The Basics of a Boiler
A boiler is an enclosed pressure vessel that is meant to heat and circulate water to produce steam—which in turn, can be used for heating spaces and/or service water heating to a building. According to Boilers Guide (www.boilers.guide), in most commercial building heating applications, the heating source in the boiler is a natural gas fired burner.

Boiler Tune-Ups
A boiler tune-up should be performed annually. Regular, quality tune-ups and maintenance can ensure optimal performance from your boiler—translating into energy and cost savings. A boiler tune-up can optimize burner combustion and efficiency, extend the life of the boiler and increase overall building comfort.

Boiler tune-ups should be completed by a qualified technician as part of a regular maintenance schedule. This process includes measuring combustion efficiency before and after, adjusting air flow to reduce excessive stack temperatures, adjusting draft control, checking combustion air intake, cleaning the fire side heat exchanger and water tubes and calibrating the controls. A pre- and post-combustion efficiency measure should be taken to verify any increases in combustion efficiency.

Did you know?
Boiler tune-ups can improve boiler efficiency by 5% or more.

Sample Project Potential Annual Savings

<table>
<thead>
<tr>
<th>Sample Project for 1000 kBtu Boiler Tune-Up</th>
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<tbody>
<tr>
<td>Cost to tune-up boiler</td>
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<tr>
<td>Vectren prescriptive rebate</td>
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<tr>
<td>Net boiler tune-up cost</td>
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<tr>
<td>Annual therm savings</td>
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<tr>
<td>Annual cost savings</td>
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<tr>
<td>Simple payback without incentive</td>
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<td>Simple payback with incentive</td>
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Earn up to $200 Per Tune-Up
Rebate not to exceed tune-up cost and is available once per 18-month period for each existing boiler.

In addition to rebates for boiler tune-up, rebates are also available for boiler controls:

- Rebates for boiler reset controls: $250

Rebate eligibility requirements
Applicant must submit a separate Boiler Tune-Up Log Sheet with application.

For full eligibility requirements and rebate forms, visit www.vectren.com/savings/in-business/rebates/gas.
2019 Boiler Replacement and Controls Rebates
for Business Customers with Vectren Natural Gas Service

Boiler Replacement and Controls
If your boiler is more than ten years old, it may be time to think about replacing it. Older boilers use more fuel to heat water than high-efficiency models, wasting both fuel and money.

Temperature Reset
Lowering the boiler control temperature can save natural gas since less heat is stored in the boiler vessel and off-cycle heat losses are reduced. Controllers are available that automatically reduce boiler set temperatures to save natural gas as the outdoor air temperature increases. Consult the manufacturer’s recommended minimum return water temperature setpoint before implementing this strategy.

Once turned ‘off’ some heat is still contained in the boiler, which, if unused, is wasted. Some controllers offer a heat purging control which allows pumps to remain ‘on’ for a period after the boiler is ‘off’. As a result, most of the remaining heat is pushed out of the boiler and into the actual heating system; thereby reducing energy lost. This function increases system efficiency by maximizing the usage of all energy created by the boiler.

Did You Know?
- Replacing an old, inefficient boiler with a new high-efficiency boiler can reduce natural gas use by 10-20%
- Replacing boiler burners when existing burners cannot be adjusted to reach 70% efficiency is a recommended retrofit measure
- Retrofitting existing boilers with new high-efficiency burners can reduce natural gas use by 5-10%
- Implementing a boiler reset strategy can reduce natural gas use by 5%
- Replacing an existing boiler before it reaches the end of its useful life with a new high-efficiency boiler can help with natural gas cost savings

Earn up to $5,000 for Boiler Replacements
- Rebates for natural gas boiler: Up to $5,000 per newly installed boiler, that is 90% AFUE/TE or greater

Earn up to $250 for Boiler Controls
- Rebates for boiler reset controls: $250

Rebate eligibility requirements
Rebates may not exceed 50% of total project cost. For full eligibility requirements and rebate forms, visit www.vectren.com/savings/in-business/rebates/gas.