



DG connections in 2012

**Ofgem DG Forum 2012
Glasgow Nov 12th**

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Head of Development**

Scottish Charity Number: SC039673



Community Energy Scotland

31 staff across Scotland –Shetland to the Borders

Support whole lifecycle of a project ; inception, feasibility, planning, installation and operation.

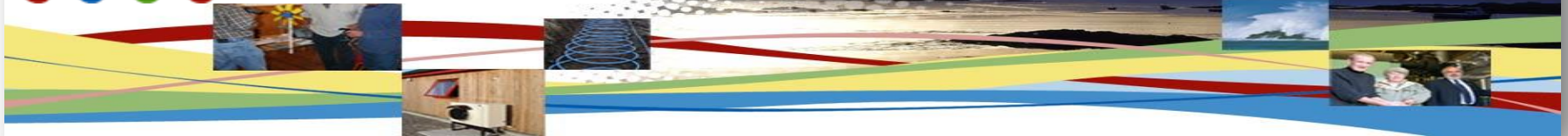
Microgen to MW

All renewable technologies supported

300 + members

Engage in policy, regulation and research





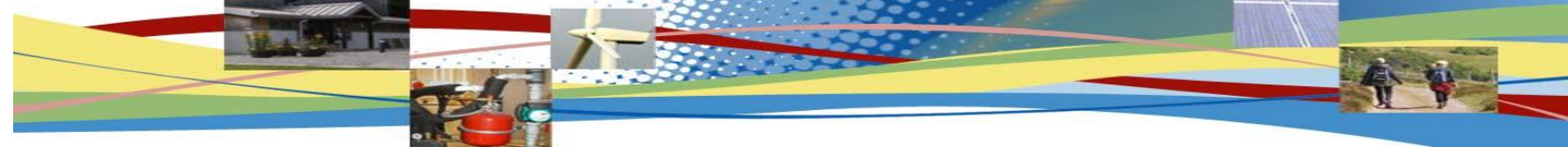
Activity to date in community sector

216MW in development

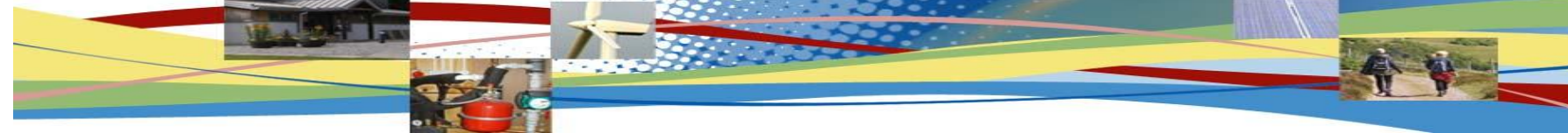
162 projects underway (162 connections!)

Projects ranging in scale from kW to ~ 13MW

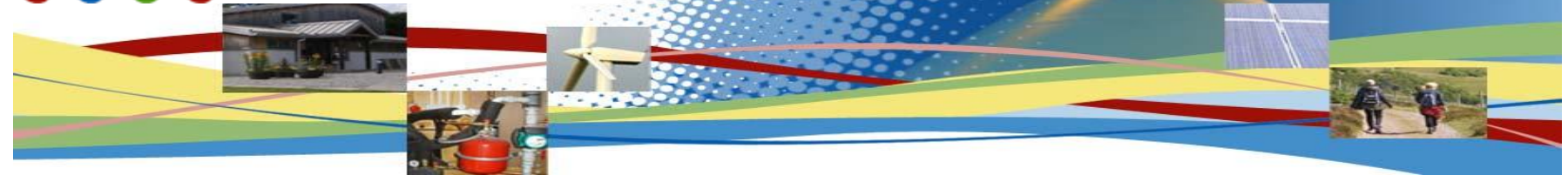




Policy drivers	Reality on the (Grid) ground
Scottish targets 100% of demand by 2020 from renewables, UK targets	No discrimination for renewables
Community Energy 500MW by 2020	Renewable resource is rich in remote and rural areas with weak grid networks
Local Authority and National planning policy and frameworks	Not aligned with grid availability e.g. Argyll
FiT degression rates – shortening window of opportunity	Transmission and distribution delays out to 2020
EMR looming	High costs of connection



Network capacity and transmission constraints	
Orkney	ANM - constraints
Shetland – constraints	NINES
Western Isles	HVDC delays
Argyll – 50 kW limit transmission delays until 2020	
North and West Highland – transmission delays and single phase supply common	
North East Scotland	
Lochaber and Skye- transmission delays 2020	
St Andrews	Flexible Networks
Borders	ARC
Dumfries and Galloway	
South Lanarkshire	



Activity since last year

Relationship and information exchange

Community Energy DNO working group

Workshops for all our staff on connections from both DNO's

Innovation and Infrastructure fund – working with DNO's

Process improvements

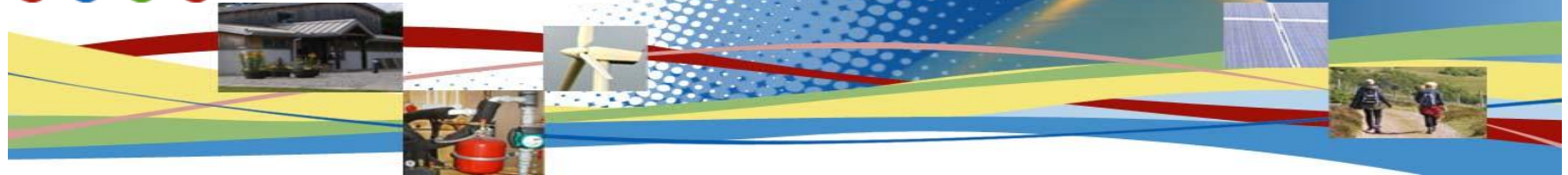
Contracted generation review

Revised payment schedules in transmission constrained areas

Improvements in connection documentation forthcoming

Improvements in online data available

Improvements in costs to SoW system but not to delays



Connection Offer Process – is it currently Fit for Purpose?

Validity and value of feasibility studies v's Connection queue race ?

More information required upfront – informal discussion and easy to understand on website- to be able to identify tipping point for network upgrade

No available information on interactive generation offers before full connection offer received- should be similar to planning permission system i.e. once a project has applied for connection- plant and capacity details made publicly available

Transmission system delays- need to be upfront in conversation and documentation

Least cost connection – is it really?

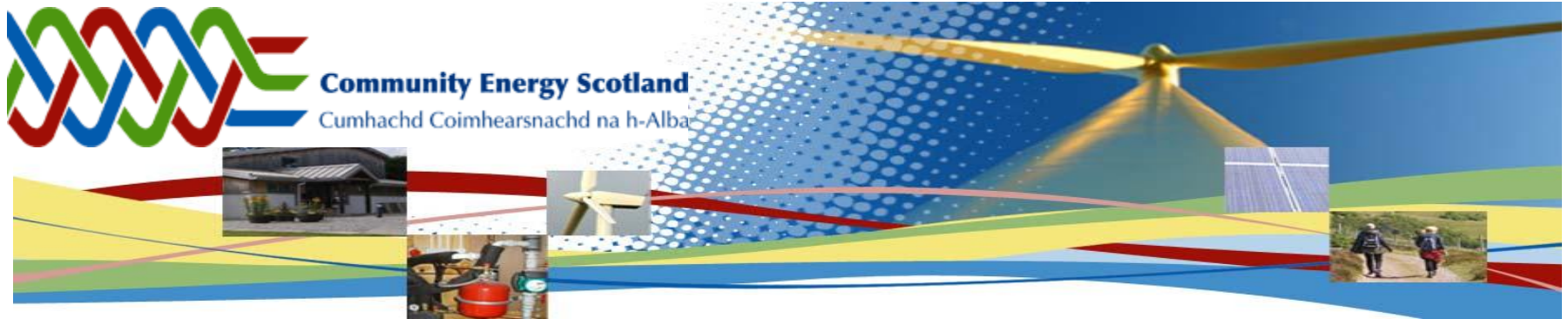


Customer Service from initial discussion to constructed connection

Treatment of customers is not equal – inability/unwillingness to deal with customers who are not technical experts

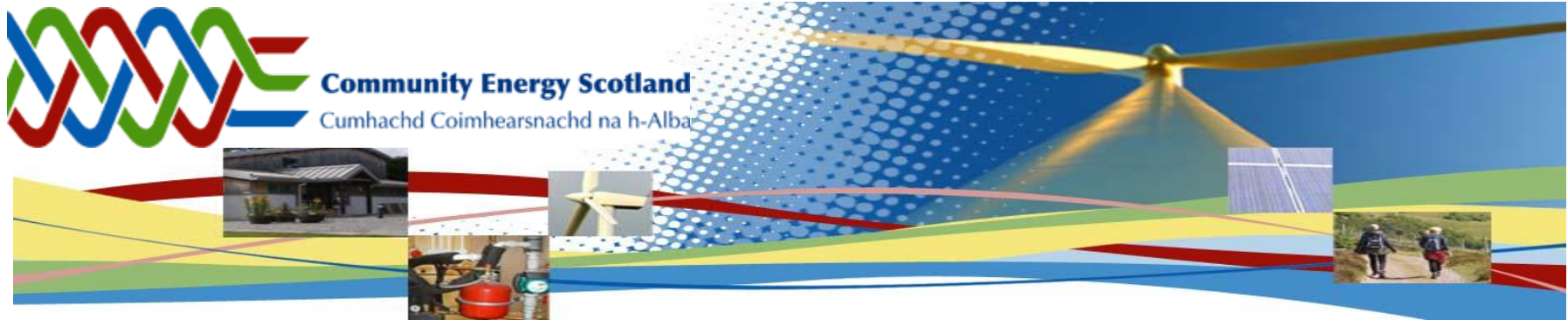
Re-costing of projects if DNO is challenged- but this requires technical expertise on part of customer

Customer service once connected when technical faults arise



Once in process - Case study

- I. Existing connection offer and signed agreement – with deposit paid
- II. New connection agreement was provided with a six figure reduction in the connection cost – cost apportionment - new additional generator
- III. Some weeks later DNO staff advised that the new agreement had been issued in error and the previous discussions were to be disregarded - no rebate available at this time, although potentially available at the future within a 5 year timeframe once a new customer was energised.
- IV. And ... A new replacement offer would have to be issued and this would have a higher connection cost than original due to additional unforeseen works !
- V. 7 months..Still awaiting issue of this new agreement and new connection cost since April 2012
- VI. Full balance of the connection cost (??) must be settled before the final stage of grid works in January. No up-to-date grid agreement/payment schedule and are unable to forecast grid expenditure at one of the most critical times of the project.



Connection construction – case study

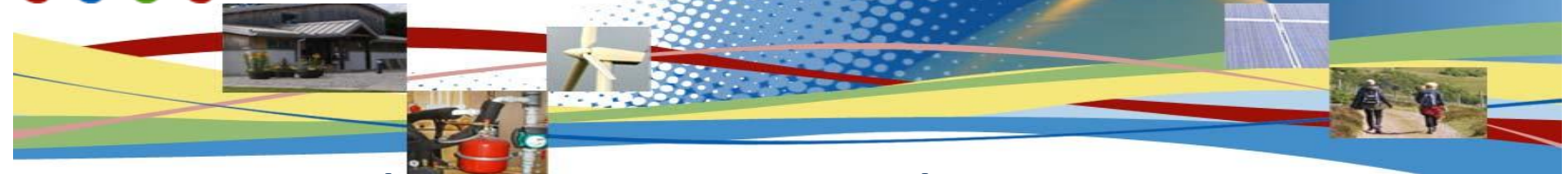
Upgrade from single to 3phase in order to service 9.9kW PV and GSHP.

Confusion over 3 phase supply- actually in place and highlighted as such but DNO quoted for new 3 phase cable – despite on site survey

Once identified 3 phase in situ a rebate for 3 phase costs took 6 months

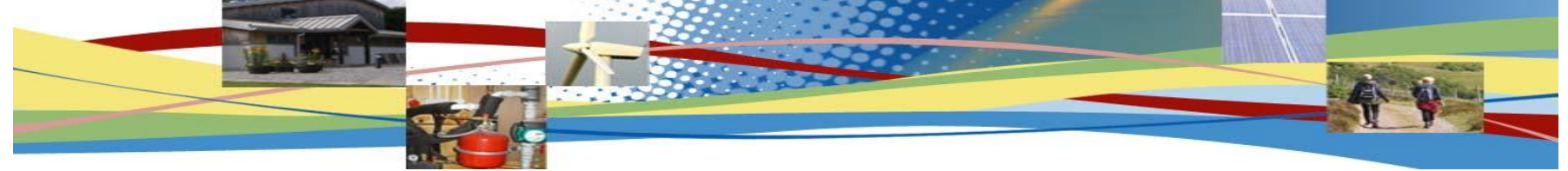
Customer /DNO communication ?

“We had a name and mobile number - but it was usually switched off and without a message service..”



Constructed connection– case study STATCOM

- I. Consultant study highlighted no need for statcom
- II. The study also highlighted that the grid was currently being run under a derogation and that it was outwith the statutory limits....was the statcom in part a response to a situation that was already an issue?
- III. STATCOM– option for in- turbine STATCOM at cost of £20,000 rejected by DNO, only option was a £360,000 device which sits on DNO network .
- IV. Community bought paid and installed STATCOM, DNO have now adopted it .
- V. Transformer fault within STATCOM soon after commissioning.
- VI. Communication on repair works is proving difficult with DNO
- VII. Turbine now restricted in generation until fault rectified
- VIII. Request for response from DNO on potential to operate with leading power factor (and increase generation export) – no answer



Summary

To achieve targets a much greater integration of DG is required and a collaborative approach in addition to :

faster connection timescales – earlier than 2020!

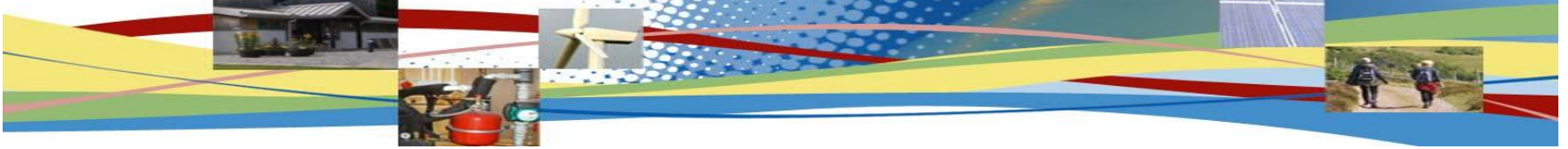
Innovation Innovation Innovation

strategic upgrades to network which are not financed upfront by DG

a regulation and incentive structure to enhance integration of DG

DNO's providing information, support, guidance and a transparent service to all customers

SUPPORT RENEWABLE UK' s PROPOSED WORK PROGRAMME



Clarity , Transparency and Distinction?

Energy suppliers – Scottish Hydro , Scottish Power

DNO's – Scottish Power EN, Scottish Hydro Electric PD

Transmission- Scottish Hydro Electricity TL, Scottish Power T

Generation – SSE, Scottish Power Renewables



From one community owned 900kW connected generator

“In conclusion, we were very pleased with the service and support we received from our DNO”

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