

1.1 moves to amend H.F. No. 4423 as follows:

1.2 Delete everything after the enacting clause and insert:

1.3 "Section 1. Minnesota Statutes 2022, section 216B.2427, subdivision 1, is amended to
1.4 read:

1.5 Subdivision 1. **Definitions.** (a) For the purposes of this section and section 216B.2428,
1.6 the following terms have the meanings given.

1.7 (b) "Biogas" means gas produced by the anaerobic digestion of biomass, gasification of
1.8 biomass, or other effective conversion processes.

1.9 (c) "Carbon capture" means the capture of greenhouse gas emissions that would otherwise
1.10 be released into the atmosphere.

1.11 (d) "Carbon-free resource" means an electricity generation facility whose operation does
1.12 not contribute to statewide greenhouse gas emissions, as defined in section 216H.01,
1.13 subdivision 2.

1.14 (e) "Disadvantaged community" means a community in Minnesota that is:

1.15 (1) defined as disadvantaged by the federal agency disbursing federal funds, when the
1.16 federal agency is providing funds for an innovative resource; or

1.17 (2) an environmental justice area, as defined under section 216B.1691, subdivision 1.

1.18 ~~(e)~~ (f) "District energy" means a heating or cooling system that is solar thermal powered
1.19 or that uses the constant temperature of the earth or underground aquifers as a thermal
1.20 exchange medium to heat or cool multiple buildings connected through a piping network.

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

2.1 ~~(g)~~ (h) "Greenhouse gas emissions" means emissions of carbon dioxide, methane, nitrous
2.2 oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride emitted by
2.3 anthropogenic sources within Minnesota and from the generation of electricity imported
2.4 from outside the state and consumed in Minnesota, excluding carbon dioxide that is injected
2.5 into geological formations to prevent its release to the atmosphere in compliance with
2.6 applicable laws.

2.7 ~~(h)~~ (i) "Innovative resource" means biogas, renewable natural gas, power-to-hydrogen,
2.8 power-to-ammonia, carbon capture, strategic electrification, district energy, and energy
2.9 efficiency.

2.10 ~~(i)~~ (j) "Lifecycle greenhouse gas emissions" means the aggregate greenhouse gas
2.11 emissions resulting from the production, processing, transmission, and consumption of an
2.12 energy resource.

2.13 ~~(j)~~ (k) "Lifecycle greenhouse gas emissions intensity" means lifecycle greenhouse gas
2.14 emissions per unit of energy delivered to an end user.

2.15 ~~(k)~~ (l) "Nonexempt customer" means a utility customer that has not been included in a
2.16 utility's innovation plan under subdivision 3, paragraph (f).

2.17 ~~(l)~~ (m) "Power-to-ammonia" means the production of ammonia from hydrogen produced
2.18 via power-to-hydrogen using a process that has a lower lifecycle greenhouse gas intensity
2.19 than does natural gas produced from conventional geologic sources.

2.20 ~~(m)~~ (n) "Power-to-hydrogen" means the use of electricity generated by a carbon-free
2.21 resource to produce hydrogen.

2.22 ~~(n)~~ (o) "Renewable energy" has the meaning given in section 216B.2422, subdivision
2.23 1.

2.24 ~~(o)~~ (p) "Renewable natural gas" means biogas that has been processed to be
2.25 interchangeable with, and that has a lower lifecycle greenhouse gas intensity than, natural
2.26 gas produced from conventional geologic sources.

2.27 ~~(p)~~ (q) "Solar thermal" has the meaning given to qualifying solar thermal project in
2.28 section 216B.2411, subdivision 2, paragraph (d).

2.29 ~~(q)~~ (r) "Strategic electrification" means the installation of electric end-use equipment in
2.30 an existing building in which natural gas is a primary or back-up fuel source, or in a newly
2.31 constructed building in which a customer receives natural gas service for one or more
2.32 end-uses, provided that the electric end-use equipment:

3.1 (1) results in a net reduction in statewide greenhouse gas emissions, as defined in section
3.2 216H.01, subdivision 2, over the life of the equipment when compared to the most efficient
3.3 commercially available natural gas alternative; and

3.4 (2) is installed and operated in a manner that improves the load factor of the customer's
3.5 electric utility.

3.6 Strategic electrification does not include investments that the commissioner determines
3.7 could reasonably be included in the natural gas utility's conservation improvement program
3.8 under section 216B.241.

3.9 (s) "Thermal energy" means piped noncombustible fluids used to transfer heat into and
3.10 out of buildings to reduce any on-site greenhouse gas emissions resulting from all types of
3.11 heating and cooling processes, including but not limited to special heating and cooling, hot
3.12 water, and refrigeration.

3.13 (t) "Thermal energy network" means any real estate, fixtures, and personal property
3.14 operated, owned, used, or used for, in connection with, or to facilitate a utility-scale
3.15 distribution infrastructure project that supplies thermal energy, including but not limited to
3.16 the project types defined under section 103I.005.

3.17 ~~(r)~~ (u) "Total incremental cost" means the calculation of the following components of
3.18 a utility's innovation plan approved by the commission under subdivision 2:

3.19 (1) the sum of:

3.20 (i) return of and on capital investments for the production, processing, pipeline
3.21 interconnection, storage, and distribution of innovative resources;

3.22 (ii) incremental operating costs associated with capital investments in infrastructure for
3.23 the production, processing, pipeline interconnection, storage, and distribution of innovative
3.24 resources;

3.25 (iii) incremental costs to procure innovative resources from third parties;

3.26 (iv) incremental costs to develop and administer programs; and

3.27 (v) incremental costs for research and development related to innovative resources;

3.28 (2) less the sum of:

3.29 (i) value received by the utility upon the resale of innovative resources or innovative
3.30 resource by-products, including any environmental credits included with the resale of
3.31 renewable gaseous fuels or value received by the utility when innovative resources are used
3.32 as vehicle fuel;

4.1 (ii) cost savings achieved through avoidance of purchases of natural gas produced from
4.2 conventional geologic sources, including but not limited to avoided commodity purchases
4.3 and avoided pipeline costs; and

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

4.6 ~~(s)~~ (v) "Utility" means a public utility, as defined in section 216B.02, subdivision 4, that
4.7 provides natural gas sales or natural gas transportation services to customers in Minnesota.

4.8 Sec. 2. Minnesota Statutes 2022, section 216B.2427, is amended by adding a subdivision
4.9 to read:

4.10 Subd. 9a. **Thermal energy networks.** Innovation plans filed after July 1, 2024, under
4.11 this section by a utility with more than 800,000 customers must include spending of at least
4.12 15 percent of the utility's proposed total incremental costs over the five-year term of the
4.13 proposed innovation plan for thermal energy networks projects. If the utility has developed
4.14 or is developing thermal energy network projects outside of an approved innovation plan,
4.15 the utility may apply the budget for those projects towards the 15 percent minimum
4.16 requirement without counting those costs against the limitations on utility customer costs
4.17 in subdivision 3.

4.18 Sec. 3. **THERMAL ENERGY NETWORK SITE SUITABILITY STUDY.**

4.19 (a) The Department of Commerce shall conduct or contract for a study to determine the
4.20 suitability of sites to deploy thermal energy networks statewide.

4.21 (b) The study must:

4.22 (1) identify areas more and less suitable for deployment of thermal energy networks
4.23 statewide; and

4.24 (2) identify potential barriers to the deployment of thermal energy networks and potential
4.25 ways to address those barriers.

4.26 (c) In determining site suitability, the study must consider:

4.27 (1) geologic or hydrologic access to thermal storage;

4.28 (2) the existing built environment including, but not limited to, age, density, building
4.29 uses, existing heating and cooling systems, and existing electrical services;

4.30 (3) the condition of existing natural gas infrastructure;

5.1 (4) road and street conditions, including planned replacement or maintenance;

5.2 (5) local land use regulations;

5.3 (6) area permitting requirements; and

5.4 (7) whether the area is an environmental justice area, as defined in section 116.065,
5.5 subdivision 1, paragraph (e).

5.6 (c) No later than January 15, 2026, the Department of Commerce must submit a written
5.7 report documenting the study's findings to the chairs and ranking minority members of the
5.8 senate and house of representatives committees with jurisdiction over energy policy and
5.9 finance."

5.10 Amend the title accordingly