

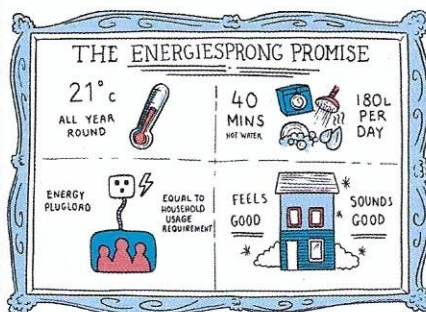
Notes on an exciting visit to a near zero-carbon whole house retro-fit project: Weds 11th December, courtesy of MiSpace Exeter. Part of the project to improve the overall energy performance of the housing stock in our community, and the keen interest we have exhibited. Chacewater PC members Peter Chesworth, Steve Leech, and John Carley were delighted to be invited to see the Exeter project, alongside Cornwall Housing officers, and Cornwall Council cabinet member for homes Andrew Mitchell.



The Zero Energy Building Catalyst (ZEBCat) project is supported by the European Union Regional Development Fund. We were shown part of the project that involves three adjacent pairs of semi-detached council owned properties. Programme partners are Devon County Council (Lead), Energiesprong UK, Exeter City Council, North Devon Homes, Regen, and Sanctuary Housing. Very detailed initial survey of each property, 3D scan. Leading to new walls, new roofs, much improved insulation, ventilation, solar panels, battery system, efficient ground source heat pump electric heating.



Where possible the new walls are factory made off site, then fitted over the very thick (200mm) exterior insulation. Underfloor insulation is installed by self propelled robot machine, this avoids disruption to tenants.

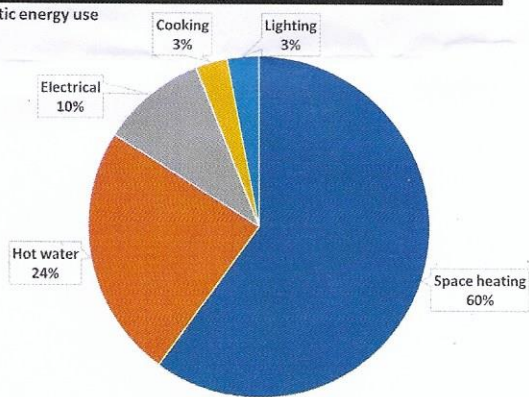


New insulated roofs have at least 4KWp PV, a 6KWh lithium battery installed in each property.

New triple glazed uPVC windows.

Properties are made more airtight, and fitted with mechanical ventilation with heat recovery.

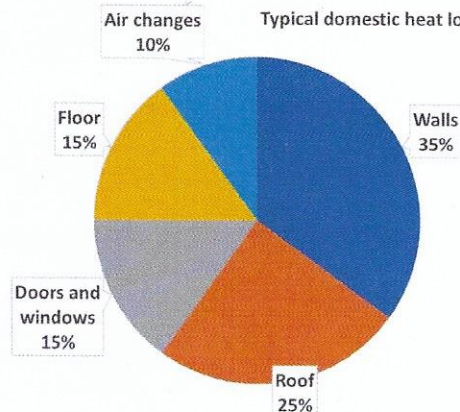
Typical domestic energy use



Typical domestic energy use (before retrofit)

Space heating	60%
Hot water	24%
Electrical	10%
Cooking	3%
Lighting	3%

Typical domestic heat losses (before retrofit)



Typical domestic space heat losses (before retrofit)

Walls	35%
Roof	25%
Doors & windows	15%
Floor	15%
Air changes	10%



Estimated average utility costs per house before retrofit £2000, estimated costs after retrofit <£400. Retrofit cost per property approx. £80,000. Funded by EU ERDF grant, income from RHI payments, and savings in future maintenance.

A similar project is now planned for Cornwall.

