

Stakeholder Question A

GUOC used to be a reflection of a generator's transmission system use. Now GUOC is also being charged on the capacity used at the distribution level. Capacity that never touches the transmission system. Can the AESO explain why this is in keeping with the intention of having GUOC?

AESO Response

A generating unit owner's contribution (GUOC) is a locational price signal for a new generating unit to choose to locate in a certain region to avoid, or at least minimize its adverse impact on the transmission system. GUOC is still reflective of the impact of a new generator on planning and operations in the region. It is not related to transmission system access or transmission system usage. The provisions in the *Transmission Regulation* do not distinguish between transmission-connected generators and distribution-connected generators with respect to the requirement to pay GUOC. Pursuant to section 29 of the *Transmission Regulation*, it is the "owner of a generating unit" that is required to pay GUOC. Similarly, section 47(b) of the *Transmission Regulation* requires the Commission to ensure that the ISO tariff charges the "owners of generating units" for a financial contribution towards transmission system upgrades. Accordingly, the owner of a generating unit, irrespective of whether it is connected to the transmission system or distribution system is required to pay GUOC. However, a generating unit with a rated capacity of 1 MW or less is not required to pay GUOC pursuant to Section 30 of the *Transmission Regulation*.

Once the proposed refiled ISO tariff^[1] becomes effective, GUOC will be calculated based on the maximum capability (MC) rather than Rate System Transmission Service (STS) contract capacity. This change from Rate STS contract capacity to MC would result in both transmission-connected dual-use connections (i.e. market participants with both load and generation) and distribution-connected market participants with generation having to pay an appropriate amount of GUOC. Any additional generation capacity would either reduce inflows or increase outflows from a location and the AESO plans to accommodate the connection of the additional generation capacity, therefore it is appropriate for a GUOC rate to be based on that additional generation capacity.

Stakeholder Question B

What's the purpose of the GUOC? It appears to be a deposit on system access, not a proxy for transmission need.

AESO Response

Please refer to response to Question A above.

^[1] Exhibit 25175_X0003.01, Appendix A to AESO 2018 ISO Tariff Compliance Filing – Refiled ISO Tariff

Stakeholder Question C

Why different rules on Maximum Capability for BTF and ISDs?

AESO Response

As discussed in the information document Energy Offers and Bids ID #2012-008R, if permitted under an applicable approval issued by the Alberta Utilities Commission (AUC) (such as an Industrial System Designation (ISD)), pool participants with on-site load may choose to offer their energy net-to-grid rather than offering gross generation. Such pool participants should enter as the source asset's maximum capability, the amount of energy that they expect to export to the grid, rather than the entire generating capacity of the source asset. For additional information, refer to AUC Decisions, including: Decision 23418-D01-2019, EPCOR Water Services Inc. E.L. Smith Solar Power Plant, February 20, 2019; and Decision 24126-D01-2019, Keyera Energy Ltd., Cynthia Gas Power Plant, June 25, 2019.

It is reasonable to assess GUOC based on the maximum capability that the pool participant chooses to offer into the power pool because that amount should be reflective of generation capacity that would either reduce inflows or increase outflows from a location. The AESO plans to accommodate the connection of the additional generation capacity and therefore it is appropriate for a GUOC rate to be based on that additional generation capacity. An ISD is approved by the Commission to offer less than gross generation, so if the owner of that ISD chooses to offer net-to-grid, then it is more reasonable to assess their GUOC on the net-to-grid MC because they are not expecting to export their entire generating capacity to the grid.

Stakeholder Question D

When a MP executes a System Access Service (SAS) agreement, pays their GUOC within 30 days and then subsequently changes a critical information requirement, such as an in-service date (which is likely given we are in an energy only market), what are the details around the calculation of potentially forfeiting the GUOC and what is the governance process or dispute resolution process?

AESO Response

For a transmission-connected project that requires the construction of transmission facilities, if a market participant executes a SAS agreement and subsequently changes critical information after the execution date¹, the MP does not risk forfeiting the GUOC refund. However, if changes to critical information are made after the effective date² of the SAS agreement, then the MP may forfeit all or a portion of the GUOC refund. As per subsection 3.6(10) of the refiled ISO Tariff, a market participant is required to pay GUOC within 30 days after the effective date of the SAS agreement.

¹ The execution date of the SAS agreement is the date that the SAS agreement is signed.

² For a connection project, the effective date of the SAS agreement is typically the date that the Commission issues permit and licence to the market participant, unless there are conditions precedent included in the SAS agreement. Refer to subsection 3.7(1) of the Refiled ISO Tariff for further details.

The process and calculations for the GUOC refund process are described in subsection 7.5 of the refiled ISO tariff³ and Section 505.2 of the ISO rules, *Performance Criteria for Refund of Generating Unit Owner's Contribution* ("Section 505.2").

Subsection 7.5(2) of the refiled ISO tariff states that the refund period for GUOC begins on January 1 following the initial contract capacity start date specified in section 4 of the SAS agreement and ends 9 calendar years later, on December 31. If the market participant changes the initial contract capacity "start date" at any time prior to the effective date of the SAS agreement, the AESO will consider the new date to be the initial contract capacity date for purposes of calculating the GUOC refund. As a result, such a change may be made without a market participant risking forfeiture of their GUOC refund.

Subsection 2(3) of Section 505.2 states that the refund for each year during the refund period is calculated as: refund = annual amount x performance assessment.

- "performance assessment" is determined in accordance with Section 505.2; and
- "annual amount" is calculated in accordance with subsection 7.5(3) of the refiled ISO tariff, which states:

7.5(3) The **ISO** must calculate the annual amounts during the refund period as:

- (a) 5.6% of the contribution for a generating facility, in each of the first through fourth calendar years in the refund period;
- (b) 11.2% of the contribution for a generating facility, in the fifth calendar year in the refund period; and
- (c) 16.6% of the contribution for a generating facility, in each of the sixth through ninth calendar years in the refund period

Additionally, subsection 7.5(4) of the refiled ISO tariff provides that the annual amount calculated under subsection 7.5(3) must be adjusted for performance and/or energization delays. Subsection 7.5(4)(c) of the refiled ISO tariff provides that the annual amount (and therefore refund for the year) must be reduced to zero if the generating facility has not energized before the start of the first calendar year following the initial contract start capacity date specified on the SAS agreement.

If the market participant changes the MC at any time prior to the effective date of the SAS agreement, the AESO will use the revised MC for purposes of calculating the GUOC refund. As a result, such a change may be made without a market participant risking forfeiture of their GUOC refund.

In the event that a market participant decreases its MC after the SAS agreement has become effective, the performance assessment and refund will be calculated using the maximum capability that the market participant originally provided as critical information at the time the SAS agreement became effective. In the event that a market participant increases MC after the SAS agreement is effective, GUOC will be assessed on the incremental amount of MC.

To illustrate how GUOC payments and refunds are calculated, four examples of transmission-connected projects that require construction of transmission facilities are provided below:

³ Exhibit 25175_X0003.01, Appendix A to AESO 2018 ISO Tariff Compliance Filing – Refiled ISO Tariff.

Example 1:

An entity proposes to connect a 50 MW generator to the transmission system in Northeast Alberta. The GUOC rates are:

Generating unit owner's contribution rates

Planning Region	Current (2014-2015) Rate (\$/MW)	Proposed Rate (\$/MW)
Northwest	\$10,000	\$10,000
Northeast	\$50,000	\$20,000
Edmonton	\$32,500	\$30,000
Central	\$22,400	\$50,000
Calgary	\$10,000	\$40,000
South	\$25,000	\$20,000

Following the provisions of subsection 7 of the refiled ISO tariff, the determinations for this example are:

- The maximum capability of the generator is 50 MW. The calculation to determine the GUOC amount is 50 MW x \$20,000 = \$1,000,000.
- The in-service-date⁴ proposed in the SASR by the generator is November 15, 2021 and as a result the initial contract capacity start date in the SAS Agreement is November 1, 2021⁵.
- The refund period will be January 1, 2022 through December 31, 2030.
- The annual amount for the first year in the refund period is 5.6% x \$1,000,000 = \$56,000.

For purposes of this example, consider a connection project where the SAS agreement becomes effective upon the issuance of permit and licence by the Commission. If at some point after the SAS agreement has become effective, the market participant would like to change their in-service-date by one year to November 15, 2022, the SAS Agreement will need to be amended to reflect the new contract capacity start date, November 1, 2022. Notwithstanding that the amended SAS agreement reflects the new contract capacity start date, the initial contract capacity start date for purposes of calculating the GUOC refund is November 1, 2021.

If the market participant's project energizes in November 2022, the market participant will forfeit the GUOC refund for the first year of the refund period in the amount of \$56,000, pursuant to subsection 7.5(4)(c).

The market participant will forfeit the entire GUOC refund if the project fails to energize by January 1, 2030 or if the project is cancelled prior to energization.

⁴ The in-service-date is the date that the project energizes.

⁵ The initial contract capacity start date is the first day of the month of energization.

Any market participant can file a dispute with the AESO in accordance with Section 103.2 of the ISO rules, *Dispute Resolution*.

Example 2:

An entity proposes to connect a 200 MW generator to the transmission system in the Edmonton area.

The GUOC rates are: **Generating unit owner’s contribution rates**

Planning Region	Current (2014-2015) Rate (\$/MW)	Proposed Rate (\$/MW)
Northwest	\$10,000	\$10,000
Northeast	\$50,000	\$20,000
Edmonton	\$32,500	\$30,000
Central	\$22,400	\$50,000
Calgary	\$10,000	\$40,000
South	\$25,000	\$20,000

Following the provisions of subsection 7 of the refiled ISO tariff, the determinations for this example are:

- The maximum capability of the generator is 200 MW. The calculation to determine the GUOC amount is 200 MW x \$30,000 = \$6,000,000. The in-service-date proposed in the SASR by the generator is November 20, 2021 and as a result the initial contract capacity start date in the SAS Agreement is November 1, 2021.
- The refund period will be January 1, 2022 through December 31, 2030.
- The annual amount for the first year in the refund period is 5.6% x \$6,000,000 = \$336,000.

For purposes of this example, consider a connection project where the SAS agreement becomes effective upon the issuance of permit and licence by the Commission. If at some point after the SAS agreement has become effective, the market participant would like to change their in-service-date by a year and a half to May 15, 2023, the SAS Agreement will need to be amended to reflect the new contract capacity start date, May 1, 2023. Notwithstanding that the amended SAS agreement reflects the new contract capacity start date, the initial contract capacity start date for purposes of calculating the GUOC refund is November 1, 2021.

If the market participant’s project energizes in May 2023, the market participant will forfeit the GUOC refund for the first two years of the refund period. This would amount to \$336,000 for 2022 and another \$336,000 for 2023, pursuant to subsection 7.5(4)(c). The total forfeited refund is \$672,000 because there are no refunds for “partial” year performance.

The market participant will forfeit the entire GUOC refund if the project fails to energize by January 1, 2030 or if the project is cancelled prior to energization.

Any market participant can file a dispute with the AESO in accordance with Section 103.2 of the ISO rules, *Dispute Resolution*.

Example 3

An entity proposes to connect a 15 MW generator to the transmission system in the South area.

The GUOC rates are:

Generating unit owner's contribution rates

Planning Region	Current (2014-2015) Rate (\$/MW)	Proposed Rate (\$/MW)
Northwest	\$10,000	\$10,000
Northeast	\$50,000	\$20,000
Edmonton	\$32,500	\$30,000
Central	\$22,400	\$50,000
Calgary	\$10,000	\$40,000
South	\$25,000	\$20,000

Following the provisions of subsection 7 of the refiled ISO tariff, the determinations for this example are: The maximum capability of the generator is 15 MW. The calculation to determine the GUOC amount is 15 MW x \$20,000 = \$300,000

- The in-service-date proposed in the SASR by the generator is January 20, 2022 and as a result the initial contract capacity start date in the SAS Agreement is January 1, 2022.
- The refund period will be January 1, 2023 through December 31, 2031.
- The annual amount for the first year in the refund period is 5.6% x \$300,000 = \$16,800.

If at some point after the SAS agreement has become effective, the market participant would like to change their in-service-date by 11 months to December 20, 2022, the SAS Agreement will need to be amended to reflect the new contract capacity start date, December 1, 2022. Notwithstanding that the amended SAS agreement reflects the new contract capacity start date, the initial contract capacity start date for purposes of calculating the GUOC refund is January 1, 2022. However, pursuant to subsection 7.5(4)(c) of the refiled ISO tariff, if the market participant's project energizes by December 31, 2022, they will still receive a GUOC refund for the first year because the new contract capacity start date falls before the start of the refund period.

Example 4

An entity proposes to connect a 50 MW generator to the transmission system in the Calgary area.

The GUOC rates are:

Generating unit owner's contribution rates

Planning Region	Current (2014-2015) Rate (\$/MW)	Proposed Rate (\$/MW)
Northwest	\$10,000	\$10,000
Northeast	\$50,000	\$20,000
Edmonton	\$32,500	\$30,000
Central	\$22,400	\$50,000
Calgary	\$10,000	\$40,000
South	\$25,000	\$20,000

Following the provisions of subsection 7 of the refiled ISO tariff, the determinations for this example are:

- The maximum capability of the generator is 50 MW. The calculation to determine the GUOC amount is 50 MW x \$40,000 = \$2,000,000.
- The in-service-date proposed in the SASR by the generator is June 20, 2022 and as a result the initial contract capacity start date in the SAS Agreement is June 1, 2022.
- The refund period will be January 1, 2023 – December 31, 2031.
- The annual amount for the first year in the refund period is 5.6% x \$2,000,000 = \$112,000.

If the market participant would like to change their in-service date after the SAS agreement has been executed but prior to the SAS agreement becoming effective, the SAS agreement will need to be amended to reflect the new initial contract start date. For purposes of this example, the market participant would like to change their in-service date by one year to June 20, 2023. The amended SAS agreement will therefore reflect a new initial contract capacity start date of June 1, 2023. In this case, there will be no forfeit of the GUOC refund because this change was made prior to the effective date of the SAS agreement. Provided the market participant changes the initial contract capacity start date prior to the effective date of the SAS agreement, the initial contract capacity start date in the amended SAS agreement is the date that will be used for purposes of calculating the GUOC refund.

Stakeholder Question E

Will there be consequential amendments required to the Long-Term Adequacy metrics as a result of changes in the connection queue and project list? MSA has expressed concerns around forward market liquidity. Changes to the project list is a great step, are their plans for changes to the Long-Term Adequacy metrics around the timing of ISD and projects in construction.

AESO Response

The Long-Term Adequacy (LTA) metrics will continue to show generation projects under construction and project in-service dates will align with the Project List. Currently the GUOC payment is the critical milestone for a project to be included as “under construction” in the LTA report. However, once the refiled ISO tariff becomes effective, the effective date of the SAS Agreement (i.e. normally upon the receipt of permit and licence for connection projects) will become the new inclusion criteria for generation projects. In this case, GUOC payment is due within 30 days of the SAS Agreement becoming effective. While

GUOC payment is still an important milestone, the AESO will continue to ensure that projects are actively under construction to be included on the “under construction” list in the LTA report.