Local Energy Plan
for Drumnadrochit

July 2018

Plan Summary

A Local Energy Plan for Drumnadrochit

This Local Energy Plan has been developed to enable the Drumnadrochit community to look at its existing and future energy needs in terms of power, heat and transport and determine where it sees priorities for action.

It has been created by the community, rather than being developed for them by other bodies (e.g. local authorities or National Government).

The development of the plan has been led by a steering group including Soirbheas, Glen Urquhart Rural Community Association, the Chamber of Commerce and the Community Council.

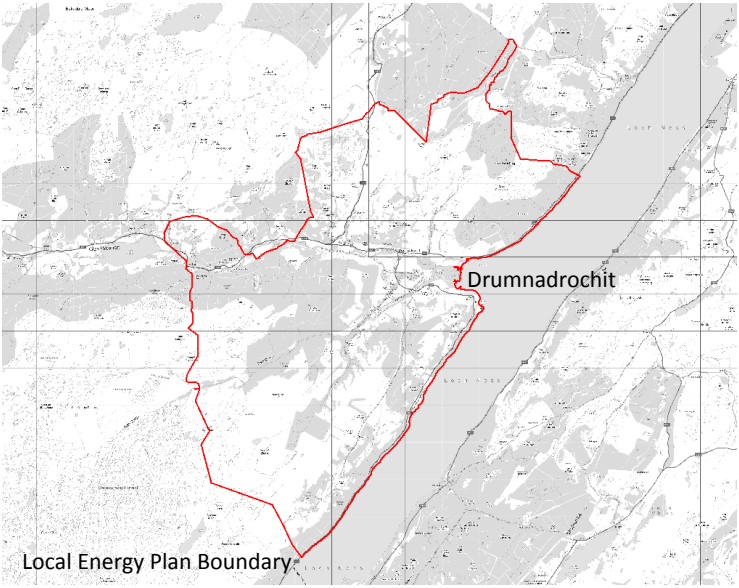
The Local Energy Plan provides a start in the community's engagement with its energy needs. It offers a focus for immediate opportunities that can be developed in the short term. It also provides scope for longer term planning for further changes in the future.

Approach to Local Energy

Our energy needs, and how these are met reliably, cost effectively and without long term environmental consequences, are one of the key considerations for every community.

For this reason the present and future energy needs of a community are most usefully considered together as a 'whole system'. In this way the overlapping impacts of how we use power, heat and transport can be considered at the same time, rather than in isolation.

As part of this there needs to be a study boundary to provide a primary area of focus. This does not exclude the linkages with neighbouring areas or opportunities that may be nearby.



Identifying Community Needs

One of the key aims in developing the plan for Drumnadrochit was to understand the community's needs and aspirations in relation to energy. These have been sought by a combination of:

- working with a local steering group
- workshop sessions with local volunteer ambassadors
- an online survey

Community Views

Feedback showed that the key issues that the community wished to see addressed were:

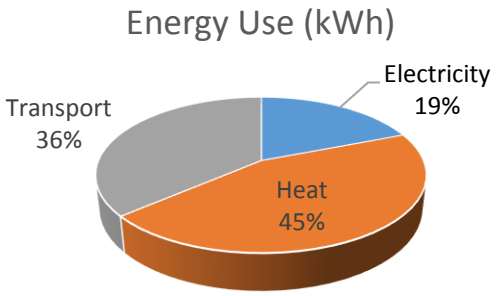
- projects that reduced energy costs with minimal impact on the local environment
- transport projects that prioritised the most vulnerable households with minimal impact on the local environment
- projects that seek to use energy generated locally

Those that should benefit from any energy projects should be householders and community groups in the first instance.

Those that benefit from any transport projects should be householders and local-intra Local Energy Plan area commuters as well as those travelling further afield.

Energy Use for Drumnadrochit

The annual estimated total energy demand is shown here.



Source	Annual Energy Use (GWh/yr)	Annual Carbon Emissions (tCO_{2e}/yr)
Residential, *of which:*	28.4	1,975
Electricity	5.1	4,066
Heating	11.9	3,444
Transport	11.4	9,485
Non-Domestic, *of which:*	3.0	1,005
Electricity	0.9	346
Heating	2.1	659
Total (All Sources)	31.4	2,980

Future planned housing development in the Local Energy Plan area may add 3% to residential heating demand and up to 8% to residential electricity demand.

Challenges to address

In meeting the energy needs of Drumnadrochit a number of challenges have been identified:

High levels of fuel poverty

Highland region has an average fuel poverty rate at 52% (Scottish House Condition Survey, 2016)

Inefficient energy consuming housing

76% of dwellings are assessed as being in the least efficient Energy Performance Certificate (EPC) rating bands (D – G)

Almost 33% of dwellings are of solid wall design

Predominance of electric heating

46% of dwellings use electric heating; 33% use heating oil

These are fuels with expensive tariffs for households

Grid constraint for larger local generation assets

Present capacity limits the size of local generation, such as wind turbines, that can be connected to the local grid

High vehicle ownership

75% of the population are economically active and typically travel to work by car

Current bus services are restrictive in supporting commuters

Local tourism contributes to seasonal surges in traffic passing through Drumnadrochit

Proposed Actions – Energy Efficiency

Action	Description	Timescale
Promote energy efficiency and opportunities for support in demand management and resource efficiency	Raise awareness among community in Drumnadrochit of existing support services available to homes and businesses Potentially use community day as a forum for this	Short
Provide support and advice around tariff switching	Offer support and advice to households and businesses regarding electricity tariff switching and maintaining awareness of changes to tariffs in the market	Short
Heating oil club	Promote existing heating oil club within Drumnadrochit	Short
Continue programmes of fabric improvements and insulation within residential property	Seek support, advice and funding (where available) for ongoing improvement works to insulation and building fabric	Medium

Proposed Actions – Energy Generation

Action	Description	Timescale
Use of Solar (photovoltaic) PV and battery storage at Day Care Centre	Conduct feasibility study to look at options for supply into battery storage system or adjacent new build property	Medium
Develop a solar PV and/or solar thermal array	Conduct feasibility study to look at potential for development of a community owned and operated ground mounted solar array and promote the uptake of building mounted PV and solar thermal arrays in suitable locations.	Short / Medium
Small scale hydro	Carry out feasibility study to assess scope for further micro hydro scheme in local area	Short / Medium
Promotion of use of heat pumps and other renewable options in new build properties	Seek designs for new build dwellings that use heat pumps (air or ground source) and other renewable options where appropriate as the primary heat source alongside high levels of insulation and fabric	Short / Medium
Use heat from wastewater	Seek to use heat from wastewater as primary heat source for community buildings. Follow up initial feasibility study.	Short / Medium

Proposed Actions – Transport

Action	Description	Timescale
Real time transport information	Seek to provide enhanced transport information in Drumnadrochit	Short
ULEV shuttle bus to Inverness and Community use	Conduct feasibility study to look at development of an Ultra Low Emission Vehicle (ULEV) shuttle bus service to Inverness timetabled to suit travel needs from Drumnadrochit. Explore options to use the bus by the community outside peak tourist periods (June – August peak)	Short / Medium
Electric vehicle development	Explore local opportunities to extend the charging point network and promote community investment in vehicles	Medium

Proposed Actions – Smart Energy Systems

Action	Description	Timescale
Smart grid development	Seek understanding of potential development of localised grid management system. Initial exploratory talks with Scottish & Southern Electricity Networks regarding appropriate smart meter designs to be rolled out	Medium

Further Information

The detailed final Local Energy Plan is available within the community. For further information about how the plan is being taken forward please contact info@soirbheas.org

A copy of the plan is available for download at:

http://www.soirbheas.org/local-energy-plan/

The development of the plan has been funded as part of the COBEN project (**CO**mmunity **BEN**efits of Civic Energy), an EU Interreg (North Sea Region) funded programme with fifty per cent match funding through the Scottish Government's Community and Renewable Energy Scheme (CARES). CARES is delivered by Local Energy Scotland. Technical support and plan development has been undertaken by Wood Environment & Infrastructure Solutions UK Limited. Community consultation support has been provided by Beyond Green Advisors Limited.