COMMISSION OF INQUIRY
RESPECTING THE MUSKRAT FALLS PROJECT

Transcript | Phase 1 — Volume 45

Commissioner: Honourable Justice Richard LeBlanc

Friday — 23 November 2018

CLERK (Mulrooney): All rise.

This Commission of Inquiry is now open. The Honourable Justice Richard LeBlanc presiding as Commissioner.

Please be seated.

THE COMMISSIONER: Good morning.

All right. Mr. Fitzgerald, I think.

And, Sir, you remain affirmed or under – you remain under oath, I think (inaudible).

MR. KEATING: Yes, I do.

THE COMMISSIONER: You remain under oath at this time, Sir.

MR. FITZGERALD: Mr. Keating, my name is Andy Fitzgerald and I represent – excuse me – Charles Bown and Julia Mullaley. And the first thing I'm going to do this morning is bring you to P-01195, which is tab 2 in your book.

Waiting for it to come up on the screen there for counsel.

UNIDENTIFIED MALE SPEAKER: Tab 3.

MR. FITZGERALD: Well, I guess before it comes up there I can ask you a couple of preliminary questions around the document you have in front of you.

MR. KEATING: Sure. Yes, okay.

MR. FITZGERALD: Who is Mr. Wes Foote?

MR. KEATING: Mr. Wes. Foote, at the time, was assistant deputy minister.

MR. FITZGERALD: You know, in terms of his role at the Department of Natural Resources, he was ADM but what was his area?

MR. KEATING: He would have been the central figure with responsibility to energy, the offshore in particular. He would have been, effectively, the senior bureaucrat in the Department of Natural Resources that the oil and gas industry would be relating to.

MR. FITZGERALD: Okay, so he was a central figure with respect to the offshore.

MR. KEATING: Yes.

MR. FITZGERALD: Would that include, obviously, natural gas –

MR. KEATING: Yes.

MR. FITZGERALD: – and liquefied natural gas: everything we've been talking about the last few days?

MR. KEATING: That's correct.

MR. FITZGERALD: And he was the senior bureaucrat involved in that area?

MR. KEATING: As that department was organized, those functions would flow through him. In particular, on a technical basis –

MR. FITZGERALD: Okay.

MR. KEATING: – they would have had another ADM responsible for fiscal terms, like royalties, but –

MR. FITZGERALD: Okay.

MR. KEATING: – he would be the primary technical executive.

MR. FITZGERALD: So he was the government lead on oil and gas and natural gas and liquefied natural gas and those areas.

MR. KEATING: Yes.

MR. FITZGERALD: Okay, I wanted to clarify that because we haven't heard from Mr. Foote, and his name does appear in several of the exhibits that were presented to you.

So would you deal with Mr. Foote frequently?

MR. KEATING: Quite regularly.

MR. FITZGERALD: Okay.

And would you deal with him quite regularly on areas such as the development or the possible development of natural gas?

MR. KEATING: Yes, I would.

MR. FITZGERALD: Now, Mr. Learmonth, in his direct examination yesterday, brought you to P-01195. And if we can just scroll down to page 2, and he brought you to the many good points made by speakers. And we spent a lot of time yesterday about number one, two and three.

MR. KEATING: Mm-hmm.

MR. FITZGERALD: However, this email goes on – and if we can just scroll down the page a bit. Stop right there, please. Around halfway down there is a – right there, landed cost.

Could you please read that into the record, Mr. Keating?

MR. KEATING: Okay, right there at that bullet?

MR. FITZGERALD: Yeah.

MR. KEATING: It says, "landed cost using his metrics would include a gas cost of $5-$7 plus a toll of ($3.65 to) $10.37+/Mcf., likely toll would be at the upper end using his 35 MMcf/d annual average daily requirement, so very expensive landed gas, and by extension, expensive power …."

MR. FITZGERALD: Okay, so it's my understanding that this was a comment that was being made by Ziff back to Mr. Foote.

MR. KEATING: Yes, that's how I understand it.

MR. FITZGERALD: Okay, and despite some positive comments up above, there's a negative comment below here about expensive landed gas and by extension, expensive power. And this was in relation to the Bruneau presentation, I believe – Dr. Bruneau?

MR. KEATING: Mm-hmm.

That's correct.

MR. FITZGERALD: Okay.

Below that we have: He cited. Can you please read that into the record? Starting with: He cited.

MR. KEATING: Yeah, "he cited other offshore pipeline examples, not strictly analogous to offshore NL …."

MR. FITZGERALD: So it's my understanding on that, that there would've been, I guess, examples cited about offshore pipelines and they were not analogous to Newfoundland. So, obviously, there's differences in the Newfoundland offshore, would you agree with me?

MR. KEATING: I would.

MR. FITZGERALD: Yeah, such as …?

MR. KEATING: Such as the environmental conditions.

MR. FITZGERALD: Yes.

MR. KEATING: Such as seabed conditions, such as presence of ice conditions; soil conditions are very specific to different regions. And in this particular case, I believe you can expand that to say the pipeline examples and their particular markets that they reach and the resources that they tap into. I'd say – so it's a full range of considerations that are not strictly analogous to offshore Newfoundland and Labrador.

MR. FITZGERALD: Okay. Now – and I'm not an engineer, but I'm led to believe there's a subsea cable going between Labrador and Newfoundland now in relation to Muskrat?

MR. KEATING: Yes.

MR. FITZGERALD: Do you know how long that is?

MR. KEATING: Not offhand. No, I can't –

MR. FITZGERALD: Okay.

Would the pipeline out to the offshore be longer than the cable that's going between Labrador and Newfoundland?

MR. KEATING: Yes, it would.

MR. FITZGERALD: Substantially longer?

MR. KEATING: Substantially longer.

MR. FITZGERALD: Would you agree with me if a pipeline is substantially longer, there's substantially more risk?

MR. KEATING: Yes, I would.

MR. FITZGERALD: Would you also agree with me that if there's substantially more risk, there could be an increased problem with reliability, if we're relying on that for energy and electricity in the province?

MR. KEATING: Yes, I would.

MR. FITZGERALD: I believe your evidence yesterday – and, once again, I'm sure it was clear from an oil and gas person but, you know, I'm a lawyer here trying to understand where you're coming from – you mentioned two pipelines.

MR. KEATING: Yes.

MR. FITZGERALD: So how does that work again?

MR. KEATING: So I didn't mention two pipelines, I think the – in the context, if this is what you're referring to –

MR. FITZGERALD: Yeah.

MR. KEATING: – was Hebron had laid a fibre optic cable –

MR. FITZGERALD: Okay.

MR. KEATING: – to the Hebron platform. And I think, in the context, it was Dr. Bruneau asserted that if they would do it for – Exxon would do it for the Hebron platform, meaning lay a direct cable to the platform –

MR. FITZGERALD: Mm-hmm.

MR. KEATING: – well then by an analogue, why wouldn't we do a pipeline? So then I wanted to clarify and say that that's probably a misunderstanding and that Dr. Bruneau probably wasn't aware that are, in fact, two fibre optic cables –

MR. FITZGERALD: Okay.

MR. KEATING: – in completely different locations. And, actually, there's a further – a cable between two offshore platforms, Hibernia and Hebron, to create a circuit which increases the reliability. And, of course, went on to say that in addition, reliability and reduction of risk is maintained through satellite and microwave communications.

MR. FITZGERALD: Okay but that's a different field than natural gas, obviously.

MR. KEATING: Yeah, it is, but related just to the overall scope of development of offshore.

MR. FITZGERALD: I mean, if your internet goes down it's not quite as serious as if the power goes off, is it?

MR. KEATING: Well, I would say that that is true in terms of providing a baseload service to a half-million people. There – that's a completely different mindset.

MR. FITZGERALD: Okay, there's – the next bullet, if you could please quote, it starts with: Assumes.

MR. KEATING: "… assumes that ice scour risk can be managed, and that safety would be comparable to other pipelines in areas with no ice …."

MR. FITZGERALD: So this was an assumption that Mr. Bruneau was making.

MR. KEATING: That's right, and I do believe this is what Mr. Bruneau contends is his very specific core area of expertise.

MR. FITZGERALD: Okay. Do you have any comments about this?

MR. KEATING: So when we talk about ice scour and it can be managed, it's mostly avoidance and mitigation. And there's a series of studies undertaken by C-CORE through the years which says that you should – ought to bury pipelines below the, I guess, likely statistical chance that the keel of an iceberg penetrates the seabed, scours and comes into contact. And that can be statistically applied along a curve.

MR. FITZGERALD: Yes.

MR. KEATING: And it's highly variable according to the soil conditions, the pipeline, but typically what it means is you ought to bury it and you ought to bury it likely the whole way –

MR. FITZGERALD: Okay.

MR. KEATING: – because of the – of the near certainty that ice scour will occur along the path.

MR. FITZGERALD: Okay.

But this was a – something that was obviously highlighted by Ziff after they reviewed Mr. Bruneau's presentation.

MR. KEATING: Yes.

MR. FITZGERALD: And this would have been a concern of theirs.

MR. KEATING: Correct.

MR. FITZGERALD: If they brought it to your attention.

MR. KEATING: Yes.

MR. FITZGERALD: Next one, Mr. – next bullet there, Mr. Keating.

MR. KEATING: Okay. "Would need to validate this assertion, maybe theoretical, but in practice, ice is a risk for pipelines, and security of supply is paramount for baseload power."

MR. FITZGERALD: The last portion of that: "ice is a risk for pipelines, and security of supply is paramount for baseload power."

MR. KEATING: Correct.

MR. FITZGERALD: Can you explain that to the public in terms of baseload power and why we need it and why ice can be a problem with that?

MR. KEATING: Okay. So in – now in my non-utility mindset –

MR. FITZGERALD: Yes.

MR. KEATING: – but having worked in utility for a number of years, baseload power is the power that you rely on 24-7, 365 days a year, and it is only supplanted by incremental power as you need it, as the load fluctuates.

But there ought to be a baseload of power that people can rely on with certainty when they flick their switch and that ought to be – in 99.99 per cent – available, and I'm sure there are studies that – or statistics that I just can't quote now – but has a high, high degree of availability for – to be considered a baseload power.

MR. FITZGERALD: Yeah, and this was another concern by Ziff with respect to Dr. Bruneau's presentation?

MR. KEATING: That's right. Because I believe their – they would say, and contend, in the offshore, reliability, while still important, ranges between 85 per cent, 95 per cent and in particular – if you have a particular mechanical or destructive damage, it's not something you fix within a few hours. It will take weeks or months.

MR. FITZGERALD: And what happens if we don't have baseload power for weeks or months?

MR. KEATING: That would be, I would imagine, fairly catastrophic.

MR. FITZGERALD: Thank you. Down below we have: "does not account for –"

MR. KEATING: Oh, sorry. I'm reading that?

MR. FITZGERALD: Yeah.

MR. KEATING: "Does not account for liquids handling on platform…what about the liquids? They need to be stripped before the power plant, either onshore or offshore (could be benefits to this, petrochemicals, etc), however liquids can cause increased operating costs and corrosion on pipelines"

MR. FITZGERALD: Okay. And if we can focus in on that, what is Ziff saying here with respect to this –

MR. KEATING: So to simplify it – 'cause there's a lot of –

MR. FITZGERALD: Please.

MR. KEATING: – petrochemical and physical aspects here. But what you want to ship in pipelines, typically, is a dry gas, because impurities, and some of the more complex carbon chains, can do things to pipelines like develop either corrosion –

MR. FITZGERALD: Yes.

MR. KEATING: – in some cases, or waxy deposits. So they're an issue to the integrity of pipelines. So you might want to consider, before you put gas in a pipeline of this particular length, treatment of that gas before you put it into the pipeline.

Now, I will give this consideration, in fairness to Dr. Bruneau. When he believes that the pipeline of this shorter distance is something that is viable, there could be a technical debate on whether you need to treat that gas offshore or onshore.

MR. FITZGERALD: Okay.

MR. KEATING: Most of my analysis would say – or most of what our experience would say – that it's best to do it offshore. In particular, if you're relying on that pipeline for any kind of power generation or, you know – you need – important of the asset to be maintained. But most certainly, in the 600-plus-kilometre route, due to the length of that pipeline, you would certainly need, then, that treatment offshore on a facility.

MR. FITZGERALD: And that would be an additional cost obviously?

MR. KEATING: Yes.

MR. FITZGERALD: I see 1.9 billion referenced here.

MR. KEATING: Yeah …

MR. FITZGERALD: That was his estimate?

MR. KEATING: Yeah, that's his estimate. I don't know where that comes from, but that's what that says.

MR. FITZGERALD: Yeah.

Below I believe Ziff points out: "who pays the estimate of $1.9B capex for power plant, pipe, offshore platforms, etc.?" That was just another –

MR. KEATING: Yes.

MR. FITZGERALD: – point that was being highlighted.

Down below, the bullet there, "producer silence," if you wouldn't mind, Mr. –

MR. KEATING: "Producer silence on this gas for electricity option speaks volumes."

MR. FITZGERALD: And if we could quote below?

MR. KEATING: "Wes, he makes some good points, but doesn't answer the central question: with such a low load profile, is it good business to lay out such large capex to bring offshore gas to NL for power generation? If it makes business sense, the industry should be pushing this, not academics. Monetizing stranded gas requires markets and volumes large enough to bring economies of scale."

MR. FITZGERALD: Now, do you know what Ziff's expertise is generally?

MR. KEATING: Yes, Ziff's expertise is in analyzing global markets for oil and gas. They monitor the supply and demand of different regions and the provision of oil and gas. They will examine, much as they have done here, concepts of proponents as they bring forward projects.

So their expertise in here is aligned with this consideration, and of course, as a consultant, they would have had the benefit of doing this kind of thing for multiple clients, multiple times –

MR. FITZGERALD: All over the world?

MR. KEATING: Yes, all over the world.

MR. FITZGERALD: Now, it seems to me when I read that paragraph there is that their expertise is not limited to technical matters but they also consider financial matters?

MR. KEATING: Yeah – oh, central to that. They would be an advisor. So they would likely be the type of consultant not just to study a specific – like a soil interaction with iceberg, for example, but they will look at the complete concept for development and provide advice on a myriad of issues.

MR. FITZGERALD: Would you agree with me that oil companies know how to make money?

MR. KEATING: I most certainly would.

MR. FITZGERALD: When I read this comment he makes to Mr. Wes Foote, the impression I get from Ziff is that this suggestion is nothing more than an academic pipe dream.

MR. KEATING: Maybe I wouldn't choose those words, but they were, without any interaction, maybe, at that time from any of the oil and gas industry, all of their own fruition –

MR. FITZGERALD: Yes.

MR. KEATING: – based on what they saw.

MR. FITZGERALD: Mm-hmm.

MR. KEATING: Likely thought that this wasn't a realistic opportunity at all.

MR. FITZGERALD: And I get from that statement, as well, if you would agree with me, they also considered the markets and the volume large enough to bring economies of scale. So it seems like they're considering the – Newfoundland in general, or specifically, there –

MR. KEATING: Well, that's central to the point, because I don't think anyone ever believes that gas is not available. There's –

MR. FITZGERALD: No.

MR. KEATING: – lots of gas available; it's available today.

MR. FITZGERALD: Yes.

MR. KEATING: It was available then. What people are missing is that being available is one thing, but being commercially justified to bring to a consumer – that test has not been met, and has been analyzed many times.

MR. FITZGERALD: Thank you.

In your testimony yesterday, you used a phrase – and I think it sort of – it goes from this comment here by Ziff – willing buyer, willing seller.

MR. KEATING: Yes.

MR. FITZGERALD: You recall this?

MR. KEATING: Yes, I do.

MR. FITZGERALD: In terms of the oil companies – and Mr. Learmonth was talking about, well, why didn't you try to negotiate and –

MR. KEATING: Correct.

MR. FITZGERALD: – whatnot?

Were you aware that – I guess, in 2006, 2007 – there was a view that we were gonna have an energy shortfall in 2013, 2015 – around that time period.

MR. KEATING: An energy shortfall in what –

MR. FITZGERALD: In terms of electricity.

MR. KEATING: In the province?

MR. FITZGERALD: Yeah.

MR. KEATING: 2006? Yeah, I would have believed; I wouldn't know specifics to it, but I knew that was the start of some discussions in terms of understanding what our existing power capacities were and potential load, yes.

MR. FITZGERALD: Yeah, and I'm speaking generally –

MR. KEATING: Yes.

MR. FITZGERALD: – I don't expect you to know every detail –

MR. KEATING: Okay.

MR. FITZGERALD: – but you have been working in this industry –

MR. KEATING: Yes.

MR. FITZGERALD: – for a long time.

You know, in light of the comments of Ziff, here, and the willing buyer, willing seller, given this coming shortfall – the issues that were coming – in your opinion would it have been wise for the province to gamble on the seller coming to the table to negotiate? Or should they deal with something that they can control in and of itself?

MR. KEATING: Very complex question. I don't think, first of all, gambling is good in any context. I do believe that if it – if the purpose for any such negotiation was to secure volumes of gas for baseload power – to provide a service – a broad provincial service, then it's more a matter of understanding both the technical –

MR. FITZGERALD: Yes.

MR. KEATING: – capacity of – to make that happen, the commercial construct to make sure that certain rights and obligations are be – enforced and withheld, and of course the financial wherewithal to understand how the flow of the buyer-seller interaction falls out and is equitable or not at the end of the day. So there's – it's a complex –

MR. FITZGERALD: And I appreciate the complexity of it.

MR. KEATING: Yes.

MR. FITZGERALD: But I'm in government –

MR. KEATING: Yes.

MR. FITZGERALD: – and I have a province that's – that has a power issue.

MR. KEATING: Yes.

MR. FITZGERALD: And I have a pending – impending problem that's coming with power.

MR. KEATING: Right.

MR. FITZGERALD: I know I have an expert here from Ziff telling –

MR. KEATING: Yeah.

MR. FITZGERALD: – me that this is just not on. And, you know, due to the size of the province and the cost of it all. And, you know, in that context, would you think it would've been prudent for Nalcor to hold off, knowing full well that it had no power to force an oil company to enter into an agreement with it?

MR. KEATING: Well, predicated on that there was even a commercial reality of –

MR. FITZGERALD: Yeah.

MR. KEATING: – something happening, that's the starting point.

MR. FITZGERALD: That's right.

MR. KEATING: Because otherwise I don't know that you start, if there's not a commercially justifiable project. If you held off, you would give, then, any leverage to one of the parties and that would put all of the control in the hands of the seller for, then, in terms of price –

MR. FITZGERALD: Yes.

MR. KEATING: – deliverability and so on. So that is – that is clear.

Secondly, if that still – if that benefit to the seller, which you're gonna provide –

MR. FITZGERALD: Mm-hmm.

MR. KEATING: – was not sufficient enough, you would get into a situation where you would likely have – well, you would likely get in a – into much, much bigger trouble than whether you're gonna be providing a service or not. You're gonna be getting into trouble in terms of what the cost of the service is, whether you can maintain it – because at the end of the day, it's not – it is not your resource still.

MR. FITZGERALD: That's right.

MR. KEATING: You're just – you're just bound by contract.

MR. FITZGERALD: But if you were to take that risk – I won't use the word "gamble" –

MR. KEATING: Yes.

MR. FITZGERALD: – if you were to take the word –

MR. KEATING: Yes.

MR. FITZGERALD: – that risk, the longer you waited in hope for a negotiation, your negotiation position would be worse because the oil companies would know that you needed the natural gas 'cause you have an impending problem with energy.

MR. KEATING: Well –

MR. FITZGERALD: Is that what you're telling me?

MR. KEATING: That is part of what I'm saying. Also, too, this notion of waiting means that other options that you would've had would have expired.

MR. FITZGERALD: Okay.

MR. KEATING: That's a very important concept for everyone to understand, is that optionality is near and present in every major resource decision. Husky, a gas owner, sits and waits and looks at its options to maximize its value for its gas. And Nalcor would sit and look at its options to provide its legislative requirement for provision of electricity. If they match up, well, all well and good. Then you can have a sensible negotiation and an outcome, provided you can address these risks that we've talked about.

If those things don't line up, those options are not – you can't exercise the option, then you have to exercise the options you have at hand or the one you can most control; it will be self-determined then.

MR. FITZGERALD: Would it be fair to say if the options don't line up it could possibly inhibit the ability of Nalcor to carry out its statutory duty to look after the power needs of the people in the province?

MR. KEATING: I would say it would certainly hamper it. It would certainly impair it. And it may lead to suboptimal outcomes.

MR. FITZGERALD: Okay. Generally, in my experience, suboptimal is – can often be more expensive?

MR. KEATING: Yes, it's likely more expensive, less attractive and high risk.

MR. FITZGERALD: Okay, thank you.

I'd like to direct the witness to P-01204, tab 11.

MR. KEATING: P-12, tab 11.

MR. FITZGERALD: Now, if we can just scroll down. Just up a little bit just so I can see who this email went to, please. Thank you.

Now, Mr. Keating, this is an email from you –

MR. KEATING: Yes.

MR. FITZGERALD: – to Mr. Martin –

MR. KEATING: Yes.

MR. FITZGERALD: – Mr. Bown –

MR. KEATING: Yes.

MR. FITZGERALD: – Mr. Bennett –

MR. KEATING: Yes.

MR. FITZGERALD: – and Dawn Dalley.

MR. KEATING: Correct.

MR. FITZGERALD: And it's CPWs with LNG, liquefied natural gas, and pipe gas –

MR. KEATING: Yes.

MR. FITZGERALD: – using Ziff estimates.

MR. KEATING: Yes.

MR. FITZGERALD: Now, if we can just scroll up now so we can see the entire chart here. That's great, thank you.

Now, this was brought to your attention yesterday, I believe, by Mr. Learmonth.

MR. KEATING: Yes.

MR. FITZGERALD: And it's my understanding – and I'm sure Mr. Learmonth will correct me if I'm wrong – actually, before I get to that, can you just take us –

UNIDENTIFIED MALE SPEAKER: Sorry.

MR. FITZGERALD: – can you just take us to – describe this for us?

MR. KEATING: The chart?

MR. FITZGERALD: So we all understand, including the people in Newfoundland and Labrador.

MR. KEATING: Yes, okay, the chart you see in front of you?

MR. FITZGERALD: Yes.

MR. KEATING: Okay. So this chart was a selection of five different concepts – or gas, natural gas alternatives depicted in the now known CPW format, in Canadian dollars, as compared to the one on the far left which is the Interconnected Island, which I consider always the base case. It's the one we have at the time.

MR. FITZGERALD: And it may seem rudimentary to some of us in this room, but as I look at the chart –

MR. KEATING: Sorry –

MR. FITZGERALD: – it goes from –

MR. KEATING: – I misspoke, I misspoke. It's the second – Isolated Island, is the base case.

MR. FITZGERALD: Yes.

MR. KEATING: It's the one which we have.

MR. FITZGERALD: So – but this goes from the least-cost –

MR. KEATING: Yes.

MR. FITZGERALD: – to the people of the province –

MR. KEATING: Yes.

MR. FITZGERALD: – to the most expensive cost for the people of the province.

MR. KEATING: That's correct, from left to right.

MR. FITZGERALD: So you go from 8.4 to 15?

MR. KEATING: Yes, that's correct.

MR. FITZGERALD: Okay. Now I –

MR. KEATING: In billions.

MR. FITZGERALD: – I didn't mean to interrupt. I just want to put it in context.

Now, if you can just take us through each one of these and describe what they are, generally.

MR. KEATING: Okay, generally, Interconnected Island would be, effectively, the Muskrat Falls Project as it would be understood at the time and calculated.

MR. FITZGERALD: And what's the amount of that?

MR. KEATING: That would be $8.4 billion, CPW.

MR. FITZGERALD: Okay, and the next option –

MR. KEATING: Next –

MR. FITZGERALD: – column two?

MR. KEATING: Next one would be the Isolated Island, which is, I guess, the status quo where you continue to rely on refurbished Holyrood –

MR. FITZGERALD: Mm-hmm.

MR. KEATING: – and fuel. And then – now we have –

MR. FITZGERALD: And what's the amount of that one?

MR. KEATING: That would be $10.8 billion.

MR. FITZGERALD: That's based on Ziff's numbers, yes?

MR. KEATING: That's correct.

The next one would be liquefied natural gas at a price – input price of a range between 80 to 90 per cent of Brent. Brent is a global –

MR. FITZGERALD: Brent crude, yes.

MR. KEATING: – Brent crude price. And that calculates out a range at 10.7 billion for the 80 per cent of Brent and 11.2 billion for the 90 per cent of Brent.

MR. FITZGERALD: Okay. The next one, please.

MR. KEATING: The next one now is the pipeline version; it's the FPSO Pipeline from Ziff at $22 – and I'll – that is now the MMBtu or the million British thermal units of the price of gas that Ziff would've (inaudible) out of their study –

MR. FITZGERALD: Yes.

MR. KEATING: – and that is put into the CPW calculation and comes out to 12.8 billion.

MR. FITZGERALD: And finally.

MR. KEATING: And finally the Standalone, which is the, sort of, the more robust one where effectively Nalcor in its own – takes possession or builds a structure and provides the service and that's 15 billion.

MR. FITZGERALD: So would you agree with me that all of these options –

MR. KEATING: Yes.

MR. FITZGERALD: – we have option number one which is 8.4 billion, which is the Muskrat Falls option.

MR. KEATING: Yes.

MR. FITZGERALD: Then we have the next option is 10.8 billion.

MR. KEATING: Correct.

MR. FITZGERALD: That's significantly more then 8.4 billion. The next one we have 10.7 or 11.2, whatever way you want to characterize it. That's still more expensive then 8.4, correct?

MR. KEATING: Correct.

MR. FITZGERALD: The next option by Ziff is 12.8 billion.

MR. KEATING: Mm-hmm.

MR. FITZGERALD: And the final is 15.0 billion. All of those are substantially more expensive than 8.4 billion.

MR. KEATING: Yes, by a matter of degree here, yes.

MR. FITZGERALD: Yes, and we're talking about billions of dollars.

MR. KEATING: And we're talking about billions of dollars.

MR. FITZGERALD: Yes.

Now, I recognize yesterday that Mr. Learmonth brought you to a Wood Mackenzie report and there was some issue about that.

MR. KEATING: Yes.

MR. FITZGERALD: And I believe, and I understand from that evidence that the numbers Wood Mackenzie was using were less than the Ziff numbers.

MR. KEATING: That's correct.

MR. FITZGERALD: Ziff's numbers were higher.

MR. KEATING: Right.

MR. FITZGERALD: And it's my understanding that –

MR. KEATING: So – sorry. I think this combination – the Wood Mackenzie report –

MR. FITZGERALD: Yes.

MR. KEATING: – addressed many Ziff numbers –

MR. FITZGERALD: Mm-hmm.

MR. KEATING: – they would on balance advise Ziff's numbers on capital were actually lower, tended to be lower –

MR. FITZGERALD: Okay.

MR. KEATING: – in most cases. But in the price of the LNG –

MR. FITZGERALD: Okay.

MR. KEATING: – they would advise that a lower LNG price was possible.

MR. FITZGERALD: Okay.

MR. KEATING: So there was a combination of feedback.

MR. FITZGERALD: So – and, I guess, I accept that.

MR. KEATING: Yeah.

MR. FITZGERALD: But my point is, I believe, when I did that math yesterday, I looked at it and I believe it would be 10.1 or 10.2 billion if the numbers were used for Wood Mackenzie –

MR. KEATING: So –

MR. FITZGERALD: – in the third column.

MR. KEATING: So what I would suggest is to do that calculation properly, it's not simply a 10 per cent effect to that bar –

MR. FITZGERALD: Mm-hmm.

MR. KEATING: – because the price of the LNG makes up, maybe, 50 to 60 per cent of the total CPW charge, because the balance is capital –

MR. FITZGERALD: Okay.

MR. KEATING: – is the equipment that you build-out. So then it's a 10 per cent effect on a portion of the bar, which means the change in price would be less than a simple 10 per cent haircut on that bar.

MR. FITZGERALD: Okay, that would still be much more than 8.4 billion for the –

MR. KEATING: Yes, it would be.

MR. FITZGERALD: – for the Muskrat Falls Option.

MR. KEATING: Yes, it would be.

MR. FITZGERALD: So whatever you use, Wood Mackenzie or Ziff –

MR. KEATING: Yes.

MR. FITZGERALD: – we still have a difference between $1.5 to $1.8 billion –

MR. KEATING: Yes –

MR. FITZGERALD: – thereabouts.

MR. KEATING: – it's a substantive difference.

MR. FITZGERALD: Billions.

MR. KEATING: Yes.

MR. FITZGERALD: Okay. Now – so the Muskrat Falls option, according to the – this work by Ziff, and even if we superimposed the Wood Mackenzie numbers, it's still 1.5 – at least $1.5 billion more – cheaper, sorry –

MR. KEATING: Yes.

MR. FITZGERALD: – for the people of Newfoundland and Labrador.

MR. KEATING: That's what this would say.

MR. FITZGERALD: Yes. Okay, did you give any consideration to going to Mr. Martin and suggesting to him that we have a professor here at the university, who has come up with a presentation and it's gonna cost an extra $1.5 billion, but I think we should try it.

MR. KEATING: No, I would not have made that suggestion.

MR. FITZGERALD: You have a duty, as Mr. Budden says to you as – at Nalcor, to look out for the best interest of the people of the province.

MR. KEATING: That's correct.

MR. FITZGERALD: Would you agree with me that in the context of not having a willing buyer or willing seller, in the context of the economies of scale that are put forward by Ziff, and in the context of the numbers, where there's billions of dollars in the difference, it was prudent for you and consistent with your duty at Nalcor not to pursue that option?

MR. KEATING: For all those reasons, and the additional reasons wherein this has been studied multiple times by multiple parties – all reputable, major, multinational corporations – I would have fairly firm ground to stand on to make that assertion.

MR. FITZGERALD: Thank you.
And that's going to get me to my next point, Mr. Keating. You have significant private sector oil and gas experience, is my understanding.

MR. KEATING: At this time, it's two-thirds of my career, more or less.

MR. FITZGERALD: Yes, you only started at Nalcor in 2007.

MR. KEATING: 2005 – December.

MR. FITZGERALD: 2005 – okay. But before that – when did you start in the oil and gas after you left (inaudible)?

MR. KEATING: I started in oil and gas back in 1991, and my first permanent position was in 1993.

MR. FITZGERALD: Okay, so from '93 roughly –

MR. KEATING: Yeah.

MR. FITZGERALD: – to 2005, you were working in that industry with different oil companies.

MR. KEATING: Correct.

MR. FITZGERALD: Some domestic, some foreign, or all foreign? They're all foreign, yes?

MR. KEATING: All foreign-owned –

MR. FITZGERALD: Yeah.

MR. KEATING: – and with mostly domestic placement.

MR. FITZGERALD: Okay. And I guess in performing a role in – with those various oil companies, you would obviously come into possession of certain information.

MR. KEATING: Always.

MR. FITZGERALD: Some of that information – I would imagine a lot of it – would be commercially sensitive.

MR. KEATING: Most of it.

MR. FITZGERALD: Yes, however, in reviewing that information over the years, would you agree with me that you obtain a knowledge base yourself, as a professional, as an engineer, in this area of development?

MR. KEATING: That's right. I'm a certified professional engineer, and my work experience becomes my institutional knowledge –

MR. FITZGERALD: Yes.

MR. KEATING: – and of which I will be able to make judgments and decisions based on that history of knowledge.

MR. FITZGERALD: Yes. So there may not be a document or an email that speaks to everything that you know about this issue.

MR. KEATING: There might not be.

MR. FITZGERALD: Yes. You're professional and you're giving us – and you're trying to assist the Commissioner here with your memory and your expertise. Is that correct?

MR. KEATING: As best I can.

MR. FITZGERALD: Yes. There's been a recent spill of about 250,000 litres, estimated, I guess, with respect to –

MR. KEATING: Cubic metres.

MR. FITZGERALD: – cubic metres in the –

MR. KEATING: 150 cubic metres.

MR. FITZGERALD: – okay. Fair play. In the offshore, recently, and –

MR. KEATING: Yes.

MR. FITZGERALD: –and I thought about this last night when we'd been talking about pipelines and whatnot. Was the environment a consideration for Nalcor when they were reviewing these issues?

MR. KEATING: I'd say the environment in the offshore oil and gas sector is paramount. It – with safety –comes before all else and those are not just empty words. It is a number one priority.

MR. FITZGERALD: And in – let's just build on that for a second. Separate and apart from the offshore and the environment, would you agree with me that Nalcor also considers other things such as salmon rivers and, I guess, botany and trees and all of these types of things when it's doing a development?

MR. KEATING: Yes; in particular as a subsidiary of Newfoundland and Labrador Hydro has a pretty established track record and – recognized and awarded on those matters through the years.

MR. FITZGERALD: And would you also agree with me that, you know, you're a Crown corporation, that you're doing your best to balance the environment with ensuring that the people of the province have power.

MR. KEATING: We would – we would balance that for sure with the environment having a pretty special place in terms of the ability to provide the power.

MR. FITZGERALD: Now I recognize there is nothing perfect –

MR. KEATING: Right.

MR. FITZGERALD: – and I'm not suggesting that to you, but there would be a balance, wouldn't there?

MR. KEATING: Correct.

MR. FITZGERALD: My last question has to do with the Energy Plan. The Energy Plan – would you agree with me – is an aspirational document?

MR. KEATING: Yes. It is an aspirational document in a way that – while there – it is not a legislated document –

MR. FITZGERALD: That's right.

MR. KEATING: – and it's not law.

MR. FITZGERALD: No

MR. KEATING: It provides a government policy orientations and directives. So it is – it's an important document, and it's a public document, and it's meant to inform any reader that this is what that particular government at that particular time – intent. But it is aspirational and in that it's forward-looking, largely, and encompasses broad time horizons.

MR. FITZGERALD: And when you read that aspirational document, I would suggest that the government put forward any number of options in 2006, 2007 that could be considered with respect to the province's energy needs. Is that correct?

MR. KEATING: That's correct.

MR. FITZGERALD: And, while the province has chosen to pursue the Muskrat Falls Project –

MR. KEATING: Mm-hmm.

MR. FITZGERALD: – there's nothing in the Energy Plan prohibiting or preventing Nalcor, in the future, should it be economically viable and environmentally friendly, in pursuing other areas, such as natural gas or LNG.

MR. KEATING: My knowledge of our articles incorporation under legislation are very broad to pursue most any, if not all, energy-development strategies for the benefit of the people of the province.

MR. FITZGERALD: And, in effect, then, when you're looking at the energy policy, and you go back to 2006, 2007, we go to 2010, we go to sanction – ultimately, part of that decision is based on the economics of the situation at the time.

Would you agree with me?

MR. KEATING: Yes. Most certainly, yes.

MR. FITZGERALD: And if there's not an air of reality, or a commercial reality, to offshore oil and gas, that's going to affect the decision that's made, isn't it?

MR. KEATING: For sure.

MR. FITZGERALD: Those are all my questions.

Thank you, Mr. Keating.

MR. KEATING: Thank you.

THE COMMISSIONER: Thank you.

Robert Thompson, I think you said no?

Ms. Van Driel, I don't believe is there.

Consumer Advocate?

MR. HOGAN: Good morning, Mr. Keating. John Hogan –

MR. KEATING: Mr. Hogan.

MR. HOGAN: – counsel for the Consumer Advocate.

Mr. Keating, I just wanna – first, while it's fresh in my mind – follow up on a couple of questions Mr. Fitzgerald asked you.

MR. KEATING: Okay.

MR. HOGAN: He suggested to you, or asked you, do oil companies know how to make money –

MR. KEATING: Yes (inaudible).

MR. HOGAN: – and you said yes.

MR. KEATING: – yes.

MR. HOGAN: I just wanna make sure we're comparing the same things here, because I guess all along you're talking about the fact that, if natural gas could be developed to make money it would have been developed to make money.

MR. KEATING: That would be a contention, yes.

MR. HOGAN: Fair enough.

But, I mean, Muskrat Falls was built for domestic use, and I would – I don't – there's no private company making money from Muskrat Falls, correct?

MR. KEATING: I – okay, to be specific, there are private companies that are involved in the construction –

MR. HOGAN: On this –

MR. KEATING: – and –

MR. HOGAN: – on the purchase of the power.

MR. KEATING: For the purchase of power, no, it's a regulated utility. What would create the revenue. I believe – again I'm not sure – but there's an equity component as well to the Muskrat Falls ownership. And there is a flow of equity, then, to who provides the equity, and that likely is – and I'm just making an – the assertion is that it's the provincial government, ultimately.

MR. HOGAN: Okay – well, Nalcor.

MR. KEATING: Nalcor, yes.

MR. HOGAN: Okay, but why couldn't that be done – I just – I wanna go back to Dr. Bruneau, who – I think his position is the domestic case was never examined by Nalcor.

MR. KEATING: Right.

MR. HOGAN: Right?

So, let's just build a pipeline –

MR. KEATING: Right.

MR. HOGAN: – and get the gas here –

MR. KEATING: Right.

MR. HOGAN: – for the ratepayers.

MR. KEATING: Right.

MR. HOGAN: And we don't care about Husky; we don't care about, you know, any other oil company that makes money. The same way we built a line from Labrador –

MR. KEATING: Yeah.

MR. HOGAN: – down here so we can power our houses on the Island. Why hasn't that been examined I think was Dr. Bruneau's suggestion.

MR. KEATING: Okay, so it has been examined, but let me explain. The pipeline scenario – just park it aside and we're gonna talk about Nalcor looking at gas and gas domestication, bringing gas to shore. So I will look, in my experience, and say, okay, I want to get that gas to shore for the benefit of Newfoundlanders and Labradorians for electricity, for industrial power, for the use in expanding refineries, for basic economic development. That's my belief then, now and in the future.

We selected the most likely technical solution to be a CNG train. And in that, what I attempted to do is negotiate with Husky Energy, is to say Nalcor and its technology provider, the CNG shipper, we would assume effectively most, if not all, the risk and cost in developing this project. So much so that the designer or the owner of the CNG ship would take its risk, the designer and owner of the onshore infrastructure – which will likely be Nalcor – the power plants, would take our risk. And we would take that ship out to the Husky field and simply tie in to their existing infrastructure.

Yes, there may have been some additional costs required on the Husky side to facilitate that and, yes, some disruption to their production of oil. And, yes, I would have accounted for that in my negotiation, my calculation, but that was the thrust of a couple of years' worth of work inside Nalcor to expedite, lower the barriers to domestic use of natural gas.

And at the end of the day, some of the drivers for that fell away. The industrial users didn't materialize. The gas user was finding ways to use that gas, now not as a storage vehicle but now more as a pressure support vehicle. So there were many factors involved.

But to be fair, as Dr. Bruneau would know – and he, unfortunately, wouldn't know this because this has gone on in commercially sensitive arrangements and studies and negotiations. He would only – could speak to what he sees.

MR. HOGAN: Mm-hmm.

MR. KEATING: And I have full respect for that. But what he probably wouldn't appreciate is a pretty extensive piece of work on behalf of Nalcor and private sector companies that are – you know, three, four, five that I can consider, that through the years have attempted to lower those barriers and reduce risk.

I'll suggest this – there's another part of it too. An offshore oil and gas company typically, if it's selling its oil or gas, wants to sell into a market; it wants to expose itself to a market risk. Not many oil companies – I don't know, actually, as I sit here, an oil company – a pure upstream oil company selling into a regulated market directly, and that being the – basically the only off taker in a regulated sense and for firm power and for baseload reliability. I, at the time, six or seven years ago, looked into it to see if I could find some analogues. I couldn't. There may be I just couldn't find any.

So a company like Husky – and I won't personify those companies; most companies will say the same thing – they would rather enjoy exposure to a broad market. Those are market risks they're willing to take. They're not so much willing to take 'regulatedly' imposed restrictions and criteria on providing of baseload service.

MR. HOGAN: Again, but I'm not talking about Husky's concern, I'm talking about Nalcor's concern and study on whether they could – not even whether they could, because I know they can –

MR. KEATING: Yes.

MR. HOGAN: – what the cost would be to get the gas here for domestic use only. And I don't care –

MR. KEATING: Yes.

MR. HOGAN: – and Husky does not have to make a penny off it. Now is – does that study – I know you said experience –

MR. KEATING: Yes, yes.

MR. HOGAN: – and you looked at –

MR. KEATING: Yes.

MR. HOGAN: – it and thought about it. Does that study exist to say this is the CPW for that –?

MR. KEATING: No, well –

MR. HOGAN: No.

MR. KEATING: – wouldn't have been in a CPW frame. I do have transportation costs, I do have facility costs, I have a –

MR. HOGAN: So rather than –

MR. KEATING: – business case.

MR. HOGAN: Rather than bringing them all together and saying –

MR. KEATING: Yes.

MR. HOGAN: – here, CEO, you know, we have your Isolated Option, we have the Interconnected Option –

MR. KEATING: Mm-hmm.

MR. HOGAN: – we have the domestic natural gas study option that would –

MR. KEATING: Yes.

MR. HOGAN: – cost X. Does that exist?

MR. KEATING: Yes.

Actually, it may, in some form, be in this binder. It led me to a meeting with Husky on maybe – certainly one occasion I can remember, maybe one or two – is to say I have now a business case; I have a vehicle that warrants some further technical discussion. Are you willing to sell this volume of gas at this price? I did pose that.

MR. HOGAN: And is that – have we seen that yet over the last day and a half? It's not the Pan Maritime –

MR. KEATING: No, no.

MR. HOGAN: – report, is it?

MR. KEATING: So the –

MR. HOGAN: It's not the Pan Maritime?

MR. KEATING: No, no, the study is – are the EnerSea studies.

MR. HOGAN: Okay.

MR. KEATING: There's a – there's two studies here; one in particular by a company called EnerSea. They're the CNG provider.

MR. HOGAN: And that's just for domestic use?

MR. KEATING: And that's – there's the domestic use and the ability, which I also tried to use CNG to entice Husky to do this domestic case was while (inaudible) can have a CNG tanker come to Holyrood, that tanker also – scalability can go to Halifax or Boston.

So what I was trying to do again is say I may have a business case to land gas here for power and refinery. It wouldn't just work for power; we'd need a refinery and industrial consumption.

If I could get 200 to 300 MMcf a day, I have a business case. And at the time I believe we had one.

MR. HOGAN: Do you know what the cost was?

MR. KEATING: Yeah, maybe the shipping cost was a $1.60, $1.70 –

MR. HOGAN: Total cost?

MR. KEATING: Oh, total cost? It eludes me now that's all. I was just focused on the CNG –

MR. HOGAN: Maybe I can ask you to advise other counsel, and Commission counsel, about what report that is, too.

MR. KEATING: Sure.

MR. HOGAN: Yeah, is that okay?

MR. KEATING: Sure.

MR. HOGAN: Okay, thanks.

Just back to Dr. Bruneau. Yesterday, your evidence was – and correct me if I'm wrong – that the Ziff report was essentially commissioned in response to Dr. Bruneau.

MR. KEATING: I believe it was.

MR. HOGAN: Okay.

MR. KEATING: Now, I didn't commission it. It wasn't part of the commissioning.

MR. HOGAN: Well –

MR. KEATING: But I would have to believe at the time that it may be a leading – but I do, I also understand that there were letters to the editor and …

MR. HOGAN: Well, this gets – so you – I mean you – there were emails going back and forth. You were obviously aware that there was – and you stated yesterday that there was a goal to get more information out to the public about –

MR. KEATING: Correct.

MR. HOGAN: – natural gas at that point in time?

MR. KEATING: Yes, that's correct.

MR. HOGAN: Correct.

So the purpose of the Ziff report was for public relations, not for Nalcor Decision Gate process?

MR. KEATING: In my mind it would be because it wasn't a Nalcor study, a Nalcor report. It was a –

MR. HOGAN: Yeah.

MR. KEATING: – government-initiated –

MR. HOGAN: Okay.

MR. KEATING: – report.

MR. HOGAN: Right. I just – can we bring up P-00926, please, page 29.

MR. KEATING: And what tab was that, please?

THE COMMISSIONER: So it's not –

MR. HOGAN: It wouldn't – oh, it is, sorry.

THE COMMISSIONER: I don't think you have it in your book.

MR. HOGAN: You don't have this.

THE COMMISSIONER: So you'll have to look at it on the screen.

MR. HOGAN: I'll give you a chance later. It is a Nalcor deck.

MR. KEATING: Okay.

MR. HOGAN: Is that the right word? Everyone keeps talking about decks.

MR. KEATING: Yeah, deck is – we don't do those anymore now.

MR. HOGAN: What's that?

MR. KEATING: We're getting away from decks these days.

MR. HOGAN: Oh, okay. Page 29, please?

So this is a Nalcor document and other witnesses have been asked about this. And it's, I guess, suggestions from the communications team about House of Assembly debate.

MR. KEATING: Okay.

MR. HOGAN: So I know you didn't draft this, so probably had no participation in it.

MR. KEATING: I don't know if I've ever seen it.

MR. HOGAN: Okay.

But I'll just read it out. It says, Current status: Every two or three days after the initial briefing the following materials will be released: Natural gas papers – so these are the Ziff and Wood Mackenzie papers.

So my question is, you being involved as a Nalcor VP in getting the Ziff report done –

MR. KEATING: Yes.

MR. HOGAN: – you know, then how do you feel about the fact that it's being used for – I'm going to say – partisan purposes in the House of Assembly?

MR. KEATING: I guess being a realist, and you're a Crown corporation, the politicization of studies and reports is almost a matter of course, so I'm probably not surprised. I guess it's up to the ultimate user of the reports to determine how they're best used. You know, I think at the end of the day though, if there's forums that want to have an open discussion which, like, the House of Assembly has, I think they should also have the benefit of the material.

MR. HOGAN: Okay.

But I mean it was – the report was drafted for public purposes and it was – then it was not really put out in the public. It was sort of used –

MR. KEATING: Yeah. And I don't have any comment. It wasn't – I wasn't involved in the 'strategization' of how these things would be used, ultimately.

MR. HOGAN: Okay.

MR. KEATING: Because I was basically a compiler or an assembler.

MR. HOGAN: Okay.

And on the issue of Dr. Bruneau – obviously, it was enough of a concern that the government commissioned a report. You know, why didn't anyone just pick up the phone and give him a call?

MR. KEATING: I –

MR. HOGAN: I mean, you had information, now, today you said – he – maybe –

MR. KEATING: Yeah – right – and maybe –

MR. HOGAN: You know, maybe if you had it back then, you wouldn't have needed to commission –

MR. KEATING: Right – my door – that's one of the big regrets of the – of some of these interactions that I know people have: this lack of understanding or misinterpretations. Often always, best resolved by picking up the phone, go and visit somebody. My –

MR. HOGAN: 'Cause there was a lot of effort – like, I just – I – we can bring up the emails, but there's lines that say: we need to get ahead of Bruneau, and people might actually think there's some truth to his position, we need a strategy to deal with this gas stuff. I mean –

MR. KEATING: So Mr. Hogan, I am not so sure – my style would be to pick up the phone and call, and I'm not so certain that maybe I didn't attempt – I can't say for certain. I can't say. I certainly can't say it.

But it is – I look at it now and say well, if I had – because Dr. Bruneau would have been effectively the only advocate. I think Cabot Martin had mostly an LNG orientation. But there was maybe only one or two – handful – of proponents for gas and that I knew – I had business relationships with Mr. Martin, and I know Dr. Bruneau, and we had met on a couple of occasions, and we discussed some of these things.

To the extent that I would almost flip it over – if Dr. Bruneau was serious and wanted to know more about pipelines and gas and potential, he could have come and spoken to us, as well.

MR. HOGAN: Well, to be fair, he did a public presentation –

MR. KEATING: Yes, he did.

MR. HOGAN: – and nothing about Ziff or Wood was ever publicly scrutinized. It wasn't put to the PUB or anything like that. So I don't know if that's fair to say that Dr. Bruneau could have called you. He did his best to go public.

MR. KEATING: Not sure that the Ziff's report weren't with – through a public process or made – made public to the PUB.

MR. HOGAN: Well, they weren't open to any public –

MR. KEATING: I don't think anything was prepared to address – and in actual fact, I think some of the considerations at the time was, you know, maybe we should do our own Harris Centre and do a presentation. And in fact, I think – I probably built five or six presentations for Fred Martin, primarily – he would have been the spokesperson out on these initiatives – and maybe he even spoke at – either a board of trade or something about these issues.

So I think there was a response. We just weren't ready the – the day of the Harris Centre – it was kind of a surprise – had a little bit of a notice, but that's my recollection.

MR. HOGAN: I guess the other question I have, and then I'll leave the topic, is why – at that point in time, in 2012 – why couldn't the project, or the natural gas option, just stand on its own at that point in time? Why was there a panic to say we need to look at this again? Or we need to prove –

MR. KEATING: Well –

MR. HOGAN: – it again?

MR. KEATING: – I guess what confuses me to this day is it stands on its own then and now, and I can't understand why a very, very small segment of the population – quite frankly, I don't know anyone else except counsels today and Dr. Bruneau have advocated that this is a realistic opportunity. Time and time again, the oil companies themselves, in their own –

MR. HOGAN: No, no. I know you understand that.

MR. KEATING: Yes.

MR. HOGAN: I know your position on that, and I know you might struggle with why other people –

MR. KEATING: Yes.

MR. HOGAN: – don't understand it. But if that was the position in 2012 –

MR. KEATING: Correct.

MR. HOGAN: – and it's the position now –

MR. KEATING: Right, correct.

MR. HOGAN: – and Dr. Bruneau does his presentation, why hire all these experts very close to the sanction date? What –

MR. KEATING: Well –

MR. HOGAN: Why was there extra information needed? Why couldn't the project stand on its own at that point in time?

MR. KEATING: Well, I guess –

MR. HOGAN: With the work that was done at that point.

MR. KEATING: So I guess the work that was done – that the Lower Churchill Project team relied on – was Navigant, as their primary consultant. And so Navigant navigated the screening process of the concepts. And I guess that consultant satisfied themselves by their research and review that the natural gas wasn't a viable option.

And for the most part, that was seen as – to be satisfactory. And there was plenty of public discourse about it through the years – development plans filed, C-NLOPB decisions rendered on those to substantiate that.

There was no shortage of public understanding that gas wasn't commercially available for domestic production.

MR. HOGAN: But obviously there was – felt there was need –

MR. KEATING: There –

MR. HOGAN: – to get more.

MR. KEATING: – was at least a need by a Memorial University professor to know more.

MR. HOGAN: No, but by Nalcor to put more out there.

MR. KEATING: Yes, because then, what will happen – what happened was –

MR. HOGAN: The government.

MR. KEATING: – a whole bunch of questions by a broader spectrum of people, which we thought were fair and we needed to address and we needed to address quickly.

MR. HOGAN: I mean, back – like I said, these reports were commissioned fairly late, a couple of months before sanction. I mean, is it fair to say, really, whatever would have been in those reports wouldn't have affected the sanction decision?

MR. KEATING: Trying to avoid the hindsight biases in all this stuff. (Inaudible) –

MR. HOGAN: Ziff comes out in October 2012.

MR. KEATING: Right.

MR. HOGAN: If Ziff had said –

MR. KEATING: If Ziff had said – and to be fair, Ziff – to be fair, if a consultant had come in and said, you know, you're all wrong, this is a real, cogent point and this warrants further study and – would there be a stop to pump the brakes? I would absolutely believe that to be the case. That's part of the reason why you do it anyway. Just to make sure, as you go down through the final analysis, have you checked all the boxes, crossed the Ts and dotted the Is? And there was concern that, in the world of natural gas, there wasn't enough in the public domain to satiate some of the questions that occurred.

MR. HOGAN: But I'm gonna – is – was there relief when Ziff came back and said what it's at?

MR. KEATING: Well, for sure, but the relief wasn't it – surprise –

MR. HOGAN: No.

MR. KEATING: – of the outcome. Their relief was, okay, we have an answer in a timely fashion; let's get it out.

Because they only had a number of weeks. Remember, they were charged with doing the review in a number of weeks that they would have to kind of compress a number of years of other analysis.

MR. HOGAN: And – this has been asked about a number of reports – Ziff would have only gotten any of the information that Nalcor provided it. Is that correct?

MR. KEATING: No. Ziff would have gotten their own repository of information. They would have done, I presume, their own data search, their data mining, what's available. Then they would have engaged with the provincial government and they would have discussions there and then they got some more information. Then they would have, obviously, spoken to Husky Energy and got some more information and finally they would come to us – and I don't know their methodology, but I know it was – it followed along those lines.

So it wasn't just Nalcor they relied upon for information, whatsoever.

MR. HOGAN: Do you know who at government was talking to Ziff throughout this process?

MR. KEATING: I think the primary point of contact was Wes Foote.

MR. HOGAN: Okay.

MR. KEATING: I think he was the study owner.

MR. HOGAN: And – well, I think it was minister –

MR. KEATING: Deputy – assistant deputy minister.

MR. HOGAN: Was it Minister Kennedy at the time? Was he the minister?

MR. KEATING: Minister Kennedy was, at the time, the minister.

MR. HOGAN: Do you know what his thought process was around Ziff?

MR. KEATING: No, I can't say I was party to the expressed decision, but I know it was the minister himself who said we gotta get a study going. I think there was – certainly in Nalcor, we had this meeting, said we gotta get some information. And that was probably likely running concurrent with the government, and I think the government said let's pull the trigger and get this consultant Ziff.

MR. HOGAN: It certainly wasn't a Nalcor decision to commission those reports, was it?

MR. KEATING: It was not Nalcor's decision to commission Ziff. It was government's. We commissioned this PIRA LNG study.

MR. HOGAN: PIRA?

MR. KEATING: PIRA.

MR. HOGAN: Okay. Good. That's a good segue.

Can we bring up the PIRA report? I think it's 01203, please – which is tab 10.

MR. KEATING: 10.

MR. HOGAN: Page 10. Scroll down a little bit, please. Right there.

So this is talking about contracts. Obviously – you tell me if I'm wrong – if you're going to develop natural gas anywhere in the world, you want to have a buyer.

MR. KEATING: Yes.

MR. HOGAN: And you would enter into contracts for those sales. Correct?

MR. KEATING: Yes.

MR. HOGAN: The third bullet point there says: "Potential structural changes that are not foreseeable." And this is talking about why contracts are 20 years.

MR. KEATING: Yes.

MR. HOGAN: "There are always limitations in the ability to forecast. By the end of a 20-year forecast, its accuracy is tenuous at best."

MR. KEATING: Yes.

MR. HOGAN: Do you know if this study based its assessment on 20-year contracts?

MR. KEATING: It did to the extent that if you entered into a contract between now and, say, four or five years for a 20-year delivery, this is likely the price band that you could expect.

MR. HOGAN: So when you're making your decision you say, well, how much money can we make over and let's look at it over 20 years.

MR. KEATING: Right, so –

MR. HOGAN: Because beyond 20 years, God knows what's going to happen.

MR. KEATING: – beyond 20 years, it is sort of always a God knows, but you tend to be informed by then a very important aspect of what other 20-year contracts are in place at the time. So you will have – like, today, I can look and say there were X number of 20-year contracts in place that expire from 19 years to one year.

So that forms my impression of what renewal markets may look like at any point in time and that's helpful. So you go through this process of – and this is what these experts are good at. But at the end of the day, of course, if you're going to be linked to oil as a primary determinant, then that's an extra complexity and those markets are also (inaudible).

MR. HOGAN: So in your experiences in the oil industry, is 20 years sort of the benchmark?

MR. KEATING: Well, we actually tried to forecast out life of fields. In some cases the fields are going 30 years, you forecast out. But, obviously, the accuracy or forecast is more accurate to the front end and less to the back. You account for that through your discount rates, which oil and gas companies tend to be 15, 20 per cent typically, for big long investment horizons.

MR. HOGAN: So I'm asking about this for two reasons; one, you're probably aware of the issue around the Isolated Option, the forecasts for oil were 50-plus years?

MR. KEATING: Yes.

MR. HOGAN: Okay.

But the other question I have then, is that if you're forecasting commercial viability –

MR. KEATING: Yes.

MR. HOGAN: – the reason – one of the reasons the Isolated Option was not chosen was because the price of oil was going to increase over the course of 50-plus years.

MR. KEATING: Correct.

MR. HOGAN: If we're going to look at the viability of natural gas –

MR. KEATING: Right.

MR. HOGAN: – when comparing it to the Isolated Option, should we – I say, we – should –

MR. KEATING: Yes.

MR. HOGAN: – whoever does the report say, well, how much money will we make if natural gas goes up over the course of 50-plus years, to be fair – to make fair comparisons?

MR. KEATING: Correct. Yes.

MR. HOGAN: And that wasn't done, was it?

MR. KEATING: It – oh it's done. This is the company PIRA. They have another service and they provide us our oil and gas – or oil price forecasts and horizons. So they're actually one of the global leaders in price forecasting. So they would sit back with that same question and dilemma and offer –

MR. HOGAN: But did they (inaudible) there? You know, or we'll have to look through it maybe.

MR. KEATING: I'm going to presume that they did, that's the style, but I can't say for certain.

MR. HOGAN: Okay. I'll get off PIRA now.

If and when gas is developed –

MR. KEATING: Mm-hmm.

MR. HOGAN: – I say when. Will it be developed? Do you know? Can you say?

MR. KEATING: I tend to believe that the volumes of gas are not – what's the right word – are not too small that wouldn't warrant a serious consideration. And my belief is, with the investments in the infrastructure, that there are always plans that companies make that at certain points, as the oil production declines and we get to blowdown, that they would have had a chance to examine, through the fullness of time, what options come and go.

And then they come to this exercise-your-option decision. And it is my role, actually, to see to it that they would find a way to develop it or else that's a stranded resource. And I know that a large part of my focus, as we get to the twilight and the decline of those fields is to see that those resources are developed.

MR. HOGAN: So if it's developed for domestic electricity –

MR. KEATING: Yes.

MR. HOGAN: – here on the Island –

MR. KEATING: Yes.

MR. HOGAN: – I mean logic tells me that that will affect the use of electricity for Muskrat Falls. Is that correct?

MR. KEATING: So in the hypothetical case that gas comes to the Island for any reason, the planners at Newfoundland and Labrador Hydro, or Nalcor at the time, will look at that as a resource, compare it to alternatives and integrate or not. I guess that's a decision in the future. And that will have an impact on prices one way or the other.

I would say just strategically too, the fact – and this is, you know, for public knowledge and comfort. The fact that we just have a big hydro project doesn't preclude ever that gas would be landed. Because with this transmission infrastructure that we have and with the growing load – albeit not as growing as high as we would have thought back in the day – you have effectively a pipeline now. It's called, you know, the power cable. And you can convert gas to electricity to service markets at any point in the future. So that is in interesting option that Muskrat Falls actually provides to actually gas development.

MR. HOGAN: Yeah, okay. Analyzed at the time.

MR. KEATING: Yes.

MR. HOGAN: Yesterday, you said that Ed Martin and Gilbert Bennett made the decision to screen out natural gas.

MR. KEATING: Yeah, that would be their decision.

MR. HOGAN: Okay. I'm just wondering why Mr. Bennett is involved in that decision.

MR. KEATING: Oh, he'd be the – I guess formally, Ed Martin, CEO, is the Gatekeeper of the Decision Gate process.

MR. HOGAN: I understand that.

MR. KEATING: But he would have to make – he would have to do so on a recommendation, I think, from the chief executive, Gilbert Bennett. So one way or the other –

MR. HOGAN: But Gil Bennett is not in the Oil and Gas –

MR. KEATING: No, no, no. Now, remember, this is on the collection of all the inputs. I don't he's coal or wind, you know, so he would collate the inputs, make a determination – I think it was aided by Navigant – and the options would have been screened.

MR. HOGAN: And did you make a recommendation as the VP of Oil and Gas as to whether it should or shouldn't be screened out?

MR. KEATING: I would make – I don't think I made a formal one. I think the closest you get is that Decision Gate pack.

MR. HOGAN: 2011 report?

MR. KEATING: The one I wrote myself, I guess, and –

MR. HOGAN: Okay.

MR. KEATING: – that one. So that's the closest I came to expecting to be asked to supply a report for a broader document and I wanted to make sure the document reflected, of course, the history of what we've done. So if anyone asks then or asks now, I'd say what we did was the appropriate screening out of gas.

MR. HOGAN: So you would point to that your sign-off for the screening process – that document you drafted?

MR. KEATING: Yeah, I would consider that my screen off –

MR. HOGAN: Yeah.

MR. KEATING: – personally and professionally, but there was no – if you're looking for my signature on a piece of paper, that doesn't exist.

MR. HOGAN: Okay. I think you said yesterday you would have been consulted on this, so –

MR. KEATING: Oh, for sure, yes.

MR. HOGAN: – you were consulted?

MR. KEATING: Oh, yes.

MR. HOGAN: You specifically remember being consulted on that?

MR. KEATING: Yeah, yeah, yeah, and particular on the gas.

MR. HOGAN: Okay.

Just for maybe my own understanding – we can bring it up if you want, it's at – it's Bruneau's timeline. You were asked about it.

MR. KEATING: Yes.

MR. HOGAN: So 2020, I think, to 2025 for when –

MR. KEATING: Yes.

MR. HOGAN: And then you said, well, that's – the dates had to be pushed out.

MR. KEATING: Yeah.

MR. HOGAN: I think you said they need to be pushed because there was more oil found at Hibernia?

MR. KEATING: Yeah, I'd probably want to – if you want to get that chart and zip it up again –

MR. HOGAN: It's at P-00090, page 14.

MR. KEATING: – because I think there were some misunderstanding.

MR. HOGAN: That's tab 26, page 14.

MR. KEATING: Tab 6?

MR. HOGAN: Twenty six.

MR. KEATING: Twenty six. So, yes, so, again, these are the correct numbers that Dr. Bruneau lifted from various resources. No quibble, that is what they are.

When you look at a date like 2020, that would be a date that would be in the – I believe it would've lifted it from the Hibernia development plan. And that date would say: This is the date, in our estimation, that gas is available for sale. And then I think what they would go on to say is: It's available in sales volumes of 300, 200, and 100 MMcf.

And then they would go on to say: The impact of sales in 2020, and before and after for that matter, they – are as follows, and then they draw a graph that shows at each volume that's made available, the impact to oil production. So they – what they say is: Yes, physically, the gas is available – you know, effectively as it is today.

MR. HOGAN: Thank you. Well, I guess there's gas available on day one, isn't there?

MR. KEATING: There's gas available on day one –

MR. HOGAN: Yeah.

MR. KEATING: – what they're doing now is quantifying and periodizing a volume to a time. And I have no dispute or issue with that. But what they go on to say is, that if gas is sold – if this volume of gas is sold, this is the impact to oil production from the Hibernia –field. And that would range from, I don't know, 40 million barrels down to 8 or 9 million barrels across the spectrum.

And then, they conclude by saying, in that same report – maybe 10 or 15 lines down – that the sale of gas for domestic consumption for – power is not economically feasible – something to that –

MR. HOGAN: Again –

MR. KEATING: – extent.

MR. HOGAN: – on a commercial –

MR. KEATING: Right. Commercially – yeah. Commercially feasible.

So that is the – that is where this is. But, in how Dr. Bruneau, again, uses this – it implies that – somehow equates availability with commercial – the commercial reality. And the commercial reality is those companies may be indicating when the right time is on the oil-production window to make gas available. But it's not without a cost, and I'm not – I don't think that this particular domestic market – it warrants it. I think that's what is being said.

MR. HOGAN: But there was gas available in 2020 (inaudible) –

MR. KEATING: There's gas available –

MR. HOGAN: – will be available.

MR. KEATING: – there's gas available now.

MR. HOGAN: Okay. Thanks.

I don't know if you're familiar with the expressions of interest that were done regarding the development of the Lower Churchill – the fact that there were expressions of interest.

MR. KEATING: Was that pre-Gull Island days – back –

MR. HOGAN: Yeah, that was (inaudible) –

MR. KEATING: – oh, okay – vaguely familiar –

MR. HOGAN: Okay.

MR. KEATING: – I know it was a period in –

MR. HOGAN: I'm wondering if – was that ever thought about as an option for the development of natural gas – to put out expressions of interest and say, you tell us what you can and can't do.

MR. KEATING: I can't recall. I would presume that if – it was – expression of interest were out, that certain – I don't know, gas providers would have submitted something. I just can't (inaudible) –

MR. HOGAN: You're not aware of one.

MR. KEATING: – not aware of it, no.

MR. HOGAN: Okay. Thanks.

MR. KEATING: Now, you made me curious. I just – I wonder if anything was submitted –

MR. HOGAN: It's a good idea, is it?

MR. KEATING: Yeah.

MR. HOGAN: Yeah. Just a couple more questions. I was reading – looking at – the Atlantic Accord this morning, and it talks about waste –

MR. KEATING: Yeah.

MR. HOGAN: – I don't know if you're familiar with –

MR. KEATING: Yeah, okay. Fine.

MR. HOGAN: – (inaudible). I'm just sort of exploring this, so –

MR. KEATING: Mm-hmm.

MR. HOGAN: – you know, I look at it and think that there's ways, maybe, that you could consider the gas that's being stored offshore as waste, which means something needs to be done with it. So was that ever looked at by Nalcor to say: Husky, you know what? You gotta deal with this stuff, and we're gonna use it.

MR. KEATING: Right, and – that's a good question. And that's, actually – that's a daily question.

So, in the realm of commercially sensitive types of discussions we have, I can say certain things. I can say that an operator – I'll be generic – an operator will choose to drill in certain locations in certain ways, and use certain pressure support systems, and it aims to maximize the greatest sweep of oil that it can. Where there may be a difference of opinion between other operators or co-venturists to say: Oh, that well should be there instead of there. Or you should use oil versus gas or any of these kind of questions. It comes down often to, like: I think we get more oil this was versus your version. And that is the typical ebb and flow of the discussions of budgets and drilling timing locations.

So, this notion of waste would be for – say for us, central to us is: okay, as we store this gas – Husky or even Hibernia – Hibernia's not so much storing it, they're cycling it for (inaudible). Specifically Husky, you know, what's our experience with that gas being lost in the reservoirs, being not able to be pulled out?

Because that is a concern, so then that would be a concern to me to say that as we wait in the exercise of our option, are we actually seeing that resource diminish?

MR. HOGAN: Yes.

MR. KEATING: And I would have – I'd ask those questions, it's important to me. But it is also important to the operator, they still want to see the maximum value. So, there is always this discussion amongst technical people to say: Listen, let's try to maintain the value across the board. I don't see that Husky has any less of a view to making the greatest value for gas than we would.

MR. HOGAN: No, but I'm not – again, I'm not concerned about Husky making money –

MR. KEATING: Yeah.

MR. HOGAN: – I'm concerned about powering the province.

MR. KEATING: Oh.

MR. HOGAN: And if there's a way to say: Husky, because this is waste, we consider this waste, we're going to order you or mandate you to deal with it so we can use it here.

MR. KEATING: Okay, so at – as it is today and at the time and prior, we don't consider that the storage of the gas a waste.

MR. HOGAN: Yeah.

MR. KEATING: We consider – we could consider it an opportunity cost –

MR. HOGAN: Yes.

MR. KEATING: – it costs money to store that gas. It is effectively a disposal if you give it zero value. So if we can't – can we take the money that we would have spent on those gas injection wells and could we apply it to one of these domestic gas situations? So let's look at that. So it's been done. Everyone, you know, inside the partnership group would look that in these studies amongst themselves that: Wow, we can, maybe, save $200, $300, $400 million, maybe, on this gas storage thing by applying it towards a pipeline. The difference is though, the pipeline scenarios that are contemplated or the CNG scenarios that are contemplated or the FLNG scenarios that are contemplated are bigger, robust, more lucrative projects, because the domestic gas is not economic and there is no amount of opportunity cost that I can apply to that scenario to make it worthwhile. And – it is true, it would be the first thing you would go to.

MR. HOGAN: Yes.

MR. KEATING: And the difference sometimes is – it is in Dr. Bruneau's very own PowerPoint where he says: listen, in some annual energy years, we're only using 17 – 13 or 17 million (inaudible) cubic feet. I mean, that generates only about $60 million of gas if you sold it at $2.

MR. HOGAN: So has there been any – I mean we've heard politicians say –

MR. KEATING: There's nothing in the –

MR. HOGAN: – that there's no stone –

MR. KEATING: – public domain.

MR. HOGAN: – unturned in terms of the dealing with –

MR. KEATING: There's – and there's nothing in the public domain about this. And that is a handcuff that we all have. But you can – you, you know – as the executive of Nalcor Energy, responsible for this, I would have had full knowledge and insight and awareness into this. I would have brought to bear any and all commercial, legal constructs to make it happen. And if I could make it happen, I would. I – I feel so strongly that a lot of the words about the – requiring the development plans to be filed before – those were my words.

MR. HOGAN: And again, you use the word commercial, right?

MR. KEATING: Yeah. It had to be. Again, I come back to – I – maybe it's – maybe I'm naive – I don't know – if it's not commercial, it's subsidized. That's how I think. Then –

MR. HOGAN: Yeah –

MR. KEATING: – there's a –

MR. HOGAN: That's –

MR. KEATING: – subsidy.

MR. HOGAN: Sure.

MR. KEATING: So then –

MR. HOGAN: Muskrat Falls is not commercial.

MR. KEATING: Yeah, but at the time it would have been. And – and that's what I – that's the only thing that I knew and that's the only thing that I guess was at hand, that those CPWs represented a commercial project.

MR. HOGAN: Again – it sounds like, to me, that this issue was not specifically looked at – not necessarily a criticism – from a domestic cost standpoint.

MR. KEATING: To say –

MR. HOGAN: Well subsidized or not – 'cause we're paying a lot for Muskrat Falls, right? You know, and –

MR. KEATING: But that's the benefit of hindsight.

MR. HOGAN: Sure.

MR. KEATING: So at the time – apples to apples – pipeline gas – CNG gas for domestic energy use was discounted by Ziff, Husky, Exxon, Wood Mac – you know – I'd go on, say there's even more companies that would come in and offer other alternatives because they first would say: surely there's no chance that this gas is gonna have any commercial use on the Island – 'cause they know it. They would have looked this. It's all publicly available.

MR. HOGAN: Yep.

Last question I have. I know you're here to talk about natural gas, but you were involved with the Hebron project.

MR. KEATING: Yeah – correct.

MR. HOGAN: This went – there was cost overruns.

MR. KEATING: Yes they had.

MR. HOGAN: Yep. I just want to know if there was any discussions that you had with the Lower Churchill Project team regarding risks, cost overruns, be careful about this, be careful about that, we –

MR. KEATING: Yes, yes.

MR. HOGAN: – experienced it at Hebron.

MR. KEATING: Yes, for sure. Because that would be another part of the normal course of business that there's two big – well three, Vale was on the go as well. And to the extent that we could, actually, we even had some of the folks from ExxonMobil and their contractors meet with Lower Churchill Project a couple of times and share experiences and whatnot – experiences in productivity.

There is no doubt – and they both more or less started at the same time. The Hebron project was – and again, mindful of commercially sensitive information, but I can speak in broad terms about the cost overruns. It was not immune from cost overruns. If you look at –

THE COMMISSIONER: Let's just stay away from that at this stage.

MR. KEATING: Okay.

THE COMMISSIONER: I don't care about why Hebron was over budget or whatever. I think the point being made by the question is that you were aware – or you were, anyway – you were aware of the fact that there were cost overruns on Hebron.

MR. KEATING: Yes.

THE COMMISSIONER: And I heard your answer with regard to the issue of whether or not this was discussed with Lower Churchill. Did you discuss it with them?

MR. KEATING: The cost overruns?

THE COMMISSIONER: Yes.

MR. KEATING: Yeah, yes, we did.

THE COMMISSIONER: You did – no, when – I'm not asking we. I'm asking you. Did you have a discussion with the Lower Churchill Project group? Did you have a presentation with the group on the issue of the –

MR. KEATING: Yeah, I did. I did –

THE COMMISSIONER: Okay.

MR. KEATING: – have a presentation.

MR. HOGAN: That was actually –

THE COMMISSIONER: We haven't been able to see that yet, so –

MR. KEATING: Oh, okay.

THE COMMISSIONER: So you might be able to point us to your presentation at some stage and provide it to us?

MR. KEATING: Yes. It would certainly be – the content when – there's commercially sensitive information in it, but there exists a PowerPoint where I think I put the costs of Hebron from DG2 to DG3 and sanction together and showed cost development. I think something like that exists.

MR. HOGAN: So –

THE COMMISSIONER: If you can assist us in locating that – we haven't found it yet.

MR. KEATING: Okay.

THE COMMISSIONER: Okay.

Anything else, Mr. Hogan?

MR. HOGAN: That's it. Thank you.

MR. KEATING: Okay. Thank you.

THE COMMISSIONER: All right. I don't believe anybody's here from Manitoba – or, I'm sorry – from Nalcor board members and Newfoundland Power.

So Mr. Simmons – Nalcor Energy?

MR. SIMMONS: Good morning, Mr. Keating.

MR. KEATING: Good morning.

MR. SIMMONS: Many things have been covered very thoroughly so far. But there's a few points I want to go back to just to kind of fill out some of the – particularly, the early part of the story that's come up through the last day and a bit.

So you joined Newfoundland and Labrador Hydro in 2005 as vice-president of business development, I believe you had said –

MR. KEATING: That's correct.

MR. SIMMONS: – at that time. Did that have a particular focus on the oil and gas side of the business then?

MR. KEATING: Yeah, it was clear, what would an oil and gas person be doing inside a regulated utility? It was, at the time, just a precursor to the Energy Plan, and then the expanded mandate of Hydro into what now is the – Nalcor Energy. My job as VP business development was primarily focused at getting equity stakes in the offshore.

However, in the early days, I had to recuse myself from certain negotiations, discussions specific to Hebron simply because I left an executive position of one of the proponents.

In that period of time, I was active in these two wind power projects, and one – in the Fermeuse and Ramea. So I was responsible for a group of people that looked and established wind monitoring when – and negotiated and, I guess, put in place two fairly successful wind power projects and then a demonstration project in Ramea where we used hydrogen.

So those are the types of business development things. I also, in that time – early days – would have been involved in things like – there – mining – mines or aluminum smelters that would have interest in Labrador hydro power.

MR. SIMMONS: Right. So coming from your oil and gas background, having been with Norsk Hydro – I guess now –

MR. KEATING: Yes.

MR. SIMMONS: – it would be Statoil – shortly before. We've heard in the evidence, and I think you were asked, about a report done in 2001 by Pan Maritime Kenny.

MR. KEATING: Yes.

MR. SIMMONS: Is that a report you would have been familiar with before coming to Newfoundland and Labrador Hydro?

MR. KEATING: Yes. Yes, it would. Yes.

MR. SIMMONS: Okay. And something that you would have had access to and been –

MR. KEATING: Yes.

MR. SIMMONS: – familiar with after joining Newfoundland and Labrador Hydro –

MR. KEATING: That's correct.

MR. SIMMONS: – as well? Okay. I want to look, actually, at the report for a few minutes, please, at P-00088. And it's not in your binder.

THE COMMISSIONER: All right. So it will come up.

MR. SIMMONS: So it'll come up on the screen here. This is just the first page. And if we could scroll down just a little. Stop there. It says it's submitted to "Government of Newfoundland and Labrador; Department of Mines & Energy; Petroleum Resource Development Division."

Do you know anything about how this report came to be commissioned or what the objective was in commissioning this report at the time?

MR. KEATING: I think it was a government – government would ask the industry for the story of natural gas. What industry – broadly –

MR. SIMMONS: Mm-hmm.

MR. KEATING: – usually – maybe even through the Canadian Association of Petroleum Producers or some – at that time – whatever manifestation – provide to me – government – a plan or – what would it take to develop these offshore natural gas resources?

MR. SIMMONS: Sure. Can we go to page 3, please?

So this is the executive summary. The first paragraph there starts out by saying that the study has been commissioned on behalf of the government, and then it goes on to say: "The work involved a detailed review of the technical and economic aspects of developing the offshore natural gas and associated liquid resources of Newfoundland and Labrador" – which I think is consistent with what you just said.

MR. KEATING: Yes.

MR. SIMMONS: And then it goes on to say: "The study focused mainly on the gas and gas liquids of the Grand Banks area, the pipeline option for commercially developing the resources and the utilization of the gas for power generation on the island of Newfoundland."

So had you been aware at the time that those were objectives that were being looked at –

MR. KEATING: Yes.

MR. SIMMONS: – as well, specifically, pipeline and use of gas for electricity generation.

MR. KEATING: That's correct.

MR. SIMMONS: Okay, scroll down please – a little farther – okay, we can stop there.

Now, there's a paragraph here that begins: "The work of the study."

And it says: "The work of the study concludes that the natural gas resources evaluated can be developed economically using a pipeline system to export gas from offshore Newfoundland to Eastern Canada and on to the US. A sustainable production rate of at least 700 million standard cubic feet per day is required in order to maintain the economics of the system."

Now, I think I heard you earlier refer to the 700-million-standard-cubic-feet number –

MR. KEATING: Yes.

MR. SIMMONS: – as being some kind of threshold –

MR. KEATING: Threshold.

MR. SIMMONS: – number. So can you tell me a little bit more about what the conclusions were, as best you can recall –

MR. KEATING: Yeah.

MR. SIMMONS: – from this report, that led to this 700-million-cubic-feet number and what the significance of that was?

MR. KEATING: So at the time, the study would cover, of course, the physical nature of pipelines, and then the cost estimates. They will look at the likelihood of lending areas, the locations – whether it be Nova Scotia, Boston or the Island. They would have considered, really, a broad suite of, actually, multiple options within a particular scenario.

They would have had the opportunity to look at load profiles and domestic demand, and they would've concluded, both from a technical point of view and a commercial point of view, that the optimal threshold – meaning that – safe to say if you had more than 700 million cubic feet – 800, 900, a billion – a thousand, sorry – you would probably have a more robust project.

But at least you needed a minimum volume of this gas deposited in the pipeline, as described therein, to meet a market that they knew existed at that time, and that would meet an economic threshold, if I'm summarizing correctly.

MR. SIMMONS: Okay, and then it goes on, and there's a couple of qualifications then. It says: "The extent and availability of the resources identified in the study must be confirmed prior to beginning any pipeline project, especially those in the North White Rose field."

So at the time of that study, how far advanced was our understanding of what gas there might be in the White Rose field, or can you say?

MR. KEATING: So in – White Rose, as a whole, was – fairly well understood that it had been drilled and delineated and, effectively, is in early stage of development. So that was important, but of course, there still remained many locations to be drilled through the years –

MR. SIMMONS: Mm-hmm.

MR. KEATING: – through the development well process – that would give greater insight as to the volumes. There were many sub-areas of the field, which we're still talking about developing today, or even drilling today, that may provide additional volumes. Or you may have had an estimate for a particular volume that existed at that time; that only when you drilled you found it wasn't so high.

So what it's basically saying is that the – particular to the north White Rose field is – it is the largest gas cap that exists, and likely is the single-largest pool – concentrated pool of gas, and as a result we should – you should know that area with far greater precision than, maybe, the authors of the study would advise, then, before you committed to a pipeline development project.

MR. SIMMONS: Now, back in 2001, Hibernia had been in production for some time –

MR. KEATING: (Inaudible) three or four years.

MR. SIMMONS: – Terra Nova had been in production for some time, but there's no mention of those two here.

Is that because it was well known, even in two-thousand and –?

MR. KEATING: They were in development phase (inaudible) –

MR. SIMMONS: In development phase.

MR. KEATING: – they're being built. Yeah.

MR. SIMMONS: Okay.

And so, at that point, how well known was it whether or not there would be any significant amounts of gas at Hibernia or Terra Nova that could contribute to this –

MR. KEATING: They would –

MR. SIMMONS: – export scenario?

MR. KEATING: – have a fairly good handle on what the prospectivity would be. The board, at the time, would have held table of volumes on a pool-by-pool basis that, indeed, changed over time.

MR. SIMMONS: Mm-hmm.

MR. KEATING: But they would have had, at least at the screening level, some degree of comfort that a 700-million standard cubic feet project could be viable.

So I would contend that there was enough information there to say that that would be viable. But they would condition it to say that once you select the – your – the specific project, you'd ought to really, then, understand the reservoir's deliverability.

MR. SIMMONS: And then the last part of that paragraph says: "… a basin-wide co-operative approach will be necessary for economic resource development." Do you have any comment on what –

MR. KEATING: Yes –

MR. SIMMONS: – that refers to?

MR. KEATING: – because I'm – my memory escapes me now. There's not only a threshold of throughput – which is this – there's a threshold for the resource size, as well: How many years are you able to produce?

So it was always seen that probably not one single pool was gonna give you the volumes necessary for a stand-alone export scenario. In fact, I can guarantee you there isn't; that's been the conclusion of many studies since then.

So it would look like that you would have to pool the gas that was not only available in the White Rose field, or the Hibernia field, Terra Nova field, Hebron field – to come up to some, I think, 4- to 5-trillion cubic feet of resource, which could backstop the 700-million cubic feet per day as required.

I don't think the volumes that related solely to the White Rose area, which were around two Tcf, may have provided the best threshold. I think the total volumetrics needed to be higher.

MR. SIMMONS: So at this point with this study –

MR. KEATING: Yes.

MR. SIMMONS: – and I know this is back in –

MR. KEATING: Yes.

MR. SIMMONS: – 2001, which is a fair time ago now. It was, you know, about 10 years before –

MR. KEATING: Mm-hmm.

MR. SIMMONS: – the sanction decision of Muskrat Falls. So at this point, based on this study, it wouldn't have just been up to Husky to be able to provide what these study authors determined was the volumes of –

MR. KEATING: Well –

MR. SIMMONS: – gas that would be necessary –

MR. KEATING: Most –

MR. SIMMONS: – for commercial development –

MR. KEATING: Most certainly not.

MR. SIMMONS: – all the operators form the oil fields (inaudible) involved.

MR. KEATING: All the operators would have to have aligned and agreed on a (inaudible) development scenario.

MR. SIMMONS: Okay, right.

MR. KEATING: Which is not easy.

MR. SIMMONS: Okay.

Now there's just a couple lines from the next paragraph, "The study further concludes" –

that's this study – "that the optimum route for the gas export pipeline from the Grand Banks into Bull Arm" – which was where apparently they were considering bringing it – "is a northern route into deep water (> 200 m) and then an overland route to Come by Chance."

So this northern route that's referred to, is that the 600-plus kilometre route that you discussed earlier rather than a direct route across the shallow Grand Banks. This would be the deep water route that was even under –

MR. KEATING: Yeah that's –

MR. SIMMONS: – considered as the optimum –

MR. KEATING: – that's correct. Visually I think there might be a diagram here but you almost go south, get off the shelf and then hug the Grand Banks – you know, I guess the slope of the Grand Banks all the way around until you get to the Avalon.

MR. SIMMONS: Okay.

Can we go to page 5 please? Or I'm sorry, page 6.

This is the end of the executive summary and it has a bulleted list there of some of the principle conclusions for the study. And if we go down to about the sixth bullet, there's one that begins "Delivery of gas for domestic use" –

MR. KEATING: Yes.

MR. SIMMONS: – so it says: "Delivery of gas for domestic use for power generation, industrial, commercial, and residential is not economically feasible without integral development for delivery to Eastern Canada and the US. This is due to the small size of the potential domestic market and the resulting high unit cost of bringing the gas to shore combined with the cost of installing a gas pipeline from the Grand Banks to Come-by-Chance."

MR. KEATING: Yes.

MR. SIMMONS: So how well accepted at the time in 2001 was this conclusion that this was an accurate description of the economics of the case for domestic use of natural gas in the grand banks for power generation?

MR. KEATING: So this would be inside the industry. The owners and contractors at the time well understood.

MR. SIMMONS: Page 14, please.

There's a section here in the report dealing with pipelines. I'm just bringing you here 'cause there's a table headed "Landing and Export Pipeline Costs" and without going through the whole report – I understand that the scenario that was being looked at was to build a pipeline to come into Bull Arm to get the gas to the Island. Then there would be an overland pipeline to Come By Chance where there'd be a refinery use for it.

MR. KEATING: Yes.

MR. SIMMONS: And then it would be possible to build a pipeline actually from Come By Chance through to –

MR. KEATING: (Inaudible.)

MR. SIMMONS: – eventually to Boston –

MR. KEATING: Yes.

MR. SIMMONS: – in order to export the gas from there – and that these were looked at as separates – pieces –

MR. KEATING: Yes.

MR. SIMMONS: – of an overall export case.

And on this – table, in the right hand column, are these estimated costs, millions of dollars, for the different segments of the pipelines?

MR. KEATING: I believe that to be the case.

MR. SIMMONS: And the top one is, "Northern Import Route (Grand Banks to Come by Chance)" same exhibit, same page. Is this the deep water –

MR. KEATING: This would be –

MR. SIMMONS: – route?

MR. KEATING: – the 600 kilometre route.

MR. SIMMONS: Right. And the estimated cost at back in –

MR. KEATING: 2001.

MR. SIMMONS: – 2001 was $795 million.

MR. KEATING: That's correct.

MR. SIMMONS: And if you go down to – so that – if you go down to the very bottom, there's a line that says, "Come by Chance to Holyrood Spur". Do you know what that would have been referring to? Last line in the table.

MR. KEATING: The last line in the table – Come By Chance to Holyrood Spur – oh yeah. That would be for once the gas is landed to have an – offtaking line to the power plant.

MR. SIMMONS: And the cost of that is an additional $128 million at that point. Estimated. Okay.

And then at page 35, please.

Page 35 there's an appendix here, too. It's headed C-Core. And it says, "Iceberg Risk and Routing Considerations for Grand Banks and Export Pipelines."

So, my understanding – correct me if I'm wrong – is that C-Core, as part of the study, was engaged to do the pipeline – routing analysis and consider the iceberg scouring considerations.

MR. KEATING: That's correct.

MR. SIMMONS: Yeah. Page 37.

We saw earlier that it was the Northern Route that was the preferred one and, in this table, is that item number one, which lists the length as 620 kilometres?

MR. KEATING: That seems to be – yes.

MR. SIMMONS: And then for trenching it says 110 kilometers – would that be the – extent of that that would have to be trenched, even with the Northern Route?

MR. KEATING: That would be – yes. And I would assume that to be a little bit on the front end and back end.

MR. SIMMONS: So that – that report was in existence then in 2001. It was on the books when you joined Newfoundland and Labrador Hydro in 2005. We know that by September of 2007 the Energy Plan was released, and I believe you've said that in your role you had some input into the oil and gas parts of the Energy Plan. Correct?

MR. KEATING: Mm-hmm.

MR. SIMMONS: Okay.

So I'd like to bring you to Exhibit P-01305, please.

THE COMMISSIONER: Tab 15.

MR. SIMMONS: Yes. So as we now know to call it, this is a deck.

MR. KEATING: Yes.

MR. SIMMONS: And it's a Newfoundland and Labrador Hydro deck titled: Proposal to Monetize Grand Banks Natural Gas, August 2006. And we can turn the pages there in a moment, but can you recall generally what this was about? Do you remember this presentation?

MR. KEATING: Yes, I do. I almost consider it as one of the first central things I was engaged to do. And it may be – I was in the company maybe nine months at the time.

MR. SIMMONS: Mm-hmm. Okay.

Page 2, please? Who was this presentation made to?

MR. KEATING: This presentation was twofold. It was to present internally for alignment, the executive, to say that here is an opportunity and we're going to engage Husky and partners, Hydro and any other off takers, Newfoundland and Labrador Refining, for a joint study. So it was basically a twofold basis: one is, first of all, to get alignment with my management team and say this is a good thing worth pursuing; and then take substantially the same report, if not completely the same report, and have meetings with these proponents.

MR. SIMMONS: Okay.

So the material we see here, this was the one that was prepared for the internal discussion. And what were you looking for alignment on internally?

MR. KEATING: That there was indeed a need for gas for electricity generation, number one, I want to confirm that; and number two, that with the appearance of industrial customers now, that there may be indeed a threshold of gas consumption that could justify a pipeline.

MR. SIMMONS: Mm-hmm.

And was this actual presentation later made to Husky or was –?

MR. KEATING: Yes, it was.

MR. SIMMONS: It was.

MR. KEATING: This presentation was made to Husky.

MR. SIMMONS: Okay. Slide 5, please?

And, actually, maybe what we'll do is we can just page through a couple of pages. This one on page 2 is purpose, then on page 3 there's one that says, Hydro Overview, which just has a very general description of Hydro's role in power generation. And then the next page talks about the reorganization of Hydro. And then we'll go, please, to page 5.

This one is headed: Commercialized Stranded Grand Banks Gas. And the first two bullets there read: "Project internally driven by Hydro" and "Hydro as the 'Market Maker.'"

MR. KEATING: Correct.

MR. SIMMONS: So what's that all about?

MR. KEATING: Oh, that was one of the best designs of now this – so more integrated corporation – was to say that not only would it be just a regulated utility, but it could participate in the chain of delivery of, for example, natural gas.

MR. SIMMONS: Mm-hmm.

MR. KEATING: And so what I could do in this position is integrate the needs of an offshore gas resource holder, who would be interested in selling or monetizing with a buyer, which would be Hydro, a subsidiary company, with maybe some intermediates, like industrial customers that would have a need for gas. And that we could provide a combination of market that also has a potential – because, remember, I wasn't in, at that time, the offshore ownership licences. I would be a customer.

MR. SIMMONS: When you say I, you mean Nalcor –

MR. KEATING: I – not Jim Keating –

MR. SIMMONS: – for the province wasn't an owner of resources.

MR. KEATING: – the – Newfoundland Labrador Hydro was –

MR. SIMMONS: Yeah.

MR. KEATING: – not a member or in a consortium, but we could be a market maker. We could link in some needs for industrial customers, whether that be, in this case, refineries would need heat gas for their fractionation and/or even blended gas –

MR. SIMMONS: Mm-hmm.

MR. KEATING: – or the condensate to increase their profitability. We could probably address the power concerns in the aging hydro – sorry, Holyrood plant. And maybe even that baseload could spawn a petrochemical industry, for example. But it needed a critical mass of market that I knew the – from my previous life that the offshore oil companies found elusive. So I felt that Nalcor – Hydro in this case – could be a market-maker and bring those together.

MR. SIMMONS: Right, right. Now, we saw in the 2001 Pan Kenny maritime study that they fixed this 700-million cubic feet number as being kind of a target you had to reach in order to get a commercially viable opportunity that would be worthwhile for the oil companies, who are the owners of the gas, to participate in it.

Was that number informing this kind of thinking that you had here, or that concept?

MR. KEATING: Yeah, well what I had to do is effectively now broaden some horizons, because maybe the industry had long since just realized and settled on the major pipeline export case – the markets in New England and so on – as a sort of a base-case development scenario. Then it was only a matter of time, let's say, or volumes.

But this particular case wouldn't necessarily be front and centre to the offshore companies because it involved domestic users of electricity and domestic users of energy and would come to our doors first. And I thought, okay, if 700 is a threshold for New England export or Nova Scotia export, maybe 300, which could mean lower costs, could be an economic threshold for the Island. And I thought that very exciting and worthy of study.

MR. SIMMONS: Mm-hmm.

And you've got – your third main bullet there says: Concept includes and it lists a number of things. Can you describe for me how you envisaged this concept and what would make it up?

MR. KEATING: Absolutely. We would develop a combined-cycle combustive turbine, I mean a more modern plant to consume electivity and, of course, displace the bunker C at Holyrood, which there's environmental considerations and, of course, a new plant and reliability concerns.

We did forecast (inaudible) load and that volume would rise organically through time. And even more importantly, this would have seamlessly, I guess, integrated into any kind of large export project that Hydro would've been considering through the appearance of a DC line from the Island to North America.

So the idea was not only could we probably get some threshold of domestic use, but if we built in a cable to Nova Scotia, we can generate excess electricity with excess gas –

MR. SIMMONS: Mm-hmm.

MR. KEATING: – and sell it to the – to Nova Scotia and, in some ways, use gas to build the transmission line. And I thought that was very competitive.

MR. SIMMONS: Right, okay.

So then, if we go, please, to page 8, there's a slide called: The Opportunity.

MR. KEATING: Yes. and that, pretty much is what I just described, I think.

MR. SIMMONS: Okay.

So here you've got "Near Term Anchor Customers" and you're listing, I think, the – some numbers of millions of standard cubic feet of gas that –

MR. KEATING: Correct.

MR. SIMMONS: – there might be – that they might be customers for.

MR. KEATING: Correct.

MR. SIMMONS: And you've listed Newfoundland Refining Corp. Now, was that the proposed refinery that was being talked about at the time?

MR. KEATING: Yes, at that time there were some proponents of constructing a brand new refinery.

MR. SIMMONS: Mm-hmm.

MR. KEATING: And was a – I guess it was a serious proposal at the time; there were serious actors behind it. And they had come in and they talked about this. Well, they talked about it, first, from the provision of electricity, then they talked about is there an opportunity to use gas. And, of course, I asked what the typical gas – I am an upstream oil and gas person, not so much a downstream oil and gas person, so it wouldn't occur to me naturally –

MR. SIMMONS: Upstream means the provider as opposed to the user.

MR. KEATING: Yes.

MR. SIMMONS: Yeah.

MR. KEATING: It's from the discovery, production –

MR. SIMMONS: Mm-hmm.

MR. KEATING: – a shipment to –

MR. SIMMONS: Mm-hmm.

MR. KEATING: – refinery.

MR. SIMMONS: Mm-hmm.

MR. KEATING: So I asked what the needs would be, and when they said 120 million standard cubic feet – which was, in my mind now, three times or four times the domestic electricity use, I thought this was at least the start of something.

That was followed up, I think, in the next line – the existing Come By Chance refinery, it had gone through or was going through some change in ownership and some commitment for expansion and investment. And in consultation – meetings with North Atlantic, they thought they could use feed gas as well, so I added that. And then we looked at Newfoundland and Labrador Hydro and projected out, in a reasonable time frame, what a justification for natural gas would be for this purpose.

So now I got something in the area of 200 to 300 million standard cubic feet give or take some variability on those numbers.

MR. SIMMONS: Mm-hmm.

MR. KEATING: And I thought that was a pretty good starting point.

MR. SIMMONS: Right.

And then on the next bullet it's "Longer Term Potential," the first one is "Gas-to-wire," and we saw a reference to gas-to-wire in the Energy Plan, which was released subsequently to this presentation that you were involved in.

MR. KEATING: Yes.

MR. SIMMONS: So is that the same kind of concept that – it was referred to in the Energy Plan.

MR. KEATING: I believe it's the same kind of concept where effectively you just have – you generate more electricity with more gas because you have the ability to export.

MR. SIMMONS: Right.

So for near-term anchor customers you were getting the volumes up to 200 or 300 million standard cubic feet and you were projecting maybe 150 for gas-to-wire, that's still far short of 700. So what's this gas-to-liquids idea there?

MR. KEATING: So gas-to-liquids, now, with the question marks would be: okay, we're an island, we have great access to markets equidistant between the UK and the eastern seaboard of the US. That – at the time there were plenty of studies that say that there would be a boom or – if you will – or an emergent petrochemical industries appearing, or need for petrochemicals.

And I thought that if we were able to get an anchor tenant as these refineries, and the power, and augment that with export, could we attract then, from a business development case, other industrial applications like petrochemicals. Gas-to-liquids is broad; it really is. It's effectively petrochemicals and (inaudible) –

MR. SIMMONS: So this would be out there, refining type or industrial use, or –

MR. KEATING: Yeah.

MR. SIMMONS: – uses of natural gas –

MR. KEATING: Plastics –

MR. SIMMONS: – that use it to make other products.

MR. KEATING: Yeah. Yeah. Absolutely.

MR. SIMMONS: Okay.

MR. KEATING: So then I get the volumes up, up, up. And it's a pretty intriguing proposition. And I thought that may be of interest to my – the offshore companies.

MR. SIMMONS: And slide 9, please. The next page.

And this one is headed "Domestic Gas Considerations". And I won't take you all the way through this – I think we may be able to understand now what you're referring to when you talk about the valuing of potentially stranded resource. The second full bullet there is Transportation and storage risk and you've got a sub-bullet that says: "CNG vs Pipeline".

MR. KEATING: Correct.

MR. SIMMONS: So at this point – in 2006 –

MR. KEATING: Mm-hmm.

MR. SIMMONS: – where was the debate or the analysis – where did it sit on this issue of what was going to be the best way to get gas from the offshore onto the Island to serve these needs that you're trying to identify or built.

MR. KEATING: Right. So in many ways CNG was competing head to head with Pipeline and but it was again I've said the long pipeline. It was the pipeline that the industry likely thought – if one was developed, large-scale or not – even consistent to 2001 study – would be the six hundred, I guess, forty kilometre pipeline. So then in this context what was known in the times – 2006 –is that there was a centre for Marine CNG. A lot of investment from the university – from ACOA, government and the private sector including Norsk Hydro – my former company – was focused on making this a centre – a global sample of excellence.

So I knew a lot of study was gone into CNG and a lot of optimism. So by putting CNG versus Pipeline there I was effectively positing to the Husky is – we should study each –

MR. SIMMONS: Mm-hmm.

MR. KEATING: – in this scenario and determine which was the best for us and that's really the purpose of that.

MR. SIMMONS: So for – if one of the by-products of your – of the opportunity you were presenting here was going to be to make natural gas available for use at Holyrood for generation or of electricity did it matter whether it came by CNG tanker or by pipeline?

MR. KEATING: No. As long as it was environmentally safe and technically prudent to do so the – I guess the most economic would be the deliverer and the gas knows no, you know –

MR. SIMMONS: So whichever was most economic and met the environmental –

MR. KEATING: All these (inaudible) –

MR. SIMMONS: – tests and so on – from your perspective is someone who is promoting these ideas. You weren't' committed to either one of those two options.

MR. KEATING: I wasn't committed to either – I wasn't committed to either one.

MR. SIMMONS: Mm-hmm.

MR. KEATING: My experience – my history would have said that CNG could likely have been a preferred option at that point but I was at least standing back to say – we should now probably do more detailed investigation of this specific case.

MR. SIMMONS: Now at the last bullet there's this Value chain ownership structures and it lists Hydro, Husky et al, Newfoundland Refining Corp, Others ? What issue or what idea is that referring to?

MR. KEATING: So as a market-maker you have different companies with different interests and each one all trying to optimize their position in this chain –

MR. SIMMONS: Mm-hmm.

MR. KEATING: – of delivery.

MR. SIMMONS: Mm-hmm.

MR. KEATING: So what I wanted to have open for discussion would be – what are the interests of these players? And could they all be accommodated? And, again, it was – a first step is to say, can we make this happen, and whose role is where? Who assumes risk? Who gets reward? And that's all I was trying to articulate here is I was mindful of it and we had to explore it.

MR. SIMMONS: Mm-hmm.

So, were you proposing here that the entire capital investment for all elements of this chain of getting natural gas onshore would have to be borne by the offshore oil industry, or were you suggesting that it could be considered that Hydro would bear some responsibility for some parts –

MR. KEATING: So, I'd –

MR. SIMMONS: – (inaudible)?

MR. KEATING: – actually draw your attention to, maybe, the third bullet – sub-bullet of the above. I was – knowing that this was gonna be presented to a gas owner, I was signalling that there's an expectation of 5 sets.

MR. SIMMONS: Mm-hmm.

MR. KEATING: So, no matter what you hear, basically let's talk about a whole bunch of things, but we have to deliver for electricity generation, that kind of price for per kilowatt, 'cause I believe at the time it was the regulated rate, or rate that we should have aspired to.

So, while I was suggesting there that Hydro could – and in the meeting – obviously take ownership and possession of the key utility-type structures, it might be that Husky could have interest in the pipeline or CNG. Refining Corp might want the pipeline – the branch pipeline. All these things were at play, and not that I was indifferent to, but of course in order to make a deal – make something happen, you have to explore these things.

MR. SIMMONS: Okay.

Now, I don't have many questions for you –

MR. KEATING: Yeah.

MR. SIMMONS: – or – about Dr. Bruneau's presentation – his ideas – but I will at this point –

MR. KEATING: Yes.

MR. SIMMONS: – ask you to comment on the proposition that Dr. Bruneau's proposal actually sounds a lot like this when he's proposing that there be a pipeline built and that the utility potentially take responsibility for investments needed in order to help get gas onshore, and that it would be brought to Holyrood and used to fire a new-type plant – a CCCT plant at Holyrood.

And that concept seems to me as being one that would have fit within what's under consideration in your –

MR. KEATING: Most certainly.

MR. SIMMONS: – proposition here.

MR. KEATING: Most certainly. I think if Dr. Bruneau would have been in my meetings at that time –

MR. SIMMONS: Mm-hmm.

MR. KEATING: – he would have been thrilled at this likelihood 'cause it would have – we had – we were addressing some of the key risks of, maybe, the presentations that he would have had. We would have expanded this market; we were looking to create the threshold market that electricity alone wouldn't provide. We were open to modes of transportation – pipeline, whatsoever. We probably would had still a difference of a technical opinion on the routing. But that's a minor matter and it's a minor matter in terms of cost as well. I think this is professional differences of opinion. But I think very much so, it would fit with that scenario.

MR. SIMMONS: And I do understand Dr. Bruneau to have said that when he made his presentation, he was presenting an idea that he felt should be fully considered, as supposed to something he was saying was a definite proposal that would work.

MR. KEATING: Correct.

MR. SIMMONS: I'm going to suggest to you that one difference between the proposal, as presented by Dr. Bruneau later in 2012, and this one you have here, is that you were going a step farther and looking to see how you could address the problem you'd recognize as being as how to make commercially interesting enough for the operators to want to participate in it.

MR. KEATING: Absolutely. I was trying to remove the barriers.

MR. SIMMONS: So you brought this to Husky?

MR. KEATING: Yes I did.

MR. SIMMONS: What happened?

MR. KEATING: Well, we met, I think we me twice. I first presented – they were intrigued as well. I think they needed to know a little more about these market and industrial customers, I think, first and foremost. So I, I think I had then a meeting with the refinery proponents in Husky and that at some point, I think, maybe in Husky, if my memory serves me correctly, met with the refinery proponents on their own. So I think they're trying to do their own due diligence to see how likely this would be.

Through the ebb and flow of maybe a number of weeks or couple of – maybe two or three months – it seemed to me that Husky was – had lost some interest in pursuing it. And the best that I could have assumed then, because the meetings became less frequent and the engagement became more difficult, was that, you know, they considered this and perhaps were doing some analysis of their own

UNKNOWN MALE VOICE: (inaudible.)

MR. KEATING: I presume. And maybe they saw that if it was economically viable, it was probably marginal at best. And through then now maybe just short months after that, I think, refinery opportunity dissolved and, I think – both refinery opportunities dissolved – and I think we're back to square one.

MR. SIMMONS: Right. So we know that the second refinery didn't get built.

MR. KEATING: Correct.

MR. SIMMONS: We know the expansion at Come By Chance didn't happen.

MR. KEATING: Correct.

MR. SIMMONS: So once those things came off the table, you, your case for there being a higher-volume domestic market pretty well evaporated –

MR. KEATING: Correct.

MR. SIMMONS: – at that point? Now there were still efforts undertaken though to investigate the CNG opportunity. Correct?

MR. KEATING: Yes.

MR. SIMMONS: Right. Because if I understand, the CNG opportunity added a dimension that a pipeline wouldn't, in that, CNG tankers taking compressed natural gas from the Newfoundland offshore could not only bring it to the Island for use but to bring it to other nearby – relatively nearby markets in the northeastern United States.

MR. KEATING: Correct.

MR. SIMMONS: Which –

MR. KEATING: The key difference – let alone the technical delivery mechanism – is CNG is expandable.

MR. SIMMONS: Mm-hmm.

MR. KEATING: You can start with four or five –

MR. SIMMONS: Mm-hmm.

MR. KEATING: – or two ships –

MR. SIMMONS: Mm-hmm.

MR. KEATING: – and go to 12 ships based on your resource or market size. And they can go multiple markets.

MR. SIMMONS: Yeah.

MR. KEATING: So they really do help with some of concerns around the captive market or limited market, limited customers. So it is an option that pipelines don't have. 'Cause you're limited to the termination point. And the diameter of the pipeline.

MR. SIMMONS: Can we go to Exhibit P-01306 please?

MR. KEATING: 16?

MR. SIMMONS: Probably.

THE COMMISSIONER: Tab 16.

MR. KEATING: Yes.

MR. SIMMONS: I'm not going to go through – all the way through this. Just going to bring this to your attention here. This, as I understand, is a presentation that was made by EnerSea Transport LLC.

MR. KEATING: Yes.

MR. SIMMONS: On the bottom right it refers to an International Marine CNG Forum which sounds like some form of meeting or session. And it says, "Centre for Marine CNG" in St. John's. So that's the centre you referred to earlier that was established by oil companies?

MR. KEATING: Yes.

MR. SIMMONS: And was that in conjunction with Memorial University also?

MR. KEATING: Memorial University was a part of that, yes.

MR. SIMMONS: Yeah, okay. And tell us who EnerSea is. And what they did.

MR. KEATING: EnerSea was a – there were six main proponents of the CNG technology. And what I mean by that is these were different companies but in some way, shape or form had slightly different technology.

MR. SIMMONS: Mm-hmm.

MR. KEATING: So EnerSea was a company headed by former Shell executives and some Exxon executives. And they had perhaps – on our estimation and on our research – one of the better technical concepts, and they probably had an advantage in that they were class certified for their vessels, which means – it's important because this is new technology – and the further you're along in your engineering and your design, you comfort the risks.

And I guess the other consideration was that EnerSea were one of the founding members of the Centre for Marine CNG. So they were alive to the issue, alive to our realities, and this is EnerSea.

MR. SIMMONS: So this is October, 2007, and I think Nalcor, then the Energy Corporation of Newfoundland and Labrador had formed by that time.

MR. KEATING: Yes.

MR. SIMMONS: And you had moved into your new position.

MR. KEATING: Yes.

MR. SIMMONS: Where they are. In that position were you, and people at Nalcor, engaged with EnerSea on these – on –

MR. KEATING: Yes. We –

MR. SIMMONS: – these issues?

MR. KEATING: We would have – we would have been attending and I guess invited to marine CNG activities, meetings, conferences and stuff. So we would have known people from EnerSea and it was in those early days that we began discussions to say, you know, let's evaluate the opportunity. Of course, being a Crown, we ought to go through some, you know – the EOI and RFP process to make sure we got the – the best service provider. And that was, I think, subsequent to this presentation.

MR. SIMMONS: Okay. So what's the EOI process that you are referring to?

MR. KEATING: So – so we submitted an EOI – expressions of interest –

MR. SIMMONS: Mm-hmm.

MR. KEATING: – or request for proposals to evaluate pretty broadly, any and all means, as to develop our offshore gas.

MR. SIMMONS: Mm.

MR. KEATING: Internally, we prioritized studying CNG first.

MR. SIMMONS: Mm-hmm. Okay. And – but why did you do that? Why prioritize CNG over the other two principal options I understand would be either a direct pipeline or a liquefied national – natural gas – LNG option?

MR. KEATING: So we'll start from back to front. LNG was a far more, let's say, robust and costly deployment of natural gas and it required a big – a big offshore resource.

MR. SIMMONS: Mm-hmm.

MR. KEATING: And so that was probably not a near term thing that would be interesting to study.

Pipelines, as at this time we've kind of passed the small bore tests, if you will, that the –

MR. SIMMONS: Now what do you mean by small bore?

MR. KEATING: This – the prior deck – the 2006 deck where we thought maybe we have an emerging market?

MR. SIMMONS: Small bores and narrow pipeline –

MR. KEATING: Small bores and diameter pipeline.

MR. SIMMONS: Small diameter pipeline.

MR. KEATING: Small diameter pipeline.

We are now maybe into a pipeline consideration consistent to 2001 report, which was a – bigger pipeline of a greater volume. So that would have been something we were wanting to study inside and which left then the more novel and unique compressed natural gas opportunity.

MR. SIMMONS: Okay.

Exhibit P-01307, please.

THE COMMISSIONER: Tab 17.

MR. SIMMONS: So this one is – is headed "Confidential Information", but I understand from discussions with you otherwise that this report is now available and can be made public whereas it may not have been earlier.

MR. KEATING: Yeah. It would have been under a pretty standard confidentiality arrangement at the time because there were facts, figures, numbers, the technical information there sensitive to EnerSea – that they would have in other markets and jurisdictions been wary of and broad circulation – but I think to (inaudible) as – and looking at a brief review of my confidentiality agreement, I believe time has expired so that I can share this – particulars –

MR. SIMMONS: Okay.

MR. KEATING: – of it.

MR. SIMMONS: And it notes that it's prepared for Newfoundland and Labrador Hydro and if we scroll down a little bit we can see the dates – and stop there – it says final report was 17 of January 2008.

MR. KEATING: Mm-hmm.

MR. SIMMONS: So this is – the presentation we just saw to the Centre for Marine CNG was in 2007 and we're now moved on into early –

MR. KEATING: Yes.

MR. SIMMONS: – early 2008. Page 3, please?

This is the Executive Summary. So it says – the first paragraph – "Newfoundland & Labrador Hydro (NLH) commissioned EnerSea to perform a Detailed Feasibility Study (DFS) for production and transport of natural gas from the North Avalon gas field in the Grand Banks area offshore Newfoundland." So the North Avalon gas field, which is that?

MR. KEATING: North Avalon gas field. Trying to be generic –

MR. SIMMONS: Yes.

MR. KEATING: – we are speaking of the White Rose field, the Northern Avalon reservoir of the White Rose field. That's not a term that is used within the local industry but is a term I think EnerSea – so it is effectively the White Rose field.

MR. SIMMONS: Okay.

The next paragraph: "This study evaluated the technical and commercial feasibility of developing and transporting gas reserves as CNG from the North Avalon reservoir to a delivery point near the proposed refinery owned by Newfoundland Refinery Corporation (NLRC)."

So at the time of this report –

MR. KEATING: Mm-hmm.

MR. SIMMONS: – the new refinery option was still –

MR. KEATING: Still in play.

MR. SIMMONS: – in play and the proposal was to bring the gas to the Island?

MR. KEATING: Yes.

MR. SIMMONS: Right.

And by doing so would it have been available then potentially for use in electricity generation also.

MR. KEATING: For sure.

MR. SIMMONS: Okay.

The next page, page 4, please, and could you scroll down to where it says Conclusions?

The – for the – under Conclusions it states: "This feasibility study concludes that a GPSS solution" – I think that's the type of vessel that you referred to yesterday?

MR. KEATING: Yeah, it is. Gas production storage and shuttling.

MR. SIMMONS: Okay – "solution is technically viable across the range of conditions examined to safely, reliably and efficiently transport gas from the supply to market locations defined."

I'm not going to walk you through the details in this report –

MR. KEATING: Mm-hmm.

MR. SIMMONS: – but maybe you can tell me from what you recall of what you – of what generally the conclusions are and whether this report help advance any of the objectives that you were pursuing?

MR. KEATING: Correct.

So chiefly this one is to look at the technology and then find any gaps that need further refinement and, of course, coming from the proponent they're interested to have us be convinced that there are probably no technical gaps. But, of course, that's prerogative. This was – that would be the purpose of the report.

MR. SIMMONS: Mm-hmm.

MR. KEATING: The – another purpose of the report would be to back out potential tariff that this division of that service would create and a tariff would be, let's say the construction of the ships, the frequency of deliveries, the number of ships, the volume of gas delivered would economically generate a cost per MMBtu or a cost per MMcf as the case may be for gas.

And then we could use that in terms of our internal economic model to say okay, can this tariff of delivering the gas from the White Rose field to the Island – deliver gas that is at an economic level that a regulated utility, for example, could buy and generate electricity that's at or better than what they're doing today.

MR. SIMMONS: Okay. Can you tell me whether this report or information from it was shared or made available to Husky or any of the other operators who might be – who you'd be looking to to agree to sell the gas and enter into contracts to sell the gas to take advantage of this opportunity?

MR. KEATING: So I would say that one of the reasons why it's commercially sensitive of course is this is the beginning of potentially a negotiation. So EnerSea would partner with us as we would likely be an offtaker. We (inaudible) would be a purchaser.

So to the extent that my – at the time I was thinking that this report in whole would be delivered to Husky, I didn't have that expectation at all.

MR. SIMMONS: No.

MR. KEATING: I wouldn't expect that. However, I understood that Husky would have done – probably with the same contractor – a similar study.

MR. SIMMONS: Mm-hmm.

MR. KEATING: And if not the same contractor, likely a competitor with a different technology. So it was for me, the purpose to say would I have enough of an economic opportunity out – as an outcome of this study – to advance the negotiations to find an economic project.

MR. SIMMONS: And EnerSea was a company that would actually be – was in the business and would be the company who would deal with –

MR. KEATING: Yes.

MR. SIMMONS: – offshore operators to make the deal –

MR. KEATING: Right. They –

MR. SIMMONS: – to provide the service.

MR. KEATING: The interesting thing about this is that they would have taken the commercial risk of the transport. Meaning that they were interested in proving this was a concept they could apply globally. Because it's important (inaudible) to mention, this has not occurred anywhere in the world.

So this CNG mode of development –

MR. SIMMONS: Mm-hmm.

MR. KEATING: – has not been commercialized yet.

MR. SIMMONS: Mm-hmm.

MR. KEATING: And one of the key concerns we had was – in the final analysis – was should this be the testing ground for this brand new technology? CNG was common in terms of land-based. You know, trucks and cars and stuff. But to apply it in a marine environment – that's why Central Marine CNG was developing it – was something new and novel.

So in this particular case, the proponents of CNG, they saw strategically the the ability to say – if I take and remove the risk from you, Husky, of a pipeline –

MR. SIMMONS: Hmm.

MR. KEATING: – by using my ships and if I take the risk of you, Hydro, of being a guaranteed deliverer as you've required. And I can do it for a certain dollar value per MMBTU I'm happy and shouldn't you be happy and can we continue this negotiation?

MR. SIMMONS: All right. And at this point – this particular study was done with the idea, I think –correct me if I'm wrong – that the gas would be moving from offshore Newfoundland to onshore Newfoundland.

MR. KEATING: That would be correct.

MR. SIMMONS: So what was the outcome, then, of this work in January, 2008?

MR. KEATING: I think this – it informed this prior debt that you saw to say that we were – we had, on our own – we weren't going to wait for Husky go green light on things. We needed to get our own information. So we got this information. We got the number. We thought that it may have merit – but merit on the fact that is continued with this report that these ships were going to deliver between 200 and 300 MMcf a day to make this study viable. So if those refineries didn't materialize then we –

MR. SIMMONS: This option wasn't going to work.

MR. KEATING: This option evaporated as well. So this option – this way of moving gas wouldn't have been economic –

MR. SIMMONS: Right.

MR. KEATING: – if it we were only selling 30 or 50 (inaudible).

MR. SIMMONS: So when the new refinery possibility evaporated then – when it went away – and this option no longer was going to be one that was going to work to get –

MR. KEATING: Mm-hmm.

MR. SIMMONS: – gas onshore Newfoundland is that where you stop then or did – or was there a further alternative that was explored?

MR. KEATING: So there are several further alternatives that were explored but I would have to say while we waited to see if the domestic market would increase –

MR. SIMMONS: Hmm.

MR. KEATING: – but most attention and focus for the big mess – the export scenarios and –

MR. SIMMONS: Okay.

MR. KEATING: – and FLNG and/or pipeline.

MR. SIMMONS: Okay. SO can we go to exhibit P-01308, please?

THE COMMISSIONER: Tab 18.

MR. SIMMONS: So this is a second EnerSea report. This one is called Grand Banks Gas Export Project – Detailed Feasibility Study prepared for, and now it's, Nalcor Energy.

Scroll down to the date, please? And it says final issued 4th of August, 2009. So this is –

MR. KEATING: Couple of years later.

MR. SIMMONS: – about a year and a half –

MR. KEATING: Yeah.

MR. SIMMONS: – later from the other report.

THE COMMISSIONER: Mr. Simmons, I just looked at my watch. I couldn't believe it's actually twenty-five to twelve. Do you want to take a break? I don't want to –

MR. SIMMONS: It might be a wise – it might be just as well. I have enough that maybe it wouldn't hurt to give Mr. Keating a break for a few minutes.

THE COMMISSIONER: Okay. So let's take 10 minutes. I apologize for being so late. I didn't realize it was so late.

CLERK: All rise.

Recess

CLERK: All rise.

Please be seated.

THE COMMISSIONER: Sorry, Mr. Simmons, to take so long to get to the break this morning, but proceed when you're ready.

MR. SIMMONS: No, but – and thank you, Commissioner, for extending the break for a few minutes.

THE COMMISSIONER: No problem.

MR. SIMMONS: We hadn't anticipated that Mr. Keating would have been back today. And there's actually a board meeting underway, and there was a matter that required some attention, so we need just a few extra minutes, thank you.

THE COMMISSIONER: No problem.

MR. SIMMONS: So what we've got on the screen now, Mr. Keating, is Exhibit 01308, and this is a second EnerSea report, dated August 2009. And maybe we can just turn over to page – probably page 3. It's actually a bit further on, but I won't take you through this one in detail.

But is this a second report that was commissioned from EnerSea to look at instead of just transport of natural gas in CNG vessels from the offshore to the Island, to actually also include transport to other markets, including into the Boston area?

MR. KEATING: Yes, it is.

MR. SIMMONS: Okay. And what was the purpose of extending the concept study in that way?

MR. KEATING: In two reasons. One is, I guess, at that time, the continental gas price had experienced a few spikes.

MR. SIMMONS: Mm-hmm.

MR. KEATING: So then there was a decent opportunity to say, okay, the provision of gas, now, to this market may be more interesting. There may be what's called an economic netback – the cost of delivery versus the cost of sale – due to this price spikes that warrant some interest.

MR. SIMMONS: Okay. And had – if it were possible to put in place a CNG-export scenario to carry gas from offshore Newfoundland to the Boston area, would that then also have facilitated being able to implement bringing gas in for domestic use at Holyrood?

MR. KEATING: Oh, most certainly, because then the story evolves this way: that you could properly have presented a more – even more attractive opportunity for the gas owners –

MR. SIMMONS: Mm-hmm.

MR. KEATING: – Husky and Suncor, number one. Number two, should that be economically justified then with the scaling and the flexibility of the CNG technology, which is just simply add another ship. You could possibly then spread the costs of this project more broadly and perhaps now reach the Island, address electricity needs and then potentially build industrial opportunities.

MR. SIMMONS: So what happened then with this after August 2009, with this initiative?

MR. KEATING: I think the price of natural gas just declined – dropped – and really didn't recover, so the spikes were short-lived, the opportunities evaporated.

MR. SIMMONS: And that decline in natural gas prices in the Eastern US, I think we've heard that that may have been tied to the advent of shale gas production –

MR. KEATING: Yeah, that's right.

MR. SIMMONS: – (inaudible) eventually it drove down prices.

MR. KEATING: And it effectively endures to this day.

MR. SIMMONS: Endures to this day. So that opportunity that was foreseen to be a potential back in 2009, that – those same conditions haven't arisen since then?

MR. KEATING: That's correct.

MR. SIMMONS: Okay.

Now, this was August of 2009. We know that Decision Gate 2 for the Muskrat Falls – for Lower Churchill Project was about a year later in the fall of 2010. So had anything changed by the fall of 2010 regarding the potential to get natural gas onshore for domestic gas production compared to what we've seen in the Pan Kenny Maritime report from 2001 and the initiatives that you began to take in 2006, including these two studies by EnerSea in 2007 and 2008?

MR. KEATING: Yeah, so entering into 2010, effectively the domestic market didn't materialize that we spoke about earlier, and now, this continental market or the eastern seaboard market, it didn't materialize. So the prospects then for natural gas export this way in particular weren't looking feasible.

MR. SIMMONS: Okay.

Okay, so I want to bring you now to Exhibit 01310 – P-01310. You've been referred to this before, and this was a draft of a paper that –

THE COMMISSIONER: Tab 20.

MR. SIMMONS: – you had prepared.

MR. KEATING: Okay.

MR. SIMMONS: And the first page of the exhibit is an email message from you to Mr.

Bown, July 13, 2012. You can read it there, but I –

MR. KEATING: Mm-hmm.

MR. SIMMONS: – gather, from what you've stated in that message, that this was not a polished report or a finalized report. This was some work that you've described as having been initiated by you on your own?

MR. KEATING: Mm-hmm. Yes.

MR. SIMMONS: And at the bottom of that, what we can see on the screen, the – there's I think an icon indicating that the paper is attached, and it describes it as "Piped Gas and LNG Discussion Paper – DraftApril 18".

MR. KEATING: Yes.

MR. SIMMONS: So was this work actually begun by you back in April of –

MR. KEATING: I think so, yes.

MR. SIMMONS: – 2012?

MR. KEATING: Yes.

MR. SIMMONS: And at this point in July, you've sent it on to –

MR. KEATING: That's correct.

MR. SIMMONS: – Mr. Bown?

MR. KEATING: It was probably largely drafted by me late April. Probably remained dormant for some time, maybe I went back to it every now and then, but I forget the reason now, but I thought that Charles might – I think it was generally, again, just an interest and some factoids or some chronology. So I thought, you know, one of the best things I have is this report, and I just said, so, here's for reference.

MR. SIMMONS: Okay. And let's go, please, to page 10.

There's a section on page 10 headed "Nalcor Energy's Natural Gas Experience."

And if we scroll down – further down the page it says "Nalcor's Involvement with Natural Gas." And it actually starts with a reference to those expressions of interest in –

MR. KEATING: Yes.

MR. SIMMONS: – July 2007 that you told us about earlier.

MR. KEATING: Yes.

MR. SIMMONS: And if we go on to page 11, it talks about – you write here about the energy studies that we've already spoken about. And at the bottom of page 11, it refers to the last EnerSea study, I believe, that you had there.

So I'll bring you over now to page 12, where we'll pick up the story.

And on the second paragraph there, beginning "In July, 2009," there's a reference to Nalcor being approached by Excelerate Energy. Now, you told us something about this yesterday.

MR. KEATING: Yes.

MR. SIMMONS: And I wonder if you can just tell me what this particular initiative was and what kind of consideration was given to it as a potential means of supplying a natural gas fuel for the Holyrood electricity generation?

MR. KEATING: Okay, so Excelerate is one of the few companies – maybe the only one – that has entered into a very niche market of having an LNG ship – a ship capable of storing and transporting LNG – with the provision of offloading and maybe generating electricity with their own turbines, their own machinery on board. But primarily the purpose of Excelerate's concept is to take spot markets of LNG and deliver it as a re-gasified gas, basically, the final product, to coastal states and effectively try to reduce the cost that the coastal state has to build the regasification plant. It has regasification facilities on board that ships – it's quite interesting and quite novel.

MR. SIMMONS: So this particular proposal didn't have anything to do with bringing natural gas from offshore Newfoundland. This would have been gas that they would supply –

MR. KEATING: Globally.

MR. SIMMONS: – from the global markets.

MR. KEATING: Correct.

MR. SIMMONS: Yeah. Okay.

And what came of that initiative by Excelerate Energy?

MR. KEATING: So, again, it was early in Excelerate's evolution, they had a handful of ships that were exploring markets and their principal – their executive came to visit and knew of our seasonality, knew that we were an island, and they were targeting island states, of course. And they proposed that – one model is that they would deliver their service in the southern hemisphere for a few months and then deliver the same service in another hemisphere for a few months and thereby keep their ship active kinda year round; pretty interesting. And that the service would be then to provide market-priced natural gas, which was in the form of LNG, on the ship, converted re-gasify by heating it, and making gas available to a jurisdiction.

Their concept was primarily not a long-term concept. Their – by their own admission, they would typically stand in the place of permanent facilities, temporarily, either while they're being constructed or if they were shut down. So, I don't think they had an interest – and probably for obvious reasons – to have a ship tied up continuously for decades, to have this as a cycling thing, to provide long-term power.

But I thought at this point it might be interesting for the Hydro people to be engaged and to discuss and to see if there was an opportunity in the next couple years that this could be of service.

MR. SIMMONS: So what came of this initiative then?

MR. KEATING: So we had a number of meetings and interactions and we, you know, signed confidentiality agreements. We met on several occasions in Houston, in St. John's and so on. And it got down to the formulation of a term sheet, you know, a potential term sheet with conditions precedent. We still hadn't decided we were gonna do it, but we were interested to say: What's it gonna cost? And, of course, the cost was going to be equivalent to the displaced fuel at Holyrood. And so that's –

MR. SIMMONS: So if I stop you there.

MR. KEATING: Yes.

MR. SIMMONS: Does that mean that the fuel cost would be the same whether you continued to burn No. 6 or No. 2 fuel at – No. 6 fuel at Holyrood or brought in LNG on an Excelerate ship?

MR. KEATING: Yes, it would be our voided costs whatever. So whether it was No. 2 or No. 6 –

MR. SIMMONS: Mm-hmm.

MR. KEATING: – they would price us the equivalent of our current cost.

MR. SIMMONS: Mm-hmm.

MR. KEATING: So, really, it was more of a plant flexibility they were providing, not a cost of service opportunity. There was no – their business model was to exploit, of course, the island states to say: I know you are largely oil dependant, I'm bringing you LNG that I get in the spot market for something less than price of oil and I'm going to resell it to you at the price of oil. But maybe the service I provide is seasonal, you don't need me all the time, and maybe the service that I provide is that you don't need to build an onshore re-gas facility, I have it on my vessel.

MR. SIMMONS: Okay.

Turn to page 13, please.

The top of page 13 there's a reference there to August 2011 and a Memorandum of Understanding signed with a Höegh LNG Ltd of Norway. So was Nalcor approached by Höegh with a business proposition or something they wanted to explore at the time?

MR. KEATING: Yes, we were.

MR. SIMMONS: And what was that?

MR. KEATING: These were – this Höegh was one of, maybe two or three, FLNG proponents that I can recall. One –

MR. SIMMONS: What's FLNG?

MR. KEATING: Floating liquefied natural gas.

MR. SIMMONS: Mm-hmm.

MR. KEATING: Whereby, in this case, you don't have your liquefaction plant onshore, you actually put it on a ship.

And, again, it's novel in that these are big ships, these are expensive ship, but yet it would be a primary source for monetizing stranded gas fields. And they came to explore the possibility that this would be a solution for the Grand Banks gas. So we entered into a confidentiality agreements, shared technical knowledge and information, and had several meetings.

MR. SIMMONS: Okay. And were any of the offshore operators involved in those discussions?

MR. KEATING: We directed the Höegh LNG people to, of course, communicate with and meet with –

MR. SIMMONS: Mm-hmm.

MR. KEATING: – the offshore folks in which – and I know they did.

MR. SIMMONS: Right. And is this the type of initiative that Nalcor could have implemented on its own or would the co-operation of the offshore operators to engage in the sale of the gas have been an essential part of it?

MR. KEATING: It would fully require the involvement and engagement of the offshore operators to provide the gas.

MR. SIMMONS: So what came of this initiative then?

MR. KEATING: So, when this particular initiative, after some analysis, it was determined that the field size – two reason actually – field size wasn't sufficient enough for the planning horizon to make this level of investment economic.

MR. SIMMONS: Mm-hmm.

MR. KEATING: So they weren't interested so much – maybe the two trillion – Tcf of gas, say, available in the White Rose field. They were looking at for scale maybe five, seven Tcf. That was one thing.

And there were also some considerations for the technology that needed further review –

MR. SIMMONS: Mm-hmm.

MR. KEATING: – mostly the off-loading and on-loading technology, particularly in harsh environments. They hadn't fully been given certification for that technology and they require some additional study. And at the time, again, there were no FLNG projects anywhere in the world and yet we were faced again with should this be the first place for this kind of technology.

MR. SIMMONS: Right.

MR. KEATING: Since then, of course, there are several. One Shell has called Prelude, which is the preeminent one and it sits in a massive gas field. So it is the right place to approve that technology.

MR. SIMMONS: Right, yeah.

MR. KEATING: So after time it was clear that this opportunity would not materialize and those discussions ceased.

MR. SIMMONS: Okay.

And do – if – from what I understand from your description of this opportunity, this was not something that was – would've been an initiative directed at bringing gas to the Island of Newfoundland –

MR. KEATING: No this would've been a pure export –

MR. SIMMONS: Pure export.

MR. KEATING: – with – I don't know that there would have been opportunity unless we built a regasification –

MR. SIMMONS: Right.

MR. KEATING: – plant.

MR. SIMMONS: Yes.

MR. KEATING: I wouldn't exclude it, but I'll say that it might not be in Höegh LNG's interests. It was interested in pursuing the markets – the oil index markets in Asia for example.

MR. SIMMONS: Right. So would I be correct in presuming that if an initiative like this went ahead, the LNG that was produced from the floating ship would be sold into world market at world prices and if Newfoundland and Labrador Hydro wanted to buy it for use at Holyrood it would be buying LNG off the world market at world –

MR. KEATING: Yeah.

MR. SIMMONS: – prices essentially?

MR. KEATING: Correct.

Now – and again, we would use and exert our influence to see if we can get some opportunistic pricing on this.

MR. SIMMONS: Mm-hmm.

MR. KEATING: We would certainly use and lever any and all ways, but of course, you'd have to deal with the commercial realities of the interest holder, the gas holder and of the shipper. And look at our negotiating position and our market size.

But not to say – we know that the provincial government and Nalcor would have certain levers to see if it could extract an opportunity. The opportunity just didn't materialize because of the resource size.

MR. SIMMONS: The next paragraph – and we won't spend much time on this – refers to November of 2011 and a confidentiality agreement with North Atlantic Refining Limited –

MR. KEATING: Mm-hmm.

MR. SIMMONS: – regarding a joint study for use of LNG at the refinery. Did that initiative have any legs? Did that go anywhere?

MR. KEATING: No, no, it was short lived. It was almost one meeting, and an idea – and I think it might have been around another transaction related to the (inaudible) refinery –

MR. SIMMONS: Mmm.

MR. KEATING: – and it didn't get any legs after – much, much later.

There was an interest to say that if we could provide a market to – and in this case it wasn't to procure Grand Banks gas. But if we could buy global LNG, would we be interested in also actually building out their business case; taking some gas for electricity use? So it was the reverse. They wanted to know if they could add the electricity world to their plant world. And it seemed novel, but I think they investigated it and it didn't make sense for them.

MR. SIMMONS: And in the next paragraph there, February of 2012, there was a confidentiality agreement with Unión Fenosa Gas, and we haven't spoken about these confidentiality agreements, but am I correct that when an approach is made by a company – these international, privately-based oil companies – the effect of entering into a confidentiality agreement allows them to disclose their confidential proprietary information for – to you –

MR. KEATING: Yes.

MR. SIMMONS: – and you to disclose your information to them –

MR. KEATING: Yes.

MR. SIMMONS: – on the understanding that if there's no deal made, everyone keeps everything confidential?

MR. KEATING: Yes, that's right.

MR. SIMMONS: Okay, and –

MR. KEATING: And in some cases, I'll go far as to say certain clauses that I've signed – largely I resist, but in some cases you can see the purpose in it – you need not disclose that you were in discussions. So in this case, this one didn't – I could speak to it, but – and it happens.

MR. SIMMONS: And when you prepared this paper, the things you've included in here are ones where you were satisfied at the time you could publicly disclose the extent of the –

MR. KEATING: Yes. Yeah –

MR. SIMMONS: – discussion of this paper –

MR. KEATING: – to the extent –

MR. SIMMONS: – is that what you're us telling us today?

MR. KEATING: – and the time that I had, that's the case.

MR. SIMMONS: So this one in February of 2012 – Unión Fenosa Gas of Spain. And if I understand correctly, this was an idea they brought that would have involved bringing natural gas from offshore to the Island, is it?

MR. KEATING: Primarily, no –

MR. SIMMONS: No?

MR. KEATING: – natural gas to Spain.

MR. SIMMONS: Spain?

MR. KEATING: And again, though, as an added aspect, it could be that we would be part of the distribution chain. So Unión Fenosa of Spain, it was a more engaged process, because they were one of the first, if not only buyers, if you will –

MR. SIMMONS: Mm-hmm.

MR. KEATING: – at this point most of our discussions had been with the intermediate chains, like the midstream, the people that ship the gas to market.

MR. SIMMONS: Mm-hmm.

MR. KEATING: These folks are actually the market. So – but they also have their corporation 'cause it's broad and it expands and they're in the upstream, midstream, downstream of oil and gas. So they're a serious company with serious scale, and they came and opened up discussions with us, and I am sure with my – with the offshore partners.

MR. SIMMONS: And did anything ever come of this initiative?

MR. KEATING: No, again, primarily, it had to do with the field sizes didn't warrant the longer term, bigger investment to create an LNG-export scenario.

MR. SIMMONS: So by the time we reach 2012, then, has anything really changed regarding the viability of either a pipeline to bring Grand Banks gas to the Island or a CNG or LNG solution to bring natural gas to the Island, compared to where things stood in 2001 when the Pan Kenny Maritime report was done?

MR. KEATING: No, it hasn't. There's been ebb and flow of markets and prices and opportunities, but, effectively, we are where we are and have always been.

MR. SIMMONS: Okay. Thank you very much, Mr. Keating. Those are all the questions I have for you.

THE COMMISSIONER: Redirect.

MR. LEARMONTH: Mr. Keating, could you turn to tab 11. That's exhibit 01204.

Do you have it?

MR. KEATING: Yes.

MR. LEARMONTH: Okay. Who prepared this CPW analysis?

MR. KEATING: That would be the Investment Evaluation group inside Nalcor Energy.

MR. LEARMONTH: And what information did – went into this?

MR. KEATING: I think it was the information they already had with regards to the Interconnected and Isolated Island and I think what they did is they took the outcome of the Ziff reports and converted the, I think, Ziff's MMBTU dollar figures into equivalency PWs along with similar methodologies.

MR. LEARMONTH: Is there any back-up documentation available for this?

MR. KEATING: I'm sure it exists but it would exist within Investment Evaluation.

MR. LEARMONTH: But Nalcor would have –

MR. KEATING: Nalcor would have it for sure.

MR. LEARMONTH: You're sure of that, are you?

MR. KEATING: To make these kind of calculations, I would be surprised if there wasn't.

MR. LEARMONTH: Can you get it for us?

MR. KEATING: I believe we are able to get that.

MR. LEARMONTH: Okay. Will you use your best efforts to get it?

MR. KEATING: Yes, I certainly will.

MR. LEARMONTH: All right. And I just wondered – these are Ziff analysis.

MR. KEATING: Yes.

MR. LEARMONTH: If we just turn to tab 13 while we're on that topic. That's Exhibit 1206.

Now, we know that Wood Mackenzie prepared a draft report that dealt with LNG as well as the pipeline situation. Correct?

MR. KEATING: Yes.

MR. LEARMONTH: Yeah. So is there a reason that Wood Mackenzie's numbers weren't used in this analysis at tab 11, 01204?

MR. KEATING: Because I think the determination was that Wood Mackenzie made a comment on the Ziff report, but Ziff did the analysis. So what the table shows was the outcome of the analysis. It didn't necessarily do, I guess, a sensitivity to what the WoodMac consultants had brought out in its report.

MR. LEARMONTH: How do you know?

MR. KEATING: Because it appear to be. Because I think the main difference from Wood Mackenzie's overview was they would have suggested a slightly lower or 70 per cent world oil price.

MR. LEARMONTH: Well, there's other information there in the Wood Mackenzie draft report that I suggest would confirm that they did more than – they did an analysis of it. You don't agree with that?

MR. KEATING: Oh, I just don't know what Wood Mackenzie did.

MR. LEARMONTH: Okay, so you don't know.

MR. KEATING: I don't know.

MR. LEARMONTH: Well, you just said before that you thought you knew what they did.

MR. KEATING: No. No, I was referring to what the Investment Evaluation group did –

MR. LEARMONTH: No.

MR. KEATING: – within Nalcor.

MR. LEARMONTH: But you don't know what analysis or what level or depth of analysis that Wood Mackenzie did in their draft report on LNG.

MR. KEATING: That's correct.

MR. LEARMONTH: Okay.

So why was it then, when we're speaking of that – going back to tab 13, that's 01206. So why are you commenting that – said: Yes, Wood Mackenzie should say that they were to comment only on the pipeline piece. Rationale for focus only on pipeline was that we believe the pipeline was the primary contention issue and the pipeline had more local and specific considerations. Why would you agree that the report should be limited?

MR. KEATING: Well, it's because of what I – that's what I believe that they were asked to do. I'm no – necessarily think that the government asked WoodMac to come up with LNG prices; I thought they were asked to consider the pipeline scenario. And if I was mistaken, I may have been mistaken, but that was what I thought at the time.

MR. LEARMONTH: Well, you said pretty clearly Wood Mackenzie should say that they were to comment only on a national – on the pipeline piece.

MR. KEATING: Correct. That was my impression.

MR. LEARMONTH: Did you see their terms of reference?

MR. KEATING: No, I haven't.

MR. LEARMONTH: You didn't. So you're just speculating there, are you?

MR. KEATING: Speculating.

MR. LEARMONTH: But why would you speculate on something like that?

MR. KEATING: Because that's what I knew at the time.

MR. LEARMONTH: What did you know at the time?

MR. KEATING: That I thought that they were only to be doing a review on the pipeline option. And comment on LNG I didn't think was in their spectrum, in their –

MR. LEARMONTH: On what –

MR. KEATING: From the conversations with Wes Foote, who –

MR. LEARMONTH: Okay.

MR. KEATING: Yeah, who described –

MR. LEARMONTH: So he told you that, did he?

MR. KEATING: I believe so, yeah, early on.

MR. LEARMONTH: Yeah. Early on meaning when?

MR. KEATING: I don't know.

MR. LEARMONTH: Well, you don't know.

MR. KEATING: I don't know specifically. It would have been before, obviously, I wrote this email. I – and it would have been in a conversation to say: WoodMac is preparing a review of Ziff, they're going to do this and they're going to do that. It wouldn't have been a verbal conversation.

MR. LEARMONTH: Okay. Well, why would you be consulted on that if WoodMac did some work that they weren't suppose to do? Why would –

MR. KEATING: I don't know that I was being consulted. I may have been asked to look at it for completeness and accuracy and – no different than I would've on any number of reports to discharge my duties.

MR. LEARMONTH: Did you ever see the terms of reference or the scope of work that the government sent to Wood Mackenzie?

MR. KEATING: Don't believe I did.

MR. LEARMONTH: Well, then on what basis can you form the conclusion that you weren't supposed to –

MR. KEATING: Because I believe I was –

MR. LEARMONTH: Wait 'til I finish.

MR. KEATING: Sorry.

MR. LEARMONTH: On what basis can you form the opinion that it was not something that they were asked to do?

MR. KEATING: I believe I was told by Wes Foote, who was the, I guess, the holder of the WoodMac agreement.

MR. LEARMONTH: So then he sends information to you to get your comment on what he should do about this error on the part of Wood Mackenzie. In other words, in doing work on LNG that they weren't asked to be – to do?

MR. KEATING: No, I don't think he sent it to me for that. I think he sent it to just me broadly for comment; not specifically.

MR. LEARMONTH: Okay, we'll have to find out more about that, but anyway – and we were talking about the PIRA report again this morning and I believe you said yesterday that – when I – you were asked why it wasn't released to the public. You're reason was that they didn't want to get involved in any public debate.

MR. KEATING: Correct.

MR. LEARMONTH: But what's the basis of that? I mean, did Navigant get involved in any public debate?

MR. KEATING: I don't know if Navigant was involved in any public debate.

MR. LEARMONTH: Did MHI?

MR. KEATING: I'm not sure; I don't know their involvement or not.

MR. LEARMONTH: Did WoodMac?

MR. KEATING: Not sure – I wouldn't know.

MR. LEARMONTH: Yeah. But once again I'm – I want you to tell us why, if – we'll accept strictly for the sake of this question that the reason is as you stated, why wouldn't you just take the report and release it? And if someone said: Well, we want Wood – want PIRA representatives to come and give a public form on it. Just say, they're not available.

MR. KEATING: That – like – I could very well have done that. It would've been the – it would've been my ultimate decision, it was my recommendation that we release the report. I asked the staff person who was relating to Ziff for that agreement. They responded back to us that they don't typically, you know, as I mentioned, engage themselves in this process and any – even the use of any excerpts from this report needed their permission and would be bound under confidentiality rules.

So it's not only that they wouldn't speak to it, but I could see and sense that they weren't likely interested in it's full disclosure without additional protections.

MR. LEARMONTH: But that's not what you said yesterday.

MR. KEATING: It's just my full understanding now, having understood that the – there are emails that I have. I went back and looked at that last night and I saw it was clear in emails from –

MR. LEARMONTH: So are you saying that Nalcor was prohibited or prevented from releasing the PIRA report because of some contractual terms between Nalcor and PIRA that prohibited or prevented Nalcor from doing that?

MR. KEATING: I believe we had –

MR. LEARMONTH: No, is that what you're saying?

MR. KEATING: No, I'm not saying that.

MR. LEARMONTH: Okay, well what are you saying?

MR. KEATING: I'm saying that I believed we had contractual terms that provided for the release of the report. What I am saying is when the report was completed and I wanted the engagement of PIRA to present, represent the report, their commercial person responded to me in the context that I had.

MR. LEARMONTH: Yeah.

MR. KEATING: So I knew either that I had a dispute with my consultant to issue that report or I had to seek additional protections that they were perusing. And I think when I had that discussion with Ed, he realized that this was not gonna be going further.

MR. LEARMONTH: But none of the other consultants that were retained, in terms of the Muskrat Falls, ever made any public presentations. Why would you think that PIRA would be called upon to do so?

MR. KEATING: I don't know; is a contingency or is a – it would've been something – I know that it was probably the only contractor I engaged, so I would've wanted them to make a presentation.

MR. LEARMONTH: Yeah. I suggest to you the reason you didn't was that you didn't want – you didn't release it to the public because you wanted to keep it private; you didn't want to disclose it to the public.

MR. KEATING: I don't believe that's my case. I don't believe that's what I said. I don't believe that was my intention and I have documented that. I've got emails to the contrary.

The decision not to release was Mr. Martin, and I don't know if it was fully his decision. That's something you can put to him.

MR. LEARMONTH: Well, I'm putting it to you.

MR. KEATING: I don't know the – I don't know that answer. All I know is that the report –

MR. LEARMONTH: Okay.

MR. KEATING: – was prepared for release. It was my intent to release. I asked for it to be released. I received a response that conditions the release. I convey that to Mr. Martin and it was determined that we wouldn't release.

MR. LEARMONTH: But you could've released it without any conditions. You didn't have to go back to them for (inaudible) –

MR. KEATING: We would have, but at some – at potentially some commercial risk with the study provider.

MR. LEARMONTH: So that's the reason you didn't release it?

MR. KEATING: That's probably – I don't know if that's the reason, I didn't make that determination.

MR. LEARMONTH: Okay.

Now, yesterday you remember we spoke about the – I referred you to the documentation from Husky Energy, P-01313, which is tab 22. And I suggested that the lifespan of the wellhead platform was 25 years from the time of construction.

MR. KEATING: That's right.

MR. LEARMONTH: And you read it and then you came back and later said that you had checked and it was actually 2023 to 2028 –

MR. KEATING: Yes.

MR. LEARMONTH: – based on a later document.

MR. KEATING: Based on – well, the, I guess, the verification of it came on a later document, but my knowledge at the time would've been 2028. So that would've been a –

MR. LEARMONTH: What was the later document?

MR. KEATING: I think it was the – well, this is the project description of the ultimate development plan, so it would've been the White Rose Extension Project development plan submission.

MR. LEARMONTH: That's the submission?

MR. KEATING: The submission.

This was the description –

MR. LEARMONTH: When would that have been?

MR. KEATING: I think maybe a year later.

MR. LEARMONTH: Yeah, because I have – now, it's not entered as an exhibit, but I will have it entered as an exhibit – this is a C-NLOPB Staff Analysis of the White Rose

Development Plan Amendment Application, South White Rose Extension Tie-back.

Are you familiar with – dated April 26, 2013.

MR. KEATING: I'm not familiar with it immediately, but I've – I know it exists, yes.

MR. LEARMONTH: Okay. Well, do you know what dates are in –?

MR. KEATING: No, I don't.

MR. LEARMONTH: But – so you said definitively 2023 to 2028.

MR. KEATING: I said 2028 was based on my knowledge of what was in the development plan application for – that Husky submitted. And I don't know if it's in this book here, probably not, but if you had that, I'd could be able – I could point you to where I saw that.

MR. LEARMONTH: Well, this one on page 41 [sp page 4], says – and I'll show it to you – "… the Proponent has extended field life to 2030 for the full-field production profiles." And it says: "Production to 2030 would extend field life five years beyond the original 20-year design life of the" – SeaRose – "FPSO. Further work will be required by the Proponent to assess feasibility and impacts of" – field life extension – "beyond 2025."

That's on page 41, which refers to 2030, and on page 57 there's more information on this about 2030, so –

MR. KEATING: So I don't dispute that.

MR. LEARMONTH: Okay.

Well, you know, your company, Nalcor, is a part of the – you'd have an interest in this project. And it may not be a big deal in the final analysis, but I wonder why you would come here and give dates – 2028 – when you knew, or ought to have known, that it was a different date that we're going by. Can you explain that?

MR. KEATING: You're speaking of something that's two or three years later.

MR. LEARMONTH: Yeah.

MR. KEATING: I'm speaking of the question of what I knew at the time. And what I knew at the time was 2028. And it surprises me not that through our process of interrogation with the C-NLOPB and talking about any understandings they would have had ensuing 36, 24 months, that they might squeeze another year –

MR. LEARMONTH: Yeah.

MR. KEATING: – out of a productive life, it's – and if my memory fails me, because the documents aren't in front of me, I – that's a misfortune but I'm clear, 2028 was what I knew then.

MR. LEARMONTH: Yeah.

MR. KEATING: And I don't know that actually has any bearing or change to what was at matter, because what was at discussion was when the oil runs out.

MR. LEARMONTH: Mm-hmm.

MR. KEATING: And the oil runs out in 2028,'29 or '30, at a time whereby if you're gonna provide gas, you need to pay then for some facility. So, I guess, my line of questioning – if I didn't get it by a year because of one other document didn't have it, I'm open to that.

MR. LEARMONTH: Yeah.

MR. KEATING: I'm just trying to convey that I'm no way attempting to, you know, mislead or motivate outcomes any differently.

MR. LEARMONTH: Yeah.

Well, you know, as I said, it may not be a big deal, but I find it – I submit to you that it's unusual that a person in your position would not know the – this information and would come and say a different date. I know it's not a huge difference, but I just suggest –

MR. KEATING: I – to be fair, I deal with four projects; 300 or 400 wells; 30 or 50 offshore blocks, each one has their own time line, and they're constantly being evaluated and constantly being moved back and forth in terms of horizons. I know my operators' opinions and I know my own company's opinions and those numbers are fairly malleable, and to the extent and effect that I was able to truthfully answer your question, I believe I did it.

MR. LEARMONTH: But based on this document, the information you gave –

MR. KEATING: I could be off – in the opinion of the board –

MR. LEARMONTH: You're – based on this document, I suggest that you're wrong.

MR. KEATING: – I could be off by two years.

MR. LEARMONTH: Now, I don't know, there may be other documents, but I just bring up the point that –

MR. KEATING: I take your point.

MR. LEARMONTH: You take my point. Okay.

Now, so let's go with the year 2028. 2028 to 2030 doesn't make a huge amount of difference; however, do you agree that – let's assume that the year is 2028 or 2030, it doesn't matter – so if it's 2028 and there's going to be a construction of this wellhead platform at a price of around 2 billion, is that right?

MR. KEATING: The –

MR. LEARMONTH: Is that –

MR. KEATING: – 2028 includes the possible – at the time, possible construction –

MR. LEARMONTH: Yeah.

MR. KEATING: – of this wellhead platform.

MR. LEARMONTH: Okay. But if – based on what you're saying, that Husky knowing or assuming that oil's going to run out at 2028, would never last, at this stage – it's 2018, it's not going to go into production until – it'd be finished until 2022. Correct?

MR. KEATING: So –

MR. LEARMONTH: Is that correct?

MR. KEATING: Repeat what you said.

MR. LEARMONTH: Well, when is the wellhead platform supposed to go into production? What's the estimated date?

MR. KEATING: 2022.

MR. LEARMONTH: Yeah. Okay, so you're saying then that if we use the 2028 date, that it would be financially beneficial for Husky to have this platform built, at whatever cost it is, on the understanding that it would only be used for six years?

MR. KEATING: No, you're – what you're mistaken there is the 2028 or '30 date was contingent on start up in 2017. So the project's been delayed five years.

MR. LEARMONTH: So was the completion date supposed to be 2017?

MR. KEATING: The completion date was supposed to be 2017.

MR. LEARMONTH: Okay. Well then, let's use that 13-year period.

MR. KEATING: Right.

MR. LEARMONTH: So, you're suggesting, I think, that – and I want to get this straight –

MR. KEATING: Yes.

MR. LEARMONTH: – that that would be an economically viable proposition – to just simply use the wellhead platform, at whatever cost it is, and then it's of no use after 13 years.

MR. KEATING: Yes. That's –

MR. LEARMONTH: That's what you're saying

MR. KEATING: That is what has happened.

MR. LEARMONTH: Okay. But if that's the case, then the wellhead platform, in your scenario, would've been paid for by 2028.

MR. KEATING: Yes, it would've had commercially sensitive information that would give me a payback period –

MR. LEARMONTH: Of?

MR. KEATING: – of something inside that.

MR. LEARMONTH: Inside that. So it'd be paid for?

MR. KEATING: Yes.

MR. LEARMONTH: Okay. Well, isn't that a perfect scenario for the development of offshore natural gas?

MR. KEATING: Yes.

MR. LEARMONTH: Because you've got this platform; it's not being used for oil production, it's been paid for, so wouldn't it be very easy at that point to convert it to a facility to deal with natural gas. There'd be limited operating expenses and whatever revenue was derived from that would be profit of some kind to Husky.

MR. KEATING: Yes, and that will be my job now, to focus on how to make what you just said happen.

MR. LEARMONTH: But that's logical, what I'm saying?

MR. KEATING: That would be logical, what you're saying.

MR. LEARMONTH: Yeah, so you've got the thing; it's not going away.

MR. KEATING: Correct.

MR. LEARMONTH: There's a long life.

MR. KEATING: Yes.

MR. LEARMONTH: It's not used for oil and it's –

MR. KEATING: It is the –

MR. LEARMONTH: – it's appropriate for connecting to a natural gas facility. So you agree with all that?

MR. KEATING: Yes, I agree with that.

MR. LEARMONTH: Okay, very good. Thank you.

Now, I – in listening to Mr. Budden's questions on this engagement, by the government, of Ziff – listening to your answers to his question – do you acknowledge that Nalcor was in a conflict of interest in terms of dealing – it's dealings with Ziff on this report? I'll explain why I say that – I suggest that to you.

That you're a partner of some form, for want of a better term, with Husky. You know that Husky – based on what you've said – doesn't want anything to do with natural gas.

MR. KEATING: Well, not equivocally, but it's specific and temporally.

MR. LEARMONTH: Yeah. The –

MR. KEATING: Okay. Not – nothing to do with the type of the –

MR. LEARMONTH: No, at the time, they didn't want –

MR. KEATING: – (inaudible) that you're speaking of.

MR. LEARMONTH: Yeah, they didn't want to anything to do with it.

MR. KEATING: It's not fair to say to Husky that they don't have any interest in natural gas.

MR. LEARMONTH: Yeah. So you are running interference for them. You're saying to them: Look, we're your partner, don't worry about it, I'll take care of it.

Don't you see any conflict there? You're trying to help your partner at the same time as Ziff is trying to do an independent review. Do you see any problem there at all?

MR. KEATING: It is – we are in complete alignment – Nalcor and Husky – that the piped –

the pipeline proposal that was – Ziff was being charged to evaluate, didn't make no sense. So this is not a situation where there was an if or an or or a maybe. This was a situation whereby, in the absence of Husky's own data and information, which couldn't be and wouldn't be made available, the government determined that it should get some information out. And my role there was to say: I can help supply that information, where you are not able to, and I can keep you out of this public discourse on this concept that has no merit.

MR. LEARMONTH: Yeah. And that was your conclusion going into it; it has no merit –

MR. KEATING: Completely. That's my motivation, solely.

MR. LEARMONTH: Yeah. And so on April – as early as April 12, you have concluded that, based on Ziff telling you that Husky – quote – and this if from Exhibit P-01200 at tab 7, you're saying in an email to Ed Martin: "Ziff said 'Husky says they are considering using gas for pressure support in the future. That's it. End of story.'"

MR. KEATING: Yes.

MR. LEARMONTH: So that's the end. What was the point of Ziff going any further, then?

MR. KEATING: No, no, not the point of Ziff going any further. They had to continue and do their whatever analysis and come up with their presentations and whatnot, but they understood one of the key drivers –

MR. LEARMONTH: Mm-hmm.

MR. KEATING: – for Husky's non-commercial availability statements that they make in their development plans.

MR. LEARMONTH: Yeah, but end of story.

MR. KEATING: End of story as if to say: It doesn't work economically, proven, and it now doesn't work practically because they're using the gas for oil production.

MR. LEARMONTH: Hmm. Well, you know, that's –

MR. KEATING: I don't know there's any other narrative in my mind that is open that the consultant could see that undoes what the industry, its partners, would've long since held.

MR. LEARMONTH: Yeah –

MR. KEATING: I could not see it.

MR. LEARMONTH: Yeah, well, you didn't say that. You said: End of story.

MR. KEATING: I've probably said as much in many circumstances in conversations I've had with people around at that time. It just doesn't appear in this email.

MR. LEARMONTH: Well, why doesn't it?

MR. KEATING: Because it's extraneous.

MR. LEARMONTH: It's extraneous. All right.

And then Mr. Martin says: "Bingo." That's a very strong term.

MR. KEATING: Right. He got it, so it's crystalized.

MR. LEARMONTH: So it's the end of the story.

MR. KEATING: End of the story as we understood it.

MR. LEARMONTH: End of the story.

Okay, now, we've heard evidence, both in examination and in cross-examination of this, what I would suggest is a very curious, if not unusual, relationship between government, Nalcor, Husky oil – or Husky Energy and Ziff. And, you know, you've been questioned on it.

I just want to ask you: Are you saying that the Ziff Energy report that we're talking about was an independent report? Are you saying that?

MR. KEATING: I'm not saying that. I'm not saying that it's an independent report. I think the independence is – it's not a report from Nalcor. It's not a report from government. It's not a report from Husky. It's an independent body assessing those insights, data, viewpoints, histories and coming up with their own story, and through the process, if we are asked to give input or provide comment, we will. So in terms of saying it's independent, I don't know what your standard of independence is. I'm familiar, if I will, to know that –

MR. LEARMONTH: Yeah.

MR. KEATING: – if we have two companies with a dispute on –

MR. LEARMONTH: Yeah.

MR. KEATING: – reserves, we'll commission an independent –

MR. LEARMONTH: Mm-hmm.

MR. KEATING: – technical company.

MR. LEARMONTH: Yeah.

MR. KEATING: But each company still has an opportunity to present its case to the independent company to get this report.

MR. LEARMONTH: Yeah.

MR. KEATING: So it's not unusual for me and –

MR. LEARMONTH: No.

MR. KEATING: – actually I don't know how it works where you have something truly independent where you have no engagement with whatsoever.

MR. LEARMONTH: Okay.

Okay, well, I'm not talking about generally.

MR. KEATING: Okay.

MR. LEARMONTH: You said earlier – just a minute ago – that you didn't – you weren't saying that the Ziff report was an independent report. Is that correct? That's what you said.

MR. KEATING: I'm saying it's independent from Nalcor and it's independent from government.

MR. LEARMONTH: Well, you know, you know what I'm asking you. Are you saying – it's a very simple question.

MR. KEATING: Yeah, okay. It's an –

MR. LEARMONTH: It's –

MR. KEATING: It's, indeed, an independent report –

MR. LEARMONTH: Right.

MR. KEATING: – but I didn't –

MR. LEARMONTH: Okay.

MR. KEATING: I'm trying – I'm struggling to find your definition of independence.

MR. LEARMONTH: Well, I want your –

MR. KEATING: Okay.

MR. LEARMONTH: I mean your –

MR. KEATING: For my definition? Sorry.

MR. LEARMONTH: Okay.

Okay, but you didn't say that earlier.

MR. KEATING: Okay.

MR. LEARMONTH: You didn't acknowledge that – you said it wasn't an independent report or –

MR. KEATING: Yeah.

MR. LEARMONTH: – words to that effect less than a minute ago.

MR. KEATING: It is an independent report.

MR. LEARMONTH: Okay so you're changing your mind?

MR. KEATING: No, I'm understanding your question more clearly.

MR. LEARMONTH: Well, I think the question was very clear. You're saying that you didn't understand my question earlier?

MR. KEATING: I'm understanding your question now, yes.

MR. LEARMONTH: No, are you saying you didn't understand it earlier?

MR. KEATING: Yeah, I'm saying I didn't understand it earlier.

MR. LEARMONTH: Okay, well, there's a transcript, so we'll see if –

MR. KEATING: Sure.

MR. LEARMONTH: – there's a reasonable basis for your misunderstanding.

MR. KEATING: Okay.

MR. LEARMONTH: But, anyways, so just so I understand, your opinion for the official record –

MR. KEATING: Yes.

MR. LEARMONTH: – notwithstanding the relationship that I described earlier with Husky and Nalcor and the government, you're saying without equivocation that the Ziff report was an independent report?

MR. KEATING: Yes.

MR. LEARMONTH: Okay.

Thank you very much. That's all my questions.

MR. KEATING: Thank you.

THE COMMISSIONER: Okay, I'm mindful of the time but I do have a couple of questions for you while I have you here.

So – and bear in mind, I don't have as much information or as – experience or knowledge as you do, so bear with me with these questions. But, first of all, for – as I understand it, for the issue of offshore resources – for instance with oil – there is normally negotiations and whatever to set a royalty or set an amount of money that the Province of Newfoundland and Labrador will actually receive as a result of, you know, the exploitation of the resource.

MR. KEATING: Right.

THE COMMISSIONER: Am I correct on that?

MR. KEATING: That's correct.

THE COMMISSIONER: So is – can I assume that for gas there would be a similar arrangement?

MR. KEATING: So for gas there's no current legislative royalty which is similar to the legislated oil royalty. It's not – there's no legislative royalty.

THE COMMISSIONER: So, if – just to ask another question, if there is no established rate for royalty for gas, how does a proponent cost a project?

MR. KEATING: So what, well, typically now, proponents will do is they'll look for guidance in the Energy Plan itself where the – like, I think the government's indicated structure of a royalty, and it's a progressive royalty with collars for high and low prices. So there's enough there to run, you know, sort of a rudimentary economic analysis of natural gas.

It's not legislated yet. I know through the course of time there were various attempts at legislating it. And, invariably, I think what will happen is as a natural gas project approaches some commercial reality, that will be done.

THE COMMISSIONER: Right.

Actually, I believe the Energy Plan itself has a provision that relates to the fact that that was supposed to be part of the job to be done once the Energy Plan was passed.

MR. KEATING: Correct.

THE COMMISSIONER: Right?

Now, can I also assume that for gas, that – or any resource, I guess – that the government could actually indicate that it was prepared to waive a royalty?

MR. KEATING: I believe it has the ability, yes.

THE COMMISSIONER: Okay.

So I just want to look at the Ziff report for a moment, and these are questions that I haven't had – heard, so that's why I'm asking the questions.

So the Ziff report, if we look at it, it seems to me that what it's basically indicating is that there is no commercially viable option with regards to the issue of gas.

MR. KEATING: Correct.

THE COMMISSIONER: Correct?

MR. KEATING: Correct.

THE COMMISSIONER: And, in fact, it says in the report itself, in the summary part of the report, that the power generation demand on – for the Island is so small that any investment in offshore infrastructure, plus associated operating cost and procedure, the returns on capital, would not meet the returns required by oil and gas companies.

MR. KEATING: (Inaudible) yes, that's (inaudible).

THE COMMISSIONER: Okay.

So the Ziff report was looking at it on the basis that there would be a commercially viable operation where there would be rate of return going to oil and gas companies as a result of the development of natural gas.

MR. KEATING: I think so, yes.

THE COMMISSIONER: Okay.

So why would – and, again, my simple knowledge of this area, why would you – what would happen, for instance, if a customer were to come – and you referred to this a little bit earlier on, but it was in line with the export market, but what would happen if a customer were to come along to an oil company and say: Look, we need a small amount of gas to meet some demand that we have and we're prepared to pay the cost of getting that gas to us, and we're prepared to give you an amount of money to pay for that gas. Was that option or was that ever looked at seriously as a possible option here?

MR. KEATING: In this case, I believe not in specifically the case that's presented by Dr. Bruneau where you have a pipeline to service just electrical load. I believe we talked about it earlier when I talked about a broader industry where we had industrial users. So –

THE COMMISSIONER: Right.

MR. KEATING: – we did get to that level of conversation.

THE COMMISSIONER: Okay. Okay. So I'm looking at potentially the pipeline, but it could be –

MR. KEATING: Yes.

THE COMMISSIONER: – other reasons.

The reason I asked the question is because it seems to me that that sort of a proposition is not much different from a company like Nalcor looking at a project like the Muskrat Falls Project. They're going to invest $6.2 billion into that, plus financing, and to supply the local market because they didn't consider the issue of exports.

So it just makes me wonder why somebody would not look at this sort of an option, you know, a 2 billion option potentially – and I don't know, it may not even be viable or whatever. But I just wonder – it just seems to me strange that they wouldn't look at a – an option like that.

And I know that's not within your confines. It was for others to consider.

MR. KEATING: It is a – except if you look at the guidance that the Ziff report is creating, if you take the, I think, $21 per MMBtu number, which would have been that all-in cost that you discussed, like this –

THE COMMISSIONER: Mm-hmm.

MR. KEATING: – is the cost of all the capital. And let's assume Husky didn't have to invest any of it, and let's assume this was the Government of Newfoundland and Labrador through Nalcor, investing all of it. A couple of good things happen.

First of all, you probably don't need the rate of return that Husky will need, so the economy gets better. You will also probably benefit from the fact that, would there be a necessity to even have a royalty stake? Because effectively the end benefactor would be the people of the province. You wouldn't want – maybe I – my suggestion – pancake that. So you would probably have a number; that $21 would go lower.

But I think what you look at in the final analysis is when you apply that dollar value per MMBtu, it renders the complete concept as non-economic as compared to the Isolated Island case.

THE COMMISSIONER: Right. But you have an oil company out there that has lots of gas and I assume it costs money to actually inject gas into holes, to store gas?

MR. KEATING: Yes, it does.

THE COMMISSIONER: Right. Okay, and then, you know, and then add to that – and again, you're probably not the right person to put this to and somebody may well put it to somebody else – but you're also looking at a 30-year time frame because in 2041, whether you have to pay for the gas at market price or pay for it at lesser value because you partly own the company, there's a possibility of getting oil.

Anyway, no, I – thank you, I just needed to sort of express that, and I appreciate your answers to those questions.

MR. KEATING: Thank you.

THE COMMISSIONER: All right. Thank you, you can step down.

I guess we're finished for the day. And we start next week with Mr. Bennett?

MS. O'BRIEN: Yes.

THE COMMISSIONER: Yes, okay. So we're on for (inaudible) at 9:30 Monday.

CLERK: All rise.

This Commission of the Inquiry is concluded for the day.