

ONTARIO ENERGY BOARD

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| FILE NO.: | EB‑2014-0012 |  |
| VOLUME:  DATE:  BEFORE: | 3  December 2, 2014  Christine Long  Cathy Spoel  Marika Hare | Presiding Member  Member  Member |

**EB-2014-0012**

THE ONTARIO ENERGY BOARD

IN THE MATTER OF the Ontario Energy Board Act, 1998, S.O. 1998, c. 15, (Schedule B);

AND IN THE MATTER OF an Application by Union Gas Limited, pursuant to section 36(1) of the Ontario Energy Board Act, 1998, for an order or orders approving rates and other charges for an interruptible natural gas liquefaction service.

Hearing held at 2300 Yonge Street,

25th Floor, Toronto, Ontario,

on Tuesday, December 2nd, 2014,

commencing at 9:32 a.m.

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VOLUME 3

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BEFORE:

CHRISTINE LONG Presiding Member

CATHY SPOEL Member

MARIKA HARE Member

MICHAEL MILLAR Board Counsel

KHALIL VIRANEY Board Staff

CHARLES KEIZER Union Gas Limited

KAREN HOCKIN

CHRIS GAGNER

ROGER HIGGIN Energy Probe Research Foundation

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B. Fay, P Jones, G. Tetreault, S. Van der Paelt,

Previously Affirmed; J. Erling, Affirmed

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**No EXHIBITS FILED DURING THIS PROCEEDING.**

**No UNDERTAKINGS FILED DURING THIS PROCEEDING.**

Tuesday, December 2, 2014

### --- On commencing at 9:32 a.m.

MS. LONG: Please be seated.

Good morning, everyone. Today we are continuing our hearing in EB-2014-0012, an application by Union Gas Limited for an order approving a new interruptible natural gas liquefaction service.

May I have appearances, please.

# Appearances:

MR. KEIZER: Charles Keizer on behalf of Union Gas Limited.

MS. LONG: Mr. Keizer, good morning.

MR. KEIZER: Good morning.

DR. HIGGIN: Good morning, Madam Chair. Roger Higgin for Energy Probe.

MS. LONG: Dr. Higgin, good morning.

MR. MILLAR: Good morning, Madam Chair. Michael Millar, counsel for Board Staff, with Khalil Viraney.

MS. LONG: Thank you, Mr. Millar.

Mr. Keizer, are you ready to introduce your new witness to us?

# Preliminary Matters:

MR. KEIZER: Yes, actually, before I do, I thought we could deal with a couple of transcript corrections, and then -- before we deal with qualifying Mr. Erling and all the direct that relates to that.

The existing panel continues to be under oath, and it is my understanding that there are a couple of transcript corrections, and I would ask the appropriate witness to deal with those, I think starting with Mr. Jones.

# UNION GAS LIMITED - PANEL 3

**Mr. Bill Fay, Previously Affirmed**

**Mr. Pierce Jones, Previously Affirmed**

**Mr. Greg Tetreault, Previously Affirmed**

**Ms. Sarah Van der Paelt; Previously Affirmed.**

MR. JONES: Yes. On page 55, line 21 of the transcript, it should read "we do have turn-down capability of the facility".

MR. KEIZER: Mr. Tetreault?

MR. TETREAULT: I have several numerical corrections. On page 42, line 18 of volume 2, it reads "of the total net book value --

MS. LONG: Mr. Tetreault, sorry, can you just wait til we get there?

MR. TETREAULT: I'm sorry.

MS. LONG: We're a little bit slow. Page 42?

MR. TETREAULT: Yes, page 42, line 18. Currently the transcript reads "of the total net book value of assets, 53 percent", that should read "50.3".

On the same page, at line 25 we have the same correction. It currently reads "I've got 22 million, but only 53 percent". That should be "50.3" as well.

Then if we can move forward to page 44, on line 23, the transcript reads "approximately half, 58.3 percent". That should also say "50.3".

And finally, on page 45, line 2, the transcript reads "and 66.4 for vapourization". That should read "6.4".

MR. KEIZER: That's the end of the transcript corrections.

MS. LONG: That's the end of the transcript corrections? Thank you.

Are there any other preliminary matters you need to deal with, Mr. Keizer?

MR. KEIZER: Just one other -- just for a note that we -- all of the undertakings except for one will be filed this morning. Just for the information of the Board, the one undertaking, J2.6, that was -- you may recall was a table that Mr. Rubenstein wanted to be recalculated coming out of the last rates case.

It will be filed, hopefully, in the next day or so. Finance is still working, trying to accommodate Mr. Rubenstein's request.

MS. LONG: Okay, thank you for that update.

MR. KEIZER: So if I may, then, if I could introduce Mr. Jonathan Erling as a witness on behalf of Union Gas, and if Mr. Erling could be sworn.

MS. HARE: Mr. Erling, could you stand, please.

**Jonathan Erling, Affirmed.**

MS. HARE: Thank you, please be seated.

MR. KEIZER: So Madam Chair, if I may, I have a few questions to put to Mr. Erling with respect to his qualifications, and hopefully request that he be qualified as an expert.

If I may proceed in that regard?

MS. LONG: Yes, please do so.

# Examination-In-Chief by Mr. Keizer:

MR. KEIZER: So Mr. Erling, you are managing -- you are a managing director at KPMG LLP?

MR. ERLING: Yes, I am.

MR. KEIZER: And you have various accreditations with respect to education and licences? You have a Bachelor of Science of Engineering in mechanical engineering?

MR. ERLING: Correct.

MR. KEIZER: You also have a Master's of Business Administration, and you also -- a Professional Engineer's designation?

MR. ERLING: That's correct.

MR. KEIZER: You are a member of KPMG's global infrastructure projects group?

MR. ERLING: That's correct.

MR. KEIZER: And you specialize in energy and regulated utility sector?

MR. ERLING: That's correct.

MR. KEIZER: Mr. Erling, what is your particular area of focus with respect to your role at KPMG?

MR. ERLING: Within KPMG, I focus on regulated utilities. I also do work in district heating and co-generation, and among regulated utilities that covers the water, gas, and electricity sectors, primarily.

MR. KEIZER: And how long have you been with KPMG?

MR. ERLING: Slightly over 25 years.

MR. KEIZER: And is cost allocation and rate design a specific area of focus?

MR. ERLING: It's an important element of the work that I do, yes.

MR. KEIZER: And in that regard, what other aspects of cost allocation evidence have you given or reports created that may be helpful to the Board to understand?

MR. ERLING: Perhaps the most relevant -- I have been involved in a number of overhead capitalization studies, one for Union Gas, one for Hydro Ottawa. Both of those were filed and accepted by the Board on prior proceedings.

I've undertaken an overhead capitalization study for NB Power and recently completed an update for that utility that will be filed in their next rate proceeding.

I have done some work for EnWin Utilities in the allocation of costs amongst the water, LDC, and telecom operating units of the Windsor Utilities Commission and EnWin Utilities, and I have also appeared before the Manitoba Public Utility Board expressing some opinions with respect to the cost allocation processes for Manitoba Public Insurance, specifically between the regulated and unregulated portions of their business.

MR. KEIZER: And have you ever testified before this Board?

MR. ERLING: I have testified before this Board in two proceedings. One was for Toronto Hydro in respect of the treatment of tax variances for electricity distribution utilities under incentive rate-making.

And in addition, I appeared as part of a KPMG panel in a general consultation proceeding with respect to IFRS or the impact of international financial reporting standards on rate design for electricity and gas utilities.

MR. KEIZER: Madam Chair, if I may, I would like to qualify Mr. Erling as an expert in cost allocation and for the purposes of this proceeding.

MS. LONG: Are there any objections, Dr. Higgin? Mr. Millar?

DR. HIGGIN: No objections, Madam Chair.

MS. LONG: Thank you, then we will accept Mr. Erling as an expert in cost allocation and rate design.

MR. KEIZER: Thank you, Madam Chair.

If I may, then, I would like to pose to Mr. Erling just some brief questions in direct relating to his report filed in this proceeding, and that report is filed and marked as Exhibit A, tab 2, attachment A.

And Mr. Erling, you are the author of the report for "Union Gas Limited, Identification of Liquefaction Service Costs", dated May 12th, 2014?

MR. ERLING: That's correct.

MR. KEIZER: And what was the purpose of your mandate and object of the report?

MR. ERLING: The scope of my work was to allocate 2013 Board-approved costs for the Hagar facility amongst the functions of liquefaction, storage, and vapourization, and to support Union's development of a rate, of a new rate for liquefaction services.

MR. KEIZER: And what methodology did you employ with respect to that?

MR. ERLING: Well, if I could speak briefly to the approach that we took, it was really, I think, first and foremost to understand the nature of the facility. I worked quite closely with Union Gas staff to look at how the facility operated, its structure, the functions within it; also sought to understand what information was available with respect to the facility in terms of cost information and operating data.

The other element of the work was to look for precedence in other jurisdictions where you had an existing liquefaction facility that was adopted or converted to also provide services to the transportation sector, and to look to see if there were precedents in those jurisdictions in terms of how they allocated costs or designed rates for a new service.

And that led to two of the references in or report. One is to the Fortis facilities in BC, and also to the Gaz Métro facilities in Montreal. So we looked at the cost allocation methodologies used there.

I think in discussions with Union staff on the operation of the Hagar facility, one thing I particularly wanted to understand was the behaviour of costs at the facility, and to look at costs that would be considered fixed and also costs that might be common costs, and distinguish those from the variable costs that increase with incremental activity at the facility.

So really an important element of our work was to structure the cost and to -- really a fixed and variable assessment of the components of costs.

MR. KEIZER: And were there any basic conclusions that you reached with respect to your report?

MR. ERLING: Well, you know, I think the basic conclusions are as outlined in the table on page 10 of our report, which allocates costs amongst the functions, and then shows the division of those costs into fixed costs for recovery and variable costs leading into an allocation of the total costs of the facility.

MR. KEIZER: Thank you, Mr. Erling.

Madam Chair, those are my questions in direct.

MS. LONG: Thank you, Mr. Keizer.

Dr. Higgin, are you proceeding first?

DR. HIGGIN: I think I am the only person here.

MS. LONG: Well, there you go.

DR. HIGGIN: You'll be very happy to hear that.

[Laughter]

# Cross-Examination by Dr. Higgin:

DR. HIGGIN: Yes. I would like to start with a couple of follow-up questions. One of them is quite general, and it was sort of discussed.

And this is in the event that the Board determines the LNG transportation operation to be non-utility -- this is to the whole panel, but Union as well -- can we understand if Union's thought about this any more and whether it has certain views on some aspects that -- I will just outline a couple, and add any others that you wish.

So the first question is: If it's a non-utility, should there be a separation of all of the incremental capital costs, from an accounting and other point of view? In other words, they don't go in rate base? Would that be something that Union has thought about?

MR. TETREAULT: Dr. Higgin, I wouldn't say we've considered all of -- all the permutations that may result from a decision by the Board that it's non-utility service. So I think there's some evaluation or some work to do.

But I do expect in that circumstance that the rate base associated with the capital investment in that scenario would not be -- would not be treated as utility rate base. That would be my expectation.

DR. HIGGIN: Thank you. And does that include the road upgrade or not? Would that be part of that?

MR. TETREAULT: Yes, it would be.

DR. HIGGIN: Thank you. Then the other question that you may have thought about: Because it's a non-utility operation, working together with regulated activity, should there be an affiliate service agreement under the ARC to govern the operations and the shared services? Would that be something that you would think might be appropriate if it was a non-utility operation?

If you haven't thought about it, just say so. I am not trying to put you on the spot.

MR. TETREAULT: Yes, that's fair, Dr. Higgin. We haven't considered how ARC or an affiliate-type relationship would apply here.

I'm -- we would need to evaluate that. I'm not sure that if it were deemed to be non-utility, there would be necessarily any affiliate relationship at all.

DR. HIGGIN: Okay. Thank you. I have just one other follow-up question from the transcript on Thursday, and this relates to you, Mr. Fay, and your discussions. So I wonder if you could just turn up that transcript and start with the discussion and the response that you make at pages 96 and 97.

My actual question will be on page 97, but to give you context, I thought you might want to have the rest of the response that you've made in front of you as context. I will just give you a minute to look at that and see what you were discussing with me.

MR. FAY: Page 96?

DR. HIGGIN: 96, yes, volume 2. And at line 11, you start, and the issue of the discussion we're having is about inventory charges. Okay?

MR. FAY: Yes.

DR. HIGGIN: My specific question relates to page 97 and starts at line 4. Or you start, I should say, at line 4.

And you outline that:

"In this case, the LNG is flowing directly into the trucks..."

And I assume by "trucks" you mean either trucks or tankers.

"...and there is really not a dispensing charge or a withdrawal charge. So that is the distinction I just wanted to make..."

And I think the distinction relates to conventional storage. You can outline that. And that's -- then you go on to say one of those is interruptible and the other is firm.

So what I am exploring or asking you to explain to me is -- so can you discuss why there would not be a dispensing charge, particularly under non-operation, utility operation, because you have all this incremental capital. We just discussed about that. Wouldn't there need to be a dispensing charge?

MR. FAY: My understanding is there is compression required to withdraw the LNG from the tank into the tanker. So I may have misled you at the time, in terms of there's no dispensing charge.

But my understanding is that those costs would be included in whatever Mr. Tetreault had included in the cost. But there's no -- my understanding -- and Mr. Tetreault can correct me -- is that what I was trying to get at was we haven't divided it into an injection and withdrawal charge, if you know -- from traditional services.

It's more in terms of developing a rate, which includes all the incremental costs for the service being provided here, unlike a traditional storage cost. That's where I was trying to go with that.

DR. HIGGIN: Thank you. I think the construct I am using here is that if it was a non-utility operation, particularly would there not be, then, a requirement for a dispensing charge which would be separate from the other assets that are shared by the two services?

MR. JONES: Actually, Dr. Higgin, if I could point you to some –-

DR. HIGGIN: Yes?

MR. JONES: -- to a reference in our evidence. On page 21 of 25, tab 1, in our evidence there's a table, table 3.

Yes. So that table there, table 3, is the total estimated project capital costs in millions of dollars.

DR. HIGGIN: The incremental, yes.

MR. JONES: Right. So you can see on line 11 specifically it talks about some of the hard parts that are required for this service. So it makes reference to the pumping skid. So that pumping skid -- currently this new L1 rate doesn't have a pump at our facility.

So through this L1 service we'll be purchasing and installing a new pump, which will actually facilitate removing LNG from the tank and putting it into the tanker trucks.

DR. HIGGIN: Right. And I think, as Mr. Fay said, under the construct that you were having a regulated rate, those costs were being part of the incremental costs that were added in Schedule 6 to create the rate. Am I correct, Mr. Tetreault?

MR. TETREAULT: That's correct.

DR. HIGGIN: So my question then is, if it were separated as a non-utility operation, and there wasn't a regulated rate per se, you would still have to have a dispensing charge of some sort to recover those capital costs. Wouldn't that be the case?

MR. TETREAULT: I will respond slightly differently, Dr. Higgin.

DR. HIGGIN: Yes.

MR. TETREAULT: What you would have in that case is a non-utility investment, capital investment, of $9.9 million, which includes the facilities that Mr. Jones spoke to, in terms of dispensing equipment that is required, and that would be a non-utility investment, and those -- the revenue requirement associated with that would be borne solely by the non-utility business.

DR. HIGGIN: Okay, thank you. That was my -- those are my follow-up questions to Union. I have a few questions for Mr. Erling. If we can go there now, Mr. Erling, that would be appreciated.

So you covered with counsel your mandate. I just want to clarify one or two aspects of that.

So you indicated to counsel that this was a new service that was going to happen, but you weren't directly involved in the development of the new service and the costs and the allocation of those costs related to the new service. Am I correct?

MR. ERLING: That's correct. I allocated the existing costs for 2013. It was Union's responsibility to develop rates based on that cost allocation and also to decide how to incorporate the incremental costs associated with the new service.

DR. HIGGIN: Right. So if we look at a traditional cost allocation functional -- and that means functionalization, classification, and allocation, you were really focused on functionalization for the costs of the existing plant and facilities. Am I correct?

MR. ERLING: That's correct.

DR. HIGGIN: Thank you. So, now, you mentioned briefly to counsel that you thoughts of it as liquefaction, but in fact the plant has the three functions, as you know.

And so one of the common services that is also now shared to a degree is the storage and the tanks. So that would include being part of the common shared services, would be the costs of the tank and the storage.

MR. ERLING: That's correct.

DR. HIGGIN: Thank you.

MR. ERLING: So certainly in my report also identified costs of storage, and I believe that is the basis of the rates that Union developed.

DR. HIGGIN: Yes. We're going to talk a little bit about that now.

So can I ask you to go to -- we have it up -- page 2 of your report. And I would just like to look at the section C that says, what were the principles that you used for designing the functionalization of the costs of the plant. So the question is this: Just help me, who do you mean by LNG wholesalers at this point, as opposed to, say -- does that include Union Gas, or does that include other people? Who are these people that should absorb these costs? Who are they?

MR. ERLING: I think it would be the people taking advantage of a new service to obtain LNG.

DR. HIGGIN: So you see them as, as you say, wholesalers, possibly retailers. So third parties? Not Union?

MR. ERLING: Third parties. I assume that, you know, it could include Union acting as a wholesaler. I hadn't given that much thought, in terms of how I worded this.

DR. HIGGIN: Okay. So then you outline the principles. And to summarize this, you end up with the construct that it's a fully allocated cost, as opposed to incremental. And that is the way that the Régie approved also in Quebec, which was a fully allocated cost. Correct?

MR. ERLING: I can't speak to what the Régie did, ultimately. The study that I quoted in the report in respect of Quebec was the submission by the utility. I am not aware of the Régie's ultimate decision in that regard.

DR. HIGGIN: So you didn't -- I'm sorry, I had assumed that you had also read the Board's decision rather than just the utility's filing.

So you limited your reading to the filing --

MR. ERLING: That's correct.

DR. HIGGIN: -- which is the D section, and not to the decision?

MR. ERLING: That's correct.

DR. HIGGIN: Okay. We'll come to that in a minute.

So how would these principles apply, if at all, or differently if it was a non-utility operation regarding how the costs would be shared and whether there should be, for example, full accounting separation, et cetera? How would it work? Would it work somewhat differently?

MR. ERLING: I think, in my mind, if you look at the scope of my report -- which is allocating 2013 Board-approved costs amongst the three functions -- I don't see my work being different if it was a non-utility function that was taking the liquefaction service from the existing Hagar facility versus an operation that was embedded in the regulated utility.

I don't see any differences in the way that we would have gone about the cost allocation process.

DR. HIGGIN: Okay. Thank you. Can we look at your report now, page 5, and just a little bit on some of the methodology that you have employed. I would particularly like to understand the second bullet, which deals with the allocation on throughput volumes, and you say there that it's a method that could be used but has certain problems.

Perhaps you could just outline why you decided to reject that, although it quotes "it was appealing at first sight".

MR. ERLING: Well, yes, I would be happy to speak to that. I think it is appealing at first sight because as an engineer I always find physical measures intuitively appealing versus cost accounting measures --

DR. HIGGIN: I'm an engineer too, so I do, yeah.

MR. ERLING: That is just a bias that I have, so I always like to think of things in physical terms, as opposed to dollar signs.

When it comes to the facility at Hagar, and I think I point this out on the report, is that, you know, when it is operating as a system integrity asset, any volume that has been liquefied ends up being vapourized.

So the volumes in the two cases are the same, with the slight distinction that, of course, there is some boil-off, so you end up liquefying somewhat more than you will ultimately vapourize. So there is a distinction.

When you look at storage, storage is really -- I think the costs of storage are really related to the physical space that's allocated to the storage function. You know, it's a holding tank, and so the costs are really not dependent on the volumes that move in and out of the tank. They're really dependent on the volumes that you have to put in the tank, because that determines how large the tank is.

So the three processes have quite different natural measures of their physical capacity, liquefaction and vapourization being really throughput measures and storage being a space measure.

And of course, the other issue here is that the vapourization process, it is designed to inject a lot of gas in a very short period of time, so it has a much higher throughput capacity than the liquefaction process. And in fact, if you empty the tank, I think it takes 200 days or something to fill it again once you start to turn the liquefaction process on.

So the liquefaction process, you know, the throughput measure is quite small in relation to the vapourization measure, but in fact it is a much more complicated process. It's a lot harder to cool things down than it is to heat them up, and it takes a lot more fuel to run the liquefaction process than the vapourization process.

And so really the instantaneous throughput capacity of the liquefaction process is in no way indicative of its relative complexity.

DR. HIGGIN: Okay. Can I just ask you on the third point here -- it says:

"Costs associated with storage are related to residency time as well as to the volume stored."

Could you probably explain that and the note that you have that it is not reflected in a simple volume measure?

MR. ERLING: Well, I think that is really just trying to get across the idea that if I have a tank and I put a gallon of, I'll say, gasoline into it, just -- and the gasoline sits there for 50 days versus sits there for one day, you know, the gasoline that's sat in the tank for 50 days has used that space 50 times more than the gasoline that just stayed in the tank one day.

But it's as simple as that. That's all I was trying to get across with that.

DR. HIGGIN: What else might go along with that? For example, boil-off, if it was -- would be dependent on how often that happens, filling that space and that tank or piece of tank and emptying it?

MR. ERLING: Well, certainly one of the things that we looked at in examining the facility was: What is the nature of boil-off and how does it vary?

And I think the conceptual model that we developed in the course of our work was just to say that boil-off is something that occurs on a relatively constant basis over time. It's not very dependent on the volume in the tank at a particular point in time, or it wasn't something we wanted to try to model in how we thought about costs.

So in thinking about boil-off, I think my mental model is that boil-off is just a constant amount and it goes on over time. You know, I understand, talking from Pierce, that it may vary with temperature and more so with atmospheric pressure, but those things do not relate to the usage of the facility by the various activities they're in.

So I don't think it is relevant from a cost allocation perspective.

DR. HIGGIN: Okay. Thank you. That's helpful.

I'm just going to end up by, you know, going to the Régie. I had the decision but you haven't looked at the decision. So we do have a filing here, and maybe we can give this an exhibit if it -- I think it has an exhibit, actually, sorry. J2.2, if we could just look at that filing. That's just from this morning.

MR. KEIZER: Madam Chair, that is a response to an undertaking which we are going to be filing this morning, but we did have a copy finished, which we gave Mr. Higgin. And now we have copies, which we can provide to the Board as well.

MS. LONG: Thank you.

MR. KEIZER: I believe the response to the undertaking is a table which Mr. Erling looked at for purposes of consideration of the application made by Gaz Métro to the Régie.

[Mr. Millar passes out undertaking response]

DR. HIGGIN: Thank you. You have that, Mr. Erling?

MR. ERLING: I do, yes.

DR. HIGGIN: Thank you. Just position this for us within your work. And what are we looking at here with respect to this -- I think it is an annex, isn't it? Yes. Perhaps you could just tell us what this document is.

MR. ERLING: This is a table within the submission by Gaz Métro. I would -- you know, I think, as an introductory comment, I would like to say one of the disadvantages for me about working with this document is that it is, of course, in French, and my ability to read French quickly, if at all, is not good. And hence it was always a struggle to make sense of the document, and I can't skim it with the same speed which I would be able to an English document.

And, you know, I have the decision, for example, and that is one reason I didn't go through the decision, as it would have been a time-consuming effort.

But I did -- it was easier, certainly, for me to look at the tables in the submissions. And, you know, my reading of the table is that if you look at line 11 in the table, there is a footnote in italics. It says: "ratio des coûts d'effectif." And my Google Translator said that that is ratio of the cost of the assets.

You will see that that -- so there appears to be an allocation of the cost of assets amongst storage, liquefaction and vapourization, and then that ratio is used to allocate many of the operating costs of the facility, so salaries, materials, professional services. Assurances, I'm not sure exactly what that is, but that's -- that appears to be an important element of how they allocate costs.

DR. HIGGIN: Thank you. So this was the company's filing and then the board made its decision -- we will come to that in a minute.

So the question I have is -- the box at the top left, if you could just go to that.

MR. ERLING: Yes.

DR. HIGGIN: Okay. Just tell us for the storage, just storage only, what the -- what that would tell you in terms of how storage was dealt with in the physical sense, in that it says the capacities and so on for the two services.

MR. ERLING: Well, with the cautionary note that I'm looking at this a bit on the fly, I see on line 2 it says "regular clients" and then on line 3 it says "client of GNL," which I assume is the new service, and there's a ratio of space and it looks like it is 91.5 to 8.5.

DR. HIGGIN: Okay. That's what I would have also -- my limited French, I would agree with you.

So the purpose of asking some of these questions is clear. I think, Mr. -- knows what my concern is. My concern is whether or not space for the facility that has a turnover of that space quite frequently should be the allocator; it is the allocator, as opposed to some things such as capacity, deliverability or volume throughput, which is a volumetric throughput-type of range, activity.

So that's my fundamental concern about how the storage is dealt. As an expert, can you address my concern, please?

MR. ERLING: Well, if I think of the costs of the storage facility, you know, it's a big tank. And certainly the costs that we were allocating with respect to the storage function were largely to do with the tank and its capital cost.

I think that the costs of that storage facility are largely a function of its size, and therefore a function of space. And so I guess I'm not following your conclusion that in fact it is how often you move things in and out of the tank that are the driver of cost.

To me it still seems that it's the capacity of the tank and the use of that capacity and how much capacity you are -- or how much space you are calling upon that's the important driver of cost.

DR. HIGGIN: Okay. So you agree then that that's the methodology that you feel is appropriate, and that's fine.

MR. ERLING: That's correct.

DR. HIGGIN: That's your answer. But you would agree that if the cost allocation used different -- a different driver or a hybrid driver, then that would change the functions -- the allocations as well.

MR. ERLING: I think it follows that if you use a different driver you may end up with a different result, yes.

DR. HIGGIN: Okay. Thank you. One last question. Did you identify in your work whether, as it says on this table -- it says "client GNL", and that -- is GNL, in your -- from your reading of the Board's response, or is -- that it is a non-regulated activity. I think the Board actually did find that that was to be a non-regulated activity.

MR. ERLING: I don't have direct knowledge of that. I can accept your assertion that it is, if that's --

DR. HIGGIN: I'm not sure how material it is, Madam Chair, but basically there is a decision that actually says that. So if it's of interest, it would be perhaps well for Union to look at that and agree, or not, with that proposition. Otherwise, I'm going to just put it forward that that is the case, that the Board did find, and I have the reference. It is in D-2010-057. So that is D-2010-057. The Board found it is a non-regulated activity. If Union wants to accept that, I'm fine. If they want to check that and tell us, equally fine.

MS. LONG: Mr. Keizer, do you have a comment on whether or not you want to comment on what the decision said, or not?

MR. KEIZER: Well, I believe, actually, Ms. Van der Paelt was reaching for the microphone, so I would ask her to respond.

MS. VAN DER PAELT: So we are aware of the two decisions in Canada. Gaz Métropolitain's is an unregulated, and Fortis is a regulated.

DR. HIGGIN: Thank you. Those are my questions, Madam Chair, and you will be glad I am short today.

MS. LONG: Thank you, Dr. Higgin.

Mr. Millar, do you have any questions? No? Then the panel has some questions.

# Questions by the Board:

MS. SPOEL: I would like to just follow up on some of the points or some of the area that Dr. Higgin was discussing with respect to the storage.

And in the KPMG report -- I am not sure whether Mr. Erling is appropriate to answer some of these questions or the Union panel, so it might depend how you come at it.

But in Mr. Erling's report he says on page 1 that -- and it is the second-last paragraph. It says:

"Under the current operating regime the storage tank, once emptied, needs to be refilled only in advance of the following heating system."

Is that correct, that over the course of the summer you are not required to maintain full -- the full inventory that you would require for vapourization, if necessary?

MR. JONES: That's correct. So we have the tank full during the peak heating season.

MS. SPOEL: That starts, what, in December?

MR. FAY: Yes, December is the peak heating season.

MS. SPOEL: So from, say, December to March or April?

MR. FAY: December through the end of March.

MS. SPOEL: Okay. So does that mean -- and by my basic calculation you can -- it seems to me at the liquefaction rate of about 3,000 gJs per day you could refill the tank at a rate of about 100,000 gJs per month, close, or 90,000 per month, I guess. 30 days times 3,000 per day.

MR. JONES: Yes, that sounds about accurate.

MS. SPOEL: So in the past few years you've only had incidents where you've had to actually vapourize less than 100,000 gJs at a time. Is that correct?

MR. JONES: Yeah, as per our interrogatory responses, yes.

MS. SPOEL: So is it not then possible that, let's say come April of a year you've got the storage tank full because you've been able to re -- any that you have used over the previous heating season for incidents where you've had to vapourize, you have been able to liquefy enough gas day by day to refill it again, because you didn't actually empty the tank. You only used a little bit.

So is it not possible then that over the, say, eight months from April to November you can actually use much more of that storage for the purposes of maximizing the input and output of liquefaction, and in fact, your constraint is not the 7,000 -- well, let me put it this way. You could in theory use a lot more than 7,000 gJs of storage for the LNG process over the course of the summer, as long as by the fall you are filling it up with gas so that it is ready for your peak heating season, or have I got that wrong?

MS. VAN DER PAELT: So with the service you would not have access to more than the 7,000 gJs, so --

MS. SPOEL: Why not?

MS. VAN DER PAELT: Well, the tank would actually be full except for the 100,000 gJs that we need to liquefy. So in the example that you provided to us of the 600,000 gJs approximately that is held for integrity space, 500 is still sitting there.

MS. SPOEL: Right. But why can't you sell -- couldn't you pump some of that 500 -- I mean, it's all the same gas. Couldn't you -- it is all liquefied natural gas.

Couldn't you pump some of that out into trucks that drive up and then replace it the next day with a tanker truck worth of newly liquefied gas to keep your 500? I mean, it is not like you have got a physical pocket that you are storing the other liquid in. It is all mixed together in the tank.

MS. VAN DER PAELT: Yeah, it is physically mixed, but on a contractual basis we are going to manage to the 7,000 to make sure that we don't infringe on the integrity space, so --

MS. SPOEL: Why would you do that if you don't actually have to keep it full for the eight months of the year that are not the heat peaking season? Couldn't you make better use of that storage space or make different use of it and provide more flexibility in the LNG program, if you didn't say we're constrained by storage? Your constraint is actually the rate at which you can liquefy?

MS. VAN DER PAELT: So we wanted to ensure in the service design that we didn't make any assumptions around a system integrity event and that we preserve the reliability of that asset and preserve that for Union Gas and for those system integrity events.

So if our service design assumed that you could take advantage of that space or do something differently with that, you then made a leap of faith that there hasn't been an integrity event in that winter.

MS. SPOEL: But I'm not talking about the winter. I'm talking about, like, July.

MS. VAN DER PAELT: The integrity event in the winter, though -- so it takes six days to empty the tank and 200 days to fill it. So if the integrity event in the winter that that space is preserved for emptied in six days, we would need 200 days to fill the tank to get the integrity space back.

For us to make an assumption that that integrity event didn't happen and, therefore, there was additional space available to us would then lead us to believe that you didn't need the entire asset for the integrity space, which we believe we do.

MS. SPOEL: Right. But could you -- and I'm just trying to explore some things here.

Could you deal with it the way you deal with your storage, your underground storage, where, I think, you have some short-term. So if it turned out that you -- the tank was full -- which in fact every year it probably is by April or May -- that you could then offer additional service and maximize use of those assets over the summer months by selling more LNG, if a short-term market was there, as opposed to -- I understand long-term contractually you can't commit. But short-term you could.

If it turned out to be a booming market and you could sell whatever you could make, wouldn't you be able to then increase your throughput by taking advantage of more storage or provide a more flexible service?

MS. VAN DER PAELT: So the service we've proposed in our filing did not have that flexibility built in. And that's how the costs and the design has been constructed in order to preserve that.

If the Board in their decision saw that we had the ability to do that -- we didn't believe we had the ability to use any of the integrity assets that are preserved -- we would certainly look at that. But our design does not contemplate us using any of the integrity space, whether it be the gas that is in the tank, whether it be the space of the tank, whether it be the liquefaction capacity used to get that gas back in the tank, because we were trying to keep it very clean, in terms of what was being used here was assets that were additional liquefaction capacity on the system versus what is currently in rates.

But should the decision from yourselves see something different, we would certainly have to look at that.

MR. FAY: One added thing that makes this -- sorry. One added complexity to the situation is that the molecules that are owned for system integrity are owned by Union Gas, and the system -- the molecules owned for the LNG transportation service, if we were to draw down the tank in the summer for the LNG service, that means that we're taking out molecules that were -- it becomes a bit of an issue in terms of whose molecules we're actually pulling out and having to replace again.

MS. SPOEL: Don't you have that same issue in your storage facilities, your underground storage facilities? I mean, the molecules are all mixed together, and yet some belong to Union for your in-franchise customers and some belong to other customers who are buying storage space?

MR. FAY: But the customers haven't injected the volume. We would be having to transfer the molecules between the parties.

I'm not saying it couldn't be done. It is just not -- it would be complex. It would mean that the customers would have to redeliver the molecules before the peak heating season.

So if we were to draw down the tank for LNG services, we would have to actually have the customers redeliver that, so that we could have it full by, say, November or December 1st.

It just adds complexity.

MS. SPOEL: But it could be done?

MR. FAY: Yes.

MS. SPOEL: Thank you.

MR. TETREAULT: Member Spoel, the service contemplates as well -- further to Mr. Fay's point -- that customers will deliver gas at the Union NDA, our interconnect with TransCanada. That would feed into the Hagar facility.

And it didn't necessarily contemplate a -- I will call it a longer-term park and loan. It only contemplates the balancing associated with some of the timing differences that we have discussed earlier.

MS. SPOEL: But again, you could, if it was -- if the market developed to a point where it made sense to do it, that is a service you could offer? From a physical point of view, you could do it, if it became attractive to do so?

MR. TETREAULT: In theory, yes, it could work.

MS. SPOEL: Thanks. Those are all of the questions I have.

MS. LONG: Ms. Van Der Paelt, I just had one question. And I think Mr. Tetreault answered part of the question this morning when he was speaking to Dr. Higgin about the upgrade to the road in the amount of $500,000.

And you answered the question, saying that if this was not a utility service, that that 500,000 would not find itself into rate base, if I understood your evidence correctly; is that correct?

MR. TETREAULT: Yes. I had said that the entire capital investment, if it was a non-utility investment, would be -- would not be included in utility rate base. And that included the road upgrade.

MS. LONG: So what happens if this is a utility service? As I understand it, the city still owns the road but the $500,000 is not being considered as OM&A; it is being considered as a capital expense.

What happens in that scenario? Is that added to rate base?

MS. VAN DER PAELT: Yes, it would be part of our 9.9 million that is all added to rate base.

MS. LONG: Okay. Even though the city owns the road?

MS. VAN DER PAELT: Right. The one-time upgrade is required specifically by Union Gas for the service they're offering at Hagar. So it is not something the city would upgrade, but then they would maintain the road post that.

MS. LONG: Okay. Thank you.

MS. HARE: Just to follow up on that, is that unusual, to put in rate base something that you don't own?

MS. VAN DER PAELT: I'm not personally familiar with all of the items in rate base. What I am familiar with, though, is this capital expenditure is a direct capital cost associated with this project.

So it's not a capital cost that the -- would have been incurred by the city or anybody else, had we not been there. We are driving that cost requirement, and therefore it is our obligation to meet that as part of the project.

MS. HARE: No, I understand the need for the road, and I certainly read the letters of comment, which are all about the road.

But -- I could be wrong -- it just struck me as unusual to be able to put something in rate base that is not an asset that you own. You know, if you can't answer that today, maybe it is something that you could address, Mr. Keizer, in your argument.

MR. KEIZER: Yes, we will address that in argument.

I think it goes to the level of being a capital contribution, not unlike if you were building a transformation station and the utility was providing a capital contribution but included the contribution in rate base. But we'll deal with it in argument.

MS. LONG: You can tell we're interested in that, so perhaps you could address that.

MR. KEIZER: I have made it duly noted.

MS. LONG: I think that those are all of our questions. So with that being said, we thank you, witnesses, for --

MR. KEIZER: Madam Chair, if I may, unfortunately --

MS. LONG: Do you want to do some redirect?

MR. KEIZER: I just have one question in redirect, which I think can be, hopefully, ably handled by, hopefully, Mr. Tetreault.

# Re-Examination by Mr. Keizer:

MR. KEIZER: I just want to take you back to -- not today, although today, I believe, touched on it as well, but in an exchange that took place involving Mr. Higgin.

One of his questions arose with respect to the liquefaction capacity, the storage level and the number of cycles which took place, and I believe Mr. Higgin's calculation discussed 59 cycles over the course of the 170 days that was the basis of his calculation.

And my question to you, I guess, is a two-part question, but I will put it together in one question, which is -- and just for clarification, so everybody's working from the same level.

How does the approach to storage at Hagar differ in any way from the approach in the more traditional storage sense with respect to injections and withdrawals? And does that impact anything to do with cost allocation or rate design?

MR. TETREAULT: I think, Mr. Keizer, we've touched on this. I guess I will answer it this way, that Hagar is not traditional storage like storage at Dawn, where you have distinct injection withdrawals and you would have compression and other facilities to facilitate that.

Hagar, specifically on withdrawals, is very different, in the sense that you -- you open a valve and the LNG flows.

Further, we have a capital investment that will be borne by this rate that reflects an LNG pump to assist in moving the LNG from the tank to the skid or to the dispensing facilities.

To your cost allocation and rate design question, I'd say that -- I'd say that the discussion on cycling would have -- has no bearing on how we've functionalized the cost amongst the functions, or how we've proposed our rate to be designed.

MR. KEIZER: If I could just have a moment?

Those are my questions, Madam Chair.

MS. LONG: Thank you, Mr. Keizer. Thank you, witnesses.

So the next step in this, we will look forward to that one outstanding undertaking that is going to be filed and then the argument in-chief of Union, which we will look forward to receiving on Friday.

Thank you, everyone.

MR. KEIZER: Thank you, Madam Chair.

### --- Whereupon the hearing adjourned at 10:31 a.m.