

## Higher power, lower bills Plug into ... Auditor plugs faithful into energy efficiency

Author: KEVIN O'CONNOR  
Staff Writer  
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Vermont Interfaith Power and Light, a nonprofit group promoting fossil-fuel conservation and renewable resources in religious communities statewide, by calling (802) 434-7307 or logging onto [www.vtipl.org](http://www.vtipl.org)

Efficiency Vermont, a consumer-funded organization that offers energy-saving inspections, ideas and incentives to homes and businesses, by calling toll free 1 (888) 921-5990 or logging onto [www.encyvermont.com](http://www.encyvermont.com)

For Ron McGarvey, a longtime parishioner of Burlington's Christ Church Presbyterian, it isn't a crisis of faith that sparks him to drive three hours south to Bennington's Congregation Beth El Jewish synagogue.

It's a chillier feeling.

"No plastic over the stained-glass windows?" McGarvey asks Rabbi Joshua Boettiger as the two circle the blue-shingled synagogue topped by a Star of David.

McGarvey's follow-up questions fly like blizzard snow: Are the walls and roof insulated? Are the windows and doors weather-stripped? When did someone last inspect the furnace? Do you know how much heat seeps out of cracks and crevices when it's cold?

McGarvey can answer that latter query himself: Too much. That's why he's a volunteer energy auditor for Vermont Interfaith Power and Light, a nonprofit group promoting fossil-fuel conservation and renewable resources in spiritual communities statewide.

The 64-year-old thought he had hung up his clipboard three years ago when he retired from Efficiency Vermont, a state-founded, consumer-funded organization whose inspections, ideas and incentives have cut electric, fuel and water bills for homes and businesses by about \$6 million a year.

Then McGarvey learned of Interfaith Power and Light's mission to fight global warming "while living out our covenant with the Creator." Now donating his time and talent, he has checked more than 75 religious buildings throughout Vermont, from northwestern Swanton's Memorial United Methodist Church to southeastern Brattleboro's All Souls Unitarian Universalist Meeting House.

Congregation Beth El is his first synagogue. It's easily spotted by the large Hebrew letters on its front door. Inside, children learn how their ancient ancestors, seeing only enough oil to light a menorah for one day, miraculously watched it last for eight.

But McGarvey knows that doesn't happen with heating oil now flaming up to \$3.45 a gallon. And the synagogue's heat-eating sanctuary and cold-holding basement are "typical of many Vermont religious facilities," he says.

Simple change can add up to big dollars, many are discovering. In Rutland, Grace Congregational United Church of Christ switched its 35 illuminated exit signs from 40-watt bulbs to 4-watt miniatures to save \$900 in electricity a year. In St. Johnsbury, St. John the Evangelist Catholic Church recouped the cost of replacing its boilers when oil use dropped by almost 40 percent.

And so the energy auditor, leading the rabbi on a building tour, crackles with questions and answers to enlighten the congregation - and everyone else in the community.

Windows and doors

The Bennington rabbi, 34 years young, marvels that his building is 85 years old.

"You don't see a lot of synagogues in America with this kind of character," Boettiger says. "It has an old-world intimacy. But my suspicion is it's not the most energy-efficient."

Enter McGarvey with a notebook, flashlight, camera and pen. Joining the energy field 25 years ago as conservation manager for Michigan Consolidated Gas Co., he moved east in 2001 to work as director of residential services for Efficiency Vermont, a nonprofit group under contract to the state Public Service Board.

McGarvey retired in the spring of 2005. That fall, he volunteered to demonstrate a do-it-yourself audit for members of

Vermont Interfaith Power and Light, one of 24 state chapters of a self-described "religious response to global warming." Soon, however, McGarvey was doing all the audits himself. Now recommended mostly by word of mouth, he reviews an average of two to three buildings a month.

The auditor, seeing a yarmulke atop the rabbi's head, is conscientious enough to ask if he should wear one.

(Boettiger says no.)

The rest of McGarvey's questions focus on fuel, not faith. Starting outside, he sees only summer screens over the synagogue's blue and purple stained-glass windows.

"I'm relatively new here," the rabbi responds as if under interrogation.

Then McGarvey spots something.

"It looks like you do have a form of storm window here, which is good," he says. "It not only provides protection for the window but also reduces heat loss."

Before the rabbi can exhale, McGarvey moves to the back entrance of the basement.

"As we do more work on it," the rabbi says, "we're trying to get people to call it the social hall."

McGarvey is more interested in the door. He searches for gaps before scanning the room for high cracks that can leak heat and low crevices that can let in cold.

"When warm air escapes, it creates lower pressure that draws cold air from the outside," he explains. "Anything you can do to interrupt the flow - caulk,

weather-strip, keep doors closed - is beneficial."

In the boiler room, the rabbi boasts that the oil burner is new. But McGarvey notices the nearby water heater and pipes aren't insulated. He suggests a \$15 padded cover.

"A lot of these things are easy to do yourself," he says, "and pay off within a year."

Lights and appliances

The rabbi turns down the thermostat to 57 degrees when the 100-household congregation isn't using the synagogue. But he wonders if that wastes more energy than it saves when he cranks up the heater to room temperature.

McGarvey says that fear is a fallacy. He recommends lowering the thermostat to 50 if a space is unoccupied for at least four hours.

"Setting this back saves much more energy than it takes to warm things up again."

McGarvey's money-saving tips aren't confined to heating and cooling. He looks up to the social hall's fluorescent lights. Most buildings have T12 tubular bulbs. But they're not as economical as smaller diameter T8 bulbs, which the rabbi gratefully discovers his synagogue has.

McGarvey, however, senses a "slight hum." He says that means the bulbs are plugged into magnetic ballasts rather than more efficient electronic ones.

Moving upstairs to the sanctuary, the auditor eyes the lights hanging from the high ceiling.

"You should be able to get compact fluorescents for here."

McGarvey tells the rabbi they're sold at most hardware stores.

"How about Greenberg's?" the rabbi asks.

(The storeowners are local - and members of the synagogue.)

McGarvey examines everything. The oak-panel front doors feature a hand-carved menorah and Hebrew lettering. But the auditor focuses more on the bean-bag snake that hides a big crack along the bottom.

"The front door is usually a weak point for religious buildings," he says, "because it gets used the most and has the most air leakage."

McGarvey hunts for the thermostat. Install it too close to a door, he says, and it can ignite the heater too often.

He next opens the kitchen refrigerator.

"You might find some hummus from the Carter administration," the rabbi says half-jokingly.

McGarvey instead searches for another dated label. The refrigerator, he discovers, was built in 1989 - years before the 1993 introduction of more energy-efficient models. The synagogue is paying up to \$200 a year to power the appliance. The auditor recommends metering its electric use to see if a new unit bearing the government's Energy Star logo could slice that bill in half.

'It's the right thing'

The audit ends with McGarvey examining the wheelchair-accessible

door.

"You've got gaps along the edge," he tells the rabbi.

A quick study, Boettiger simply responds: "On the top, too."

McGarvey will return to his Burlington home to review the synagogue's fuel and electric bills before offering more specific recommendations. But he says he often spots the same problems statewide.

Many thermostats aren't dialed down when a building's not in use.

"Churches could reduce their heating costs if they practiced greater temperature setback."

Many doors lack weather-stripping.

"This may not seem like a big deal to people, but how many of us would live with a door in our home that didn't close tightly in the winter?"

And many heating pipes and distribution ducts aren't insulated.

"Make sure more of the heat you generate gets to where you want it."

Such improvements fuel McGarvey. Locally, he wants to help the faithful save money for more charitable causes. On a larger level, he's aiming to stem fossil-fuel use and preserve the planet.

"In the long run, I'm motivated by my

grandchildren and future great-grandchildren," he says. "Stewardship of the earth fits in the beliefs of almost every religion I know. I don't want this to sound like a sermon, but if we're really going to have a long-term effect on reducing greenhouse-gas emissions, people have to be motivated by more than just 'how much money am I going to save?' You do it because it's the right thing."

McGarvey tells the rabbi he'll write back in a year to ask how the synagogue responded to his suggestions.

"My volunteer work doesn't reduce energy costs. People have to do something with the information."

Boettiger starts by offering thanks.

"I'm glad for the opportunity," McGarvey replies. "We're an interfaith organization."

The prospect of a three-hour trip home doesn't dispirit him. He'll stop on his way to check Arlington's St. James Episcopal Church.

"If it's a long drive, I try to do more than one assessment. It's more efficient. That's one of the benefits you get - to see interesting people and places."

And leave with a warm feeling.

Contact Kevin O'Connor at [kevin.oconnor@rutlandherald.com](mailto:kevin.oconnor@rutlandherald.com).

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