Guidance Document
Private Gas Facility Requirements in SB 2408/P.A. 102-662

Electric Generating Units (EGUs) and Large Greenhouse Gas-Emitting Units (LGUs) that use gas as a fuel that are not public GHG-emitting units are required to permanently reduce all CO_2e and copollutant emissions to zero no later than January 1, 2045, according to a statutory schedule based upon the NOx and SO_2 emissions of the unit and the unit's geographic location. Certain units must also reduce emissions in advance of the zero-emission deadline.

Zero Emission Deadlines

- **By January 1, 2030:**
  - NOx emissions rate greater than 0.12 lbs/MWh or SO_2 emission rate greater than 0.006 lb/MWh; and
  - Located in or within 3 miles of an environmental justice (EJ) community designated as of January 1, 2021, or an equity investment eligible community (EIEC).

- **By January 1, 2035:**
  - Began operation prior to September 15, 2021;
  - NOx emission rate of 0.12 lb/MWh or less and an SO_2 emission rate of 0.006 lb/MWh or less; and
  - Located in or within 3 miles of an EJ community designated as of January 1, 2021, or an EIEC.

- **By January 1, 2040:**
  - NOx emission rate greater than 0.12 lbs/MWh or an SO_2 emission rate greater than 0.006 lb/MWh; and
  - Not located in or within 3 miles of an EJ community designated as of January 1, 2021, or an EIEC.

- **By January 1, 2040:**
  - All remaining units that have a heat rate greater than or equal to 7000 BTU/kWh.

- **By January 1, 2045:**
  - All remaining units.

Interim Emission/Operational Reduction Deadlines

- **By January 1, 2030, the following units must reduce CO_2e emissions by at least 50% from its existing emissions for CO_2e:**
  - Began operation prior to September 15, 2021;
  - NOx emission rate of 0.12 lb/MWh or less and an SO_2 emission rate of 0.006 lb/MWh or less; and
  - Located in or within 3 miles of an EJ community designated as of January 1, 2021, or an EIEC.

- **After January 1, 2035, the following units shall reduce CO_2e emissions by at least 50% from its existing emissions for CO_2e; be limited in operation to, on average, 6 hours or less per day measured over a calendar year; and not run for more than 24 consecutive hours except in emergency conditions, as designated by a Regional Transmission Organization (RTO) or Independent System Operator (ISO):**
    - NOx emission rate greater than 0.12 lbs/MWh or an SO_2 emission rate greater than 0.006 lb/MWh; and
    - Not located in or within 3 miles of an EJ community designated as of January 1, 2021, or an EIEC.

- **By January 1, 2035, the following units must reduce its CO_2e emissions by at least 50% from its existing emissions for CO_2e:**
    - All remaining units that have a heat rate greater than or equal to 7000 BTU/kWh.

Limit on Existing Emissions

As of the effective date of the Act, no unit may emit, in any 12-month period, CO_2e or copollutants in excess of that unit's existing emissions for those pollutants.

The rolling 12-month period begins with the first full month following the legislation's effective date, September 15, 2021. The first full 12-month period runs from October 1, 2021 to September 30, 2022, though it is possible that a source could exceed its total prior to a full 12 months. Any unit that exceeds its emissions limit without a statutory or regulatory exception in a 12-month period may be subject to IEPA's existing enforcement authority under Section 31 of the Environmental Protection Act.

Notifications/Reporting

All sources are required to keep records of CO_2e and criteria pollutant emissions and to notify the Illinois EPA if they exceed their allowable emissions. Almost all impacted sources already report hourly CO_2, NOx, and SO_2 emissions to USEPA on at least a quarterly basis. All sources report emissions annually to the Illinois EPA.

The affected sources are all subject to Clean Air Act Permit Program (CAAPP) permitting standards. New obligations pursuant to P.A. 102-662 will be established in the applicable sources' CAAPP permits upon either submission of an application for revised operating permit, or operating permit renewal.

Exceptions to Zero Emissions Deadlines and Emissions Restrictions

Notwithstanding any applicable zero emissions or emissions reduction deadline, or 12-month rolling average emissions restriction, EGUs and LGUs are allowed to temporarily continue emitting GHGs if it has been determined that ongoing operation of the EGU is necessary to maintain power grid supply and reliability or ongoing operation of the LGU that is not an EGU is necessary to serve as an emergency backup to operations, consistent with the following:

- If a unit that is a participant in an RTO intends to retire, it must submit documentation to the appropriate RTO by the appropriate deadline that meets all applicable regulatory requirements necessary to obtain approval to permanently cease operating the unit;

- If a unit that is a participant in an RTO receives notice that the RTO has determined that continued operation of the unit is required, the unit may continue operating until the issue identified by the RTO is resolved. The unit must cooperate with the RTO in resolving the issue and must reduce its emissions consistent with the applicable zero emissions, emissions reduction, or 12-month rolling average emissions restriction requirements as soon as practicable when the issue identified by the RTO is resolved;

- Any unit that is not a participant in an RTO is allowed to continue emitting GHGs after the zero-emission date if necessary to serve as an emergency backup unit if approved by the Illinois Commerce Commission.

The purpose of these exceptions is to permit ongoing operation regardless of an applicable zero emissions deadline, emissions reduction deadline, or 12-month rolling average emissions restriction to maintain power grid supply and reliability. Since ongoing operation due to power grid supply and reliability determinations might impact both CO_2e and copollutant emissions, it follows that these exceptions are applicable to emissions of both CO_2e and copollutants.

PJM and MISO have outlined defined scenarios in which they would utilize the statutory provisions that enable generators to run units in the event that the rolling emissions limits needed to be exceeded to maintain grid reliability and stability. Each unit will be responsible for accounting for their own emissions and reliability exceptions.

If PJM or MISO foresee the need to run an EGU or LGU in Illinois for any of the defined reliability scenarios, they will communicate the need to the applicable generation owner, monitor system conditions, and communicate to the generation owner when the unit is no longer needed for reliability and should be taken offline and stop generating.

Within 30 days of an exception event, the generation owner or operator shall submit to the Illinois EPA Bureau of Air Compliance Section, with a copy to the applicable RTO, a Notice of Exception Event that provides the following information:

- The unit committed;
- The time the unit began operating;
- The time the unit stopped operating; and
- The emissions attributable to this window of time.

Addendum

Responses to 12/22/21 PJM Independent Market Monitor Letter

1. Is it correct that affected generators must comply with section 9.15 (k-5) beginning with the 12 month period from October 1, 2021, through September 30, 2022. If correct, are only emissions from October 1, 2021, through September 30, 2022, subject to limits in the first 12-month rolling period? If not, when does the compliance obligation begin?

Yes, that is correct. The first compliance timeframe is from October 1, 2021, through September 30, 2022. And yes, only emissions in that timeframe are subject to the limitations as a starting point. Each month thereafter, a new rolling 12-month period will be compared to the limits.

2. Does the Illinois Environmental Protection Agency and/or the Illinois Pollution Control Board plan to monitor compliance with Section 9.15 (k-5)?

The Illinois EPA will monitor compliance as it does with other regulations. Additionally, sources are already required to notify the Illinois EPA of any noncompliance.

3. Does the Illinois Environmental Protection Agency and/or the Illinois Pollution Control Board plan to issue regulations addressing the implementation of Section 9.15 (k-5)?

The Illinois EPA does not intend to promulgate regulations itself or propose regulations to the Illinois Pollution Control Board (PCB). The PCB has not communicated any indication to the Illinois EPA that it intends to do so on its own.

4. Will the definition of the CO2e emissions limit be based on current CEMS data for the baseline period or will it be based on the emissions estimates reported in 2018–2020?

The baseline period emissions are calculated using a combination of CEMS data and emissions factors based on fuel usage. All of this information is already reported to USEPA by sources subject to (k-5), per 40 CFR Part 98, and Illinois does not intend for any changes in existing methodologies in that regard. Specifically, Part 98.2(a)(1) requires Part 98 reporting of sources that are subject to Part 75. CO2e emissions are calculated using Equation A-1 from 40 CFR 98.2(b)(4), and emissions data for specific contributing pollutants are taken from a combination of CEMS data and other measurement or estimation methods. Part 98.3 requires reporting of CO2, CH4, N2O, and each fluorinated GHG. This covers all pollutants used to calculate CO2e that would be emitted by sources subject to (k-5). Part 75.13 requires use of CO2 CEMS or alternate methods that are acceptable continuous monitoring methods detailed in Appendices F and G to Part 75. Part 98 Tables C-1 and C-2 have default values for CH4, N2O, and other GHGs, based on fuel type, that sources should continue to use for requirements pursuant to (k-5); they are essentially considered to be continuous parameter monitoring based on fuel consumption.

5. Will the definition of ongoing CO2e emissions be based on current CEMs data or will it be based on emissions estimates?

See response to #4, above. CO2e emissions are calculated using Equation A-1 from 40 CFR 98.2(b)(4), and emissions data for specific contributing pollutants are taken from a combination of CEMS data and other measurement or estimation methods. Existing emissions should be calculated using the information sources reported from 2018-2020, and those sources should continue to rely on the same methods for monitoring or estimating those emissions going forward.

One difference between federal requirements and the new Illinois requirements is that federal Part 98 GHG reports are annual while Illinois requirements are for rolling 12-month periods. However, sources already have the necessary information for tracking these emissions on a monthly (or more frequent) basis. As such, sources should continue to use methodologies in Part 75 and Part 98 as discussed above, but must demonstrate compliance on a 12-month rolling basis. This will require that sources review the information on a monthly basis to ensure ongoing compliance.

6. Will the definitions of co-pollutant baselines and ongoing emissions be based on estimated emissions per quantity of fuel (MMBtu) burned?

Similar to Question 5 above, a source should continue to use the methods for measuring or calculating emissions that are currently required by its permit. In some cases, this will be based on CEMS monitoring; in other cases, calculations may be based on emissions testing or fuel use for sources subject to (k-5).

"Copollutants" refers to the six criteria pollutants that have been identified by USEPA pursuant to the Clean Air Act: NOx, CO, PM, SO2, ozone, and lead. Many sources subject to (k-5) have CEMS for NOx and perhaps CO, and may use emissions testing for other emissions. Otherwise, PM, SO2, and lead emissions should be calculated based on fuel use if the source is not currently required by its permit to record or report emissions of those pollutants. Ozone is not directly emitted by sources subject to (k-5).

Emission baselines are established with emissions data previously submitted by sources for 2018 to 2020 in their annual emissions reports, and ongoing emissions for those respective pollutants should be measured or calculated using the same methods that have been employed in those baseline years and required by the source permit.

Response to 2/3/22 PJM Letter

Do the emissions which result from dispatch by PJM for reliability decrement the emissions cap before the cap is reached? Specifically, the treatment of the emission exemption will directly impact the level of opportunity cost a generator will be able to include in its generation offer. PJM is respectfully requesting that the IEPA issue a written determination, or reply to this communication, regarding this facet of CEJA. This will allow us to provide this guidance to the IMM and generation operators.

Section 9.15 (k-5) of the Climate and Equitable Jobs Act provides that no unit may emit, in any 12-month period, CO_2e or copollutants in excess of that unit's existing emissions for those pollutants. Notwithstanding this or any other applicable zero emissions or emissions reduction deadline, Electric Generating Units and Large Greenhouse Gas Emitting Units are allowed to temporarily continue emitting greenhouse gases if it has been determined that ongoing

operation is necessary to maintain power grid supply and reliability or to serve as an emergency backup to operations. The statutory operation exceptions do not apply until the applicable emissions deadlines or limits are reached. PJM has outlined defined scenarios in which it would utilize these statutory provisions that enable generators to run units in the event that the rolling emissions limits needed to be exceeded to maintain grid reliability and stability. While the statute provides relief for generators to continue to run in exceedance of an emissions deadline or restriction, it does not allow generators to not count the emissions during those PJM-defined run times towards any applicable statutory or permitting emissions limit or restriction.