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PHOTO: REDCOM PRODUCTIONS

By Tali Folkins
STAFF WRITER

O GREENEST CHURCH?

GREEN CHURCH MOVEMENT FINDS SUCCESS STORIES MIXED WITH RELUCTANCE, 'NEED FOR EDUCATION'

In 2018, Canon Judy Rois, adjunct faculty member of the University of Toronto's Trinity College and executive director of the Anglican Foundation of Canada, undertook a research project with Daphne Rixon, a business professor with an expertise in accounting at St. Mary's University in Halifax, and Alex Faseruk, a retired professor of business at the Memorial University of Newfoundland. The three wanted to evaluate the effectiveness of "green audits"—environmental friendliness assessments of their buildings—performed, with financial help from the national church, at nine Anglican parishes in 2013.

As part of their research, they asked a series of questions of the rector or another parish member on various aspects of its audit, such as whether the parish agreed with the audit's recommendations, what were its environmental and financial effects and whether the parish would be willing to continue with the green audit program.

Their findings—to be published in the *Journal of Accounting and Finance*, a U.S.-based business journal—showed mixed levels of enthusiasm for the audits, Rois says. In some cases there were a number of greening successes—churches switched to higher-efficiency and longer-lasting LED lightbulbs (in one parish this added up to 220 bulbs), and away from single-use plastics, for example. Some aging boilers were replaced. One parish considered selling excess power generated by the solar panels it installed. But other churches responded to the audits less enthusiastically. Not all adopted their recommendations. One parish's green audit called on it to switch from using Styrofoam cups. But in the end the parish decided against this, Rois says, because they felt the Styrofoam cups were "part of their congregational culture."

Of the nine parishes surveyed, seven reported no desire to continue with the green audit program because they believed they had already benefited from it as much as they were likely to. Rois also believes it's noteworthy that only nine parishes did the 2013 audits—even though the national church originally requested that 40 parishes complete them.

"We've got 1,600 parishes. Forty were asked to please do this…and nine—nine—did it," she says.

The handful that responded comprises a small fraction of total Anglican parishes in the country, making it difficult to generalize about the state of the Canadian church; and in any case, making a judgement on Canadian Anglicans' eagerness to green their buildings was outside the scope of their study, Rois says.

Nevertheless, its findings—as well as the apparent reluctance of parishes to take part in the audits in the first place—leave her personally with difficult questions.

"The first thing I'd say is it's a very small sample. But it's the only sample we have. So if we were to put a judgement on it, which we don't, as authors—but if we were—we would say, 'Why? Why aren't you doing this?' It's a very important issue. The Anglican church is the third-largest church in Canada…Why nine parishes?"

Since 2012, St. Mark the Evangelist Anglican Church in Ottawa has had solar panels, forming a cross, on its roof.

PHOTO: ST. MARK THE EVANGELIST ANGLICAN CHURCH

When greening gets thorny

Rois isn't alone in her concern. When it comes to greening their buildings, Canadian Anglicans face a number of challenges—including a lack of awareness about the need for change and the difference that their own actions could make, say others who have worked closely in the area.

Julia M. Roberts, a retired environmental technologist and member of the national church's Creation Matters Working Group, did energy audits for a number of Vancouver-area churches in 2002. In the lower level of one church, she discovered a large hole through which cold air was freely entering the building.

"People were bringing blankets to church to stay warm, and all it needed was a bit of insulation and a bit of closing off this area," she says.

Because she moved away from Vancouver shortly thereafter, Roberts says she's unsure to what extent the churches implemented her recommendations. But she says she's found aspects of the church greening process discouraging. She also says she once met another energy auditor who said she found it a waste of time to do the audits for churches, because they tended not to implement her recommendations.

Recent years have seen a number of Anglican churches in Canada take big steps toward renewable energy. Over the winter of 2006-2007, the parish of St. Andrew and St. Mark of Dorval, Que., installed an energy-saving geothermal heating and cooling system. Various churches across the country have begun harnessing the power of the sun: All Saints' Anglican Church in Collingwood, Ont.; the convent of the Sisters of Saint John the Divine in Toronto; Trinity Anglican Church, St. Mark the Evangelist Anglican Church and the Anglican Parish of Huntley in Ottawa; the Church of St. Stephen the Martyr in Thunder Bay, Ont.; All Saints' Anglican Church in Mission, B.C. and St. David of Wales Anglican Church of Vancouver; and tiny St. John the Divine of Quick, B.C., just to name a few. By 2017, three parishes in the diocese of Ontario had not only installed solar panels but were selling excess power back to the grid.

While Roberts says she knows there have been some greening success stories among Canadian Anglican parishes, she also has the impression that many congregations feel overwhelmed by what they see as more immediate challenges. They're mostly volunteers with other demands on their time, and they may not necessarily be skilled in how to maintain a building.

"Everybody's clinging on by their toenails trying to keep their church running, and they can't find the time or the energy to look at it," she says.

Some congregations fear the extra expense—even though the greening of their buildings typically saves parishes money, she adds.

"There may be a lack of awareness as to how this could be a contribution to mitigating climate change, and also that, ultimately, it should reduce operating costs," she

says. "I think there's still room for education about this."

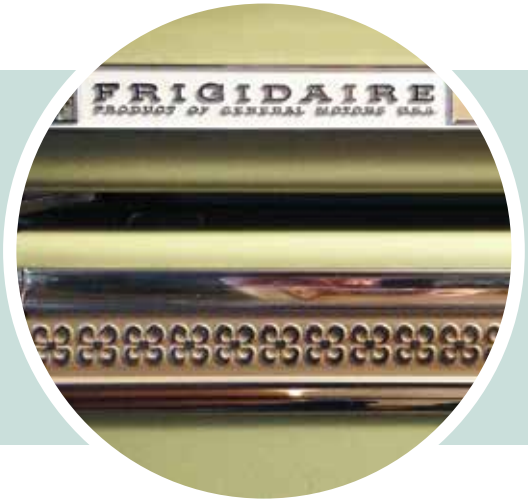
Rois's research group reached similar conclusions.

"Parishes are so busy with capital campaigns, and raising money, and balancing the budget and everything else that it's not necessarily top-of-mind," she says. "A lot of people said, 'My small action is not going to really be effective.'"

Some priests reported a lack of enthusiasm for change among their congregations, Rois says. But some reluctance to greening might be coming from the priests themselves, she adds.

"You know, if you go broad you could go crazy, and I think some clergy feel it's too big: 'There's homelessness, there's addiction, there's climate change—there's so many things, I can't begin to face it all. So I'm just going to take care of my own parish, baptize the babies, bury the dead, do Sunday services and I'm done,'" she says.

Her group's paper concludes that "to date environmental auditing has not yet proven to be effective in the programs of the [Anglican Church of Canada]." Its recommendations include a before-and-after form for parishes to use to clearly specify how their energy consumption and expenses changed after they implemented the improvements specified by the audits.



"If you're still rockin' an avocado-green fridge in the kitchen from the 1970s, it's [financially] killing you, it's killing the environment," he says. "Stop using it. Unplug it and drag it to the curb."

—Stephen Collette

PHOTO: MITCHELL HAINDFIELD/FLICKR

Low-hanging avocado-green appliances

The audits studied by Rois's group were offered as part of a green audit program of the Anglican Church of Canada from from 2013 to 2016. Under the program, the national church provided grants of up to $1,000 to pay for two-thirds of the cost of green building audits done in cooperation with the Greening Sacred Spaces initiative of Faith & the Common Good, an interfaith organization aimed at helping religious communities in Canada become more sustainable.

The program was ended for a number of reasons, says Ryan Weston, lead animator of public witness for social and ecological justice at the Anglican Church of Canada. One is that there has been a burgeoning of efficiency-boosting incentives offered by numerous other organizations across the country.

"A national program didn't seem like the best fit for the array of incentives that might be available," Weston says. "Each province might have their own program of supports, and then individual municipalities and even different utility providers may also have additional programs and incentives. Even within a single diocese, then, there might be several different options, including possible low-cost energy audits."

The program also involved flying someone in from

Toronto to do the audits, he says, meaning both an increased carbon footprint and a limit to the number of parishes that could take part.

The national office, he says, is hoping to put together tools to help dioceses and parishes take advantage of energy efficiency incentives in their regions.

Stephen Collette, building audit manager for Faith & the Common Good, says church members aren't always aware that it's often the simplest things that can make the most difference to the environmental sustainability of their house of worship—and save their parish the most money. Greening a church isn't always about installing solar panels or other big projects, he says—in fact, switching to solar or some other renewable form of energy generally shouldn't be the first priority of a church that wants to be kinder to the earth.

"It's the last thing you should do from an energy perspective," he says. "You need to get your energy management under control. You need to be Energy Star everything: LED lights…power bars. Making sure the minister's actually turning the computer off when they leave. You need to have all that under control before you do the most expensive thing possible.

"It's always about getting the low-hanging fruit first."

This is partly because these easily achievable goals tend to have an immediate impact that can be a great morale-booster for parishioners.

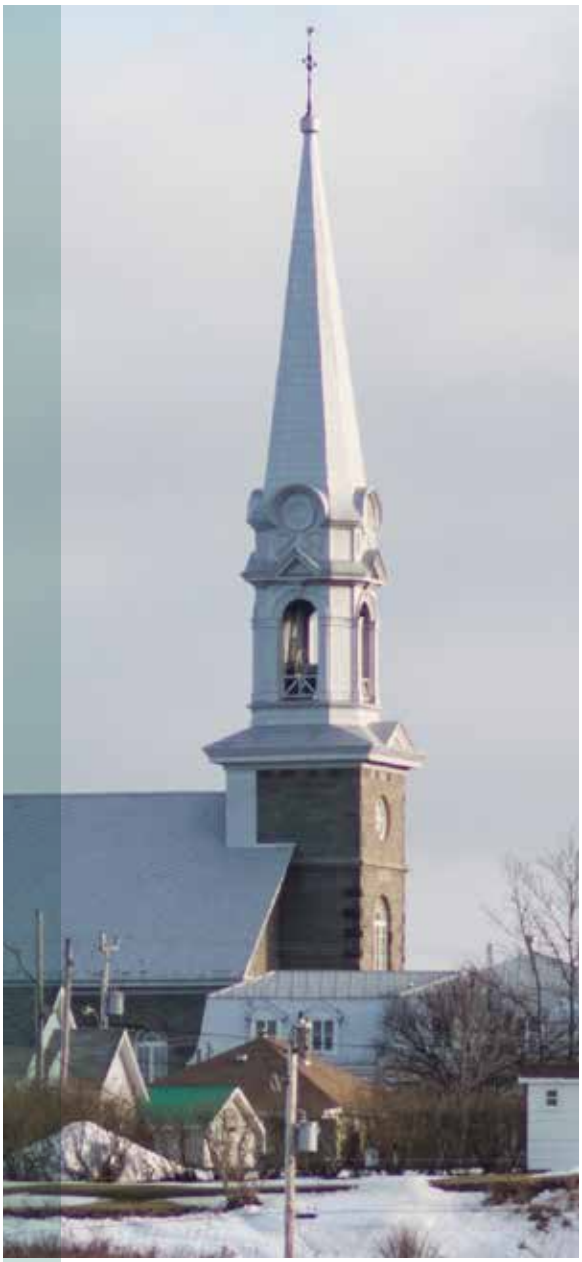
"If I can empower volunteers to do a couple simple things on a Saturday morning, that's awesome," Collette says. "Now they're like, 'Oh, that wasn't so hard.' 'Oh wow, I notice the difference.' 'Oh—you know, that was great.'

"We need to build that capacity, and that understanding, one step at a time."

Conserving energy in these ways—saying goodbye to an energy-guzzling appliance, for example—can mean immediate benefits both to the environment and a church's finances, he says.

"If you're still rockin' an avocado-green fridge in the kitchen from the 1970s, it's [financially] killing you, it's killing the environment," he says. "Stop using it. Unplug it and drag it to the curb."

Other relatively simple but effective measures include air sealing and weather stripping around windows and doors, he says, and installing setback thermostats, which you can program to reduce heating and cooling in spaces when no one's around.



"Oftentimes in older buildings there's a door up into the belfry that's typically propped open, and the heating dollars are literally escaping out the building. So you can take your offering plate and walk up to the attic hatch and just throw it at it, because that's what it's costing."

—Stephen Collette

PHOTO: LANE V. ERICSON

The anatomy of physical plants

Once a church that wants to move to solar has undertaken measures like these, and has reduced its electricity consumption, it may find it also needs to install fewer solar panels, he says. But until it has taken these steps, installing panels might not be advisable.

"If you can make it less than 11 years and even better, less than a seven-year payback, it's better than a GIC. Slam-dunk, go put panels on your roof. But: it's always cheaper to do all the other stuff first and foremost," he says.

Another important part of the awareness that congregations need to build, he says, is of the nature of their buildings themselves—many of which were built long ago, with features very different from the buildings most of us are more familiar with.

"Because they perform differently, it's important to understand how they work, how they fail and where the opportunities lie to improve them," he says. "I think the challenge is … we don't have people managing the buildings who have skills and knowledge of how the really old-timers used to do it, like 100 years ago. And as such, we try to apply modern fixes that are inappropriate to the building typology."

This, he says, is one reason why it can be so beneficial to churches to have a green audit done by a professional.

Sometimes a solution that's advisable in other buildings is not a great idea for a church. For example, Collette says, insulating a stone building such as a church could cause the mortar on the outside to freeze and crack in winter.

On the other hand, a process that might not be necessary in any other type of building could boost a church's energy efficiency dramatically. Most people are unaware that church steeples with lots of cracks and other holes for air to escape operate essentially like chimneys in wintertime, all-too-efficiently drawing heated air up and out of the building.

"Churches…literally are the tallest chimneys in town. And oftentimes in older buildings there's an attic hatch or a door up into the belfry, or a door into the attic that's typically propped open, and the heating dollars are literally escaping out the building, because the hot air is rising, and the greater the chimney, the greater the suck. So you can take your offering plate and walk up to the attic hatch and just throw it at it, because that's what it's costing," he says.

"Air sealing is more important in an older building than insulation is. You should still insulate, of course, where possible, but air sealing especially the attic hatch, especially up into the towers, the attics, the belfries, is very critical."

Finding a lifegiving path

Churches that have done what they can to both reduce consumption and generate their own energy might find themselves able to go off the grid altogether. This, at least, is the goal of the Anglican Church of the Incarnation in Oakville, Ont. Last February, it switched from natural gas to a geothermal system, which heats and cools the building with the help of more than 2 km of underground pipes that exchange heat with the ground. The retrofit made it the first faith community in the Halton Region—which includes Oakville and some surrounding towns—to have made the switch to geothermal energy. Once it has the geothermal system paid for, the parish's next step will likely be to install enough solar panels on the church's roof to completely fill its demand for energy—and possibly even sell excess to the grid to fund mission, says its rector, Archdeacon Michael Patterson.

Being good stewards of creation, Patterson says, has always been part of the ethos of the Church of the Incarnation, which was founded in the late 1980s. Over the years the parish has undertaken a range of environmentally-friendly measures, including completely changing over to LED lighting, insulating, sealing and installing energy-efficient windows. The

Mac Morrison, a parishioner at the Church of the Incarnation in Oakville, Ont., switches on the church's new geothermal system.

PHOTO: CONTRIBUTED

immediate impetus of its switch to geothermal was the failure in 2015 of one of the units in its existing heating system; Patterson felt it would be a good opportunity to float the idea of the church switching to a greener system.

There was some pushback against the geothermal system, he recollects, from church members.

"There were vocal opponents because of costs," he says.

In the end, concerns about the environment prevailed.

"The big thing was for us was the risk that we were taking paled in comparison to the risk of not doing something in regards to the climate—that by doing nothing we are exacerbating and contributing to the environmental disaster that we're all confronted with," Patterson says. "This was really at the core of what ultimately took us over the top, that people recognized we need to make big choices, big decisions, take big risks in order to mitigate climate change."

The church also recognized that by switching to geothermal, the church could serve as a role model to

other community organizations.

"We wanted to be a leader in our area, providing examples of the things that can be done by small groups of people," Patterson says.

The project ended up costing the parish of about 165 families around $430,000—about $270,000 of which it covered through a fund-raising campaign and another $100,000 through a bank loan. The parish estimates the new system will mean a 30 per cent reduction in its utility bills, and that it will have recouped the cost of the system in 12 to 15 years, Patterson says.

What is it that makes some parishes resistant to green their churches, whereas others seem to embrace the process enthusiastically? Some—including Rois and the co-authors of her study—say demographics could be a factor; one interviewee cited in the paper said elderly congregants tended to lack a desire to engage in the process. (The same interviewee also reported that middle-aged congregants were often too busy in other activities inside and outside the church to give themselves over to environmental action—and that youth members were more involved in other forms of activism.) Rois says it's possible that some—not all—elderly people aren't used to seeing creation care as a high priority, because it wasn't an important focus of concern in their younger years.

The Rev. Marian Lucas-Jefferies, another member of the Creation Matters Working Group and coordinator of a green group in her diocese, the Anglican Diocese of Nova Scotia and Prince Edward Island Environment Network, agrees.

"It's so foreign to people's experience, especially if they're older," she says. It's partly for this reason why Lucas-Jefferies says she's been greatly encouraged by a recent burgeoning of contacts between her diocese's group and a number of young environmentalists in the area. These growing relationships, she says, in many cases originated with churches lending local green groups space for meetings, but it has grown to include attendance by some ecology-oriented people on church-organized retreats.

"I'm hoping it will make people who aren't in church feel welcome and comfortable in their relationship with the church, and it will motivate our people to commit themselves further to caring for creation as well," she says. "Getting these younger people in is a real plus—they see it in a different light."

Collette believes a church's embrace of greening sets it up to better connect with the young, who may otherwise be unfamiliar with church and unengaged by its traditional symbols.

"If faith communities and the Anglican church truly accept their creation care mandate, I think there's a golden opportunity to reach younger people," he says. "It's a symbol to get them in the door. Because the big shiny 't' on the top of the building doesn't do it anymore."

When the church exudes greenness

Archdeacon Katherine Bourbonniere is rector of the Church of St. Andrew in Cole Harbour, N.S., which has undertaken a wide range of ecological initiatives in recent years, including a green audit through Faith & the Common Good subsidized by the national church. One of its most important recent initiatives, she says, was the installation in 2016 of a set of heat pumps, which heat and cool the building by transferring heat between it and its surroundings. Installing the heat pumps would have cost the parish $38,000, but their cost was defrayed with the help of a $8,500 grant from Efficiency Nova Scotia, a provincial energy efficiency organization funded by Nova Scotia Power. The parish has already saved $28,000 in electricity bills from using the heat pumps, Bourbonniere says, and expects to have recouped the cost of the project this year. The parish is also considering installing solar panels on the church.

Part of the parish's embrace of greening she attributes to its unique culture: possibly because of the community's history; it sits on farmland that was expropriated for development about four decades ago, and people are sensitive to the use and misuse of the land, she says. Bourbonniere believes the parish probably has more members of Lucas-Jefferies's

environmental network than any other in the diocese.

But part of the difference could also be the way these issues are approached in her parish, she says.

"We don't force people.... We make them think about what impacts they're having," she says. "Any time we've gone in and said, 'Now we can't do this,' people get their backs up and immediately they start saying then they're not going to [change].

"I think it's conversing. And bringing people into that conversation on a regular basis, making them feel part of it."

Patterson says that the biggest factors in the Church of the Incarnation's leaders eventually winning over reluctant parishioners to the geothermal project was being patient with their questions and making sure that they would find the answer to what they were not able to answer immediately.

Another important element in the project's success, he says, was finding local partners to provide whatever kind of support they could—help in this case that ranged from expertise to public relations.

"We got the town behind us, we had politicians supporting us, and so it really became a community effort," he says. The church also had assistance from Faith & the Common Good as well as a local green group, the Halton Environmental Network.

Individuals pitched in as well, as word spread through the community. "There were people who were not members of the parish who gave to the project because of the mission and the ethos that was underlying the whole thing," Patterson says. Their donations, though not enough to cover a significant portion of the project's cost, were nevertheless "surprisingly helpful," he says.

Roberts says her experience, too, has led her to believe that local support can make the difference. In the fall of 2015, her church, St. Saviour Pro Cathedral in Nelson, B.C., and a number of other faith communities were approached by a local environmental group about getting together to study *Laudato si',* an encyclical from Pope Francis expressing concern about the excesses of consumerism and environmental degradation. From the seven weekly sessions that followed emerged the Nelson Interfaith Climate Action Collaborative, a green group with membership drawn from a range of local faith communities. The group meets every month for climate vigils and has put on an awareness-raising parade.

"We don't force people.... We make them think about what impacts they're having.... Any time we've gone in and said, 'Now we can't do this,' people get their backs up and immediately they start saying then they're not going to [change]."

— Katherine Bourbonniere

Five of its members, including the parish of St. Saviour Pro Cathedral, have pledged to make their buildings dependent only on renewable energy by 2050. It's this pledge, and the sense of not being alone in its efforts, Roberts says, that's driving the church's current goal of improving its heating system to reduce greenhouse gas emissions.

"I think it's that support from the wider group, you know? That we're all working together," she says. "Somehow that's given it some inspiration, some energy and so we're actually working on it.... I think support is really important, and...it doesn't have to come from the diocese, or the national church."

Though it's important for Canadian Anglicans to know that in many cases their buildings will need work to be environmentally sustainable, they should also know that these same structures often have considerable potential as "green" buildings, Collette says. Though they may be old, Anglicans shouldn't assume their buildings are simply outmoded and not fit for an era of climate crisis.

"I think in general the typical Anglican building stock has the capacity to be very resilient moving forward, if certain details are upgraded appropriately," he says. "They can very easily take us through the 21st century."

Moreover, there's also an environmental incentive to keep these buildings from the wrecking ball: the vast outlay of energy that would be required to demolish them and construct any new building in their place.

"The energy it takes to mine, extract, process, transport, build, use, then tear down and ship to the landfill...three-quarters of that [work] is already done in an existing building," he says. "It's something to keep in mind.... The greenest building is the one still standing."

PHOTO: DK SAMKO

TEN WAYS TO GREEN YOUR CHURCH WITHOUT BREAKING THE BANK

1. Weather strip and caulk around windows and doors.
2. Insulate attics and other areas that may not yet have been insulated. (But note that this might not always be advisable with stone walls—see above.)
3. Get setback, or programmable, thermostats, which automatically reduce heating and cooling in rooms when no one is present. Set the temperature to 14 C in winter or colder areas, and 29 C in summer or hotter climates.
4. Install automatic lights or dimming switches, or post reminders by light switches to turn off lights when they're not being used.
5. Host a green conversation after worship, or start a green team to brainstorm new projects.
6. Use a portable fan and/or ceiling fan together with your air conditioner.
7. Unplug appliances that aren't in use, and turn off unused power bars.
8. Open and close window blinds depending on the season. In the summer, turn on fewer lights and rely on natural light. In the winter, keep blinds closed to keep heat from leaking out through windows.
9. Switch to LED light bulbs. Replacing light bulbs in exit signs can be particularly effective in saving energy, because these lights are on 24 hours a day.
10. Get rid of energy-wasting appliances, or replace them with Energy Star appliances or appliances with high EnerGuide ratings.

Adapted from: "Top 10 Green Actions Under $10"; "Reduce Your Ecological Footprint: Faith Community Tips"; and "'Do-It-Yourself' Faith Building Energy Audit Guide", all by Faith & the Common Good.