



RETROFITTING YOUR EXISTING HOME

The Importance of Retrofitting our Existing Housing Stock

One of the greatest challenges green building faces is the renovation of homes. The majority of our existing stock requires some level of retrofit to enable us to live more sustainably. This concept entails improving existing homes indoor air quality and energy efficiency in regards to the consumption, creation and conservation. It can be difficult to prioritize which projects should be completed first when improving your existing home, but it is critical to adopt a tailored approach.

The best place to start is with a professional energy assessment. There are numerous DIY checklists that exist, but it's best to take advantage of all the diagnostic tools energy auditors have access to like infrared thermal scanners, duct blaster and blower door tests.

Below are some other ideas of how to get started on retrofitting your home!

Checklist - Where to Start!

Insulation – The better insulated your home is, the less money you'll spend on heating. Take care of your housing envelope and insulate when you have the opportunity. This is great to think about while replacing the roof, having sheetrock removed, siding replaced, or plumbing and electrical updates.

Ventilation – Ventilation includes both the exchange of air to the outside as well as circulation of air within a building. One way to achieve air exchanges in an existing home would be to use a Panasonic Whisper Light Fan. These are very quiet and can be set on a timer for convenience.

Material Use – Salvaging and reusing materials during your retrofitting project is a very effective. If salvaging is not possible, look into incorporating locally produced or sustainable materials. Keep in mind low VOC paints and finishes as well as materials that don't have formaldehyde or toxins in them for healthy indoor air.

Renewable Energy – For a long term sustainable energy source, alternative power should be considered. Solar panels and residential wind turbines are becoming more affordable with some break even points in 6-7 years instead of 12-15 like a few years ago. If you are planning on being in your house for long, your energy could be free after a short period of time.



Lighting – Your lighting represents almost 10% of consumption, so switching to energy smart bulbs is critical. Small things can make a big difference and replacing energy wasting lighting is easy and affordable. Seattle City Lights and Puget Sound energy offer discounts on CFL bulbs as well as lighting fixtures.

Change the way you live, change the world!

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Checklist Continued -

Seal Air Drafts – Heat escapes through unsealed windows, outlets, ducting, doorways and more. Air sealing is one of the most inexpensive retrofits that can net you great energy savings.

Upgrade or Weatherize Windows & Doors – Older homes can benefit with a window and door upgrade.

Tune up your HVAC Systems – Having regular tune-ups of your HVAC system, as well as cleaning your filters monthly, can save you money and keep them running at optimal levels. If upgrading your furnace chose a AFUE rating of at least 92%.

Upgrade your Skylights – Heat rises, and if your skylight is inefficient it can let a lot of warmth escape.

Install a Programmable Thermostat – Programming a thermostat to your schedule can help you save lots.

Decrease Water Usage – Install WaterSense low flow toilets, shower-heads & faucet aerators.

Plant Trees – Planting trees to provide shade in the summer and protect from wind in the winter helps keep energy costs down.

Plug Loads – We use plug loads every day, and they represent a large amount of our energy consumption. Plug Load Monitors are available for you to see how much energy your devices use and which need to be unplugged. You'd be surprised! Some manufacturers offer smart appliances which can be connected to smart electric meters to shift your electric use to off-peak hours. At the very least using energy star appliances helps you save money and reduce your energy usage, thus reducing your carbon footprint.

Low Impact Development- It is important to have low impact development. As communities grow, so does the amount of surface area covered by roads, roofs, and parking lots. Low impact development is a sustainable storm water practice that helps manage runoff.

Examples of L.I.D are:

- Rain Barrels catch rainwater for irrigation use.
- Rain Gardens and Bio swales which collects storm water runoff from roofs, driveways and other impervious surfaces.
- Veggie Roof Tops absorb rain water and reduce energy costs.
- Permeable Pavement like roads, parking lots, driveways, sidewalks allow rainwater to seep through which prevents soil erosion. These are black pavers, porous asphalt or concrete and grid systems.

