



THE ULTIMATE GUIDE TO COMMERCIAL PROPANE APPLICATIONS

HOW TO BUILD ANYWHERE,
WITHOUT SACRIFICES.



TABLE OF CONTENTS

SOLUTIONS for commercial buildings.....	3
JAY PEAK RESORT boosts business with propane-fueled water park	4
SANFORD SCHOOL DISTRICT saves its budget with propane heating and school buses	6
CAMP WOODSTOCK AND CROSSROADS keep the power on and meals coming in any weather.....	8
TEXAS HEALTHCARE FACILITIES design sophisticated HVAC systems with propane.....	10
CHURCH OF THE GOOD SHEPHERD takes the chill off by converting to propane heat.....	12

SOLUTIONS FOR COMMERCIAL BUILDINGS



TOUR OUR VIRTUAL BUILDINGS TOOL TO SEE THE SYSTEMS AND AMENITIES THAT ARE RIGHT FOR YOUR SPECIFIC BUILDING TYPE AT [PROPANE.COM/INTERACTIVE-TRAINING-MODULE](https://www.propane.com/interactive-training-module).

BUILD ANYWHERE, WITHOUT SACRIFICES.

For commercial construction pros and building and business owners, there's no simpler way to describe the promise of propane. It allows you to construct your buildings with first-rate amenities regardless of where they are located.

Propane offers the same performance characteristics as natural gas. It's a smart, efficient, and environmentally friendly choice for a building's major energy applications, and it's an abundant, domestically produced source of energy. And because it's stored on site, it's not limited to locations accessible by the natural gas grid.

REAL-WORLD SUCCESS

"The Ultimate Guide to Commercial Propane Applications" brings together five outstanding examples of companies and organizations that refused to compromise. From a ski resort in Vermont that used propane to open a water park that runs even in the coldest months of winter to healthcare facilities in Texas that used propane to design their sophisticated, efficient HVAC systems, these stories provide inspiration and education on all that propane has to offer in commercial settings.

COMMERCIAL PROPANE APPLICATIONS



SPACE HEATING

Commercial gas furnaces provide heated air at a significantly warmer temperature than some electric options to provide steady and reliable comfort. Commercial boilers can serve both space heating and hot water applications with capacities up to 8,660,000 British thermal units [Btu/hr].



WATER HEATING

Tankless water heaters deliver endless, on-demand hot water, and are available in rack systems that offer redundancy and higher flow rates. Commercial storage tank water heaters are a more robust version of common residential units.



COOKING

Propane cooking equipment delivers professional-grade performance while decreasing fuel consumption and providing convenience and functionality in any commercial kitchen.



CLOTHES DRYING

Commercial propane clothes dryers provide laundry functions for numerous building types, with a range of capacities to meet specific needs.



FIREPLACES

Propane fireplaces and fire pits add warmth and ambience to guestrooms and welcome areas and can provide comfy, efficient heating.



GENERATORS

Propane-powered standby generators offer clear advantages over diesel regarding fuel storage, fuel maintenance, and reliability.

Combined heat and power [CHP] units also produce electricity for a building, but they capture the propane engine's waste heat to create hot water, reducing a building's energy costs.



MOBILE GENERATORS

Mobile generators powered by propane offer low-emission power on the jobsite with sizes ranging from 3.25 kW to 125 kW.



OUTDOOR LIVING

With an array of options, propane outdoor amenities can distinguish a business by creating unique and inviting environments.



HOSPITALITY

JAY PEAK RESORT BOOSTS BUSINESS WITH PROPANE-FUELED WATER PARK

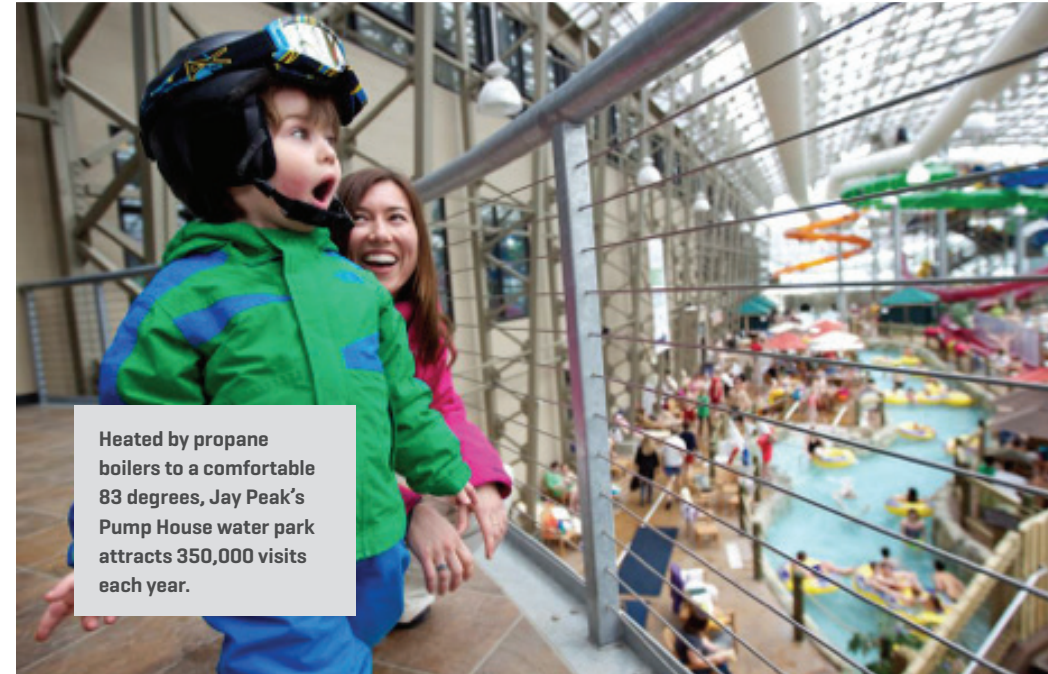
Jay Peak's \$50 million in annual revenue is bolstered by amenities including 10 restaurants, three hotels, and a massive water park that rely on powerful propane.

Jay Peak Resort is one of the premier ski resorts in New England. Founded in 1957 in the Northeast Kingdom of Vermont, just two miles from the Canadian border, it has 350 skiable acres, nine ski lifts, an iconic 60-person aerial tram, and a reputation for lots of natural snowfall.

The resort has undertaken a significant improvement in base-area amenities in the past seven years. To add to the more than 250 condos and townhomes on the mountain, the resort built three hotels with more than 300 total rooms.

To make the resort more profitable year-round, Jay Peak also constructed an NHL-sized ice arena, a golf course that hosts 12,000 rounds per year, and a year-round indoor water park with several large slides, a kids play area, and a stand-up flowrider. In total, the resort has an annual revenue of \$50 million with 300,000 skier visits and 350,000 water park visits each year.

To keep its three hotels and popular water park cozy in the frigid winters of northern Vermont, Jay Peak Resort requires a high-performance heating system. Propane is versatile enough to work in the resort's remote, rural location; powerful enough to fuel the high-efficiency boiler plant; and reliable enough to keep the resort running and heated throughout even the coldest winter conditions. In addition to space heating and water heating, the resort boosts its year-round business with a variety of propane-fueled amenities.



Heated by propane boilers to a comfortable 83 degrees, Jay Peak's Pump House water park attracts 350,000 visits each year.

SPACE HEATING AND WATER HEATING

Maintaining a cozy 83-degree temperature in the water park throughout Vermont's frigid winter requires a lot of heating power — and propane is up to the task. A central boiler room at the Hotel Jay and water park includes 12 AERCO Benchmark 3.0 propane boilers, each with 3 million British thermal units (Btu) of capacity. The boilers have a 15:1 turndown ratio, meaning that they can easily meet all part-load conditions.

Depending on return water temperatures and the load being served, the propane boilers will range from 87 to 98 percent efficiency. Oil boilers in this same input range average just 85 percent efficiency¹. Providing all of the snow melting, heating, and hot water with an oil boiler system would cost roughly 14 percent more every winter and have about 20 percent greater CO₂ emissions. By choosing a more efficient propane boiler system, the resort saves more than \$100,000 annually in the central boiler room alone² and reduces the carbon footprint of the facility by nearly 900 metric tons of CO₂ per year.

Condos and townhomes throughout the resort also use propane boilers to provide baseboard heat and domestic hot water.

¹ Average efficiency based on data from the Air-Conditioning, Heating, and Refrigeration Institute. www.ahrinet.org.

² Cost projections for heating oil based on U.S. Energy Information Administration data. www.eia.gov.

COOKING

Jay Peak has ten restaurants, ranging from small snack bars to fine-dining options, and each of them relies on propane equipment for cooking. “The chefs that cook in these restaurants enjoy cooking with propane — they prefer it,” Stenger says. One of the more visible appliances is a propane-fueled pizza oven that serves as a unique centerpiece to the Hotel Jay’s Foundry Restaurant. “People really like to look at it,” Stenger says. “It’s a conversation topic and it cooks a great pizza.” Many residences also include propane ranges.

CLOTHES DRYING

Jay Peak worked with Vermont’s energy efficiency utility, Efficiency Vermont, to choose appliances and systems that were both efficient and that reduced electrical consumption. Propane dryers for hotel laundry and in residences are just one more way the resort minimizes its electricity needs.

FIREPLACES

There’s nothing like curling up by the fire after a long day on the slopes, so propane fireplaces are included in nearly all of the condos and townhomes at Jay Peak, and in all hotel rooms in the Hotel Jay and Tram House Lodge. The resort began replacing wood fireplaces throughout the resort about 15 years ago.



OUTDOOR AMENITIES

Each hotel at Jay Peak includes an outdoor propane firepit, providing a comfy, campfire-like gathering place. Propane patio heaters extend the outdoor dining season at several of the resort’s restaurants, and outdoor propane barbecues at the base of the mountain create a party atmosphere in the late winter and spring. Perhaps most impressive is a propane-fueled hydronic snowmelt system that runs under the resort’s paver walkways. “It keeps the walking surface safe so there’s no slips and falls, and it also cuts down considerably on snow removal and labor,” Stenger says.

FUTURE DEVELOPMENT

Ultimately, developments like the large hotels and water park that drive Jay Peak’s \$50 million in annual revenue simply wouldn’t be possible without propane. The fuel provides a reliable heating source even for large businesses and developments in remote areas that lack natural gas infrastructure. And Stenger’s company is continuing to use propane at other developments across Vermont. That includes a recently completed 112-room hotel at sister resort Burke Mountain, which uses propane for all space and water heating and fireplaces, and several upcoming residential and commercial projects in the nearby town of Newport, all of which are likely to be heated by propane.

**CHECK OUT THE VIDEO
AND CASE STUDY ABOUT
JAY PEAK AT PROPANE.COM**

JAY PEAK RESORT

JAY, VERMONT

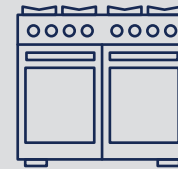
PROPANE SYSTEMS:



SPACE HEATING



WATER HEATING



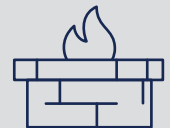
COOKING



CLOTHES DRYING



FIREPLACES



OUTDOOR AMENITIES



SANFORD HIGH SCHOOL'S PROPANE BOILER CONVERSION SAVES \$30,000 A YEAR

Inspired by a successful switch to a propane-fueled school bus fleet, the Sanford School Department went with a familiar fuel to replace its failing heating system.

Located in a blue collar residential community in southwest Maine, the Sanford School Department has faced extreme budget challenges in recent years. With declining state subsidies and a cap on local tax increases, the department has had to cut about \$3 million over two years in positions, supplies, and programs.

The 1,100-student Sanford High School was built 42 years ago with all-electric heat and then converted 25 years ago to hydronic heating. In the conversion, two 4-million-Btu oil boilers were shoehorned into an old tractor garage, and oil pipes ran from an external oil tank and through the school's locker rooms to reach the boiler room. The inefficient system was smelly, unreliable, and near the end of its life.

"We had no end of problems with the old oil system," says David Theoharides, Sanford's superintendent of schools. "We could never get the oil lines not to leak. I would go into the locker room and there would be sawdust on the floor soaking up the oil, and the locker rooms would just reek."

Ty Pombriant, Sanford's facilities director, struggled to keep the units up and running. "We were constantly changing filters, or we had one down because a burner was clogged," he says. "You'd never know when you'd get a phone call at night with, 'The thing shut down.'" Trane Building Advantage Group, an energy services firm that Sanford had hired to conduct an energy audit, recommended the school invest in a new, high-efficiency boiler system.



After upgrading to a high-efficiency propane boiler, Sanford High School's staff has been pleased with the system's cleanliness, reliability, and performance.

Meanwhile, the department's school bus contract was up for bid. Tiring of a bus fleet that was frequently under maintenance and emitted noxious diesel fumes while idling, Sanford sought a contractor that could provide a more dependable fleet.

On both fronts, propane offered an efficient, reliable upgrade that provided the school district with budget savings while delighting students, teachers, and maintenance staff.

SCHOOL BUS FLEET

After putting out a request for proposals for the new school bus contract, the department received an intriguing response. Not only would the contractor provide a new fleet and a new bus garage, but they would also make Sanford the first district in Maine to have cleaner, quieter school buses completely powered by propane autogas.

"The part we noticed right off the bat is when they're parked in front of the school, people aren't gagging from the diesel," Theoharides says.

SANFORD SCHOOL DISTRICT

SANFORD, MAINE

SPACE HEATING AND WATER HEATING

Delighted with the performance of the new propane buses, Sanford was particularly receptive when Trane Building Advantage recommended converting the high school's boiler system from oil to propane. The school replaced the old oil boilers with three Viessman CM2-620 propane condensing boilers and new boiler plant controls. One boiler operates year-round to provide the school domestic hot water, while the other two operate seasonally for space heating and provide redundancy.

Trane Building Advantage projected that the boiler replacement would provide \$16,892 in annual fuel rate savings from switching to propane and \$14,400 in efficiency-related savings by upgrading the boilers, for a total of \$31,292 in annual savings.

With a total cost of \$335,192 for the boiler plant upgrades, the project provides an ROI of 10.7 years. While that's a remarkably fast return on investment for a system with a 30-year life span, it doesn't even take into account maintenance savings or the fact that the system needed to be replaced anyway. Compared with simply replacing the boilers with new oil boilers, the propane system likely provided instant ROI.

Because the project was justified through cost savings alone, the Sanford School District did not have to set aside a large capital improvement budget. The \$30,000 in savings equates to about 1 percent of Sanford School District's total budget, allowing the district to reinvest in education.

COOKING

The school department's productive experience using propane in its central kitchen provided further support for the decision to convert. The kitchen, which cooks and distributes food throughout the district's 13 schools and provides free breakfasts and lunches throughout the summer, uses propane to power its stoves and ovens, as well as for three tankless water heaters for washing dishes.

GENERATORS

Sanford School District's Memorial Gym, which also contains the central kitchen, is protected by a propane standby generator, which kicks in automatically during a power outage. The standby power is particularly vital during Maine's frigid winters, ensuring operations can safely continue even during a snowstorm.

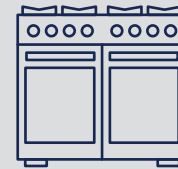
PROPANE SYSTEMS:



SPACE HEATING



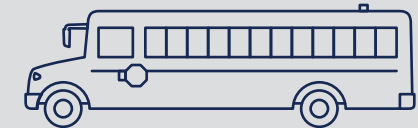
WATER HEATING



COOKING



GENERATORS



SCHOOL BUS FLEET



**CHECK OUT THE VIDEO
AND CASE STUDY
ABOUT THE SANFORD
SCHOOL DEPARTMENT
AT PROPANE.COM**



RELIABLE POWER MAKES HAPPY CAMPERS

Two northeast summer camps offer kids a getaway from the always-on connections of the everyday world. But while their campuses may be isolated from city amenities, propane ensures their campers remain warm and well-fed in any weather.

For Anthony Gronski, summer camp is a training ground for life.

The executive director at YMCA Camp Woodstock, a summer camp and retreat center in Woodstock Valley, Connecticut, says today's kids are so electronically connected through texting and their phones that it's difficult for them to learn to build relationships, face to face. Summer camp offers an opportunity to disconnect from the internet and bond with friends in a positive environment, where kids can be kids.

The camp's remote location, on a pristine 75-acre lake surrounded by woodlands and farms, is an ideal setting to create that environment. So even though there's no natural gas available and the electric grid can be unreliable, Gronski wouldn't change a thing. The camp simply turned to propane to fuel the generators, heating systems, and cooking appliances that keep them running in any weather condition.

Like Camp Woodstock, summer camp at Crossroads provides a safe respite from the busy world, on a lake surrounded by woodlands. Originally founded to provide summer camps for kids from Boston, the organization has recently developed a year-round, holistic approach to programming focused on leadership, character development, and college prep.



At Crossroads' 200-acre Camp Wing in Duxbury, Massachusetts, propane furnaces, boilers, and water heaters provide space and water heating to dozens of buildings, including the farmhouse and health center, pictured in background.

SPACE HEATING AND WATER HEATING

At the largest Crossroads site, a 200-acre camp in Duxbury, Massachusetts, propane furnaces, boilers, and water heaters provide space and water heating to 22 cabins, an office building, a barn used for maintenance and recreational space, a farmhouse and health center, and the Duxbury Stockade, a large colonial fort building that lodges up to 140 campers in the summertime and 75 in the winter.

With no natural gas available on the site, propane heating systems were an easy choice over heating oil, says Ben Palmer, Crossroads' director of operations. "They perform better, and it's a cleaner option, too," he says. "Some of our donors are interested in making sure we're making environmentally sound decisions. So I think, as far as I know, it's a much cleaner option to go with the propane in terms of the emissions."

Camp Woodstock uses propane throughout its 42 buildings onsite, including lodges, cabins, and meeting spaces. All of the buildings use propane furnaces or boilers for space heating. Three centralized bath houses use boilers for hot water, and the lodges use propane storage tank water heaters for their bathrooms.

COOKING

At most camps, the dining hall is just as crucial to the success of the camp as hot water for showers. Woodstock's kitchen serves three meals a day to up to 400 people onsite. The kitchen uses propane to fuel convection ovens, grills, and a large kettle that can handle 40 pounds of pasta. "It's really critical that our dining hall can maintain operation, regardless of the weather, without power," Gronski says. "We really rely on the propane to continue to flow even when we lose power."

In the Crossroads kitchen, propane fuels a 12-burner stove, a large kettle, a griddle, and two convection ovens. Maintaining the reliability of that kitchen was an important factor in the camp's decision to use propane.

GENERATORS

Camp Woodstock employs eight propane generators, six mobile and two permanently installed, to keep the camp

running in an outage. "Out here, we lose power," Gronski says. "We're mainly wooded and pretty much the way it was since it was incorporated in 1670." Because the nearby community is so spread out, it's frequently the lowest on the priority list when power is restored. "We were the last ones to get power the last time it went out. Everyone here is prepared for it. Everyone has generators."

The generators are critical to maintaining the camp's lighting, refrigeration, heating, and particularly the pumps for well water. "That's just such a comfort to have generators set up, because two things that really can stop camp is water and septic," Gronski says. "So those generators keep us operating and keep water flowing in both directions."

The protection against power outages is particularly vital for non-profit organizations like the YMCA, where lost revenue from a weekend without power or uncomfortable and upset guests can wreak havoc on an operating budget. Camp Woodstock offers \$177,000 in financial aid and scholarships to campers each year. But losing a week of summer camp to a power outage could result in up to \$300,000 in losses — and that's not even including the loss of income from families who decide not to return.



**CHECK OUT THE VIDEO
ABOUT CAMP WOODSTOCK
AT PROPANE.COM**

YMCA CAMP WOODSTOCK

WOODSTOCK VALLEY, CONNECTICUT

CROSSROADS

DUXBURY, MASSACHUSETTS

PROPANE SYSTEMS:



SPACE HEATING



WATER HEATING



COOKING



GENERATORS



SOLVING HEALTHCARE HEATING CHALLENGES

For two hospitals on the edge of Texas Hill Country, propane provides a solution for complex mechanical designs.

The Lakeway Regional Medical Center is in growth mode. Open since 2012, the 106-bed hospital in Lakeway, Texas, has a large cardiology department, is stroke-accredited, and is in the process of earning its trauma designation. It's become a go-to healthcare destination for local Hill Country communities weary of the longer drive to Austin.

A mile away, the Vibra Rehabilitation Hospital of Lake Travis is growing, too. The 30-bed acute rehab hospital will soon open six more beds, as well as a hyperbaric and wound care center.

Along with their location, these two thriving healthcare businesses have an operational detail in common: They both solved key building system challenges with propane.

SPACE HEATING AND WATER HEATING

Hospital codes and licensing requirements often dictate healthcare facilities' air flow rates, temperature, and humidity specifications. In some buildings, keeping the humidity down requires sophisticated mechanical systems.

In Vibra Rehabilitation Hospital's reheat system, the mechanical system first chills the air to 52 degrees to remove humidity. Then, to avoid freezing temperatures for the building occupants, reheat coils in the building's Variable Air Volume [typically known as VAV] boxes reheat the air to a comfortable 70 degrees.

Vibra turned to propane boilers to heat the water that runs through the coils. Separate propane boilers also provide the building's domestic hot water. The heating system is



For Lakeway Regional Medical Center, supplementing the hospital's electric heating system with a propane boiler was the most cost-effective and reliable solution.

expensive because the boilers must run year-round. But, says Wayne Martin, the hospital's plant operations director, it's the best solution available while the hospital waits for the natural gas utility.

"They do make electric water heaters," Martin says, "but the cost of electricity would be even worse."

Lakeway Regional Medical Center was built with growth in mind, says Silas Powell, Lakeway Regional's director of support services. "When it was laid out, the footprint was set up so it can expand to 300 beds with the addition of a north tower onto our existing facility," he says. But the infrastructure, including the mechanical systems, was put in place to support that growth from the beginning.

The building's primary heating, water heating, and cooling are provided by three chillers (along with three cooling towers) and two Templifiers, essentially large heat pump water heaters. The building also required a backup boiler system for when one of the Templifiers was down for service or when the weather was particularly cold. With no natural gas available, propane was an ideal fit to fuel the boiler. "To me, it's more cost-effective, and it's a very reliable system to have in place," Powell says.



COOKING

At Lakeway Regional, propane also fuels cooking equipment such as stoves and ovens in the hospital's large commercial kitchen. "In a commercial kitchen, gas is the preferred method of cooking," Powell says. "It's also more cost-effective. I don't know any commercial kitchens I've been in that tried doing it on electric."

Vibra also uses propane for its kitchen equipment, including a steamer and grill. That's a benefit for the kitchen staff, Martin says. "They prefer using flame to electric [cooking], just for the efficiency of cooking quickly."

"IN A COMMERCIAL KITCHEN, GAS IS THE PREFERRED METHOD OF COOKING. IT'S ALSO MORE COST EFFECTIVE."

SILAS POWELL
DIRECTOR OF SUPPORT SERVICES,
LAKEWAY REGIONAL MEDICAL CENTER

SOLVING OPERATIONAL CHALLENGES

Healthcare facilities often need to employ complex mechanical systems, whether to achieve sustainability goals, meet code or licensing requirements, or both. But with propane up to the task, there's no need to locate these facilities within reach of natural gas. For construction and design professionals and business owners of all types, knowing the capabilities of propane can help solve operational challenges when natural gas isn't available.

LAKEWAY REGIONAL MEDICAL CENTER

LAKEWAY, TEXAS

VIBRA REHABILITATION HOSPITAL OF LAKE TRAVIS

LAKEWAY, TEXAS

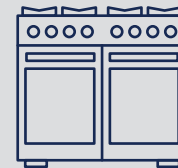
PROPANE SYSTEMS:



SPACE HEATING



WATER HEATING



COOKING



PUBLIC ASSEMBLY

UPGRADED BOILERS ARE A BLESSING FOR CHILLY CONGREGATION

Low-emission propane heating is an ideal fit for a parish interested in reducing both its energy bills and its environmental impact.

The Church of the Good Shepherd in Acton, Massachusetts, has had a lot of chilly choir rehearsals and vestry meetings.

Rebuilt on a shoestring after a fire in 1985, and without much thought given to energy conservation, the church was heated by a poorly designed hydronic system running on an inefficient oil boiler.

“The boiler room was like a sauna and had to have the windows open because it was so hot in there,” says Jessie Panek, a volunteer on the church’s sustainability committee. Meanwhile, the rest of the church was frequently too cold. The horseshoe-shape building had three zones, and the zone at the far end, which included a gathering space, offices, and a meeting/choir room, was never comfortable.

The very active sustainability committee has been working for the last five years to reduce the church’s huge oil heating bill and improve the church’s environmental impact. The group saw an opportunity to do both when the Episcopal Diocese of Massachusetts launched the Creation Care Initiative, a series of grants and loans intended to fund energy efficiency and environmental upgrades for congregations across the state.

SPACE HEATING AND COMFORT

The church applied for and received a \$10,000 grant to invest in a new system before their 19-year-old boiler gave out. The committee looked at a variety of options, but they settled on a conversion to propane fairly quickly, Panek says. Natural gas would have been prohibitively expensive to bring to the site, leaving propane and oil as the only options.



Switching from an oil boiler to propane will save the Church of the Good Shepherd approximately \$5,000 in fuel costs annually.

“It was clear that any propane or natural gas system was going to be much more efficient [than oil],” Panek says. While most oil boilers are about 84 percent efficient, the committee found that propane boilers could affordably achieve efficiency levels above 95 percent. “As far as we can tell, we’re doing the best thing environmentally,” Panek says. “There’s less impact, less greenhouse gases produced from the propane side of the equation than from oil. So that really was a big deciding factor for us, coming at it from the environmental point of view.”

After settling on propane, the committee decided to work with Osterman Propane to install a pair of 96 percent efficient propane boilers. Manufactured locally in Massachusetts, the HTP Elite Fire Tube boilers are cascading — instead of one boiler running at full capacity, the two boilers can run simultaneously at a more efficient level. The dual systems also provide redundancy in the event that one of the boilers is offline.

The new sealed-combustion boilers vent to the outdoors, so makeup air is no longer needed in the boiler room. The technicians also upgraded the expansion tank and gas piping and installed a special circulator capable of handling the varied flow needed in the previously cold office wing.

Those heating system fixes were just what the church needed before the brutal winter set in. "We've had some spells of good cold weather this winter, and it seems to have been able to keep up incredibly well with the cold temperatures," Panek says. She was happily surprised to learn that the system actually runs more efficiently if temperatures are not allowed to drop too low, so the sanctuary is no longer frigid on days when it's not in use. "It's more efficient, but it's also more comfortable," she says.

DESPITE OPERATING THROUGH A MUCH COLDER WINTER, THE PROPANE BOILER SYSTEM WAS MUCH LESS EXPENSIVE TO OPERATE, CONSUMING ABOUT \$9,300 WORTH OF PROPANE VERSUS \$14,000 WORTH OF OIL, FOR A PROJECTED PAYBACK OF LESS THAN SIX YEARS.

Despite operating through a much colder winter, the system was also much less expensive to operate, consuming about \$9,300 worth of propane versus \$14,000 worth of oil last year, for a projected payback of less than six years.

ENVIRONMENTAL PERFORMANCE

While the annual energy savings provided by the propane boiler conversion will provide the Church of the Good Shepherd with a healthier budget, the reduced carbon emissions were just as important to the parish, Panek says.

"I suspect that at any church of any denomination, people are really beginning to recognize that that's part of our obligation to the earth, to God's creation, to take care of it," Panek says. "And the best thing we can do is to try and minimize what impact we're having. I said to the parish, we cannot argue to the diocese that they should give us a green grant to simply replace an oil furnace with another oil furnace, because it just doesn't look like environmentally the right thing to do."

The Episcopal Diocese of Massachusetts raised the money for the \$2 million, five-year grants program in 2010 after adopting the Genesis Covenant, a national effort by religious communities to reduce greenhouse gas emissions by 50 percent within 10 years, says Esther Powell, grants and events administrator for the diocese. Out of 150 congregations, 69 have applied for green grants and several dozen have used them to put in more-efficient heating systems.

With the church's propane boilers keeping the cold at bay throughout the winter, the congregation got first-hand experience with just how comfortable it can be to make environmentally sound choices.

CHURCH OF THE GOOD SHEPARD

ACTION, MASSACHUSETTS

PROPANE SYSTEMS:



SPACE HEATING



WATER HEATING



LEARN MORE AT PROPANE.COM

From restaurants to multifamily buildings, resorts, and industrial plants, propane fuels commercial projects of any type (as well as homes). Visit [Propane.com](https://www.propane.com) to access free tools and resources.

VIRTUAL COMMERCIAL BUILDINGS

[Propane.com/Interactive-Training-Module](https://www.propane.com/Interactive-Training-Module)

Tour our interactive Virtual Commercial Buildings to see propane applications for your project type.

BUILD WITH PROPANE GUIDE: COMMERCIAL EDITION

[Propane.com/Commercial-Construction](https://www.propane.com/Commercial-Construction)

Download this personal handbook to learn about propane systems, new technology, and products in commercial construction.

BUILD WITH PROPANE NEWSLETTER

[Propane.com/Newsroom/Subscribe](https://www.propane.com/Newsroom/Subscribe)

Sign up for the commercial edition of the Build With Propane newsletter to stay informed on the latest news, techniques, and incentives for propane building.

SUBSCRIBE ON YOUTUBE

[Youtube.com/BuildWithPropane](https://www.youtube.com/BuildWithPropane)

Don't miss the latest videos featuring commercial case studies, new technologies, and interviews with construction and facilities professionals.

FREE CONTINUING EDUCATION CERTIFIED TRAINING

[PropaneTrainingAcademy.com](https://www.propanetrainingacademy.com)

Grow your bottom line by attending one of our free propane training sessions and earn credits from the AIA, NAHB, NARI, and GBCI [in conjunction with the USGBC].

FIND A PROPANE SUPPLIER

[Suppliers.Propane.com](https://suppliers.propane.com)

Enter a ZIP code to find propane suppliers in your area.