



# Working Better Together to Promote Community Energy

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Scottish Charity No. SC039673

# Community Energy Scotland

Scottish Charity since 2008

Voluntary board

Community group membership (about 400)

20 staff based across Scotland



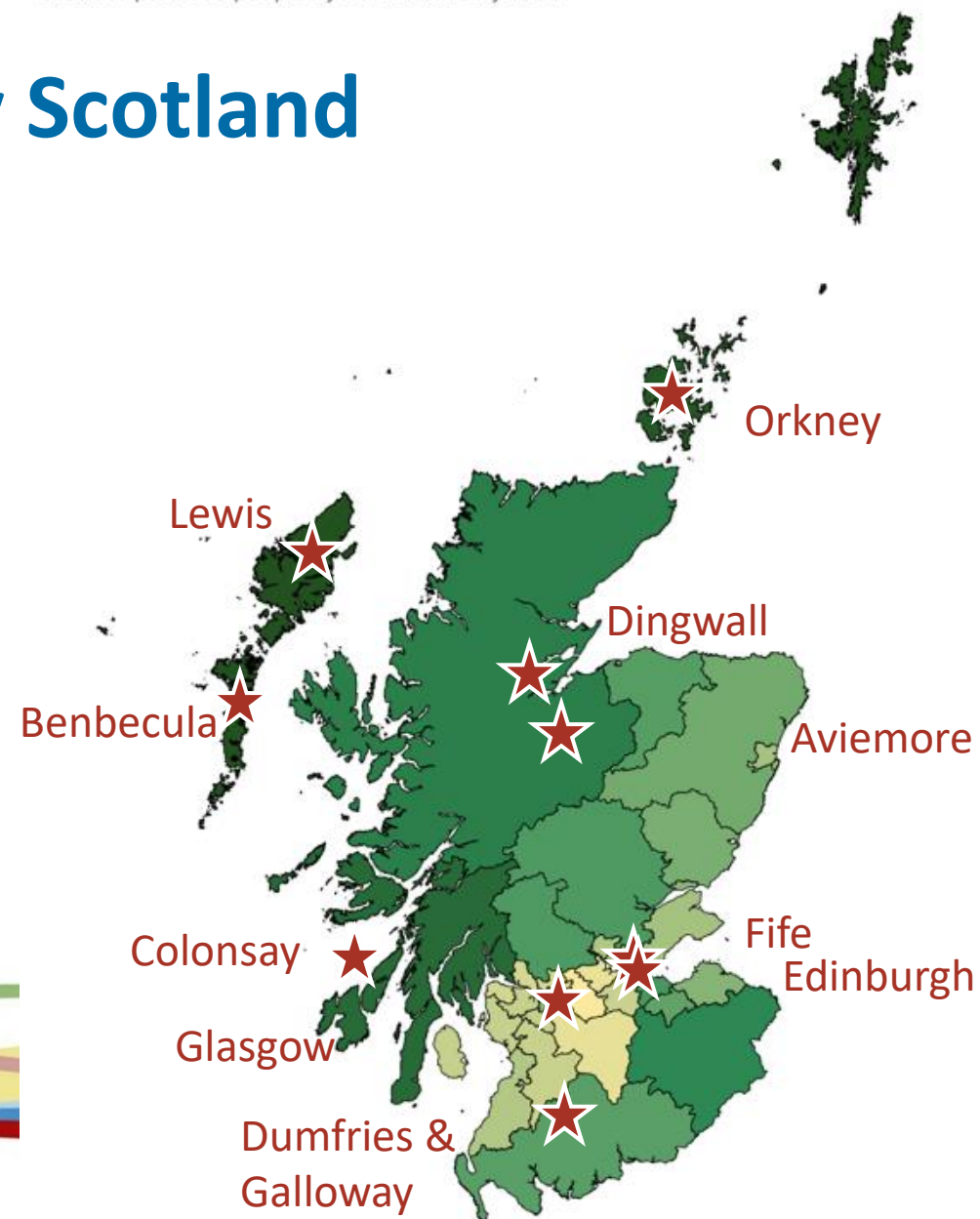
# Community Energy Scotland

## Our Vision:

Our vision is of communities actively shaping a low-carbon society that values wellbeing for all.

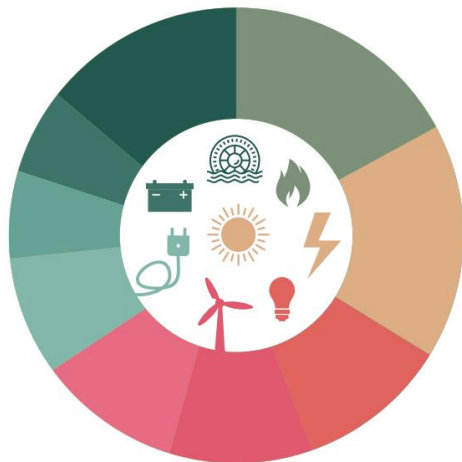
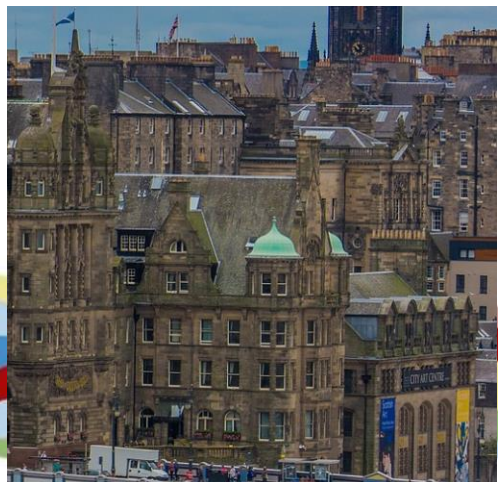
## Our Mission:

We work with communities and our partners to support, promote and represent the community energy sector. We do this by providing technical assistance, knowledge sharing & championing the role of community-led action in the transition to a low-carbon future.



# What is Community Energy?

- Organised community-based groups
- Sharing of benefits
- Focus on social and environmental outcomes:  
not private financial gain
- Reducing energy use
- Managing energy better
- Generating & selling energy
- Using local energy, locally
- Local ownership, local finance



## LEADER Programmes

### Ayrshire LEADER

- Rural Ayrshire Renewable Energy Fund - total fund £320,000
- This comprised:
  - £240,000 of Capital Funding
  - £80,000 of Technical Assistance Grants
- Capital funding covers the cost of the supply and installation of renewable technologies to serve community buildings
- Technical Assistance Grants cover the cost of developing projects to community buildings and for revenue generation

# LEADER Programmes

## Ayrshire LEADER

### Renewable Technologies for Community Buildings

#### Heating

Biomass Wood Chip, Wood Pellet, also Log  
Heat Pumps Air Source, Ground Source, also Water  
Solar Thermal Hot water

#### Electricity

Solar Photovoltaic  
Micro-wind  
Micro-hydro



# LEADER Programmes

## Technical Assistance Grants for Community Buildings

Grants to cover the cost of Planning and Building Warrant Applications when technologies require these

## Ayrshire LEADER

Grants to cover the cost of an audit of the existing building, where the building services are complex, to establish the requirement and likely benefits (carbon and cost savings) of introducing renewable technologies



# Outer Hebrides Community Energy Support Service

## OHCESS

- Programme funded by Comhairle nan Eilean Siar (CnES) and delivered by Community Energy Scotland (CES)
- Through OHCESS, support on renewable energy and energy efficiency issues was provided to community groups in the Outer Hebrides (2014-2015)
- 41 community projects supported over a year
- Local contact through Community Energy Scotland, guiding them through any project development questions, community engagement, capacity building and aftercare issues.
- Policy work undertaken by CES to try and strengthen the position of local groups in issues relating to the interconnector and grid.



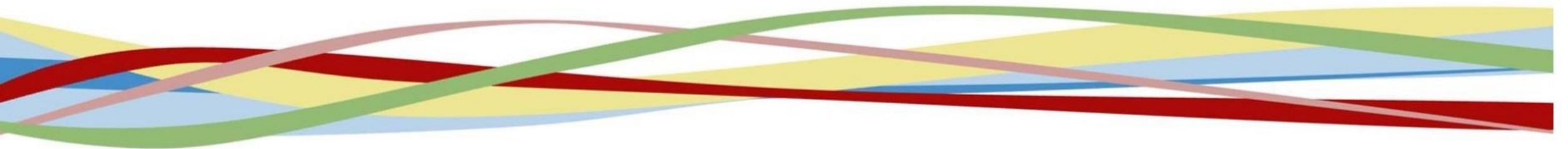
# Outer Hebrides Community Energy Support Service

## OHCESS

- 6 groups with installed large-scale, revenue-generating wind turbines received support and training, as well as facilitating the sharing of knowledge and learning and representing groups to other agencies and policy work.
- 16 projects at an earlier stage of developing revenue-generating projects were supported to progress from the very early stages of becoming constituted and having feasibility studies carried out, up to pre-construction phase.
- 19 community-owned facilities were supported to either look at the viability of micro-renewables or given support to maintain or repair micro-generation.

## Outer Hebrides Local Energy Hub

*“OHLEH is an innovative project demonstrating how different renewable energy technologies can be integrated to support local energy economies and circular supply chains.”*



# Creed Integrated Waste Management Facility



Comhairle nan Eilean Siar



Scottish Salmon Company  
Barvas Hatchery

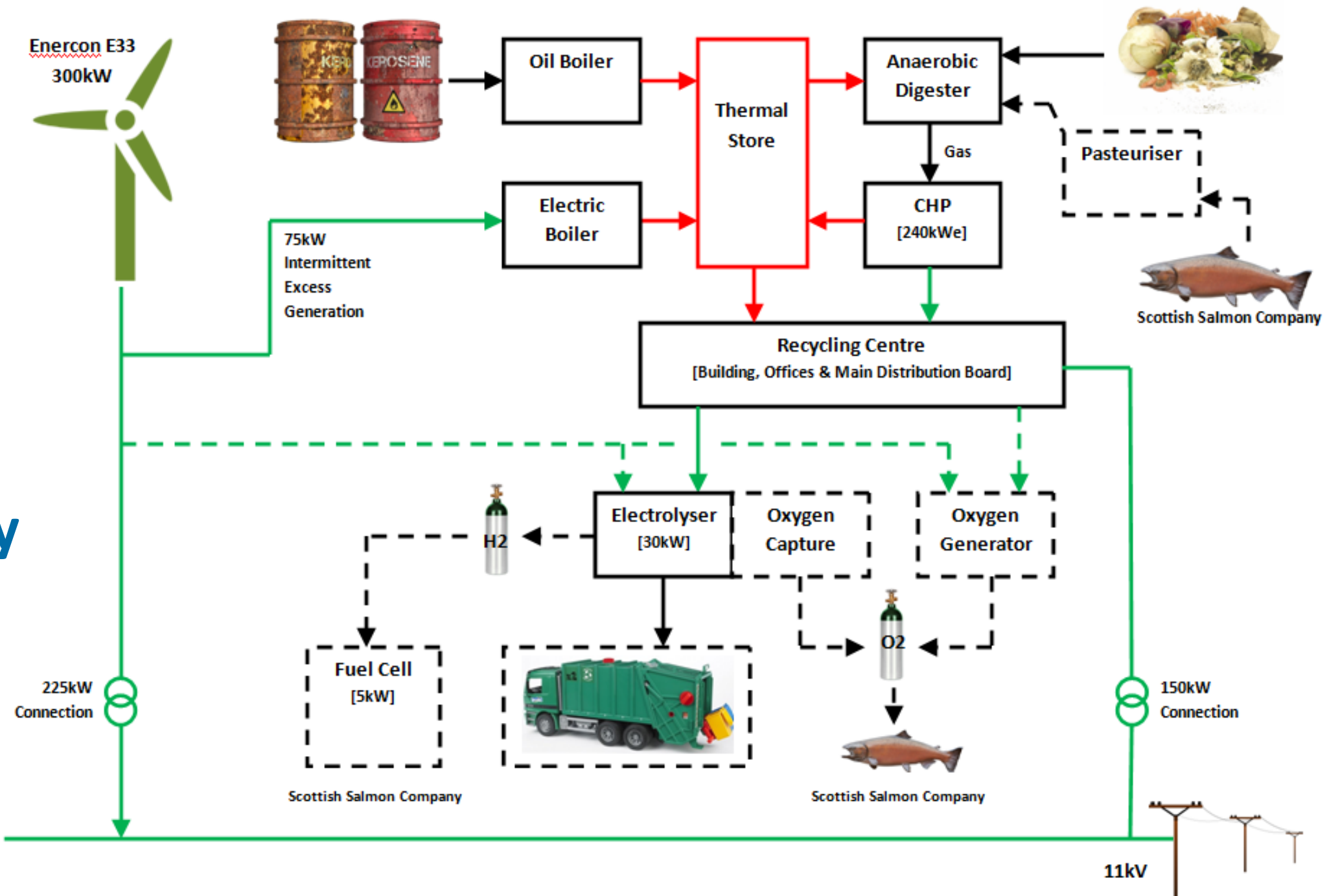
Scottish Salmon Company  
Marybank Fish Processing

Comhairle nan Eilean Siar  
CREED Integrated Waste  
Management Facility



Empowering Communities

# Circular Economy

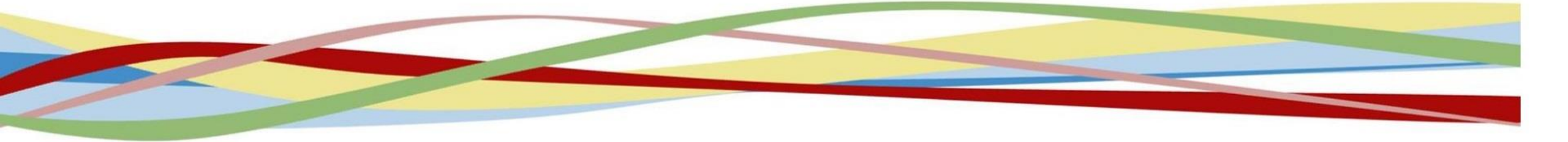


## OHLEH – Key Benefits

### **CnES:**

- **ECONOMIC:** Increased Wind & CHP generation subsidy  
Income from sale of O<sub>2</sub>  
Reduced use of grid electricity & kerosene
- **ENVIRONMENTAL:** Reduced direct fossil fuel use (kerosene & diesel)

### **Scottish Salmon Company:**

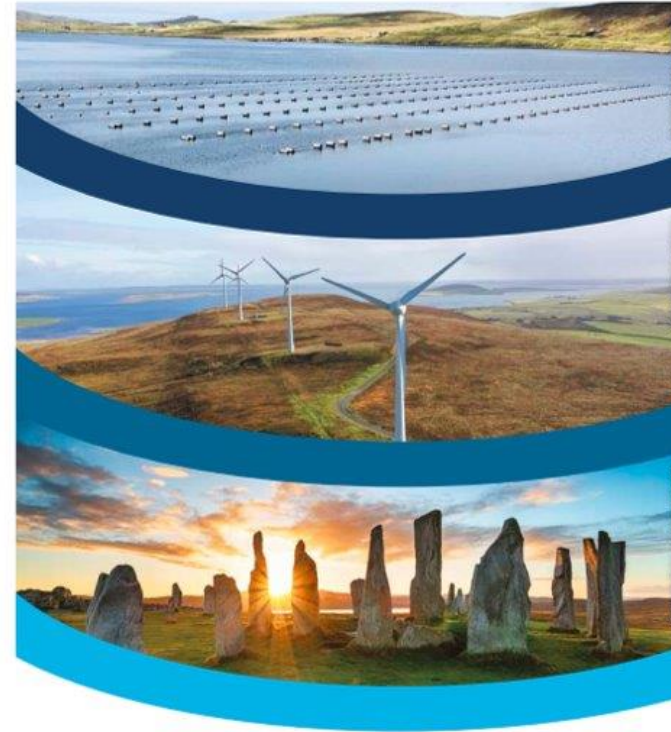
- **ECONOMIC:** Reduced cost of fish waste disposal  
Cheaper O<sub>2</sub> than open market  
Cheaper electricity using Fuel Cell than market
  - **ENVIRONMENTAL:** Reduced waste to landfill
- 

# The Islands Deal

## Islands Centre for Net Zero

The Islands Centre for Net Zero (ICNZ) is a pan-island innovation project that will support Orkney, Shetland and the Outer Hebrides to become lighthouse communities in the energy transition.

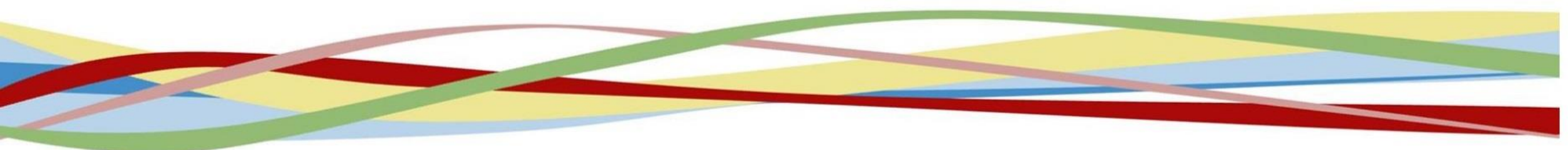
By exploring and trialing solutions to decarbonisation that have replicability and application worldwide, the project will accelerate the islands' journey towards decarbonisation, while generating additional GVA and green jobs for the islands.



OUR ISLANDS  
OUR DEAL



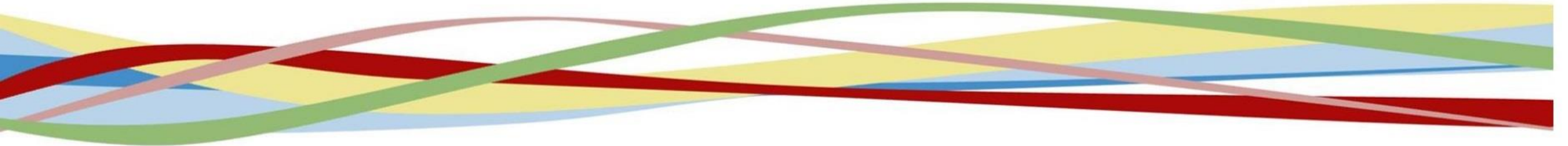
Islands Deal  
Agreed Programme



## Islands Centre For Net Zero

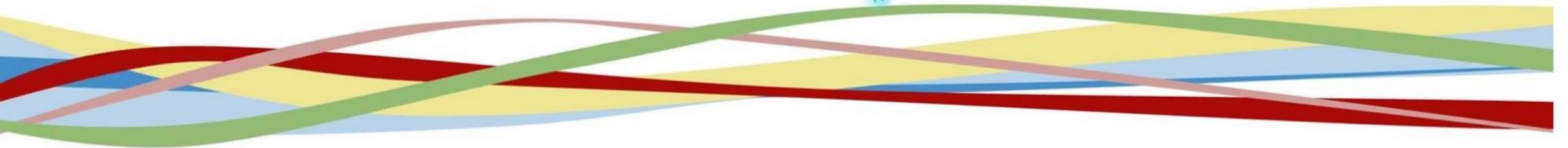
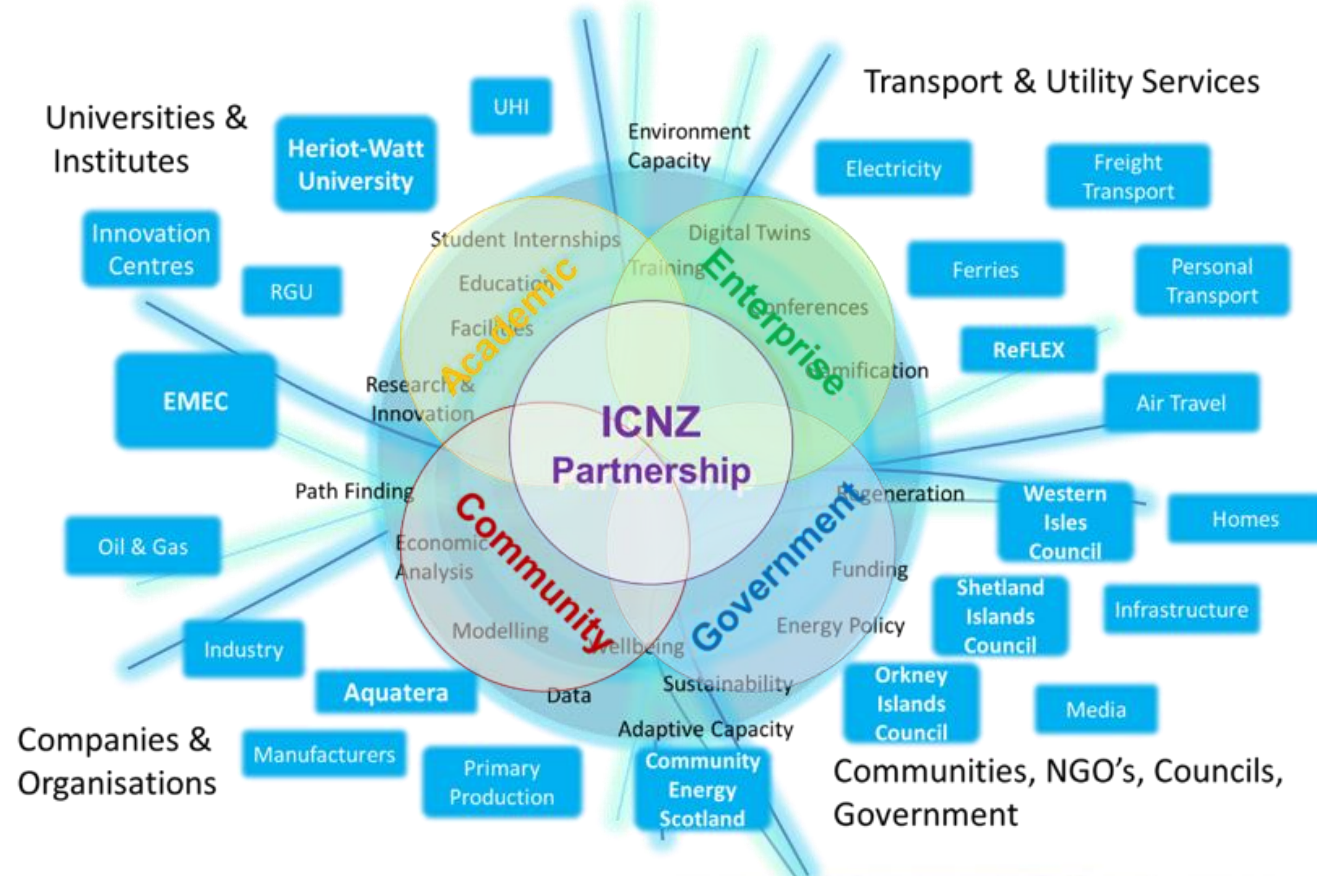
ICNZ will work with local communities and businesses from the ground up, empowering the islands to navigate pathways to decarbonisation to deliver:

- Ten percent average reduction per year in carbon emissions for all three island groups over the next ten years
- Sustainable “green” jobs within the islands for 300 people
- Eight times the impact from the Islands Growth Deal investment over the longer term through match funding and generation of new revenue streams
- Significant added value to other low carbon future projects and other Deal strands, ensuring decarbonisation impact across the whole programme



# Islands Centre For Net Zero

## ICNZ Partnership





# Islands Centre For Net Zero

## Large Scale / Regional Carbon Projects (£100M+):

Scapa Flow (Orkney)  
Orion Project (Shetland)  
(All / TBC)  
Stornoway Energy Hub (Outer Hebrides)

Scotwind (All)  
Grid Upgrades

- Facilitate
- Advise
- Find roles for local organisations
- Help to remove barriers
- Connect with smaller projects
- Enable larger partners
- Establish baselines
- Support change
- External Influence

## Intermediate Scale Industrial / R&D projects (£10M's):

### Transport:

- Marine – ferries, shipping, fishing etc.
- Air – aviation, drones etc.
- Land – low carbon vehicles, fueling infrastructure etc.

### Power:

- New types of generation e.g. tidal, wave, wind, geothermal
- Demand response, aggregation, smarter grid etc.

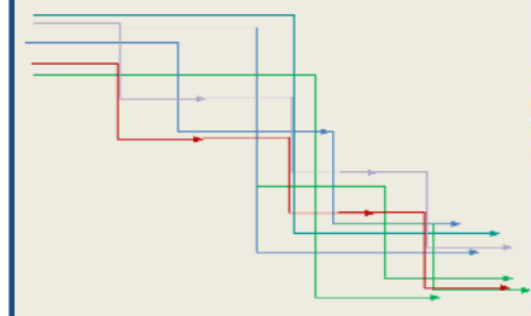
### Heat:

- Industrial applications

Top Down

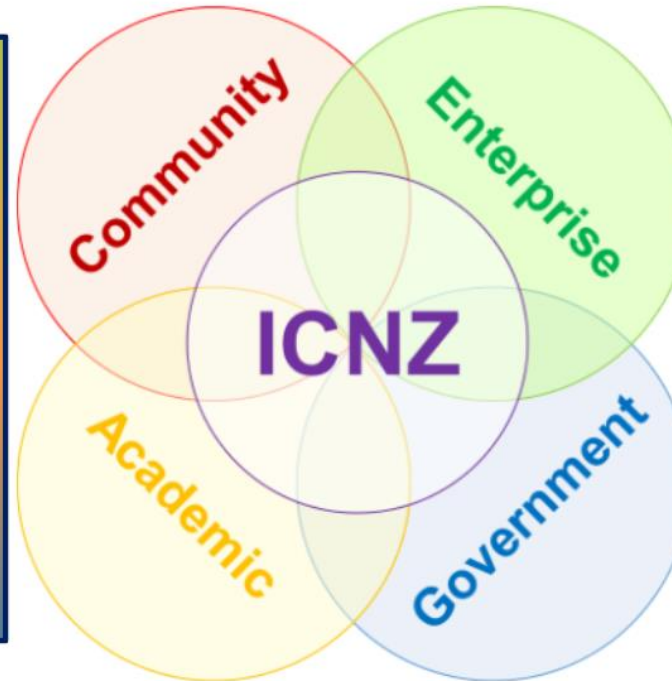
Cross Cutting

## Carbon Transition Projects



Bottom Up

TOOL UP!



- Attract funding
- Support scoping and design
- Build partnerships
- Provide a test and demo environment
- Provide modelling / analytical support
- De risk projects
- Coordinate activities across all three islands
- Share learning

## Local/Small Scale Projects (≤£1M's):

Domestic scale  
Fuel poverty  
Small scale generation  
Consumer behavior

Energy savings  
ReFLEX  
Primary industries

- Instigate
- Outreach & engagement
- Project delivery as appropriate
- Working with community groups
- Primary research
- Identify Gaps
- Support planning
- Ensure inclusion
- Enable actions

Em

## WP1 Project Management:

- Island Centres (Orkney/ORIC, Shetland, Outer H)
- Supporting pan island strategic decision making
- Risk management & HSE
- Financial and administrative reporting
- Project steering & advisory groups
- Delivering consortium agreement

## WP2 Data Exchange:

- Data gathering, curation, ongoing monitoring
- Data management platform and processes

### WP3 Transition Lab:

*Solutions not yet known*

- Modelling, digital twins, gamification, experimentation
- InTIME Methodology

### WP4 Demo Zones:

*Solution partially known*

- Test and demonstration facilities and locations
- Instrumentation pool
- Performance assessment

### WP5 Community Hubs:

*Solutions known, need action*

- Inclusivity tools
- Capacity building materials
- Practical re-training tools
- Community Action Planning
- Community engagement facilities

### WP6 Islands Accelerators:

*Wider resources needed*

- Fundraising
- National/international outreach
- Sign posting opportunities
- International low carbon island hub
- Support all Island Deal projects and strategic collaborations

## Facilitating Transition Projects:

### WP7 Shetland

### WP8 Outer Hebrides

### WP9 Orkney

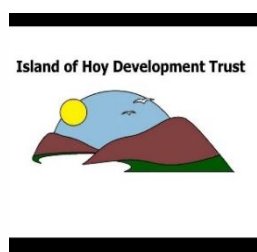
- Projects developed within the programme or funded separately
- Project themes include heat, power, transport, behavior, resources, policy, infrastructure
- All projects include performance monitoring and optimisation

## WP10 Communication, dissemination, and wider knowledge exchange:

- Stakeholder engagement, delivering events and hosting visits
- Community engagement facilities (energy trail, showcase locations, virtual energy islands)
- Publications, website, multimedia
- Pan-island knowledge exchange

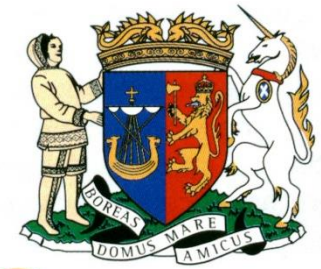


Empowering Communities



# Orkney's Island Grid: taking the Lead in Developing Local Energy Systems:

- Renewables Control & Storage
  - Renewables Power Zone
  - Orkney Energy Storage Park
  - Surf 'n' Turf
  - BIG HIT
- Local matching of generation and demand
  - Heat Smart Orkney
  - SMILE
- Wider Grid Services
  - ReFLEX
  - TraDER



ORKNEY ISLANDS COUNCIL



## Overview of CNI

“Demonstrate the low carbon energy potential of Scotland’s islands as hubs of innovation in renewable energy and climate change resilience, whilst positively impacting on island economies and population retention and growth”

Scottish Government, 2021



CARBON AUDITS



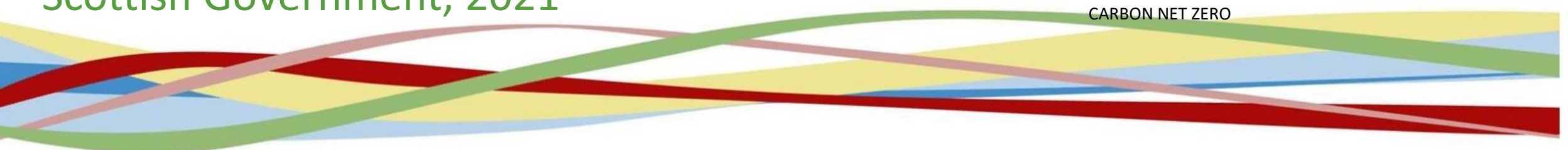
COMMUNITY  
CLIMATE ACTION  
PLANS



CLIMATE  
INVESTMENT  
STRATEGY

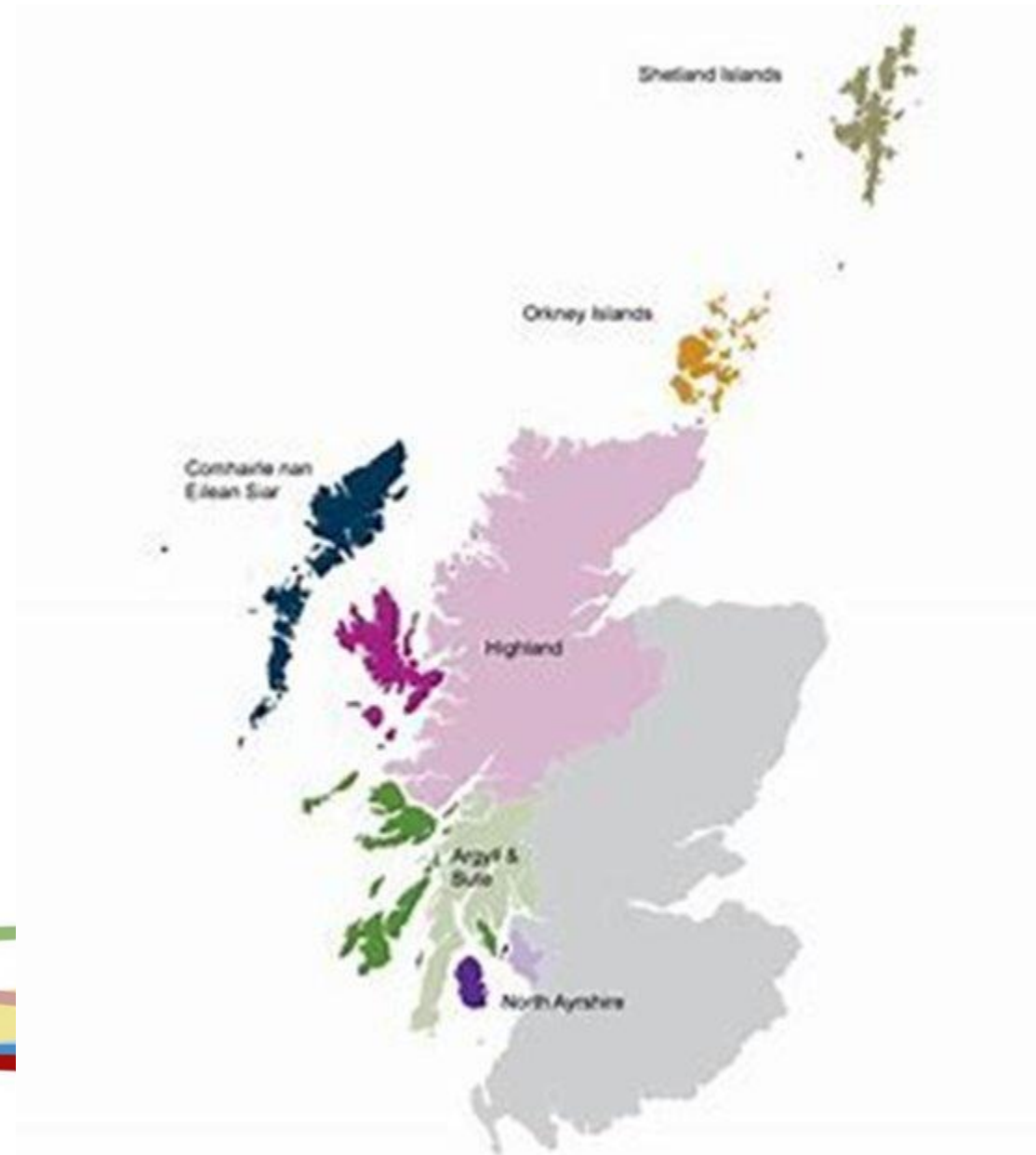


CARBON NET ZERO



## Policy context of CNI

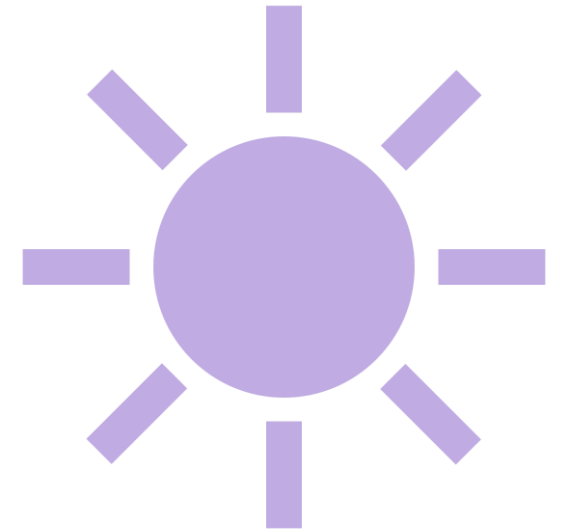
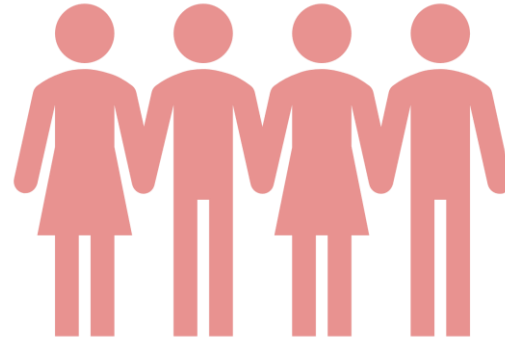
- Scotland has one of the most ambitious climate change targets in the world (net zero by 2045)
- Scotland = bespoke island focused place based piece of legislation (Islands (Scotland) Act 2018)
- Led to the National Islands Plan
- Feeds into the ICNZ and the regional climate hubs



## Aims of CNI

- Demonstrate the low carbon energy potential of Scotland's islands as hubs of innovation in renewable energy and climate change resilience
- Positively impacting on island economies and population retention and growth.
- Contribute to the Scottish Government's 2045 net zero commitment.
- Work closely with communities to move towards net zero in a fair and just way

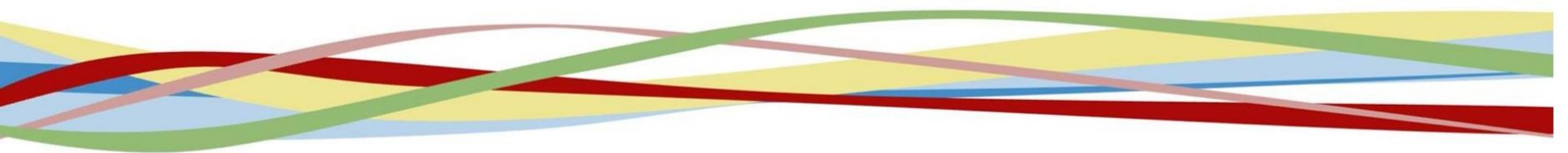
# Carbon Neutral Islands



CARBON AUDITING  
July to November 2022

COMMUNITY ENGAGEMENT  
AND PRIORITY SETTING  
November to March 2023

COMMUNITY CLIMATE  
ACTION PLAN COMPLETE  
March 2023



# Carbon Neutral Islands



Support from CES



£40,000 for each island to spend by the anchor organization



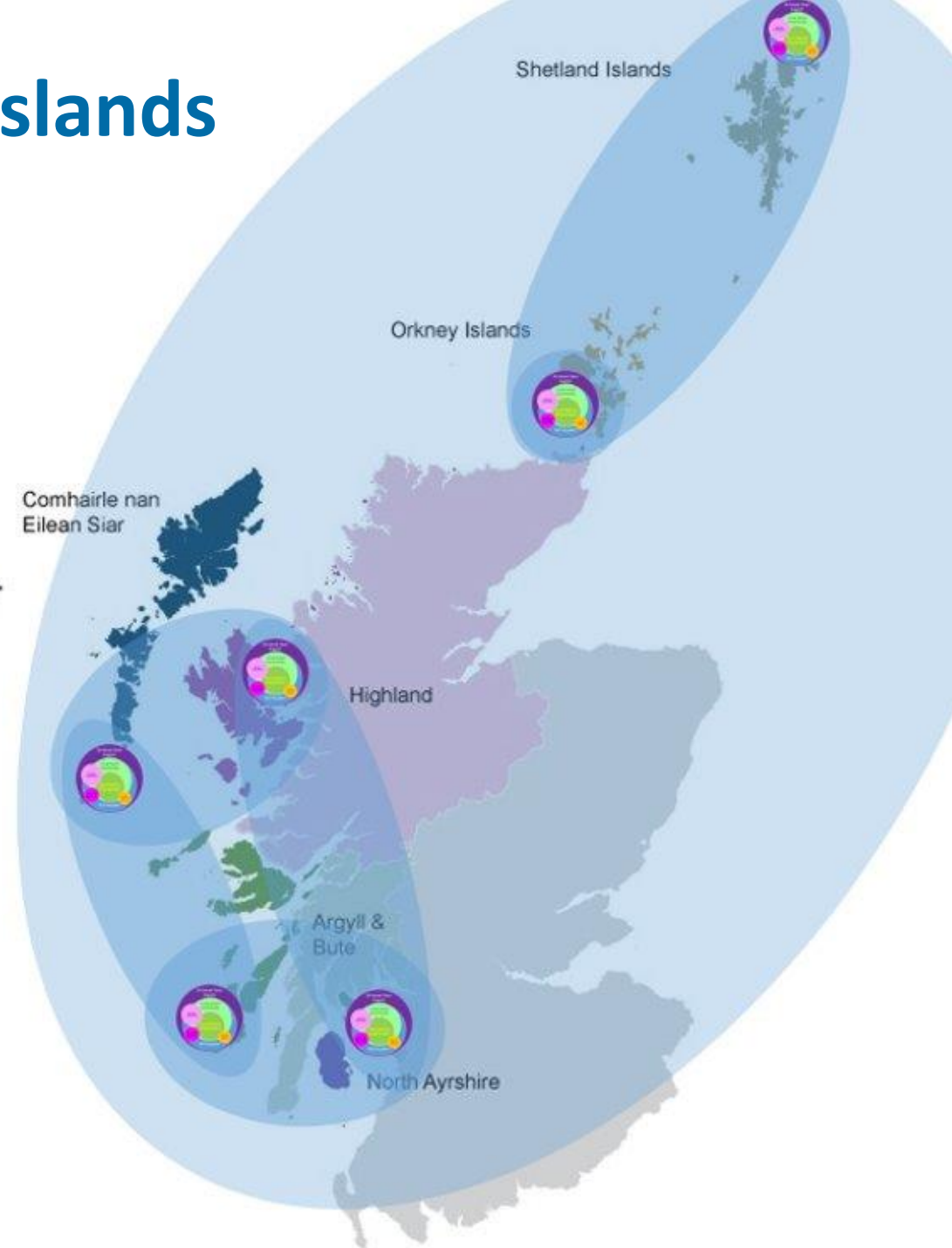
Expertise to carry out climate audits – from CES and external partners



Provide networking opportunities



Training through SCCAN





# Climate themes which will inform the Climate Action Plan:



Power and Heat



Waste and Resources



Nature Based Solutions



Sustainable Transport



Land Use, Forestry and Marine



Water Use



Food Production



Climate Adaptation

# Cumbrae

- Population: 1,300
- Area: 4.5 miles<sup>2</sup>
- Plans for a £27 million flood prevention scheme
- Industry: Tourism
- Steering group – work in progress
- Anchor organization: Cumbrae Community Development Company
- **Community Development Officer: Scott Watson**



# Islay

- Population: 3,228
- Geographically the 5<sup>th</sup> largest Scottish Island, 240 square miles
- Industry: Agriculture, Whisky and Tourism
- Steering group: 22 people elected
- Anchor organization: Islay Energy Trust
- **Community Development Officer: Neil Gow**



# Raasay

- Population: 161
- Area: 24 miles<sup>2</sup>
- Main industries: tourism
- Raasay Community Renewables have just finished two run-of-river hydro schemes (99kW & 38kW) – only 50kW will be able to be sold to the grid initially
- Steering group: fully formed
- Anchor Organisation: Raasay Development Trust
- **Community Development Officers: Tom Luinsk and Rosie Macinnes**



# Barra

- Population: 1,264
- Main industries: Tourism; Fishing/fish processing
- Barra and Vatersay Community Campus development will bring together health/learning/community facilities
- Steering group: fully formed
- Anchor Organisation: Voluntary Action Barra & Vatersay
- CBaB members of Community Power Outer Hebrides
- **Community Development Officer: Shona MacLeod**



# Hoy

- Population: 419
- Main industries: tourism, farming,
- Isle of Hoy Development Trust is a member of Community Power Orkney
- Hoy Energy Ltd (trading subsidiary of IoHDT) runs the 900 kW Community owned turbine and .
- IoHDT received two Nissan eNV200 electric vehicles for community use as part of ReFLEX project
- Steering group: tbc
- Anchor Organisation: Isle of Hoy Development Trust
- **Community Development Officer: Aisling Philips**



# Yell

- Population: 966
- Main industries: tourism, fishing, aquaculture, renewables, crofting
- Steering group: fully formed
- Anchor Organisation: North Yell Development Council
- NYDC runs the Garth Wind Farm, which has five 900kW turbines
- **CDO : Reuben Irvine**

