SENATE
STATE OF MINNESOTA
NINETY-SECOND SESSION

S.F. No. 421

(SENATE AUTHORS: WEBER and Rarick)

DATE	D-PG	OFFICIAL STATUS
01/28/2021	188	Introduction and first reading
		Referred to Energy and Utilities Finance and Policy
02/15/2021		Comm report: To pass as amended and re-refer to Finance

A bill for an act

relating to energy; establishing the Natural Gas Innovation Act; encouraging natural gas utilities to develop innovative resources; proposing coding for new law in Minnesota Statutes, chapter 216B.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

Section 1. **TITLE.**

This bill may be referred to as the "Natural Gas Innovation Act."

EFFECTIVE DATE. This section is effective the day following final enactment.

Sec. 2. **[216B.2427] NATURAL GAS UTILITY INNOVATION PLANS.**

Subdivision 1. **Definitions.** (a) For the purposes of this section and the lifecycle carbon accounting framework and cost-benefit test for innovative resources issued by the commission, the terms defined in this subdivision have the meanings given.

(b) "Innovative resource" means biogas, renewable natural gas, power-to-hydrogen, power-to-ammonia, carbon capture and utilization, strategic electrification, district energy, and energy efficiency.

(c) "Biogas" means gas created by the anaerobic digestion of biomass, gasification of biomass, or other effective conversion processes.

(d) "Carbon capture and utilization" means the capture of greenhouse gases that would otherwise be released into the atmosphere and the use of those gases to create industrial or commercial products for sale.

(e) "Carbon-free resource" means an electricity generation facility that, when operating, does not contribute to statewide greenhouse gas emissions, as defined in section 216H.01, subdivision 2.

(f) "District energy" means a network of hot- and cold-water pipes used to provide thermal energy to multiple buildings.

(g) "Energy efficiency" has the meaning given in section 216B.241, subdivision 1, paragraph (f), but does not include energy conservation investments that the commissioner determines could reasonably be included in the natural gas utility's conservation improvement program.

(h) "Lifecycle greenhouse gas emissions" means the emissions of an energy resource associated with the production, processing, transmission, and consumption of energy associated with the resource.

(i) "Natural gas utility" means a public utility as defined in section 216B.02, subdivision 4, that provides natural gas sales or transportation services to customers in Minnesota.

(j) "Power-to-ammonia" means the creation of ammonia from hydrogen created via power-to-hydrogen using a process that has lower lifecycle greenhouse gas intensity than conventional geologic natural gas.

(k) "Power-to-hydrogen" means the use of electricity generated by a carbon-free resource to create hydrogen.

(l) "Renewable natural gas" means biogas that has been processed to be interchangeable with conventional natural gas and has lower lifecycle greenhouse gas intensity than conventional geologic natural gas.

(m) "Strategic electrification" means the installation of electric end-use equipment where natural gas is a primary or back-up fuel source provided that installation (1) will result in a net reduction in statewide greenhouse gas emissions as defined in section 216H.01, subdivision 2, over the life of the equipment as compared to the most efficient commercially available natural gas alternative, and (2) is installed and operated in a manner that improves the customer's electric utility's load factor. Electric end-use equipment installed pursuant to this section is the exclusive property of the building owner. Strategic electrification does not include investments that the commissioner determines could be reasonably included in the natural gas utility's conservation improvement program pursuant to section 216B.241. Strategic electrification approved pursuant to this section is not eligible for a financial incentive pursuant to section 216B.241, subdivision 2c.

(n) "Total incremental cost" means the sum of:

(1) return of and on capital investments for the production, processing, pipeline interconnection, storage, and distribution of innovative resources included in a utility innovation plan approved pursuant to subdivision 2;

(2) incremental operating costs associated with capital investments in infrastructure for the production, processing, pipeline interconnection, storage, and distribution of innovative resources included in a utility innovation plan approved under subdivision 2;

(3) the incremental cost to procure innovative resources from third parties;

(4) the incremental costs to develop and administer programs included in a utility innovation plan; and

(5) incremental costs for research and development related to innovative resources approved pursuant to subdivision 2, less the sum of:

(i) any value received by the natural gas utility upon the resale of the innovative resources or their by-products including any environmental credits included with the resale of renewable gaseous fuels or value received by the natural gas utility when innovative resources are used as vehicle fuel;

(ii) any cost savings achieved through avoidance of conventional natural gas purchases, including but not limited to any avoided commodity purchases or avoided pipeline costs; and

(iii) any other revenues received by the utility that are directly attributable to the utility's implementation of an innovation plan.

Subd. 2. **Innovation plans.** (a) A natural gas utility may file an innovation plan with the commission. The utility's recommended plan must describe or include, as applicable, the following components:

(1) the recommended innovative resource or resources the utility plans to implement to advance the state's goals established in section 216C.05, subdivision 2, clause (3), and section 216H.02, subdivision 1, within the requirements and limitations set forth in this section;

(2) any recommended research and development investments related to innovative resources the utility plans to undertake as part of the plan;

(3) the total lifecycle greenhouse gas emissions that the natural gas utility expects to reduce or avoid pursuant to the plan;

(4) the natural gas utility's estimate of how emissions expected to be avoided or reduced compare to total emissions from natural gas use by its customers in 2020;

(5) any pilot program proposed by the natural gas utility related to the development or provision of innovative resources, including an estimate of the total incremental costs to implement the pilot program;

(6) the cost effectiveness of innovative resources proposed from the perspective of the natural gas utility, society, the utility's nonparticipating customers, and participating customers as compared to other innovative resources that could be deployed to reduce or avoid the same greenhouse gas emissions targeted by the utility's proposed resource;

(7) for any pilot not previously approved as part of the utility's most recent innovation plan, a third-party analysis of the lifecycle greenhouse gas intensity of any innovative resources proposed to be included in the pilot;

(8) for any proposed pilot not previously approved as part of the utility's most recent innovation plan, a third-party analysis of the forecasted lifecycle greenhouse gas emissions reductions achieved or the lifecycle greenhouse gas emissions reduced or avoided if the proposed pilot is implemented;

(9) an explanation of how the utility calculated the lifecycle greenhouse gas emissions avoided or reduced by each pilot including descriptions of how the utility's method deviated, if at all, from the carbon accounting frameworks established by the commission;

(10) whether the recommended plan supports the development and use of alternative agricultural products, waste reduction, reuse, or anaerobic digestion of organic waste, and the recovery of energy from wastewater, and, if so, a description of where those benefits will be realized;

(11) a description of third-party systems and processes the utility plans to use to:

(i) track the proposed innovative resources included in the plan so that environmental benefits are used only for this plan and not claimed for any other program; and

(ii) verify the environmental attributes and greenhouse gas intensity of proposed innovative resources included in the plan;

(12) a description of known local job impacts and the steps the utility and its energy suppliers and contractors are taking to maximize the availability of construction employment opportunities for local workers;

(13) a description of how the utility proposes to recover annual total incremental costs and any steps the utility has taken or proposes to take to reduce the expected cost impact on low- and moderate-income residential customers;

(14) any steps the utility has taken or proposes to take to ensure that low- and moderate-income residential customers will benefit from innovative resources included in the plan; and

(15) a report on the utility's progress toward implementing the approved proposals contained in its previously approved innovation plan, if applicable; and

(16) a report of the utility's progress toward achieving the cost-effectiveness objectives established upon approval of its previously approved innovation plan, if applicable.

(b) Along with its recommended plan, the natural gas utility must provide forecasted total incremental costs and lifecycle greenhouse gas emissions for:

(1) a set of pilots that the utility estimates would provide approximately half of the greenhouse gas reduction or avoidance benefits of the utility's preferred plan;

(2) a set of pilots that the utility estimates would provide approximately one and a half times the greenhouse gas reduction or avoidance benefits of the utility's preferred plan; and

(3) a set of pilots that the utility estimates would provide approximately twice the greenhouse gas reduction or avoidance benefits of the utility's preferred plan.

(c) In deciding whether to approve, modify, or deny a plan, the commission may not approve an innovation plan unless it finds that:

(1) the size, scope, and scale of the plan and the incremental total cost of the plan will result in net benefits under the cost-benefit framework established by the commission;

(2) the plan will promote the use of renewable energy resources and reduce or avoid greenhouse gas emissions at a cost level consistent with subdivision 3;

(3) the plan will promote local economic development;

(4) the innovative resources included in the plan have a lower lifecycle greenhouse gas intensity than conventional geologic natural gas;

(5) reasonable systems will be used to track and verify the environmental attributes of the innovative resources included in the plan, taking into account any third-party tracking or verification systems available;

(6) the costs and revenues expected to be incurred pursuant to the plan are reasonable in comparison to other innovative resources the utility could deploy to address greenhouse gas emissions and considering other benefits of the innovative resources included in the plan;

(7) the costs and revenues expected to be incurred for any energy efficiency, district energy, or strategic electrification measures included in the plan are reasonable in comparison to the costs of renewable natural gas, biogas, hydrogen produced via power-to-hydrogen, or ammonia produced via power-to-ammonia resources that the utility could deploy to address greenhouse gas emissions;

(8) the total amount of estimated greenhouse gas reduction or avoidance to be achieved is reasonable considering the state's goals established in section 216C.05, subdivision 2, clause (3), and section 216H.02, subdivision 1, customer cost, and the total amount of greenhouse gas reduction or avoidance achieved under the natural gas utility's previously approved plans, if applicable; and

(9) 50 percent or more of estimated costs included for recovery in the plan are for the procurement and distribution of renewable natural gas, biogas, hydrogen produced via power-to-hydrogen, or ammonia produced via power-to-ammonia.

(d) The utility bears the burden to prove the actual total incremental costs to implement the approved innovation plan were reasonable. Prudently incurred costs incurred pursuant to an approved plan and prudently incurred costs for obtaining the third-party analysis required in paragraph (a), clauses (6) and (7), are recoverable either:

(1) under section 216B.16, subdivision 7, clause (2), via the utility's purchased gas adjustment;

(2) in the natural gas utility's next general rate case; or

(3) via annual adjustments provided that, after notice and comment, the commission determines that the costs included for recovery through the rate schedule are prudently incurred. Annual adjustments shall include a rate of return, income taxes on the rate of return, incremental property taxes, incremental depreciation expense, and incremental operation and maintenance expense. The rate of return shall be at the level approved by the commission in the natural gas utility's last general rate case, unless the commission determines that a different rate of return is in the public interest.

(e) Upon approval of a utility's plan, the commission shall establish plan cost-effectiveness objectives based on the cost-benefit test for innovative resources. The cost-effectiveness

objective for each plan should demonstrate incremental progress from the previously approved plan's cost-effectiveness objective.

(f) A natural gas utility with an approved plan must provide annual reports to the commission regarding the work completed pursuant to the plan, including the costs incurred under the plan and lifecycle greenhouse gas reduction or avoidance accomplished under the plan; a description of the processes used to track, verify, and retire the innovative resources and associated environmental attributes; an update on the lifecycle greenhouse gas accounting methodology consistent with current science; an update on the economic impact of the plan including job creation; and the utility's progress toward achieving the cost-effectiveness objectives established by the commission on approval of the plan. As part of the annual status report the natural gas utility may propose modifications to pilot programs in the plan. In evaluating a utility's annual report the commission may:

(1) approve the continuation of a pilot program, with or without modifications;

(2) require the utility to file a new or modified plan to account for changed circumstances; or

(3) disapprove the continuation of a pilot program.

(g) Each innovation plan shall be in effect for five years. Once a natural gas utility has an approved innovation plan, it must file a new innovation plan within four years for implementation at the end of the prior five-year plan period.

(h) A utility may file an innovation plan at any time after this section becomes effective.

(i) For purposes of this section, and the commission's lifecycle carbon accounting framework and cost-benefit test for innovative resources, whenever an analysis or estimate of lifecycle greenhouse gas emissions reductions, lifecycle greenhouse gas avoidance, or lifecycle greenhouse gas intensity is required, the analysis will include, but not be limited to, as applicable:

(1) avoided or reduced emissions attributable to utility operations;

(2) avoided or reduced emissions from the production, processing, and transmission of fuels prior to receipt by the utility; and

(3) avoided or reduced emissions at the point of end use, but in no event shall the analysis count any one unit of greenhouse gas emissions avoidance or reduction more than once.

The analysis or estimate may rely on emissions factors, default values, or engineering estimates from a publicly accessible source accepted by a federal or state government agency,

where direct measurement is not technically or economically feasible, if such emissions factors, default values, or engineering estimates can be demonstrated to produce a reasonable estimate of greenhouse gas emissions reductions, avoidance, or intensity.

Subd. 3. **Limitations on utility customer costs.** (a) The first innovation plan submitted to the commission by a natural gas utility may not propose, and the commission may not approve, recovery of annual total incremental costs exceeding the lesser of (1) one and three quarters percent of the natural gas utility's gross operating revenues from service provided in the state at the time of plan filing, or (2) $20 per nonexempt customer based on the proposed annual total incremental costs for each year of the plan divided by the total number of nonexempt utility customers. Notwithstanding this limitation, the commission may approve additional annual recovery of up to the lesser of (1) an additional quarter of one percent of the natural gas utility's gross operating revenues from service provided in the state at the time of plan filing for recovery, or (2) $5 per nonexempt customer based on the proposed annual total incremental costs for each year of the plan divided by the total number of nonexempt utility customers of incremental costs for the purchase of renewable natural gas produced from:

(i) food waste diverted from a landfill;

(ii) community wastewater treatment; or

(iii) an organic mixture including at least 15 percent sustainably harvested native prairie grasses or locally appropriate cover crops selected in consultation with the local Soil and Water Conservation District or the United States Department of Agriculture, Natural Resources Conservation Service, by volume.

(b) Subsequent innovation plans submitted to the commission may not propose and the commission may not approve, recovery of annual total incremental costs exceeding the limits set forth in paragraph (a) unless the commission determines that the utility has successfully achieved the cost-effectiveness objectives established upon approval of a utility innovation plan under paragraph (a), in which case the utility may propose, and the commission may approve, recovery of annual total incremental costs of up to the lesser of (1) two and three quarters percent of the natural gas utility's gross operating revenues from service provided in the state at the time of plan filing, or (2) $35 per nonexempt customer based on the proposed annual total incremental costs for each year of the plan divided by the total number of nonexempt utility customers. Notwithstanding this limitation, the commission may approve additional annual recovery of up to the lesser of (1) an additional three quarters of one percent of the natural gas utility's gross operating revenues from service

provided in the state at the time of plan filing for recovery, or (2) $10 per nonexempt customer based on the proposed annual total incremental costs for each year of the plan divided by the total number of nonexempt utility customers of incremental costs for the purchase of renewable natural gas produced from:

(i) food waste diverted from a landfill;

(ii) community wastewater treatment; or

(iii) an organic mixture including at least 15 percent sustainably harvested native prairie grasses or locally appropriate cover crops selected in consultation with the local Soil and Water Conservation District or the United States Department of Agriculture, Natural Resources Conservation Service, by volume.

(c) Subsequent innovation plans submitted to the commission may not propose, and the commission may not approve, recovery of total incremental costs exceeding the limits set forth in paragraph (b) unless the commission determines that the utility has successfully achieved the cost-effectiveness objectives established upon approval of a utility innovation plan under paragraph (b), in which case the utility may propose, and the commission may approve, recovery of annual total incremental costs of up to the lesser of (1) four percent of the natural gas utility's gross operating revenues from service provided in the state at the time of plan filing, or (2) $50 per nonexempt customer based on the proposed annual total incremental costs for each year of the plan divided by the total number of nonexempt utility customers. Notwithstanding this limitation, the commission may approve additional annual recovery of up to the lesser of (1) an additional one and one-half percent of the natural gas utility's gross operating revenues from service provided in the state at the time of plan filing for recovery, or (2) $20 per nonexempt customer based on the proposed annual total incremental costs for each year of the plan divided by the total number of nonexempt utility customers of incremental costs for the purchase of renewable natural gas produced from:

(i) food waste diverted from a landfill;

(ii) community wastewater treatment; or

(iii) an organic mixture including at least 15 percent sustainably harvested native prairie grasses or locally appropriate cover crops selected in consultation with the local Soil and Water Conservation District or the United States Department of Agriculture, Natural Resources Conservation Service, by volume.

(d) A large customer facility that has been exempted by the commissioner of commerce from a utility's conservation improvement program under section 216B.241, subdivision

1a, paragraph (b), shall be exempt from the utility's innovation plan offerings and shall not bear any costs incurred to implement an approved innovation plan unless the large customer facility files a request with the commissioner to be included in a utility's innovation plan. The commission may prohibit large customer facilities exempted from innovation plan costs from participating in innovation plan pilots. For purposes of this subdivision, "gross operating revenues" do not include revenues from large customer facilities exempted from innovation plan costs.

(e) A natural gas utility filing an innovation plan may also include spending and investments annually up to ten percent of the proposed total incremental costs related to innovative plan pilots, subject to the limitations in paragraphs (a), (b), and (c).

Subd. 4. **Innovative resources procured outside of an innovation plan.** Without filing an innovation plan, a natural gas utility may propose and the commission may approve cost recovery for:

(1) innovative resources acquired to satisfy a commission-approved green tariff program that allows customers to choose to meet a portion of the customers' energy needs through innovative resources; or

(2) utility expenditures for innovative resources procured at a cost that is within five percent of the average of Ventura and Demarc index prices for conventional natural gas at the time of the transaction per unit of fossil natural gas that the innovative resource will displace.

An approved green-tariff program must include provisions to ensure reasonable systems are used to track and verify the environmental attributes of innovative resources included in the program, taking into account any third-party tracking or verification systems available.

Subd. 5. **Thermal energy leadership challenge.** The first innovation plan filed by a natural gas utility with more than 800,000 customers must include a pilot thermal energy leadership challenge for small- and medium-sized businesses. The pilot program must provide small- and medium-sized business with thermal energy audits to identify opportunities to reduce or avoid greenhouse gas emissions from natural gas use, and provide incentives for businesses to follow through with audit recommendations. The utility must develop criteria to identify businesses that take meaningful steps to follow through on audit recommendations and recognize qualifying businesses as thermal energy leaders.

Subd. 6. **Innovative resources for very high-heat industrial processes.** The first innovation plan filed by a natural gas utility with more than 800,000 customers must include a pilot program that will provide innovative resources for hard-to-electrify industrial

processes. A large customer facility exempt from innovation plan offerings under subdivision 3, paragraph (e), shall not be eligible to participate in this pilot.

Subd. 7. **Electric cold climate air-source heat pumps.** (a) The first innovation plan filed by a natural gas utility with more than 800,000 customers must include a pilot program that facilitates deep energy retrofits and the installation of cold climate electric air-source heat pumps with natural gas backups in existing residential homes that have natural gas heating systems.

(b) For purposes of this subdivision, "deep energy retrofit" means the installation of any measure or combination of measures, including air sealing and addressing thermal bridges, that under normal weather and operating conditions can reasonably be expected to reduce the building's calculated design load to ten or fewer British Thermal Units per hour per square foot of conditioned floor area. Deep energy retrofit does not include the installation of photovoltaic electric generation equipment, but may include the installation of a qualifying solar thermal project, as defined in section 216B.2411.

Sec. 3. **PUBLIC UTILITIES COMMISSION LIFECYCLE CARBON ACCOUNTING FRAMEWORK AND COST-BENEFIT TEST FOR INNOVATIVE RESOURCES.**

By June 1, 2022, the Public Utilities Commission shall issue by order frameworks for the calculation of lifecycle carbon intensities of each innovative resource as follows:

(1) a general framework for the comparison of power-to-hydrogen, strategic electrification, renewable natural gas, district energy, energy efficiency, biogas, carbon capture, and power-ammonia according to their lifecycle greenhouse gas intensities; and

(2) a cost-benefit analytic framework to be applied to innovative resources and innovation plans filed pursuant to section 216B.2427, that the commission will use to compare the cost-effectiveness of those resources and plans. This analytic framework shall take into account:

(i) the total incremental cost of the plan or resource that would be evaluated under the framework and the lifecycle greenhouse gas emissions avoided or reduced by the innovative resource or plan, using the framework developed under clause (1);

(ii) any important additional economic costs and benefits, programmatic costs and benefits, additional environmental costs and benefits, and other costs or benefits that may be expected under a plan; and

(iii) baseline cost-effectiveness criteria against which an innovation plan should be compared. In establishing the baseline criteria, the commission shall take into account the

options available for reducing lifecycle greenhouse gas emissions from natural gas end uses and the goals in section 216C.05, subdivision 2, clause (3), and section 216H.02, subdivision 1. To the maximum reasonable extent, the cost-benefit framework shall be consistent with environmental cost values established pursuant to section 216B.2422, subdivision 3, and other calculation of the social value of greenhouse gas emissions reduction.

The commission may update frameworks established under this section as necessary.

Sec. 4. **EFFECTIVE DATE.**

Sections 1 and 3 are effective the day following final enactment. Section 2 is effective June 1, 2022.