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**From:** Joyce Poon [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=3093C75378834FD195C6A07D2C0ADED1-JOYCE POON]  
**Sent:** 2017-11-22 3:32:40 PM  
**To:** Bonnie Chan [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=a617163bdc2c45f0838f8bfd1665a47b-Bonnie Chan]  
**CC:** George Pessione [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=fe1264f59cb3428a90a73766e96ea517-George Pess]; Bashir Bhana [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f7ca92bb3384495d95f56b96eed74290-Bashir Bhan]; Brendan Callery [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=8d566c63fc78445aa59f4be51e5f8ac0-Brendan Cal]  
**Subject:** RE: LTEP Modules, New Directive  
**Attachments:** 2017-11-21-Consolidated staff comments to the IESO v1.6 (JP).docx

Please find attached the responses to Module 5: Cost, and the link to the Cost Module updated (Cost Module with current date) to include the appropriate edits

<S:\Resource Integration\Projects\2017 Long-Term Energy Plan\2017 LTEP Modules>

Cheers,  
Joyce

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**From:** Bonnie Chan  
**Sent:** November 22, 2017 9:23 AM  
**To:** Rebecca Chen; Simon Zhang; Simon Geraghty; Yvonne Huang; Joyce Poon  
**Cc:** Brendan Callery; Bashir Bhana  
**Subject:** FW: LTEP Modules, New Directive

Hi team,

Attached are ENERGY staff edits and questions to the LTEP modules.

The LTEP modules are found here:

<S:\Resource Integration\Projects\2017 Long-Term Energy Plan\2017 LTEP Modules>

For each of the leads, can you please make the edits as necessary.

If an edit is made to the module, write in the document "See module" (or something to that effect to say that the edit was completed).

If an edit is not made to the module, but an explanation is needed, provide your response on to the document.

Send me back the revised module and the document with your responses by **EOD Monday November 27**. I will compile and send it out to ENERGY mid next week.

Thanks,  
Bonnie

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

From: Bashir Bhana  
Sent: November 21, 2017 2:10 PM

To: Bonnie Chan  
Cc: Andrew Pietrewicz  
Subject: FW: LTEP Modules, New Directive

Fyi - Bonnie, as discussed, let's chat game plan tomorrow AM after you've had a chance to review. Thanks.

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

From: Bashir Bhana  
Sent: November 21, 2017 2:09 PM  
To: David Barrett  
Subject: RE: LTEP Modules, New Directive

Dave - we will take a look to figure out the best way to move forward. I'll aim to connect with you tomorrow morning. Thanks.

Bashir Bhana, P.Eng. | Manager, Resource Integration Planning, Legal, Indigenous Relations and Regulatory Affairs  
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-----Original Message-----

From: David Barrett  
Sent: November 21, 2017 1:27 PM  
To: Bashir Bhana  
Subject: FW: LTEP Modules, New Directive

Bashir, sorry, I haven't had a chance to review, so forwarding. Lets connect on what they're asking of us

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

From: Du, Tom (ENERGY) [<mailto:Tom.Du@ontario.ca>]  
Sent: November 21, 2017 11:35 AM  
To: Anthy Lovachis; David Barrett  
Cc: Biagi, Letitia (ENERGY); Armstrong, Hillary (ENERGY); Talwar, Shruti (ENERGY); Young, Graham (ENERGY)  
Subject: RE: LTEP Modules, New Directive

Anthy, David:

Apologies for the late reply - please see the attached for the Ministry's comments to the previously supplied modules.

Happy to facilitate a call, or meeting, between IESO and Ministry staff on any questions.

Cheers,

Tom

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

From: Anthy Lovachis [<mailto:Anthy.Lovachis@ieso.ca>]  
Sent: November 7, 2017 11:00 AM  
To: Talwar, Shruti (ENERGY); David Barrett  
Cc: Du, Tom (ENERGY); Biagi, Letitia (ENERGY); Armstrong, Hillary (ENERGY)

Subject: RE: LTEP Modules, New Directive

Apologies, please use the attached which has the addendum "self-notes" removed.

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

From: Anthy Lovachis

Sent: November 07, 2017 10:26 AM

To: 'Talwar, Shruti (ENERGY)'; David Barrett

Cc: 'Du, Tom (ENERGY)'; 'Biagi, Letitia (ENERGY)'; 'Armstrong, Hillary (ENERGY)'

Subject: RE: LTEP Modules, New Directive

Hi Shruti,

Module 2- Conservation has been updated, as discussed. Please see attached.

I understand from our conservation group that we intend to post the APS addendum prior to the modules being posted. Glenna will touch base with conservation staff directly.

Any update on your end for the remaining modules?

Thanks,  
Anthy

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

From: Anthy Lovachis

Sent: October 25, 2017 10:16 AM

To: 'Talwar, Shruti (ENERGY)'; David Barrett

Cc: 'Du, Tom (ENERGY)'; 'Biagi, Letitia (ENERGY)'; 'Armstrong, Hillary (ENERGY)'

Subject: RE: LTEP Modules, New Directive

Further to yesterday's email, please find attached Module 5 - Costs. Also attached is an updated version of Module 3 - Supply, which incorporates the data on storage. With respect to the emissions factors request, I understand the IESO staff have had separate conversations with Tim Christie's group. Attached are the emissions factors, as requested.

In terms of next steps, will the IESO have an opportunity to review the modules once they're complete?

Cheers,  
Anthy

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

From: Anthy Lovachis

Sent: October 24, 2017 10:43 AM

To: 'Talwar, Shruti (ENERGY)'; David Barrett

Cc: 'Du, Tom (ENERGY)'; 'Biagi, Letitia (ENERGY)'; 'Armstrong, Hillary (ENERGY)'

Subject: RE: LTEP Modules, New Directive

With attachments this time :)

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

From: Anthy Lovachis

Sent: October 24, 2017 10:40 AM  
To: 'Talwar, Shruti (ENERGY)'; David Barrett  
Cc: Du, Tom (ENERGY); Biagi, Letitia (ENERGY); Armstrong, Hillary (ENERGY)  
Subject: RE: LTEP Modules, New Directive

Hi Shruti,

Please find attached the data for:

- \* Module 1 - Demand
- \* Module 2 - Conservation
- \* Module 3 - Supply
- \* Module 4 - Transmission
- \* Module 6 - Emissions

We're anticipating having Module 5 (costs) over to you a bit later this week.

Let me know if you have any questions.

Anthy

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

From: Talwar, Shruti (ENERGY) [<mailto:Shruti.Talwar@ontario.ca>]  
Sent: October 18, 2017 3:36 PM  
To: Anthy Lovachis; David Barrett  
Cc: Du, Tom (ENERGY); Biagi, Letitia (ENERGY); Armstrong, Hillary (ENERGY)  
Subject: RE: LTEP Modules, New Directive

Hi Anthy,

Emission rates - tonnes/kWh for NOx, CO2 etc., that are multiplied to the generation to calculate the total emissions.

Let us know if you need further clarity.

Shruti

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

From: Anthy Lovachis [<mailto:Anthy.Lovachis@ieso.ca>]  
Sent: October 18, 2017 2:56 PM  
To: Talwar, Shruti (ENERGY); David Barrett  
Cc: Du, Tom (ENERGY); Biagi, Letitia (ENERGY); Armstrong, Hillary (ENERGY)  
Subject: RE: LTEP Modules, New Directive

Hey there,

Looking for further clarity on the emissions factors piece noted below. What are you looking for specifically (avoided emissions, emissions from marginal resources, or default emissions factors for cap and trade)?

Thanks,  
Anthy

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

From: Talwar, Shruti (ENERGY) [<mailto:Shruti.Talwar@ontario.ca>]  
Sent: October 17, 2017 5:15 PM

To: Anthy Lovachis; David Barrett  
Cc: Jordan Penic; Du, Tom (ENERGY); Biagi, Letitia (ENERGY); Armstrong, Hillary (ENERGY)  
Subject: RE: LTEP Modules, New Directive

Thanks for the draft, Anthy. Some staff-level comments on this draft. I would note that once we review the drafts of the remaining modules, we may have some additional general comments on format and structure.

Let us know of questions.  
Shruti

GHG Tab

- \* Modify "GHG Emissions (Megatonnes CO2 equivalent)" to "GHG (megatonnes CO2 equivalent)"
- \* Modify "Forecast GHG Emissions at 2017 Levels (Megatonnes CO2 equivalent)" to "Low GHG Outlook (megatonnes CO2 equivalent)".

AC Emissions Tab

- \* Modify "(Megatonnes...)" to "(megatonnes...)"

General Comment

- \* The word "emissions" behind GHG, NOx, etc may be redundant for the row labels since the table's title says "LTEP 2017 Emissions".
- \* Consider adding a row titled "Historic Emissions" for 2005-2016 numbers
- \* Specify whether emissions are domestic generation only, or include imports

Include Emission factors

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From: Anthy Lovachis [Anthy.Lovachis@ieso.ca]  
Sent: October 12, 2017 1:21 PM  
To: Talwar, Shruti (ENERGY); David Barrett  
Cc: Jordan Penic; Du, Tom (ENERGY); Biagi, Letitia (ENERGY); Armstrong, Hillary (ENERGY)  
Subject: RE: LTEP Modules, New Directive

Shruti,

Attached is the spreadsheet for LTEP Module 6.

The IESO is aiming to have spreadsheets for all modules complete and shared with the ministry early in the week of 23rd. If you have any questions or feedback on the attached, please let us know as soon as possible so that we can incorporate your feedback into the remaining modules.

Thank you,  
Anthy

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From: Talwar, Shruti (ENERGY) [mailto:Shruti.Talwar@ontario.ca]  
Sent: October 11, 2017 9:55 AM  
To: David Barrett  
Cc: Anthy Lovachis; Jordan Penic; Du, Tom (ENERGY); Biagi, Letitia (ENERGY); Armstrong, Hillary (ENERGY)  
Subject: RE: LTEP Modules, New Directive

Hi David,

The ministry is working on the directive and Hillary will be in touch on that piece.

For the modules, the ministry is expecting a draft of a module this week - could you advise us which one we will be seeing first?

Also to help with coordination, it would be useful for us to have the order in which you intend to share drafts. So something like the following:

Week of October 10 - module a

Week of October 16 - modules b, c, d ..etc.

Week of October 23 - modules e, f, g....

There may be interest to see certain drafts sooner than others. If you can share the timeline/order with this by the end of this week that would help keep things moving along.

Thank you.

Shruti

Shruti Talwar

Director, Strategic Policy and Analytics Branch Strategic, Network and Agency Policy Division Ontario Ministry of Energy  
416.325-8698

[shruti.talwar@ontario.ca](mailto:shruti.talwar@ontario.ca)<mailto:shruti.talwar@ontario.ca>

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

From: Talwar, Shruti (ENERGY)

Sent: October 5, 2017 8:47 AM

To: David Barrett

Cc: Bashir Bhana; Anthy Lovachis; Jordan Penic; Du, Tom (ENERGY); Armstrong, Hillary (ENERGY); Biagi, Letitia (ENERGY)

Subject: RE: LTEP Modules, New Directive

Hi David,

Propose we talk about the directive first and then the modules.

Thanks,

Shruti

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

From: Talwar, Shruti (ENERGY)

Sent: October 4, 2017 5:29 PM

To: David Barrett

Cc: Bashir Bhana; Anthy Lovachis; Jordan Penic; Du, Tom (ENERGY); Armstrong, Hillary (ENERGY); Biagi, Letitia (ENERGY)

Subject: Re: LTEP Modules, New Directive

Sounds good, David. Talk to you tomorrow.

Sent from my iPhone

On Oct 4, 2017, at 4:34 PM, David Barrett

[<david.barrett@ieso.ca<mailto:david.barrett@ieso.ca<mailto:david.barrett@ieso.ca%3cmmailto:david.barrett@ieso.ca>>](mailto:david.barrett@ieso.ca)  
> wrote:

Shruti, I think we should discuss modules development again, as well as the new directive. I hope this time works; feel free to invite who is needed.

Dial in:

Local dial-in number: 416-343-2275

Conference ID: 6485470

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<meeting.ics>