

# LTEP Modules - IESO Updates

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**From:** David Barrett <david.barrett@ieso.ca>  
**To:** "Du, Tom (ENERGY)" <tom.du@ontario.ca>  
**Cc:** "Biagi, Letitia (ENERGY)" <letitia.biagi@ontario.ca>, "Armstrong, Hillary (ENERGY)" <hillary.armstrong@ontario.ca>, "Talwar, Shruti (ENERGY)" <shruti.talwar@ontario.ca>, "Young, Graham (ENERGY)" <graham.young@ontario.ca>, Anthony Lovachis <anthony.lovachis@ieso.ca>  
**Date:** Wed, 29 Nov 2017 23:59:59 -0500  
**Attachments:** IESO responses to ENERGY LTEP Module comments 2017-11-29.docx (28.89 kB); 2017 LTEP Module 1 - Demand 2017-11-29.xlsx (325.16 kB); 2017 LTEP Module 2 - Conservation 2017-11-29.xlsx (20.6 kB); 2017 LTEP Module 3 - Supply 2017-11-29.xlsx (54.2 kB); 2017 LTEP Module 4 - Transmission 2017-11-29.xlsx (9.82 kB); 2017 LTEP Module 5 - Cost 2017-11-29.xlsx (58.89 kB); 2017 LTEP Module 6 - Emissions 2017-11-29.xlsx (584.81 kB)

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Tom, I've attached the updated Modules 1 through 6 and the IESO's responses to comments. Changes made to the Excel files are highlighted and IESO responses are in green in the Word document. We're still looking into the last comment of the Conservation Module and we're seeking further clarity on the request on the last comment of the Cost Module. The Transmission Module 4 and Emissions Module 6 did not change from last time, but are included for completeness.

Thanks,  
David

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

**From:** David Barrett  
**Sent:** November 22, 2017 5:16 PM  
**To:** 'Du, Tom (ENERGY)'  
**Cc:** Biagi, Letitia (ENERGY); Armstrong, Hillary (ENERGY); Talwar, Shruti (ENERGY); Young, Graham (ENERGY); Anthony Lovachis  
**Subject:** RE: LTEP Modules, New Directive

Thanks Tom. We've reviewed and should be able to send along our response by November 29.

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

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

Anthony, 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><<mailto:david.barrett@ieso.ca%3cmmailto: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>