

RE: LRC (Jan. 31) | Net metering

From: "Pagel, Alexa (ENERGY)" <alexa.pagel@ontario.ca>
To: "Coker, Meaghan (ENERGY)" <meaghan.coker@ontario.ca>, "Whittington, Matt (ENERGY)" <matt.whittington@ontario.ca>, "Esdaile, Trevor (ENERGY)" <trevor.esdaile@ontario.ca>
Cc: "Katona, Keley (ENERGY)" <keley.katona@ontario.ca>
Date: Wed, 25 Jan 2017 18:18:39 -0500

Hi Meaghan,

Please find answers below, and let me know if you have any more questions.

Thanks,
Alexa

1. In closer review, I'm finding it difficult to understand Table 1 & 2. Why would 50% increase in uptake in the high uptake case (see Table 2) result in the same annual generation as the electricity generation in Table 1's low uptake case?

It is a coincidence the MWh is the same in both tables as described in the question. The numbers in each table are the result of separate analyses as described below.

Table 1 are the estimates for expected cumulative installed generation in the year 2020 that would occur without the propose amendments. This includes all the generation capacity installed up until and including in the year 2020.

Table 2 are the estimates for expected additional incremental generation capacity that would be installed in the year 2020 as a direct result of the proposed amendments. For this analysis we used a range of additional incremental program uptake that would result from the proposed amendments from 10% to 50% that would be installed in addition to the expected cumulative installed generation numbers found in Table 1.

2. Beyond 2020, will the 3.5 cent estimated subsidy continue to decrease as we reach grid parity?

The value of solar is driven by avoided generation, transmission and distribution costs, not cost of equipment/technology. Based on the IESO analysis, the value of solar does not vary much past 2020 (all analysis based on 2013 LTEP forecasts). We will be doing cost benefit analysis on the program every 3 years as required, which will allow us to capture any changes over time. A true cost shift can only be determine retroactively, including based on actual uptake and where the uptake occurred.

3. How is Ontario planning on pricing the electricity that consumers can sell back to the grid from their grid-generated stored energy? I.e. What is our response to our process versus California's?

All electricity returned to the grid by a net-metering client, including electricity that has been stored in a battery, will be credited using the same rate structure as they

are charged for consumption. California's process is complex; costly and unnecessary for Ontario given that Ontario currently allows for energy storage to be part of a net metering installation.

From: Coker, Meaghan (ENERGY)
Sent: January-24-17 5:59 PM
To: Pagel, Alexa (ENERGY); Whittington, Matt (ENERGY); Esdaile, Trevor (ENERGY)
Cc: Katona, Keley (ENERGY)
Subject: RE: LRC (Jan. 31) | Net metering

Thanks Alexa, these responses are fine to go to CO.

Additional questions for CRED for my own understanding are below. Happy to have a chat if that is easier. Thanks in advance!!

1. In closer review, I'm finding it difficult to understand Table 1 & 2. Why would 50% increase in uptake in the high uptake case (see Table 2) result in the same annual generation as the electricity generation in Table 1's low uptake case?
2. Beyond 2020, will the 3.5 cent estimated subsidy continue to decrease as we reach grid parity?
3. How is Ontario planning on pricing the electricity that consumers can sell back to the grid from their grid-generated stored energy? I.e. What is our response to our process versus California's?

From: Pagel, Alexa (ENERGY)
Sent: January-24-17 12:16 PM
To: Whittington, Matt (ENERGY); Coker, Meaghan (ENERGY); Esdaile, Trevor (ENERGY)
Cc: Katona, Keley (ENERGY)
Subject: RE: LRC (Jan. 31) | Net metering

Hi,

As follow up to the below, CO had questions about the net metering package. Please see questions and responses below, and let me know if there are any concerns before we share with CO. They have asked for this information as soon as possible in order to finalize the LRC binders.

Thank you,
Alexa

#1 Re the MOF consequential amendments - When was the net metering reg passed, and has the exemption been provided to all self-generators in practice? Has MOF just not applied the DRC to these people and it is a matter of catching up the reg?

- * The proposed amendments to the Debt Retirement Charge (DRC) Regulation would sustain the exemption, in place since 2005, for all net metered generators from having to pay DRC on the portion of self-generated electricity that they self-consume.
- * The current round of amendments to the Net Metering Regulation includes the proposal to remove the 500 kilowatt capacity limit. If the DRC exemption is not extended for net metered generation facilities above 500 kW in O. Reg. 493/01, in addition to increased metering costs to customers, distributors would need to update their Customer Information Systems and billing systems in order to charge DRC for net metered customers, which would introduce costs and take time (Hydro One estimates six to eight months).
- * The DRC will be removed from all customers' bills by April 1, 2018, and therefore the costs and effort associated with these changes would be made without long-term benefit.
- * While the DRC is in place, all net metering customers continue to pay DRC on the electricity they consume from the electricity grid.

#2 Why are the Independent Power Authorities not licenced or regulated by the Ontario Energy Board?

- * An IPA is a distributor that is owned and operated by a local First Nation community, is not connected to the provincial grid, and is not otherwise licensed or regulated by the OEB. There are 10 IPAs in Ontario.
- * IPAs fall under the jurisdiction of the federal government and receive funding for operating expenses transferred to the community from Indigenous and Northern Affairs Canada (INAC).
- * IPAs operate on First Nation reserve land under federal jurisdiction and do not impact the Ontario electricity system (being unconnected),.
- * IPAs are currently exempt from licensing and other regulatory provisions of the Ontario Energy Board Act (O.Reg 161/99) and from provisions in the Electricity Act requiring them to provide non-discriminatory access and the obligation to supply customers (O. Reg 160/99).
- * Some remote First Nation communities are served by Hydro One Remote Communities Inc. (HORCI) as a result of historic electricity service agreements between the former Ontario Hydro and INAC. Since HORCI is an OEB-licensed distributor receiving subsidies from Ontario ratepayers, distribution systems in these communities are regulated by the OEB.

#3 The Ministry of Energy consulted in summer and fall 2015 and posted the proposal on the Environmental and Regulatory Registries in August 2016. Why was there a delay between the posting and the proposal?

- * While ENERGY invited feedback on all program aspects during Summer and Fall 2015 consultations, the consultations were weighted towards soliciting feedback on two **compensation** options: maintaining volumetric electricity rates or moving to a new “Value of Renewables Tariff.” A decision on compensation was needed before the Ministry could make recommendations on program design elements (such as credit carryover period, treatment of energy storage).
- * From **November** 2015 to early March 2016, ENERGY reviewed stakeholder written submissions, and engaged with the Net Metering Advisory Working Group – including separately seeking advice and input from the Independent Electricity System Operator and Ontario Energy Board – to develop a recommendation on compensation. In March 2016, the Ministry decided to continue the practice of compensating generators at volumetric electricity rates.
- * During April and May 2016, the Ministry worked to develop recommendations for each program design element, including credit carryover period, eligible sizing, treatment of energy storage, and cancellation terms.
- * On June 13, 2016, a new Minister was appointed to the Ministry of Energy. ENERGY staff worked to brief the new Minister on net metering in June, and in late July 2016 received the Minister’s approval to post the proposed amendments to Net Metering Regulation, which were then posted to the Environmental and Regulatory registries on August 19, 2016 for a 48-day comment period.

From: Whittington, Matt (ENERGY)

Sent: January-20-17 3:44 PM

To: Pagel, Alexa (ENERGY); Coker, Meaghan (ENERGY)

Cc: Esdaile, Trevor (ENERGY); Katona, Keley (ENERGY)

Subject: Re: LRC (Jan. 31) | Net metering

Also - still trying to confirm PAs availability. We'll let you know.

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Whittington, Matt (ENERGY)
Sent: Friday, January 20, 2017 3:34 PM
To: Pagel, Alexa (ENERGY); Coker, Meaghan (ENERGY)
Cc: Esdaile, Trevor (ENERGY); Katona, Keley (ENERGY)
Subject: Re: LRC (Jan. 31) | Net metering

Hi Alexa

This is fine.

Thanks
Matt

Sent from my BlackBerry 10 smartphone on the Rogers network.

From: Pagel, Alexa (ENERGY)
Sent: Friday, January 20, 2017 2:54 PM
To: Coker, Meaghan (ENERGY)
Cc: Esdaile, Trevor (ENERGY); Whittington, Matt (ENERGY); Katona, Keley (ENERGY)
Subject: RE: LRC (Jan. 31) | Net metering

Hi Meaghan,

For your review, please find attached the pink note related to the net metering package. Apologies for the tight turnaround, could you please send any additional edits/comments **by EOD**? CO is looking to have this draft finalized by the end of the day.

And could you please let me know if the PA is able to attend LRC on January 31? We understand from CO that both net metering and EWRB will be discussion items, so would like to arrange PA briefings next week.

Thank you,
Alexa

From: Pagel, Alexa (ENERGY)
Sent: January-18-17 12:28 PM
To: Coker, Meaghan (ENERGY)
Cc: Esdaile, Trevor (ENERGY); Whittington, Matt (ENERGY); Katona, Keley (ENERGY)
Subject: RE: LRC (Jan. 31) | Net metering

Hi Meaghan,

Please find attached the updated version of the Ministry Approval Form (clean and tracked changes). The package is now ready for Minister's signature.

Thanks,
Alexa

From: Coker, Meaghan (ENERGY)

Sent: January-18-17 11:00 AM
To: Pagel, Alexa (ENERGY)
Cc: Esdaile, Trevor (ENERGY); Whittington, Matt (ENERGY); Katona, Keley (ENERGY)
Subject: RE: LRC (Jan. 31) | Net metering

Thanks Alexa, for this info. One small edit below, then good for signature!

Edit:

I think it would be helpful if the package clearly states that NM customers are currently being paid at tiered rates.

Perhaps at the top of the 3.5 cent subsidy section or with the proposed amendment “to clarify the description of the billing method”.

Something as simple as this from the Q/A document ...

Most LDCs in Ontario will bill residential net-metered customers based on the Tiered Pricing structure of the Regulated Price Plan.

Also with that I think it would be helpful to mention ...

The Ministry will be undertaking a cost-benefit analysis to help inform whether investments in Ontario’s MDM/R should be made to enable province-wide TOU billing for these customers.

From: Pagel, Alexa (ENERGY)
Sent: January-18-17 9:33 AM
To: Coker, Meaghan (ENERGY)
Cc: Esdaile, Trevor (ENERGY); Whittington, Matt (ENERGY); Katona, Keley (ENERGY)
Subject: RE: LRC (Jan. 31) | Net metering

Hi Meaghan,

Staff sent the below answers to your questions re: the net metering package.

Let me know if you have any more questions, or if we can get the package ready for DM/Minister signature.

Thanks,
Alexa

1. Can staff provide more context/info. re: costs passed to consumers – is this related to the GA?

Global Adjustment costs would not increase as a result of net metering uptake. However, customers may pass on a small amount of GA and other volumetric electricity charges (e.g. volumetric distribution, transmission, and regulatory charges), that they otherwise would have paid, to other customers. This is because they are consuming less electricity from the grid.

However, these charges (or, a portion of these charges) are only passed on to other consumers where the value of electricity generated by the net metering participant is lower than the volumetric charges listed above. This is further explained in the answer to question 2 below.

2. Why are we using a model that isn’t tiered? (page 12)

Staff did use Tiered Pricing in the analysis. Please see footnote 33 on page 13 which states the following:

“3.5 cents is based on the difference between residential Tiered Prices in 2020 (12 cents/kWh) and the average of IESO’s preliminary estimates of the 20-year levelized value of solar in different regions of the province (12 cents + 5 cents / 2 = 8.5 cents) in 2020.”

Volumetric electricity rates are used as a proxy for the value of the net-metered renewable energy generation. However, in most areas of the province, the IESO has modelled that the value of the electricity generated by the net metering participant may be slightly lower than the total of volumetric electricity rates.

Most residential net metering participants in the province will be billed for their consumption, and credited for their exports, at Tiered Pricing rates. In 2020, Tiered Pricing rates that a customer would receive on exports to the grid are modelled to be on average \$0.12/kWh (brought back into \$2016, and accounting for average residential solar PV generation and current Tiered Pricing kWh tier thresholds as posted on the OEB’s website).

Based on IESO’s estimate of the value of solar PV generation, however, that \$0.12/kWh is \$0.035 higher than the true value offered by PV generation to the province in 2020. The IESO’s analysis did not account for distribution costs/benefits, so was an indicative estimate. However, for the purpose of the analysis we also only looked at commodity charges paid (Tiered Pricing) as these are the largest source of credits a net metering customer would receive, and as residential customers are being transitioned to a fully fixed distribution charge.

ENERGY staff used this \$0.035 difference between what net metering participants are credited vs. the value offered by their generation to calculate an estimate of the subsidy provided to net metering customers (the total cost shift) assuming different levels of uptake. In terms of the cost shift examples in the LRC package, these would be funded entirely through the Global Adjustment, given the scope of the analysis.

3. Does the package speak to current subsidies offered to NM customers? See pg. 12 referencing 3.5 cents, but this is not offered now/proposed to be. Should have current pricing.

Please see answer to question 2 above. There are no direct subsidies currently offered to net metering participants. However, volumetric electricity rates may represent a modest indirect subsidy in certain areas of the province.

From: Armstrong, Hillary (ENERGY)
Sent: January-16-17 4:22 PM
To: Teliszewsky, Andrew (ENERGY)
Cc: Imbrogno, Serge (ENERGY); Katona, Keley (ENERGY); Pagel, Alexa (ENERGY); Whittington, Matt (ENERGY); Moulton, Dan (ENERGY); Esdaile, Trevor (ENERGY); Coker, Meaghan (ENERGY); Baker, Carys (ENERGY)
Subject: LRC (Jan. 31) | Net metering

Hi Andrew,

For concurrent review, attached is the net metering package that is tracking to LRC for January 31. As with the Large Building EWRB package, final copies (signed by the Minister) need to be sent to Executive Counsel Office by **January 19**. The password to open the draft reg. is: billing.

And an update on MOF’s DRC regulatory amendments:

- MOF’s EBR posting closed on Jan. 6, and they received no comments.
- MOF is seeking a decision on TB exemption prior to Jan. 31, given the small expected fiscal impact.
- MOF is scheduled to seek LRC approval of amendments to their DRC regulation on Jan. 31. We have reviewed the draft Ministry Approval Form and have provided some edits to ensure alignment with our package.

Staff are also preparing speaking remarks for the Minister/PA at LRC.

If you are comfortable with this package, we can prepare it for signature.

Thanks,
Hillary