



# Top 10 Ways to Green your Historic Home

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**Assess the existing conditions:** Conduct your own energy assessment or retain a qualified firm to perform a full energy audit to understand your savings if an upgrade is made. For the DIY's, there are several simple and free computer programs you can use. The assessment can include reviewing energy bills, checking for air leaks in the building envelope, ductwork, or hot water piping, quantity of insulation, and more. *Resource: <http://hes.lbl.gov/consumer/>*



**Reduce air infiltration:** Properly seal leaks discovered through your energy assessment or audit. These typically occur at windows, doors, junction boxes in exterior walls, and plumbing or electrical penetrations in exterior walls. Determine the proper product for sealing, such as weather stripping, caulk or foam sealant. Install operable dampers in historic fireplace chimneys. At exterior doors, add sweeps or modify the threshold to create a better seal. Refer to the DOE's Energy Savers website for advice on selecting and installing the appropriate product. *Resource: [http://www.energysavers.gov/your\\_home/insulation\\_airsealing/index.cfm/mytopic=11280](http://www.energysavers.gov/your_home/insulation_airsealing/index.cfm/mytopic=11280)*



**Insulate:** While windows in historic homes are often blamed for losing heat during the winter, a larger culprit is often an un-insulated attic. Insulate your attic first for the most dramatic heat loss reduction, then the crawlspace or basement. Ensure that the ductwork in your attic is insulated as well. Studies show un-insulated ducts (especially in the attic) could lose 10-30% of a home's energy. Don't forget, installing insulation in your home is eligible for a Federal Tax Credit. *Resource: [https://www.energystar.gov/ia/partners/publications/pubdocs/DIY\\_Guide\\_May\\_2008.pdf](https://www.energystar.gov/ia/partners/publications/pubdocs/DIY_Guide_May_2008.pdf)*

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**Open your home's windows:** Homes constructed prior to electricity and air conditioning were designed for their specific local climate and site orientation. Windows and transoms were placed to facilitate cross-ventilation while shutters and porches were employed to provide shade without deterring ventilation. Tall ceilings allow heat to rise and ceiling fans keep the air moving. To employ natural ventilation, make sure double hung windows, transoms, and roof vents are operable and don't forget to turn off the mechanical system when windows are open. *Resource: <http://www.nps.gov/hps/tps/briefs/brief09.htm>*

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**Assess HVAC systems:** HVAC filters keep your system free of contaminants, enabling proper air flow. Replace filters regularly (every 3-6 months) and ensure the condensing coils are clean and units are shaded in the summer. If you decide to replace your HVAC, purchase a high SEER unit or consider ground source heat pumps for increased efficiency. Also, consider purchasing multiple smaller units (mini-splits) to enable separate zoning of floors. Don't forget, HVAC systems may be eligible for a Federal Tax Credit. *Resource: [http://www.energystar.gov/index.cfm?c=heat\\_cool\\_pr\\_maintenance](http://www.energystar.gov/index.cfm?c=heat_cool_pr_maintenance)*

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**Improve window efficiency:** Install clear UV film on south-facing windows to reduce heat gain in the summer months. Add interior or exterior storms to reduce infiltration and improve the performance of your HVAC unit. Low-E coating on storm window glass can improve cold weather performance and comfort on any window orientation by reflecting heat back into the building. Add sash locks to ensure the window is completely closed and sealed when not in use. Install weather stripping at joining rails, the sill and other areas of the window to ensure a tight seal. Install thermal shades or curtains for winter. *Resource: [http://www.energysavers.gov/your\\_home/windows\\_doors\\_skylights/index.cfm/mytopic=13430](http://www.energysavers.gov/your_home/windows_doors_skylights/index.cfm/mytopic=13430)*

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**Upgrade lighting:** Install compact fluorescent (CFL) or LED light bulbs instead of traditional incandescent. These bulbs are now available in traditional shapes for locations where bulbs are exposed. CFL's traditionally use about 25% of the energy of comparable incandescent, while LED's can use as little as 10%, while providing the same light output. Don't forget to turn off lights when not in use. *Resource: <http://www.edf.org/page.cfm?tagid=608>*

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**Lighten up:** Dark roofs absorb and hold heat from the sun, causing warmer temperatures outside, and increased HVAC use inside. Paint existing metal roofs with a solar reflectance index (SRI) of 75 or higher to reflect heat. Using current technologies, paint companies have formulated darker colored paints with high SRI due to their molecular structure, so it's not necessary to go "white" to be efficient. When replacement is needed, use a historically appropriate high SRI product. *Resource: <http://www.coolroofs.org/products/search.php>*

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**Reduce water consumption:** Inspect piping and repair any leaks. Add screw-on flow restrictors to faucets. Install high-efficiency plumbing fixtures such as WaterSense labeled toilets, faucets and showerheads. Install a rain barrel for garden irrigation. Irrigate using drip hoses instead of sprinklers. Water at night or during the cooler hours of the day to reduce evaporation. Turn off the faucet when brushing your teeth or shaving. *Resource: <http://www.epa.gov/WaterSense/>*

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**Upgrade appliances:** When time to replace, install a high efficiency ENERGY STAR labeled dishwasher, refrigerator, clothes washer, water heater, etc. Some ENERGY STAR products are eligible for a Federal Tax Credit. Consider an instantaneous water heater in lieu of tank-type for greater energy savings. To further reduce your energy consumption, keep the refrigerator stocked for optimal performance. Utilize scheduling features to run the dishwasher and clothes washer at night during off-peak hours, or to turn off the water heater when on vacation. *Resource: [http://www.energystar.gov/index.cfm?c=products\\_pr\\_find\\_es\\_products](http://www.energystar.gov/index.cfm?c=products_pr_find_es_products)*

### Additional Resources:

[http://www1.eere.energy.gov/consumer/tips/pdfs/energy\\_savers.pdf](http://www1.eere.energy.gov/consumer/tips/pdfs/energy_savers.pdf)  
<http://www.nps.gov/history/hps/tps/weather/index.html>  
<http://www.nps.gov/history/hps/tps/download/guidelines-sustainability.pdf>  
<http://www.preservationnation.org/issues/sustainability/>  
<http://energytaxincentives.org/>



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