

# LEAP Case Study - incremental changes

## Calderglen Mill

nr. Lochwinnoch

c. ~1814



- Detached stone built house - 150m<sup>2</sup> floor area - 3 floors, 3 bedrooms and 2 public rooms.
- “Hard to Heat” = Solid stone walls. Lath & Plaster interior. Poor insulation. Draughty with open chimneys.
- Original old, inefficient LPG boiler costing ~£2000 per annum to barely heat the house.
- Oil-fed Aga providing cooking, hot water and ambient heat costing ~£1500 per annum.
- Electricity ~£1200 per annum.

### Work Performed/remaining:

- Insulation & draught proofing.
- Curtains & blinds.
- Low-energy lighting.
- Replaced inefficient LPG boiler with high efficiency model.
- Replace Aga with high-efficiency electric equivalent.
- Wood-burning stove (cheaper heating fuel and no draughts).
- Solar PV to generate electricity.
- Started upgrading of internal walls – replacement of lath & plaster with new, well-insulated wall.
- Still to complete internal insulation and removal of remaining open chimney.



### Our story:

We were unhappy with the amount of energy it took to heat and light our home. We were still barely warm but the heating bills were enormous.

After making the improvements we now enjoy a much more comfortable, warmer home, we no longer have oil or Aga servicing bills and we are saving significant energy and money.

## Calderglen Mill Carbon Reduction

- Replacement of high-carbon oil-fed Aga with high-efficiency electric equivalent, powered using self-generated solar electricity.
- Reduction in LPG consumption by increase in boiler efficiency, draughtproofing and improved insulation.
- Use of low-carbon biomass heating.



Significant reduction in fuel consumption by the implementation of energy-saving measures, adopting behavioural change (e.g. tolerating a slightly cooler house, using jumpers) and burning their own wood in stoves.



### Solar PV basics:

- 20 year government payment designed to provide return on investment of approx. 9 yrs.
- Can reduce your annual electricity consumption by up to ~35%.
- Ideally south-facing, 35° elevation, no shading.
- Reliable, noise-free, low-maintenance.



### Wood Burning (biomass) basics:

- Cheap if locally sourced.
- Very "Eco".
- Needs seasoned.
- Needs stored (dry).
- Can be very cheap if you source your own, but physically hard work!
- Must be installed by a qualified installer.

### Government incentives:

- Green Deal Cash Back scheme, contributing towards insulation & boiler upgrades, plus low energy lighting, glazing etc.
- The Green Deal – a way of upgrading your home without the large up-front costs.
- Council-led schemes.
- Extra support for priority groups.

Green Deal Assessment Required!

Did you know that old boilers throw away ~20% of your heat?

All our advice is free, impartial, practical and tailored to you

LEAP helps its local communities save energy, save money and care for our environment.

We provide free impartial advice on insulation, draught proofing, heating, renewable energy, The Green Deal, grants and subsidies.

We encourage renewable energy generation (community and domestic), food cooperatives, and lift sharing.

We run the not-for-profit LEAP car club.



Lochwinnoch • Kilbarchan  
Howwood • Bridge of Weir