

Ms McGREGOR - We're required - and it's pretty standard in project financing world - we're required to provide regular reporting updates to them on a range of elements around the project, in addition to which we have regular strategic meetings with them. They are entitled to ask whatever questions they want on respect of our progress on the project.

Ms GLEGHORN - And they too are subject to Australian parliament scrutiny through Estimates and the likes, the CEFC has obligations under that to report on their investments as well.

Ms McGREGOR - We also, in receiving the regulatory determination that we just received this month, we have a requirement for ex-post acquittal of our activities. We are also setting ourselves up to make sure that we're going to be able to supply the information that we need to to the AER in respect of any of those ex-post acquittals as well.

CHAIR - Does the AER publish that information or is that for their internal use?

Ms McGREGOR - I can't speak for that process.

Mr PARAMESWAR - The AER has published their final determination on 6 February, which is available -

CHAIR - The ex-post reporting?

Mr PARAMESWAR - The ex-post review could occur if we've overspent our allowance. So we've received an allowance, and if we overspend our allowance, then the AER will consider completing an ex-post review. There will be a report from the AER that will be published.

CHAIR - If that was the case.

Mr PARAMESWAR - That is correct.

CHAIR - If you're within budget, they don't.

Mr PARAMESWAR - That is correct. But just - sorry, Stephanie - we do have reporting obligations that we have to the AER as well on an ongoing basis along with the financier, along with our shareholders.

CHAIR - How often do you report to the AER?

Mr PARAMESWAR - The AER's final determination has just come through this month. We don't have the same reporting obligations that a TNSP has because we're an intending TNSP, but we do have reporting obligations where we would have to periodically report to the AER as well based on our financials.

CHAIR - During the construction period.

Mr PARAMESWAR - Correct.

CHAIR - Once it's operational, then what's the reporting then?

Mr PARAMESWAR - We will have the same obligations like a normal TNSP would have.

Ms McGREGOR - TasNetworks, AusNet, any of them. We become an operating entity, and we roll into the regulatory reporting cycle that's required of any network company in Australia.

Mr BAYLEY - Can I go back please to the latent capacity here in Tasmania, because obviously a lot of the assumptions are built on our ability to trade over Marinus and the benefits there. For example, the latest OTTER report on energy in Tasmania has that we had a net import for example of 12,049 gigawatt hours across Basslink in 2023-24. Hydro's generation was down because of the dry years. This is including 71 gigawatt hours of gas from the Tamar Valley gas power station, and on the side, solar generation was up 31 per cent. I guess you're saying there's latent capacity here, and I see that there is in theory because Hydro has a capacity to deliver more energy if it rains and there's water. That hasn't been the case over recent years. We've now had an announcement that they're not going to deliver a dividend to the Tasmanian government.

CHAIR - Based on last year's results.

Mr BAYLEY - Based on last year's results. What do you say to that when we're a net importer of energy as it stands at the moment?

Mr PARAMESWAR - Obviously, I won't go into too much detail because probably it's Hydro's question to answer, but what I will say is that there is no information I would say in OTTER's report of what the weighted average price of the imported energy was. As you would appreciate, there's a difference between energy and capacity - what I refer to all the time is the latent capacity, and if you are forecasting, if you had the tools set up to have the foresight appropriately, then you would have sufficient energy available to ensure you can unlock/unleash the capacity when the market needs it the most and you would import at the lowest possible prices.

Again, I don't have market stats in front of me, but during the day now when the sun is shining and the wind's blowing, you would see prices for approximately 10 to 12 hours a day, you would see negative prices. I would be hoping that Tasmania would take the advantage to import that lower-cost energy for the 10 to 12 hours and you would see the net energy balance perhaps could shift and perhaps has shifted. That is because you are importing the lower-cost energy, you are taking that energy and ensuring that you're filling your dams up, so in the future you are able to use that energy when the market needs it the most.

So that is where the advantage comes through for the capacity, and this capacity was built, I want to say, between 50 to 100 years ago and I think it's a great investment opportunity for Tasmania and, if managed appropriately, I think there is a great opportunity for Tasmania to monetise it.

Mr BAYLEY - But Hydro is already trading in that manner on a on a smaller scale, albeit I acknowledge, but they're already trading power across the Basslink at high-price times and importing it at low-price times, but I guess in terms of latent capacity, I'm still struggling to understand when we're a net importer of energy where that latent capacity sits.

Mr PARAMESWAR - So the opportunity you have is to import more lower-cost energy with an additional 750 megawatts of interconnection, which you then store it in your dams and release it when the market needs it the most. That is the advantage that you have with capacity. Going back to, I think your point, Chair, that is where the arbitrage comes into play and I don't have a price duration curve in front of me right now, but essentially the arbitrage is when you can and are able to import more cost-effective energy - maybe 30 or 40 per cent of the time - and then you're able to release it at the highest prices 30 to 40 per cent of the time, that is where you make most of your money and having storage -

CHAIR - I'm seeing the higher-price times are shorter in duration than the lower price time, so this is one of the challenges. This is not your challenge; this is Hydro's challenge, in terms of being able to do that, and there are capacity constraints at times, but we pay the Tasmanian regional reference price, yes?

Mr PARAMESWAR - When you mean we pay the -

CHAIR - The Hydro will pay that price -

Mr PARAMESWAR - Hydro will receive the Tasmanian regional reference price when they sell, correct, yes.

CHAIR - Yes, so if those volatility periods reduce over time, there will be less arbitrage, yes?

Mr PARAMESWAR - I think it's best Hydro answers this question. But what I will say, Chair, is there is a spot market where you trade electricity and the price could change every five minutes and then there's a contract market and there are -

CHAIR - We're talking about the spot market here, maximising opportunities in the spot market?

Mr PARAMESWAR - Not, not necessarily, no. I would say you are maximising your trading opportunity, which will be a combination of optimising your spot market outcomes and your contract market outcomes, and I think, as you would be aware, there are contractual mechanisms that help you hedge your spot market exposures in the future and including - and I know I've read a couple of your articles which also talk about settlement residue auctions - there are options available in the market where you can buy SRAs that then look to cover or hedge your basis risk, which is the risk between the Victorian and Tasmanian regional reference node.

CHAIR - Yes, but the SRAs are competitive?

Mr PARAMESWAR - That is correct.

CHAIR - And with the new rule change that creates the loop in Victoria, New South Wales and South Australia, will smooth that out even further, as I understand it, and so there may be less inter-regional revenues or more auction items available and so the supply and demand sets the price point, doesn't it?

Mr PARAMESWAR - Again, I would probably let Hydro - I'm confident they've modelled these things, that is what they would be doing as part of their job. I haven't been in the industry trading electricity for the last three years, so it's not fair to answer it as well. I might answer it, but it might not be correct.

Ms McGREGOR - Our focus is really on ensuring that the capacity that the market is expecting out of Marinus Link for stage 1 is that we deliver well, we deliver on time, we deliver it efficiently and we make sure that we are able to be up and running by 2030.

Ms FINLAY - Which is not very far away.

Ms McGREGOR - No, it's not.

CHAIR - Any further questions from anyone? Is there anything you want to add in closing?

Ms McGREGOR - I will thank you, Chair. Thank you again for the opportunity to be here before the committee. Given the significance of Marinus Link, we welcome the continued scrutiny. Our role as a regulated company and the custodians of this nationally significant infrastructure is to deliver efficiently, to deliver safely, to deliver on time and ensure the enduring benefits that everybody wants from this investment are achieved. We, as a team and the custodians of the project, are very happy and willing to continue to engage and welcome any visits that you might wish and any future engagement. Thank you for your time today.

CHAIR - Thanks. We will write to you with a couple of those follow-up questions, acknowledging that some information won't be available immediately; that's fine.

We thank you for your time and information today.

The witnesses withdrew.

The committee suspended from 10.55 a.m. to 1.00 p.m.

TREASURER and DEPARTMENT OF TREASURY AND FINANCE

CHAIR - Thank you, Treasurer, and your team for appearing before the Energy Matters Committee. The main purpose of this part of our process has been to learn more about the whole-of-state business case. We were scheduled to have a full briefing on that before the last election was called, and that was subsequently cancelled when parliament was prorogued. This is the first opportunity we've really had as a committee to interrogate, if you like, the whole-of-state business case, noting quite a bit's moved on since then as well. There will be questions that flow from that as well.

I'm sure all your team are well aware of parliamentary privilege and the process for the committee; I don't need to go through that.

I will ask you to introduce the members of your team at the table and have them take the statutory declaration, and then if you wish to make some opening comments, you're welcome to do so.

Mr ABETZ - Thank you very much, Chair. On my left, Gary Swain, the Secretary, and Anton Voss on my right, who is Executive Director of the Marinus Business Case.

Mr GARY JOHN SWAIN, SECRETARY and **Mr ANTON VOSS**, EXECUTIVE DIRECTOR, PROJECT MARINUS WHOLE-OF-STATE BUSINESS CASE, DEPARTMENT OF TREASURY AND FINANCE, WERE CALLED, MADE THE STATUTORY DECLARATION AND WERE EXAMINED.

Mr ABETZ - Thank you. I do have an opening statement of about one-and-a-bit pages, and in fairness I think I will be relying exceptionally heavily on the gentlemen on either side, given their corporate knowledge and my relatively new introduction into this area as Treasurer.

If I may with the opening statement: the focus of my appearance today is the project Marinus whole-of-state business case prepared by the Department of Treasury and Finance. The business case was a comprehensive point-in-time assessment designed to inform the government's consideration of Marinus Link stage 1 and the associated North West Transmission Developments.

As the committee is aware, we have provided the committee with an unredacted version of the whole-of-state business case, noting that a redacted version was publicly released in August 2025 on the Treasury website. As today's hearing is a public hearing, I note that some matters contained in the unredacted material are confidential or commercial-in-confidence at the request of TasNetworks, Marinus Link Pty Ltd, Hydro Tasmania, the Clean Energy Finance Corporation and the Australian Government. Where questions go to the specifics of those matters, I will be unable to answer in public unless the committee wishes to take those specific questions in camera, which is consistent with established parliamentary practice for confidential evidence.

The business case was completed in April 2025, with modelling inputs finalised by December 24. This was ahead of further regulatory, commercial and procurement information that became available prior to Cabinet's final investment decision.

The whole-of-state business case, therefore, did not make a recommendation, but instead provided detailed analytical support to government. As I was not the treasurer at the time the business case was completed or when the final investment decision was taken, I will be relying on support from Treasury officials to assist with detailed or historical matters as required. The government's FID was taken after considering not only the business case but also the recommendation of the Marinus Link Pty Ltd and TasNetworks boards, and the changed arrangements subsequently negotiated with the Australian Government, including the provision of a $346 million Commonwealth grant to TasNetworks. This grant, formalised through an amendment to the Federation Funding Agreement, is intended to reduce the non-concessional component of TasNetworks' regulated asset base, and therefore helps to mitigate transmission price impacts on Tasmanian customers.

Updated information, including the Project Marinus Final Investment Decision Assessment Report, a decision summary and the Expert Advisory Panel Report is available on ReCFIT's website. Following extensive technical, economic and regulatory assessment, the government took a positive FID on project Marinus in order to stimulate the Tasmanian economy, new jobs and investment, improve energy security and to facilitate improved financial outcomes for Hydro Tasmania, which will ultimately be returned to the state budget to help fund services like health and education.

The aim today is to assist the committee with the content, assumptions and findings of the whole-of-state business case and Treasury's analysis of its implications for government businesses, the state budget, energy markets and the broader economy. The intention is to answer questions within those boundaries and take technical or other matters on notice where appropriate.

Finally, I understand the committee was provided with a range of unredacted final investment decision and Marinus Link Pty Ltd shareholder documents by the Minister for Energy and Renewables. Questions regarding shareholder matters for Marinus Link Pty Ltd and the FID itself are therefore best directed to the acting Minister for Energy and Renewables, who will appear following my evidence. Thank you.

CHAIR - Thanks, Treasurer. To lead off, perhaps, there have been quite a few changes since the original business case was prepared, as I understand it, and the October 2024 evidence suggested that the project assessment relied on AEMO scenarios, progressive change, step change and a hydrogen-related scenario and associated modelling. The Deloitte modelling used for the whole-of-state business case is based on the AEMO draft 2024 ISP scenarios. So that's the background.

Have the core modelling scenarios been materially changed from what witnesses said they relied on in October 2024 and, if so, can you explain what has changed, why those changes were necessary, and provide a sensitivity showing how our conclusions shift if the scenarios are run without those adjustments?

Mr ABETZ - I think that's a great question for Mr Voss.

Mr VOSS - Treasurer, yes, you're right. We did a range of scenarios in the whole-of-state business case, as you are aware, so no Marinus, Marinus stage 1, Marinus stage 2. We looked at a range of demand profiles from AEMO using what we had available at the time, which was the 2024 draft integrated system plan from AEMO. That deals with a whole range of supply

and demand forecasts across the entire NEM, including Tasmania. We looked at some load-growth scenarios. We looked at hydrogen development, for example. We looked at contingent projects that TasNetworks might need to support those developments, and that load growth, obviously, included the hydro projects as well, but the base behind all that, as you say, was the AEMO 2024 ISP.

The document, the whole-of-state business case is a point-in-time document. We're very clear about that in the executive summary and throughout, and it was presented to the government in that light. As the Treasurer said, after the whole-of-state business case was presented, a range of additional information came from the various boards, from Hydro Tasmania as well. The government also did some further negotiation with the Australian Government, as the Treasurer says and as you're aware, around equity capping, for example, and also the $346 million grant.

That was the position as it was presented, and we haven't done - since then - an update with the AEMO ISP profiles. The decision has been made. The AEMO and ISP profiles are different and they were different in 2022, and they will be different again in 2028. They change quite a lot between each biennial release. I think we actually mentioned that in here as a risk or something to consider. They do change quite significantly, but again, that was the information the government had before them at the time they had to make the decision.

CHAIR - So you talked a bit about - but why were the changes made specifically?

Mr VOSS - So which changes were those, sorry?

CHAIR - The changes from the 2024 ISP.

Mr VOSS - Yes.

CHAIR - How does that change the picture for Tasmania, or doesn't it?

Mr VOSS - Compared to the most recent ISP, are you talking about?

CHAIR - Yes.

Mr VOSS - We haven't done the modelling for that. It did change, so it changed demand profiles, for example, was my recollection. They changed across the country; they changed their expectation around probabilities of demand profiles across the country, so - testing my memory here, it was well over a year ago now - I think the likelihood in the 2024 ISP of the so-called progressive change scenario and the step change scenario was about the same on probabilities, that AEMO, the Australian Energy Market Operator, had. It was about 35 per cent each, from memory, and then they had a green hydrogen superpower option which we didn't look at.

In fact, when they do these scenarios, they do a whole range of them and they pick the sort of most optimal development path out of those. I think there are well over a dozen that they actually have, ultimately, and then pick a range of them. The most recent update, again testing my memory, does show different demand profiles, as you'd expect because they do change every two years. We haven't done an update of the modelling since then. The

modellings are very complicated and an expensive exercise and the decision around final investment decision has been made. So, we haven't done an update since then.

CHAIR - Did anyone else want to follow up with that? Janie, did you want to ask about the Treasurer mentioned the 300 - sorry -

Mr BAYLEY - 346.

CHAIR - $346 million.

Ms FINLAY - Yes, thank you - 346. Hi, Treasurer - online - the $346 million amount negotiated and will go to TasNetworks, depending on how that's treated will have a material impact on the benefits to consumers. Can you outline for the committee your instructions to TasNetworks on how you expect them to treat and how to apply those funds over different parts of the business?

Mr ABETZ - I think that would be a question to be asked later to the minister - or Acting Minister for Energy. Is that right?

Ms FINLAY - Well, it's actually not an energy question, as such as a financial question. If you could.

Mr ABETZ - Yes, but the Minister for TasNetworks is not me.

Ms FINLAY - No, but it's a federal grant, and it's about financial implications. So, if you could make a comment, I would appreciate that.

Mr ABETZ - Or pass it on.

CHAIR - Perhaps if I can reframe a little bit, Treasurer. How do you expect the money to be received? Then, where will it go from there? Yes, we know what happened with the Mersey money, for example, how that was treated. This is a large lump sum, if you like.

Mr ABETZ - It is.

CHAIR - How would it be treated in a financial sense and how will we track that through the financial reporting?

Ms FINLAY - And over which part of the system will it be applied? Because depending on where the transmission impacts it's directed - connected customers or contracted customers - it will have a material difference to the consumer.

Mr VOSS - First thing I say, as the Treasurer said, these things are still being worked through and, ultimately, TasNetworks is working through these matters as well. I will just sort of preamble that this isn't confirmed, so to speak, but expectations. The federal financing agreement, with regard to this payment, I'm pretty sure is actually online.

CHAIR - It's quite a long document.

Mr VOSS - It's quite a long document. It has a timeframe of the delivery of the $346 million - my recollection is July 2029, which is around the timing of the commissioning of the NWTD. That's sort of the milestone. So, when the NWTD is built and it's commissioned, then the payment flows from the Commonwealth government. My expectation is it's going to come as a grant from the Commonwealth government to the state, like most payments are made to the state. In this case, the expectation would be that it would go to TasNetworks as a grant. Again, that's still got to be worked through.

CHAIR - As opposed to an equity transfer?

Mr VOSS - As opposed to an equity transfer. Part of the reason behind that is still being worked through with the AER, even in this circumstance, because this is a bit unusual. This is not something that happens frequently in regulated, massive transmission businesses around the country. The intention behind it is to reduce the regulated asset base, and this goes to Ms Finlay's question, so that all customers would benefit from that. How that works is the regulated asset base - again, don't quote me - but I would say for argument's sake, it's $2 billion. That $346 million will come off the regulated asset base. Therefore, when the AER does its standard regulatory calculations on the regulated asset base and applies a weighted average cost of capital to that, the number is lower than 2 billion - it's 1.7 billion or whatever the number is going to be. So therefore, the charge to customers - all customers: major industrials, mums and dads, businesses - will be lower as a result of that because the regulated asset base is smaller and therefore the weighted average cost of capital is applied to that. When it's applied to a smaller number, it's a smaller revenue requirement.

That's my expectation of how it's to happen. Again, I will caveat that they're still working through this with the AER because it's not something that's usual. I think it's going to be treated something like a standard customer contribution. But that's my understanding of how it will flow. It should be captured in the upcoming Budget because I do think it captures it in the very far out year of the forward estimate.

Mr BAYLEY - Just to be clear: across the whole regulated asset base, not just North West Transmission Developments.

Mr VOSS - Again, that is my understanding. It's to help customers more broadly.

CHAIR - TasNetworks confirmed that.

Mr ABETZ - I think the secretary -

Mr SWAIN -That was the exact point I was going to make. I think there has been discussion about if it were applied narrowly to the project because of the concessional finance, it would be a very limited benefit to customers. It's been applied in a way that will maximise the benefit to the Tasmanian customer.

Mr VOSS - That's correct.

Ms FINLAY - Thank you.

CHAIR - Being that the next pricing regulatory period for the AER is from 2029 to 2034, Treasurer, you did suggest that the funding wouldn't flow by way of grant to the state - to

TasNetworks- until 2029. Surely there will need to be some certainty if TasNetworks is going to be able to put it into their application to the AER for their regulated revenues in that pricing period?

Mr ABETZ - When are we anticipating that to be locked away? Because that's the big question.

Mr VOSS - Again, we're assuming the Commonwealth government will live up to its commitment. It's written in a public document and if it's a federation financing funding agreement. There's a date in there, as with all the other agreements that the state has entered into with regard to rail or whatever it might be, they're those types of documents. That documents online, the date is in there.

From recollection it was also included in the Commonwealth's mid year economic fiscal outlook. I'm pretty confident the number was also in MYEFO.

Ms FINLAY - Thank you. Could I ask a follow-up question?

CHAIR - Yes.

Ms FINLAY - These are two different things, but I'm interested to understand how they intersect. The policy position of government treasurer to neutralise any impact on increased transmission to major industrials - when and how will that be treated and how will that play into this maximising the benefit to customers.

Mr VOSS - Ms Finlay, just so I'm clear, you're asking about the government's policy commitment to shield direct transmission connected customers from the impacts of Project Marinus, yes?

Ms FINLAY - Yes.

Mr VOSS - Yes, that is a government policy commitment. We in Treasury are currently working with TasNetworks on the implementation of that. There are different ways it could be done, but TasNetworks has a direct relationship with those customers. Again, to be clear, the policy commitment is on direct transmission connected customers. That's more than just the big four major industrials everyone's familiar with, Nyrstar, Bell Bay Aluminium -

Ms FINLAY - It's about twelve?

Mr VOSS - Yes, it's about a dozen. Yes. They have those relationships. As I understand it, they send monthly bills to those customers. Rather than - sort of - it being done through the policy delivered through State Growth or otherwise - and we would need the information from TasNetworks to know what the value would need to be to offset the impact from the NWTD and Project Marinus because each of those major industrials, or the direct transmission connected customers contracts are quite different. The way their charges are done is quite different. It depends on a whole range of things around the types of assets they use and the amount of peak demand they have and it's complicated. It's not like a set amount, as I understand it, and it can vary over time. TasNetworks would have to provide us - as in us being the government, the information in any event to be able to make sure we offset the impact of Marinus on those customers.

We're working with TasNetworks about them managing that, but then it comes back to how it's being funded. Obviously, we're looking how that will be funded and that's being looked at as part of the budget process, but the government commitment is there.

CHAIR - Do we have any idea what ballpark figure we're looking at here to sort of equalise the playing field a bit there?

Mr VOSS - It varies over time.

CHAIR - Let's talk numbers.

Mr VOSS - Again, all to be confirmed because all these things are still to come.

CHAIR - Yes, I am asking within a range.

Mr VOSS - It changes quite a bit because Marinus, as you know, doesn't sort of happen until early 2030s. The main uplift from the actual Marinus Link cable itself doesn't happen till then and they don't start charging customers until then, even though they're in the construction period.

With regard to the NWTD and TasNetworks' project, they will start charging customers during the build phase. It starts next year 2026-27, but it's a small number and then it builds over time until it gets to the Marinus point.

Broadly next year, I think the number is under $2 million, for example, for the 2026-27 number. That sort of order, and then it builds up over time and then you can go back, I suppose, to the whole-of-state business case to have an indication of what the order of magnitude of the number is.

I think for the major industrials, for the four that we looked at in the whole-of-state business case, it was in the order of $20 million for Project Marinus transmission uplift.

CHAIR - In terms of how that could be funded, it appears from what Anton said, Treasurer, that it hasn't been determined yet. The options will be like a publicly funded CSO-type of arrangement or TasNetworks funding it within their own lack of profitability, which is highly unlikely. Hydro is under pressure at the moment. What are we likely to see and when are we likely to see this in the forward Estimates? TasNetworks starts charging soon.

Mr VOSS - The Budget's not done yet. It is subject to that. As you articulated, Ms Forrest, there are a range of ways of doing it. Treasury would always prefer a publicly funded transparent CSO and I think that's what the Treasurer is looking at from the budget perspective.

CHAIR - Out of the public account.

Mr VOSS - Yes, it has to be paid in some form or other.

CHAIR - Fully transparent.

Mr VOSS - There is a CSO framework. I believe that government is looking to bring in the second stage of the government business governance reforms that will include, for example, CSOs for state-owned companies. At the moment, the CSO framework applies strictly to government business enterprises, not state-owned companies. I understand this is not my realm - Gary, just jump in here - but my understanding is the second phase of those reforms are going to look at applying that same framework to the state-owned companies.

CHAIR - TasNetworks being a state-owned company as opposed to Hydro being a GBE.

Mr SWAIN - That's entirely right, though. Even though it's not a technical requirement, it would be in alignment with the government's own reforms to do it as a CSO. As a point of additional detail, the commitment was related to real increases directly attributable to the project. It's not a kind of open-ended commitment. It's got some quite specific parameters around it, and they will, in a timing sense, as Anton said, ramp up towards 2029-30. By the time the dollars are becoming significant, this will have been in the public domain for a number of years.

Mr VOSS - I would also add that the grant obviously helps, which comes in 2029-30, so that also assists.

Ms FINLAY - That was the purpose of my question. What's the connection between that policy position and the grant in one supporting the other? Are they then connected in terms of the calculations to determine the benefit to customers?

Mr VOSS - Yes, the grant is intended to reduce prices for customers as a result of the government going ahead with Project Marinus. They are separate things, but they're related, Ms Finlay. The government's commitment is to offset the cost of Project Marinus on direct-transmission-connected customers as part of the arrangements -

CHAIR - To everyone, the $346 million?

Mr VOSS - Yes, as part of the arrangements in making the FID decision, the $346 million applies to all customers. There will be a benefit from that $346 million to offset costs from Marinus to the major industrials. That will be taken into account. There will be a netting out and it's an ongoing thing. They're related in that sense, but they're not -

Ms FINLAY - I'm not a maths genius, so take with humour the question that I ask: if the government's policy was treated to the direct-connected customers first so there was a neutralising of that increase and the $346 million was applied, would that see a greater benefit to household and small business customers? Is there a difference in the outcome of the timing of the treatments?

Mr VOSS - I think -

Ms FINLAY - Could there be?

CHAIR - Do you understand the question, Anton?

Mr VOSS - I think I understand the question. There's an impact on all customers from the $346 million grant. It is related directly as a result of the decision to go ahead with Project

Marinus. The benefit to direct-connected customers will be captured from the $346 million grant. It will be captured as part of the decision and the payment from the Budget, for example, the CSO. They're all in the same thing. They won't get a double hit, if that's what you're asking, Ms Finlay. We won't insulate them from Project Marinus in that the $346 million comes over the top and we take some more off because then they're having actually more benefit than otherwise would have been the case. They are connected -

Ms FINLAY - In fact, my question was in reverse. If we applied the government's policy first, would there be a greater benefit to non-direct-connected customers?

Mr VOSS - It's not really a first or second thing. The way it will be dealt with, I believe, is that the knowledge that the $346 million grant is coming will be captured as part of the offset for Project Marinus and the additional payment that will need to be made by the government to offset the impact on those major customers. It will be captured in the maths for want of a better word.

Mr SWAIN - And just to add, and the calculation is effectively year-by-year.

Mr VOSS - Yes.

Mr SWAIN - That's how they both net out. They will be working in different directions on a yearly basis. The other thing I should have said before, if I could just add to the record, is its existing direct-connect customers. So, this is on the basis that anybody who was a new load coming into Tasmania would be fully aware of the environment that they'd be walking into, so the policy doesn't need to extend to those potential customers.

CHAIR - That is a CSO policy.

Mr SWAIN - Yes, but it's very specific. It's existing direct-connect, real impacts associated directly with Marinus.

Mr BAYLEY - A similar conversation but bringing it down to the household level. In October we heard evidence about the household benefits of Marinus and there was an exchange about how those figures are often quoted without the transmission costs, which is where we know a lot of the increases are going to come, and the Deloitte report attached to the whole-of-state business case explicitly warned that wholesale prices are not retail prices and that that report didn't actually model retail prices.

The heart of this I'm trying to get to is where the public statements about consumer savings are consistent with what the whole-of-state business case actually models and what it doesn't model and show. The question really is, can you set out the method used in the whole-of-state business case to translate wholesale modelling outputs into a net bill impact for Tasmanian households once Marinus and North West Transmission Developments charges are incorporated, plus whatever offsets are planned - and confirm whether that method differs from what was relied on for the hearing in a dollar-per-customer kind of context in October last year, which you may not have at your fingertips, I presume.

Mr VOSS - What hearing's that one?

Mr BAYLEY - It was in October last year before the committee with, I think it was with Treasury staff and the minister and the Treasurer. The real question is whether there have been any changes to the way the modelling has been done. The Deloitte report did demonstrate under one scenario, Marinus Link 1 versus no Marinus Link, a 59 per cent increase in wholesale prices. Can you outline whether there have been any sort of changes in the context of or review of that work?

Mr VOSS - We haven't. Again, it's a bit like Ms Forrest's question before: we don't have a redone modelling. We have to engage external consultants for that and it's a very expensive and complicated exercise. But I don't think the fundamentals are any different, and if the committee will indulge me, this stuff is complicated and there's a lot of moving parts.

CHAIR - It's all the more reason to try to explain it to people.

Mr VOSS - Yes, and so I will try to go through this in pieces.

The first thing I'd say is to stress again that regulated customers, so that's households and small business customers, the pricing that they currently pay and have paid for many years for wholesale energy, so the price of energy generated largely by Hydro Tasmania, but not exclusively now, references the price in Victoria. That has been the case for a very long time and is still the case. There's a whole range of reasons for that.

If you step back - there's a couple of markets, I suppose. We will start with wholesale; I will do it in pieces if I can. There's like the wholesale energy, there's distribution, which is the small poles and wires down your street. There's the transmission, which is the big stuff going over the farmers land, and then there's this other stuff at the end: retail margins and various other bits. All those add up to the bill.

Mr BAYLEY - And that's the price stack, effectively?

Mr VOSS - Yes, the price stack. Let's start with the wholesale energy bit because that's sort of the more complicated bit. As I said, the wholesale energy price has for many years and continues to be linked to the price in Victoria. We are connected to Victoria through Basslink. The price that the Tasmanian economic regulator looks at - and it's done independently, there's a model which is all covered on the regulator's website about how they work those prices out - it does take some Tasmanian conditions into account, for example, around dam levels and various other things.

The regulator works through a wholesale price for Tasmania largely based on the Victorian market, and just stepping back from that, if you actually look at spot prices, so prices - I will go back a little bit if I can - and forgive me if the committee knows this already: with regard to the wholesale prices that go into mums and dads' prices and small business regulated prices, they look at contract prices, they look at forward prices that are in the market - so the price for the next year as it's currently trading, that's a forward price, a contract price.

The other one that is often talked about is the spot price. That's the price that's happening right now. I've actually just pulled it up because you can pull it all up on the AEMO website. The spot price in Tasmania, as we speak, is $88.12. The generators around the

country - Victoria is 62 - the generators around the country put in bids continuously, 24 hours a day, seven days a week, and the price changes every five minutes. That's spot price.

In theory, the spot price over time will reflect the forward contract prices, so when they're making the market - the price in a year's time from now will be $88, they're predicting on the basis of the average of all the spot prices every five minutes, 24 hours a day, 365 days a year; in theory, those two things should largely equate. So the wholesale spot price, which is often talked about, and no doubt you're going to talk to me about arbitrage at some point, maybe you're not, there's a range of things that sit behind the energy trading that Hydro does and all generators do, and there are complications between contracts that they strike with major industrial customers, contracts they strike with retailers, hedging they might do, and then the spot price, which is the thing that's going on, which is really how the generators are actually paid through the Australian Energy Market Operator.

CHAIR - So - and to be clear: what price have we paid?

Mr VOSS - We being -

CHAIR - Tasmania, Hydro. What price do we pay? Do we pay the Tasmanian regional reference price or the Victorian regional reference price?

Mr VOSS - They are paid the Tasmanian regional reference price in a spot sense, but what actually happens, what their actual price outcome might be, will be dependent on what their full book, energy book looks like. You've got to add up all the contracts that they've struck with major industrial customers; you've got to add up all the hedging they've done to offset some of these things, because the prices go really high; they've got the wholesale energy price that has been given to them by the regulator, who, as I said, they go through and they have a look at them. All those prices all sort of sit in an energy - but they got like a dozen traders, I think, at Hydro who deal with this stuff. It's highly complicated. Essentially, it's just like any financial instrument. It's no different to, you know, silver futures or oil prices; it's a financial instrument fundamentally.

So just stepping back a bit: the wholesale energy modelling that we did for the whole-of-state business case -

Mr BAYLEY - This is the Deloitte report?

Mr VOSS - The Deloitte report. Essentially we tried to - the modelling, it's a PLEXOS-based model it's called, it's a particular brand that most in the market use - essentially where it goes is it goes on a whole range of assumptions, it tries and calculates, based on load profiles, supply in the market, what these prices will be going forward. So in the case of the whole-of-state business case we went 25 years forward and in this document, which is fully publicly available, we have in here the expectations around wholesale prices -

Mr ABETZ - Just for the *Hansard*, what document is that?

Mr VOSS - This is the Deloitte Marinus Link Electricity Market Modelling Final Report, which is on the Treasury website if people are enthusiastic. It tries to model what forward prices are going to be going, which we did. So, it's very long on assumptions and Hydro does this modelling as well. A whole range of market participants do this modelling to try to work out

what's going to happen with prices going forward. The wholesale price - going back to the start, the wholesale price in Tasmania that goes to mums and dads and small business, set by the regulator, relates to prices in Victoria and, as I said, the challenge is there is a range of different prices you look at, but it basically it reverts to prices in Victoria. So that's been the case for many years and remains to be the case.

So then going back to what our modelling says, and this is consistent with modelling I've seen from Hydro, third parties, some public and some confidential: over time, as the NEM transitions from coal to more renewables, the wholesale energy price across the National Electricity Market - so Tas, Vic, Queensland, South Australia, New South Wales - will go up. It will go up in nominal terms anyway because of inflation, but more broadly, it will go up because you are pulling a lot of that coal out of the system and they've got to replace it with new stuff. So that means that over time the tide rises. So, absolute prices in the NEM will go up, and that's what our modelling shows, and because Tasmania is linked to Victoria, and because regulated prices reference Victoria, and market prices reference Victoria, the overall energy price for wholesale energy, the price that generators receive, will go up over time.

Just to give you, again, the scale: Yallourn in Victoria is a - that coal plant is over a gigawatt, so that's more than Tasmania is currently using today. So, right now, in the last five minutes, we used 766 megawatts of energy across the state. That's all the major industrials, mums and dads, business, used 766 megawatts five minutes ago; Yallourn is over a gigawatt - so, that's in Victoria; and then Eraring in New South Wales is 2.9 gigawatts coal-fired. Those plants are running 24/7, 365 days a year. They are massive coal-fired power plants. They're coming out because of all the issues around climate and carbon, et cetera. Those things are going to be expensive to replace, and they've got to come up with batteries, renewables - Hydro's going to participate through Marinus Link. That's why electricity prices in the NEM over time - in the modelling, at least - in the modelling on various assumptions, will rise progressively. So, yes -

CHAIR - The wholesale price?

Mr VOSS - Wholesale prices. Then to that you add transmission prices, distribution prices and the other small bits for retail margin, et cetera.

Mr BAYLEY - But this report you're quoting that was informing the whole-of-state business case, I mean, it has a Marinus Link, one cable versus - relative to no Marinus Link in a volume-weighted average price, which shows that there's going to be a 59 per cent increase in that wholesale price in Tasmania versus a 7 per cent decrease in Victoria. That's what it shows on page 20, as I understand it.

Under a no-Marinus Link situation Tasmania experiences a moderate price increase relative to Victoria. This is associated with minimal load growth and limited exposure to market volatility in mainland NEM states. Relative to no Marinus Link, the Marinus Link one-cable scenario results in relatively higher Tasmanian prices in line with Victorian price trends due to greater exposure to mainland NEM market dynamics from 2030 onwards. So, given that, wholesale prices plus local transmission costs that get laid on top on the stack, plus whatever else, how is it that the government has anchored the whole argument around Marinus on it reducing power prices?

Mr VOSS - It goes back to that Victorian number. So, see that Victoria number's lower, that you're quoting, minus-$11 megawatt hour, as modelled, or whatever the period that was on average. Tasmanian prices reference Victorian prices. The regulator goes and looks at Victorian prices. So, if the Victorian price is lower by $11 a megawatt hour, then the Tasmanian price will be lower because it references that price. The Tasmanian price in here, which you're looking at, which is the no-Marinus price, if we don't do it - and this gets a little bit complicated when we go through it - the reason why it goes up, no Marinus versus Marinus 1, in a wholesale sense, is, as you say, it's the connection between Tasmania and Victoria. Just economic theory would show you if you get more interconnection, and you have less constraints, then the price will rise going forward. The Tasmanian price in this circumstance also relates to how much generation is built in Tasmania. If you go to another section of -

Mr BAYLEY - Forgive me, but it says here that there's a $40-a-megawatt hour, or 59 per cent increase, relative to no Marinus.

Mr VOSS - For the wholesale spot price, not the contract price. So, that Tasmanian price -

CHAIR - Doesn't the spot price inform the wholesale price 12 months out? That's what you were saying earlier.

Mr VOSS - Again, just going back to the start: the Victorian price is the thing we reference right now, have done for years and will continue to do; not the Tasmanian price. The Victorian price will be lower because when you connect Marinus up, Hydro will be able to send energy to Victoria during periods when the price is particularly high. I think the cap price in the NEM is around $16,000 a megawatt hour. So, when there's really tight supply and really high demand, Hydro will be able to step in, send energy north to Victoria and keep those prices - the peaks of those prices - lower, which is where that minus-$11 number's coming from.

Mr BAYLEY - So, where does the plus-$40 for Tasmania come from?

Mr VOSS - That is relative to us not doing Marinus 1 and, again, this - I've got to take you to another slide, Mr Bayley, this is important. The two pages before that we've got -

Mr ABETZ - Does it have a page number?

Mr VOSS - It has 18 and 19.

Mr BAYLEY - Page 18.

Mr VOSS - This talks about installed capacity between no Marinus and Marinus 1. You can see in the no-Marinus scenario, you still get - in the modelling - quite a lot of renewable generation built from Tasmania.

The reason the modelling does that is because in absolute - sorry, not absolute terms - from a capacity-factor perspective and from - say looking at things like the CSIRO GenCost report - renewable energy - wind in particular in Tasmania - is cheaper to build - not in a concrete and people sense, but from a commercial sense - it's cheaper to build because the wind

farms are particularly efficient down here versus say Victoria and New South Wales and some other parts.

The modelling builds wind in Tasmania even if we don't do Marinus 1. Now, it doesn't build as much wind as Marinus 1. Marinus 1 facilitates much more wind than otherwise would have been the case, but some is still built. We also have some existing uplift from Hydro where they make a bit more generation in the state, as they're going to do some refurbs of their assets, some other bits and pieces.

You can see that there's additional capacity built in Tasmania even when Marinus isn't built. What happens in that circumstance - and I will take you to page 19 - you can see that on aggregate in an annual basis, in this modelling, Tasmania is pretty much on export the entire time. We're exporting energy on average consistently.

Even in a no-Marinus world - in a no-Marinus world we've only got Basslink, which is capacity constrained to basically 500 megawatts. What happens under the modelling is that some wind is built in Tasmania, because it's cheaper to build wind in Tasmania than it is in Victoria. You get more generation on-island, it's all exported, and what happens because of the constraint is that on average the price in Tasmania, in those circumstances in the modelling the spot price in Tasmania is lower because there's a lot of energy in Tasmania and we can't quite get it off island.

That's why you see on page 20 that you referenced - and the price differential. You have essentially excess capacity in the state and that - in an only-Basslink scenario, no-Marinus Link scenario, drives prices down here.

As we highlight in the whole-of-state business case, this is all modelling and in practice what's happening is that the renewable generators in Tasmania are waiting until Marinus is built, before they commit to the state; otherwise you'd argue we have it already. If you actually look at the price in the modelling, it's pretty low. In practice you'd run into - we also say this in the business case - this doesn't take into account commercial realities, planning realities, environmental realities. What would actually happen in practice is you wouldn't get that generation built in the state in a no-Marinus world.

Therefore, you wouldn't see wholesale prices in Tasmania depress by as much as this. That's what the modelling says. Again, I go back to the point, and I know where you're coming from. At the end of the day, the Tasmanian price references the Victorian price and the Victorian price is lower because Marinus helps keep prices lower on the mainland.

I'm just going back to the start. The challenge is in absolute terms, energy prices in the NEM will rise, but building of Marinus - given we're still related to the Victorian price, will keep Victorian prices a bit lower. We reference Victorian prices, so prices in a wholesale sense in Tasmania will be lower under the current policy frameworks. That's very long and complicated and I probably didn't -

Mr BAYLEY - Even though it says here, table one average differences in annual wholesale electricity prices between Marinus Link 1 and no Marinus Link from 2031 to 2050, Tasmania plus 40 megawatt hours, a 59 per cent increase relative to no-Marinus Link scenario?

Mr VOSS - As I said, that is in the circumstance of in the modelling more generation built in Tasmania in a no-Marinus world, it's on permanent export all the time, in the modelling, you get a lot of energy in the state, you have a lot of probably spill in the hydro plant, and prices are depressed because there's a lot of energy in the state that we can't get off island.

Again, the modelling assumes that some wind is built here. In practice what would happen is you wouldn't see the wind built and you wouldn't get this outcome. In any event, it doesn't matter, because we reference Victorian prices. Those are Tasmanian spot prices. They aren't the Tasmanian price that Tasmanians are getting. You've got to look at the Victorian price to understand what Tasmanians get. I know that's complicated, but that's the world we're in.

I think this is the challenge. The challenge with this stuff is it's like - and I've been doing this for years. I don't know why I've ended up being in energy, but I am. It is complicated.

CHAIR - It's a little bit counter-intuitive.

Mr VOSS - It is and it's complicated and sometimes people say there's something else going on or there's some sort of conspiracy thing. The problem is it's just complicated and people aren't trying to cover stuff up. There are thousands of pages of material out there to look at, and it takes a long time to go through. I went through the whole-of-state business case last night and the document is 400 pages. There's a lot there, but it is difficult.

Mr BAYLEY - I still can't reconcile what you're telling me with the graph that says a 59 per cent increase in wholesale prices relative to no Marinus Link.

Mr SWAIN - At an intuitive level, I will have a go. What you're saying effectively is Tasmania is additional supply into Victoria. The Tasmanian supply is existing capital, it's not new capital. If we are displacing new capital that would be high cost with capital that is written down and existing and we're displacing either a fuel cost that has a dollar number against it or potentially renewables with a fuel cost here that is zero dollars but has a foregone value cost, so, intuitively, more supply is coming into Victoria with written down capital and zero fuel costs, which is supply increases, demand stays the same, price goes down in Victoria and we're linked to Victorian prices, so effectively what we're doing is displacing high-cost replacement supply in Victoria.

Mr VOSS - Again, you can see that. That's in the modelling as well. That's in page 18.

CHAIR - While we're on this then can we talk about the inter-regional revenues and the process by which Hydro makes the claims that it will sell into a high-priced market, et cetera and how the inter-regional revenues will be dealt with, acknowledging that up until 1 July last year it had an agreement with Basslink. Now it does not. There's no agreement, no regulation, so those residues or the arbitrage benefits go to APA. After 1 July this year, one presumes that the regulation will occur as planned or as expected. It's not done, but let's presume it does, then the residues will then go to the auction, but won't that be after the regulated revenue requirement is taken out for APA? The residual pool is less.

Mr VOSS - I will have a crack at answering this. This isn't whole-of-state business case specific. You might want to follow up. You could ask TasNetworks some questions on this too.

CHAIR - They weren't real sure either. It's probably more for Hydro in some respects.

Mr VOSS - I think they're appearing before you in March. I did listen to you yesterday, Chair, in the TasNetworks, I caught bits of it. Again, with that caveat, there's two pieces going on here. One is the revenue requirement for the future regulated Basslink, I think you mentioned a number about $100 million, $107 million?

CHAIR - I think $170 million was the number.

Mr VOSS - If that goes ahead. It's important to point out that in that circumstance, as proposed by APA, Victorians pay 75 per cent of that and Tasmanians pay 25 per cent of it. Under the former arrangement you discussed, Tasmanians, through Hydro, were paying for all of it. It wasn't regulated, but they were paying for all the costs of the cables. Now we have shifted three-quarters of the cost to Victorians. That's the first.

CHAIR - It doesn't include the Basslink facility swap fee. That's still live. But anyway, let's not complicate any further.

Mr VOSS - That's a separate issue with Hydro. That's another one of those wonderful financial contracts. That's the first thing I'd note. There's a revenue requirement that will be collected from Tasmanian customers. The incidence formerly fell on Hydro, but it's a lesser amount now for Tasmania as a whole, Tasmanian Inc, because Victoria is meeting 75 per cent of that cost. That's the first part, and that's where it gets a bit complicated. There's a number of other moving parts around this. I think I have a broad understanding of this. There are intra-regional charges that are charged to Victorian customers and Tasmanian customers for the use of the networks on each jurisdiction. For example, if we're exporting energy to Victoria, by definition we're using not only the Basslink cable, we are also using the on-island transmission network, which Tasmanians paid for, to give some energy to Victoria. So there's an intra-regional charge that's charged to Victorians for the use of our network and vice versa. If we're importing, Victoria will charge us. It's called the Modified Load Export Charge - MLEC.

They're part of the mix of charges and then, as you alluded to, on top of that, there's then the Interregional Revenue Auctions held by AEMO. Those have never been held in Tasmania before, but are routinely held on the mainland for interconnectors in the other jurisdictions across New South Wales, Victoria and South Australia. We don't know what the outcomes of those are going to be because we've never had one. So TasNetworks is going through an exercise of trying to forecast what those inter-regional revenue costs will be and also the Modified Load Export Charge costs that they will charge Victoria. VicGrid has gone through a similar process as to what to charge Tasmanians.

You have to capture all of that - so the $27 million or whatever the number is for the Tasmanian charge from the regulator to pay APA for the cable under a regulated framework - that's part of that $106 million, our 25 per cent, it's about $27 million - and then there are other things and those things combined will be what the charge is to Tasmanian customers.

TasNetworks is working through a process at the moment trying to forecast what those are. They have to forecast those in advance of 2026-27. Once they work out what those are, we will have an indication then of what the impact of Basslink will be on customers. But until those are locked down - and they haven't locked them down yet, those two other charges - that's what the net impact will be to the state - to all customers.

Again, just like in the whole-of-state business case, the main thing we're - the government's watching, we're watching and ReCFIT will be watching - is: 'What is the impact on the major industrials?' - particularly because they're a disproportionately large part of the transmission cost because they use most of the transmission network in the state. For mum and dad, even if it was the full $27 million, which it won't be, there will be offsets and it will be less than that. It's not that material - it's spread over a lot of customers.

CHAIR - As I said to TasNetworks yesterday, if there are negative residues from the Coordinating Network Service Provider - if they are that entity -

Mr VOSS - Yes, which they are highly likely to be.

CHAIR - Yes, one would presume, then they bear that cost - because you can have positive and negative residues - when there are other costs that are taken, as you've described, when I hear Hydro say they're going to make a lot of money that can help the budget situation, based on participating in the auction which AEMO runs when there's risk of negative residues, there is no benefit to them.

Mr VOSS - What do you mean by negative residues?

CHAIR - It's negative rather than a positive result across the link.

Mr SWAIN - A net cost to Tasmanians.

CHAIR - Yes, a net cost to Tasmanians.

Mr VOSS - Again, I think they're working through this as well, they will be bidding on two things. There's both export residues and import residues, so they go both ways.

CHAIR - For example, how you could have a negative residue - if, for some reason, you had to sell the counter-intuitive way, so you're selling -

Mr VOSS - Are you talking about counter-price flows?

CHAIR - Yes, that's right. In that case, there'd be negative residues.

Mr VOSS - Again, I could be wrong - and this is sort of again outside of the whole-of-state business case - but negative - counter-price flows are uncommon. In the grand scheme of things, they will be part of the consideration, but they're not a material consideration.

Counter-price flows do happen and, for the committee's benefit, counter-price flows right now are $62 in Victoria and $88 in Tasmania. You think energy would flow from Victoria to Tasmania because the price in Tasmania is higher. It could be - because of other technical reasons, another thing that Hydro potentially can benefit from - so FCAS, Frequently Control Ancillary Service -

CHAIR - Which is not a big part of their business.

Mr VOSS - No, but similarly. Sometimes those things get in such an *extremus*, you can actually get a weird result where you get energy flowing the wrong way where it actually flows from a high-price region to a low-price region in a spot energy sense because of some of these ancillary services driving that behaviour, but that's pretty uncommon. So, I wouldn't have thought that as a material issue.

CHAIR - We're getting bogged down in this. But there's a new rule change, the loop rule, to try to smooth this out because clearly it is an issue; otherwise why would they do that? Anyway, that's a rhetorical question.

Mr VOSS - I think it's more around the challenge of practicalities. I don't think that's an issue. It's pretty infrequent. I don't think that will be an issue from a Hydro profit perspective.

CHAIR - It's a question for Hydro. I will go to them. Did anyone else want to follow up with any of those? I might just move on then. Going back to the whole-of-state business case, your comfort zone, Anton.

Mr VOSS - It's not really. None of it is my comfort zone.

CHAIR - Going back to the previous hearings, there was evidence presented that emphasised the net benefits are positive even if some Hydro projects such as Tarraleah don't proceed while also linking project Marinus to the North West Transmission Developments plus Hydro augmentations later - Cethana for example.

So how dependent are the claim benefits on associated projects that are not Marinus Link itself, like Hydro upgrades, pumped hydro, potentially new large industrial load and new wind? Because one of the presumptions of the Marinus business case was that 800 megawatts of renewable generation that would be unlocked, for want of a better word, because of it.

I just want to understand if you can separate the benefits.

Mr VOSS - I can, if Treasurer, you're still comfortable with me to keep going on.

Mr ABETZ - Exceptionally comfortable.

Mr VOSS - And circling back to the Hydro profitability question, which I think is what you question is. Look, we're pretty clear in the whole-of-state business case. The benefit to Hydro comes from, and you've got the unredacted version, but it's even clear in the redacted version. The benefit to Hydro in a profitability sense comes from their existing kit, their existing assets.

CHAIR - They would still require quite a bit of maintenance there. It's old kit.

Mr VOSS - They will require in all circumstances: with Marinus or without.

CHAIR - Yes, regardless. I wouldn't dispute that.

Mr VOSS - That's where the uplift in trading revenue comes from; it's their existing stuff. The reason why Hydro is very well positioned in the changing NEM environment is because of the nature of their assets, the changes as to how the NEM's going to operate probably

going forward. This is mentioned - I think - you've got the rising tide of just general electricity prices, but the reality of it's going to be more volatile. Our modelling shows it's going to be more volatile. It's consistent with other modelling. I've seen Hydro's modelling as well, and Hydro can trade the volatility. It's the day-to-day volatility is really where they make lots of benefit and that's using their existing assets.

We've done our modelling for the whole-of-state business case. That's where the profit uplifts come from. It's from the existing kit. The challenge with the Tarraleah project, well, (a) they've got an issue there because they've got to do something because it's old as we all know. I think some of you may have visited it.

CHAIR - It's had failures in the canal and all that.

Mr VOSS - And then Cethana is obviously a different project again and the intention behind it is to benefit from the volatility as well. There's a whole pumping, you know, pumping prices are low and generating prices are high. But the challenge with those two projects is they have to build them and it's the same around the rest of the NEM.

So when you build, you build batteries or you build new solar or you build new wind farms, you still, and this is the reason prices go up, you have to build this stuff. At the moment it doesn't exist and it's costly, obviously. So that impacts on the business cases of those projects because they've got to take into account the build cost, the debt, et cetera to do it. And so the big benefit Hydro's got is we've got these ideally positioned existing hydro-generation assets which are already built and the problem at the moment is they can't get the energy off-island because Basslink constrains them from doing so because they can only do 500 megawatts.

So to your question around the projects versus the existing stuff, we showed in the whole-of-state business case in our modelling at least - and Hydro will have different modelling, et cetera, and it's not to in any way downplay the, as I said, you know Tarraleah is a challenging one because something's got to happen there and Cethana is a different thing again; but most - the vast bulk of the uplift comes from their existing kit, because they don't have to build anything. I described it -

CHAIR - If we look at percentages then, like the benefits to Marinus Link interconnector alone, the North West Transmission Developments and then Hydro, predominantly with augmentation like the Tarraleah and Cethana projects, is there a percentage of benefit to each of those?

Mr VOSS - I don't know if you can break - I mean the Marinus Link and the NWTD are essentially costs, so it's a bit like part of the project. They are costs to facilitate, in essence, that benefit that Hydro gets, but the costs are - as you know, and you would have seen because you've got the unredacted - the cost of those transmission projects, relative to them being built in a normal regulatory framework or being built by the private sector, even being built by TasNetworks under their current normal regulatory - are significantly reduced because of the nature of the - particularly, the low cost of debt. I will just -

Mr BAYLEY - The concessional finance.

Mr VOSS - Yes, I will just stress here again: the Treasurer made a comment in his opening statement around confidentiality. The Clean Energy Finance Corporation is very sensitive on the debt and the interest costs.

CHAIR - Yes, I understand that.

Mr VOSS - So I won't be going into those, but you have seen them, and suffice to say, they are very low rates of interest on that debt, and the projects are quite highly geared as well, so there's a lot more debt than would usually be the case. If you think back on the timing of this, the circumstances are that when these deals are being negotiated between the governments, we had come out of COVID and, as I think we all are aware, interest rates were extremely low through that period. I think if we went to renegotiate this deal or do a different deal again today, if you were starting from scratch, I don't think you'd see those interest rates again. The reason why - going back to your question - at the end of the day, the NWTD and Marinus Link are costs. Marinus Link, again, broadly 75 per cent is being paid for by Victorians. We obviously paid for the NWTD, but the NWTD has got very, very low concessional finance, which keeps -

CHAIR - Operating costs, you're talking about there?

Mr VOSS - Yes. It's correct. Also, that ultimately pays the debt down; they have to pay the debt back to the CEFC, so that's all captured in the numbers. So they are the costs of doing it. Then the upside, potentially - again, I will stress modelling, volatility, we spent a lot of time in the whole-of-state business case - you'd expect Treasury to do these things, to talk about risks and technology risks and sovereign risks and all those things, but nevertheless, Hydro seems very well positioned in the NEM going forward. That's where the financial benefit comes from, and those two other pieces you referred to, the NWTD and Marinus Link, they are a cost, but they are, to Tasmanians, very discounted costs than would otherwise be the case.

Mr SWAIN - Without talking to it, but there is the waterfall diagram that's in the whole-of-state business case - really tells the story in a single diagram, and that shows the relative contribution of the different projects - Marinus 1 versus subsequent projects. For all the reasons just articulated, it shows overwhelmingly that Marinus 1 is the beneficiary of that existing installed capacity that doesn't have to be built. So, that is a one-off benefit, it can't be attributed -

CHAIR - But it was also supposed to unlock a 400 or 800 - I can't remember how many megawatts was supposed to unlock. The whole-of-state business case was sort of contingent - expected that and -

Mr VOSS - Additional generation is modelled.

CHAIR - Yes, additional new generation.

Mr SWAIN - Yes, that's true, and it's part of what enables - that is an enabler for Hydro to trade more aggressively into the mainland to realise the benefits as well. It changes the dynamic for Hydro from - historically they would have had a lower incentive to welcome other generation into the state than they would under this scenario. So it also potentially -

CHAIR - Because of the constraints of Basslink?

Mr SWAIN - Well, because if there's more generation on-island, they're more able under their fixed water supply, or largely fixed water supply, to trade aggressively into the mainland. So it also supports an evolution of the energy market in Tasmania to broaden competition and away from just hydro so it's also changing the strategic dynamic in Tasmania. Previously trying to invest in Tasmania was always going to be challenging when you are facing a competitor who has a zero-fuel cost. Now, Hydro still has a zero-fuel cost, but they also get a - they've got a significant commercial incentive to want to maintain capacity to trade.

Mr VOSS - Can I just - going exactly to your question, in your copy, in the unredacted copy, we have in the Hydro chapter, pages 293 and 297, we have waterfall charts that answer your question. You can see how much is the existing portfolio and again, this is our modelling, Hydro has different modelling, and you can see that Tarraleah -

CHAIR - Was this provided by Hydro or done by Treasury? It's a bit unclear as to what was provided by Hydro and included.

Mr VOSS - In the modelling - so we got modelling from Hydro, it had 16 different scenarios, and we went through a range of those. We also did test it with Deloitte as to whether those revenues and flows were reasonable. I think we also have a - we do, in fact, we have another chart in chapter 8, in the Hydro section talking about - find it for you - where those landed. There is quite a large spread, and there you go, figure 8.34. You can see there the sort of the range that - Hydro's different 16 models, and then we have also the modelling that we did through Deloitte, to see - and basically the Deloitte stuff falls within the range of the Hydro stuff. I would also point out, to my recollection, Hydro's modelling included - the stuff that we got from Hydro included, I think, four scenarios from external consultants as well, because I think the board wanted to similarly test the Hydro modelling.

Mr BAYLEY - That's the generation side. What about the load side? The modelling appears to rely heavily on, kind of, new-load assumptions. Deloitte describes a progressive, adjusted approach that keeps Tasmania's major industrial load at a step-change levels, and there's assumptions in there around a 400 megawatt hydrogen plant. Of course, there's significant uncertainty about at least one of our major industrials, and hydrogen keeps sort of evaporating, let's say. What's the evidentiary basis for the industrial and hydrogen load assumptions, and what happens to bill impacts and net economic benefits if that load arrives later, or not at all, or in different volumes than has been modelled? Is that something that's countenanced specifically in the whole-of-state business case or the attachments that we can look at?

Mr VOSS - We do, as I said - one of the challenges we had with this exercise is trying to decide on the scenarios, because it's not - I think we had no Marinus, Marinus 1, Marinus 2; We have three different AEMO ISP load profiles. We include - and what we tried to do was capture things around government policy at the time. Hydrogen was obviously part of government - looking at Bell Bay and there's - with regards to the AEMO ISPs, as I said, they had a so-called step change - that's in the Deloitte - the step-change profile, which included a large uplift in demand for Tasmania. Again, we didn't come up with the demand profiles, that came from the Australian Energy Market Operator for Tasmania. The step change - this is on page 11, public document, Deloitte modelling.

Those incorporated significant uplifts in demand, and so we sort of use that as an example of what hydrogen plant could be captured in that. That was captured in there, but we also did

some other scenarios where there wasn't a hydrogen plant. We did explicitly not model a major industrial leaving, mainly because it was just - the problem you run into is there are so many scenarios that - as I said, they're costly and take lots of time. At the time that was one of those discussions - decisions we had to make about 'Do we model a major industrial leaving?', and we chose not to. As I said, multiple scenarios we did based on the AEMO ISP to try to capture different states of the world.

Mr BAYLEY - What would your expectation be, though, if we did lose a major industrial and a big new load, 400 megawatts of hydrogen didn't arrive? What's your - what would be your expectation of impact on bills and broader economic activity?

Mr VOSS - In the case of - I think the second one where hydrogen doesn't arrive, we do try to capture that. That's one of the sort of progressive change scenarios, so that's modelled. The other thing, if you don't have hydrogen, you don't include contingent projects up to George Town, you don't need to do the additional transmission work that's required. So that keeps prices lower in a transmission sense, at least. We also captured that in the economic modelling, what that looks like, some of the step change versus the non-step change, hydrogen coming, not hydrogen coming. We try to capture that in GSP and exports and that's all captured in the economic chapter in the CG modelling.

I think your second question on a major industrial leaving - we didn't model that. I can't really comment on what that would specifically do for the pricing, other than to say that potentially more supply on-island would have - from a generic perspective - more supply on-island would - if you can't export it, would probably - more supply would reduce less demand. I should rephrase that. Same supply, less demand, because a major industrial has left. You'd think all other things being equal, prices would be suppressed.

We didn't explicitly model that. I think one of the things that Marinus does provide for the government - and we did mention this in the whole-of-state business case - it provides optionality. The reality is people know the major industrials are pretty small. They're old plant, they're requiring significant capital upgrades. They are price-takers from both their input cost - the ore they bring in and the output they send.

The challenges of major industrials have been evident for many years. What Marinus Link does do is it does provide some options for Hydro in the circumstance where demand falls on-island. In fact, when Basslink was first commissioned, if you go back and have a look at the reasoning why they did Basslink, one of the reasons was that if a major industrial left, then Hydro needs to have an option on what to do with demand on-island if they can't attract a new industry to the island because that's obviously the other alternative. You get something new that comes in and uses that energy.

Mr SWAIN - Given the government's policy position of adjusting transmission prices for major industrials, the challenges for major industrials will largely be independent of Marinus and North West Transmission. That's how they're positioned in global markets in a new trade context. To make that point, they're largely insulated from impacts of this project, all these projects, but if a major industrial does go, in the context of pretty full employment, you would expect some immediate employment impacts and some localised employment impacts that will adjust over time. In that context, having a very big on-island project like North West Transmission, which creates a lot of employment for a number of years, would provide some time for employment adjustment.

I'm saying the North West Transmission/Marinus release value in the existing Hydro assets that are in order of magnitude, on average, bigger than the transmission costs. That's a sort of benefit, but they give some insurance to employment consequences around an MI withdrawal; albeit, the MIs are insulated from the price impact through the transmission policy of government.

Mr VOSS - If I could add one more thing, Treasurer. The major industrials issue is not Tasmanian-specific. We talk about that again in the whole-of-state business case. Nationally, it's pretty challenging. They've got international competition. Australia's not a cheap place to do business, and in that sense, for a whole range of reasons, and we are transitioning to a different energy future. There are pressures around the country, as we know, on major industrials. Of the big four, other than Bell Bay Aluminium, which I think people are aware, there are discussions between Hydro and Bell Bay now around energy prices, but the other three major industrials have contracts that run for quite a number of years yet. It's not the energy price that's causing the angst in the major industrial sector.

Mr BAYLEY - I recognise it's not the energy price that's causing the concerns. The question is the impact if they go on the assumptions and the modelling and the projections.

CHAIR - We talked about this with TasNetworks and Marinus Link earlier today contingent projects and industrial load - we've been chatting about that a bit now. I'm interested in the assumptions versus the option value. In the whole-of-state business case modelling to what extent the large industrial loads, including hydrogen-related demand treated as assumed in the base case, or as an upside contingent case, or explicitly not required for the investment conclusion?

Mr VOSS - This is around the contingent projects?

CHAIR - Yes. The whole-of-state business case. You are looking at both, aren't you?

Mr SWAIN - Sorry. I was just clarifying to you. So, is it contingent projects from a transmission perspective?

CHAIR - Yes, TasNetworks talked about some of those, but then Cethana is also a contingent project in the AEMO ISP.

Mr VOSS - As part of their current regulatory determination, TasNetworks has submitted a range of contingent projects and that's a public document. I think there are six of them, and there are triggers essentially as to how - if there's new load coming into an area, they have to go through a process around contingent projects with the Australian Energy Regulator, but it largely revolves around the technical standards. They have to be able to meet certain technical standards for the electricity network. If those, because of new load being built in say George Town as an example, there are upgrades that are required to facilitate those technical standards. They have a range of triggers and we in the whole-of-state business case -

CHAIR - What were the assumptions in the whole-of-state business case related to these contingent projects perhaps, let me put it that way?

Mr VOSS - It's on page 86, and we have a chart on page 86. This is in the public version as well, around additional Tasmanian load and TasNetworks' contingent project investment triggers. The triggers only primarily happen in the step-change scenario, so let's say with hydrogen happening in the state, and you can see there we have trigger 1, trigger 2 and trigger 3. What we were trying to do - and this was the challenge of building scenarios - we were trying to relate what we're doing in the whole-of-state business case to actual real things that were in the marketplace or that TasNetworks had put forward or likely outcomes, and because they put forward a contingent projects application with a range of contingent projects, we work through with them what that might look like and what projects might get triggered under the load profile, the step-change load profile from AEMO. On that chart 4.2, you can see there what the various triggers were, and when we went and did the pricing implications for transmission costs for customers, we included those contingent project triggers.

CHAIR - So you assume they would proceed?

Mr VOSS - They were triggered and they were put in the cost stack in those demand scenarios, so the pricing chapter similarly goes through the various scenarios and in the scenario where there's additional hydrogen, for example, built in Tasmania which triggers those contingent projects, we capture that in the price implication.

CHAIR - So everything's assumed that the trigger will automatically result in that becoming an actionable item.

Mr VOSS - Yes, they will build it. That was the assumption we made.

Mr SWAIN - We were trying to ensure coherency in the scenario. You couldn't have a scenario that involved a new load but didn't give you the connecting transmission project to join it and we put quite a bit of time into debating whether we had that coherency right.

Mr VOSS - And again, because I note you're writing this down, Ms Forrest, page 255 and figure 8.10, we have the contingent project trigger 2 stack and how much they cost as per the TasNetworks submission. Again, you can come up with a whole range of scenarios, not just on the load side, you could also do stuff in the supply side, but the way we built this, try to get it there. You have the major George Town upgrade, reactive support at George Town and upgrade at the Waddamana to Palmerston line were captured in that step-change scenario, so the transmission costs that we did for the pricing captured that outcome. So we tried to manage that, related to what actually had been put forward by TasNetworks to the energy regulator. It was sort of a realistic scenario that we were looking at.

CHAIR - Okay. To pick up on some of the things that Vica was asking about earlier, and you just mentioned the price chapter. Just a bit of context, the whole-of-state business case bill impact chapter indicates transmission charges rise, that they're largely offset because Tasmanian wholesale prices are assumed to remain aligned with Victorian. This is going back a bit to what we were talking about earlier. Tasmanian exports put downward pressure on Victorian spot contract prices.

With regard to bill impacts, the price alignment plus the export lowers Victorian prices mechanism and the standing offer translation, can you walk the committee through step-by-step how the whole-of-state business case converts, firstly, the modelled wholesale outcomes into the standing offer and regulated price tag Tasmanians actually pay? We sort of went almost

there, but it would be good to have more clarity on that, including how Victorian prices feed into Tasmania's regulator methodology. What is the public sensitivity if Tasmania's wholesale prices do not remain aligned with Victoria? When we feel a drought or constraints and in the case where there are price separation events.

Mr VOSS - I will point the committee to pages 181 to 183. Again, depends on the scenario we're looking at, but we do have another waterfall chart which tries to break up the cost to residential customers and we do the same for small business.

Mr BAYLEY - Which page, sorry?

Mr VOSS - It is 181 or 182. But you will get the idea. Let's look at 181 as an example. This is all the public documents also. Just try to give an indication of the breakup: you get cost implications for customers from the transmission build. Again, I'd stress those are a lot less than what they would otherwise be because of the very low cost of the concessional finance. Just on that, for example, for the average customer - these are in real dollars not nominal dollars - looking at figure 7.1, it's about $50 is the cost of Marinus Link to an average residential customer. It is about $10 or so - $8 there for the NWTD. Those two bits are transmission costs.

CHAIR - This is presuming concessional finance.

Mr VOSS - Yes, that's all captured in that.

CHAIR - But not the $430-whatever-million it is? $346 million.

Mr VOSS - Correct. So, that's important. Again, point in time - at this stage, we didn't have the $346 million grant from the Australian Government, which will change this dynamic. Then you can see the wholesale. Those two things are as you would expect. We build transmission kit. We're not paying for all of it; Victoria pays for a large chunk of it. It's much cheaper than it otherwise would be because of low concessional finance, but there's still an impact - depends on the scenario of which impact you're looking at. But broadly there, you've got a $50 to $60 uplift in prices to Tasmanian typical residential customers from the new transmission infrastructure on island.

Then, going to Mr Bayley's comment before, we're tied to Victorian prices because Marinus puts a down pressure on Victorian prices, you see a negative - a reduction - in the wholesale energy price relative to what it would have been if you didn't do Marinus. That's a negative. That offsets, in this case, more than all of the transmission cost. There's another piece which is important, which we haven't touched on, which is a rebate, which relates to Tarraleah and I can talk about that. Then you sort of get a net impact. There are - transmission costs more and then there's a wholesale benefit because prices are lower than the other ones would be because we're tied to Victoria.

Again, I would caveat, it's modelling absolute prices overall will go up and the challenge with that negative wholesale price, which we talked about in this document, customers won't see that negative price because it's the counterfactual. We either built Marinus or we didn't. So you will see it in the modelling. It's evident that that's what the modelling says would happen; prices will be a bit lower than if we didn't build Marinus, but they won't actually see it on their bill. They won't see a -

CHAIR - Well, they will see more - a higher number.

Mr VOSS - What they will see - they will see the transmission price will be in there. So that's a bit difficult for government, but that's what the modelling is showing. If we didn't build Marinus, the wholesale price would be a bit higher because the Victorian price will be a bit higher. You wouldn't get the transmission cost, but in the modelling it's a bit less, and that's consistent with what Marinus Link had as well, and various other -

CHAIR - When you say a bit higher, what sort of magnitude are we talking?

Mr VOSS - Sorry?

CHAIR - When you say - we hear from Hydro they're going to be selling to a higher-priced market, they're going to make a motza for the state, right; you're saying that wholesale prices will go up less than what they would?

Mr VOSS - A bit less than they would have, yes.

CHAIR - Yes, so what's the magnitude here we're talking about?

Mr VOSS - I think we've also got that in the modelling somewhere.

CHAIR - I'm sure you have. Might be on the top of your head, I thought, Anton.

Mr VOSS - No, God, there are too many numbers. It's dollars per megawatt-hour. So you know, it's - yes, three or four or whatever it might be.

CHAIR - It's not a huge amount.

Mr VOSS - Again, it's - this is the tricky piece, because that's a number on average. I mentioned before that where Hydro does particularly well, it's not about the average price necessarily. They're going to change from being the sort of a baseload generator in Tasmania to capacity-type player. So they will be generating more when prices are particularly high and, as I said before, it changes every five minutes.

CHAIR - But can we expect to see enough high-price periods where they can make money?

Mr VOSS - That is what the modelling says. Again, it's technology risk and sovereign risk -

CHAIR - That's only after Marinus, not before.

Mr VOSS - No, they get it now. That's right. If you go and look at how they -

CHAIR - But Basslink is constrained.

Mr VOSS -They are, but they still - previously if you go back pre-regulation, they were paying Basslink, as you know, quite a significant amount of money to be able to access those inter-regional revenues so that they could access the Victorian price.

CHAIR - But the inter-regional revenue is worth more than the cost to connect, mostly. Well, they certainly were last year.

Mr VOSS - Yes, otherwise the business case wouldn't work, but yes, the government and Hydro took that decision back in - or commissioned in 2006, but early 2000s, because of their expectations around that market, that trading arbitrage, and it comes from NEM trading generating more energy and exporting when prices are higher, and with Marinus Link and the changing NEM, the modelling indicates that that will continue, plus some.

That's what it shows, and again, it is challenging because you talk about average prices and this change-of-time issue where Hydro generates into high-price periods and, as I said before, I think the price cap in the NEM at the moment is around $16,000 a megawatt-hour. So Hydro generates into that. It hopefully won't hit the cap because Victorians won't - no-one wants to pay $16,000 a megawatt-hour, but prices are quite elevated and they can do quite well. Again, it's complicated because it's the whole book and they've got cap contracts and they've got hedges and they've got other contracts, but that's the broad intent.

We tried to put in here - let me find it, its in chapter 5. I think this is important and I will point the committee to it when I find it. Right, so page 123, we took just a standard month. It could have been any - we just had the data so we just used this month. This is just a random month; it could have been any month. We could have done a year, but it was just really to demonstrate what we're talking about here: so we had for that month, we've got a 24-hour profile on the chart which shows how much generation Hydro Tasmania was doing in that month on average over a 24-hour period versus the Victorian side of Snowy Hydro.

You can see the Tas Hydro generation. We generate more in the morning through that month - but let's say this pattern is relatively typical - we generate more in the morning through that month, then we generate far less during the middle of the day and then we generate again at night. The thing driving that generation far less during the day on average is that we're importing from Victoria, on average, because there's a lot of solar.

CHAIR - And wind and solar, not hydro, because they're not generating either.

Mr VOSS - So they're not, but what's filling that gap when Hydro's - in the morning, they're generating, they slow down generation, where's the energy coming from? It's being imported from the mainland cause the prices are cheaper. And then as solar goes away, solar in particular, they start generating again. It's that pattern. If you look at Snowy Hydro, they do something similar, but they actually, because of the nature of the system they're in with a lot of coal in Victoria and the big interconnectors between the rest of the NEM, they actually switch off.

They don't generate at all through periods during the middle of the day for summer, as in Hydro, but then say, certainly at night, they generate a lot. So they have more flexibility in their plant because they've got sort of some more other generation and baseload that's going on, so they actually can switch off now. Hydro can't do that at the moment because of the nature of the Tasmanian system, which is a bit complicated because lots of dams, lots of power stations.

CHAIR - If we had lots more renewable on-island, they could do it.

Mr VOSS - You could potentially do that with batteries. There are things to think about, technical stuff around FCAS, et cetera, but that Victorian approach is really where Hydro is intending to go, because the value of their energy is worth much more when you connect Marinus up to the mainland, because they can export into those high-price periods more than they currently can at the moment because Basslink is 500 megawatts and they get an extra 750 with Marinus Link 1.

If you turn to the next page, which is the important one, which is page 124, figure 5.12, this is the same period. Again, this is just a random month we took, VWAP Vic, which is the volume-weighted average price for Victoria, so that's the price in Victoria for that month on average in the wholesale spot market, was $20 a megawatt-hour. It was a particularly low month for whatever reason. The price that Victorian Hydro got was $60, and the reason they got that was because they generated in the high-price periods and didn't generate the low-price periods. If you look at Hydro Tasmania, same timeframe, the average price in Tasmania was $30.80 and then Hydro achieved $35, so we got a bit more than the average because there would have been a bit of wind blowing, but there was a big disparity between what Snowy Hydro did and what Hydro Tasmania did, because Hydro at the moment in Tasmania has to sort of act as that baseload and over time where it wants to move, and which Marinus will help facilitate, is to that different style of generating going forward, where they generate into high-price periods more than they currently can.

Mr BAYLEY - What about trends in solar uptake, whether it's rooftop or larger-scale battery storage, the technological advances in batteries and price as well, and I guess you would say that that demand that you see from 3 o'clock in the afternoon on that graph, where Hydro has really capitalised on those higher prices, I guess the volumes being significantly lower and the demand being significantly lower because of battery technology and self-generation and larger storage on the mainland?

Mr VOSS - All those dynamics have an impact. Solar, certainly in the Tasmanian context, is still pretty small in the grand scheme of things.

Mr BAYLEY - It's getting bigger though: 31 per cent uptake last year.

Mr VOSS - Yes, but off a pretty low base, but it will go there. It's continuing to grow. Our market is very small compared to Victoria, and when you include the interconnectors, it gives us a lot more flexibility around how that's managed, but if you still have more solar and more batteries in Tasmania, that allows Hydro to potentially not generate. Their big advantage is they can do a lot of energy, 1250 megawatts, more than is currently being generated on-island or used at the moment - they can export potentially that amount and they can do it for a long time. That's where the benefits come from.

Mr BAYLEY - Putting aside battery and solar in Tasmania though, because I agree that's not the issue, my point was more battery and solar on the mainland and demand and price spikes on the mainland as that technology -

Mr VOSS - Yes, that was captured in the modelling. So, again if you have a look at any parts of the modelling and we sort of show, so you were looking before at, page 18, you can see the difference in installed capacity in Victoria. This is page 18 on the Deloitte report, for *Hansard* purposes. We model significant uptake in Victoria of battery and batteries in particular, a little bit of solar, and they build, relative to no Marinus, significantly less wind;

obviously brown coal comes off because it's built in Tasmania instead, so this is this displacement of - wind being built in Victoria, winds built in Tasmania. We have a large uptake of batteries in the modelling in Victoria, so we try to capture it. Again, it's modelling. It could be slower than that or faster than that.

I think that technology is always a risk. AI is potentially a risk even. I mean you just don't know what the future is going to look like, but the government had this decision before them at the time, they had to make that decision, and we tried to capture - well, we didn't try to capture, we did capture, in the modelling, battery uptake. It's quite significant under the step-change scenario, in particular under AEMO's modelling. So that is in there. It might be more or it might be less, but I think ultimately the trend of where Hydro is going is really what we need to focus on. I worry about false precision. We have a number of $60.82; that's not going to be the number. It will be something completely different, but Gary made the comment before, I think the value of the whole-of-state business case was it gave a lot of insights. We're talking here about key insights more than this is a conclusive outcome because we're not predicting the future per se. That's impossible to do. I don't know what the price is going to be in five minutes' time, but the general direction of where that's going and Hydro is positioned in the NEM should be pretty strong given what we expect is going to happen.

Mr SWAIN - If I could jump in on that point, there's a couple of key points – so in testing - the thinking around this, we ask questions internally like what if - and this would pick up those technology changes and some of those other risks and we also thought about hydrology quite a lot. Now, if on average -

Mr BAYLEY - Hydrology as in dam inflows?

Mr SWAIN - Changes to water availability, rainfall availability.

CHAIR - Rainfall, et cetera.

Mr BAYLEY - Have you got that modelled? What did you use to analyse that? Because that's the question we've been asking endlessly of Hydro.

Mr SWAIN - Can I come back? All I was going to say was, in the internal discussion we kind of went - so noting they're nominal on average outcomes, if you halved the expecting trading benefit and doubled the expected network costs, would it change the direction of your conclusions? What we got to was, no, because the relativities of those numbers are so big, which means, coming back to Anton's point, you don't have certainty and you can't treat the whole-of-state business case as predictive, but it does help in decision-making and it also helped in the state formulating its commercial position.

How does that translate? Well, in a decision about how much exposure you want to equity in Marinus, there is technology risk in networks. The state has effectively capped out its equity exposure to Marinus because the key benefit isn't coming from that; it's coming from the trading side and the Hydro side. But there are still -

CHAIR - Begs the question of why we're in it all.

Mr SWAIN - Well, there are still risks, is what I was going on to, and they're named up in the whole-of-state business case. There's a very significant one that I think has to be actively

monitored and managed as best - or influenced as best we can, which is around the way the NEM operates. But the other bit is making sure that the potential savings, which are on average nominal, are not pre-spent. So, Treasury's advice, and it's in the whole-of-state business case to the government is you really have to be a long way off on the revenue side and a long way off on the cost side to change your global conclusions, but it doesn't mean that's the outcome in one year. That's probably the key.

CHAIR - So, don't spend money before you get it?

Mr SWAIN - Don't spend the money before you get it.

Mr VOSS - That's pretty much it. It will be volatile too. Volatility is actually good in an energy sense for Hydro because of the nature of their assets. The problem we run into then is, from the Treasurer's perspective, the profitability and the dividends that flow back are also going to be volatile and because they're relatively chunky, it's going to make stuff - it's challenging for the Treasurer in budget management.

CHAIR - So, just so the Treasurer feels included, I've got a question for him on this.

Mr VOSS - Do you mind, Chair, if I just add - can I ask one last thing just to finish this, just to your and Gary's point. We sort of had a go at this, this was a bit tricky - but we had a bit of a go, for something you can have a look at maybe later, on page 371 of the whole-of-state business case, which was in chapter 10, which was a longer the summary we tried to do.

Mr BAYLEY - What page, sorry: 378?

Mr VOSS - Page 371, yes. We stress-tested some of this stuff. So, in chapter 8 where we go through each business by business, what does this look like if costs are higher or revenues aren't as high or whatever it might be. So we, on page 371, have a table here where we use the base case of Hydro's profit before tax expected uplift. Again, caveats of that, but that's what - then we talk what the cost of Marinus would be and the NWTD costs and then try to work through what the per cent of Hydro's profit - the costs are versus the profit. We did it with a downside scenario and the downside scenario had a 30 per cent cost increase to Marinus Link cable 1; it had a 30 per cent cost increase to NWTD stage 1; it had a 30 per cent cost increase to Tarraleah, because Tarraleah is captured in our modelling; it had 25 per cent lower revenue for Hydro than what was modelled; and a 1 per cent increase - 100 basis points - in borrowing costs, and even in that scenario, that's about when you break even.

So, to Gary's point, it's the global direction is that -

CHAIR - So, the table that you're referring to -

Mr VOSS - The model benefits to Hydro should be enough to cover, ultimately, the cost even in a poor outcome where revenue's less, costs are higher, interest rates are higher, et cetera.

CHAIR - So, that's table 10.1 you're referring to.

Mr VOSS - Yes.

CHAIR - And that must be in the commentary, that bit about how much it presumes.

Mr VOSS - Yes, it's in the footnote. Those downside scenarios we talk about separately in chapter 8 for each business - we tried there to collect it all together. It goes to Gary's point about - if you look at the cost of Marinus and the NWTD - and it won't be this much - but it's going to be less than, but similar-ish to what Basslink cost when it was commissioned in 2006 on a per annum basis to Hydro, which they pay. You're getting a cable with 50 per cent more capacity and it's brand new.

We haven't really talked about energy security. I think that's the other important factor.

Mr BAYLEY - Well, before we go there, because it's -

Mr VOSS - Sorry, I interrupted your question to the Treasurer as well. That was the point of that table.

CHAIR - Treasurer, this is for you because it's a Treasury question. The forward Estimates assume - this is in the Budget - that Hydro will deliver profits of around $423 million in 2028-29. That's before Marinus will come online. In this period of transition, where we're reliant on a constrained Basslink, but under regulated Basslink interstate trading, revenues no longer flow to Hydro since the agreement's been ended and Basslink will be regulated in this period. The surplus of the residues that are auctioned appears to be what Hydro is relying on for that. If interstate trading profits reduce or change under regulation because they're no longer flowing directly to Hydro, what advice have you received explaining how Hydro achieves these forward Estimates profits without them coming from Tasmanian customers? On what basis is that in your forward Estimates in the Budget? That's a pretty huge number, $423 million.

Mr VOSS - I'm not dealing with the Hydro budget forecast, but given the timing of that, I suspect it does relate to Hydro's expectation around profitability, and it would be, I believe, a factor of their expectation. Yallourn, which I mentioned before, is supposed to go in 2028 and Eraring is around a similar timeframe. That would be related to their expectations around -

CHAIR - This is even more than they made in the really lucrative carbon-tax years. Almost double.

Mr VOSS - We will take it on notice just to come back to you, but I suspect that's what is driving that behaviour. It's related definitely to their wholesale modelling and what their expectations are of exports, even though Marinus isn't -

CHAIR - We know the forward Estimates are just a guess, after all.

Mr VOSS - We had in our modelling, I just recall, that in 2028 we had some quite large spikes in our wholesale energy modelling that Deloitte did. That was directly related to this coal being withdrawn from the system.

Mr SWAIN - That's my memory, too. So, 2028-29 was kind of a bit of a changeover point, which is one of the reasons that there's particular interest in getting Marinus built by that sort of timeframe so that as - and also for energy security with the coal plants leaving - so that as that price effect of moving to a market dominated by incoming generation, not fully depreciated baseload coal, starts to work its way through the system, that from a Victorian side,

they don't get the plant coming in that's more expensive. From a Tasmanian side, the benefit of that goes in part to Tasmania through Hydro returns.

CHAIR - Does that presume though that, when that coal-fired power station goes offline in 2028, I think, that there is a certain amount of variable renewables built in Victoria, or anywhere really on the mainland in the NEM? And potentially here? Does it presume that no more is built? Surely, the Victorians aren't going to sit there and think, 'Oh well, we know it's going to close down, but we won't worry about it until it does.'

Mr SWAIN - I run out of knowledge at that point, because that will be what's in Hydro's assumptions, particularly around where they have made commercial judgments that might vary from an ISP base. That is what I would expect them to have done. That's probably getting to a point that we'd have to ask Hydro.

CHAIR - They obviously feed this information into Treasury. Otherwise, how does it appear in your budget papers?

Mr SWAIN - Yes, it does get fed through.

CHAIR - How do you challenge or test that? Because it's a pretty big number to put in the forward Estimates - it looks very nice.

Mr SWAIN - We will go through the normal corporate planning process. We will ask them to give detail about how they got there. I just don't have that at my fingertips. That will be through the branch that does shareholder policy advice and interacts with the budget branch in terms of what goes into the budget. I just don't have that level of detail.

Ms FINLAY - Supposing if we can ask that a different way or whether we can ask you to take that on notice, between now and 2028-29 and from 2028-29 and beyond, what budgeting are you doing to receive dividends from Hydro based on their profit forecasts? What considerations do you have there on dividend funds coming into the budget?

Mr SWAIN - No, there's nothing dealt with in the budget beyond the forwards, but also for this Budget, that's a live matter for consideration for budget committees.

Ms FINLAY - Chair, could we ask to take the answer to the Chair's question on notice?

CHAIR - Yes, they have agreed with that, Janie.

Ms FINLAY - Sorry, thank you.

Mr BAYLEY - My question is to the hydrological modelling. Prior to Basslink, there was an actual report done modelling future inflows that was publicly available and released. Have you anything similar? Is there a report that Treasury has seen that models the hydrological inflows into Hydro dams upon which future generating capacity and projections are based?

Mr SWAIN - No, we don't. We would rely on Hydro's own hydrology view that's incorporated into their estimates and also there's the energy security function that sits in ReCFIT in State Growth. We did have some - and I've answered this incorrectly, I realised in the past, so Anton might want to jump in here - the hydrology risk might impact or constrain

Hydro's ability to generate, but it will also have a price effect through the market. You might have less energy, but it again could be at a higher price. It's hard to work out both the physical and commercial outcomes of a change in hydrology.

Mr BAYLEY - It's a pretty foundational piece of information. Are you aware of Hydro having done anything more apart from some Bureau of Meteorology advice? This was done for Basslink. This kind of reporting was done ahead of Basslink and I guess we had assumed that it would have been done ahead of an investment decision that's bigger again, in Marinus.

Mr VOSS - I will come back to that one because I think I know what your concern is. We didn't do an explicit hydrological modelling. That's Hydro's domain. That's their bread and butter.

Mr BAYLEY - Bread and butter they haven't actually been able to provide the committee though.

Mr VOSS - I can't comment on what Hydro does but that is obviously a key to Hydro and would be something that I expect management and the board would be all over. You'll have an opportunity to discuss with them, no doubt, in March and this came up in GBE scrutiny, is my recollection. I think the Chair did discuss their expectations on evaporation and they had some number going forward - a couple per cent declines over time from memory.

CHAIR - There was a bit of that in Legislative Council scrutiny.

Mr VOSS - Yes, that's where my recollection was from. But again, we haven't seen a specific report on that and from Treasury's perspective the approach is we're not experts in water modelling. Hydro are the experts in water modelling and something they deal with.

Mr BAYLEY - No, but it's an input that reinforces some of the assumptions and some of the information you're being told, that's all. I guess I'm just trying to establish whether you've seen it. I know you're not going to do it.

Mr VOSS - And we haven't seen it. The other thing I will say to Gary's point, which is important, which you're aware of, is post the Basslink outage in 2015-16 they changed the framework with the high-reliability level and the prudent-storage level and that's looked at by the economic regulator, so the high-reliability level is to ensure that, if we had a six-month outage of Basslink and a low-inflow sequence, we do not run out of water. So, they change the nature of how much water is in Hydro's storages; it's directly as a result of the Basslink outage because what happened through that circumstance -

CHAIR - And the lead-up to that where they do the carbon tax trading?

Mr VOSS - Correct and dam levels, as you will recall, got very low and I recall that being a very challenging period for government.

CHAIR - It was a very tense time.

Mr VOSS - It was a very tense time. I think, other than COVID, it was probably the most tense time that I actually saw government at that stage, in my experience. So, that whole framework change was a very large report done on Tasmanian energy security. I think it was

Geoff Willis who looked after that at the time, so that's still publicly available I'm pretty sure, and out of that came that change in the framework. It's now looked at by the Tasmanian energy regulator in the energy security monitor and assessor framework; it's all online. They show the dam levels continuously, they show the HRL and the PSL.

Mr BAYLEY - What's that HRL?

Mr VOSS - The HRL- high-reliability level and the prudent-storage level (PSL). So, they are all there every month; it's all updated.

CHAIR - It is very nice at the moment.

Mr VOSS - It is quite high at the moment; that's right.

And that was put in expressly to deal with the challenge of low dam levels. It inhibited Hydro's commercial flexibility by definition because they can't run the dams as low now. So, if the general concern is around lower rainfall, climate change, et cetera, there are other overlays to manage that and I think what will happen with Marinus Link, that will need to be reviewed because it's currently reviewed now.

If there's a big change in supply - so more wind, for example, comes on-island, they did a review and I think Cattle Hill came on-island, the regulator did, or if there was a drop in demand, so a major industrial left, for example - they would review that because there's no point keeping the dam levels too high, you just don't need them. It comes back to what's your major risk factor and your major risk factor was a big Basslink outage and we can't import for six months; that's a problem.

So, I expect when Marinus comes online at some point the regulator's going to have to go and work out what that looks like, but I just wanted to remind the committee there's another layer of energy security.

CHAIR - This is the regulator's job or the government's job, to set that?

Mr VOSS - I think if there's a change in demand and supply of a certain amount I think the regulator deals with it. I suspect if Marinus comes online, there may have to be a broader review but, again, that's not my space. That's ReCFIT's space and you probably should discuss that with them. We do talk about it in here because it's so significant - 750 megawatts is a very large amount -

CHAIR - It would be very unfortunate for both of them to go down at once.

Mr VOSS - That's right, and that's an important point as well. I just mentioned energy security earlier: Marinus does provide additional energy security by definition. One of the other considerations the government had when they were presented with the decision around Marinus Link - obviously you had the concessional finance, the negotiated $346 million grant, et cetera - if they didn't do it then, at some point, I think it was quite likely that in the 2030s, at least, the government's going to be asked the question again, or the private sector will be asked the question, 'What are we going to do because Basslink is coming up to the end of its engineering life?'

So, it's already halfway through. It was commissioned in 2006, it is now 2026. It's got a 40-year engineering life; it's halfway through and it's gone out once already.

Mr BAYLEY - Gone bankrupt once, too.

Mr VOSS - Correct, so at some point the government of the day or the private sector would have had to have a look at this again because the asset is increasingly at high risk of ultimately being decommissioned or having another outage. So, that was another big consideration for the government around the decision. If we don't do it now, what are we going to do? And I think the other challenge is, if you waited till the 2030s, would you get the same arrangement that they got today or more recently with low interest rates, et cetera. You just don't know what it's going to look like, and I think what would have happened is that the NEM will move on.

So, one of the reasons that Marinus is there is to try to help Victoria in the transition from coal. If we didn't do Marinus, the NEM would have done something else. They would have built more wind or built more batteries or what they - so, I just don't know. The opportunity may have been there but again, it -

CHAIR - They should have been built 10 years ago.

Mr VOSS - You could argue on the timing, but I think there is a genuine question - unless you're going to just not replace Basslink, there would have been a time going forward that the government would've had to think about this again, I think. So, that's why the government had to think through these things carefully.

Mr SWAIN - So, a couple of points; what we did do, though, in the sensitivity is try to pick up a range of risks and ask ourselves if the sensitivity dealt with various risks, and hydrology was one of those of the ones that Anton talked about before.

Going back - just on the timing question - when I first got involved in Marinus and Battery of the Nation discussions it was about 2015 and the involvement and attitude of the Commonwealth and Victorian governments was entirely different. The deal that Tasmania has ended up with, I'm confident, would have been inconceivable because they hadn't crossed the bridge to go, 'Energy transition is happening.' When Tasmania was saying, 'Look, this is a great set of projects for Australia, but it's too big for Tassie to do on its own,' they were kind of going, 'Oh yeah.'

CHAIR - They realised they need us more than we need them.

Mr SWAIN - The negotiating position changed over a decade, and you saw that in what became possible that in the lead-up or a year or two before would have been absolutely impossible, including concessional finance, the grants, et cetera, et cetera, the capped-out equity position and so on. There's judgement in all of that, and at the end of the day there's no investment you can make which has no risk. There are still risks. We want a very big and complex project, but hopefully, the work in the whole-of-state business case and the subsequent work that was really led by ReCFIT around the financial investment decision has allowed the state to have a better and more informed view of its own interests in negotiating the commercial parameters.

Mr VOSS - If I could add if I might, just one final thing too. The whole-of-state business case in the AEMO ISP, it does model a dry year every 10 years, it's that order, so there's an explicit dry year in the modelling, quite a bad dry year - so that is captured.

Mr BAYLEY - That modelling in terms of the outcome - the question is, what modelling has informed the choice of only one dry year every 10 years. We had two in a row up until -

Mr VOSS - That was the AEMOs. That's what AEMO has in their profile, and we use the AEMO profiles. There was some hydrology captured in the modelling, and I think Gary alluded to it. The interesting thing there is that when you have lower inflows into storages, the modelling shows that prices are higher, so commercially it's not necessarily as bad for Hydro. We saw the same thing with Basslink. The one time in the last 15 years, I went back and looked at the annual prices, our prices pretty much tracked Victoria's except for in 2015-16, our prices were much higher than Victoria's, and the reason for that was Basslink was out and the dam levels were low and so the water is scarce, and the price of water goes up.

So, in a commercial sense, it's not necessarily a bad thing that there's lower water because they just charge more and it's the same across the nation as what the modelling showed. It's a different question, though. That's a commercial question, which is a different question, I think, to what you're asking. There was some dry-year modelling captured in it.

One final thing, it goes back to some of the HRL, PSL profiles, there seems to be a potential misunderstanding, not necessarily by the committee, but more broadly around 'Hydro run the generators all the time and export lots of power and we will run out of water or something'. As I said, that's not how it's managed. It's a time shift. We generate less in this period, and we generate more in this period. So, we're generating on average about the same as we were years ago.

CHAIR - How to explain that is the challenge.

Mr VOSS - Yes, it is difficult because barbeque conversations I've had that - why aren't we - but that's not how it's managed and we have the safety nets around not only Hydro itself around the commercial interests but also, as I said, the HRL, PSL and those types of buffers to make sure that the dams can't get run down. It's not in their interest to do so and it's not in the government's interests and we have the economic regulator looking at it.

CHAIR - We're just about out of time. I will write to you with the question, particularly for you, Treasurer. There were a couple of other questions I had to follow that. I might put those to you as well and there are a couple others we didn't quite get to that we might write to you and seek your information on, so we don't have to call you back. Ideally, we'd like to wrap it up, but if there's a challenge with that, by means let the committee know. Is there anything you want to say in closing at this point?

Mr ABETZ - If I may, the committee has been shown a masterclass by Mr Voss as to his knowledge, depth of knowledge and capacity in this area, and the people of Tasmania are particularly well served by Mr Voss. I want to put that on the record.

Mr VOSS - Very nice, thank you, Treasurer. I appreciate that.

CHAIR - Pay rise in order for Mr Voss. We do appreciate this is a complex area, but that's not an excuse - I'm not saying it was used - not an excuse to not try to explain things effectively.

Mr ABETZ - No.

CHAIR - Not just to the committee, but also to members of the public and that goes back to those barbeque conversations where misunderstandings can reign supreme.

Mr VOSS - That same person I'm referring to didn't even understand that we could import; they just thought we were exporting all our energy and so on.

CHAIR - There's a lot of misunderstanding.

Mr VOSS - There is a lot of that. It is challenging for government, challenging for the public.

CHAIR - That's part of the purpose of this committee is to try to hopefully inform the public as to how it does work to a point, but it does rely on our energy entities being quite frank, open and clear in how they operate.

Thanks for your time today and information. We will write to you with a few follow-up questions.

Mr ABETZ - Thank you, Chair.

The witnesses withdrew.

The committee adjourned at 3.00 p.m.