

September 15, 2021

To Market Participants and Other Interested Parties

Dear Stakeholder:

Re: **Corrected Loss Factors and True-Up Adjustments for 2012 to 2016 Under Module C of Alberta Utilities Commission (“Commission”) Proceeding 790, Complaints Regarding the ISO Transmission Loss Factor Rule and Loss Factor Methodology**

In an update on June 28, 2021 on loss factor activities under Module C, the AESO advised stakeholders it was in the process of recalculating the Module C loss factors for all years from 2006 to 2016 to reflect the correction of errors in system topologies. The AESO has implemented the corrections from 2006 forward to 2016 and has published the corrected loss factors and resulting adjustments for each year as they became available. The AESO will financially settle the adjustments in conjunction with the “true-up” settlement process described in the *Module C Settlement Procedure* document posted on the AESO website. Cash settlement will occur on December 30, 2021.

The AESO implemented the system topology corrections for 2012 to 2016, recalculated and published the loss factors for 2012 to 2016, and estimated and published the resulting adjustments on the following dates:

- 2012 and 2013 loss factors and adjustments were published on September 8, 2021;
- 2014 loss factors and adjustments were published on September 9, 2021; and
- 2015 and 2016 loss factors and adjustments were published on September 13, 2021.

The information for each year is available as follows:

- The corrected 2012 to 2016 loss factors and workbooks showing calculations for 2012 to 2016 loss factors are available on the AESO website at www.aeso.ca ► Grid ► Grid-Related Initiatives ► Loss factors ► Loss factors recalculation for 2006-2016 ► 2012 recalculated loss factors, 2013 recalculated loss factors, 2014 recalculated loss factors, 2015 recalculated loss factors, and 2016 recalculated loss factors, respectively.
- Access to the corrected 2012 to 2016 system topologies can be requested through the process for which a link is provided on the same pages listed above. Stakeholders who previously received access to the system topologies will automatically be provided access to the corrected system topologies.
- There have been no changes to other information used for the recalculated loss factors for 2012 to 2016, and that information remains available on the AESO website as described above.
- The estimated Module C true-up adjustments for 2012 to 2016 are available on the AESO website at www.aeso.ca ► Grid ► Grid-Related Initiatives ► Loss factors ► Loss factors recalculation for 2006-2016 ► Module C Adjustment Charges and Refunds.

Corrected Loss Factors and True-Up Adjustments for 2012

Table 1 lists the significant system topology corrections that were implemented for 2012. As well, minor corrections for 2012 were implemented in the following planning areas:

- South Region: Area 47 – Brooks; Area 53 – Fort Macleod; Area 44 – Seebe

- Calgary Region: Area 6 – Calgary
- Central Region: Area 42 – Hanna; Area 37 – Provost; Area 32 – Wainwright
- Edmonton Region: Area 60 – Edmonton; Area 40 – Wabamun
- Northeast Region: Area 25 – Fort McMurray

Table 1 – Significant System Topology Corrections Implemented for 2012 Module C Loss Factor Calculations

Planning Area	Description of Error	Affected Facilities
South Region		
Area 4 – Medicine Hat	Inclusion of facilities not in service	760L line, Medicine Hat – Cypress Nov 2011 – Feb 2014
Central Region		
Area 28 – Cold Lake	Incorrect line characteristics	7L74 and 7L83 lines, Wolf Lake – Leming Lake Jan 2010 – Dec 2012
Northeast Region		
Area 25 – Fort McMurray	Inclusion of facilities not in service	7L85 line, Kinosis – Ruth Lake May 2012
Area 25 – Fort McMurray	Inclusion of facilities not in service	9L23 line, Salt Creek – Ruth Lake May–Jul 2012
Northwest Region		
Area 17 – Rainbow Lake	Inclusion of facilities not in service	7L64 line, Rainbow Lake – Keg River Nov 2011 – Dec 2013

System topologies reflecting the corrections summarized above have been used to determine corrected Module C loss factors for 2012. If settled on their own, adjustments from the corrected loss factors would total approximately \$0.7 million of charges and \$0.4 million of refunds for 2012. As discussed in the AESO’s June 28 update, the amounts are significantly less than the initial Module C adjustments settled in February 2021, which comprised \$25.4 million of charges and \$25.7 million of refunds for 2012.

Corrected Loss Factors and True-Up Adjustments for 2013

Table 2 lists the significant system topology corrections that were implemented for 2013. As well, minor corrections for 2013 were implemented in the following planning areas:

- Calgary Region: Area 6 – Calgary
- Central Region: Area 28 – Cold Lake; Area 42 – Hanna; Area 13 – Lloydminster; Area 37 – Provost; Area 56 – Vegreville; Area 32 – Wainwright
- Edmonton Region: Area 40 – Wabamun
- Northeast Region: Area 25 – Fort McMurray; Area 33 – Fort Saskatchewan.
- Northwest Region: Area 21 – High Prairie; Area 17 – Rainbow Lake

Table 2 – Significant System Topology Corrections Implemented for 2013 Module C Loss Factor Calculations

Planning Area	Description of Error	Affected Facilities	Affected Period
South Region			
Area 4 – Medicine Hat	Inclusion of facilities not in service	760L line, Medicine Hat – Cypress	Nov 2011 – Feb 2014
Central Region			
Area 28 – Cold Lake	Inclusion of facilities not in service	7L157, 7L160, 7L574, and 7L583 lines, Leming Lake – Bourque – Wolf Lake	Jul–Oct 2013
Area 28 – Cold Lake	Incorrect line characteristics	7L574 line, Wolf Lake – Mahihkan	Jul–Oct 2013
Area 28 – Cold Lake	Inclusion of facilities not in service	7L146 line, Bonnyville – Bourque	Jul 2013 – Jul 2014
Area 28 – Cold Lake	Inclusion of facilities not in service	7L139 line, St. Paul – Whitby Lake	Oct 2013 – Feb 2014
Area 28 – Cold Lake	Inclusion of facilities not in service	7L74 line, Wolf Lake – Mahihkan	Oct 2013 – Apr 2014
Area 28 – Cold Lake	Inclusion of facilities not in service	7L83 line, Mahihkan – Leming Lake	Nov 2013 – Apr 2014
Area 56 – Vegreville	Incorrect line characteristics	7L701 line, Heisler – Strome	Jul–Dec 2013
Area 32 – Wainwright	Incorrect line characteristics	953L and 9L953 lines, Cordel – Nilrem	Aug 2013 – Dec 2014
Northeast Region			
Area 27 – Athabasca/Lac La Biche	Inclusion of facilities not in service	1116L, 1117L, 428L, and 457L lines, Heart Lake – Pike Lake	Jul–Oct 2013
Northwest Region			
Area 17 – Rainbow Lake	Inclusion of facilities not in service	7L64 line, Rainbow Lake – Keg River	Nov 2011 – Dec 2013

System topologies reflecting the corrections summarized above have been used to determine corrected Module C loss factors for 2013. If settled on their own, adjustments from the corrected loss factors would total approximately \$1.6 million of charges and \$1.7 million of refunds for 2013. As discussed in the AESO's June 28 update, the amounts are significantly less than the initial Module C adjustments settled in February 2021, which comprised \$35.8 million of charges and \$35.6 million of refunds for 2013.

Corrected Loss Factors and True-Up Adjustments for 2014

Table 3 lists the significant system topology corrections that were implemented for 2014. As well, minor corrections for 2014 were implemented in the following planning areas:

- South Region: Area 47 – Brooks; Area 53 – Fort Macleod; Area 55 – Glenwood; Area 44 – Seebe; Area 49 – Stavely; Area 52 – Vauxhall
- Calgary Region: Area 6 – Calgary
- Central Region: Area 36 – Alliance/Battle River; Area 28 – Cold Lake; Area 13 – Lloydminster; Area 37 – Provost; Area 56 – Vegreville; Area 32 – Wainwright
- Edmonton Region: Area 60 – Edmonton; Area 40 – Wabamun
- Northeast Region: Area 33 – Fort Saskatchewan.
- Northwest Region: Area 21 – High Prairie

Table 3 – Significant System Topology Corrections Implemented for 2014 Module C Loss Factor Calculations

Planning Area	Description of Error	Affected Facilities	Affected Period
South Region			
Area 4 – Medicine Hat	Inclusion of facilities not in service	760L line, Medicine Hat – Cypress	Nov 2011 – Feb 2014
Area 4 – Medicine Hat	Incorrect line characteristics	1034L and 1035L lines, Bowmanton – Suffield	Jun–Oct 2014
Area 53 – Fort Macleod	Inclusion of facilities not in service	893L line, Goose Lake – Summerview	May–Oct 2014
Calgary Region			
Area 6 – Calgary	Incorrect line characteristics	917L line, Janet – East Calgary	May–Oct 2014
Central Region			
Area 28 – Cold Lake	Inclusion of facilities not in service	7L146 line, Bonnyville – Bourque	Jul 2013 – Jul 2014
Area 28 – Cold Lake	Inclusion of facilities not in service	7L139 line, St. Paul – Whitby Lake	Oct 2013 – Feb 2014
Area 28 – Cold Lake	Inclusion of facilities not in service	7L74 line, Wolf Lake – Mahihkan	Oct 2013 – Apr 2014
Area 28 – Cold Lake	Inclusion of facilities not in service	7L83 line, Mahihkan – Leming Lake	Nov 2013 – Apr 2014
Area 28 – Cold Lake	Incorrect line characteristics	7L24 line, Bonnyville – Grand Centre	Jul–Oct 2014
Area 32 – Wainwright	Incorrect line characteristics	953L and 9L953 lines, Cordel – Nilrem	Aug 2013 – Dec 2014
Area 32 – Wainwright	Inclusion of facilities not in service	7L50 line, Jarrow – Battle River	Dec 2014 – Feb 2015

Planning Area	Description of Error	Affected Facilities
Northeast Region		
Area 25 – Fort McMurray	Exclusion of facilities in service	2049S substation, Kettle River Oct 2014 – Feb 2015
Northwest Region		
Area 19 – Peace River	Inclusion of facilities not in service	7L23 line, Nipisi – Narrows Creek Mar 2014 – Sep 2016

System topologies reflecting the corrections summarized above have been used to determine corrected Module C loss factors for 2014. If settled on their own, adjustments from the corrected loss factors would total approximately \$0.9 million of charges and \$1.0 million of refunds for 2014. As discussed in the AESO’s June 28 update, the amounts are significantly less than the initial Module C adjustments settled in December 2020, which comprised \$46.4 million of charges and \$46.2 million of refunds for 2014.

Corrected Loss Factors and True-Up Adjustments for 2015

Table 4 lists the significant system topology corrections that were implemented for 2015. As well, minor corrections for 2015 were implemented in the following planning areas:

- South Region: Area 47 – Brooks; Area 55 – Glenwood
- Calgary Region: Area 6 – Calgary
- Central Region: Area 28 – Cold Lake; Area 13 – Lloydminster; Area 32 – Wainwright
- Northeast Region: Area 33 – Fort Saskatchewan.
- Northwest Region: Area 21 – High Prairie; Area 23 – Valleyview

Table 4 – Significant System Topology Corrections Implemented for 2015 Module C Loss Factor Calculations

Planning Area	Description of Error	Affected Facilities
South Region		
Area 46 – High River	Inclusion of facilities not in service	434L line, Foothills – High River Jun–Sep 2015
Central Region		
Area 32 – Wainwright	Inclusion of facilities not in service	7L50 line, Jarrow – Battle River Dec 2014 – Feb 2015
Northeast Region		
Area 25 – Fort McMurray	Exclusion of facilities in service	2049S substation, Kettle River Oct 2014 – Feb 2015
Area 25 – Fort McMurray	Inclusion of facilities not in service	7L183 line, Engstrom – Kinosis Apr 2015
Area 25 – Fort McMurray	Inclusion of facilities not in service	7L183 line, Engstrom – Kinosis Jul 2015 – Dec 2016

Planning Area	Description of Error	Affected Facilities
Northwest Region		
Area 19 – Peace River	Inclusion of facilities not in service	7L23 line, Nipisi – Narrows Creek Mar 2014 – Sep 2016

System topologies reflecting the corrections summarized above have been used to determine corrected Module C loss factors for 2015. If settled on their own, adjustments from the corrected loss factors would total approximately \$0.4 million of charges and \$0.4 million of refunds for 2015. As discussed in the AESO’s June 28 update, the amounts are significantly less than the initial Module C adjustments settled in December 2020, which comprised \$29.8 million of charges and \$29.8 million of refunds for 2015.

Corrected Loss Factors and True-Up Adjustments for 2016

Table 5 lists the significant system topology corrections that were implemented for 2016. As well, minor corrections for 2016 were implemented in the following planning area:

- Central Region: Area 28 – Cold Lake

Table 5 – Significant System Topology Corrections Implemented for 2016 Module C Loss Factor Calculations

Planning Area	Description of Error	Affected Facilities
Northeast Region		
Area 25 – Fort McMurray	Inclusion of facilities not in service	7L183 line, Engstrom – Kinosis Jul 2015 – Dec 2016
Northwest Region		
Area 19 – Peace River	Inclusion of facilities not in service	7L23 line, Nipisi – Narrows Creek Mar 2014 – Sep 2016

System topologies reflecting the corrections summarized above have been used to determine corrected Module C loss factors for 2016. If settled on their own, adjustments from the corrected loss factors would total approximately \$0.05 million of charges and \$0.03 million of refunds for 2016. As discussed in the AESO’s June 28 update, the amounts are significantly less than the initial Module C adjustments settled in December 2020, which comprised \$6.8 million of charges and \$6.7 million of refunds for 2016.

Settlement of Module C True-Up Adjustments

As mentioned above, adjustments from the corrected loss factors will be settled as part of the Module C true-up process described in the *Module C Settlement Procedure* document. The AESO has to date been able to collect all Module C charges for 2012 to 2016. As a result, the total true-up adjustments estimated for each year from 2012 to 2016 comprise only the amounts provided above, which include adjustments from the corrected loss factors and interest to the expected date of cash settlement in December 2021. Any imbalances for 2012 to 2016 that remain after the true-up settlement process will be addressed by way of Rider E on a going forward basis, as described in the *Module C Settlement Procedure* document. The AESO updated the *Module C Settlement Procedure* document on August 6, 2021, to include additional information on the true-up settlement process, including the schedule for expected settlement activities.

The AESO has now published the corrected loss factors and associated adjustments for all Module C years and does not anticipate publishing additional information before settlement statements are issued in October 2021.

In its June 28 update, the AESO expected that the schedule for the true-up settlement process would allow stakeholders more than 30 days to review the recalculated Module C loss factors and resulting Module C adjustments for each year before settlement statements were issued in October 2021. The AESO acknowledges that loss factors and adjustments for 2012 to 2016 have been published from 24 to 29 days before preliminary settlement statements will be issued on October 7, 2021. However, as loss factors and adjustments for most of the Module C years were published more than 30 days before that date and because the true-up adjustments for each year are significantly less than the initial Module C adjustments, the AESO plans to proceed with issuing settlement statements in October 2021 and to cash settle the adjustments on December 30, 2021, as set out in the *Module C Settlement Procedure* document.

Stakeholders can access Module C data, results, and related information on the AESO website at www.aeso.ca ► Grid ► Grid-Related Initiatives ► Loss factors ► Loss factors recalculation for 2006 2016. Module C stakeholder updates and related information, including technical meeting presentations, are available at www.aeso.ca ► Grid ► Grid-Related Initiatives ► Loss factors ► Stakeholder engagement.

Stakeholders may contact Milton Castro-Núñez at milton.castro-nunez@aesoc.ca or John Martin at john.martin@aesoc.ca with any concerns or questions.

Yours truly,

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