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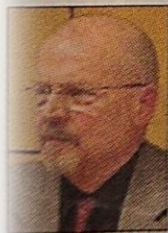
TRANSCRITICAL CO2 RETROFIT IN AN EXISTING STORE

Hannaford Supermarket in Raymond, NH

...h jumps from a rock at Fort Williams Park in Cape Elizabeth while enjoying Tuesday's seasonably warm expected Wednesday, with high temperatures barely getting out of the 20s and strong winds. **Details, B6**

Staff photo by Derek Davis

Bill would ban discrimination based on climate-change views



REP. LARRY LOCKMAN
R-Amherst

By **SCOTT THISTLE**
Staff Writer

A conservative state lawmaker is sponsoring a bill that would prohibit discrimination against people based on their climate change beliefs.

The measure proposed by Rep. Larry Lockman, R-Amherst, also would prohibit the state's attorney general from pursuing prosecution against

an individual based on the person's climate change views.

The bill, "An Act To Protect Political Speech and Prevent Climate Change Policy Profiling," was prompted by a civil lawsuit filed by a group of Democratic state attorneys general, including Janet Mills of Maine, against ExxonMobil in 2016.

Lockman said his measure,

which has nine Republican co-sponsors including Senate Majority Leader Garrett Mason, R-Lisbon, and Assistant Majority Leader Andre Cushing, R-Newport, addresses the concerns of Jonathan Reisman, an associate professor at the University of Maine at Machias.

Please see **CLIMATE**, Page A5

Hannaford Supermarket in Raymond, NH:

- 50,000 gsf store
- Opened in 1989; original racks and piping (LT R507, MT R22)
- Racks, piping, condensers, evaporators and display cases at end of life
- Large mezzanine compressor room with space and access
- Meets criteria for retrofit to TC CO2
- Supports corporate goals for:
 - ODS phaseout
 - GHG emissions reduction (and average GWP reduction)

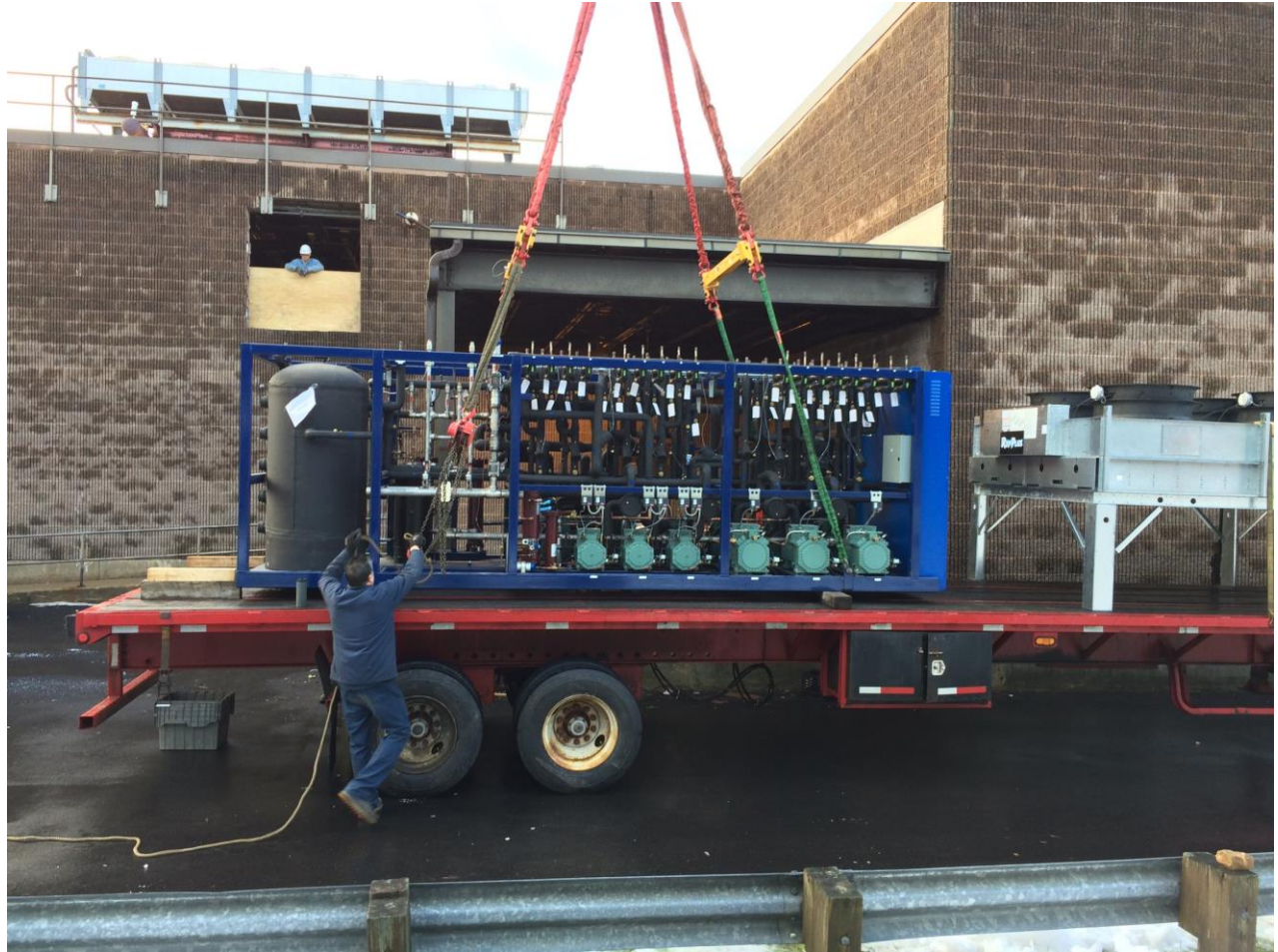
Existing compressor room:

LT rack – R507

MT rack – R22

- Remove old Emer Gen
- Remove old AC rack
- Set new TC CO2 rack
- Access via vent louver





New TC CO₂ rack.
(December 2016)

THR = 1.8 mmBtu/hr

New features (for us):

- Parallel compression
- Direct heat reclaim





- Install piping circuits and figure out controls.
- Leak detection/alarm in walk-ins, compressor room.
- Need both LT and MT loads for startup.
- Install new cases/evaporators per construction sequence.
- Overnight work; store hours don't change.
- Some new specialty cases have separate condensing units with R407A.



Things to think about on retrofits:

- Trade-offs:
 - Big vs. small
 - Complex vs. simple
 - Redundancy; high vs. low
- Factory engineering
- Tech support during installation
- R744 and skilled welders available
- Controls/programming expertise
- Contingency planning
- Cost-effectiveness; “it depends”





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Thank you very much!

