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Spring/Summer 2012

Why Choose Natural Gas?

Plus



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Outdoor Rooms Are More Comfortable, Stylish Than Ever Before
Efficiency, Reliability Make Gas A Natural Choice

Clean and Efficient

Natural gas is the natural choice when it comes to going green.

By Kristy Alpert

When it comes to deciding how to power your home's major equipment and appliances, the choice between natural gas and electric may be clearer than you think. The reasons for using natural gas in your home increase when you add energy efficiency and environmental friendliness to the list which already includes comfort, affordability and that it comes from North America.

So before choosing an electric appliance over one that uses natural gas, know the facts about where energy comes from.

NATURALLY EFFICIENT

Natural gas provides the United States with more than one-fourth of the total energy used, and the federal Energy Information Administration (EIA) predicts that will increase by 20 percent through 2030. One reason for this increase is because it's naturally efficient: from its underground source to the more than 70 million homes and businesses

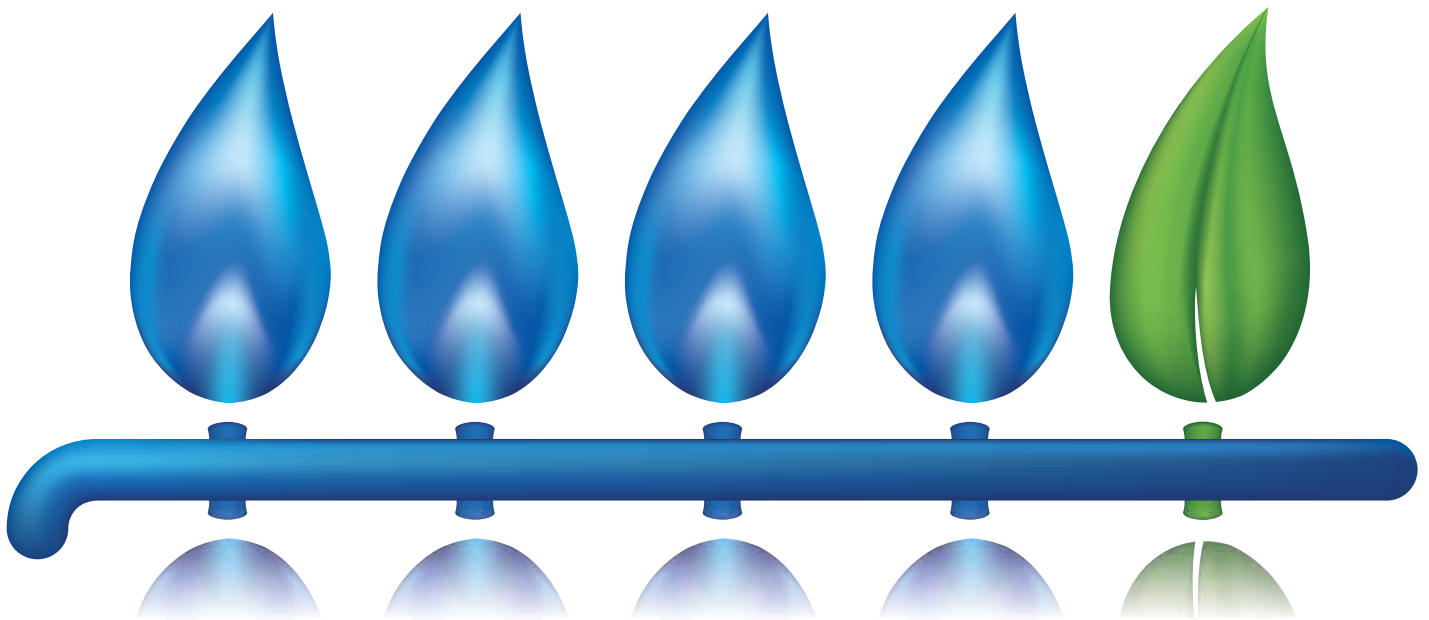
it fuels, natural gas delivers 90 percent usable energy.

When a customer wants the energy from natural gas to operate an appliance or piece of equipment, the same gas molecules are burned that are brought up from below the surface of the earth. Natural gas is most efficient when directly used by a customer and not indirectly used to convert to another form of energy such as electricity.

Electricity comes from a power plant that could be located miles away from where a customer is using the appliance. It takes energy to generate the electricity and takes more energy to move the electrons through the electric grid. (Only about 30 percent of the energy used to make electricity makes it to a customer's home or business.)

BETTER FOR THE ENVIRONMENT

Consumers are more conscious than ever of how their lifestyle and purchases affect the environment. One aspect of being "green" is becoming aware of the harmful emissions from your fuel choice.



Natural gas emits 45 percent less carbon dioxide (CO2) than coal and nearly 30 percent less CO2 than fuel oil, according to the EIA. So to accurately calculate the environmental impact of any electric appliance, you must take into account the energy that is used to make the electricity.

To calculate the carbon emissions in your home, use the carbon emissions calculator at www.gasgreen.com.

Let's not forget that natural gas is an essential part of our energy future with the continued development of renewable energy. Natural gas will provide clean, reliable power when the sun sets or wind dies down.

ENERGY STAR APPROVED

The federal government rates natural gas appliances just as they do electric ones, and many natural gas appliances have achieved the coveted ENERGY STAR® rating. This makes it easy for consumers to identify and purchase energy-efficient products that offer savings on energy bills without sacrificing performance, features, and comfort.

ENERGY STAR® standards require that an appliance operate 10 to 15 percent more efficiently than standard models, plus qualifying appliances produce less greenhouse gas emissions and other pollutants.

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Qualifying ENERGY STAR® natural gas water heaters must have an energy factor (or EF rating) of .67 or higher. This includes include tankless models, condensing units and storage tank water heaters.

Natural gas furnaces must have annual fuel utilization efficiency (AFUE) ratings of 90 percent in the South and 95 percent in the North, while boilers must have an AFUE rating of 85 percent - and they must have efficient blower motors. To find ENERGY STAR® rated appliances, visit www.energystar.gov/products. ■

THE CLEANER CHOICE

Utilizing natural gas in the home means cleaner air, specifically when used for cooking, drying clothes, home space heating and water heating. As most homeowners know, heating and water heating is where most of the costs of the home originate. Although electric water heaters may have a lower initial cost than an equivalently-sized natural gas water heater, their annual operating costs (and CO2 emissions) are much higher and result in a higher life cycle cost than a natural gas-powered water heater. (See table for a comparison of three standard water heaters.)

The chart below is for comparison purposes only and uses average pricing information to provide a current comparison between three residential water heating options. Regional energy pricing and hot water usage patterns may impact results for your specific home. Energy usage was derived based on DOE test procedures using EIA Short-Term energy outlook rates. To calculate your home's carbon dioxide emissions, go to www.gasgreen.com.

WATER HEATERS	AVERAGE INSTALLED COST	AVERAGE ANNUAL OPERATING COST	TYPICAL CARBON DIOXIDE EMISSIONS (LBS/YR)
Standard Gas Tank	\$850	\$280	2830
Standard Gas Tankless	\$1,800	\$221	2102
Standard Electric Tank	\$750	\$561	7405

Abundant Supply

SUPPLY

Recent discoveries of natural gas resources provide energy to fuel the next century.

By Tonya McMurray

PRICES

Imagine an energy source that's clean, reliable and efficient. Imagine an energy source that's available at a stable, competitive price, and one that can reduce dependence on foreign oil and create jobs in North America.

It may sound almost too good to be true, but recent discoveries from natural gas shale formations in the U.S. and advances in drilling technology have given natural gas a spotlight on the energy stage. Natural gas is a fossil fuel found in deep underground reservoirs of porous and permeable rocks. Composed largely of methane, natural gas is the cleanest burning fossil fuel and produces smaller amounts of combustion byproducts than coal or refined oil products.

A 2011 report by the Colorado School of Mines' Potential Gas Committee indicates that the United States has a natural gas resource base of 1,898 trillion cubic feet (tcf), the highest resource evaluation in the committee's 46-year history. Industry analyst IHS Global Insight, in a December 2011 report prepared for America's Natural Gas Alliance, notes that by 2010, shale gas has grown to 27 percent of total U.S. gas production. By September 2011, shale gas accounted for 34 percent, and IHS estimates that it will grow to 43 percent by 2015 and to 60 percent by 2035.

The U.S. government's Energy Information Administration agrees with that conclusion, estimating that natural gas power plants will account for nearly half of all new power plant additions through 2035.

"The natural gas arena has gone from one of having shortages to one of abundance," says Chris McGill, managing director of policy analysis at the American Gas Association. "We've seen significant growth in natural gas supply during the last four years."

That growth means there is enough total gas resources to meet current demand levels for at least a century, according to the American Gas Association.

Like the U.S., Canada has an abundant supply of natural gas resources. Gas producers throughout Canada have invested more than \$2 billion in new capital spending every year with more than \$15 billion invested since 2005, according to the Canadian Gas Association. The Canadian Energy Research Institute estimates that the development of Canadian natural gas resources will add an average of \$52 billion annually with a total \$1.3 trillion contribution to Canada's overall economy over the next 25 years.

More than 6 million homes, businesses and industries used natural gas in 2010, accounting for more than half of Canada's population, says the CGA. In addition to the 2.69 trillion cubic feet of natural gas used within the country, Canada exports 3.264 trillion cubic feet to the U.S. per year.

"Natural gas is growing in popularity with Canadian consumers because it is abundant, affordable, clean, reliable, safe and versatile," said Ruth York, a research analyst for the Canadian Gas Association. "This is good news for Canada's energy security and for Canadian consumers using natural gas."

DOMESTIC RESOURCES

Approximately 98 percent of the natural gas used in North America is produced in North America, according to America's Natural Gas Alliance. This domestic gas supply is not dependent on foreign markets, changes in political alliances, or other disruptions in foreign supply.

Domestic resources mean greater reliability, says McGill. Because gas pipelines and storage are controlled domestically, consumers have

the assurance that the gas will be available when they need it.

“There is strong flow in the pipeline and lots of natural gas in storage, which is important because 15 to 20 percent of the gas supply from November to the end of March comes from storage,” he says.

ENERGY INDEPENDENCE

A strong domestic supply of natural gas can help provide energy independence for the U.S. and Canada. According to the Energy Information Administration, the United States imports nearly half of crude oil and refined petroleum products consumed in the country. About one-fourth of that is imported from Canada, but the rest comes from less stable and more volatile sources, including nearly 20 percent from the Persian Gulf countries of Bahrain, Iraq, Kuwait, Qatar, Saudi Arabia and the United Arab Emirates.

While some growth in the natural gas market will come from use in residential and commercial buildings and power plants, the biggest growth area is in natural gas vehicles, McGill says. According to America’s Natural Gas Alliance, replacing 3.5 million heavy-duty vehicles with natural gas vehicles by 2035 would save more than 1.2 million barrels of oil per day – more than the United States imported from either Venezuela or Saudi Arabia in 2009.

AN ECONOMIC BOOST

Keeping natural gas production in North America also means strong job growth within the United States and Canada. In its December report, IHS reported that the shale gas industry supported 600,000

jobs in 2010. IHS estimates this will grow to 870,000 in 2015 and to more than 1.6 million jobs by 2035.

IHS estimates that the shale gas contribution to the U.S. Gross Domestic Product (GDP) will grow from \$76 billion in 2010 to \$118 billion by 2015 and to \$231 billion by 2035. With growth in the natural gas industry, IHS estimates that the shale industry will generate more than \$933 billion in federal, state, and local tax and royalty revenue over the next 25 years.

Lower gas prices will generate net GDP and employment growth in the short term, according to the IHS report. And, in the long term, low, stable prices will have a positive impact on manufacturing profitability and North American competitiveness.

LOWER ENERGY COSTS

Increased natural gas supply has resulted in a significant decrease in natural gas prices for consumers. The Energy Information Administration estimates that average winter expenditures for natural gas will be \$671 for the 2011-2012 season, a significant decrease from the \$935 average expenditure in the 2005-2006 winter season.

“The overall picture we’ve seen with natural gas is really excellent,” McGill says. “We’ve seen more than a 20 percent increase in availability since 2007 and not a lot more demand, so we’ve had strong supply with relatively low cost.”

With lower costs and increased reliability that comes from a strong domestic supply of natural gas resources, natural gas is proving to be the star in the energy lineup. ■

SAFE AND SUSTAINABLE PRODUCTION

Much of the increase in natural gas resources has come from shale formations thousands of feet below the earth’s surface. Extracting gas from the shale formations requires hydraulic fracturing, frequently called “fracking” or “hydrofracking.”

Hydraulic fracturing is a process in which water, sand and other chemicals are injected deep underground at high pressures to fracture rock formations. The sand is carried into the fractures to keep the cracks open once the injection stops.

Fracturing fluid is more than 99 percent water and sand by volume, according to the Colorado School of Mine’s Energy and Minerals Field Institute. However, there has been significant controversy over the safety of the remaining one percent that is composed of other chemicals, with specific concern about contamination of surface and ground water reservoirs.

“Hydraulic fracturing is an industrial process,” said Chris McGill, managing director of policy analysis at the American Gas Association. “And as with any industrial process, there are some risks. But we believe that it can be

done in safe and sustainable manner.”

Hydraulic fracturing is governed by numerous state and federal laws with regulations governing every step of production from the initial permit process up to the safe disposal of fluids. A 2004 Environmental Protection Agency study concluded that hydraulic fracturing is not a potential hazard to ground water sources.

Natural gas reservoirs are found thousands of feet below aquifers and surface water, according to the Colorado School of Mines’ Energy and Minerals Field Institute. The institute reports that gas reservoirs are typically 10,000 feet or deeper while aquifers and surface water are typically within 200 feet of the earth’s surface.

Hydraulic fracturing is a necessary part of gas production, and it can be done responsibly, says McGill. “It needs to be done correctly and sustainably. It takes being committed to the science upfront; it takes transparency and sharing what you find. When all those things are in place, hydraulic fracturing is safe and sustainable.”





Outer (LIMITS)

Today's outdoor rooms make a strong case for the 'staycation.'

By Cindy Baldhoff

T

he term "staycation" was first tossed around in modern vocabulary back in 2008, when the financial crisis caused many consumers to rethink their travel plans for the summer. Since then, the term has become so popular that it's even been added to the Merriam-Webster Collegiate

Dictionary – and it also has changed the way that many people approach their summertime fun.

Instead of spending money on vacations, many consumers today are investing those funds back into their home, which provides them with lasting, tangible results that they can enjoy year-round. Specifically, many people have turned their attention to the great outdoors, where the options are as unlimited as the imagination and bounded only by property lines.

"Outdoor rooms are more popular in general because there's

a shift in the way people are spending their luxury money," explains Chad Lake of the Antioch, California-based Wholesale Patio Store. "The idea of vacations or things that are one-time use for this significant amount of dollars are going out the window and people are looking at spending their money more in a frugal sense as an investment."

This has caused a boom in outdoor rooms, which now often rival their indoor counterparts. The basics to an outdoor room are seating or dining space, a cooking appliance and a heat source, but they have evolved well beyond a wooden picnic table, grill and fire pit. Some of the more popular additions to outdoor living spaces include:

- **Deck or patio.** Adding or enlarging a deck or patio is one of the best – and most common – ways to improve your outdoor space. Adding covered areas that provide protection from the sun and the rain further extend the usefulness of your deck, and it becomes the starting point for future additions.





• **Outdoor kitchen.** The past few years have seen a dramatic increase in the popularity of outdoor kitchens. From simple spaces that could cost just a few hundred dollars with a grill, shaded area and furniture to luxury open-air rooms costing more than \$100,000, outdoor kitchens have become one of the hottest trends in the past five to 10 years. The most important component of an outdoor kitchen is, of course, the grill. Natural gas grills offer fast cooking times, lower fuel costs and the convenience of never running out of natural gas, which makes for a better outdoor cooking experience overall. (Adding natural gas convenience outlets to your space makes it easy to install gas appliances.)

• **Outdoor living room.** Similar to outdoor kitchens in popularity, outdoor rooms have become particularly trendy in warmer climates. In cooler areas, features like a gas fire pit or patio heater provide essential heat and also create a focal point for your outdoor room. The same goes for natural gas-fueled outdoor fireplaces, which are more expensive, but provide an effective and visually appealing way to warm up the outdoors. Today, you can also add luxury features like an outdoor fireplace, built-in TV or even a waterfall.

• **Landscaping/lighting.** Landscaping is a relatively simple but sure-fire way to add more character and beauty to your home's exterior. When done properly, it allows you to create your own personal oasis. Plus you can add to the beauty and ambiance through the use

of landscape lighting, which will showcase a yard's features and add security. In addition to the landscape lighting, consider what kind of mood you can create in your new space through such features as natural gas tiki torches or natural gas lights. Natural gas lights come in a diverse range of styles and can be mounted on walls, hung from a ceiling or mounted on a post in your yard.

"An outdoor room increases the value of the home as well as [customers'] quality of life and even their relationships with their families, because they can spend more time with each other and have more things to do centered around fun family functions," says Lake. "Outdoor rooms give you more space than most interior rooms to create the atmosphere you desire, and you can do whatever is best for your needs and wants."

DESIGNING YOUR SPACE

Deciding what your space should look like will depend on several factors, such as where you live, how you'll use that space and how much money you're willing and able to spend on it. Another important factor is the size of the new additions. Anyone who has ever shopped for new furniture knows that what seems a manageable size in the showroom may look much larger once it's inside your home – and the same principle applies to outdoor rooms.

"There are so many options out there at many different price

points,” explains Leslie Wheeler, director of communications for the Hearth, Patio & Barbecue Association. “When a homeowner is looking to develop an outdoor living area, personal preferences are very important. For example, if the grill is important, then a larger investment will be put into that item. It’s definitely important to figure out priorities.”

NEEDS VERSUS WANTS

To prioritize needs versus wants, determine what the space will be used for as well as how often. Will it be used only for entertaining in the summer, or would you like to be able to entertain well into

late fall and early winter months? Do you want cozy, intimate seating around a firepit, or a large, open outdoor room with a fireplace? Is this space for cooking and dining, or more for gathering casually with friends? The options are as diverse as the individuals planning the space, so what works for you is what you need to keep in mind.

“We look at an outdoor living space as having three anchors,” Wheeler says. “You need something to cook on, something to sit on and something to keep you warm when it’s cool out.”

Even with a small budget, you can have all three of these things, she says. “It’s the price points that make the difference. You just have to find what works for you and your budget. ■

OUTDOOR ESSENTIALS

If you’re looking at creating an outdoor space, here are some of the essentials you might consider including:

- **Gas grill.** For many outdoor kitchens, the grill is central focus. Whether you’re using a basic console model or adding a built-in grill with bells and whistles like a rotisserie and a warming space, you can find one that fits your exact needs. (Keep in mind that the number of burners/amount of cooking space is more important than the fancy features.)
- **Fire pit.** There’s no need to go inside when the temperatures drop; in fact, with a fire pit, you can turn a chilly fall evening into a cozy experience. A fire pit or patio heater can provide a less expensive option to an outdoor fireplace, while at the same time creating the ambiance you’re looking for. Bring on the marshmallows and hot cocoa!
- **Outdoor furniture.** Seating is an absolute must. Determine your design style before you start buying furniture. Buy something that matches the overall “look” you’re going for and don’t be afraid to explore some of the new materials – like resin wicker – that’s been introduced for the outdoors. Of course, always try it before you buy it; comfort is even more important than appearance.
- **Water feature.** Whether it’s a quiet, Zen-inducing fountain, a simple birdbath with running water or a koi pond, water is a wonderful way to add ambiance to your space. Of course, you can always go a little bigger – a spa or pool is a great addition, and you can extend their use with a natural gas heater.
- **Lighting.** Lighting plays two roles in the outdoor room: It creates ambiance, but it also provides safety. Look at areas where lighting is needed – such as walkways and deck stairs – and also look at what lighting will add to the mood on a summer night. You can also add ambiance with gas lights and tiki torches.
- **Shaded area.** When the summer heat is on, you’ll want to beat it with some

proper shading. Increase the enjoyment of your outdoor room with a shaded area such as a patio umbrella or canopy. If you prefer an open-air feeling, a wooden pergola provides a permanent source of shade without completely blocking out the sun and sky. And it’s a great option for outdoor rooms with a grill, because the pergola won’t trap the heat and smoke like a canopy or umbrella.

One way to make it easier to plan your new outdoor room is to use online planning tools, such as the free visualization tool provided by Energy Solutions Center at esc.youreality3d.com.

The software allows you to import a photo of your own backyard space, then upload images of desired additions – such as fire pits, furniture, patio heaters, tiki torches, etc. – and place them in your back yard or on your deck or patio. You can rearrange the items and add or remove items. There’s even a feature to swap out textures such as countertops and cabinet facings, and when you’re done designing the room, you can save it – and take it with you as a reference tool when you’re shopping for supplies for your outdoor room. Once you’ve seen what you can do with your space, you need to get serious – and draw up a budget that will let you maximize your dollars and create the room you desire.



You Can Count on It

Natural gas is one of the most reliable fuel choices around.

By Kristy Alpert

When a storm hits, count on natural gas to maintain power in your home. With an estimated 60 to 70 percent of power outages each year occurring as a direct result of inclement weather, the odds are pretty good that most homes will experience some degree of serious power failure, unless they have a natural gas standby generator.

“To a large degree, weather that impacts electricity doesn’t have the same impact on natural gas,” says Steve Landrum, product and services manager for CenterPoint Energy in Houston, Texas. “Natural gas piping is underground, so natural gas supply is unaffected by strong winds that can cause tree limbs to make contact with and even knock down power lines. Natural gas back-up generators are a great way to assure that you will have power when you need it.”

ADDED VALUE

Although there are still no power-outage-proof systems, natural gas is by far the most reliable fuel source. For added security in the case of a severe storm, installing a natural gas backup generator is one way to ensure your family has electricity in the event of an unfortunate outage. Natural gas backup generators are designed to keep your family safe and secure even when the grid is working against you.

The cost to purchase and install of one of these generators can start as low as \$1,800. This is based on where the generator and gas meter are located, plus the size of the unit – which equates to how much electricity, is produced. A generator may actually improve your home’s resale value – similar to adding a central air conditioning system.

“It is an investment and may increase the home’s value and equity,” confirms Jake Thomas, product manager for Generac, a company that recently introduced a new, small system that provides backup power for an entire home for less than \$2,000. “Additionally, many insurance

companies offer discounts to customers with automatic home backup power systems because they will help prevent storm damage during a power outage.”

BACKUP

A backup system will start up automatically during a power outage by running on the home’s existing natural gas supply, which generally means it can run for as long as necessary, says Thomas. “When electrical power is restored, the generator turns off automatically and returns to standby mode, monitoring power until it is needed again,” he says. “One of the biggest benefits is that it allows you to automatically back up essential circuits—like the refrigerator and furnace—at a price point that is comparable to a large portable generator.”

For a homeowner, it’s really about gaining some measure of control over the unpredictable nature of severe weather, Landrum says. “Many times people look at the price [of a generator] without understanding the true value of that purchase. What they need to look at is what it will cost not to have a generator if your power goes out.” ■





Grilled Lamb with Brown Sugar Glaze

Prep Time: 15 minutes

Cook Time: 10 minutes

Ready In: 1 hour 25 minutes

Servers 4

INGREDIENTS

1/4 cup brown sugar

2 teaspoons ground ginger

2 teaspoons dried tarragon

1 teaspoon ground cinnamon

1 teaspoon ground black pepper

1 teaspoon garlic powder

1/2 teaspoon salt

4 lamb chops

DIRECTIONS

1 In a medium bowl, mix brown sugar, ginger, tarragon, cinnamon, pepper, garlic powder and salt. Rub lamb chops with the seasonings, and place on a plate. Cover, and refrigerate for one hour.

2 Preheat grill for high heat.

3 Brush grill grate lightly with oil, and arrange lamb chops on grill. Cook five minutes on each side, or to desired doneness.

Pork Tenderloin with Herb Sauce

Prep Time: 10 minutes

Cook Time: 20 minutes

Ready In: 30 minutes

Serves 6

INGREDIENTS

3/4 cup red wine vinegar
or cider vinegar

1/4 cup butter or
margarine, cubed

2 tablespoons

Worcestershire sauce

2 teaspoons seasoned salt

1 1/2 teaspoons dried
parsley flakes

1 1/2 teaspoons dried oregano

1 teaspoon garlic powder

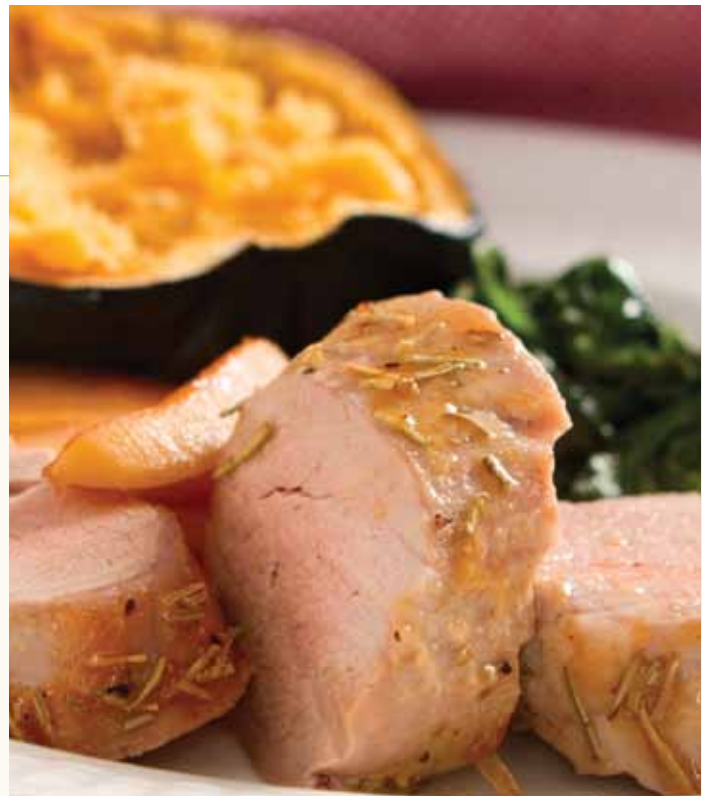
1/4 teaspoon pepper

2 boneless pork tenderloins

DIRECTIONS

1 In a saucepan, combine the first eight ingredients. Cook for three minutes or until butter is melted. Grill pork tenderloins, covered, over medium heat for 18-20 minutes or until a meat thermometer reads 160 degrees F, basting with herb sauce and turning occasionally. Let stand for 5 minutes before cutting.

SOURCE: ALLRECIPES.COM



BAXI LUNA

Even in the least heat dependent regions

Baxi was the first combination heating and domestic hot water boiler in North America, and is now producing significant savings, even in the least heat dependent areas of California.

Your current heating appliance will one day need to be replaced. When that time comes, upgrade to a proven, high efficiency, gas-fired heating solution and enjoy a greener and more affordable future. The Baxi Luna HT modulating, condensing wall-hung boiler, for instance, will help you cut your fuel consumption dramatically, while freeing up valuable living space, enhancing your home equity, and cutting greenhouse gas emissions by up to 90%.

Baxi has been heating homes in Europe for over three decades, and homes and businesses throughout North America for 15 years. Ideal for hydronic in-floor radiant, towel racks and snow melt applications, Baxi is also a great choice for a forced air with hydronic air handler system.

Energy Star approved and CSA certified, Baxi is a whisper-quiet and compact all-in-one space heater and water heater that comes with multiple built-in safety features. True to Baxi's commitment to safety, quality and environmental protection, this high efficiency appliance may only be installed by a Baxi trained and certified heating and plumbing contractor.

Make Baxi your future home heating choice for a new home or for replacing an aging and inefficient heating system. Visit www.wallhungboilers.com today, and get a Baxi-trained and certified contractor to help you enjoy a greener and more affordable future – with plenty of comfort and savings.

Baxi Luna HT 380 is a high efficiency, compact all-in-one space heater/water heater that can heat a home up to 4,000 square feet and provide endless domestic hot water.

www.wallhungboilers.com

