

From: torielly@nalconenergy.com
Sent: Monday, October 7, 2013 11:18 AM
To: kevingoulding@nlh.nl.ca
Subject: Re: Long Term Island Interconnected Fuel and Power Purchase Forecasts
Attachments: Copy of PLF12 Iter1 Infeed CPW Analysis 2012Aug1.xlsx; MHI-Nalcor-49.1 FuelCosts.xlsx

Here's what I have. If you need me to help drive an answer on this, jet let me know.



Copy of PLF12 Iter1 Infeed CPW Analysis 2012Aug1.xlsx



MHI-Nalcor-49.1 FuelCosts.xlsx

Thanks,

Terry

| | |
|--|--|
|  | <p>Terence O’Rielly Manager, Economic Analysis Investment Evaluation Nalcor Energy c. 709 693 8030 t. 709 737 1290 e. torielly@nalconenergy.com w. nalconenergy.com</p> |
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Kevin Goulding---10/07/2013 07:12:16 AM---Terry, I will have a look through to see what was provided before. Would you be able to look on you

From: Kevin Goulding/NLHydro
To: Terry O’Rielly/NLHydro@NLHydro
Date: 10/07/2013 07:12 AM
Subject: Re: Long Term Island Interconnected Fuel and Power Purchase Forecasts

Terry,

I will have a look through to see what was provided before. Would you be able to look on your end to see if you can send me a summary of the assumptions, i.e. start of drawdown, timing of the LIL, timing of the units, etc.

Thanks,

Kevin

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|  <p>newfoundland labrador hydro a nalcor energy company</p> | <p>Kevin Goulding, P. Eng. Supervisor - System Operations Engineering System Operations and Planning Newfoundland and Labrador Hydro - a Nalcor Energy company t. 709 737-1409 c. 709 682-8196 f. 709 737-1318 e. KevinGoulding@nlh.nl.ca w. www.nlh.nl.ca</p> |
|--|---|

You owe it to yourself, and your family, to make it home safely every day. What have you done today so that nobody gets hurt?

Terry O'Rielly---10/06/2013 07:11:34 PM---I didn't realize we had the draw down happening that early. I thought we had it 6 months prior to the infeed. I suggest we be c

From: Terry O'Rielly/NLHydro
 To: Rob Henderson/NLHydro@nlhydro, Auburn Warren/NLHydro@nlhydro
 Cc: Kevin Goulding/NLHydro@nlhydro
 Date: 10/06/2013 07:11 PM
 Subject: Re: Long Term Island Interconnected Fuel and Power Purchase Forecasts

The dates I quoted are from memory and are anchored to MHI 1. 250 MWh each year. Kevin should validate.

For the waterfall could we just assume the only change is in MF in-service? The value associated with this would simply be the delta in fuel between the isolated DG3 and the infeed DG3 fuel cost from July 2017 to March 1 2018.

This approach would eliminate all impacts from different load to changes in fuel price.

Of course Kevin would have to produce a projection that reflects high water to flow through the RSP but he would not have to do that for tomorrow.

We are presenting to Ed on Wednesday so Auburn would like my result tomorrow.

Sent from my BlackBerry 10 smartphone.

From: Rob Henderson

Sent: Sunday, October 6, 2013 6:39 PM

To: Terry O'Rielly

Cc: Kevin Goulding

Subject: Re: Long Term Island Interconnected Fuel and Power Purchase Forecasts

I didn't realize we had the draw down happening that early. I thought we had it 6 months prior to the infeed. I suggest we be consistent with DG3 to prevent there being another impact to explain. However, we still have to recognize the staging of the units as we did for DG3.

Rob

Rob Henderson

Vice President - Newfoundland and Labrador Hydro

Newfoundland and Labrador Hydro - a Nalcor Energy company

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You owe it to yourself, and your family, to make it home safely every day. What have you done today so that nobody gets hurt?

Terry O'Rielly---10/06/2013 06:34:28 PM---Hi Kevin,

From: Terry O'Rielly/NLHydro

To: Rob Henderson/NLHydro@nlhydro, Kevin Goulding/NLHydro@nlhydro

Date: 10/06/2013 06:34 PM

Subject: Re: Long Term Island Interconnected Fuel and Power Purchase Forecasts

Rob would this be what you want to compare to DG3 that saw a draw down in 2015 and 2016?

If so the impact may need to show up on the waterfall.

Sent from my BlackBerry 10 smartphone.

From: Rob Henderson

Sent: Sunday, October 6, 2013 6:14 PM

To: Kevin Goulding

Cc: Terry O'Rielly

Subject: Re: Long Term Island Interconnected Fuel and Power Purchase Forecasts

Hi Kevin,

I would suggest starting the draw down after the winter of 2017. I would also suggest minimum HRD after the in-feed connection until the MFP plus available firm capacity in the recall block has sufficient capacity to enable shutdown of Holyrood with N-1 criteria. I don't know when that is. One unit at Muskrat at 206 MW on March 1 won't be enough to replace the 467 MW of HRD. Joanna and I did some analysis of this last year when we were looking at the option of bringing in the HVdc 6 months to a year before Muskrat. You may want to have a look at that.

Otherwise I am good. Please call if you want to discuss.

Rob

Rob Henderson

Vice President - Newfoundland and Labrador Hydro

Newfoundland and Labrador Hydro - a Nalcor Energy company

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You owe it to yourself, and your family, to make it home safely every day. What have you done today so that nobody gets hurt?

Kevin Goulding---10/06/2013 06:01:31 PM---Rob, I will assume minimum hydro in 2014, average hydrology in 2015 and 2016 and for the first t

From: Kevin Goulding/NLHydro
To: Terry O'Rielly/NLHydro@NLHydro, "Rob Henderson" <RHenderson@nlh.nl.ca>
Date: 10/06/2013 06:01 PM
Subject: Re: Long Term Island Interconnected Fuel and Power Purchase Forecasts

Rob,

I will assume minimum hydro in 2014, average hydrology in 2015 and 2016 and for the first two months of 2017, then a drawdown of 500 GWh from March 1 2017 to Feb 28 2018. Then we switch immediately from HRd to the infeed and do some replenishment for the remainder of 2018?

Please advise

Kevin

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From: Terry O'Rielly
Sent: 10/06/2013 03:56 PM NDT
To: Kevin Goulding
Subject: Re: Long Term Island Interconnected Fuel and Power Purchase Forecasts

Rob indicated drawdown and high water per below. Load remains the same.

Do you need anything else.

Sent from my iPad

On Oct 6, 2013, at 3:43 PM, "Kevin Goulding"

<KevinGoulding@nlh.nl.ca> wrote:

What are the assumptions..I'm not sure they were settled

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From: Terry O'Rielly

Sent: 10/06/2013 02:44 PM NDT

To: Kevin Goulding

Subject: Fw: Long Term Island Interconnected Fuel and Power Purchase Forecasts

I have been told we need the entire waterfall for tomorrow evening.

Is that possible on you end?

Sent from my BlackBerry 10 smartphone.

From: Rob Henderson

Sent: Saturday, October 5, 2013 12:06 PM

To: Auburn Warren; Terry O'Rielly

Cc: Kevin Goulding; Paul Humphries; James Meaney

Subject: Re: Long Term Island Interconnected Fuel and Power Purchase Forecasts

Thanks for the context. The GRA 5 year plan unfortunately will get some scrutiny and therefore assumptions can become public.

We will have to solve this in that context and not cause extra work for Terry and Kevin.

Rob

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Auburn Warren---10/05/2013 11:05 AM NDT---Hi all, Recall this will be presented to Ed et al as a high level illustrative view -- with large ca

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| From: | Auburn Warren |
| To: | Terry O'Rielly; Rob Henderson |
| Cc: | Kevin Goulding; Paul Humphries; James Meaney |
| Date: | 10/05/2013 11:05 AM NDT |
| Subject: | Re: Long Term Island Interconnected Fuel and Power Purchase Forecasts |

Hi all,

Recall this will be presented to Ed et al as a high level illustrative view -- with large caveats that true build up would be required.

Thx

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Terry O'Rielly---10/05/2013 10:28 AM NDT---Jim, I defer to you to

advise on Rob's question. I can say that Tom is assuming the same phase-in o

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|----------|---|
| From: | Terry O'Rielly |
| To: | Rob Henderson |
| Cc: | Auburn Warren; Kevin Goulding; Paul Humphries; James Meaney |
| Date: | 10/05/2013 10:28 AM NDT |
| Subject: | Re: Long Term Island Interconnected Fuel and Power Purchase Forecasts |

Jim, I defer to you to advise on Rob's question. I can say that Tom is assuming the same phase-in of units as the DG3 runs. They are just commencing on March 1, 2018. I think this will have to be our assumption since moving off of this right now would not be able to be processed through the models in time.

Terence O'Rielly

Manager, Economic Analysis

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Rob Henderson---10/05/2013 08:21:47 AM---Are we going to have all or at least 3 MFP units ready in March as Kevin is assuming? If the unit in

From: Rob Henderson/NLHydro
 To: Terry O'Rielly/NLHydro@NLHydro, Kevin Goulding/NLHydro@NLHYDRO
 Cc: Paul Humphries/NLHydro@NLHydro, Auburn Warren/NLHydro@NLHYDRO
 Date: 10/05/2013 08:21 AM
 Subject: Re: Long Term Island Interconnected Fuel and Power Purchase Forecasts

Are we going to have all or at least 3 MFP units ready in March as Kevin is assuming? If the unit in service dates are drawn out longer through out 2018 then the draw down effect may all show up in 2018.

Rob

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Terry O'Rielly---10/05/2013 12:02 AM NDT---Thanks Kevin for such a quick turnaround. This forecast was requested to reflect the delay in COD fo

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|----------|---|
| From: | Terry O'Rielly |
| To: | Kevin Goulding |
| Cc: | Rob Henderson; Paul Humphries; Auburn Warren |
| Date: | 10/05/2013 12:02 AM NDT |
| Subject: | Re: Long Term Island Interconnected Fuel and Power Purchase Forecasts |

Thanks Kevin for such a quick turnaround.

This forecast was requested to reflect the delay in COD for LCP. As such it will underpin the waterfall chart that will be presented to Ed next Wednesday. Essentially we will demonstrate the known impacts since DG3 by including Emera, the GIA, the delay in COD and finally the

Financing.

Because of delayed COD, ratepayers will see Increased fuel consumption for 7 additional months. The choice to not drawdown the reservoirs will cost customers an additional 500 GWh of associated fuel as well. These erosions of value will likely be highlighted in the waterfall as a delay in COD and a change in drawdown.

Folks we do not have much time to make a final decision on what will be used so that we can meet the deliverable. Whatever is chosen here needs to satisfy both the GRA and the RFF.

Rob, Can you advise if this is final?

Thanks,
Terry

Sent from my iPad

> On Oct 4, 2013, at 11:29 PM, "Kevin Goulding"
<KevinGoulding@nlh.nl.ca> wrote:

>

> Terry,

>

> As per our discussion earlier this evening - please see the attached.

>

> Following are the assumptions:

>

> Hydrology

>

> Average hydrology used throughout.

> 2014 and 2015 are as per the GRA model method (4,581 GWh and 4,596, respectively)

- > 2016-2018 is the long term 'run-out' value of 4,600 GWh
- > There is no drawdown assumption prior to the LIL interconnection
- >
- > Fuel Prices
- >
- > July 26, 2013 PIRA forecast for 2014 No. 6 fuel
- > March 26, 2013 PIRA forecast for 2015-2018 No. 6 fuel
- > August, 2013 forecast for No. 2 fuel
- >
- > Load Forecasts
- >
- > June 21, 2013 OPLF for 2014-2017
- > June 2013 Initiation Forecast for 2018
- >
- > LIL In-Service Date
- >
- > March 1, 2018
- > At that time I have assumed the immediate transition from Holyrood to Infeed energy
- > There is a Holyrood/Infeed split of 524/1,359 GWh in 2018
- > I have indicated the Infeed energy amount in the Power Purchase budget but have not indicated any assumption of cost
- >
- > As discussed, I cannot prepare a Labrador Power Purchase budget at this time due to the uncertainty around the longer term Labrador forecast requirements.
- >
- > Please let me know if I should be working with any different assumptions.
- >
- > Regards,
- >
- > Kevin
- >

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- >
- > Kevin Goulding, P. Eng.
- > Supervisor - System Operations Engineering
- > System Operations and Planning
- > Newfoundland and Labrador Hydro - a Nalcor Energy company
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- > You owe it to yourself, and your family, to make it home safely every day. What have you done today so that nobody gets hurt?
- > <FuelRun 2014-18 - No Formulas.xls>
- > <PP_Is1_2014-18 No Formulas.xls>
- > <Wheeling_2014-18 - No Formulas.xls>

NOTE

The attachments to this email are Excel spreadsheets which have not been printed.

The native Excel spreadsheets will be displayed on monitors during the hearing.