State of Minnesota

HOUSE OF REPRESENTATIVES

EIGHTY-FIFTH SESSION

HOUSE FILE NO. 1666

March 5, 2007
Authored by Eken, Juhnke, Morrow, Urdahl, Bly and others
The bill was read for the first time and referred to the Committee on Environment and Natural Resources
March 13, 2007
Committee Recommendation and Adoption of Report:
To Pass as Amended and re-referred to the Committee on Finance

A bill for an act

relating to environment; requiring studies and reports to assess the state's capacity for terrestrial and geologic carbon sequestration; appropriating money.

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

Section 1. **DEFINITIONS.**

Subdivision 1. **Terrestrial carbon sequestration.** "Terrestrial carbon sequestration" means the long-term storage of carbon in soil and vegetation to prevent its collection in the atmosphere as carbon dioxide.

Subd. 2. **Geologic carbon sequestration.** "Geologic carbon sequestration" means injecting carbon dioxide into underground geologic formations where it can be stored for long periods of time to prevent its escape to the atmosphere.

Sec. 2. **TERRESTRIAL CARBON SEQUESTRATION ACTIVITIES.**

Subdivision 1. **Study; scope.** The Board of Regents of the University of Minnesota is requested to conduct a study assessing the potential capacity for carbon sequestration in Minnesota's terrestrial systems. The study must:

(1) conduct a statewide inventory and construct a database of lands across several land types, such as forests, agricultural lands, peatlands, and wetlands, that have the potential to sequester significant quantities of carbon and of lands that currently contain large stocks of carbon that are at risk of being emitted to the atmosphere as a result of changes in land use and climate;

(2) quantify the ability of various land use practices, such as the growth of different species of crops, grasses, and trees, to sequester carbon and their impacts on other

ecological services of value, including air and water quality, biodiversity, and wildlife habitat;

(3) identify a network of benchmark monitoring sites to measure the impact of long-term, large-scale factors, such as changes in climate, carbon dioxide levels, and land use, on the terrestrial carbon sequestration capacity of various land types, to improve understanding of carbon-terrestrial interactions and dynamics;

(4) identify long-term demonstration projects to measure the impact of deliberate sequestration practices, including the establishment of biofuel production systems, on forest, agricultural, wetland, and prairie ecosystems; and

(5) evaluate current state policies and programs that affect the levels of terrestrial sequestration on public and private lands and identify gaps and recommend policy changes to increase sequestration rates.

Subd. 2. **Coordination of terrestrial carbon sequestration activities.** Planning and implementation of the study described in subdivision 1 will be coordinated by the Minnesota Terrestrial Carbon Sequestration Initiative, a task force consisting of representatives from the University of Minnesota, the Department of Agriculture, the Board of Water and Soil Resources, the Department of Commerce, the Department of Natural Resources, and the Pollution Control Agency and agricultural, forestry, conservation, and business stakeholders.

Subd. 3. **Contracting.** The University of Minnesota may contract with another party to perform any of the tasks listed in subdivision 1.

Subd. 4. **Report.** The commissioner of natural resources must submit a report with the results of the study to the senate and house committees with jurisdiction over environmental and energy policies no later than February 1, 2008.

Sec. 3. **GEOLOGIC CARBON SEQUESTRATION ASSESSMENT.**

Subdivision 1. **Study; scope.** (a) The Minnesota Geological Survey shall conduct a study assessing the potential capacity for geologic carbon sequestration in the Midcontinent Rift system in Minnesota. The study must assess the potential of porous and permeable sandstone layers deeper than one kilometer below the surface that are capped by less permeable shale and must identify potential risks to carbon storage, such as areas of low permeability in injection zones, low storage capacity, and potential seal failure. The study must identify the most promising formations and geographic areas for physical analysis of carbon sequestration potential. The study must review geologic maps, published reports and surveys, and any relevant unpublished raw data with respect to attributes that are pertinent for the long-term sequestration of carbon in geologic

formations, in particular, those that bear on formation injectivity, capacity, and seal effectiveness. The study must examine the following characteristics of key sedimentary units within the Midcontinent Rift system in Minnesota:

(1) likely depth, temperature, and pressure;

(2) physical properties, including the ability to contain and transmit fluids;

(3) the type of rocks present;

(4) structure and geometry, including folds and faults; and

(5) hydrogeology, including water chemistry and water flow.

(b) The commissioner of natural resources, in consultation with the Minnesota Geological Survey, shall contract for a study to estimate the properties of the Midcontinent Rift system in Minnesota, as described in paragraph (a), clauses (1) to (5), through the use of computer models developed for similar geologic formations located outside of Minnesota which have been studied in greater detail.

Subd. 2. **Consultation.** The Minnesota Geological Survey shall consult with the Minnesota Mineral Coordinating Committee, established in Minnesota Statutes, section 93.0015, in planning and implementing the study design.

Subd. 3. **Report.** The commissioner of natural resources must submit a report with the results of the study to the senate and house committees with jurisdiction over environmental and energy policies no later than February 1, 2008.

Sec. 4. **APPROPRIATION.**

$475,000 is appropriated from the general fund for the fiscal year ending June 30, 2008, to the commissioner of natural resources for the purposes of sections 2 and 3. Of this amount, the commissioner shall make payments of $385,000 to the Board of Regents of the University of Minnesota for the purposes of section 2 and $90,000 to the Minnesota Geological Survey for the purposes of section 3.

Sec. 5. **EFFECTIVE DATE.**

Sections 1 to 4 are effective the day following final enactment.