

# overview

November-06-15 1:11 PM

- 2013 – Long-Term Energy Plan
  - Sets out government policy
- Transition material – issues decks
- Reliance on energy advice
- No options provided in submissions
- Know what 's not there
- Files
  - Nuclear
    - Bruce – refurb
    - Darlington – refurb
    - Pickering – wind down, when? Costs incurred?
    - No new build
  - Energy east pipeline
    - Private sector proponent, federally regulated
    - Ontario will be intervenor at OEB
    - What should inform position
  - Remote transmission
    - Connect mostly FN communities
    - Policy went through August 2015
    - Pick FN consortium who can lead build
    - Consortium has signed but gov hasn't formally approved
    - Recipients in this case won't pay for build out, all of us will pay a bit
    - 1.3B
  - System planning bill
    - Introduced, going through leg
  - OESP (Ont electricity support program)
    - Clean Energy benefit paid from tax base (1B)
    - Means tested, sliding scale
    - Only for people who pay own energy bill, if renter doesn't apply
    - Doesn't apply to affordable housing
    - Assigned to OEB to deliver
  - Assets
    - Hydro side, mostly done from policy perspective
    - Governance – how works with province being only one shareholder, what does relationship with agency look like?
    - Energy wanted stand alone secretariat – with new FTEs
      - TB told manage from within and do through PRRT
    - Fall bill will address proceeds

# OPG Nuclear Nov. 6/15

November-06-15 1:41 PM

|             |                                                                                                                                                                                                                                                                                                |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | Attendees:PO:Tom TeahenAndrew BevanKarim BardeesyGillian McEachern Andrew HurdCO:Steve OrsiniWilliam Bromm Steven DavidsonOliver Jerschow<br>ENERGY:Keley Katona (DMO to invite MO, ministry staff and others as appropriate)Serge ImbrognoAndrew TeliszewskyOFA:Ronald KwanFrancisco Chinchon |
| Attachments | <br>OPG Nuclear Cabinet submission - v14 - 20151104 clea...                                                                                                                                                   |

[Link to Outlook item](#)

## Notes

- Don't have all info to say 100% this is right thing to do
- Do have enough to say that it is headed in that direction and should continue to move forward
- Need to do business plan filings with OEB shortly
  - Need to do public consultation on Pickering before doing so
  - Darlington - need to sign contracts as set to open unit in October, won't sign contracts until shareholder (province) is comfortable
- License approval
  - 13 yr approval - might be 10yr interval but with certainty for 13yrs
  - Conditions could be placed on license, more related to public input/comms, less related to actual refurbishment
- EA - status
  - Approval received, appeal is still pending
  - Appeal is for refurb and operation for 30+yrs
    - Appeal period goes to Dec. 3
- Contracting...
  - Risk transfer? More risk allocation
    - 300+ risks, then reviewed about where best placed, how managed
    - Project management
  - Fixed and firm pricing and target pricing
    - Scope is known, engineering is clear, procurement and construction risks is more straightforward to manage
  - Target price contract
    - Certain risks placed with contractor, certain with owner, certain shared
      - Contractor - ability to process change orders
    - Target price - set targets, contractor incentivized or penalized based on reaching/not target, owner responsible for providing certain aspects on time; schedule and price agreed to, covers entire duration of project
      - Quality issues by contractor - they cover
      - Time overruns - ability to penalize
    - Owner - some things are solely in OPG control, they remain
- 2.2B spent to date by year end
  - 4.3B contracted work remaining
    - 3.3B is in target price range (60% remaining is target price)
- 5 bundles of work scoped out
  - Biggest is retube/feeder contract (2.8B - target price contract)
    - Tight provisions on change requests, only if OPG requests scope of work
    - Profits/overhead costs factored in to target price
  - Turbine generator work
    - Fixed and target price
      - Implementation/work in field is target; costs of parts is fixed
  - Steam generator project bundle - fixed price 100M
  - Fuel handling project - fixed and target price
  - Balance of plant - fixed, target, time/material
  - Can work be fixed price without big risk premium
- Contracts cover all 4 units
  - Off ramps are included that OPC can exercise, with no penalties expect payment for work performed, materials ordered
    - Triggers for offramps - different types, some are specific to progress/price, one is "without condition"
- Financial
  - Costs covered by rate base through OEB application, 5 yr application
  - First application references only 1 unit as only one unit will be back within the 5yr application/approval
    - Subsequent 3 units are closer together so would be together on application
  - No history of OEB reviewing refurb application - expected reaction?
  - 12.8B includes contingency
    - Covers estimates uncertainties

- Schedulee uncertainties
- OEB will look to see if money spent is prudent
  - If contingency not spent, not included in money spent application, if was OEB would include in prudence review of whether needed to be spent
- Costs per Kw/H - good to have comparisons

#### Pickering

- Nuclear funds - 18B
- Extend life of pickering as cheaper to keep Pickering going than new gas
  - Some supply dip when pickering goes offline, IESO would still need to get additional electricity into system, but will look at demand and supply closer to dates
  - Don't own gas plants but do own Pickering so gov gets revenue by using nuclear over gas
  - Existing gas plant capacity but will impact GHG
- HR costs
  - Will save money through process for winding down, gradual, shifting of resources etc
- Certainty of production???
  - Forced/planned/unplanned outages?
  - No reason not to extend
  - Capital investments would need to be made to extend
    - Increased inspection time
    - Embedded in business case
  - Investment required is 300M
    - 200M is ongoing inspection costs that would be executed each year
      - Ran into condition that couldn
    - 100M - half to investments on equipment life cycle management
      - Half upfront, technical assessments necessary to apply for license to go to 2024
      - Goes to licence application for 2017
    - Gradual shutdown
      - 6 units to 2022
      - 4 to 2024
        - ◆ Gradual shut down
  - 2 processes
    - 1st is above -capital investments/support
    - Fuel channels - joining project with Bruce, how far can you take the life of them channels
      - Need to go to 20204, some requires research to develop tech to maintain
        - ◆ Could become part of license application
    - Same project supports Darlinging, joining CANDU
      - Accommodates Pickering and Darlington and Bruce in how to extend life of units
- 53M spent on trying to get approval for life extension of Pickering

#### Governance

- OPG - costs, schedule, quality, safety - properly vetted throughout org
  - Expectation any issue found closest to issue
  - OPG has specific committee of board to oversee Darlington refurb
- Ministry - did RFP for due diligence oversight/reporting
  - Person still in place
  - IO may have a role in execution phase
    - Procure an expert who will sit as ex-officio member of OPG board
    - Person would brief Minister directly

#### What has/has not gone to OPG Board

- Schedule and costs for overall 4 units of refurb
- Release of funds from definition to execution phase from Jan. 1 through to commencement of unit 2 outage
  - \$660M
- Return to board on updates and approval for execution to execution 39 months
- Board seen individually - but not packaged all together
  - Bringing it all together now

#### Timing

- Already into mobilization phase,
- Pushing outage start date has cost penalties
- Timing -

# Bruce - rate of return

November-13-15 11:33 AM

What will AG view be on rate of return?

Energy: keep 2 separate

- 10.75 - return
- Flexible generation - adds more
- Keep two separate

If combine - energy feels OFA calculation not accurate

Fee for variable is cheaper than shutting down (3M)

- No fee now for variable, built into Bruce B agreement, Bruce B was meant to run to end of life, price floor was provided so didn't go bankrupt, historically been running at floor, when too much supply, they bid in, there is no disincentive to, flex fee is paid flat or new, pay them the fee to ensure they are available to provide flex, whenever there is surplus generation, Bruce is first to be called on to shut down, so they created ability to flex and not shut down but reduce
- In refurb, incentive for variability falls away, need to find something that incentivizes them, still want to tell them they are first to shut down, need to pay them for that, they already have the technology
  - Would they manoeuvre if they weren't being paid to do it?

Don't argue with benefit - less stress on system, better for their own units

Rate of return - doesn't include system benefit, so while a cost "here", savings elsewhere (e.g., nuclear off line, if need generation have to go to gas while nuclear ramps up, costs more a

- What is benefit? 2-3x savings can quantify, can't quantify some benefits
- Direct monetary value, 2-3x avoid 5-6 shutdowns can compare to how much generation we'd need to buy when nucs shut down and payment to get nuclear up
- To the AG - can still say in public interest, justified

Rate of return - is it 11.25 or 11.9?

- Average for year?
- He gets paid for manoeuvring whether he does it or not - so needs to be added, gets paid just for capacity to do it
- Have to add given that
- Actual price line + 1.33 in net present value, assumed all units are refurbished and coming online
  - OFA didn't include update refurb price, all units

Cabinet Note - show the total...11.25

10.75 - assumes leveraging

8-11% - was range we wanted to meet, we are at 11.25, is that a risk?

Rate of Return will not be communicated - AG will take about too much/little, she will still flag it is outside the range

10.75 - high risk AG would add in flex, AG could say we exceeded range

IO will not say this is a good rate of return

# Oesp

November-17-15 11:50 AM

|             |                                                                                                                                                                                                                                                   |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | RE: Oesp                                                                                                                                                                                                                                          |
| From        | MacNeil, Amber (CAB)                                                                                                                                                                                                                              |
| To          | Davidson, Steven (CAB); Greenberg, Martha (CAB)                                                                                                                                                                                                   |
| Cc          | Marcinek, Joe (CAB); Hall, Caspar (CAB)                                                                                                                                                                                                           |
| Sent        | November-17-15 9:29 AM                                                                                                                                                                                                                            |
| Attachments | <br>2015-11-04- OESP Issues Note_clean.docx<br><br>Ins and Outs_CO Revised.docx |

Ok –so we have it all in one email. Please find below a summary of the information on the various questions over the last few days.

1. **CRA issue:**

- (excerpt from page 4 of the TB assessment note) There is a risk of OESP being considered income under the federal *Income Tax Act*, which could impact assistance programs. The risk only applies to OESP recipients that could receive annual credit amounts of over \$500 (the material threshold set under federal legislation). ENERGY and the OEB are working with MoF and the law firm Gowlings to present the case with the Canada Revenue Agency (CRA) that the OESP should not be considered income under the Act. The OEB plans to move forward with a CRA ruling. ENERGY has indicated that a CRA interpretation would not impact the January 1, 2016 implementation date, nor will it impact benefits under Ontario Works and Ontario Disability Support Program. Of the approximately 570,000 eligible OESP recipients, approximately 80% are expected to receive annual credit amounts under \$500 and would not be impacted.
- The week of Nov 10 the CRA provided a high level technical interpretation to Gowlings, which is non-binding. Their interpretation was that the OESP would be considered income under the *Income Tax Act* (ITA). Some of the reasons include:
  - The CRA used broad definitions for what constitutes “social assistance” as well as what constitutes a “payment”, which would capture the OESP;
  - The CRA reviewed the OEB webpage materials and the Ontario Budget materials and noted that the OESP program is being advertised as a program designed to provide a monthly credit to vulnerable low income people, and thus should be captured; and
  - The CRA also indicated that the income test requirement in the ITA does not apply only to a specific individual and could apply based on household income (which the OESP relies on).
- The OEB has heard back from Gowlings that a tax ruling is not possible at this time. Rulings are typically issued for future transactions, or for programs prior to them being in place. The OESP will be in place as of January 1, 2016, which would not give enough time for a ruling.
- The CRA suggested that the OEB consider seeking a legislative amendment to specifically exempt the OESP from income, this has been done in the past for other programs such as the “Energy Cost Benefit”. The Ministry has prepared language that will be included in a letter from the provincial Minister of Finance to the federal Minister of Finance requesting these legislative amendments.

2. **Debt Retirement Charge (DRC):** the DRC will be off consumers’ bills effective January 1, 2016 when OESP is launched. This is also the same time the OCEB ends and will no longer be shown on bills. The attached

document titled “ins and outs” outlines the various programs that are coming off bills, the addition of the OESP and the resulting impact for the average non-OESP recipients and average OESP recipient.

3. **OESP impact by income level:** the OESP benefit is based on a sliding scale that takes into account household income and size. Below are the 2 sliding scales for the OESP recipients.

|                                                    |                     |                       |           |           |           |           |           |                   |
|----------------------------------------------------|---------------------|-----------------------|-----------|-----------|-----------|-----------|-----------|-------------------|
| <b>Table 1: First sliding scale fixed credits</b>  |                     |                       |           |           |           |           |           |                   |
| <b>Sliding Scale #1</b>                            |                     | <b>Household Size</b> |           |           |           |           |           |                   |
|                                                    |                     | 1 Person              | 2 Persons | 3 Persons | 4 Persons | 5 Persons | 6 Persons | 7 or More Persons |
| <b>Income Bracket</b>                              | < \$28,000          | \$30                  | \$30      | \$34      | \$38      | \$42      | \$50      | \$50              |
|                                                    | \$28,001 - \$39,000 | -                     | -         | \$30      | \$34      | \$38      | \$42      | \$50              |
|                                                    | \$39,001 - \$48,000 | -                     | -         | -         | -         | \$30      | \$34      | \$38              |
|                                                    | \$48,000 - \$52,000 | -                     | -         | -         | -         | -         | -         | \$30              |
| <b>Table 2: Second sliding scale fixed credits</b> |                     |                       |           |           |           |           |           |                   |
| <b>Sliding Scale #2</b>                            |                     | <b>Household Size</b> |           |           |           |           |           |                   |
|                                                    |                     | 1 Person              | 2 Persons | 3 Persons | 4 Persons | 5 Persons | 6 Persons | 7 or More Persons |
| <b>Income Bracket</b>                              | < \$28,000          | \$45                  | \$45      | \$50      | \$55      | \$60      | \$75      | \$75              |
|                                                    | \$28,001 - \$39,000 | -                     | -         | \$45      | \$50      | \$55      | \$60      | \$75              |
|                                                    | \$39,001 - \$48,000 | -                     | -         | -         | -         | \$45      | \$50      | \$55              |
|                                                    | \$48,000 - \$52,000 | -                     | -         | -         | -         | -         | -         | \$45              |

4. **Issue Note:** Attached is ENERGY’s issue note that discusses the variables that impact household energy bills. This was prepared in response to the SOC and P’s questions about the perception of very high rural and northern energy bills. This note also includes a high level summary of the various rate mitigation programs/supports the government has.

Let me know if you need anything else.

Thanks,  
Amber

# Pickering Dec. 10/15

December-11-15 8:23 AM



Ongoing Pickering Operation - Cabinet Submission - S...

[Link to Outlook item](#)

## Notes

# H1/Coo Dec. 14/15

December-14-15 10:52 AM

|             |                                                                                                                          |
|-------------|--------------------------------------------------------------------------------------------------------------------------|
| Attachments | <br>2015-12-11 COO - Hydro One v19.pptx |
|-------------|--------------------------------------------------------------------------------------------------------------------------|

[Link to Outlook item](#)

## Notes

- COO ahead of province, looking to move quickly early in new year
- Initial conversation with Expert advisory council on early ideas
  - Market sounding of issue
  - If province is too strong, goes against original intent of province taking back-seat
- Need to continue to consider guiding principles:
  - Meaningful ownership for COO without affecting second offer/fiscal plan
- What will governance for COO look like? Are they in a position?
  - Bigger discussion
  - ToR depends on them being able to organize themselves
  - Negotiating with them as if they are properly organized to represent all FN (133), they need to ensure that and organize appropriately
  - They want to take an agreed to ToR and take that on road to inform their members
  - What do revenues look like divided up over 133 communities? Might not look like much/
- Timelines - are they too aggressive?
- What is appropriate % for FN?
  - 1-10% what is driving final position?
  - What are principles that we are aligning to? Trying to keep second offering in tact
  - COO: wants to pay IPO price, not what shares currently trading
- MNO - have heard from them
  - Expect to have some discussions with them, other agreements in energy do some proportional amount for MNO
- How does this negotiating agreement impact other negotiations?
  - Not land claims
  - Resource benefit sharing
  - Mattawa

# H1/FN negotiating mandate Jan. 2016

January-06-16 4:18 PM

|             |                                                                                                                                                                                                                                                                                                      |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | Updated back pocket pink note for H1/FN negotiating mandate                                                                                                                                                                                                                                          |
| From        | MacNeil, Amber (CAB)                                                                                                                                                                                                                                                                                 |
| To          | Greenberg, Martha (CAB)                                                                                                                                                                                                                                                                              |
| Cc          | MacDonald, Anna (CAB); Mouchian, Greg (CAB); Hall, Dianne (CAB)                                                                                                                                                                                                                                      |
| Sent        | January-06-16 11:20 AM                                                                                                                                                                                                                                                                               |
| Attachments | <div><br/>20160114 - Cabinet Submission - FN Participation in ...</div> <div><br/>CAB-16876_ID44379_Committee_Pink_Note.docx</div> |

Hi Martha – ENERGY provided the attached final signed submission to CO and TBS. Note the old version used the Dec 1, 2015 share price for all calculations and assumptions and the updated version uses the Dec 31, 2015 share value (share prices went down slightly). I have updated the attached draft pink note to reflect this updated information.

During the DM's briefing this morning he requested a copy of the note as back pocket in the absence of TBS' assessment note. Caspar noted he does not want to create a precedent that CO prepares pink notes for TB items reporting into Cabinet, but given the timing this could be helpful for the DM.

Please let me know if you have any comments/requested edits or if you'd like me to provide this to DMO.

Thanks,  
Amber

**Amber MacNeil**

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Policy and Delivery Division  
Cabinet Office  
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E: amber.macneil2@ontario.ca

# Energy East ADMs Jan. 28/16

January-28-16 10:22 AM

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Subject</b>     | <b>Meeting - Energy East ADMs Working Group 11am</b>                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>From</b>        | Hill, Allyson (ENERGY)                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>To</b>          | Greenberg, Martha (CAB); Bartucci, Ernie (CAB); Thatcher, Hillary (MAA); Mulc, Helen (MNDM); Pilla, Alison (MAA); Kwan, Ronald (OFA); Hayward, Carrie (MNRF); Fleming, Robert (MOECC); Maxwell, Karen (MEDEI/MRI); Lisa DeMarco; Gwen Haydon; Speers, Mark (MNDM); Fry, Jim (MNRF); Nixon, Brian (MOECC); How, Catherine (MOECC); Biran, Nadia (MOECC); Stickings, Michael (CAB); Manson-Smith, Rachael (MAA); Gwen Haydon                  |
| <b>Cc</b>          | Hume, Steen (ENERGY); MacCallum, Doug (ENERGY)                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Sent</b>        | January-28-16 10:14 AM                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Attachments</b> | <div><br/>EE_Information Request for January 2016 Meeting - Ja...</div> <div><br/>1 - Update January 2016 Meeting - Final.pptx</div> <div><br/>EE Working Group Agenda_Jan 28.docx</div> |

# Rate impacts due to C&T

February-11-16 9:03 AM

|             |                                                                                                                                              |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | RE: P's briefing on C+T                                                                                                                      |
| From        | Katona, Keley (ENERGY)                                                                                                                       |
| To          | Greenberg, Martha (CAB); Hume, Steen (ENERGY); Wood, Alex (MOECC); Fleming, Robert (MOECC); Harth, David (MOECC)                             |
| Cc          | Moore, Karen (CAB); Mouchian, Greg (CAB); Hall, Caspar (CAB)                                                                                 |
| Sent        | February-09-16 10:39 AM                                                                                                                      |
| Attachments | <br>Deck - Cap and Trade Electricity for SoC 20160208 - ... |

Good morning,

Attached is a draft deck to respond to the below. Note that my MO is uncomfortable with this being green-foldered at Cabinet given our Minister will not be in attendance. I understand they are discussing this issue with PO.

Please let me know if there are questions.

Keley

**From:** Greenberg, Martha (CAB)

**Sent:** February-08-16 12:20 PM

**To:** Hume, Steen (ENERGY); Katona, Keley (ENERGY); Wood, Alex (MOECC); Fleming, Robert (MOECC); Harth, David (MOECC)

**Cc:** Moore, Karen (CAB); Mouchian, Greg (CAB); Hall, Caspar (CAB)

**Subject:** FW: P's briefing on C+T

**Importance:** High

Hi,

Further to this, just chatted with you David and Alex on request #1 so think you are already thinking through what that would look like, the hypothetical examples of the allocation formula.

On household impacts, no one is surprised this is where everyone goes but trying to capture the impacts and what options exist is not straight forward. I understand Energy has done some slides that show what programs are available to consumers to help reduce their monthly bills which is a good start. For Cabinet on Wednesday we are looking to green folder some additional material that would cover what Steven outlines below. We will need energy and MOECC to work together on how best to depict this info but generally this is what we were thinking about:

- There exists already a graph that shows the increase to monthly residential bill, based on LTEP, what does the impact of C&T do to that curve (increases rates)
- If we want that curve to remain on its current trajectory, how much would need to be reinvested (understand it's not 1:1 so if electricity sector spends \$100M to buy credits, more than \$100M would need to be returned for there to be a net zero impact on residential bills, what is that number), all of this results in bending the curve back down
- Going beyond that, if we wanted to provide options to further decrease residential bills, what are we talking about (e.g., the slides energy already has on existing programs, are we talking about increasing allocations to

- those programs for households to actually reduce their usage? further reducing GAM?)
- One further steps, what needs to be returned/recycled to ensure industrial and commercial have a net zero increase (that isn't paid for through residential rates)

End goal is to try to show Cabinet members what we know (based on modelling) the impacts to be, what we are proposing to do to mitigate those impacts and what further we could explore to provide additional opportunities for people to reduce monthly bills.

Happy to set up a quick all between us all if that would be helpful. We will need to see a draft of this for tomorrow early afternoon so we can ensure it meets the need and then get something printed for Wednesday morning.

Thanks,  
martha

**From:** Davidson, Steven (CAB)

**Sent:** February-08-16 12:02 PM

**To:** Imbrogno, Serge (ENERGY); Evans, Paul (MOECC); Wood, Alex (MOECC); Hume, Steen (ENERGY); Fleming, Robert (MOECC)

**Cc:** Gherson, Giles (MEDEI/MRI); Greenberg, Martha (CAB); Mouchian, Greg (CAB); Hall, Caspar (CAB); Bromm, William (CAB)

**Subject:** P's briefing on C+T

Paul and Serge et al...

Just briefed the P for this week's Cabinet. A couple of things coming out of our full discussion on C+T. Martha is following up with your folks to develop some revised and supplementary materials, but here are the highlights:

For the free allowances methodology, need some company-level examples to make this real and understandable to Ministers, e.g. you might illustrate with hypothetical Company A and Company B examples, illustrating what factors might impact their B factor, and how the cap decline rate could impact on their need to buy allowances. Just to make it concrete. Could be a one-pager to go into folders on Wed.

Bigger issue on Household Impacts, i.e. slide 17 and broader narrative.

Bottom line position on electricity coming out of last week's discussion with Andrew is for there to be no impact on industrial/commercial electricity bills from C+T, and modest benefit for households – achieved through investment of proceeds and fact that disproportionate benefit of the GAM falls to households. The slide should show this clearly.

Also need to provide a table or some form of depiction of overall impact on households of electricity and fuels, and how can be mitigated through use of proceeds. Should include projected costs of mitigation and projected range of benefit for households.

Appreciate use of proceeds is not for decision on Wednesday and will be part of next week's TB/Cabinet decisions. But need to make the household impact narrative real and accessible for people for this week's discussion as well.

Happy to discuss further. In meantime, Martha's following up with your folks to work on some revised products. Thanks. Steven.

Steven Davidson  
Deputy Minister and  
Associate Secretary of the Cabinet,  
Policy and Delivery

The Cabinet Office  
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Toronto ON M7A 1A1

Tel 416 325 3759  
Fax 416 325 7631

# Conservation (PO/CO/TBS/Energy)

February-18-16 5:08 PM

|                   |                                                                                                                                                                                                                                                                                                                                               |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject           | <b>Multi-corners: Conservation (PO/CO/TBS/Energy)</b>                                                                                                                                                                                                                                                                                         |
| Date and Location | February-18-16 12:00 PM - 1:00 PM, Room 6501, Whitney Block                                                                                                                                                                                                                                                                                   |
| Attendees         | Moore, Karen (CAB); McEachern, Gillian (OPO); Donelson, Philip (OPO); MacDonald, Anna (CAB); Katona, Keley (ENERGY); Elder, Elizabeth (TBS)                                                                                                                                                                                                   |
| Message           | Please note time and location changedMaterials attached Purpose: ENERGY to provide an update on its conservation initiativesAttendees:PO:Gillian McEachern Phil DonelsonTBS:Felix Fung (optional)CO:Steven Davidson (Optional)Martha Greenberg (Optional)Karen MooreAnna MacDonaldAmber MacNeilENERGY:Keley Katona to invite officials and MO |
| Attachments       | <br>2016-02-17 Conservation First Report Back and COPO M...                                                                                                                                                                                                  |

[Link to Outlook item](#)

## Notes

# Energy programs

February-08-16 1:10 PM

|             |                                                                                                                |
|-------------|----------------------------------------------------------------------------------------------------------------|
| Subject     | <b>FW: This what you looking for?</b>                                                                          |
| From        | Harth, David (MOECC)                                                                                           |
| To          | Mouchian, Greg (CAB); Greenberg, Martha (CAB)                                                                  |
| Sent        | February-08-16 11:36 AM                                                                                        |
| Attachments | <br>CDM_DSM Quick Slides.pptx |

-----Original Message-----

From: McEachern, Gillian (OPO)

Sent: February-08-16 6:09 AM

To: Thiru, Kaj (MOECC); Myrans, Iain (MOECC)

Subject: FW: This what you looking for?

This covers the impact of conservation programs on bills. So just need the 2017 household impact of cap and trade now.

---

From: Teliszewsky, Andrew (ENERGY)

Sent: Sunday, February 07, 2016 9:52 PM

To: McEachern, Gillian (OPO)

Subject: This what you looking for?

# Rate impacts

February-11-16 9:02 AM

|             |                                                                                                                                              |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | RE: P's briefing on C+T                                                                                                                      |
| From        | Katona, Keley (ENERGY)                                                                                                                       |
| To          | Greenberg, Martha (CAB); Hume, Steen (ENERGY); Wood, Alex (MOECC); Fleming, Robert (MOECC); Harth, David (MOECC)                             |
| Cc          | Moore, Karen (CAB); Mouchian, Greg (CAB); Hall, Caspar (CAB)                                                                                 |
| Sent        | February-09-16 10:39 AM                                                                                                                      |
| Attachments | <br>Deck - Cap and Trade Electricity for SoC 20160208 - ... |

Good morning,

Attached is a draft deck to respond to the below. Note that my MO is uncomfortable with this being green-foldered at Cabinet given our Minister will not be in attendance. I understand they are discussing this issue with PO.

Please let me know if there are questions.

Keley

**From:** Greenberg, Martha (CAB)

**Sent:** February-08-16 12:20 PM

**To:** Hume, Steen (ENERGY); Katona, Keley (ENERGY); Wood, Alex (MOECC); Fleming, Robert (MOECC); Harth, David (MOECC)

**Cc:** Moore, Karen (CAB); Mouchian, Greg (CAB); Hall, Caspar (CAB)

**Subject:** FW: P's briefing on C+T

**Importance:** High

Hi,

Further to this, just chatted with you David and Alex on request #1 so think you are already thinking through what that would look like, the hypothetical examples of the allocation formula.

On household impacts, no one is surprised this is where everyone goes but trying to capture the impacts and what options exist is not straight forward. I understand Energy has done some slides that show what programs are available to consumers to help reduce their monthly bills which is a good start. For Cabinet on Wednesday we are looking to green folder some additional material that would cover what Steven outlines below. We will need energy and MOECC to work together on how best to depict this info but generally this is what we were thinking about:

- There exists already a graph that shows the increase to monthly residential bill, based on LTEP, what does the impact of C&T do to that curve (increases rates)
- If we want that curve to remain on its current trajectory, how much would need to be reinvested (understand it's not 1:1 so if electricity sector spends \$100M to buy credits, more than \$100M would need to be returned for there to be a net zero impact on residential bills, what is that number), all of this results in bending the curve back down
- Going beyond that, if we wanted to provide options to further decrease residential bills, what are we talking about (e.g., the slides energy already has on existing programs, are we talking about increasing allocations to

- those programs for households to actually reduce their usage? further reducing GAM?)
- One further steps, what needs to be returned/recycled to ensure industrial and commercial have a net zero increase (that isn't paid for through residential rates)

End goal is to try to show Cabinet members what we know (based on modelling) the impacts to be, what we are proposing to do to mitigate those impacts and what further we could explore to provide additional opportunities for people to reduce monthly bills.

Happy to set up a quick all between us all if that would be helpful. We will need to see a draft of this for tomorrow early afternoon so we can ensure it meets the need and then get something printed for Wednesday morning.

Thanks,  
martha

**From:** Davidson, Steven (CAB)

**Sent:** February-08-16 12:02 PM

**To:** Imbrogno, Serge (ENERGY); Evans, Paul (MOECC); Wood, Alex (MOECC); Hume, Steen (ENERGY); Fleming, Robert (MOECC)

**Cc:** Gherson, Giles (MEDEI/MRI); Greenberg, Martha (CAB); Mouchian, Greg (CAB); Hall, Caspar (CAB); Bromm, William (CAB)

**Subject:** P's briefing on C+T

Paul and Serge et al...

Just briefed the P for this week's Cabinet. A couple of things coming out of our full discussion on C+T. Martha is following up with your folks to develop some revised and supplementary materials, but here are the highlights:

For the free allowances methodology, need some company-level examples to make this real and understandable to Ministers, e.g. you might illustrate with hypothetical Company A and Company B examples, illustrating what factors might impact their B factor, and how the cap decline rate could impact on their need to buy allowances. Just to make it concrete. Could be a one-pager to go into folders on Wed.

Bigger issue on Household Impacts, i.e. slide 17 and broader narrative.

Bottom line position on electricity coming out of last week's discussion with Andrew is for there to be no impact on industrial/commercial electricity bills from C+T, and modest benefit for households – achieved through investment of proceeds and fact that disproportionate benefit of the GAM falls to households. The slide should show this clearly.

Also need to provide a table or some form of depiction of overall impact on households of electricity and fuels, and how can be mitigated through use of proceeds. Should include projected costs of mitigation and projected range of benefit for households.

Appreciate use of proceeds is not for decision on Wednesday and will be part of next week's TB/Cabinet decisions. But need to make the household impact narrative real and accessible for people for this week's discussion as well.

Happy to discuss further. In meantime, Martha's following up with your folks to work on some revised products. Thanks. Steven.

Steven Davidson  
Deputy Minister and  
Associate Secretary of the Cabinet,  
Policy and Delivery

The Cabinet Office  
99 Wellesley Street West  
Room 6420, Whitney Block  
Toronto ON M7A 1A1

Tel 416 325 3759  
Fax 416 325 7631

# Energy Feb. 22/16

February-22-16 2:30 PM

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>RE: Energy East meeting?</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| From        | Moore, Karen (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| To          | Greenberg, Martha (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Sent        | February-22-16 2:11 PM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Attachments | <br>PO CES Update deck - ENERGY.PPTX<br><br>Quebec-Ontario_Update-PO Briefing - February 22 FINA...<br><br>PO update - ON-NL Electricity Trade Discussions - EN...<br><br>Energy_East PO Briefing Feb2016 - 20160218.pptx |

## Quebec-Ontario Update

- Not looking to commit to taking energy from QC at this time
- What is QC's proposal? What is our analysis of it? What would ON counter be?
  - Looking for ON to commit to 1 TWh and pay market clearing plus additional price through this deal
  - Only for 9 months as QC only in solid surplus for 9 months
- ON starting to build proposal
- 2 P's want to meet before July 1
  - What is HQ position before then?
  - April - CANWEA meeting in Gatineau, both Ministers presenting (ON and QC)
- ✓ • What is ON position - products that ON could put on the table with QC
- Link between Pickering and QC - first time hearing there was a connection
  - Now that we have committed to extending Pickering, discussions with QC are different
  - Originally, presented as connection between deal with QC and displacing gas
- Feb. 24 - next meeting between IESO/HQ
- Slide 8 - current capacity vs LTEP in 2016 is almost a 1000MW difference, what accounts for that? Schedule of renewables, etc
  - ✓ ◦ Provide breakdown of what makes up the increase in capacity now compared to what we forecasted in 2013 for LTEP
- QC is short capacity in winter - done an RFP for capacity for post 2018
- Transmission capacity? Can take on Churchill Falls and bit more but to take on more, need to do upgrades

## QC - post meeting

- We know costs of refurb and costs of extending Pickering, maybe it's cheaper to use QC energy, if so, we have offramps
- SoC didn't know we have proposal even from QC
- ✓ • Energy to draft up "negotiating mandate"

## NL

- Early days
- NL still trying to figure out if can get to ON given have to go through QC and using their transmission
  - Do we need a tripartite agreement?
- NS also looking at getting electricity here but maybe going through states
- Canadian Energy Strategy - Energy to people section, might offer some space to talk about tri-partite?
  - BC and Alberta contemplating this

## Energy East

- Once hearing order comes - 27 months until decision
  - Hearing order could come in Q2 of 16/17
- Need to be more specific on Ontario priorities (slide 7+)

- e.g., what does highest environmental standards mean to us, naming specific waterways
- How do we know decisions being made satisfy Ontario and address concerns
  - Written explanation from TransCanada?
- Do we as gov want to try to work to get something into TransCanada deal before they finalize? e.g., supports for FN?
- Cabinet tracking - what would we like?
  - OEB report update (went out quietly during fed election)
  - Ideas for direct engagement
- Three options, only one is really needed:
  - Transmountain
  - Keystone
  - Energy east
- If no deal, have pipeline that is being paid for when don't need capacity

# Energy East Submission march 11/16

March-11-16 8:30 AM

|             |                                                                                                                                                                                                                                                     |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | Energy East ADMs Working Group                                                                                                                                                                                                                      |
| From        | Hume, Steen (ENERGY)                                                                                                                                                                                                                                |
| To          | Greenberg, Martha (CAB); Bartucci, Ernie (CAB); Thatcher, Hillary (MAA); Mulc, Helen (MNDM); Pilla, Alison (MAA); Kwan, Ronald (OFA); Hayward, Carrie (MNRF); Fleming, Robert (MOECC); Maxwell, Karen (MEDEI/MRI); Severino, Victor. J. (MEDEI/MRI) |
| Cc          | MacCallum, Doug (ENERGY); Hill, Allyson (ENERGY)                                                                                                                                                                                                    |
| Sent        | March-10-16 9:00 AM                                                                                                                                                                                                                                 |
| Attachments | <br>Energy East - March 2016 - FINAL - 20160308.pdf                                                                                                                |

Good morning all. Please find attached the Ministry of Energy's CRJ submission regarding Energy East. I believe that my Deputy's office shared a copy of the submission with your Deputy yesterday. We're planning to go to CRJ on **March 23, 2016**.

In advance of CRJ, I'm proposing to hold a ADM's Working Group meeting next week to walk through our proposed approach. An invitation will be sent out shortly.

For information, I've also provided a link to the Ontario Energy Board's report on Energy East at the following link:

[http://www.ontarioenergyboard.ca/html/oebenergyeast/documents/report\\_to\\_minister/energyeast\\_report\\_to\\_minister\\_EN.pdf](http://www.ontarioenergyboard.ca/html/oebenergyeast/documents/report_to_minister/energyeast_report_to_minister_EN.pdf)

If you have any questions, please give me a call

Steen

# Energy East ADMs march 16/16

March-16-16 8:23 AM

| Attachments |  |
|-------------|-----------------------------------------------------------------------------------|
|             | Energy East - March 2016 - FINAL - 20160308.pdf                                   |
|             |  |
|             | EE Working Group Agenda Mar 16.docx                                               |

[Link to Outlook item](#)

## Notes

# Energy H1 Item

March-22-16 1:48 PM

|             |                                                                                                                                                                                                                                                                       |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>FW: TB/MBC March 22 - Energy H1 Item</b>                                                                                                                                                                                                                           |
| From        | Mouchian, Greg (CAB)                                                                                                                                                                                                                                                  |
| To          | Moore, Karen (CAB); Greenberg, Martha (CAB)                                                                                                                                                                                                                           |
| Sent        | March-21-16 11:23 AM                                                                                                                                                                                                                                                  |
| Attachments | <br>RE Energy Item - Mar 22 TBMBC.msg<br><br>TB BN ENERGY v2 Post Chairs H1 Share Sale Strategy.... |

Hey there,

FYI, CO is being added into the minute really just to keep us in the inner circle.

Just spoke with James. I personally don't have any issues as its better that we be involved than not, but just wanted to see if either of you have any concerns.

**From:** Strang, James (TBS)  
**Sent:** March 21, 2016 11:21 AM  
**To:** Mouchian, Greg (CAB)  
**Subject:** FW: TB/MBC March 22 - Energy H1 Item

Greg, you ok with Cabinet Office being part of minute approving the offering price?

**From:** Strang, James (TBS)  
**Sent:** March 17, 2016 10:56 AM  
**To:** Lyons, Mark (TBS); Hatzis, Len (TBS); Mouchian, Greg (CAB); Graham, Helen (TBS); George-Harris, Judy (TBS); Scanlan, Darren (OFA) ([Darren.Scanlan@ofina.on.ca](mailto:Darren.Scanlan@ofina.on.ca))  
**Cc:** Lancashire, Michelle (TBS); Kearney, Sean (TBS)  
**Subject:** TB/MBC March 22 - Energy H1 Item

Energy is bringing an item to the March 22 TB/MBC meeting, a report back speaking to Hydro One IPO results and seeking approval of its proposed secondary share sale strategy. Energy's signed submission email attached.

I've also attached a draft BN for review / comments, particularly the minute.

CO – ok with the CO additions in the minute?  
Procurement exemption – there's a conditional minute proposed by Energy – if it 's necessary, extending the IPO exemption.

Any revisions will need to be seen by Energy in advance of the Board meeting. Let me know of suggested changes as soon as possible. Let's target end of day Friday (Mar 18<sup>th</sup>).

Thanks in advance,

James Strang  
7-2071

# Fw: Multicorners | QC, CES, Energy East

March-30-16 2:17 PM

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>Fw: Multicorners   QC, CES, Energy East</b>                                                                                                                                                                                                                                                                                                                                                                                                                  |
| From        | Foster, Robert (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| To          | Greenberg, Martha (CAB); Moore, Karen (CAB); Mouchian, Greg (CAB)                                                                                                                                                                                                                                                                                                                                                                                               |
| Sent        | March-29-16 10:14 AM                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Attachments | <div><br/>Quebec-Ontario_Update - Ministry Briefing - March 31...</div> <div><br/>2016-03-24- PO CES Update deck for Multicorners.pptx</div> <div><br/>Energy East - March 2016 - FINAL - 20160308.pdf</div> |

FYI - was this something you were setting up?

**From:** Katona, Keley (ENERGY) <Keley.Katona@ontario.ca>

**Sent:** Tuesday, March 29, 2016 9:51 AM

**To:** Bromm, William (CAB); Foster, Robert (CAB)

**Subject:** Multicorners | QC, CES, Energy East

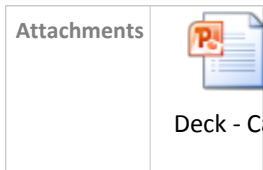
Good morning,

Attached are materials for Thursday's multicorners on ON-QC electricity trade, Energy East and Canadian Energy Strategy. We have not received an invite for your office but have this scheduled as taking place between 1:15 and 2:15pm on Thursday March 31<sup>st</sup>.

Thanks,  
Keley

# Global Adjustment Mechanism April 15/16

April-15-16 1:07 PM



[Link to Outlook item](#)

## Notes

GAM - anything not variable

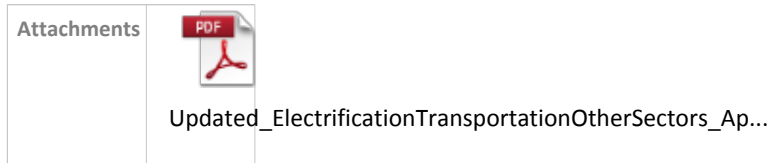
Range for GAM proceeds - takes into account cost of C going up and additional gas usage

Need apples to apples comparison of options

Other options - use GAM for residential, other ways to support industry? (e.g., tax)

# Electrification April 15/16

April-15-16 2:04 PM



[Link to Outlook item](#)

## Notes

- 2013 LTEP included transit and EV but not fuel switching which might relate to C&T costs
- Transit electrification isn't as big a pull on system as might think
- What was taking into consideration in graphs for scenarios - so haven't taken into account potential to better store electricity, assumes
- Case 3 - if assume switch one third of natural gas furnaces to electric furnaces, would need the equivalent of one new Bruce plant to meet demand

## GM

- Where do we want to drive electrification? Residential? EV?
- Part of LTEP?
- How do you incent?
- We know we have to drive towards electrification, question is where first, how, (how much)
- Should we be doing further research into what we can do
-

# Proceeds Recycling Follow Up

May-16-16 2:11 PM

|                    |                                                                                                                                              |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Subject</b>     | <b>Proceeds Recycling Follow Up</b>                                                                                                          |
| <b>From</b>        | Katona, Keley (ENERGY)                                                                                                                       |
| <b>To</b>          | Greenberg, Martha (CAB); Moore, Karen (CAB); Mouchian, Greg (CAB)                                                                            |
| <b>Cc</b>          | Bawa, Jasjit (ENERGY)                                                                                                                        |
| <b>Sent</b>        | April-28-16 10:03 AM                                                                                                                         |
| <b>Attachments</b> | <br>Cap and Trade Electricity Proceed Recycling 20160427... |

Good morning,

As a follow up to the recent meeting with PO / CO on proceeds recycling to the electricity sector, attached is a revised deck. Our MO has also shared with PO and is requesting that a follow up meeting be set up to walk through the attached.

Happy to discuss any questions.

Thanks,  
Keley

**Keley Katona | Director of Operations**  
Deputy Minister's Office | Ministry of Energy  
Tel: 416-326-7688 | BB: 647-980-4634  
E-mail: [Keley.Katona@Ontario.ca](mailto:Keley.Katona@Ontario.ca)  
4<sup>th</sup> Floor, Hearst Block, 900 Bay Street

# Renewable Natural Gas Meeting | Union & Enbridge

May-16-16 2:09 PM

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Subject</b>           | <b>Renewable Natural Gas Meeting   Union &amp; Enbridge</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Date and Location</b> | May-05-16 11:00 AM - 12:00 PM, 900 Bay St, 4th Floor, Hearst Block, Executive Boardroom                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Attendees</b>         | Imbrogno, Serge (ENERGY); Katona, Keley (ENERGY); Bungaro-Yemec, Francesca (ENERGY); Teliszewsky, Andrew (ENERGY); Baker, Carys (ENERGY); Najdovski, Dorijan (ENERGY); Stoiko, Andrea (ENERGY); Thompson, Erin (ENERGY); Sermat-Harding, Kaili (ENERGY); 'TLynch@uniongas.com'; Evans, Paul (MOECC); Ecclestone, Susan (MOECC); Liscio, Janet (MOECC); Espie, Jonathan (MOECC); Myrans, Iain (MOECC); Gherson, Giles (MEDEI/MRI); Dyl, Trish (MEDEI/MRI); Lord, Sherma (MEDEI/MRI); Simeon, Victoria (MEDEI/MRI); Finlay, Charles (MEDEI); Moore, Karen (CAB); Donelson, Philip (OPO); Kwong, Elsa (CAB); Harth, David (MOECC); Wood, Alex (MOECC); McNeill, Shannon (MOECC); Fleming, Robert (MOECC); Biran, Nadia (MOECC); Pearson, Heather (MOECC); Blackwell, Lisa D. (MOECC); Greenberg, Martha (CAB); Mouchian, Greg (CAB); McEachern, Gillian (OPO); Baker, Michelle (OPO); Thiru, Kaj (MOECC); Olsheski, Mark (ENERGY); 'David Donovan'; Esdaile, Trevor (ENERGY); Hahn, Rosanne (MOECC); Bodrug, Andrew (ENERGY); Syed, Usman (ENERGY); Block, Jennifer (ENERGY); Bardeesy, Karim (OPO); Moulton, Dan (ENERGY); Salloum, Chris (MEDEI); MacCallum, Doug (ENERGY); Hume, Steen (ENERGY); Hill, Allyson (ENERGY); Armstrong, Hillary (ENERGY); Anderson, Annette (OMAFRA); Lagerquist, Jason (OMAFRA); TJSmitheman@uniongas.com; MRLawson@uniongas.com; MGibson@uniongas.com; Baig, Saad (MEDEI); Bawa, Jasjit (ENERGY) |
| <b>Message</b>           | Update: Material attached                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Attachments</b>       | <br>16-05-05 - Renewable Natural Gas Presentation (Enbri...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

[Link to Outlook item](#)

## Notes

# FW: COO/Hydro One Negotiations

May-16-16 2:08 PM

|             |                                                                                                                                                                                                                                                                                                        |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>FW: COO/Hydro One Negotiations</b>                                                                                                                                                                                                                                                                  |
| From        | Moore, Karen (CAB)                                                                                                                                                                                                                                                                                     |
| To          | Mouchian, Greg (CAB); Greenberg, Martha (CAB)                                                                                                                                                                                                                                                          |
| Sent        | May-06-16 8:50 AM                                                                                                                                                                                                                                                                                      |
| Attachments | <div><br/>2016 05 05 Update on COO Negotiations Since March Br...</div> <div><br/>2016 05 04 FN Negotiations Placemat v10.pptx</div> |

FYI

**From:** Foster, Robert (CAB)

**Sent:** May-05-16 5:00 PM

**To:** Moore, Karen (CAB); Donelson, Philip (OPO); McEachern, Gillian (OPO); Bardeesy, Karim (OPO)

**Subject:** FW: COO/Hydro One Negotiations

Fyi - attached material from ENERGY for Monday's 5pm meeting with P+5Ms

# OPG review May 16/16

May-16-16 12:36 PM



2016-05-13- OPG Deck for Fiscal Prep\_V5 clean.pptx

[Link to Outlook item](#)

## Notes

# OPG fiscal prep May 18/16

May-18-16 10:16 AM

|             |                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Attachments | <div data-bbox="289 268 350 331"></div> <div data-bbox="276 342 495 367">FPC Agenda - May 18.docx</div> <div data-bbox="289 407 350 470"></div> <div data-bbox="276 478 711 504">2016-05-16- OPG Deck for Fiscal Prep_V4_Clean.pptx</div> |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Pre-chat

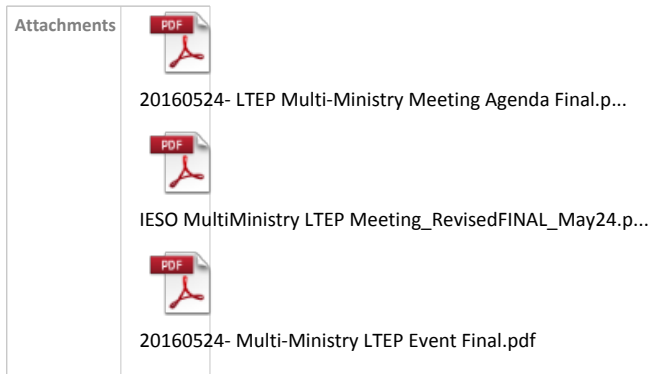
- OPG can signal work they are going but need to work with TBS on broader compensation
- Borrowing - if it isn't broke, why fix it? OFA/OEFC does not expect any fiscal gain (OPG claiming there is)
  - Does borrowing on US market offer any benefits?
  - OFA to look at any benefits of US market
- Is gov decisions on whether want OPG to operate as an independent company - fine, borrowing in own name might be somewhere we want to go but if still under provincial/crown corp, why borrowing in own name?

## Discussion

- What do you get from changes that you can't do now?
- Can you not do borrowing now?
  - Mandate has been expanded
- Would we ever invest in other provincial ventures?
  - Internal process around whether to undertake a capital investment
  - Board would then consider it
  - If board approves, would be in business plan and go to shareholder
  - Shareholder would need to consider whether it aligns to priorities
  - Epcor - good example of muni held utility (Edmonton is sole shareholder) but they have grown and now "own" water in cities in the States
- SoC - Will board have 3rd party independent review of compensation and stretch targets
  - Management retained consultant to do review
  - Board of directors retained own consultant who reports to the board, to independently evaluate compensation and review the proposal/report management did
  - soC - would shareholder also do a review?
    - Often shareholder would review what board recommends/requests
  - Expect to share results of compensation studies as part of business plan to shareholder
    - Shareholder accepting biz plan is process
- SoC - OPG is now shareholder of H1! But need to be more clear what OPG can't do now under existing rules for borrowing that OPG would get from proposed changes
  - It's flexibility to have other options
  - SoC does it need to be whole debt or incremental? Short vs long-term? Project specific?
  - OPG - want platform, flexibility to do something different, could be incremental going forward, to support darlington
- OFA - feels they can offer more flexibility than outside can
- OFA To talk to OPG further

# LTEP multi-ministry May 24/16

May-24-16 11:46 AM



## LTEP - process/overview

- IESO/OEB implementation plans new to process
- 2010 - electricity plan
- 2013 - electricity plan plus info on other fuels
- 2017 - want to be more about energy writ large, equal planning for electricity and fuels
- Other ministry questions:
  - District energy - will it be part of LTEP?
  - Biomass as an opportunity?
  - Am sure there will be discussion, question is whether what moves to implementation
    - What is role of LTEP (and gov) in deciding who gets a contract/what energy sources make up supply vs setting priorities about clean system and then who makes that up is up to procurement
      - Need to consider economic development in some of this?

## IESO presentation

-

# LRP II May 30/16

May-31-16 8:52 AM

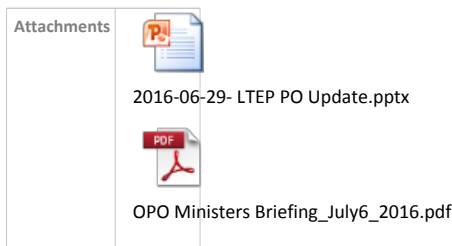
|                   |                                                                                                                                            |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Subject           | PO Briefing - LRP II                                                                                                                       |
| Date and Location | May-30-16 11:00 AM - 12:00 PM, Room 4502, Whitney Block                                                                                    |
| Attendees         | Moore, Karen (CAB); Donelson, Philip (OPO); Greenberg, Martha (CAB); Mouchian, Greg (CAB); Katona, Keley (ENERGY)                          |
| Message           | Materials attached.InviteesPOPhil DonelsonCOMartha GreenbergKaren MooreGreg MouchianENERGYKeley Katona (to invite officials and MO)        |
| Attachments       | <br>PO Update - LRP II Engagement - 20160527 - to MO.PPTX |

[Link to Outlook item](#)

## Notes

# LTEP June 30/16

June-30-16 11:02 AM



[Link to Outlook item](#)

## Notes

### Fuels working group

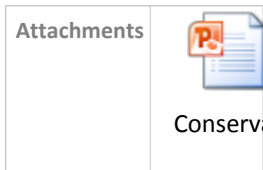
- Ensure not including only traditional sectors, make sure all perspectives are accounted for and that consultant (Navigant) provides that holistic perspective
- Will it include gov perspective vs being purely factual/data driven
  - Meant to inform LTEP, not include policy direction/recommendations
-  • Follow up - ToR for Navigant and further discussion/details on what that work is

### IESO

- Slide 14 on options/cases
  - How do you take conservation and consumer behaviour into account when working to forecast demand
  - Conservation - all scenarios using same conservation target gov set in last LTEP
    - Undertook review of conservation and result was targets set are achievable
- Slide 23
  - Why have costs decreased from LTEP forecast
    - Mostly deferral of costs (e.g., nuclear refurb, decommissioning)
    - Cost modeling is based on case b which is flat line
  - Most flex we have if don't need as much energy is on gas
    - In 2030's it's renewables
-  • How do actuals compared with LTEP forecast/projections
- Other jurisdictions...
- Do we have local sense of demand?
  - Yes, through Integrated regional resource plan (IRRP)
- Last LTEP - IESO released data modules at same time
  - Will be doing the same this time
  - Want less narrative, more data
-  • Ancillary services - more info
  - RFI released for regulation services to help manage ancillary services
-  • Karim's questions

# Conservation July 11/16

July-11-16 11:25 AM



Conservation First Minister's Table - 20160629 - to ...

[Link to Outlook item](#)

## Notes

-

# ENERGY policy items

August-02-16 10:08 AM

|             |                                                                                                  |
|-------------|--------------------------------------------------------------------------------------------------|
| Subject     | <b>ENERGY policy items</b>                                                                       |
| From        | Chochla, Megan (CAB)                                                                             |
| To          | Greenberg, Martha (CAB)                                                                          |
| Sent        | August-02-16 10:08 AM                                                                            |
| Attachments | <br>ENERGY.docx |

| Item                                                                                  | Timing                                               | Cabinet Committee       | Notes/Details/Linkages                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------|------------------------------------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Energy</b>                                                                         |                                                      |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Renewable Energy Update (info only)                                                   | August 24 <sup>th</sup> , tbc                        | MTCC                    | ENERGY to provide updates on the renewable energy program, including updates on the FIT and LRP programs, net metering, and implementation of the Green Energy Investment Agreement.                                                                                                                                                                                                                                                                                                                   |
| Conservation First report back (info only)                                            | August 24 <sup>th</sup> , tbc                        | MTCC                    | ENERGY to provide updates on implementation of the Conservation and Demand Side Management frameworks and ministry-led initiatives, including alignment with CCAP initiatives.                                                                                                                                                                                                                                                                                                                         |
| Hydro One (COO and Secondary Offering Report Back, Mandate for negotiations with MNO) | Summer/early fall                                    | JEP/TB/CAB              | Ministry of Energy to report back on results of the secondary offering, the agreement resulting from negotiations with Chiefs of Ontario for shares in Hydro One and seek a mandate for negotiations with the Metis Nation of Ontario<br><br>Would also include a minute directing ENERGY to undertake analysis on options to speed up the work on the remaining shares, with a report back in early 2017 on a recommended approach.<br><a href="#">PO asked for them to speak up</a>                  |
| Report back on recommended approach for share sales                                   | Early 2017                                           | TB/CAB                  | Ministry of Energy to report back on recommended approach for future sales.<br><a href="#">PO request to keep pushing timing</a>                                                                                                                                                                                                                                                                                                                                                                       |
| OPG Compensation and Debt Structures                                                  | Fall 2016<br><br>Major Projects check in – late Sept | TB                      | In order to provide optimal value and deliver on key projects, OPG has proposed initiatives for government consideration. Proposals include a new Executive Compensation Framework to retain and attract key talent, and an independent borrowing platform to access public debt.                                                                                                                                                                                                                      |
| RRRP Enhancements                                                                     | Late fall 2016                                       | JEP                     | RRRP is an electricity bill charge paid by all Ontario consumers to assist in mitigating the costs of electricity delivery to rural and remote electricity consumers. The Ministry is exploring options as to how this program can be enhanced to better protect vulnerable consumers and assist with electricity affordability. The Ministry will report to Cabinet in fall 2016 on the impacts of options under consideration for enhancing the RRRP program.<br><a href="#">Low priority for PO</a> |
| LTEP Update                                                                           | Fall/early winter 2016                               | JEP                     | ENERGY to report into Cabinet with an LTEP update, including the outcome of consultations.<br><br>Note: Cabinet directed that greenhouse gas reductions and building performance and energy supply trajectories for part of the LTEP.<br>Note: LTEP final approval likely Feb 2017                                                                                                                                                                                                                     |
| Net metering                                                                          | Late Fall 2016/early Winter 2017 (TBC)               | JEP (TBC), Cabinet, LRC | ENERGY to seek JEP approval of proposed updates to the net metering program (TBC).<br><br>ENERGY to seek LRC approval of regulatory amendments to update the net metering program.                                                                                                                                                                                                                                                                                                                     |
| <b>CCAP</b>                                                                           |                                                      |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| EV Charging Program (joint with MTO and MOECC)                                        | Fall/Late Fall / Early Winter                        | MTCC                    | Establish a 4 year time-limited free overnight EV charging program for residential and affected multi-unit residential customers/building.<br><br>Note: combined submission with all other CCAP EV items (MTO, MOECC, ENERGY)                                                                                                                                                                                                                                                                          |
| EV Integration Roadmap                                                                | Late Fall / early Winter                             | JEP                     | Establish a vehicle to grid integration roadmap to enable EV batteries to serve as energy storage outside of peak hours, and report back to Cabinet as part of the next Long Term Energy Plan.<br><br>Note: combined with LTEP                                                                                                                                                                                                                                                                         |
| Green Commercial Vehicle Program (joint with MTO)                                     | Late Fall / Early Winter                             | MTCC                    | Develop a green commercial vehicle program to support purchase of a range of alternative fuel vehicles and low carbon technology, including electrified refrigeration trailers, and a four year time limited incentive program for LNG or CNG fueled trucks.<br><br>Note: combined submission with all other CCAP EV items (MTO, MOECC, ENERGY)                                                                                                                                                        |
| Fuelling Infrastructure                                                               | Late Fall /                                          | MTCC                    | Implement a fuelling infrastructure program for commercial motor vehicles that will establish a                                                                                                                                                                                                                                                                                                                                                                                                        |

|                                                                     |                                        |      |                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------|----------------------------------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Program (joint with MEDG and MTO).                                  | <a href="#">Early Winter</a>           |      | network of natural gas, recovered biogas, hydrogen and electric charging stations, as needed, and report back to Cabinet in 2016 with a proposed approach.                                                                                                                                                                                                                                                            |
| First Nations energy projects (Joint with MIRR)                     | <a href="#">Late Fall/Early Winter</a> | MTCC | Develop and report back in 2016 on an implementation plan to work with First Nation governments and organizations to develop a program for low-or-no-carbon-energy-powered micro grids and other alternative energy projects, with diesel use reduction targets of 50% in 2018 and 100% in 2020, unless a First Nation community identifies that they are not willing to implement these projects in their community. |
| <b>LRC</b>                                                          |                                        |      |                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Energy and Water Reporting and Benchmarking for Large Buildings     | Late Fall 2016 (TBC)                   | LRC  | ENERGY to seek LRC approval of regulation to implement energy and water reporting and benchmarking for large buildings.                                                                                                                                                                                                                                                                                               |
| Energy Efficiency Appliances and Products regulation (amendment 21) | November 2016 (TBC)                    | LRC  | ENERGY to seek LRC approval of proposed regulatory amendments, which will include setting new and enhanced energy efficiency standards and water efficiency standards for energy using products.                                                                                                                                                                                                                      |

Also:

- Hydro quebec/IESO Aug. 16
  - In advance of joint Qc-ON cabinet meeting

## LTEP Aug. 9/16

August-09-16 3:15 PM

|             |                                                                                   |
|-------------|-----------------------------------------------------------------------------------|
| Attachments |  |
|             | 2016-08-08- LTEP PO Update v2.4.pptx                                              |
|             |  |
|             | OPO Aug 9 PO Briefing_August 8_2016.pdf                                           |

[Link to Outlook item](#)

### Notes

- Working to apply principles of open dialogue/open data
  - Share for discussion (consultation) the data that we receive
- Go to additional locations than through 2013 development
- Fuels
  - Scenarios being used are consistent with IESO OPO scenarios and consistent with CCAP, not being driven by stakeholders
- Consultations
  - Begin mid-Oct, ministry will run consultations themselves except for indigenous, use facilitator
  - Will invite other ministries on consultations (e.g., MOECC)
  - In each location - usually have LDC in morning, stakeholder in aft, open house in evening for public
  - Some stakeholders will go to every stakeholder session across province
  - 16 proposed communities, plus indigenous sessions
- IESO
  - Increased winter demand driven by residential (home heating), EV assumptions stay relatively the same
    - Can accommodate EV load easier than home heating, through gov direction, we can direct slower housing switch to ease demand and push EV as might be easier to accommodate
    - Role of renewable natural gas not taken into account, this models fuels to electricity for discussion
    - These numbers are to stimulate discussion, we might hear there are options within
  - Conservation - might be additional opportunity here, and might be worth paying more for
    - Timing for confirming conservation targets, doesn't fully align with LTEP
    - Needs to be part of LTEP as much as possible
  - Slide 12 - option a/b, can meet demand but assumes would need to extend existing contracts (currently with natural gas) or replace those contracts with similar capacity (but could be achieved through more GHG friendly/Cx/other)
    - If do want new contracts, timing for decisions becomes important, do you need to make commitments early? (e.g., water yes)
  - Will we be sharing data or graphs for consultation
  - Looping in with digital team/COC on consultation process

# QC electricity update Aug. 16/16

August-16-16 8:43 AM

|             |                                                                                                                                                                                                                                                                                                                   |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>FW: 3pm on August 16th</b>                                                                                                                                                                                                                                                                                     |
| From        | Chochla, Megan (CAB)                                                                                                                                                                                                                                                                                              |
| To          | Greenberg, Martha (CAB)                                                                                                                                                                                                                                                                                           |
| Cc          | Moore, Karen (CAB)                                                                                                                                                                                                                                                                                                |
| Sent        | August-16-16 8:26 AM                                                                                                                                                                                                                                                                                              |
| Attachments | <div><br/>PO Update - QC Next Steps Slides - ENERGY on 2016-08...</div> <div><br/>Quebec-Ontario_Update -PO Briefing - August 16_08112...</div> |
|             |                                                                                                                                                                                                                                                                                                                   |

# HST

August-16-16 1:11 PM

For FES

- Consumer protection elements
- Jobs and economy focus
  - Not being felt at the individual level
- Rebate on value of HST that everyone who pays electricity bill gets
  - Everyone who purchases electricity is paying for getting off of coal
  - Don't differentiate residential from business from BPS
  - Rebate out of CRF (not an exemption as very complicated)
- Estimate:
  - 1.3B?
  - Exemption was around 700-800M
  - If don't pay HST, don't get rebate

# ENERGY material

September-02-16 2:02 PM

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>ENERGY material</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| From        | Greenberg, Martha (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| To          | Davidson, Steven (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Cc          | Foster, Robert (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Sent        | September-02-16 12:18 PM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Attachments | <div><br/>2016-08-31- Qs and As - Electricity Rate Mitigation ...</div> <div><br/>GOV2016.091.e04.pw (Clean Energy Rebate).docx</div> <div><br/>Electricity rebate act SCHEDULE x compendium Draft 6...</div> <div><br/>ENERGY Electricity Mitigation.pdf</div> <div><br/>Draft minute v4.docx</div> |

Password: Brazil2016

- Admin costs?
  - Provincial/LDCs
- Does R1 change under RRRP
- Rental world
  - Went through this with OESP, didn't go there for that one
  - Do we want some scenarios on this?
  - Approved rental increase based on inflation and utilities goes up, maybe we need to say based on this 8%, we could say that we expect that increase to be less given we are giving
- BPS and others that don't pay HST - do we want to come back on that, provide analysis and options
  - Remind what benefits already exist
- FN - how will they be treated? Who pays HST on diesel now?
- ICI - how quickly can they start? Need demand base to enter the program, won't be one year until get benefit of ICI
- Definitions for deck - vocabulary need to know
- Use of proceeds
- Can you profit off this?
  - Get oesp, this and???
  - Make sure this isn't a refundable benefit?
- DRC - is HST charged on DRC? Should be exempt?
- System costs, use of proceeds
- Include a bill example

# Rebate notes Sept. 12/16

October-21-16 8:34 AM

|             |                                                                                                                                              |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>RE: Note</b>                                                                                                                              |
| From        | Moore, Karen (CAB)                                                                                                                           |
| To          | Greenberg, Martha (CAB); Foster, Robert (CAB)                                                                                                |
| Sent        | September-12-16 8:54 AM                                                                                                                      |
| Attachments | <br>CBN - Electricity Price Mitigation DRAFT v7 clean.do... |

Final version attached.

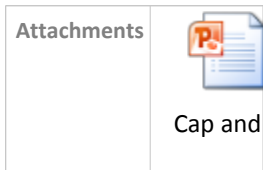
Pswd: Brazil2016

|             |                                                                                                                                                |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>Energy - TB/MBC note</b>                                                                                                                    |
| From        | Foster, Robert (CAB)                                                                                                                           |
| To          | Davidson, Steven (CAB); Greenberg, Martha (CAB)                                                                                                |
| Sent        | September-12-16 8:39 AM                                                                                                                        |
| Attachments | <br>RAN Electricity Price Mitigation v13 2016 09 12 CLEA... |

Final note attached.

# Proceeds use Oct. 21/16

October-21-16 8:05 AM



Cap and Trade Proceeds to Electricity - Clean.pptx

[Link to Outlook item](#)

## Notes

# Energy Overview for Mary

October-25-16 4:18 PM

| Attachments |                                                                                                                                              |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------|
|             | <br>LTEP Foundational - October 14 update.pptx              |
|             | <br>Broadening the Ownership of Hydro One igs edits (red... |
|             | <br>lectricity Pricing deck - 20161014.pptx                 |
|             | <br>Agency Overview - October 14 Update.pptx                |
|             | <br>Sector Overview - October 14 Update.pptx                |

[Link to Outlook item](#)

## Notes

### LTEP

- First stakeholder consultation yesterday in toronto
  - Did electricity report then fuels report
- First public open house tonight
- Outlooks for demand
  - Does it incorporate climate change, such as increasing median temperature and for example people needing more A/C
  -

# Bill mock up

November-03-16 8:07 AM

|             |                                                                                                            |
|-------------|------------------------------------------------------------------------------------------------------------|
| Subject     | <b>RE: Notes from FPC</b>                                                                                  |
| From        | Brezer, David (CAB)                                                                                        |
| To          | Greenberg, Martha (CAB); Moore, Karen (CAB)                                                                |
| Sent        | November-02-16 12:13 PM                                                                                    |
| Attachments | <br>20161102120457851.pdf |

- Energy: Electricity Rate
  - Most, but not all LDC's will be ready. Others will use inserts to explain retroactive payments will follow
  - Slide 10: Regs will give some flexibility on how to communicate, but not what. Need to respect local bill design. Message consistent.
  - Bill design (see handout) . "8% Provincial Rebate" must appear after HST line.
  - Bill stuffer for "R2" customers rather than on bill messaging because of cross messaging for different customers (?)
  - Energy to return to FPC
  - To implement may require leg amendments. Can they be included in the FES bill????

# Proceeds Nov. 7/16

November-07-16 8:39 AM



Cap and Trade Proceeds to Electricity - Interministe...

[Link to Outlook item](#)

## Notes

### Timing

- Regulatory requirement for C&T begins Jan. 1
  - Need mechanism in place before then
  - No proceeds until March/april
  - Commitment was no increase so need to start when regulatory charge starts, which is before proceeds
  - How do you balance amount of proceeds, impact on business, amount that is available to offset

### Options

- With volumetric off-peak
  - There are some that can't shift to off-peak at all so some won't benefit at all (some steel only has day shifts, not worth paying another shift for night work as not enough demand)
    - Auto, chemical
    - Means have to ensure programs that are designed to support industry are designed to recognize those that aren't benefiting from electricity support
- MOECC supportive of option 3 (volumetric off-peak)
  - For those that don't benefit from off-peak, could look at leveraging other ccap programs for those industries
    - e.g., energy storage, so they can charge at night, store, then use during day
- MEDG supportive of option 4 (hybrid)
  - Auto challenged, current agreements are short-term
  - Greenbank programs will be helpful to move sector to low-C footprint but not right away
  - Need to keep business here, losing ground compared to other jurisdictions on benefit of Ontario
- Legal tests
  - GAM - strongest link to GHG reductions as can point to specific programs
  - Volumetric - not as strong but can show that supports shifting time of use and can show that supply sources for off-peak produce less GHG
  - Officers of leg -
- Option 4 but variation
  - GAM
  - Volumetric off-peak

# OPG comp

November-09-16 2:10 PM

|             |                                                                                                                                              |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>RE: Nuclear Exec Comp</b>                                                                                                                 |
| From        | Rankin, Christine (CAB)                                                                                                                      |
| To          | Foster, Robert (CAB); Greenberg, Martha (CAB); Brezer, David (CAB); Ballantine, John (CAB)                                                   |
| Sent        | November-08-16 11:39 AM                                                                                                                      |
| Attachments | <br>TCSB - REG-11141_ID46528_LRC_Committee_Note final cl... |

Hi Rob,

Unfortunately, we have not received materials from TBS yet. So far, all they've sent is a summary of the proposal and a promise of materials to come (hopefully today). We're also working to set up a meeting today with PO and TBS to discuss timing.

Here is the summary. I've also attached the note from August 2016 when the regulation was originally approved, as it gives more context on the compensation framework.

Please let me know if you'd like to discuss further.

Thanks,  
Christine

## **Background**

The Executive Compensation Framework regulation (Framework Regulation) was brought into force on September 6, 2016 under the authority of the Broader Public Sector Executive Compensation Act, 2014 (BPSECA). The Framework Regulation requires designated employers to determine caps on salary and performance-related pay for executives. The cap on maximum salary and performance-related pay for each executive position or class may not exceed the market median of comparable positions in comparator organizations.

Designated employers must include one or more Canadian public sector comparator and weigh them at a minimum of 50% of their comparator group even if private or international comparators are authorized. President of the Treasury Board approval is required for a designated employer to select private sector or international comparators for an executive position or class.

## **Context**

It has been identified that there is a lack of Canadian public sector executives with the expertise and specific licensing necessary to operate large nuclear facilities. Ontario Power Generation (OPG) is the only publically owned Canadian company whose scope of operations requires this expertise. This expertise is required for a small subset of executives at OPG (approximately 10 positions).

As a result, OPG is unable to find any Canadian public sector comparators for its nuclear executive positions.

## **Proposal**

TBS is proposing amendments to the Framework Regulation that would allow comparison of executive positions for which nuclear expertise is required solely to positions in private and international organizations. This would mean that designated employers would not need to include any Canadian public sector organizations in the calculations of their caps for nuclear executive positions.

This would ensure that OPG, as Canada's only large public nuclear generator, is able to identify appropriate comparators for critical nuclear roles.

## **Costs**

Amendments to the Framework Regulation would impose no new costs for government or external stakeholders.

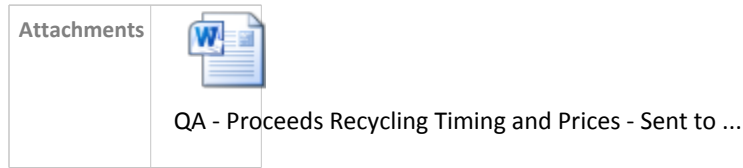
**From:** Foster, Robert (CAB)  
**Sent:** November-08-16 11:01 AM  
**To:** Greenberg, Martha (CAB); Brezer, David (CAB); Rankin, Christine (CAB); Ballantine, John (CAB)  
**Subject:** Nuclear Exec Comp

- Rationale
  - Safety, need best people as we undertake refurb, etc
- 12 people
- Comms protocol?
  - Reactive
  - Would prepare the M for questions
- Annual report, would it include?
  - Framework for comp would be posted
- Timing
  - P advisor on asset optimization
  - Retaining talent is an issue
  - Aligns to their year
- To get to Jan. 1
  - Need to post for 30 days before finalize
- Could be later if all agreed but view was important to hit Jan. 1
- Any other organizations asked for exemptions?
  - Will hear from hospitals
  - OLG
  - Not proposing to do for any other, keep this to "nuclear"
- Any controls we can put in place to provide some accountability requirements
  - Public facing controls remain, make public
  - Internal controls - active interaction between M. Clark and OPG on what comparators
- Doesn't allow for an exemption
  - Reg allows their comparators to be outside canada
- May need to be transparent and don't try to hide it, we have justification

Can someone flip me what we have on this — note, sub, deck?

# Rate Mitigation (officials only)

November-18-16 8:33 AM



[Link to Outlook item](#)

## Notes

### C&T reg

- Compliance reg start jan 1, so emissions

### Impacts/rebate

- Arbitrary decision on 3 month lag
- Once ggrra money flows to energy, energy would have to disburse to IESO, who then dispurses to customers, including LDCs
- Natural gas c is an administrative cost
- Buy allowances to cover emissions, which will be passed on
- Will it be visible on bills?

### OEB

- Expect increase due to C&T to be just over \$6/month
  - Budget said \$5/month due to heating costs
- In September we said 8% would reduce on average \$11/month

# LTEP ADM's Dec. 5/16

December-05-16 1:35 PM



2016-12-05 LTEP Update v1.3.pptx

# IESO/OEB rate ideas Dec. 13/16

December-13-16 2:51 PM

|             |                                                                                                                                                                                                                                                                                                 |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | RE: prep materials                                                                                                                                                                                                                                                                              |
| From        | Katona, Keley (ENERGY)                                                                                                                                                                                                                                                                          |
| To          | Greenberg, Martha (CAB)                                                                                                                                                                                                                                                                         |
| Cc          | Chochla, Megan (CAB); Moore, Karen (CAB)                                                                                                                                                                                                                                                        |
| Sent        | December-13-16 11:26 AM                                                                                                                                                                                                                                                                         |
| Attachments | <div><br/>Rate Mitigation Measures_December 9 2016 v3.pdf</div> <div><br/>2016-12-09 rate mitigation - distributed.pptx</div> |

Finals attached.

**From:** Katona, Keley (ENERGY)  
**Sent:** December-12-16 10:14 AM  
**To:** Greenberg, Martha (CAB)  
**Cc:** Chochla, Megan (CAB); Moore, Karen (CAB)  
**Subject:** RE: prep materials

Hi Martha,  
The attached were shared with the SoC late on Friday. These are two decks for Wednesday's meeting with the P.  
Keley

**From:** Greenberg, Martha (CAB)  
**Sent:** December-12-16 10:10 AM  
**To:** Katona, Keley (ENERGY)  
**Cc:** Chochla, Megan (CAB); Moore, Karen (CAB)  
**Subject:** prep materials

Hi Keley,

I was wondering if you have any material you can share that has or is being prepared for an upcoming meeting the P has with your Minister and potentially the heads of IESO and OEB? I understand energy was preparing some material which may have also included a deck from the IESO and OEB?

If you could let us know status and/or share them if you have them already that would be great.  
Thanks!  
martha

Martha Greenberg  
Assistant Deputy Minister  
Cabinet Office – Economic, Environment, Justice & Intergovernmental Policy  
(416) 325-5836

[Martha.Greenberg@ontario.ca](mailto:Martha.Greenberg@ontario.ca)

# LTEP Materials Jan. 4/17

January-04-17 1:40 PM

|             |                                                                                                                       |
|-------------|-----------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>LTEP Materials</b>                                                                                                 |
| From        | Chochla, Megan (CAB)                                                                                                  |
| To          | Greenberg, Martha (CAB); Moore, Karen (CAB)                                                                           |
| Sent        | January-04-17 10:57 AM                                                                                                |
| Attachments | <br>2016-10-21 - LTEP - JEP v10.pptx |

Martha, Karen – for our discussion at 11:30

Attached is the most recent LTEP deck that we have (it was intended for a JEP info item – was not scheduled in the end).

Current LTEP tracking:

PO briefing #1 – Jan 17<sup>th</sup> (process focused)

PO briefing #2 – tbd (policy focused)

MTCC – Feb 22<sup>nd</sup>

Cabinet – March

ENERGY's CoS and DM are away until Wednesday Jan 11<sup>th</sup>.

Megan

# Rate Mitigation MP Jan. 19/17

January-19-17 11:50 AM

|             |                                                                                                                                       |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>FW: Rate Mitigation - Draft MP Deck</b>                                                                                            |
| From        | Davidson, Steven (CAB)                                                                                                                |
| To          | Greenberg, Martha (CAB)                                                                                                               |
| Cc          | Foster, Robert (CAB)                                                                                                                  |
| Sent        | January-19-17 8:05 AM                                                                                                                 |
| Attachments | <br>Rate Mitigation Plan Options 20170118 v2_MP.pptx |

Pswd: snowplow

## LTEP

- Model LTEP assuming you can secure same price with Quebec, get more supply and trigger offramp for nucs
- Energy - doesn't need to be QC but some other source, like energy storage

## Rates - GAM

- Steen: Ok for another day, I need you to explain why this works as if on one hand we are saying we don't need as much supply or look to QC for additional supply (pending the right price), why would we extend contracts with the turbines (even if we get them at a better rate), so technically wouldn't the asset not have any usefulness as we don't need what it can produce so in the 21<sup>st</sup> year, it's usefulness is done so spreading the cost beyond the 21<sup>st</sup> year doesn't relate to any benefit being achieved?
  - Or is point that the contracts we don't need would be nuclear and we aren't including nuclear in this idea? So we'd continue with the renewables regardless
- Rate smoothing rate exists to smooth out impacts of nuclear refurb
- Aren't most of the energy assets appropriately amortized?
- Most are 20yr ammortization, looking at shifting to 40yr
- LDCs don't follow rate regulated accounting, so putting the asset on them isn't straight forward
  - Need to look at how that could work
- We don't own the assets thoguh
  - And we have been amortizing already so can't assume it wasn't planned to be amortized already
- Need modelling and illustrative example of how this would work
- Are we saying this is a good time to borrow money, but on other hand we expect interest rates to increase and we are telling others to be careful about over-borrowing
- Would there be any external reprotis we can use to validate this idea?
  - Sound public policy

## Other ideas

- Additional support for rural/remote
- Slide 20 - we already did Rrural/remote expansion, then add in the orange and the blue - so an additional \$200M/yr
- How do you make an impact on delivery charges as that seems to be one of the biggest issues, not only R1 or R2 customers
- Slide 20 shows the average, that is the data we get from LDCs
  - If we are worried about the outliers, that is more of a local LDC program
- Keep in mind that the volumetric rebate we are giving will help on the delivery
- OESP expansion
- Also CDM programs
- With GA and the HST, that gest you \$12 + \$11 off bills
  - The rest is small (\$2 off bill for OESP but is \$1B on fiscal)
- Debt impacts are cumulative, with deficit hit as well
- Dedicated departure tax not so hot as may make the market shakey/nervous about stocks
  - Don't want to act before OEB rules on H1

# energy FPC Jan. 25/17

January-25-17 10:31 AM

|             |                                                                                                                                                                                                                                                                            |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | energy deck for FPC                                                                                                                                                                                                                                                        |
| From        | Foster, Robert (CAB)                                                                                                                                                                                                                                                       |
| To          | Davidson, Steven (CAB); Greenberg, Martha (CAB)                                                                                                                                                                                                                            |
| Sent        | January-25-17 8:02 AM                                                                                                                                                                                                                                                      |
| Attachments | <br>Delivery Line Overview and Options v1.pptx<br><br>Rate Mitigation Plan Options 20170124__Clean1.pptx |

## Snowplow

### GA

- Slide 15 - if set up a trust, what authority would that entity have to charge customers
- While trusts should not be included in gov there are still tests that need to be considered when looking at who controls
- Comparable to WSIB trust (not consolidated although AG continues to poke)
  - There they have a deficit as they pay out and are left in deficit at times
- Here would talk about taking on debt early to pay producers and collect the revenue in the long term
- Could set up the mandate, e.g., to smooth rates but not dictate to what degree?
  - Couldn't commit to rates being frozen for 4yrs as that may indicate gov control
  - Path to balance for GA would not be something we could speak of now
  - Could commit to what the immediate decrease would be now,
- Mechanics would be leg, so need leg to pass, so what is start timing?
  - Work with OEB, they reset RPP twice a year (Oct and May)
- Slide 8 - would be looking to smooth out about \$2B of total \$4B of GA that comes for sources with 20+yrs contracts (gas, wind, solar, biomass)

### Delivery charge change

- There is no income testing, all will be eligible, like RPP, like HST
- If we cap and tax base pays remainder, is there still incentive for OEB to ensure efficiency and overseeing LDC rate setting?
  - Looking at strengthening OEB through LTEP
- There would be a floor, but would you cap how much people can receive? Not planned
-

# FPC material- Energy Feb. 1/17

February-01-17 10:34 AM

|             |                                                                                                                                    |
|-------------|------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>FPC material- Energy</b>                                                                                                        |
| From        | Kwamena, Bofoa (CAB)                                                                                                               |
| To          | Orsini, Steve (CAB); Davidson, Steven (CAB)                                                                                        |
| Cc          | Bromm, William (CAB); Foster, Robert (CAB); Greenberg, Martha (CAB)                                                                |
| Sent        | February-01-17 6:09 AM                                                                                                             |
| Attachments | <br>Rate Mitigation Plan Options_Feb 1_Clean.pptx |

## Pre-discussion AB

- Does this get us the % that we need (20-22% not including the 8%)
- What can't be done through GA, put on tax, take off rate
- Need to show fiscal impact if tis does get consolidated
  - In out years, does it give us a surplus?

## Discussion

- Slide 11
  - Why does IESO provide collection services for new entity if new entity will also have leg rights to recover from consumers (a)
  - If OFA is the lender, can OFA borrow that much without a guarantee? If need a guarantee does that increase the likelihood of being consolidated
    - No other government has borrowed through their OFA-like body the amount being considered
    - With the DRC, we froze rates, took on debt, paid off through the DRC which was consolidated?
- Mandate - how broad/narrow
  - If broad with more added to it, would that increase risk of consolidation? Yes
  - Narrow/short and to the point is probably preferred but would that not accomplish provincial priorities?
- Slide 48 - shows hit if had to consolidate
  - Dno't think the full 30\$ is accounted for here, fiscal impact should be bigger to provide for the size of rebate we are looking at
- Need to understand why this preferred over previous DRC approach of freezing rates, taking on debt, paying off
- What is relationship to climate change?
  - So if we are asking people to reduce their demand or move off the grid, that increases the burden on those that remain?
  - The cost per customer is not based on usage but on number of customers
- Baseline cost - use the OPO/IESO forecast that went out with 2017 LTEP consultation
  - Slide 7 shows GA as a -17 but slide 10 says -19-21
  - Showing a \$34 reduction off 2016 forecast bill of 160 (down to 126)
  - Increasing the immediate savings now, means new entity takes on greater debt and need to be balanced in how much debt the new entity takes on
  - Model 22% plus HST rebate
  - Model 17% plus HST rebate
  - Look at various ways of getting to this overall net decrease (including increasing the hit to fiscal plan for increasing the 8% rebate)
  - Are we comfortable with rates going up due to inflation? Probably but depends where we are starting from (with respect to initial reductions)
  - Can we be clear on how much rates are able to increase at when recovering? 2% increase per year is ok
    - DRC was approx 4-5%
- Do you specify when the entity is to start recover the debt they have taken on?
  - Showing in modeling around 2029
  - Can this be included in mandate
- Distribution

- Apply value lens, target those customers, vs RRRP R2 decrease done through SFT
- Q - so the more you use, the more you get back
- Proposal is to do just for H1 customers, what about other LDCs?
  - All LDCs are moving towards fixed distribution costs, but they are at different points in their transition
  - Because H1 are the greatest extreme, we focus there
  - OEB gave H1 an 8yr period to get to this, we are speeding that up
  - Most other LDCs are moving within 4 yrs
- If you are a toronto hydro low usage, you will see your distribution go up but we are ok with that
- Slide 6 - the yellow is including the R2 benefit just provided, not just the new purple hashtag
- Rrrp is 300
- 460-700M fiscal?
  - Avg 630M
  - Slide 5 - 332+178+30
    - Assume that existing RRRP shifts to fiscal plan, not just the incremental we'd be doing
- Need to come to terms with what will come from fiscal plan, what can stay off the fiscal plan
  - What is cheapest way to borrow money
    - Some on fiscal, some not
  - Need to look at all options
- Shifting costs to fiscal plan vs rate base
  - Might get a bigger benefit shifting to tax base than rate base
- Slide 26 - sflow like GIF, get money out this year, with agreement that entity could use funding at later date
  - Would be 16/17 funding
  - Would not contribute towards the 30%
- Regroup 11am Monday

## Rates Feb. 3/17

February-07-17 8:39 AM

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | RE:                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| From        | Kwamena, Boafoa (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| To          | Greenberg, Martha (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Sent        | February-03-17 5:20 PM                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Attachments | <div><br/>201702031712.pdf</div> <div><br/>201702031713-1.pdf</div> <div><br/>201702031713.pdf</div> <div><br/>201702031712-1.pdf</div> |

Materials from the 330 meeting. thx

**From:** Greenberg, Martha (CAB)  
**Sent:** February-03-17 4:47 PM  
**To:** Kwamena, Boafoa (CAB)  
**Subject:** RE:

Thanks. had an interesting discussion with jacob on the subject today.

**From:** Kwamena, Boafoa (CAB)  
**Sent:** February-03-17 4:46 PM  
**To:** Greenberg, Martha (CAB)  
**Subject:** RE:

They gave hard copies I will scan and send to you. Spent most of the time talking about the delivery cap concept. There is a table the SoC liked that they are working on fleshing out. Later today, I will sent the material with my chicken scratch on it. 😊

**From:** Greenberg, Martha (CAB)  
**Sent:** February-03-17 4:34 PM  
**To:** Kwamena, Boafoa (CAB)  
**Subject:**

Anything new come out of that meeting?

Martha Greenberg  
Assistant Deputy Minister  
Cabinet Office – Economic, Environment, Justice & Intergovernmental Policy  
(416) 325-5836  
[Martha.Greenberg@ontario.ca](mailto:Martha.Greenberg@ontario.ca)

# FPC Feb. 6/17

February-07-17 8:39 AM

|             |                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>Fw: Rate Mitigation</b>                                                                                                                                                                                                                                                                                                                                                                  |
| From        | Kwamena, Boafaa (CAB)                                                                                                                                                                                                                                                                                                                                                                       |
| To          | Greenberg, Martha (CAB)                                                                                                                                                                                                                                                                                                                                                                     |
| Sent        | February-04-17 7:43 PM                                                                                                                                                                                                                                                                                                                                                                      |
| Attachments | <div><br/>Rate Mitigation Plan Options_Clean_SH_6pm.pptx</div> <div><br/>slide.pptx</div> <div><br/>Delivery charge one pager.docx</div> |

pswd: snowplow

# LTEP deck - bootleg

February-07-17 8:39 AM

|             |                                                                                                                                              |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>LTEP deck - bootleg</b>                                                                                                                   |
| From        | Chochla, Megan (CAB)                                                                                                                         |
| To          | Greenberg, Martha (CAB); Moore, Karen (CAB)                                                                                                  |
| Sent        | February-03-17 4:52 PM                                                                                                                       |
| Attachments | <br>2017-01-27 - LTEP Mega Deck v1 1 - SNAP + ESP - CLEA... |

Hi, this is a rough draft of the LTEP deck that will be used to brief Min T next week. It gives us some good clues but is not yet polished or vetted by senior officials. Please do not share.

Megan

# FPC Rate Mitigation

February-08-17 11:01 AM

|             |                                                                                                                                           |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>Fw: Rate Mitigation</b>                                                                                                                |
| From        | Foster, Robert (CAB)                                                                                                                      |
| To          | Davidson, Steven (CAB); Greenberg, Martha (CAB); Moore, Karen (CAB)                                                                       |
| Sent        | February-08-17 7:00 AM                                                                                                                    |
| Attachments | <br>Rate Mitigation Plan Options_Clean_SH_Updated 2.pptx |

Still "snowplow"

- OPG
  - Would create new holding co
  - Would still have some control?
  - How do you control the rate increases in the future?
  - There is little interest in OPG board or as an entity doing something in their own interest as they don't have much interest in this
  - There are risks that could drive the increase higher but less about an OPG action that would do that but more gov direction that could cause that
  - Need to consider who has some say - OEB, OPG boards, province
  - How big does the account grow? Want to try to prevent new costs from flowing in so that it does start to decrease as otherwise will collapse
    - Some threshold

# Rate Mitigation MMMP Feb. 9/17

February-10-17 2:22 PM

|                    |                                                                                                                                            |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Subject</b>     | <b>FW: Rate Mitigation</b>                                                                                                                 |
| <b>From</b>        | Davidson, Steven (CAB)                                                                                                                     |
| <b>To</b>          | Greenberg, Martha (CAB); Moore, Karen (CAB); Foster, Robert (CAB)                                                                          |
| <b>Sent</b>        | February-09-17 1:25 PM                                                                                                                     |
| <b>Attachments</b> | <br>Rate Mitigation Plan Options_Feb 9 version _1230.pptx |

Steven Davidson  
Deputy Minister and  
Associate Secretary of the Cabinet,  
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Room 6420, Whitney Block  
Toronto ON M7A 1A1  
Tel 416 325 3759  
Fax 416 325 7631

**From:** Imbrogno, Serge (ENERGY)  
**Sent:** February-09-17 1:19 PM  
**To:** Orsini, Steve (CAB); Davidson, Steven (CAB); Thompson, Scott (MOF); Angus, Helen (TBS)  
**Cc:** Bromm, William (CAB); Kwamena, Boafoa (CAB); Katona, Keley (ENERGY)  
**Subject:** Rate Mitigation

Hi,

Here's the deck for the P&Ms meeting this afternoon. Let me know if you want a pre-brief.

Serge

# Holding structure

February-10-17 2:09 PM

- OPG likes to create sub to ring-fence their operations, under a new holding company
- OR
- OPG stays as is and create a new sub beneath it
- Hydro One comparison
  - Some similarities but not prepping an asset for sale
  - Do have a blueprint, this is the way most utilities are set up, quite common for holding structure
    - Separate regulated from unregulated business
    - Allows for risk profile to be separately assessed
  - Difference between H1 and OPG, H1 was already a holding company, had H1 Inc and then wires underneath it
    - What they did was create a new entity above it and selling shares in that
  - Similar sorts of approvals but not removing them from existing leg officers
- Impacts on H1?
  - May bring certainty as right now there is an unknown of what province is doing
  - May be indirect benefit - bring relief on rates, takes tension out of the system
- 1998/99 restructuring
  - OPG hived off entities in prep for sale
  - Many small assets that were geographic in nature, many for different sources of energy and geographies
    - Competition in market place, prep for unwinding and selling down

# GA Financing Opinion

February-15-17 2:45 PM

|                    |                                                                                                                         |
|--------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Subject</b>     | <b>FW: GA Financing Opinion - Feb 10 - Confidential Solicitor-Client Privilege</b>                                      |
| <b>From</b>        | Davidson, Steven (CAB)                                                                                                  |
| <b>To</b>          | Greenberg, Martha (CAB); Foster, Robert (CAB)                                                                           |
| <b>Sent</b>        | February-14-17 10:47 AM                                                                                                 |
| <b>Attachments</b> | <br>GA Financing Opinion - Feb 10.docx |

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Tel 416 325 3759  
Fax 416 325 7631

**From:** Orsini, Steve (CAB)  
**Sent:** February-14-17 8:59 AM  
**To:** Angus, Helen (MIT)  
**Cc:** Davidson, Steven (CAB); Bromm, William (CAB)  
**Subject:** GA Financing Opinion - Feb 10 - Confidential Solicitor-Client Privilege

Legal opinion on GA option for controllership.

# Cab item (info) Feb. 15/17

February-15-17 2:45 PM

|             |                                                                                                                                                                                                                                                                                                                   |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | RE: draft minute                                                                                                                                                                                                                                                                                                  |
| From        | Katona, Keley (ENERGY)                                                                                                                                                                                                                                                                                            |
| To          | Chochla, Megan (CAB); Greenberg, Martha (CAB)                                                                                                                                                                                                                                                                     |
| Cc          | Moore, Karen (CAB)                                                                                                                                                                                                                                                                                                |
| Sent        | February-15-17 9:25 AM                                                                                                                                                                                                                                                                                            |
| Attachments | <div><br/>Cabinet Submission - Electricity Price Mitigation_Fe...</div> <div><br/>Cabinet Submission - Electricity Price Mitigation_Fe...</div> |

## FPC Feb. 16/17

February-16-17 4:59 PM

- Objective of asset to collect future cash flows
  - Without increasing net debt
  - Acts as receivable from OPG trust
  - Debt would be issued by province
- Without OPG, create bigger risk, with debt of \$30B/asset on government's books
- Accept consolidation of debt will occur but don't want fiscal hit
- Getting opinions by tomorrow night, expect to be positive but with conditions
  - Opinions will be on IESO structure
    - KPMG, PWG, E&Y, controller?
  - For OPG looking at opinion that speaks to whether the trust can be consolidated within OPG and then would be one-line on province
    - E&Y as auditors of OPG providing opinion, expect a view by Tuesday but won't be full opinion, won't get official opinion until leg is drafted
- OFA would not be providing loan to OPG
  - Need to be element of 3rd party lending to OPG, could be 49% OFA/province but can't show all OFA, need to have some mix, at minimum 2 lenders
    - Need 2 because certain tests have to meet to allow OPG to consolidate the trust:
      - OPG needs to demonstrate they have control over the trust, how finance the activities of trust, who trustees are
      - Need to show financial risk and reward to OPG
  - OPG would need to create a trust, was looking at subsidiary, feel trust is better as want to avoid any situation of collateral
    - Don't cross securitize??
  - Comes down to needing to consolidate the trust and maintain status?

# Outstanding questions

February-17-17 3:38 PM

- Internal/External validation
  - Provide update on where that is, will have assessments for decision timeframe, with formal opinions coming with leg
- Tenants
  - Will work with MMA/MHO on report back to explore options
- Rural/remote problem
  - Provide the same explanation as is in deck but just do q/a on the disproportionate rates rural/remote have to pay
- Cost been increasing everywhere (greater than inflation? Compare to other?)
  - Reiterate how much costs have increased for every LDC, not just rural and remote
- Targeted at individual - don't have data
  - Expand on Minister Thibeault's answer that we can't target at that specific a level as we don't have data
- Debt vs deficit
  - Explain while may impact debt, goal/intent is not to impact fiscal plan

# Energy Feb. 21

February-21-17 8:00 AM

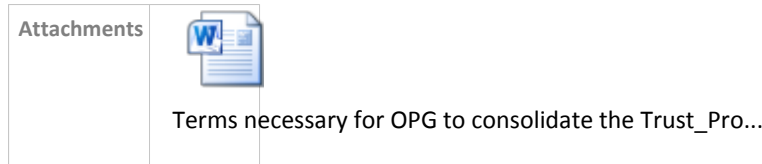
- 25% gets \$32B in debt
- Debt will be on books
  - Question is whether it is consolidated
- Issues
  - Highly visible
  - May fail
- Level of risk - if government controls OPG trust
- Refinancing not smoothing
  - Like refinancing the balance on your credit card

## 2 Risks

- Constitutionality
  - Re-Financing more than underlying assets can justify
    - Option 3 could do this better
- Accounting
  - IESO regulatory asset (before even goes to OPG trust)
    - When LDCs pay IESO and IESO pays PG more, that difference is fiscal hit
      - PSAB doesn't have regulatory asset concept (but every other standard does)
        - ◆ So creating an asset using framework
        - ◆ AG will say doesn't meet definition of asset
          - ◇ Think we can survive that with the assessments from KPMG, etc
    - Could get a panel to review this???
  - OPG trust consolidation
    - Does it get consolidated with OPG or with gov
      - More direction we give it, more likely it is consolidated with government and not OPG

# Energy Feb. 22

February-22-17 8:43 AM



- different opinions starting to come in
- OPG - 14 points, if align then ok
- Binney assessment coming in today
- KPMG last night?
- New minute for TB approval:
  - Need legislation before can do legal and accounting assessment? Not really confirmation, is it more about risk
  - SoC: Legislative mechanism for refinancing
  - Decision needs to be made assuming it is a fiscal hit and have to be ok with that
  - TB will assess the financial details of the transaction
  - Option: A feasible mechanism, legal, financing and accounting risk assessment, subject to final legislation
  - So if TB isn't comfortable with A, then go to B
- If GA mechanism doesn't work
  - Could still commit to 25% but phase in, if on fiscal plan getting to 25% right away is a huge hit so could phase in? how much would you do in 17/18? Would also mean you can't do anything else on scaleable options. So do social in 17/18 then phase in reduction
  - Develop options of what B would do – phase in, OESP could be scaled down, could also not to RRRP but just give them an additional 8%
- RRRP - modeling was just for Rural rate protection, not including remote customers, MO are interested in remote now so that adds an additional \$50M moving from rate base to tax base, buys diesel - offreserve remotes services by H1 remotes

# MP Feb. 23/17

February-23-17 10:32 AM

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>Fw: Rate Mitigation - Cabinet Submission + Major Projects Deck</b>                                                                                                                                                                                                                                                                                                                                                                          |
| From        | Kwamena, Boafoa (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                          |
| To          | Greenberg, Martha (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Cc          | Moore, Karen (CAB); Chochla, Megan (CAB)                                                                                                                                                                                                                                                                                                                                                                                                       |
| Sent        | February-22-17 9:25 PM                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Attachments | <div><br/>Cabinet Submission - Electricity Price Mitigation_GA...</div> <div><br/>Cabinet Submission - Electricity Price Mitigation_Fe...</div> <div><br/>GASmoothingFiscalSlide.pptx</div> |

# Call

February-26-17 2:14 PM

- Role of the OEB?
  - Supports some form of consumer protection?
  - Would have 2 roles
    - Oversee OPG and ensure trust doesn't co-mingle with other OPG assets
    - IESO and regulatory asset
      - To have regulatory asset, need to have a regulator, if OEB feels they don't have a role, then that means IESO can't have regulatory asset and then OPG trust can't take it on and debt is held at IESO
      - Given all changes beign made, could we look at making leg changes to ensure OEB does have a role
- Need to flag all risks, where we can say it we can flag what we are working on for mitigation but mitigation isn't a solution yet
  - Binney
  - Eurig
  - Regulatory asset
  - While we are working, the mitigation won't address the risk yet
    - e.g., leg change could help
- Keep "complete" in minute and have PO/cabinet take it out
- Would be good if this week is a must - have policy at Cabinet, then allow a TB on Thursday, do announcement on Friday
-

Feb. 27/17

February-26-17 7:49 PM

| Attachments |                                                                                   |
|-------------|-----------------------------------------------------------------------------------|
|             |  |
|             | GA Smoothing Sensitivities 2017-02-24.pdf                                         |
|             |  |
|             | 2017-02-25 Cabinet Submission - Electricity Price Mi...                           |

# Energy opinions

February-28-17 8:19 AM

|             |                                                                                                                                             |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>FW: Binnie opinion</b>                                                                                                                   |
| From        | Davidson, Steven (CAB)                                                                                                                      |
| To          | Greenberg, Martha (CAB)                                                                                                                     |
| Cc          | Foster, Robert (CAB)                                                                                                                        |
| Sent        | February-28-17 7:08 AM                                                                                                                      |
| Attachments | <br>Final LTR to Patrick Monahan re Global Adjustment F... |

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>FW: OPG White Paper - GAC deferral</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| From        | Davidson, Steven (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| To          | Greenberg, Martha (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Cc          | Foster, Robert (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Sent        | February-28-17 7:15 AM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Attachments | <br>Global Adjustment Deferral_White Paper_OPG r1a.pdf<br><br>ATT00001.htm<br><br>Global Adjustment Deferral - White Paper - Terms to ...<br><br>ATT00002.htm |

# GA Options

February-28-17 8:20 AM

|             |                                                                                                                                              |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>Fwd: GA Options</b>                                                                                                                       |
| From        | Hume, Steen (ENERGY)                                                                                                                         |
| To          | Greenberg, Martha (CAB)                                                                                                                      |
| Sent        | February-28-17 8:14 AM                                                                                                                       |
| Attachments | <br>Cabinet Submission - GA Financing Slides Feb 27_2000... |

- New options help to reduce financing risk
  - Still have legal and accounting
- Issue of GBE status of OPG
  - If interest rates get too high, may get to point where OPG can't finance the loan,
  -

# Rate Mitigation Finals

March-15-17 10:41 AM

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | RE: energy                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| From        | Chochla, Megan (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| To          | Greenberg, Martha (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Sent        | March-15-17 9:43 AM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Attachments | <div><br/>pwd.msg<br/><br/>RAN Electricity Price Mitigation v12 CLEAN FINAL 20...<br/><br/>price mitigation minute March 1 for cabinet final.do...<br/><br/>CBN - Electricity Price Protection Feb 8 final clean...</div> |



Cabinet Submission - Electricity Price Mitigation\_Fe...

# Rate Mitigation Implementation March 15/17

March-15-17 8:19 AM

|             |                                                                                                                                                                                                                                                                                     |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>FW: Rate Mitigation Implementation Meeting - March 15, 2017</b>                                                                                                                                                                                                                  |
| From        | Foster, Robert (CAB)                                                                                                                                                                                                                                                                |
| To          | Greenberg, Martha (CAB)                                                                                                                                                                                                                                                             |
| Sent        | March-14-17 3:47 PM                                                                                                                                                                                                                                                                 |
| Attachments | <br>Agenda_Weekly Rate Mitig Implmentation Group_March 1...<br><br>Consolidated - OFHP Matrix -Week March 13.docx |

## GA Financing

- OPG update
  - Engaging banks - RBC, CIBC, Goldmans
    - Securitization platform, within Canada and US
    - Looking at having platform in fall
  - Need to engage rating agencies
    - Who should OPG be working with to get modelling data, customer data
    - Need to get at impact on customers, that is big question rating agencies asking
  - Equity injection - need to think through the process
    - Issue shares? Create a second class of shares?
      - Would need change in OPG articles?
      - Will have cash coming back in to OPG as they start to make the money, need to be able to provide that cash to the province, how? What would that look like?
  - How will GA mechanism flow through - how much is needed on what timeframe? Will be assessed by rating agency
  - OFA - could they support the interim/temporary until platform is created?
    - Hoping to have system in place with the banks
    - Need to minimize reliance on OFA, better to have external to bridge if possible
    - 49/51 - can't have province do the 51%, then trust becomes province's, but could OFA provide some share if offered in stages
  - Went to Board of directors last week, reviewed concept on general, and discussed board governance
    - Created special committee of board, dedicated to this
      - First meeting is this Friday
    - AT Q: where is shareholder declaration at? To reduce risk, need to ensure directive is not too strong from province
      - Will be asked to consider from province but maybe the "whether to do it" would be a recommendation from OPG to the shareholder, and shareholder conquers
        - ◆ Will have its own structure
        - ◆ Need to demonstrate OPG business interest in executing this - need board to come to this agreement, that they feel there is a benefit to doing this
          - ◇ If province just tells OPG to do it, that is a problem for control
      - Timing/sequencing?
        - ◆ Does energy need to send directive to OPG asking them to think through/consider this?
        - ◆ Taking initial announcement as the ask of the agency to work on this
        - ◆ OPG is drafting a letter that the Minister could send to OPG asking them to do this, in maybe 2-3 weeks
        - ◆ Then OPG will send a letter back to shareholder after some further analysis
      - Need enhanced indemnification for Board? That would be part of the letter OPG sends back to government, after analysis
- IESO
  - Discussions on how to accommodate, IT, etc
  - Legal discussions with ministry, OPG
    - But really looking into how this would operate
  - KPMG opinion on regulatory construct - need to see draft leg to help inform that
    - Very draft, may not be ready for Michel
  - Legal focus has been in what IESO does in interim and pass on to OPG
- OEB
  - Work on letter from Minister
    - Allows to consider injection to result in reduction to consumers
    - Drafting on letter underway
    - Working to get better understanding of what is intended, future containment of rates (rate of inflation)
    - Expect to share draft letter end of week
  - Also OESP piece being reviewed
    - Expect to issue orders to get credit off bill for May 1, order to go out early April, end of March

- Working to implement the credit chart
  - Sending letter of direction to LDCs, assume this is what is happening so up and running for May 1,
  - All work to ensure operational underway
  - Automatic enrolments work underway, is a plan but may be difficult to implement, looking at other options for automatic enrolment
    - Won't be there for May 1 but maybe July 1
- AT
  - May 1 for LRC
    - RPPP for May 1 for rate smoothing
    - OESP enhancement
  - When changes come out for May 1 - people will do number crunching with RPPP and others, then add in 8%, but will need to show the % that social programs are contributing to 25%
    - The GA piece will come with passage of leg, just months
  - Issues management as won't see 25% at the same time
  - RPPP - news release would be about 2 weeks before takes effect, need to plan for that, so NR would be mid-april
    - Good news but just need to plan for comms as won't see 25%
  - Delivery line credits through RRRP and regulatory line changes are done through July 1
    - If LDC can't make that timing, then when they do has to be retroactive to July 1
- Can't pull off RRRP charge until leg goes through but can take OESP charge off bill as OEB has that authority for May 1
- Need to consider contempt of leg - given the staging of the pieces, need to just watch the comms/messaging
- Legal/legislation
  - OPG and Torys - all on same page for concepts, getting into details, discussions with IESO in parallel
  - 5 buckets
    - Nuts and bolts of new program into leg
    - Role of OEB
    - Role of OPG
    - Market considerations
      - Need to consider what needs to be in leg vs commercial terms
      - What do you do about customers "leaving" - would there be an exit charge?
      - If switch to net metering, not really leaving but how does that work? Less charges but need to consider
        - ◆ Need to consider net metering program
      - Need to try to protect about asset diminishing in value
    - "other"

#### Affordability Fund

- Draft TPA - H1 provided some feedback
- Draft back to H1 tomorrow
- Some slippage on timeline
  - Hoping to have final documents end of next week
- Execution is through DM
- H1 started having discussions with "computershare" - who would act as administrator, who would act as initial trustee
  - Within certain timeline formal/final trustee would be appointment
  - Funds would flow to trustee until criteria are final etc
  - Iterative
  - Looking at up to 5 trustees
    - Setting up criteria to be trustee
      - e.g., Need to have knowledge, expertise, etc on programs like this
      - Include United Way?

#### RPPP/OESP/FN

- Many sub-committees for each program
- LDC working group kicked off last week
  - Not CEO working group but actually people who would be implementing and understand how bills need to look how money would flow
- OESP - reg posting up, gives options (may not need reg but keeps options open)
  - Deals with three different enhancements
  - Meeting with MCSS to get perspective with how operated in past with automatic qualifications (e.g., health smiles)
  - Plan is to get credit changes by May 1 but automatic enrolment may take until the summer
  - CRA exemption -
    - CRA requires wet signature which is often barrier to enrolment, applies to any provincial program where CRA does income verification, they claim due to security requirements
    - CRA working on changes but not until 2018/19
    - AT going to Ottawa, will discuss what need CRA to do
- RRRP
  - Sitting down next week with the 7 LDCs plus H1 but LDCs are more passive in their role
    - More with OEB, IESO and ministry
  - May need to support the small LDCs who aren't used to this, and their old billing systems?
- FN
  - Need to do more work on this, leverage COO/energy table?
  - Some choices that need to be made will make this easy or hard
    - Who is eligible? e.g., households on reserve? Pretty straight forward and quick to implement

- But if more about only FN person, that is more difficult
- AT - need to make this as clean as possible, as easy as possible
- There is no way an LDC knows if someone is FN - need to make this geographically based, way too hard the other way
  - Don't want to go to each Chief and ask them to decide who is FN and eligible
  - There are defined boundaries for reserves, can't we use those?
- 📁▪ OEB is posting report, with transmittal letter, with copy to Chief Hill

#### ICI

- CME very vocal, do we want to provide support to CME to provide them with support to engage their members?
  - Need to discuss how to manage
- Ontario Chamber of commerce (OCC) - MEDG not supportive of using them to get message out, asked to explore
- EDA - some concerned through conservation programs, some might drop below 500 we don't want people not do to conservation so some form of criteria that prior to using programs you use more than 500?
- May 2017? Will see change on July bill

#### AT

- Moody's paper OPG shared - how would true up mechanism would work?
  - Not sure how would work yet, a function with respect to how much warehousing would need to do
    - Runs predictions vs actuals
  - Two elements
    - Every month determine the amount OPG buys, there will be adjustments to that month to month
    - Then when go to collection from customers so if a huge amount of load comes out, how do you readjust the rate to recover, is the rate that is being charged back through allowing to pay what need to, need to assess that every 6-12 months
      - Aligns relatively well with RPPP which takes place twice a year, basically a true up/variance account
      - Mapping against forecasting
  - What order of magnitude in warehouse?
    - Max capacity would be around \$500M
      - Are those funds in warehouse being used or waiting in case needed? Acts as short-term borrowing so dno't go out to market every month, will go out maybe quarterly
      - So buy asset, let warehouse accumulate, then use bring down to zero, then buy asset, etc

#### OPCD

- Request by AG for briefing
- FAO had briefing last week by energy staff
  - Expecting letter from FAO
  - Were very curious, no really tough questions at briefing
  - More curious about tax base funding and impact on provinces books
- Can use same people to brief AG?

# LTEP - april 6/17

April-06-17 1:33 PM

## Attachments



2017-03-29- LTEP Update for PO v3.2 (clean).pptx

[Link to Outlook item](#)

## Notes

- Next briefing: Market renewal (IESO)
- Consultations went very smoothly, not a lot on pricing, most on supply, very engaged public sessions, much advanced from 2013
- Issues:
  - Alignment to CCAP
    - Can plan for push on Evs but switch to electricity for things like home heating are not as likely
    - So what do you bake into plan now
  - Supply/demand
    - How do you take into account the variation that we just aren't sure of
    - Publish a range
  - Impact of fair hydro on rates/curve
  - How fuels fit in to plan
    -

# Rate Mitigation Update April 18/17

April-18-17 9:02 AM

- OEB adjust rates for may 1 based on comfort letter - expect to be known april 20th
- "Clean energy adjustment" (the debt that will need to be serviced)
- Immediate adjustments in rates ("fair adjustment")
- If rates increase above CPI - who funds? Go above CPI or use tax base
  - Looking at reg to go above but...
- Drafting - need more time
  - Pens down 28th
  - Cabinet may 10th (DtC for LRC approval, TB on May 9th)
    - Public service presentation, fact based, the considerations, need visual on structure
- Bill presentment - have to show the recovery on the bill when that hits
- Accounting
  - Opinions will be part of TB sub
  - Would they be publically released? Will be pressure to do so

# Fair hydro leg FPC May 2/17

May-02-17 8:51 AM

| Attachments |                                                                                   |
|-------------|-----------------------------------------------------------------------------------|
|             |  |
|             | FPC Agenda -May 3, 2017.docx                                                      |
|             |  |
|             | 23121467-v9-Ontario Fair Hydro Plan Act - Briefing P...                           |

## SoC/PO - LTEP/QC May 31/17

May-31-17 10:05 AM

|                                                     |                                                                                   |
|-----------------------------------------------------|-----------------------------------------------------------------------------------|
| Attachments                                         |  |
| 2017-05-30 - LTEP Process Update- Multicorners.pptx |                                                                                   |

### LTEP

- now - consultations complete, working wit IESO
- Pieces that are being worked on:
  - Need to bend cost curve down -
  - Quebec discussions
  - CCAP emissions
    - Need some peaking ability, where does that peaking come from - natural gas or Quebec?
    - Otherwise cost can't come down as much given emissions forecast
- Market renewal process
  - Could you design it to include Quebec?
  - Have existing supply compete plus new - would be good but may not be possible...
  - Quebec wants both - ability to play in market plus the 20yr contract
    - The market is that there are times when they will have ability to offer energy on spot market when they have it
  - Capacity auction, rate equal to cheapest rate now (currently natural gas)
  - Compare that price to nuclear -
  - Capacity gap starts 2020, could leverage QC then to fill the "wedge"
    - What are options to fill that gap/wedge
    - Nuclear doesn't compete in that wedge
  - Market renewal is already factored into the price curve, so whatever we want to do here, has to be better than
  - In hydro plan, assumes existing units continue to be used to justify
  - Can look at having both quebec and nuclear but then replace natural gas
    - If want only QC and not nuclear, would need more than the \$20M investment in intertie for that capacity
- Objective we are solving for:
  - Cost, carbon, economics/job impact
  - Modelling will mirror this - detail what modeling will be done
  -

### Quebec opportunity

- A chance that could increase costs, not decrease
- Good discussion yesterday with Quebec
- IESO and Hydro Quebec part of some of the discussions
- HQ give Ontario terms, in writing to make a decision based on
  - What are the parameters, including price
  - Expect to get something in a week
- From system planning, need to know what we'd get, when
- Don't want to add generation when we don't need it
  - Leads to nuclear off-ramp
    - Indirect costs of off-ramps (means might not refurb all units but will need some, increases the cost of those units that are still refurb)
- Need to do that analysis of triggering off-ramp
- Need to put all options on the table to make decision
  - Including those that we might not want to

|             |                                                                                                                                           |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>FW: QC-ON Electricity Trade Materials</b>                                                                                              |
| From        | Hindmarch-Watson, Tim (CAB)                                                                                                               |
| To          | Moore, Karen (CAB); Greenberg, Martha (CAB)                                                                                               |
| Cc          | Kwamena, Bofoa (CAB); Astill, Michelle (CAB)                                                                                              |
| Sent        | May-29-17 10:07 AM                                                                                                                        |
| Attachments | <br>QC-ON Update - Minister's Briefing - May 18 2017 - |

# LTEP May 31/17

May-31-17 10:27 AM

| Attachments |  |
|-------------|--|
|             |  |



2017-05-25- PO LTEP Deck - Enhancing Commitment to C...



Achievable Potential Study briefing\_Premier's Office...

[Link to Outlook item](#)

## Notes

# OFHP Update June 2/17

June-05-17 8:53 AM

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>OFHP IWG Materials</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| From        | Hindmarch-Watson, Tim (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| To          | Greenberg, Martha (CAB); Moore, Karen (CAB); Astill, Michelle (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Cc          | Johnston, John (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Sent        | June-02-17 5:08 PM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Attachments | <div><br/>2017-06-01-OFHP Implementation Matrix.pdf</div> <div><br/>2017-06-01- OFHP TB-MBC report back requirements sum...</div> <div><br/>2017-06-01- OPG- Dealers deliverables.pdf</div> <div><br/>2017-06-01- OFHP IWG Agenda.pdf</div> <div><br/>2017-06-01- OPCD DRC comparison chart- Draft for com...</div> <div><br/>2017-06-01- OFHP Outstanding Business Issues BN.pdf</div> |

Please find attached the materials from yesterday OFHP Implementation Working Group meeting. Discussion was general and high level on ongoing implementation efforts and some timing considerations around materials etc. Some technical issues appear to be continuing to crop up but nothing critical. Good outline of outstanding items in the attached BN.

There was discussion of recent engagements with the AG and the fact that the IESO has now complied with AG's request to share emails related to OFHP. OEB, OFA, Energy have similar requests for emails that will be addressed soon.

Michelle, please share with the DM as appropriate.

Let me know if you have any questions.

Thanks

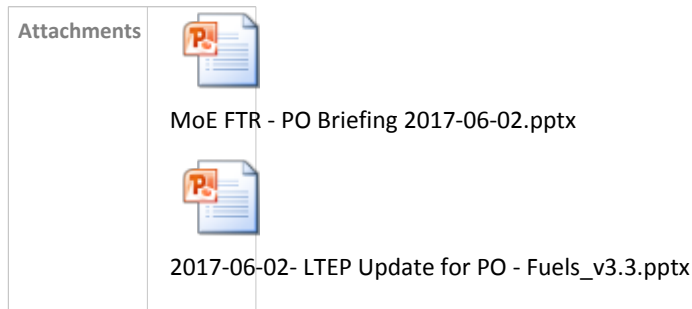
**Tim Hindmarch-Watson**

Policy Advisor  
Justice, Resource and Environmental Policy  
Policy and Delivery Division  
Cabinet Office



# LTEP: Fuels June 6/17

June-06-17 9:28 AM



[Link to Outlook item](#)

## Notes

- OPO was about mapping increasing electrification, so fuel switching
  - But fuels report builds off some of those outlooks to talk about fuel switching within fuels (outlook E and F)
- Unit costs - fixed costs for natural gas but costs are going up (compared to unit costs for transportation which are coming down but that is being masked by higher natural gas fixed costs)
- Renewable natural gas
  - Modelling for emissions reduction includes assumption of reduction based on this sector
  - Takes proceeds to do this and for the amount modelled would take more proceeds than currently allocated
  - Want to incent more RNG and not have to either buy allowances or give free allowances to enable this work to happen
- OEB - looking at second review of compliance plans (with CCAP) from gas utilities
- Role of fuels in LTEP
  - Less...
  - Focus on action areas (e.g., RNG, transportation fuels)
  - Not about new announcements on fuels in LTEP, keep it relatively low-key
  - Any signal needed to be sent to utilities in case of planned future
- MOECC perspective on fuels...looking to see bigger???

# LTEP/QC June 6/17

June-06-17 2:03 PM

|             |                                                                                                                                              |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>FW: HQEM / LTEP = 2pm Product</b>                                                                                                         |
| From        | Davidson, Steven (CAB)                                                                                                                       |
| To          | Greenberg, Martha (CAB)                                                                                                                      |
| Sent        | June-06-17 1:01 PM                                                                                                                           |
| Attachments | <br>Modelling_Impact_Assumptions proposal_Clean_June 6.p... |

pswd: Paris17

- Cost decrease from previous estimates for intertie upgrade, in part due to not needing to bury the wires anymore as previously assumed
- Scenarios
  - Base case is outlook B plus more EV
  - Scenario A...
    - Using maybe around 10% of natural gas, they were built to align with refurb so have ability to ramp up when need, same with weather, build up for hottest days
  - Add new option of some mix of nuclear and gas
    - Now positioned as "option 1 is get rid of gas, option 2 is get rid of Darlington, option 3 is get rid of Bruce
- Comms - through LTEP difficult to say taking nuclear off-ramp, can't actually trigger offramps yet and don't want to scare the market
  - Could say will continue to match supply with demand and necessary decisions with that
- Overall - will be difficult to bend cost curve further but may be able to bend the emissions curve
- Capacity market connection
  - Want to allow that as expect price savings and innovation
  - How much capacity would we be seeking through auction?
    - Start when Pickering comes off-line but then as more contracts come to end, we then add that capacity to auction
  - Need to remember that assets are being amortized for global adjustment so both in market and with Quebec, need to show that it is cheaper than what we've assumed in global adjustment
- PO - cost for Bruce and Darlington refurb (total cost per)
- Next steps
  - Finalize term sheet with Deloitte
  - Give IESO modelling assumptions for end of week
  - Ieso will need two weeks to do modelling
  -

# OFHP Implementation Dates

June-09-17 1:11 PM

|             |                                                                                                                                 |
|-------------|---------------------------------------------------------------------------------------------------------------------------------|
| Subject     | RE: OFHP Implementation Dates                                                                                                   |
| From        | Hindmarch-Watson, Tim (CAB)                                                                                                     |
| To          | Downarowicz, Ewa (CAB)                                                                                                          |
| Cc          | Moore, Karen (CAB); Greenberg, Martha (CAB); Johnston, John (CAB)                                                               |
| Sent        | June-09-17 1:06 PM                                                                                                              |
| Attachments | <br>OFHP Program Implementation Dates- V3.docx |

|             |                                                                                     |
|-------------|-------------------------------------------------------------------------------------|
| Attachments |  |
|-------------|-------------------------------------------------------------------------------------|

REG-11477\_ID49242\_LRC

Latest CBN

|             |                                                                                                                         |
|-------------|-------------------------------------------------------------------------------------------------------------------------|
| Attachments | <br>reg2017.0268.e06.docx              |
|             | <br>reg2017.0247.e10 (RRRP).docx      |
|             | <br>_reg2017.0270.e07 - edi_seal.pdf |

Draft regs

Passwords:

- Distribution rate protection (DRP) – pw: snowplow
- RRRP – pw: summer
- First Nation Delivery Credit – pw: snowplow

# Final OFHP June 14th regs

June-09-17 5:37 PM

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>FW: OFP Reg for June 14</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| From        | Hindmarch-Watson, Tim (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| To          | Moore, Karen (CAB); Greenberg, Martha (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Sent        | June-09-17 5:04 PM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Attachments | <div><br/>_reg2017.0295.e03_seal.pdf</div> <div><br/>_reg2017.0246.e09_seal.pdf</div> <div><br/>_reg2017.0247.e13_seal.pdf</div> <div><br/>_reg2017.0266.e02_seal.pdf</div> <div><br/>_reg2017.0268.e07_seal.pdf</div> <div><br/>_reg2017.0269.e06_seal (2).pdf</div> <div><br/>_reg2017.0270.e07 - edi_seal.pdf</div> <div><br/>_reg2017.0283.e02_seal.pdf</div> |

FYI

Tim Hindmarch-Watson  
416-325-4618

Attached are all the sealed regs that will be going to Cabinet next week. They are p/w protected. Most of them are “snowplow”. Then there’s “summer” and one of them is “132”.



# OFHP regs TB

June-12-17 3:50 PM

|                    |                                                                                                                                                                                                                                                                                         |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Subject</b>     | <b>FW: Draft TB Sub</b>                                                                                                                                                                                                                                                                 |
| <b>From</b>        | Hindmarch-Watson, Tim (CAB)                                                                                                                                                                                                                                                             |
| <b>To</b>          | Greenberg, Martha (CAB); Moore, Karen (CAB)                                                                                                                                                                                                                                             |
| <b>Cc</b>          | Johnston, John (CAB)                                                                                                                                                                                                                                                                    |
| <b>Sent</b>        | June-12-17 10:07 AM                                                                                                                                                                                                                                                                     |
| <b>Attachments</b> | <div><br/>Copy of TBMBC 20 Cover and Admin Data_OFHP (2) 17060...<br/><br/>TB Sub _OFHP Report Back_June 9.docx</div> |

FYI

Tim Hindmarch-Watson  
416-325-4618

**From:** Skubel, Chris (TBS)  
**Sent:** June-12-17 9:51 AM  
**To:** Hindmarch-Watson, Tim (CAB)  
**Subject:** FW: Draft TB Sub

FYI

**From:** Schlaepfer, Martin (ENERGY)  
**Sent:** June-12-17 9:47 AM  
**To:** Skubel, Chris (TBS)  
**Cc:** Malekzadeh, Afshin (TBS)  
**Subject:** Draft TB Sub

Hi Chris,

Attached is the draft TB sub on the OFHP report back. Please note this is not yet MO reviewed, so may still undergo changes.

Thanks,  
Martin

# OPG DGR EA Path June 15/17 SoC

June-15-17 8:03 AM

|             |                                                                                                                                              |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>FW: Briefing Material briefing on OPG DGR EA Path Forward - June 15/17 @ 8 am</b>                                                         |
| From        | Foster, Robert (CAB)                                                                                                                         |
| To          | Greenberg, Martha (CAB)                                                                                                                      |
| Sent        | June-13-17 3:19 PM                                                                                                                           |
| Attachments | <br>OPG DGR EA Path Forward.brfg to SoC.new date.17june1... |

- Overview of location/geology
  - Good for the low level waste
- Engagement with SON
- Michigan/US concern - why?
  - Most organizations are good but there is noise
    - Several organizations have endorsed the project
  - With water concern in Flynn and the local politics
- Will this also be repository for fuel? (adaptive phase management)
  - This area is under consideration, as a separate facility
- Process - expect decision of feds to be judicially reviewed, by intervenors (they already tried but tried too early, can't ask for review until EA approved)
  - Will go through all those necessary steps and reviews
  - If fed Minister does not approve EA, problem remains
  - Approval is like a 2 step process - could get approval based on set of conditions, then up to CNSC to monitor all those conditions
- Would you look at an alternative option in case?
  - Would not at this stage, would be costly just to get to the phase where we are at
- Ontario has not been pushing feds "publicly" (M to M) on EA
  - Feds asked not, are discussions going on but not publically
  - Working more with stakeholders
  - Is there third party supporters that we an leverage to get message out so not all OPG to talk about the benefits
- Local politics
  - If there isn't this permanent solution, then we have issues with present as communities don't want the current system

# LTEP: Innovation and Customer Choice June 20/17

June-20-17 11:50 AM



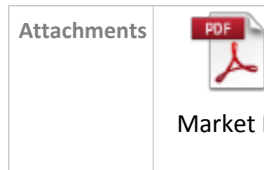
2017-06-16- PO LTEP Deck - Innovation and Customer C...

[Link to Outlook item](#)

## Notes

# LTEP: IESO "Market Reform Update" June 20/17

June-20-17 11:50 AM



Market Renewal and Environmental Policy\_June 16\_FINA...

[Link to Outlook item](#)

## Notes

- What can be in LTEP on market renewal given longer-term policy work still going on
- Does cabinet need to make any decisions on this for LTEP? Approvals required?
  - Minister already signalled
  - 5M in savings built in already
  - Quebec discussions will impact this
  - Question is more about how much savings you can put into the model

# LTEP: Supply and Demand June 26/17

June-26-17 12:57 PM



IESO LTEP Planning Outlook Discussion\_PO\_June 26 201...

[Link to Outlook item](#)

## Notes

# PO Briefing - EV charging

June-27-17 8:24 AM

|                    |                                                                                                                                              |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Subject</b>     | <b>FW: PO Briefing - EV charging</b>                                                                                                         |
| <b>From</b>        | Moore, Karen (CAB)                                                                                                                           |
| <b>To</b>          | Greenberg, Martha (CAB)                                                                                                                      |
| <b>Sent</b>        | June-26-17 5:14 PM                                                                                                                           |
| <b>Attachments</b> | <br>2017-06-23 - Presentation - Overnight Charging Optio... |

!!!!

**From:** Schlaepfer, Martin (ENERGY)

**Sent:** June-26-17 5:14 PM

**To:** Moore, Karen (CAB)

**Cc:** Hindmarch-Watson, Tim (CAB); Chatterjee, Jeet (ENERGY)

**Subject:** PO Briefing - EV charging

Hi Karen,

Please find attached the deck for this week's PO briefing on EV charging.

Thanks,  
Martin

**Martin Schlaepfer**

Director of Operations

Deputy Minister's Office

Ministry of Energy

T: 416-326-7688

E: [martin.schlaepfer@ontario.ca](mailto:martin.schlaepfer@ontario.ca)

# Pickering update

June-27-17 8:50 AM

|             |                                                                                                                                        |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>FW: Status of Pickering</b>                                                                                                         |
| From        | Hindmarch-Watson, Tim (CAB)                                                                                                            |
| To          | Greenberg, Martha (CAB); Moore, Karen (CAB)                                                                                            |
| Sent        | June-23-17 9:59 AM                                                                                                                     |
| Attachments | <br>QA for C) - Pickering Life Extension - Clean.docx |

FYI

Tim Hindmarch-Watson  
416-325-4618

**From:** Schlaepfer, Martin (ENERGY)  
**Sent:** June-23-17 9:57 AM  
**To:** Hindmarch-Watson, Tim (CAB)  
**Cc:** Martin, Eric (ENERGY)  
**Subject:** RE: Status of Pickering

Hi Tim,

Attached is a brief status update note on Pickering.

Thanks,  
Martin

**From:** Hindmarch-Watson, Tim (CAB)  
**Sent:** June-13-17 1:15 PM  
**To:** Schlaepfer, Martin (ENERGY)  
**Cc:** Martin, Eric (ENERGY)  
**Subject:** RE: Status of Pickering

Okay. Next week is fine too. It came up in discussion with PO in the context of market reform, offramps, and electricity trade and my management would like to get some clarity on current status. Thanks

Tim Hindmarch-Watson  
416-325-4618

**From:** Schlaepfer, Martin (ENERGY)  
**Sent:** June-13-17 1:13 PM  
**To:** Hindmarch-Watson, Tim (CAB)  
**Cc:** Martin, Eric (ENERGY)  
**Subject:** RE: Status of Pickering

Thanks, Tim. We will do our best for the end of the week, but there is lots going on so it might be challenging.

Can I ask what the source of the request is?

Martin

**From:** Hindmarch-Watson, Tim (CAB)

**Sent:** June 13, 2017 1:08 PM

**To:** Schlaepfer, Martin (ENERGY)

**Subject:** Status of Pickering

Hi Martin:

I know there is a lot going on, but there was another item that I was hoping you could look into for me. The question has come up of where we were at on the status of the multi step process that Cabinet laid out on the Pickering Extension. The minute from the discussion is below along with some editorializing and questions in red:

Cabinet agreed that:

1. The Ministry of Energy (ENERGY) ensure that Ontario Power Generation (OPG) continue with technical and economic assessments on the potential for ongoing Pickering operations, and proceed with regulatory and technical filings with the Canadian Nuclear Safety Commission (CNSC) and Ontario Energy Board (OEB) to ensure project feasibility.
2. ENERGY seek Treasury Board/Management Board of Cabinet approval of OPG's 2016-2018 Business Plan (approved at May 9 TB/MBC) before providing Shareholder concurrence (has this happened?), and report back to Cabinet after CNSC and OEB reviews of ongoing Pickering operations are complete (Any expectation of timing?)
3. ENERGY work with OPG and Cabinet Office on a communications strategy.

Happy to discuss further if need be. No rush on this, but by end of the week would be great.

Thanks!

**Tim Hindmarch-Watson**

Policy Advisor

Justice, Resource and Environmental Policy

Policy and Delivery Division

Cabinet Office

416-325-4618

# PO briefing on Hydro Quebec

June-27-17 10:38 AM

|             |                                                                                                                                                                                                                                                                                                    |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | PO briefing on Hydro Quebec                                                                                                                                                                                                                                                                        |
| From        | Kwamena, Boafoa (CAB)                                                                                                                                                                                                                                                                              |
| To          | McEachern, Gillian (OPO); Donelson, Philip (OPO); Marangoni, Emily (OPO)                                                                                                                                                                                                                           |
| Cc          | Foster, Robert (CAB); Greenberg, Martha (CAB)                                                                                                                                                                                                                                                      |
| Sent        | June-25-17 8:07 AM                                                                                                                                                                                                                                                                                 |
| Attachments | <div><br/>PO CO _ON-QC Presentation_Clean_300.pptx</div> <div><br/>IESO Planning Outlook for Quebec Discussion_PO_June ...</div> |

Pswd: Paris17

# Overnight Charging June 29/17

July-05-17 3:20 PM

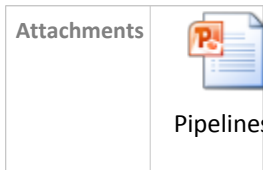


[Link to Outlook item](#)

## Notes

# Energy East Pipeline July 5/17

July-05-17 1:17 PM



Pipelines Update for PO-CO on July 5 - 2017-06-30.pp...

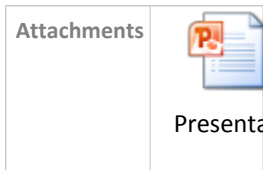
[Link to Outlook item](#)

## Notes

- NEB modernization
  - Feds taking more holistic approach, discussion paper that includes review of more than NEB but includes more broadly EA
    - Gov Ontario position on paper (energy AND MOECC)
    - comments due end of August
- Follow up:
  -  ○ Discussion paper response

# Home Energy Rating & Disclosure July 6/17

July-05-17 3:04 PM



Presentation to PO re HERD on July 6 - 2017-07-05-12...

[Link to Outlook item](#)

## Notes

Commercial buildings....where is ops buildings re: energy usage?

# Draft bootleg LTEP

July-07-17 8:32 AM

|             |                                                                                                                                     |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>LTEP- please do not forward</b>                                                                                                  |
| From        | Hindmarch-Watson, Tim (CAB)                                                                                                         |
| To          | Greenberg, Martha (CAB); Moore, Karen (CAB)                                                                                         |
| Sent        | July-06-17 3:01 PM                                                                                                                  |
| Attachments | <br>2017-07-05- LTEP Cab Sub consolidated v 3.pptx |

FYI! My little birds came through...

# Quebec Hydro/LTEP prebrief July 11/17

July-11-17 12:01 PM

|             |                                                                                                                                                          |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>RE: Meeting regarding Quebec Hydro/LTEP</b>                                                                                                           |
| From        | Armstrong, Hillary (ENERGY)                                                                                                                              |
| To          | Kwamena, Boafoa (CAB)                                                                                                                                    |
| Cc          | Frndova, Lucia (CAB); Bromm, William (CAB); Greenberg, Martha (CAB); Schlaepfer, Martin (ENERGY)                                                         |
| Sent        | July-11-17 11:51 AM                                                                                                                                      |
| Attachments | <div><br/>Overview and Comparison of June 2017 Quebec Offer_DR...</div> |

|             |                                                                                                                                           |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Attachments | <div><br/>PO CO_ON-QC Presentation_Clean_July.pptx</div> |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------|

# LTEP/OFHP July 11/17

July-11-17 3:06 PM

- Guarantee
  - OPG - needs to look out for best interest and do what they need to do but are being cooperative as need province to act as guarantor but province needs them to accept some terms
    - OPG wants to borrow in US, OFA not supportive, don't see as necessary especially in first year, can obtain what need in first year
    - What is truly needed in guarantee?
    - In going the model they are proposing, increases interest rates when don't need to take that on especially in first year
    - Can't direct them on how to borrow but can pressure them
    - Can we restrict/put conditions on our guarantee?
      - No, impacts the program
  - OPG looking to lock things down to go out to market but we need more time
    - Aiming for October
    - Need rating agencies before go to market
- Interest
  - How interest income gets into trust in first 4 years
  - Clean energy adjustment not charged to rate payers for first 4 years - so how does trust break even in first 4 years?
    - Idea was ratepayers 2% would pay interest but if no income is going into trust, how is it kept whole?
  - Leads to fiscal hit
  - IESO/OPG working on solution
    - Can IESO carry liability? If too big, trips accounting opinion
  - Or ratepayers reduced by 25 but take 27 out of the system and put 2 into IESO
    - Impacts constitutional opinion, puts that at risk faster
  - Options outside trust?
- Constitutional Law
  - Navigant report - under solicitor client privilege, done through Blakes
  - Financing requires disclosure so curve will be known, rating agencies also need to see curve (when creating asset, when paying for the asset)
  - AG will get copy eventually
  - Quantifies how much can push to future - says can refinance 40% of what we want to refinance (says we can do 10B over 4, so after 2.5B each year for 4 years all costs hit so creates 25% increase in year 5)
  - At moment, not clear whether there are sufficient grounds that this is disproportionate or whether it would be purely speculative
  - Can you footnote the curve that says may include taxbase support
    - 25% includes the 8% HST tax base support, leaves 17% that is being refinanced, which includes the 2% for social programs
- Legal opinionaries
- Rating agencies
- AG
- Accounting
  - Discussion with KPMG and impact of Navigant report, may put model at risk
- IESO status
  - Need them to sign transfer agreement with
  - AG is criticizing their accounting, IESO will stand firm on 2016 but audit committee unsure on 21017
  - Means if they aren't sure, they can't sign transfer agreement
  - KPMG working on response to AG (as auditors of IESO)

## Next steps

- Create deck that provides issues and mitigation
- LTEP

# LTEP latest draft

July-12-17 4:06 PM

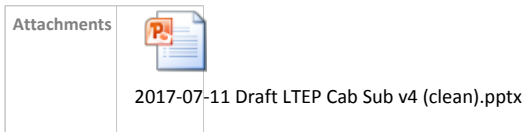
|             |                                                                                                                             |
|-------------|-----------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>LTEP latest draft</b>                                                                                                    |
| From        | Hindmarch-Watson, Tim (CAB)                                                                                                 |
| To          | Moore, Karen (CAB); Greenberg, Martha (CAB)                                                                                 |
| Sent        | July-11-17 11:06 AM                                                                                                         |
| Attachments | <br>2017-07-10- Draft LTEP Cab Sub v3.pptx |

FYI! Still bootleg

Tim Hindmarch-Watson  
416-325-4618

# LTEP: Draft Cab sub w PO July 12/17

July-12-17 4:05 PM



[Link to Outlook item](#)

## Notes

- Curve - need to take into account M sets the financial allocation amount, that is given to OPG to then fund
- What are decisions points
- What rocks did we overturn to see what costs could be dealt with in 4+ years, after 25% reduction comes off
- Net metering and Green Button need leg??
  - FES
- E-W tie (p. 25)
  - Need to rethink given updated costing
    - Costs expected to start 2020
  - IESO still modeling cost implications, need IESO recommendation on whether line is still needed
  - Can't rescind order at moment
- N-W Bulk
  - Approval to start the planning, initiate what we know we need and have building blocks ready for when we may need
  - Phase 2 is included in costs projections, so would reduce that (post 2020)
  - Phase 3 impacts Manitoba but not there yet
- Bulk planning
  - No costs associated but better planning
- Market renewal
  - No specific decision but more continue to profile
  - Policy statements in LTEP that intent to see market renewal allow for CDM, DR, renewables to compete appropriately with traditional forms of generation
    - PO: Decision point about whether market renewal will focus on renewables
    - MO: want to be lose on language so can ensure get the rate payer savings have already included in calculations (\$5B savings)
    - Balance the price curve with GHG as can't have GHG go up
  - PO: Would like to see from cabinet support for this,
- C&T
  - Talking about benefits of policy on system
  - Point to how LTEP supports climate change - electricity system is good, fuels has some way to go but can do that
- Nuclear assets
  - Reiterating what we have said to date
  - Relates to Quebec
- 33 - ways to run system better to keep costs lower, be
- Transmission corridor
  - GTA West
  - From energy perspective, feel need to preserve ability for hydro corridor even if give up highway but means have to hold on to the corridor
  - Energy doesn't have a mechanism to preserve a corridor, so piggyback on MTO/MMA process
- Reliability
  - Not questioning system now but ways could do better to let customers know what right metrics are and incentives to live up to those metrics
  - Need comms - some moneyback guarantee/service guarantee that if not weather related...
- Competitive transmitter
  - Bill 35?
- Righ sizing assets
  - Incent new, don't just do same old, if ccan be smaller when replace do that, don't' just do what always did
  - e.g., non-wire solutions if possible
- Red-tape/modernize LDCs and regulator (OEB)
  - Be more efficient
- Modernize utility business
  - Bill structure is creature of government, prescriptive
  - Launch initiative on how could be done different
  - H1 out there already on bill redesign on pilot and see how that goes
  - Could be fall launch for more
  - Bill isn't what customers want
  - January implementation (fall conclusion)
- Behind meter

- Now we give money to business to do gas plant as they aren't drawing on grid, they are doing combined heat/power projects so if not drawing on grid, can access fund
  - Protects for storage for solar
  - This existing tool is a cost saving lever for industrial customers (GAM avoidance through CHP)
  - Would stop accepting new applications
  - Savings of 0.4Mt GHG
  - Timing -
- In front of meter
  - Line inefficiencies/line loss ID, voltage regulation
- Green button
  - New standard to be coming but more to do with implementation document and that can speak to latest tech that is out there
  - Need directive? Leg...
  - Get all policy approval through LTEP
- Social benchmarking
  - Reportback on CCAP
- 53+ no decision point but mentioned in document
- EE standards
  - Nothing new
- Electricity Cx target
  - Reiterating commitment
  - Making point for higher targets in future
  - PO: IESO modeling higher Cx target
    - Results of that...would add \$11/month if pursued higher target, if start now
  - Better to treat Cx as supply lever when have supply need, so when need exists pull that lever then
    - Enough Cx can equal new gas plant
  - PO: narrative, instead of just saying we'll look later at this, need to explain how we are shifting how we look at Cx as a supply opportunity
- Demand response
  - Are we reaching 10% now? We are above what expected to be at...?
  - PO: why would we eliminate this target?
    - MO: Don't set artificial target, could be anything, want to continue to pursue it, we are eliminate all other targets so why keep it for this; don't want to put number on IESO, they are committed to maintaining DR, stakeholders want to be part of capacity auction
    - DR, storage and conversation stakeholders feel they are most to gain in a capacity auction
  - PO: unsure about removing target
- Alignment of Cx programs
  - Narrative
- Smart thermostats
  - Standard offering for smart thermostat, need to bring consistency to program
- GIF
  - Narrative
- Investor confidence project
  - Help customers get financing for innovative projects
- TB ask - smart grid fund, international demonstration fund
- Smart grid fund
  - Great businesses doing cool stuff but we've constrained ourselves
  - Impossible to get funding through programs
- International demo fund
  - PO: speaking with MRIS about what they are doing on cleantech
  - PO: could this be specific to renewables? MO: yes, but also innovation but focus on green tech, don't want to support nuclear tech though
  - PO: GGRA proceeds?
  - MO: explore opportunities to get \$10M, ggra may be too hard

# Hydro Quebec July 13/17

July-13-17 11:28 AM

|             |                                                                                                                                                                                                                                                                                                        |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>Material for Hydro Quebec Meeting</b>                                                                                                                                                                                                                                                               |
| From        | Kwamena, Bofoa (CAB)                                                                                                                                                                                                                                                                                   |
| To          | Orsini, Steve (CAB)                                                                                                                                                                                                                                                                                    |
| Cc          | Davidson, Steven (CAB); Bromm, William (CAB); Frndova, Lucia (CAB); Greenberg, Martha (CAB); Farrow, Alicia (CAB); Betzner, Lynn (CAB)                                                                                                                                                                 |
| Sent        | July-12-17 7:00 PM                                                                                                                                                                                                                                                                                     |
| Attachments | <div><br/>PO CO _ON-QC Presentation_Clean_July 12.pptx</div> <div><br/>Overview and Comparison of June 2017 Quebec Offer_DR...</div> |

Pw: Paris17

- Are areas we need to make better
  - Start time
  - Capacity - need to know we can depend on it when we need it
    - Biggest issue/sticking point
  - Source - don't want to displace renewable, want to use it to displace carbon emitting sources (e.g., natural gas)
  - Price? Yes but we can work with that
- QC - dealing with other jurisdictions...Mass. And NY
  - They want to land deals with 2 partners - could be combo of one of the states and Ontario or is it both states and not Ontario
  - To meet potential desired capacity from partners, would have to turn on gas plant that is currently not in operation
    - Or build additional base/hydro (which is more expensive than hydro is traditionally as need to build)
- Stranded assets - do we need to build capacity in the same way for future demand?
- IESO modelling
  - Raw data but needs to be analysed - couple of weeks
- Negotiations
  - Back to QC that need this to be a capacity agreement
  - Is there caveat on the capacity?...could talk about an energy deal post 2023 when looking to displace gas (after Pickering extension expires)
- Letter goes back to QC flagging issues
  - Political or not?
  - Flag areas that are important to us
  - From IESO

# LTEP/OFHP briefing.

July-13-17 11:29 AM

|                    |                                                                                                                       |
|--------------------|-----------------------------------------------------------------------------------------------------------------------|
| <b>Subject</b>     | <b>LTEP/OFHP briefing.</b>                                                                                            |
| <b>From</b>        | Kwamena, Boafoa (CAB)                                                                                                 |
| <b>To</b>          | Orsini, Steve (CAB); Davidson, Steven (CAB)                                                                           |
| <b>Cc</b>          | Greenberg, Martha (CAB); Frndova, Lucia (CAB); Bromm, William (CAB)                                                   |
| <b>Sent</b>        | July-12-17 7:51 PM                                                                                                    |
| <b>Attachments</b> | <br>2017-07-12 - PO briefing v2.pptx |

Pw: Welcome2025

# LTEP Cab sub July 20/17

July-20-17 11:16 AM

| Attachments |  |
|-------------|-----------------------------------------------------------------------------------|
|             | 2017-07-19 Draft LTEP Cabinet Submission - Appendix ...                           |
|             |  |
|             | 2017-07-19 Draft LTEP Cabinet Submission Appendix 2-...                           |
|             |  |
|             | 2017-07-19- Draft LTEP Cabinet Submission- Part 1 - ...                           |

[Link to Outlook item](#)

## Notes



2017-07-24- CBN- LTEP- v13- FINAL.docx



2017-07-25- Minute- LTEP- v13- FINAL.docx

# Hydro Quebec July 21/17

July-21-17 8:14 AM

|             |                                                                                                                                                                                                                                                                                                                   |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | Materials for Hydro Quebec follow up meeting tomorrow                                                                                                                                                                                                                                                             |
| From        | Kwamena, Boafoa (CAB)                                                                                                                                                                                                                                                                                             |
| To          | Jancik, Mike (OPO); Bevan, Andrew (OPO)                                                                                                                                                                                                                                                                           |
| Cc          | Orsini, Steve (CAB); Greenberg, Martha (CAB); Marangoni, Emily (OPO); Bromm, William (CAB); Donelson, Philip (OPO); McEachern, Gillian (OPO); Davidson, Steven (CAB)                                                                                                                                              |
| Sent        | July-20-17 8:32 AM                                                                                                                                                                                                                                                                                                |
| Attachments | <div><br/>Executive Summary_Assessment of Quebec Import Propos...</div> <div><br/>Full Report_Assessment of Quebec Import Proposal and...</div> |

# LTEP / OFHP Model Assumptions

August-02-17

12:52 PM



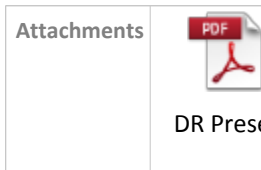
2017 LTEP Outlooks\_Briefing\_Aug1\_Clean.pptx

[Link to Outlook item](#)

## Notes

# Demand Response Aug. 3/17

August-03-17 7:54 AM



DR Presentation\_August 3 2017\_final.pdf

[Link to Outlook item](#)

## Notes

# ON-QC statement and IESO term sheet

August-15-17 3:34 PM

|             |                                                                                                                                                                                                                                                                                                            |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>FW: ON - QC Hydro Meeting / Materials</b>                                                                                                                                                                                                                                                               |
| From        | Hume, Steen (ENERGY)                                                                                                                                                                                                                                                                                       |
| To          | Greenberg, Martha (CAB)                                                                                                                                                                                                                                                                                    |
| Sent        | August-15-17 12:49 PM                                                                                                                                                                                                                                                                                      |
| Attachments | <div><br/>Ltr and Counter Proposal_S Demers_August 11 2017.pdf</div> <div><br/>EMMC 2017 Joint ON QC Statement - EN - 20170814.pdf</div> |

Hi. Thanks for the chat. As discussed, you might find the attached useful (i.e., recent ON-QC joint statement and IESO Term Sheet).

Thanks, Steen

# LTEP Outlooks Aug. 16.17

August-16-17 8:07 AM

|                    |                                                                                                                                   |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <b>Subject</b>     | <b>LTEP Outlooks Deck</b>                                                                                                         |
| <b>From</b>        | Schlaepfer, Martin (ENERGY)                                                                                                       |
| <b>To</b>          | Kwamena, Boafoa (CAB)                                                                                                             |
| <b>Cc</b>          | Greenberg, Martha (CAB); Foster, Robert (CAB); Armstrong, Hillary (ENERGY)                                                        |
| <b>Sent</b>        | August-15-17 7:00 PM                                                                                                              |
| <b>Attachments</b> | <br>2017 LTEP Outlooks_Briefing_Aug15_Clean.pptx |

Pw: Tracking17

# HQ-IESO Aug. 16.17

August-16-17 8:08 AM

|                    |                                                                                                                                                          |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Subject</b>     | <b>Quebec deck</b>                                                                                                                                       |
| <b>From</b>        | Schlaepfer, Martin (ENERGY)                                                                                                                              |
| <b>To</b>          | Kwamena, Boafoa (CAB)                                                                                                                                    |
| <b>Cc</b>          | Greenberg, Martha (CAB); Foster, Robert (CAB); Armstrong, Hillary (ENERGY)                                                                               |
| <b>Sent</b>        | August-15-17 6:54 PM                                                                                                                                     |
| <b>Attachments</b> | <div><br/>Quebec-Ontario_Termsheet Counteroffer for PO Update ...</div> |

# IESO - Hydrogen Aug. 22/17

August-22-17 1:04 PM

- Next Hydrogen?
- Idea is to use hydrogen to get off gas/diesel, link to electricity is how you charge it
- Launch an RFP for a pilot on how these hydrolyzers could benefit the system
  - Could charge when cheap and then use it to dispatch energy to the system during peak instead of dispatching
  - RFP wouldn't be for RER, that is already underway
  - Leverage GGRA funding to support pilot
    - Not ratebase
  - Length of contract needed to make commercially viable (eg., 3 vs 10 years)
  - What price willing to pay (HOEP or HOEP+)
  - This is about decarbonizing our fuels
  - Can we demonstrate any subsidy to system
  - Prepare proposal for late October (IESO) - work with GreenON
    - Award contract march
- Storage
  - Believe it has a future role to play
  - To be able to fund a pilot, need to demonstrate reduction of GHGs
  - Return on
- Quebec - has H infrastructure
  - Interested in hydrogen fueling along 401
- MTO- MX
  - They are hoping to have some sense of whether H works for RER later this fall
  - Electrification comes in for RFQ on package 3 so need sense of whether we need to use electrification or H before then if we can
  - Negotiating retrofitting pilot for existing locomotive
    - For loco pulling/pushing cars
    - Looking at having cell within each car though in future so no need for locomotive to push/pull

# Overnight Charging Aug. 23/17

November-16-17 11:49 AM

| Attachments | <div data-bbox="355 296 436 380"></div> <div data-bbox="336 390 937 426">2017-08-23 - Presentation - Overnight Charging Multi...</div> |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Notes

# LTEP debrief

August-23-17 3:00 PM

- Inflation - not to be included
- Average monthly usage - not moving off the number used now
- GHG emissions - electricity
  - By the time we get to market renewal/procurement - will be other sources that are non-carbon that can be procured
    - So use a fuzzy wedge that shows there is a
  - Policy direction to the IESO, through LTEP document, not through minute
  - Overall GHG emissions curve, if make neutral (so combined fuels/electricity)
    - But the curve that shows we are coming under the target, that includes fuels and electricity, what could someone say we aren't including that was attributed to the 114MT that we need to add on top?

# Renewable Natural Gas

August-24-17 1:34 PM

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Subject</b>           | <b>PO Briefing: Renewable Natural Gas Framework (MOECC/ENERGY/OEB/CO/PO)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Date and Location</b> | August-24-17 1:30 PM - 2:30 PM, MNRF EC Boardroom, 6th floor, Whitney Block                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Attendees</b>         | Moore, Karen (CAB); McEachern, Gillian (OPO); Donelson, Philip (OPO); Seniuk, Greg (OPO); Hindmarch-Watson, Tim (CAB); Downarowicz, Ewa (CAB); Whytock, John (CAB); Schlaepfer, Martin (ENERGY); Saad, Dani (OPO); Teliszewsky, Andrew (ENERGY); Islam, Mohammed (CAB); Jamal, Al-Noor (MOECC); Harth, David (MOECC); McMichael, Rhonda (CAB); Jancik, Mike (OPO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Message</b>           | Materials attached. Update August 21: Request from PO to move to August 24 at 1:30 Update August 11: this meeting has been rescheduled to August 24, 11:30 – 12:30pm.Update Aug 4: This meeting will be rescheduled TBD.Update July 26: Meeting rescheduled from Aug 2 to Aug 9, 2-3pm.Update July 25: Meeting rescheduled from July 25 to August 2, 1-32pm.Update Aug 4: Meeting rescheduled to Aug 16, 11:00am, room 4401.Update July 11: MOECC attendees added.Update June 28: This meeting location has changed to MNFR EC boardroom, 6th floor, Whitney Block.This meeting has been scheduled with the Premier's Office to discuss options for RNG deployment / Ontario Energy Board Options and Regulatory mechanics to incent adoption. Energy to provide materials in advance.POGillian McEachernPhil DonelsonGreg SeniukMike JancikCOSteven Davidson (optional)Martha Greenberg (optional)Karen MooreTim Hindmarch-WatsonEwa DownarowiczJohn WhytockRhonda McMichaelEnergyMartin Schlaepfer (to invite MO and officials, including CAO)MOECCAl-Noor Jamal (to invite MO and officials)David Harth |
| <b>Attachments</b>       | <br>RNG Implementation Presentation to PO on August 24 -...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

[Link to Outlook item](#)

## Notes

# Draft LTEP Cabinet Submission

August-28-17 9:37 AM

|             |                                                                                                                                      |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>Fw: Draft LTEP Cabinet Submission</b>                                                                                             |
| From        | Hindmarch-Watson, Tim (CAB)                                                                                                          |
| To          | Greenberg, Martha (CAB); Moore, Karen (CAB); Downarowicz, Ewa (CAB)                                                                  |
| Sent        | August-26-17 1:41 PM                                                                                                                 |
| Attachments | <br>2017 LTEP Part Two - v 08 - 20170825_Clean.pptx |

FYI. Karen, I think we should likely share this with MOECC asap so they can provide their input. Let me know if you have any concerns with that.

Sent from my mobile.

**From:** Schlaepfer, Martin (ENERGY) <Martin.Schlaepfer@ontario.ca>

**Sent:** Saturday, August 26, 2017 1:38 PM

**To:** Hindmarch-Watson, Tim (CAB)

**Cc:** Moore, Karen (CAB); Armstrong, Hillary (ENERGY)

**Subject:** Draft LTEP Cabinet Submission

Hi Tim,

Attached is a draft of the LTEP Cabinet submission. We will be revising early next week to reflect updated modelling.

Thanks,

Martin

## LTEP submission finals

August-30-17 10:43 AM

|             |                                                                                                                                                                                                                                                                                              |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>RE: Confidential advice to cabinet: LTEP submission</b>                                                                                                                                                                                                                                   |
| From        | Schlaepfer, Martin (ENERGY)                                                                                                                                                                                                                                                                  |
| To          | Greenberg, Martha (CAB); Hume, Steen (ENERGY)                                                                                                                                                                                                                                                |
| Cc          | Armstrong, Hillary (ENERGY); Moore, Karen (CAB); Hindmarch-Watson, Tim (CAB)                                                                                                                                                                                                                 |
| Sent        | August-30-17 8:57 AM                                                                                                                                                                                                                                                                         |
| Attachments | <br>2017 LTEP Part Two - v 12 - 20170830 clean_800am - F...<br><br>2017 LTEP Part Two - v 12 - 20170830 clean_800am - F... |

|             |                                                                                                                                                |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>RE: LTEP sub</b>                                                                                                                            |
| From        | Moore, Karen (CAB)                                                                                                                             |
| To          | Greenberg, Martha (CAB); McEachern, Gillian (OPO); Donelson, Philip (OPO)                                                                      |
| Cc          | Hindmarch-Watson, Tim (CAB); Davidson, Steven (CAB); Foster, Robert (CAB)                                                                      |
| Sent        | August-30-17 9:59 AM                                                                                                                           |
| Attachments | <br>2017 LTEP Minute_Final submission version-track chan... |

Hi all,

Attached is CO's recommended compromise minute, which has MOECC and ENERGY working together on future modeling. #3 set out below.

3. Ministry of Environment and Climate Change (MOECC) and ENERGY, working with partner ministries report back to Cabinet with updated modelling, including assumptions, outlooks, forecasts, for the ongoing implementation of the province's climate change policies and programs, including the Climate Change Strategy, the cap and trade program and the Climate Change Action Plan.

Thanks,

Karen  
416-325-4764  
[karen.moore4@ontario.ca](mailto:karen.moore4@ontario.ca)

**From:** Greenberg, Martha (CAB)  
**Sent:** August 30, 2017 9:04 AM  
**To:** McEachern, Gillian (OPO) <Gillian.McEachern@ontario.ca>; Donelson, Philip (OPO) <Philip.Donelson@ontario.ca>  
**Cc:** Moore, Karen (CAB) <Karen.Moore4@ontario.ca>; Hindmarch-Watson, Tim (CAB) <Tim.Hindmarch-Watson2@ontario.ca>; Davidson, Steven (CAB) <Steven.Davidson@ontario.ca>; Foster, Robert (CAB) <Robert.Foster@ontario.ca>  
**Subject:** LTEP sub  
**Importance:** High

Hi,

Attached is the signed submission from energy. Of note, the minute is the minute they provided yesterday and does not incorporate MOECC edits (#3). As a reminder, MOECC has requested the following change:

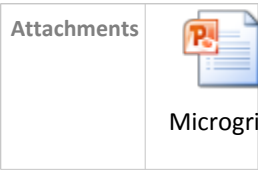
1. **ENERGY and Ministry of Environment and Climate Change (MOECC) report back on modelling (including assumptions, outlooks and forecasts) and options to align with the provincial target of reducing GHG emissions by 37 percent from 1990 levels in 2030 and to ensure that implementation of climate change policies and programs support the objectives of LTEP.**  
~~working with ENERGY and other partner ministries will report back to Cabinet with updated modelling (including assumptions, outlooks, forecasts) for the ongoing implementation of the province's climate change policies and programs (including the Climate Change Strategy, the cap and trade program and the Climate Change Action Plan).~~

Please let us know where your comfort sits as we work to finalize and see if we can make a mailout this morning. Any changes to the minute would be captured in our note given the submission is now signed.

Thanks,  
Marta

# Microgrids Sept 5/17

September-05-17 7:15 PM



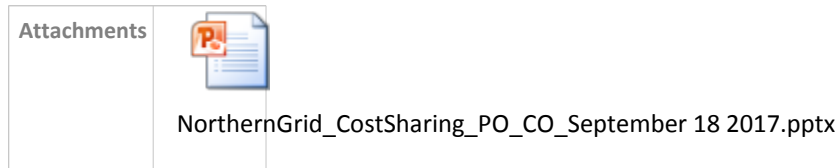
Microgrids multicorners deck DMO MO Edits - CLEAN.P...

[Link to Outlook item](#)

## Notes

# Fed-Prov North West Transmission Update

September-18-17 10:44 AM



[Link to Outlook item](#)

## Notes

- Tripartite negotiations
- Next steps
  - Is this structure ok with government
  - Leave to construct timing 4th quarter
  - Timing for inclusion in FES
- OFA ok with this if accounting works
  - OFA ok with loan as if feds don't make their appropriations, then the rate base picks it up
- What is risk to rate base?
  - \$55M/year --> 2cents/month???
  - Depends on when they walk
- Watay applied under aboriginal loan guarantee program

# Energy comms/update Oct. 3/17

October-03-17 9:09 AM

## AG report

- AG wanted to finalize Thursday
- Desire for technical briefing but no sense of timing yet
  - Hard to hold a room for a day you don't know
  - Plan B?
- Timing...ministry at estimates

## LTEP

- Cabinet Oct. 25
- Release Oct. 26?
  - Including issuing directives
  - Include technical briefing
- Allow media to read ahead of release, not formal lock up but embargoed copies
-

# AG prep

October-16-17

4:51 PM

- Tabling 1030, media studio booked for noon
- Energy - booked tech briefing for 1pm
  - Will announce LTEP release date
  - Also some updated numbers
-

# 2017 LTEP OICs

October-17-17 2:02 PM

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | 2017 LTEP OICs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| From        | Hindmarch-Watson, Tim (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| To          | Donelson, Philip (OPO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Cc          | Moore, Karen (CAB); Greenberg, Martha (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Sent        | October-17-17 12:14 PM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Attachments | <div><br/>IESO - LTEP 2017 Directive - ENG and FR - LSB Octobe...</div> <div><br/>2017-10-12 - OEB Amending Directive LSB CEEB_ v6.docx</div> <div><br/>2017-10-13- LTEP Final Tabling Cab Sub consolidated ...</div> <div><br/>OEB - LTEP 2017 directive - ENG and FR - LSB October...</div> |

Pswd: Tracking17

Hi Phil:

As discussed, here is what we have of the LTEP package again. We are still missing the OIC related to the LTEP itself and the actual final 2017 LTEP. Below we have identified some flags and questions for your consideration. I will be sending some questions to Energy on these items soon, but will hold off including the Market Renewal piece in my email until we hear back from you on this.

We have also flagged for the ministry that they need to submit the appropriate approval form given this is an LRC item and not a policy item, and therefore does not require a minute.

## IESO Directive

- Only mention of Market Renewal is under 2.1. No mention of link between Market Renewal and CCAP. However, the minute does not actually say “direct” but rather “Working with the IESO to ensure Market Renewal acknowledges...” so this may be accomplished in another way.
- Where did 2.3 re hydrogen pilot projects come from? Hydrogen production was identified in appendix 1 Energy’s LTEP submission (Slide 61) as an example of “home grown nuclear innovations”. However, no other specific mention of hydrogen or hydrogen pilot projects was in the LTEP submissions or minutes, unless one wanted to think of hydrogen as an energy storage technology. The minute contained the following on storage, but this is also addressed in 1.3 of the OEB directive and 2.2 of the IESO directive:  
“Updating market rules and regulations so energy storage can be introduced onto the grid where it makes technological and economic sense.”
- 3.3- review of regional planning process- engage with Indigenous communities as well as stakeholders and experts?
- East-west Tie- is further direction not needed in addition to the August 4th letter re updated needs assessment?
- No reference to the direction to stop accepting incentive project applications for behind the meter generation projects using fossil fuel by July 1, 2018. Is this being accomplished in some other way?

OEB Directive

- 2.1 sub bullet 2 re “protection of consumers in the natural gas sector”- this principle is very vague. The other 2 sub bullets were more or less outlined in the minute, but not this piece. The original LTEP submission contains the same reference in a high level overview of the OEB directive themes (slide 39), but no details on what this could mean is included in the body of the submission.

Let me know if you want to discuss any of these further.

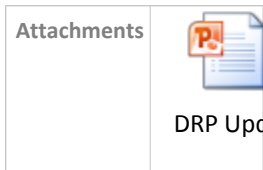
Thanks,

**Tim Hindmarch-Watson**

Policy Advisor  
Justice, Resource and Environmental Policy  
Policy and Delivery Division  
Cabinet Office  
416-325-4618

# Darlington refurb Nov. 20/17

November-20-17 8:00 AM



DRP Update Cabinet submission - 20171117\_Clean.pptx

[Link to Outlook item](#)

## Notes

# RFI IESO SoC

November-21-17 8:18 AM

|             |                                                                                                                                       |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>Following-up</b>                                                                                                                   |
| From        | Hume, Steen (ENERGY)                                                                                                                  |
| To          | Greenberg, Martha (CAB)                                                                                                               |
| Sent        | November-20-17 5:46 PM                                                                                                                |
| Attachments | <br>Non Emitting Resources RFI_November 17_FINAL.PDF |

Hi. If asked, you got this from SOC. ☺

Thanks,

# FN Microgrids Nov. 22/17 (officials)

November-22-17 9:56 AM

| Attachments |  |
|-------------|-----------------------------------------------------------------------------------|
|             |  |

Microgrids Cabinet Deck final tracked per MO comment...

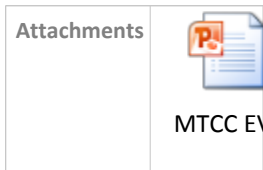
FN Microgrids Agenda.docx

[Link to Outlook item](#)

## Notes

# Overnight Charging Program Nov. 29

November-29-17 3:52 PM



MTCC EV Overnight Charging Cabinet Deck 11-21-2017 V...

[Link to Outlook item](#)

## Notes

# Darlington Refurb Sub TB Jan. 23/18

January-08-18 11:36 AM

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | RE: Darlington Refurbishment Submission                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| From        | Hindmarch-Watson, Tim (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| To          | Foster, Robert (CAB); Greenberg, Martha (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Cc          | Moore, Karen (CAB)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Sent        | January-08-18 11:13 AM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Attachments | <div><br/>DRP TB Submission APPENDIX - 20180103_FINAL.PPTX</div> <div><br/>DRP TB Submission_ESPNuc 20180103_FINAL.PPTX</div> <div><br/>Darlington TB submission Minister signed front page....</div> <div><br/>Darlington TB submission Minister's signed TB20.pdf</div> |

Hi Rob. The OEB decision is referenced on slide 13 of their deck, and indicates the approval of the Unit 2 budget and the prudent nature of the oversight.

Following up with PO about having another multi on this before the proposed tracking to TB/MBC on Jan 23. The materials I sent have now also been signed and were previously shared with PO and TBS. Signed finals attached.

Tim Hindmarch-Watson  
416-325-4618

**From:** Foster, Robert (CAB)  
**Sent:** January-05-18 7:40 AM  
**To:** Hindmarch-Watson, Tim (CAB); Greenberg, Martha (CAB)  
**Cc:** Moore, Karen (CAB)  
**Subject:** RE: Darlington Refurbishment Submission

Are there any changes coming out of the OEB decision?

**From:** Hindmarch-Watson, Tim (CAB) <[Tim.Hindmarch-Watson2@ontario.ca](mailto:Tim.Hindmarch-Watson2@ontario.ca)>  
**Date:** Thursday, Jan 04, 2018, 10:34 PM  
**To:** Greenberg, Martha (CAB) <[Martha.Greenberg@ontario.ca](mailto:Martha.Greenberg@ontario.ca)>, Foster, Robert (CAB) <[Robert.Foster@ontario.ca](mailto:Robert.Foster@ontario.ca)>  
**Cc:** Moore, Karen (CAB) <[Karen.Moore4@ontario.ca](mailto:Karen.Moore4@ontario.ca)>, Young, Samantha (CAB) <[Samantha.Young2@ontario.ca](mailto:Samantha.Young2@ontario.ca)>, Johnston, John (CAB) <[John.Johnston3@ontario.ca](mailto:John.Johnston3@ontario.ca)>  
**Subject:** Fw: Darlington Refurbishment Submission

Fyi

Sent from my mobile.

**From:** Armstrong, Hillary (ENERGY) < [Hillary.Armstrong@ontario.ca](mailto:Hillary.Armstrong@ontario.ca) >

**Sent:** Thursday, January 4, 2018 8:29 PM

**To:** Hindmarch-Watson, Tim (CAB)

**Cc:** Schlaepfer, Martin (ENERGY); Nucciarone, Michael (ENERGY); Young, Samantha (CAB); Moore, Karen (CAB)

**Subject:** Darlington Refurbishment Submission

Hi Tim,

Earlier this week you had asked about the updated Darlington Refurbishment product. Please find attached a draft of the Darlington Refurbishment submission. This evening, our MO also shared this with PO.

Thanks,  
Hillary

## Darlington Materials Jan. 18/18

January-18-18 2:32 PM

|             |                                                                                                                                                                                                                                                                            |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>Darlington Materials</b>                                                                                                                                                                                                                                                |
| From        | Moore, Karen (CAB)                                                                                                                                                                                                                                                         |
| To          | Donelson, Philip (OPO); McEachern, Gillian (OPO); Jancik, Mike (OPO); Davidson, Steven (CAB); Greenberg, Martha (CAB)                                                                                                                                                      |
| Cc          | Hindmarch-Watson, Tim (CAB)                                                                                                                                                                                                                                                |
| Sent        | January-18-18 1:21 PM                                                                                                                                                                                                                                                      |
| Attachments | <br>DRP TB Submission APPENDIX - 20180103_FINAL.pptx<br><br>DRP TB Submission_ESPNuc 20180103_FINAL.pptx |

Energy update Jan. 24/18

- M upset Darlington pulled
  - Going to speak with AB, felt he had spoken with AB prior to and agreement to go ahead
  - Additional analysis is waste of time, and LTEP just concluded so all is aligned and OPG on-time
  - Won't be here next TB (6th)
- Not looking for IESO modelling more just understanding analysis and ranges, confidence in ranges
- 

|         |                                               |
|---------|-----------------------------------------------|
| Subject | <b>RE: Darlington Refurb</b>                  |
| From    | Davidson, Steven (CAB)                        |
| To      | Imbrogno, Serge (ENERGY)                      |
| Cc      | Greenberg, Martha (CAB); Foster, Robert (CAB) |
| Sent    | January-19-18 5:38 PM                         |

Hi Serge.

We've had some further conversation with PO today to clarify extent of expectations around more off-ramp analysis. Based on those discussions, this is what we'd like to see:

Cost/Rate implications

- More detailed estimates of the cost/rate implications of both scenarios. As we discussed, estimates can be approximations or ranges developed using best available current evidence and reasonable assumptions.

- Assumptions and risks related to the modelling should be clearly articulated.

- Ministry advice on level of granularity is welcome, and ideally engaging the IESO will not be required to undertake this work. (i.e. LTEP level modelling approach not required at this time)

Economic Benefits

- Would also be helpful to try to show impact on economic benefits of the project/foregone benefit if off-ramp is exercised. Should attempt to articulate the net GDP changes, and not just the projected loss of GDP. i.e. the alternate supply scenarios would presumably also generate economic activity and it is unclear to what extent this is reflected in the current estimates.

Hope that helps clarify. We understand the caveats that will be required, but this should help better position this for decision-makers so we can land the decision.

Thanks. Have a good weekend. Steven.

Steven Davidson  
Deputy Minister and  
Associate Secretary of the Cabinet,  
Policy and Delivery

The Cabinet Office  
99 Wellesley Street West  
Room 6420, Whitney Block  
Toronto ON M7A 1A1  
Tel 416 325 3759  
Fax 416 325 7631

-----Original Message-----

From: Imbrogno, Serge (ENERGY)  
Sent: January-19-18 2:43 PM  
To: Davidson, Steven (CAB)  
Subject: Darlington Refurb

Hi Steven,

I understand PO/CO direction to TBS is to pull us off the January 23 agenda. I'm assuming there's a desire for more off-ramp analysis. If so, we should agree on what we're modeling and to what level of precision before we embark down a wrong path.

Serge

Sent from my iPad

# RE: Darlington Refurb

January-24-18 7:56 AM

|                |                                               |
|----------------|-----------------------------------------------|
| <b>Subject</b> | <b>RE: Darlington Refurb</b>                  |
| <b>From</b>    | Davidson, Steven (CAB)                        |
| <b>To</b>      | Imbrogno, Serge (ENERGY)                      |
| <b>Cc</b>      | Greenberg, Martha (CAB); Foster, Robert (CAB) |
| <b>Sent</b>    | January-19-18 5:38 PM                         |

Hi Serge.

We've had some further conversation with PO today to clarify extent of expectations around more off-ramp analysis. Based on those discussions, this is what we'd like to see:

## Cost/Rate implications

- More detailed estimates of the cost/rate implications of both scenarios. As we discussed, estimates can be approximations or ranges developed using best available current evidence and reasonable assumptions.
- Assumptions and risks related to the modelling should be clearly articulated.
- Ministry advice on level of granularity is welcome, and ideally engaging the IESO will not be required to undertake this work. (i.e. LTEP level modelling approach not required at this time)

## Economic Benefits

- Would also be helpful to try to show impact on economic benefits of the project/foregone benefit if off-ramp is exercised. Should attempt to articulate the net GDP changes, and not just the projected loss of GDP. i.e. the alternate supply scenarios would presumably also generate economic activity and it is unclear to what extent this is reflected in the current estimates.

Hope that helps clarify. We understand the caveats that will be required, but this should help better position this for decision-makers so we can land the decision.

Thanks. Have a good weekend. Steven.

Steven Davidson  
Deputy Minister and  
Associate Secretary of the Cabinet,  
Policy and Delivery

The Cabinet Office  
99 Wellesley Street West  
Room 6420, Whitney Block  
Toronto ON M7A 1A1  
Tel 416 325 3759  
Fax 416 325 7631

-----Original Message-----

From: Imbrogno, Serge (ENERGY)

Sent: January-19-18 2:43 PM

To: Davidson, Steven (CAB)

Subject: Darlington Refurb

Hi Steven,

I understand PO/CO direction to TBS is to pull us off the January 23 agenda. I'm assuming there's a desire for more off-ramp analysis. If so, we should agree on what we're modeling and to what level of precision before we embark down a wrong path.

Serge

Sent from my iPad

# Darlington Refurb analysis Jan. 31/18

February-02-18 4:03 PM

|             |                                                                                                                                            |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>Fw: Darlington Refurb</b>                                                                                                               |
| From        | Moore, Karen (CAB)                                                                                                                         |
| To          | Greenberg, Martha (CAB); Donelson, Philip (OPO)                                                                                            |
| Cc          | Hindmarch-Watson, Tim (CAB)                                                                                                                |
| Sent        | January-31-18 6:42 PM                                                                                                                      |
| Attachments | <br>DRP TB Submission_Supplemental Analysis 20180131.pptx |

Hi -- just received the darlington analysis from Energy. Will review this evening so sharing with that caveat.

Sent from my BlackBerry 10 smartphone on the Rogers network.

**From:** Schlaepfer, Martin (ENERGY) <Martin.Schlaepfer@ontario.ca>

**Sent:** Wednesday, January 31, 2018 6:25 PM

**To:** Moore, Karen (CAB)

**Cc:** Hindmarch-Watson, Tim (CAB); Nucciarone, Michael (ENERGY); Armstrong, Hillary (ENERGY)

**Subject:** RE: Darlington Refurb

Hi Karen,

Attached is the additional analysis.

Thanks,  
Martin

**From:** Moore, Karen (CAB)

**Sent:** January 31, 2018 2:41 PM

**To:** Schlaepfer, Martin (ENERGY) <Martin.Schlaepfer@ontario.ca>

**Cc:** Hindmarch-Watson, Tim (CAB) <Tim.Hindmarch-Watson2@ontario.ca>; Nucciarone, Michael (ENERGY) <Michael.Nucciarone@ontario.ca>

**Subject:** RE: Darlington Refurb

Hi Martin,

Checking in on the status of the scoping document and the analysis requested. We have heard from PO that following conversations with Sr. PO there is still a desire to see this work prior to the item going to TB for approval.

Happy to discuss.

Thanks,

Karen

416-325-4764

[karen.moore4@ontario.ca](mailto:karen.moore4@ontario.ca)

**From:** Schlaepfer, Martin (ENERGY)

**Sent:** January 23, 2018 12:17 PM

**To:** Moore, Karen (CAB) <[Karen.Moore4@ontario.ca](mailto:Karen.Moore4@ontario.ca)>

**Cc:** Hindmarch-Watson, Tim (CAB) <[Tim.Hindmarch-Watson2@ontario.ca](mailto:Tim.Hindmarch-Watson2@ontario.ca)>; Nucciarone, Michael (ENERGY)

<[Michael.Nucciarone@ontario.ca](mailto:Michael.Nucciarone@ontario.ca)>

**Subject:** RE: Darlington Refurb

Hi Karen,

Hope you are well too. Per the chain below, we are working on a scoping document that we're hoping to share to get comfort on the direction before proceeding.

Hoping to have something shortly.

Let me know if you want to chat.

Martin

**From:** Moore, Karen (CAB)

**Sent:** January 23, 2018 12:09 PM

**To:** Schlaepfer, Martin (ENERGY) <[Martin.Schlaepfer@ontario.ca](mailto:Martin.Schlaepfer@ontario.ca)>

**Cc:** Hindmarch-Watson, Tim (CAB) <[Tim.Hindmarch-Watson2@ontario.ca](mailto:Tim.Hindmarch-Watson2@ontario.ca)>

**Subject:** FW: Darlington Refurb

Hi Martin,

Hope you are well. Just want to confirm we have a shared understanding that the additional analysis requested below will be reflected in the ministry's submission.

Happy to chat when you have some time.

Thanks,

Karen

416-325-4764

[karen.moore4@ontario.ca](mailto:karen.moore4@ontario.ca)

**From:** Greenberg, Martha (CAB)

**Sent:** January 19, 2018 6:08 PM

**To:** Hindmarch-Watson, Tim (CAB) <[Tim.Hindmarch-Watson2@ontario.ca](mailto:Tim.Hindmarch-Watson2@ontario.ca)>; Moore, Karen (CAB)

<[Karen.Moore4@ontario.ca](mailto:Karen.Moore4@ontario.ca)>

**Subject:** FW: Darlington Refurb

**From:** "Davidson, Steven (CAB)" <[Steven.Davidson@ontario.ca](mailto:Steven.Davidson@ontario.ca)>

**Sent:** Jan 19, 2018 6:04 PM

**To:** "Imbrogno, Serge (ENERGY)" <[Serge.Imbrogno@ontario.ca](mailto:Serge.Imbrogno@ontario.ca)>

**Cc:** "Greenberg, Martha (CAB)" <[Martha.Greenberg@ontario.ca](mailto:Martha.Greenberg@ontario.ca)>; "Foster, Robert (CAB)" <[Robert.Foster@ontario.ca](mailto:Robert.Foster@ontario.ca)>; "Schlaepfer, Martin (ENERGY)" <[Martin.Schlaepfer@ontario.ca](mailto:Martin.Schlaepfer@ontario.ca)>

**Subject:** Re: Darlington Refurb

Sounds like a good approach. Thanks. Steven.

> On Jan 19, 2018, at 5:56 PM, Imbrogno, Serge (ENERGY) <[Serge.Imbrogno@ontario.ca](mailto:Serge.Imbrogno@ontario.ca)> wrote:

>

> Hi Steven,

>

> I'll ask my team be to scope out our next steps and assumptions to make sure we're all on the same page before proceeding with more detailed analysis. An early read on this scoping product from PO would be helpful. We'll aim for a draft early next week.

>

> Serge

>

> Sent from my iPad

>

>> On Jan 19, 2018, at 5:38 PM, Davidson, Steven (CAB) <[Steven.Davidson@ontario.ca](mailto:Steven.Davidson@ontario.ca)> wrote:

>>

>> Hi Serge.

>>

>> We've had some further conversation with PO today to clarify extent of expectations around more off-ramp analysis. Based on those discussions, this is what we'd like to see:

>>

>> Cost/Rate implications

>>

>> - More detailed estimates of the cost/rate implications of both scenarios. As we discussed, estimates can be approximations or ranges developed using best available current evidence and reasonable assumptions.

>>

>> - Assumptions and risks related to the modelling should be clearly articulated.

>>

>> - Ministry advice on level of granularity is welcome, and ideally engaging the IESO will not be required to undertake this work. (i.e. LTEP level modelling approach not required at this time)

>>

>> Economic Benefits

>>

>> - Would also be helpful to try to show impact on economic benefits of the project/foregone benefit if off-ramp is exercised. Should attempt to articulate the net GDP changes, and not just the projected loss of GDP. i.e. the alternate supply scenarios would presumably also generate economic activity and it is unclear to what extent this is reflected in the current estimates.

>>

>> Hope that helps clarify. We understand the caveats that will be required, but this should help better position this for decision-makers so we can land the decision.

>>

>> Thanks. Have a good weekend. Steven.

>>

>> Steven Davidson

>> Deputy Minister and

>> Associate Secretary of the Cabinet,

>> Policy and Delivery

>>

>> The Cabinet Office

>> 99 Wellesley Street West

>> Room 6420, Whitney Block

>> Toronto ON M7A 1A1

>> Tel 416 325 3759

>> Fax 416 325 7631

>>

>> -----Original Message-----

>> From: Imbrogno, Serge (ENERGY)

>> Sent: January-19-18 2:43 PM

>> To: Davidson, Steven (CAB)

>> Subject: Darlington Refurb

>>

>>

>> Hi Steven,

>>

>> I understand PO/CO direction to TBS is to pull us off the January 23 agenda. I'm assuming there's a desire for more off-ramp analysis. If so, we should agree on what we're modeling and to what level of precision before we embark down a wrong path.

>>

>> Serge

>>

>>

>> Sent from my iPad

# Hydro One Exec April 12/18

April-11-18 8:30 PM

|             |                                                                                                                                  |
|-------------|----------------------------------------------------------------------------------------------------------------------------------|
| Subject     | <b>FW: Hydro One Executive Compensation</b>                                                                                      |
| From        | Foster, Robert (CAB)                                                                                                             |
| To          | Greenberg, Martha (CAB)                                                                                                          |
| Sent        | April-11-18 6:48 PM                                                                                                              |
| Attachments | <br>Annual General Meeting BN (2018-04-09).docx |

**From:** Kwamena, Bofoa (CAB) <[Bofoa.Kwamena@ontario.ca](mailto:Bofoa.Kwamena@ontario.ca)>

**Date:** Wednesday, Apr 11, 2018, 6:48 PM

**To:** Davidson, Steven (CAB) <[Steven.Davidson@ontario.ca](mailto:Steven.Davidson@ontario.ca)>, Orsini, Steve (CAB) <[Steve.Orsini@ontario.ca](mailto:Steve.Orsini@ontario.ca)>

**Cc:** Foster, Robert (CAB) <[Robert.Foster@ontario.ca](mailto:Robert.Foster@ontario.ca)>, Bromm, William (CAB) <[William.Bromm2@ontario.ca](mailto:William.Bromm2@ontario.ca)>

**Subject:** Hydro One Executive Compensation

Attached is a note for the discussion tomorrow on Hydro One's Annual General Meeting. The ministry is making a few minor updates, but wanted to share this version for advance reading.