MINNESOTA
PUBLIC UTILITIES COMMISSION

NEW, REVISED, and PREFERRED DECISION OPTIONS
Proposed by Commissioner Partridge
Agenda Meeting: January 15, 2026

DOCKET NUMBER	**E-999/CI-24-352**
ANALYST	**Danielle Winner**
DATE/TIME SUBMITTED	**January 8, 2026, 11:30 a.m.**
TITLE	**Partridge LCA Framework**
SUBJECT	**In the Matter of Commission Investigation into a Fuel Life-Cycle Analysis Framework for Utility Compliance with Minnesota's Carbon-Free Standard**

Partridge Proposed Framework

Docket E999/CI-24-352

Contextual Decision Options

NEW PARTRIDGE A. The Commission finds that Minn Stat. 216B.1691 ("CFS Statute") is part of a broad set of Minnesota policies related to the tracking and reduction of greenhouse gas emissions, including, but not limited to, Minnesota's economy-wide greenhouse gas reduction goals set forth in Minnesota Statute 216H.02 and the statutory requirement included in Minnesota Statute 216B.2422 Subd. 3 that the Commission apply and consider the cost of greenhouse gas emissions in electric resource planning and certificate of need proceedings.

NEW PARTRIDGE B. Considering this framework of state policies that the legislature has tasked the Commission with implementing, the Commission determines that the legislature's overarching goal of the CFS statute is in furtherance of the state's economy-wide greenhouse emissions goals included in 216H.02; is to be integrated with the consideration of greenhouse gas emissions in resource planning and certificate of need proceedings; and is intended by the legislature to reduce greenhouse gas emissions, by the percentages and on the timeline provided in the CFS Statute, that contribute to climate change and result from the generation of electricity sold to retail customers in Minnesota.

NEW PARTRIDGE C. Because the record of evidence in this docket demonstrates that the definition of "carbon-free" in this statute lacks a timeframe for "generating electricity without emitting carbon dioxide", neither saying "at the point of generation" nor "considering the fuel lifecycle," and the fact that legislators that voted on the CFS Statute disagree about its legislative intent, the Commission determines that there is ambiguity in the language of the CFS Statute related to the boundaries and timeline of the definition of "carbon free," requiring the Commission to establish a definition and associated guidance for "carbon free" determination.

NEW PARTRIDGE D. Based on the overarching goal of the CFS Statute as stated above, the entirety of the language included in the CFS Statute, and the principles of statutory interpretation, the Commission finds that a fuel life-cycle analysis is the most appropriate methodology for assessing whether an electric resource is considered carbon free for compliance with the CFS Statute.

NEW PARTRIDGE E. Absent a fuel life-cycle analysis approach for determining carbon-free compliance, utilities subject to the CFS Statute could be required to invest in a mix of electric generation resources that increase greenhouse gas emissions economy-wide. In addition, the record reflects that an overly restrictive definition of carbon free may result in the retirement of certain potentially carbon-free dispatchable generation that are currently operating, thereby negatively impacting the reliability of the Minnesota grid or increase costs to Minnesota ratepayers, in contradiction of the direction to the Commission by the legislature in Minn Stat. 216B.1691, subdivision 2d, paragraph (b), clause 1.

NEW PARTRIDGE F. A fuel life-cycle analysis shall be used to determine whether the net emissions resulting from a technology or fuel used to produce electricity, over the fuel's production and combustion cycle, is lower than the emissions that would result from the process most likely to occur ("the counterfactual") in the absence of its use for electricity generation.

NEW PARTRIDGE G. The integrated resource planning ("IRP") process will continue to be the Commission's primary tool and process for selecting electric generating resources with consideration of reliability, resource adequacy, greenhouse gas emissions and associated externalities, and pollutants and other environmental impacts.

Decision Options Based on Staff's Briefing Papers

1. The following resources shall be eligible for full CFS compliance: solar, wind, hydropower, and nuclear.

   A. geothermal

   PARTRIDGE NEW B. Hydrogen produced with solar, wind, hydropower, nuclear, or geothermal.

PARTRIDGE NEW 5. The Commission will give full carbon-free credit to waste-derived eligible energy technologies ("EETs") included in Minn. Stat. 216B.1691, subd. 1(c)(5), only if the results of a facility-specific fuel LCA show that using the waste-derived EETs to produce electricity results in equal or lower emissions compared to the emissions that would occur in a counterfactual scenario. The counterfactual must incorporate all reasonable, commercially available waste and emissions mitigation practices associated with the EETs and be approved by the Commission after an opportunity for notice and comment by interested parties.

PARTRIDGE MODIFIED 7. In evaluating compliance or partial compliance, and in evaluating IRPs, the Commission may establish limits on significant additional use of emitting fuels that have been determined to be ~~fully or partially~~ carbon-free based on an LCA.

13. LCA review will use the following procedures:

PARTRIDGE MODIFIED B. The utility proposing a ~~new~~ ~~CF~~ fuel LCA ~~pathway~~ for compliance demonstration purposes is responsible for conducting the LCA and providing a detailed and transparent description of the inputs, assumptions, and ~~the~~ results of ~~an~~ the LCA, including a comprehensive explanation and justification for the counterfactual selected, to the Commission for review.

PARTRIDGE MODIFIED A. Prior to submitting a proposed LCA to the Minnesota Pollution Control Agency ("MPCA"), the utility will work with the MPCA to develop the appropriate assumptions and inputs for the project-specific LCA, including:

1. the appropriate counterfactual, including reasonable, commercially available practices to reduce the amount of waste feedstock and/or mitigate associated emissions

2. system boundary and feedstock assumptions, including assumptions related to leakage where applicable

3. the study period

4. relevant offsets, including but not limited to landfill methane collection practices and recycling or alternative beneficial use of waste feedstocks.

The MPCA ~~responsible state agency~~ shall review and make a recommendation to the Commission on whether to approve~~ing~~, modify, or deny~~ing~~ the assumptions, inputs, and/or results of an LCA conducted by ~~or on behalf of~~ a utility.

G. Utilities are encouraged to file proposed LCAs during a resource plan or resource acquisition proceeding, but may file at any time.

PARTRIDGE MODIFIED H. A process of public comment will transpire through a docketed process before the Commission after the proposed LCA has been submitted. Interested parties may comment on the methodology, outcome, inputs, and assumptions of the LCA, including the appropriateness of the counterfactual and associated assumptions.

PARTRIDGE NEW 22. LCA studies shall quantify all greenhouse gases considered in Minnesota Statute 216B.2422, Subd. 3, the environmental costs the Commission must apply when evaluating and selecting resource options in all proceedings before the Commission, using a carbon equivalent unit of measure.

PARTRIDGE MODIFIED 23. For all claims of carbon-free electricity used in an LCA ~~life-cycle analysis~~ where the fuel requires processing using electricity before the fuel is combusted:

B. The utility must specify the source of carbon-free electricity; and

C. If a utility does not propose carbon-free electricity, the utility should use the whole MISO territory or LRZ 1 annual grid emissions.

In its proposed fuel LCA filing, the utility shall provide a comprehensive analysis of the emissions resulting from the electricity used for processing.

25. For fully depreciated ~~existing~~ assets, lifecycle emissions shall be evaluated no sooner than every five years.

PARTRIDGE MODIFIED 27. For new capital projects, lifecycle emissions shall be reevaluated no sooner than after the capital project is either fully depreciated or was expected to be paid off as determined at the time of CFS eligibility, whichever is earlier, unless the facility was subject to an LCA and the fuel mix deviates by more than ten percent.

PARTRIDGE MODIFIED 29. For any fuel ~~mix~~ determined to be carbon-free from an LCA ~~life-cycle analysis~~ study, if that fuel source ~~mix~~ deviates by more than ten percent, the utility must submit a new or revised lifecycle analysis~~ and issue a new carbon-free percentage, if applicable~~.

34. The Commission delegates to the Executive Secretary authority to begin proceedings to establish a process to translate renewable thermal credits to an Environmental Attribute Credit for compliance tracking purposes.

PARTRIDGE MODIFIED 36. Beginning in 2027~~6~~, each electric utility subject to the Carbon-Free Standard shall include in their annual compliance report in Docket No. E-999/PR-YR-12:

PARTRIDGE MODIFIED A. For any fuel determined to be carbon-free from an LCA ~~life-cycle analysis~~ study, utilities must report the composition of the fuel mix compared to the modeled LCA ~~life-cycle analysis~~.

PARTRIDGE MODIFIED B. For any fuel determined to be carbon-free from an LCA ~~life-cycle analysis~~ study, utilities must report: electricity used to generate electricity~~,~~ and ~~marginal~~ energy attribute credit (EAC) retirements to match all electricity use ~~(hourly or annual), and weighted average trucking mileage for each generation facility that uses the exemption~~.

PARTRIDGE MODIFIED 37. Utilities subject to the CFS and intending to use ~~an~~ a resource that requires an LCA for compliance with the 2030 requirements of the CFS Statute must notify the Commission and offer basic information about the relevant resources and fuel types and sourcing within 60 days of the Commission's Order in the current proceeding.

38. Primary biomass shall not be eligible for CFS compliance. Primary biomass is defined as:

Biomass that is intentionally cultivated, harvested, and prepared for use, in whole or in part, as a fuel for the generation of electricity.

As farm-grown closed-loop biomass as defined in Minn. Stat. §216B.2424, subd. 1(a)(1).

39. Waste biomass shall be eligible for CFS compliance. Waste biomass is defined as:

A. Biomass derived from secondary activities including but not limited to:

1. Wood waste from storm damage, disease or infestation, utility line maintenance, waste from forest products manufacturing;

2. Agricultural activities including manure;

3. Food waste and other organic waste.

B. Biomass that results in lower greenhouse gases than the alternative disposal method.

C. Biomass that is not deliberately generated or created for use as a fuel feedstock, but is a by-product of the functions of society, or the result of natural forces such as pests, disease and storm damage, and requires some type of management or disposal on an ongoing basis, irrespective of the opportunities for or need for energy production.

53. Facilities that employ carbon capture and sequestration/storage systems shall be eligible for partial CFS compliance.

PARTRIDGE NEW 56. A utility proposing to use CCS for partial compliance with the CFS Statute must submit, to the Commission, a detailed analysis of the CCS project, including a detailed explanation of how emissions will be sequestered and over what time period, the annual estimated amount of carbon-equivalent greenhouse gas emissions captured and sequestered,

the annual estimated amount of remaining carbon-equivalent greenhouse gases emitted by the CCS facility, annual estimated indirect carbon-equivalent greenhouse gas emissions associated with the CCS facility, the annual estimated amount of MWh and MW provided by the CCS facility, and the resulting percent of the total output that should qualify as carbon free. This filing will be subject to a public notice and comment process and reviewed by the Minnesota Pollution Control Agency and the Minnesota Department of Commerce ("the Agencies"). The Agencies shall make a recommendation to the Commission on whether to accept, modify, or reject the utility's proposed partial credit methodology and results.

A utility using CCS for partial compliance with the CFS Statute must submit, in its annual compliance report in Docket No. E-999/PR-YR-12, the actual carbon-equivalent greenhouse gas emissions captured and sequestered at the CCS facility, the actual amount of remaining carbon-equivalent greenhouse gas emissions emitted by the CCS facility, actual indirect carbon-equivalent greenhouse gas emissions associated with the CCS facility, the actual amount of MWh and MW provided by the CCS facility, and the resulting percent of the total output that should qualify as carbon free for each year.

58. No carbon-free credit shall be given for facilities where the captured carbon is used for enhanced oil recovery.

PARTRIDGE NEW 59: Facilities that produce electricity using a combination of a carbon-free fuel with a non-carbon free fuel ("dual fuel power plant"), are eligible for partial compliance credit under the CFS Statute. Utilities seeking partial carbon-free credit must submit, to the Commission, a detailed, facility-specific analysis describing the proposed fuels to be used at the dual fuel power plant, the estimated amount of each fuel to be used annually, the estimated amount of electricity to be produced by each fuel annually (MWh and MW), the resulting percent of the total output that should qualify as carbon free. This filing will be subject to a public notice and comment process and reviewed by the Minnesota Pollution Control Agency and the Minnesota Department of Commerce ("the Agencies"). The Agencies shall make a recommendation to the Commission on whether to accept, modify, or reject the utility's proposed partial credit methodology and results.

A utility seeking partial compliance with the CFS Statute must submit, in its annual compliance report in Docket No. E-999/PR-YR-12, the actual fuels used at the dual-fuel power plant, the actual amount of each fuel used in that year, the actual amount of electricity produced by each fuel in that year (MWh and MW), and the resulting percent of the total output that should qualify as carbon free for that year.

PARTRIDGE MODIFIED 70. Energy storage assets shall be treated as load for CFS compliance purposes~~., unless storage assets are used to substantiate hourly matching requirements. In order to qualify storage assets for CFS eligibility, the asset must *(choose one or more)*:~~

~~A. Retire hourly EACs to match charging from fully CFS-eligible resources; and~~

~~B. Generate hourly EACs to match discharging.~~