COMBAT RISING ENERGY COSTS WITH AN HVAC ENERGY MANAGEMENT SOLUTION

Reduce your energy and repair costs with an HVAC Energy Retrofit Program from your HVAC service provider.
SAVE MONEY WITH HVAC ENERGY RETROFIT PROGRAMS

HVAC equipment installed in the early-to-mid 1990s is nearing the end of its service life—about 12 to 15 years.* Maintenance, repair, operating costs and downtime increase as equipment ages.

Emergency repair or replacement is costly and can disrupt business, resulting in customer dissatisfaction and lost sales.

High-efficiency equipment can help offset the rising cost of energy.

High-efficiency equipment may qualify for energy and green building rebates.

HVAC Energy Retrofit Programs reduce operating, repair and downtime costs and help you plan the timing of capital expenditure.

Immediately lower your HVAC energy costs by up to 40% and eliminate HVAC repair costs in the near future with an HVAC Energy Retrofit Program. Spending money to patch an old, inefficient system only delays the inevitable, and could result in unplanned downtime that disrupts your business, customers and employees. New HVAC equipment can be leased with little or no money down and provides you the comfort and peace of mind of a smart investment—an investment that pays for itself through lower electric bills and a lower total cost of ownership.

How HVAC Energy Retrofit Programs save you money

Avoid costly emergency replacement
If your HVAC equipment is nearing its end of life—about 12 to 15 years*—and it goes down in the middle of the summer, you will likely end up paying a premium to repair or replace the unit. What’s more, the replacement unit may not have the right features, or even be the right size, because the need to restore air conditioning could force you to make short-term trade-offs.

Avoid disrupting business and lost sales
New equipment gives you peace of mind. With out-of-date equipment, there’s a constant worry about when it may break down. Unplanned repair expenses negatively impact your profitability and cash flow. In addition to paying more for emergency equipment, you have dissatisfied customers and employees, as well as lost sales.

Lower replacement costs
Replacing multiple units at the same time spreads out fixed costs, such as crane rental and travel time, over several units. Your increased purchasing power may also lower other costs related to equipment purchase and installation.

Control the timing of your capital expenditure
Planning ahead lets you select the best equipment for your needs. When you control the timing of any capital expenditure, you manage business finances more effectively and efficiently.

Immediate positive cash flow
With leasing, there may be no up-front costs or down payments required. Combined with the lower operating costs of today’s equipment and avoided repair costs, new equipment may provide you with immediate positive cash flow.

REPAIR COSTS CAN ADD UP
Avoid spending more money repairing your old equipment, which may require only more repairs with age. Invest your current and future repair costs in new equipment, which has the added benefit of lower maintenance costs, due to increased durability and service-friendly features.

Typical costs of replacing the following components on a 7.5-ton rooftop unit.

- Condenser coil: $1,500
- Compressor (2): $1,200 each
- Condenser fan motor (2): $350 each
- Evaporator coil: $1,500
- Heat exchanger: $1,800
- Blower motor: $500

Replacement of Entire Unit: $9,000

*JPMorgan 2006 HVAC Industry Outlook
Increased efficiency saves you money immediately

Immediate savings in energy bills
Replacing less-efficient rooftop units from the early 1990s with high-efficiency new equipment provides instant energy savings. As energy costs continue to escalate, more-efficient equipment can only improve your return on investment and payback.

CASE STUDY – RETAIL APPLICATION

Compare the efficiencies of a typical 7.5-ton rooftop unit from the early 1990s with a current high-efficiency rooftop unit. Based on EER, the high-efficiency unit is 33% more efficient than the old unit, resulting in over $1,200 savings in annual electric costs. High-efficiency equipment may also qualify for energy rebates. If a major component, such as the compressor or condenser coil needs to be replaced, it further justifies replacing the entire unit.

ACTUAL REPLACEMENT COST

<table>
<thead>
<tr>
<th>Total Installed Cost of High-Efficiency 7.5-Ton R-410A Rooftop Unit</th>
<th>$9,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Rebate (Austin Energy)</td>
<td>-$765</td>
</tr>
<tr>
<td>Cost Avoidance of Condenser Coil Repair</td>
<td>-$1,500</td>
</tr>
<tr>
<td>Net Installed Cost of High-Efficiency New Equipment</td>
<td>$6,735</td>
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</tbody>
</table>

EFFICIENCY COMPARISON AND PAYBACK*

<table>
<thead>
<tr>
<th></th>
<th>Old Equipment</th>
<th>New Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>EER</td>
<td>8.5</td>
<td>11.3</td>
</tr>
<tr>
<td>IPLV</td>
<td>7.5</td>
<td>12.3</td>
</tr>
<tr>
<td>Annual Cooling Costs</td>
<td>$3,649</td>
<td>$2,409</td>
</tr>
<tr>
<td>Annual Energy Savings</td>
<td></td>
<td>$1,240</td>
</tr>
<tr>
<td>Monthly Lease Payment</td>
<td></td>
<td>$138</td>
</tr>
<tr>
<td>Monthly Electric Savings</td>
<td></td>
<td>$103</td>
</tr>
<tr>
<td>Net Monthly Lease Payment for New Equipment</td>
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<td>$35</td>
</tr>
</tbody>
</table>

Based solely on annual energy savings, the equipment will pay itself back in about 6 years. Over the 15-year life of the equipment, you can save over $18,000 in energy costs. Purchasing new high-efficiency equipment will also yield a return on investment (ROI) of 15% based on the annual energy savings.** In most cases, payback can be less than three years by accounting for avoidance of future repair costs and downtime (loss in business), escalating electric rates, and decrease in maintenance costs.

*Efficiency of new equipment based on typical high-efficiency rooftop unit available in the marketplace in 2007. Operating costs based on $0.14 kWh; weather data from Austin, Texas, operating hours Monday-Saturday, 10:00 am to 10:00 pm, Sunday, 12 noon to 8 pm.

**ROI calculated based on an initial investment of $8,235, with annual energy savings $1,240.
Your unique HVAC Energy Retrofit Program

Because retrofits to any building can increase or decrease cooling needs, your HVAC service provider should start with a site survey to not only determine the condition of the existing equipment, but also reevaluate the cooling loads of your building(s).

At the time of the site survey, you can also address comfort and indoor air quality (IAQ) issues. Recent ASHRAE guidelines require introducing fresh air to occupied spaces. Fresh air will change the temperature and humidity profiles of the space and your current equipment may not be able to handle new guideline requirements. Your HVAC service provider can offer different options to fit your needs. From equipment selection and financing options to payback analysis and installation, your HVAC service provider is a one-stop answer to your HVAC needs.

DID YOU KNOW

ASHRAE has recently updated the fresh air ventilation rate standard 62.1-2004. The purpose of the standard is to specify minimum ventilation rates and indoor air quality that will be acceptable to human occupants and is intended to minimize the potential for adverse health effects. Your HVAC service provider can recommend equipment that helps meet this standard.

REAP THE REWARDS OF GOING GREEN

When considering HVAC equipment, remember that high-efficiency equipment generally uses less energy, decreases operating costs and qualifies for energy rebates. But more than saving money long- and short-term, using less energy helps control our global depletion of the ozone layer. And here’s something else that helps protect our environment: R-410A, a non-chlorine-containing refrigerant that doesn’t deplete the earth’s ozone layer.

- As of January 1, 2010, manufacturers will no longer produce rooftop units using R-22
- R-22 will not be produced after 2020
- Production caps are already reducing the supply of R-22, which may increase the cost

When it comes to HVAC equipment, going green with R-410A is a step that pays dividends environmentally, as well as financially, for years to come.
BUSINESS OWNERS CAN TAKE ADVANTAGE OF NEW HVAC EQUIPMENT

As a business owner, there are many benefits to replacing your existing HVAC equipment with new, high-efficiency HVAC equipment. New units are not only much more efficient, but also have many features that can reduce the total cost of ownership. These new units are designed to reduce operating, maintenance and repair costs—just added benefits of your energy reduction strategy.

Reduce your utility costs
1. **Multiple Compressors**—Up to four-stage cooling capability maximizes efficiency and reduces operating costs.
2. **Variable-Frequency Drives (not shown)**—Provide high-efficiency variable air volume unit operation to meet a variety of zoning system needs.
3. **Economizer**—Free cooling saves energy costs.

Improve comfort and indoor air quality
4. **Thermostatic Expansion Valves**—Provide peak cooling performance across the entire application range for better comfort and improved efficiency.
5. **Dehumidification System (not shown)**—Helps control humidity levels, improving comfort and IAQ.

Reduce your equipment downtime
6. **Scroll Compressors**—Provides smoother, quieter and more reliable operation.
7. **Corrosion-Resistant Cabinet**—Galvanized steel cabinet protects against rust and corrosion for a longer-lasting unit.
8. **High- and Low-Pressure Switches**—By safeguarding compressors from extreme operating conditions, wear and tear is reduced.

Reduce your installation, repair and maintenance costs
9. **Advanced Controls**—Centralized controls provide fast and simple troubleshooting, reducing service time and costs.
10. **Full-Perimeter Base Rail**—Provides greater structural integrity, so the unit is easier to handle when rigging and transporting.
11. **Slab Coil**—Quicker, more thorough coil cleaning, reducing service calls.
12. **Slide-Out Blower Deck**—Improved access for belt, blower and motor, reducing maintenance time and costs.
13. **Hinged Toolless-Access Panels**—Allow quick access to components, minimizing service time, while protecting panels and roof from damage during servicing.
14. **Isolated Compressor Compartment**—Allows performance check during operation without disrupting airflow.
15. **Independent Motor Mount**—Quick and easy access without removing top panel, saving service time.
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- Air Handlers
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