## \*\*HomeSelfe\*

The Numerous
Benefits of
Energy Efficient
Practices





# What is **energy efficiency?**

In order to best utilize available power sources, we must study concrete methods to reduce energy use while maintaining equal results. Benefits to the business owner or homeowner are numerous, including monetary savings, tax incentives, and increased property values. These practices also benefit the government and the economy. This article examines in detail some methods and benefits by which energy may be saved while accomplishing the same task.

How can energy efficient practices financially benefit the homeowner or business owner?





### **Utilities:**

By employing energy efficient practices, homeowners have discovered savings of 20% to 30% on energy bills and up to 30% savings on water bills. The average homeowner spends approximately \$3100 on utilities annually. Based on these figures, the average family could save up to \$930 every year.



### **Property** values:

The population is becoming increasingly aware of the benefits, both economic and environmental, of energy efficient practices. For this reason, a home, office, or retail building will become more attractive to potential buyers if energy efficient measures are installed. Buyers want the results without the work, and they're willing to pay a little extra for already-installed Energy Star qualified commercial or residential appliances.



### Tax benefits:

Available for certain energy efficient measures. Homeowners can claim a tax credit by installing government-approved Energy Star eligible products, which can save up to 30% of the household's energy consumption. Business owners who take energy efficient measures may also be eligible for both tax credits and deductions.



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# How can **energy efficient** practices financially **benefit the economy?**

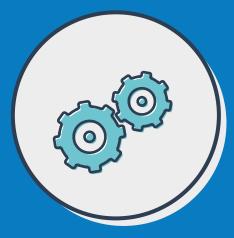
Approximately 58% of the oil supply in the U.S. is imported from other countries. Some estimates reveal the total cost of imported oil to be as high as \$388 billion. What could happen if the U.S. reduced its oil consumption to the point it was no longer dependent on other countries?



The U.S. would no longer have to pay import fees, saving money per barrel.

The cost of oil would remain stable, unrelated to foreign politics.

Government savings should be applied to even more energy efficient measures, increasing savings



Increased energy efficient measures would create more jobs because of the additional contractors hired and supplies manufactured.



**Unemployment rates** would drop as business owners save money, allowing them to grow their businesses.



As unemployment rates fall, the federal government will have to spend less on unemployment benefits.



As the government reduces unemployment benefit costs, they can reduce payroll taxes, which will allow employers to grow their businesses even more.



As the government saves money, it can benefit the economy by paying off the national debt. If oil consumption was decreased to the point that the U.S. no longer depended on foreign aid, the savings would nearly cover the annual interest cost of the national debt.

Energy efficient measures can also improve health and safety in living conditions, which can reduce individuals' need for healthcare. As the government subsidizes much of the healthcare in the U.S., they will have fewer expenses in this area.



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# What are some energy efficient practices homeowners and businesses can utilize?

Nearly every energy-consuming area of your home or business can be made more efficient by incorporating and installing various measures:



Change air filters often.
Dirty filters force
temperature regulation
systems to do more work,
consuming more energy.

Replace or modify windows. There are a plethora of double-paned energy-efficient window styles available, as well as enforcements that can be made to existing windows. Weatherstripping around windows, doors, and skylights can fix and prevent small air leaks. Another option is solar film, an easily installed vinyl window covering, which reflects UV rays while still allowing light to enter.

#### Heating and cooling



Take advantage of nature. Block the sun by installing solar screens in the windows or planting trees to provide natural shade. Close blinds to minimize heat loss through windows in the winter.



When feasible, use fans instead of turning on the air conditioning. A simple setup of two fans, placed in windows on opposite sides of a building or house, can establish a significant air flow. Ceiling fans, easy to regulate with a remote or the flip of a switch, are another viable option.



Insulate. Attics should be well-insulated. If existing walls require insulation (more common for older buildings), use spray foam, also known as injection foam, to keep the building interior more comfortable without using energy.



Install a programmable thermostat. There is rarely a need for temperature to be regulated while a building or home is unoccupied, and proper programming can ensure the system will turn on before occupants arrive so that there will be no discomfort in temperature.

#### **Appliances**

When available, always use Energy Star qualified appliances. Examples of energy efficient home appliances include:



Refrigerators, freezers, dishwashers, clothes washers/dryers



Air purifiers



Air conditioning units



Water heaters



Television sets

Plenty of energy efficient appliances are available for businesses as well, including:



Commercial dishwashers, refrigerators, freezers, ovens, and ice makers



Commercial water heaters/air conditioners



Pool pumps



Vending machines

#### Renewable energy sources

Nature's power sources – sun, wind, and water – have always been available, but only recently have we made progress in harnessing their energy. Solar power, first harvested in 1839, is currently the most accessible source of renewable energy for homes and businesses.



Solar panels are successfully used worldwide to provide energy in places where typical power sources are unavailable. The most familiar form of solar panel, known as the monocrystalline silicon panel, is well-suited for rooftops and is the most efficient form of panel; however, other types can offer a more pleasing aesthetic appearance. For example, BIPV (building integrated photovoltaics) technology incorporates solar modules into structures such as roofs and walls.

One particular type of solar panel, the thermal panel, harvests heat instead of energy. Its sole purpose is to supplement or replace air temperature regulation systems and water heaters. The thermal

panel is even able to provide air conditioning to buildings, just like electricity is used to cool a refrigerator. Currently, 80% of thermal panel users are residential; however, many businesses, especially those in the food industry, can greatly benefit from this technology.

Another option for both residences and business is the transparent solar panel, a piece of solar harvesting technology that covers entire windows. These completely clear solar panels are placed directly over entire windows without obstructing the view. Energy gathered from the sun will be able to supplement some of the power to a home or business, reducing electricity and gas bills.

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# Where are energy efficient practices headed?

New technology is constantly being developed worldwide to use cleaner sources of energy to accomplish the same tasks currently monopolized by electricity and fuel. The growing popularity of this technology is a lucrative business, motivating companies to invent the best methods before their competitors.







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