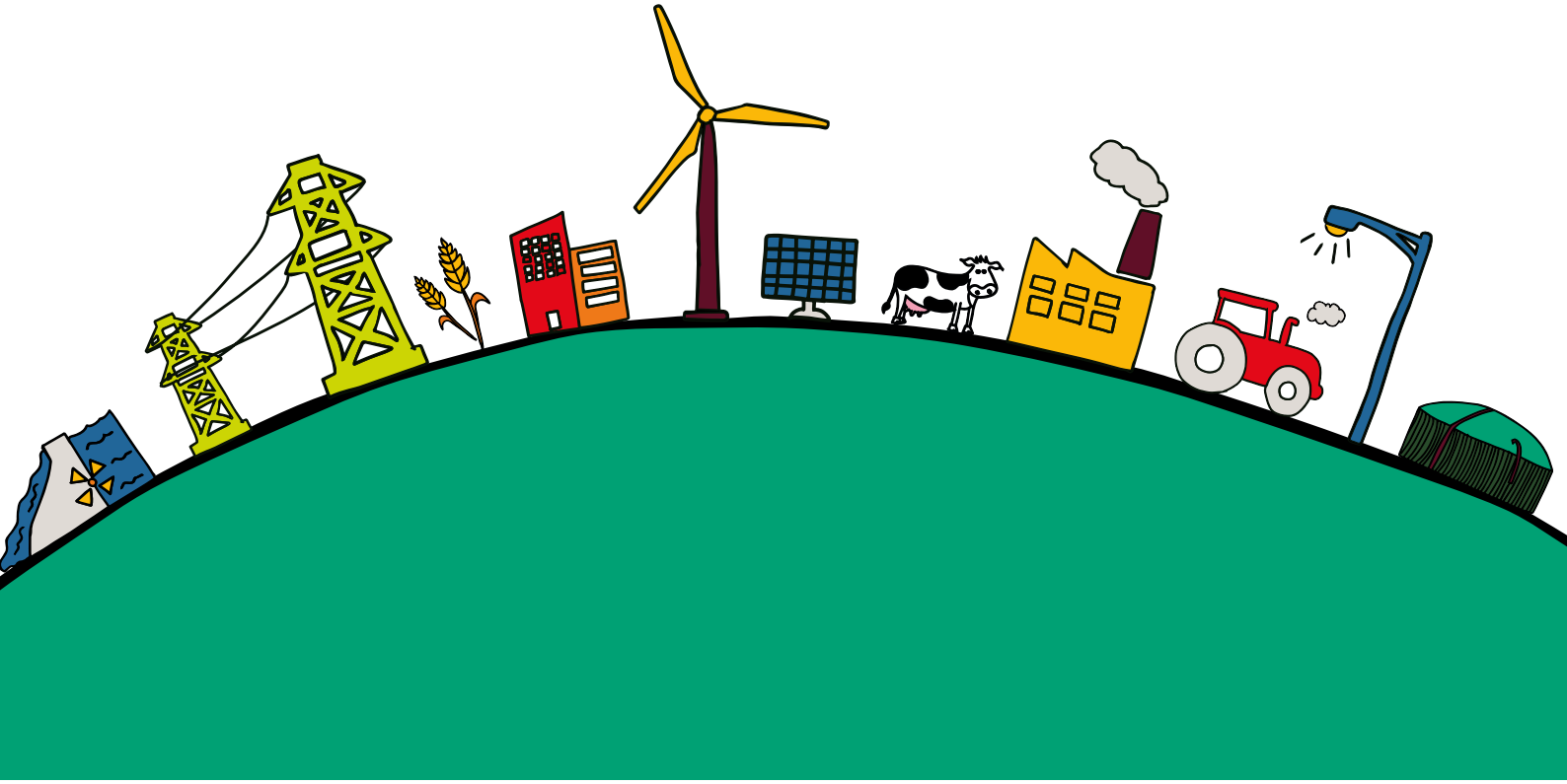
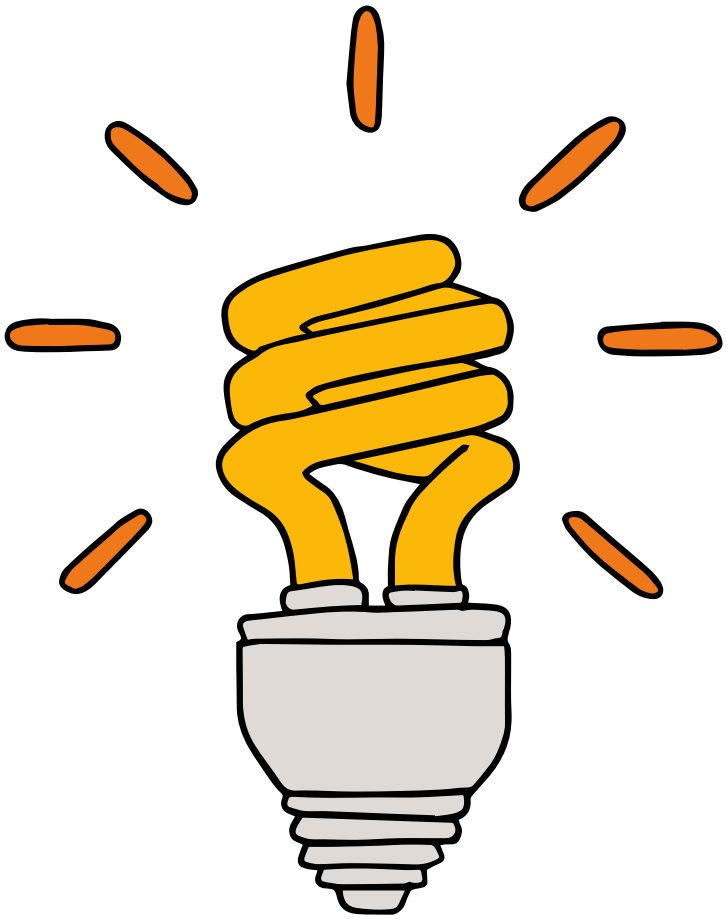
smartestenergy

energy entrepreneurs report 2014

an overview of the independent generation market in Great Britain



smarter brighter better



smarter brighter better

a significant new industry emerging

This year's Energy Entrepreneurs Report reveals just how significant a contribution the independent renewables sector is making both to the economy and in meeting the nation's energy needs.

Almost £300m was invested in commercial-scale projects during 2013, more than £1m every working day.

Independent projects can now generate electricity worth almost £1bn a year, helping businesses become more competitive, farmers and landowners to diversify income streams, communities to generate funds for local amenities and the public sector to provide better value for money.

The level of capital investment being made is also providing significant opportunities for the supply chain, from civil engineers to equipment manufacturers, and right across the country.

It is not just the scale of investment identified in this year's report that is impressive but the rapid pace of growth being seen.

The 40% increase in projects seen since last year's Energy Entrepreneurs Report has come despite a backdrop of a constrained funding environment for small and medium sized businesses.

While in isolation these projects are relatively small, together they are playing an important role in helping meet Britain's energy needs at a time when there are concerns over looming shortages in generation capacity.

Commercial-scale independent renewables are now capable of powering some 4.67m households, or enough to meet the power demands of the entire public sector.

SmartestEnergy has championed independent generation for more than a decade and it has been exciting to play a part in its growth to date.

But we believe there is much more to come. The momentum behind the dramatic growth highlighted in this year's report is continuing and the changes under Electricity Market Reform will help many more businesses, individuals and communities seize the opportunity to be part of an energy revolution.

Robert Groves
CEO, SmartestEnergy

pace of growth accelerates

£997M

value of energy generated

4.67M

homes powered - or nearly enough to meet all the public sector's power needs

The pace of growth being seen in the independent renewables sector is highlighted by the increase of more than 40% in project numbers since the publication of the Energy Entrepreneurs Report 2013.

The most active investors in commercial-scale renewables in the year included farmers, where the number of projects rose by more than 80% (301 new projects); landowners (an additional 59 projects represented a 50% rise) and developers (296 additional projects, up 44%).

Although the nature of many community renewables schemes means they fall under the 50kW threshold covered by this report, a further 15 larger scale community projects came on stream during the year, an increase of almost 30%.

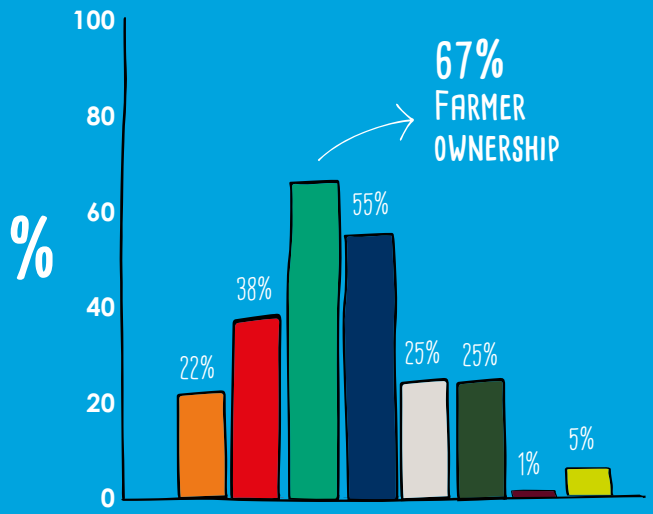
The number of larger scale onsite generation facilities also rose by more than a quarter (26%), with 418 now operational across Great Britain.

The public sector continues to be an active investor with schemes ranging from solar PV installations on council buildings to biomass facilities powering schools. The number of commercial scale schemes developed by the public sector rose by 22% during the year to 95.

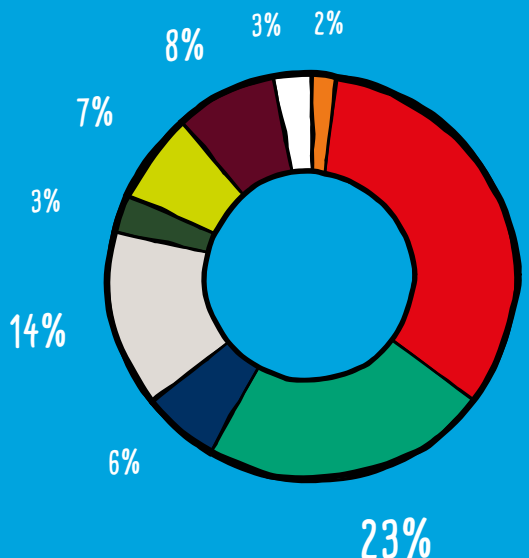
The total capacity of commercial-scale independent renewable projects now stands at 6.2 GW, enough to power some 4.67 million households. Together they generate electricity estimated to be worth almost £1bn a year.

key highlights

- 2,930 projects = 6,229 MW capacity
- Project numbers increased by 40% in 2013
- Investment of £297m in sector during the year
- £997m of wholesale energy generated
- 4.67m homes powered - or nearly enough to meet all the public sector's power needs
- Farm projects fastest-growing category for second-year running (81% increase)
- Onsite generation projects developed by businesses increase by 26%
- Onshore wind (85%) and solar PV (59%) fastest-growing technologies by number of sites



CAPACITY GROWTH FIGURES BY OWNERSHIP



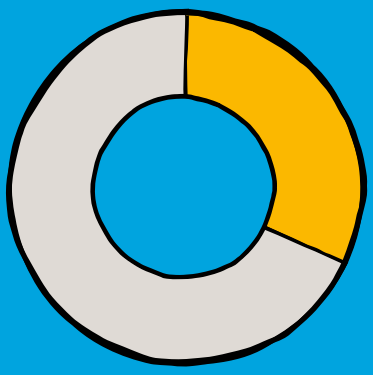
DEVELOPERS HAVE
33%
SHARE OF GREAT BRITAIN SITES

NUMBER OF PROJECTS BY OWNERSHIP

overall statistics for Great Britain

% GROWTH SINCE ENERGY ENTREPRENEURS REPORT 2013

capacity MW



32%

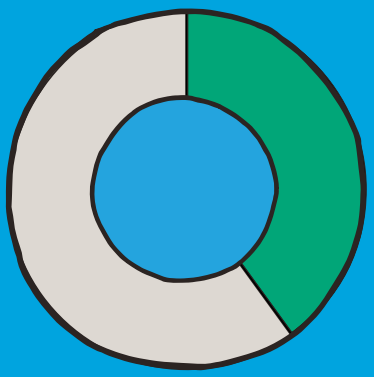
Total:
6,229 MW
New:
1,506 MW

volume MWh

19%

Total:
19,747197 MWh
New:
3,168,908 MWh

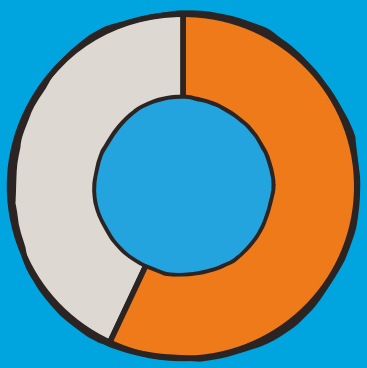
projects



40%

Total:
2,930
New:
843

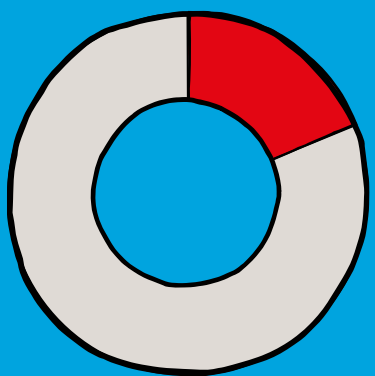
independent generators



57%

Total:
1,633
New:
593

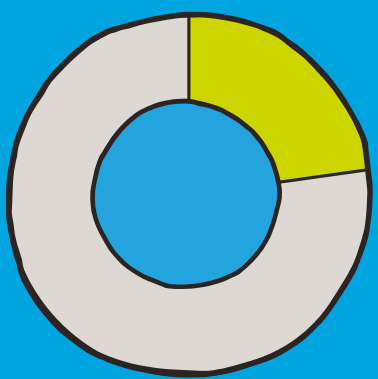
households powered



19%

Total:
4,672,787
New:
749,860

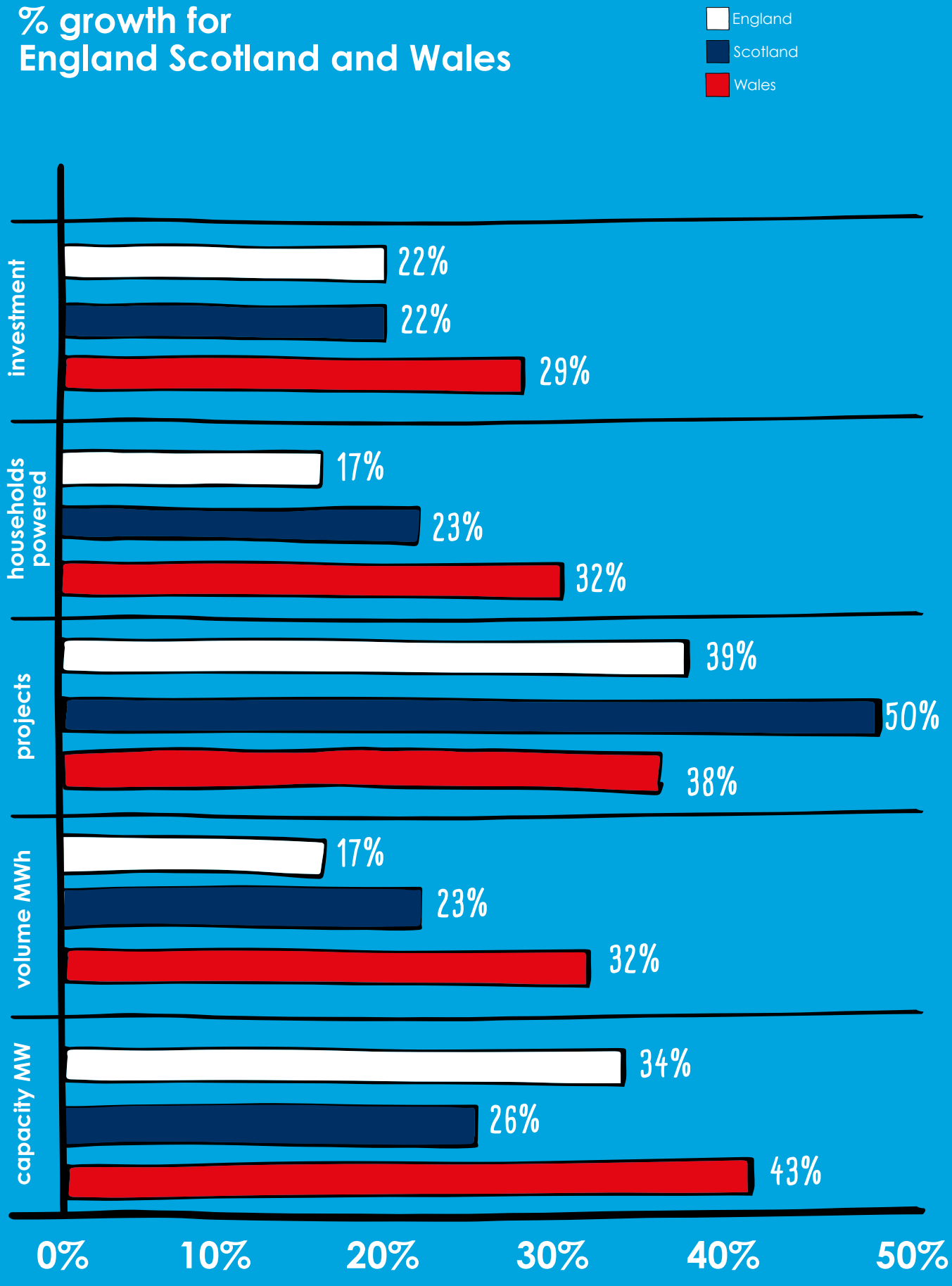
investment



23%

Total:
£1,612,822,744
New:
£297,602,666

% growth for England Scotland and Wales



an industry benefitting every corner of the country

£250M

has been invested in the South East and East of England

332,000

homes can now be powered by commercial-scale projects in Wales

25 counties recorded double digit growth in the number of projects during the year, highlighting the broad impact the sector is having right across the country. Many of the most active areas in terms of new projects are rural communities where investment in renewables is providing significant opportunities for contractors and suppliers.

Scotland led the way in growth with an increase of almost 50% in project numbers. An estimated £67m was invested in 169 commercial-scale projects there, taking total numbers north of the border to 509. Scotland now accounts for over a quarter (28%) of generation capacity. The Highlands & Islands and Aberdeenshire together account for more than 38% of that figure.

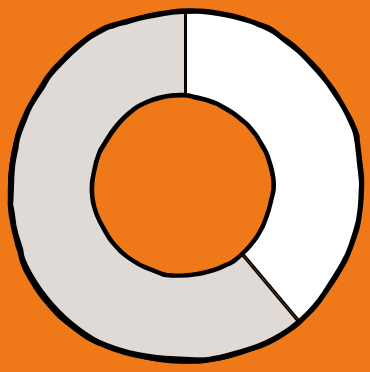
England also saw strong growth in project numbers (up by 39% to 2,207) and now accounts for close to two-thirds of capacity (64%) in Great Britain. The South East (22% of capacity) and East of England (18%) are the most significant regions. An additional £50m was invested in these two regions alone in 2013 to take their total investment to £450m.

An additional 58 projects in Wales (a capacity increase of 43%) means its commercial-scale projects can now power over 332,000 homes. More than a quarter (26%) of generation capacity is located in Glamorgan, and Carmarthenshire was found to be the fastest growing Welsh county by project numbers (up 186%).

Although onshore wind is the dominant technology across Great Britain, solar is far more significant in England than elsewhere accounting for a total of 22% of generation capacity (up from 10% last year).

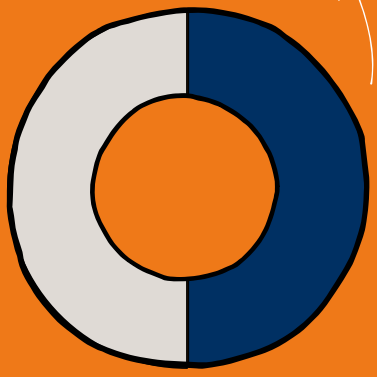
% growth by number of projects in England, Scotland and Wales and investment

39% England



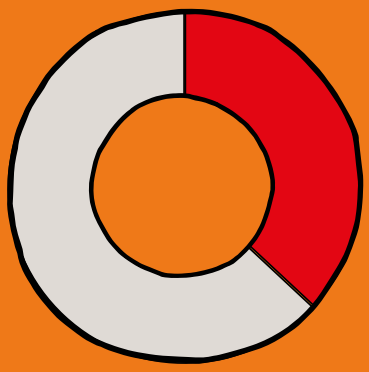
INVESTMENT:
£204,785,847

50% Scotland

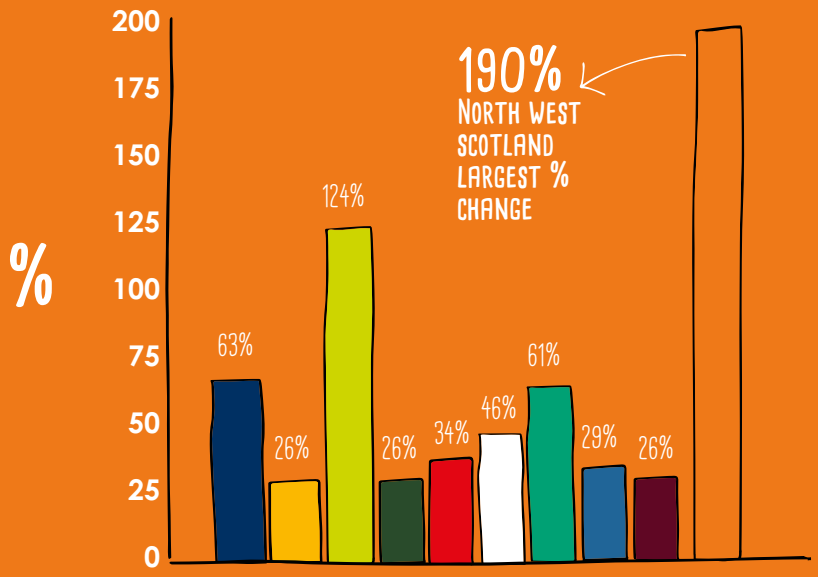


INVESTMENT:
£66,700,840

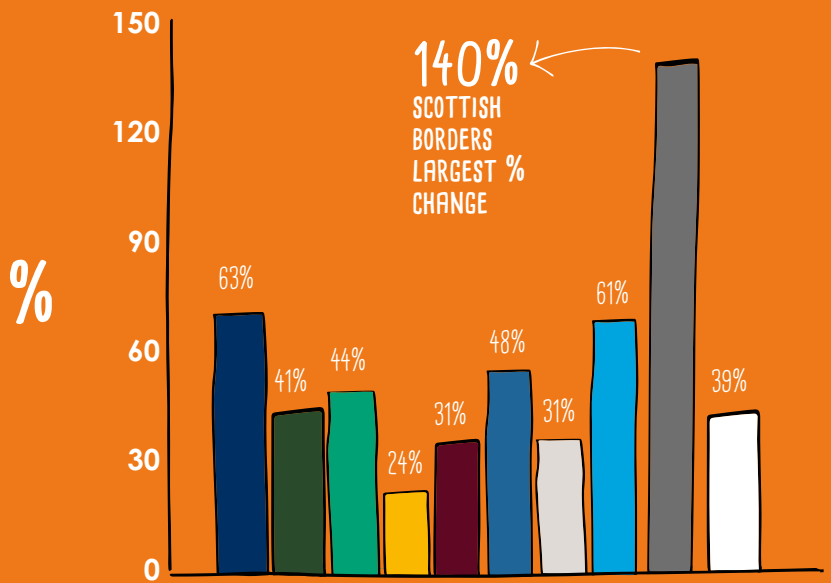
39% Wales



INVESTMENT:
£26,115,980



Top 10 regions by capacity growth



- SW England
- SE England
- Highlinds & Islands
- NW England
- Yorkshire & Humber
- SW Scotland
- West Midlands England
- South Wales
- East Midlands England
- East England
- NE Scotland
- NW Scotland
- Scottish Borders

Top 10 regions by project growth

28.3%

OF TOTAL CAPACITY IS LOCATED IN SCOTLAND

£374M

HAS NOW BEEN INVESTED IN SECTOR IN SCOTLAND

SCOTTISH BORDERS FASTEST GROWING REGION NORTH OF BORDER (140% INCREASE IN SITES)

63.5%

OF TOTAL CAPACITY IS LOCATED IN ENGLAND

YORKSHIRE (244), DEVON (143) AND CORNWALL (139) HOME TO LARGEST NUMBER OF SITES

TOTAL INDEPENDENT GENERATION MARKET IN WALES UP ALMOST 43% IN A YEAR

8.2%

OF TOTAL CAPACITY IS LOCATED IN WALES

CAPACITY IN ENGLAND (3.95 GW), SCOTLAND (1.76 GW) AND WALES (0.51 GW) NOW ENOUGH TO POWER ALL HOMES IN LONDON, EDINBURGH AND CARDIFF RESPECTIVELY

wind continues to dominate

46%

increase in anaerobic digestion projects during the year

344

new solar projects invested in during the year

With a combined capacity of over 2.8 GW, onshore wind continues to be the most significant technology for independent generators. The 40% growth seen in 2013 – an additional 399 projects - means it now accounts for 45% of total capacity.

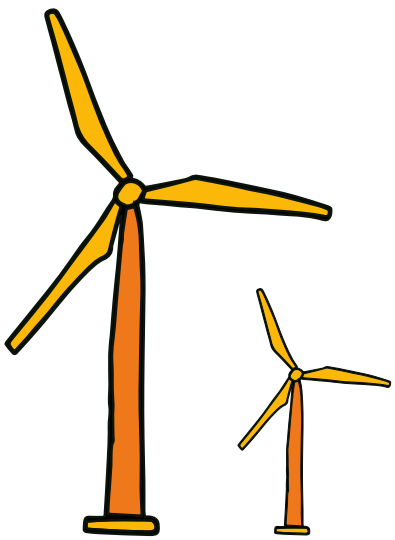
Yorkshire (52 new projects), Devon (36 new projects) and Aberdeenshire (27 new projects) were the most active in terms on new onshore wind projects.

Solar PV gained ground as project numbers more than doubled over the past year as continued falls in the cost of technology encouraged more investment. The additional 532 MW of capacity which came on stream during the year means solar now accounts for over 14% of independent renewable generation in Great Britain.

Solar PV was also the most popular choice for onsite project investors with 67 new projects during the year including many installations on the roofs of supermarkets and distribution warehouses.

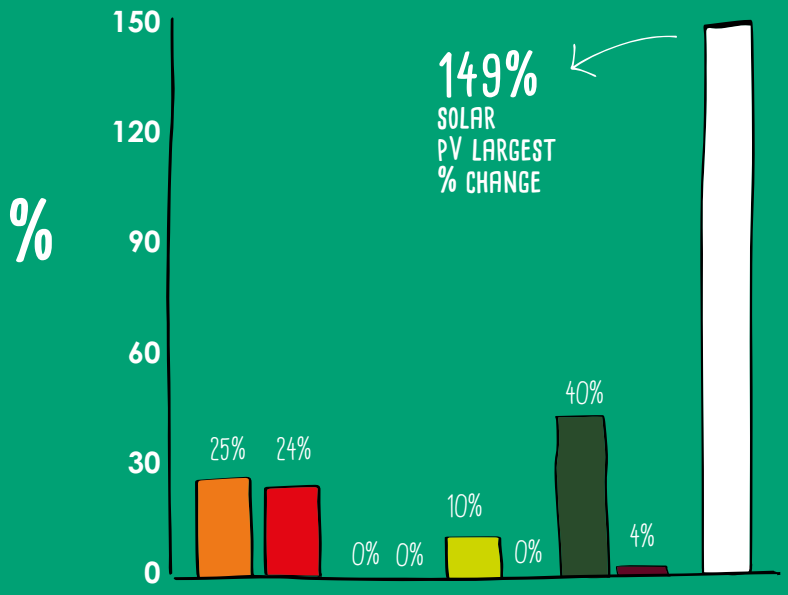
The commissioning of 40 new anaerobic digestion projects during the year represented an increase of 46% over last year's figures. This included 15 projects developed by farmers and 3 by onsite generators including dairy farmers and food manufacturers.

The number of hydro sites (up 20%) and biomass plants (12%) also showed strong growth.



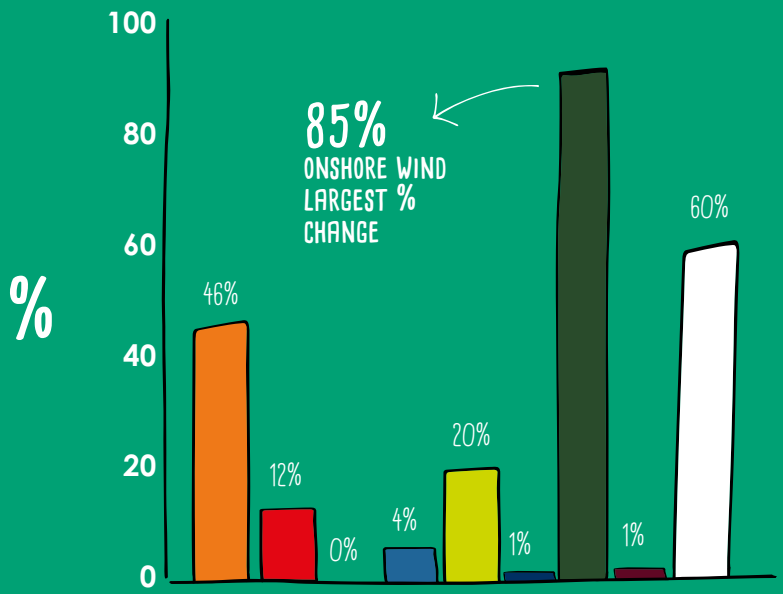
key highlights

- Onshore wind sees 40% increase in capacity – now accounts for 45% of independent generation
- Wind accounts for 84% of capacity in Scotland but 24% of capacity in England
- Solar PV is fastest-growing technology by volume, up 149%
- Anaerobic digestion sites up by 46% during year
- £61.7m invested in biomass projects in past year
- Energy from anaerobic digestion can now power over 300,000 homes



CAPACITY GROWTH BY TECHNOLOGY

anaerobic digestion
biomass
co-fired biomass
energy from waste
hydro
landfill gas
onshore wind
sewage gas
solar PV



GROWTH IN NUMBER OF PROJECTS BY TECHNOLOGY

manufacturing is now most active investor in onsite generation

£223M

total to date after £56.5m invested during the year

55%

increase in capacity for biomass

Strong growth has continued in onsite renewables as businesses look to mitigate rising energy costs, ensure security of supply and meet sustainability aspirations.

In total, 85 new projects were commissioned during the year, a 26% increase since last year's Energy Entrepreneurs Report, representing a total investment of around £56.5m.

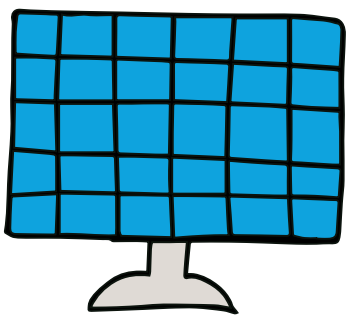
There are now 418 commercial-scale onsite projects in operation, generating electricity worth an estimated £109m a year for businesses in Great Britain.

Solar PV continues to be the most popular technology for businesses investing in the ability to generate their own power, accounting for over 65% of all projects and representing an investment of an estimated £9m since 2010.

In the last 12 months, the number of onsite solar PV projects rose by 33% (67 new sites) although biomass saw by far the biggest increase in capacity (up 55% to 231 MW) equating to an investment £52m.

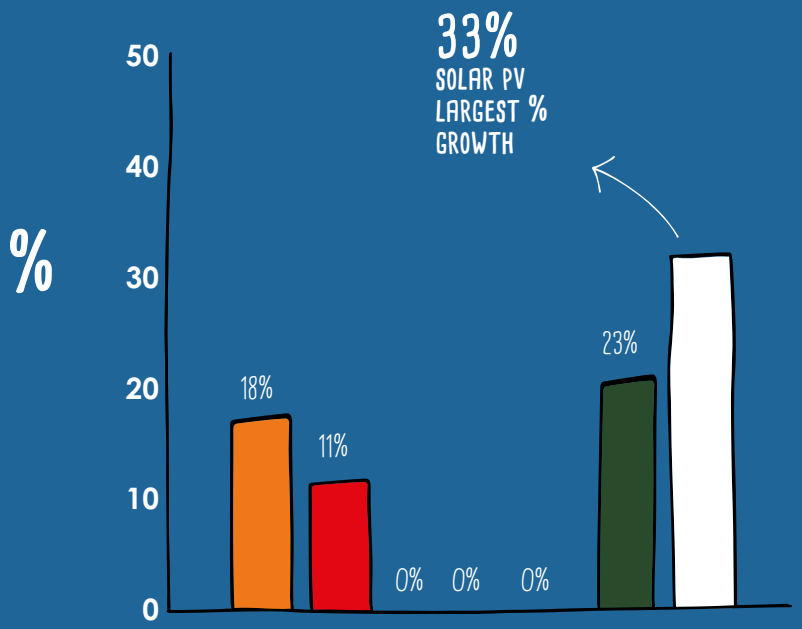
The manufacturing sector was the most active in terms of investing in new projects (38 new schemes representing a 36% increase since last year), followed by the retail and wholesale sector (27 projects, up 24%) and the distribution and storage sector (7 projects, up 39%).

The South West (17) and East of England (15) saw the highest number of new onsite projects, with businesses in these regions investing around £2m in generating their own energy in the past year.



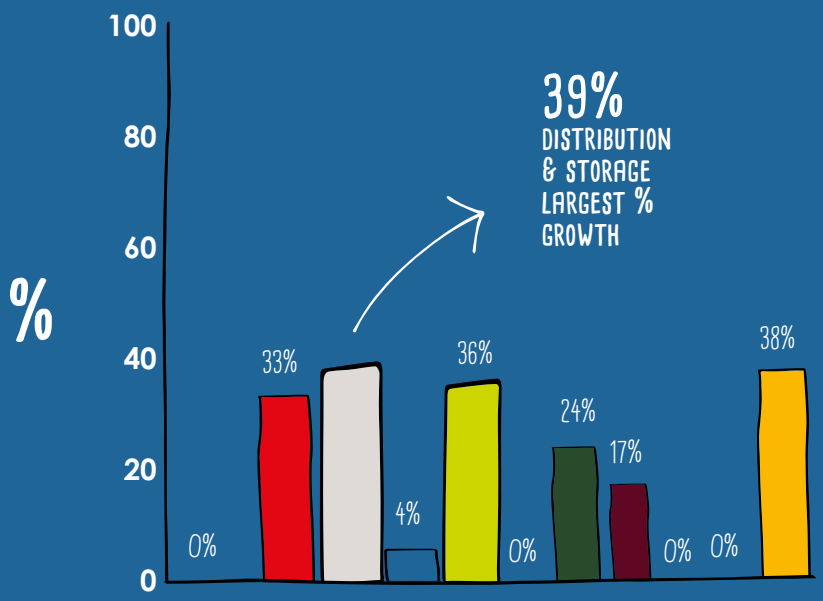
key highlights

- Onsite generation sites up by 26% to 418
- £56.5m invested during year – total to date now stands at £223m
- Onsite biomass sees biggest increase in capacity, up 55%
- Manufacturing accounts for largest number of onsite projects (144)
- Onsite projects generating £110m worth of electricity a year
- Most active sectors for new projects in 2013 were manufacturing (38 new sites); retail & wholesale (27) distribution & storage (17)



GROWTH IN ONSITE PROJECTS BY TECHNOLOGY

- anaerobic digestion
- biomass
- co-fired biomass
- hydro
- landfill gas
- onshore wind
- solar PV



GROWTH IN ONSITE PROJECTS BY SECTOR

- construction
- education
- distribution & storage
- leisure
- manufacturing
- property letting
- retail & wholesale
- service
- telecoms
- transport
- mineral products

farming maintains position as fastest-growing sector

£34.6M

worth of electricty generated by farm schemes in last year

60%

increase in generation capacity owned by arable farmers

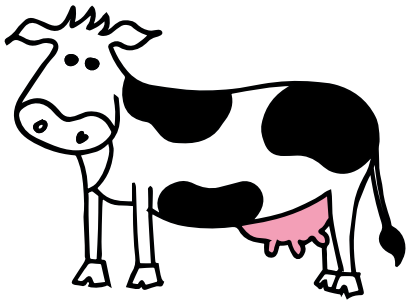
In terms of numbers of projects developed, the farming sector continued to be the most active investor in commercial-scale renewables.

The number of sites increased by 81% during the year as farmers continued to take advantage of the small-scale Feed-in Tariff scheme. Some £24m was invested in farm-based schemes during the year.

Farmers in England were the most active across Great Britain accounting for almost three quarters of total growth. The number of farm-owned projects in Wales doubled during the past year to a total of 44. A fifth of all independent projects in Wales have been developed by farmers.

Arable farmers have been the biggest investors in renewable energy to date with a total spend of £35m followed by livestock farmers (£18m) and vegetable growers (£6m).

The number of farm-owned wind projects almost doubled (up 95%) with 179 new projects which saw farmers invest an average of £59k per project. Solar PV also saw a big increase with the number of sites up 78% and an additional 9 hydro projects represented a 60% rise.

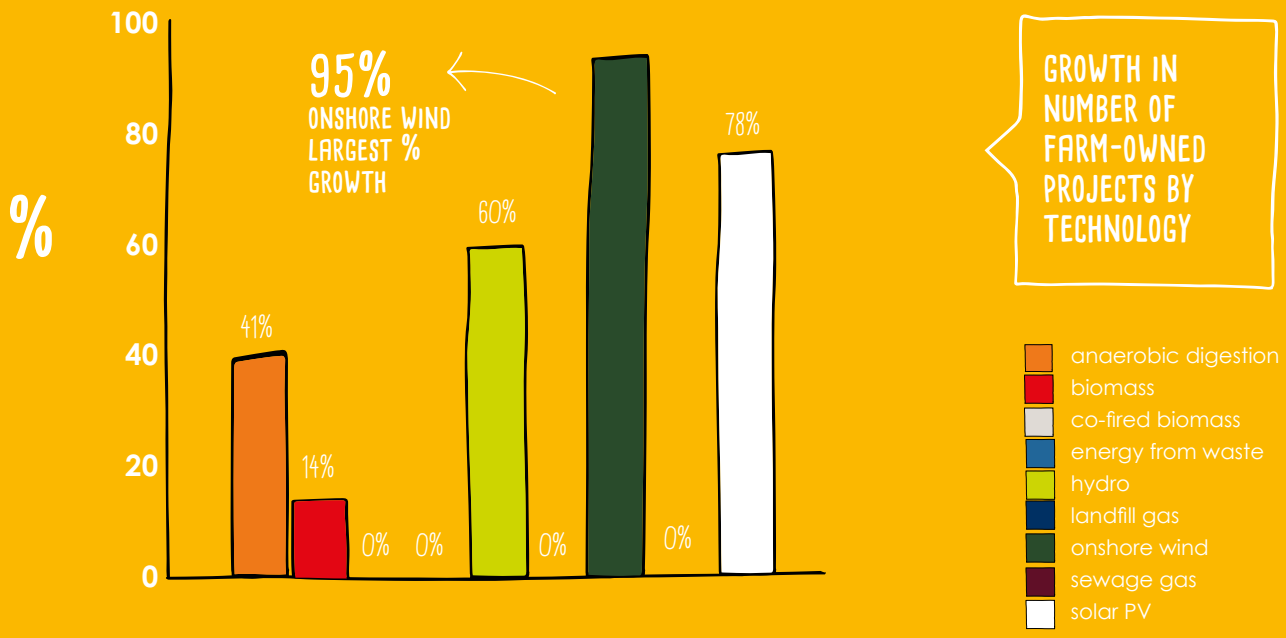


The farm sector now accounts for 5% of total independent renewable capacity in Great Britain.

Projects developed by landowners also saw a significant increase in the number of new projects with a rise of 59 projects representing a 50% increase and an investment of over £8m since the last Energy Entrepreneurs Report.

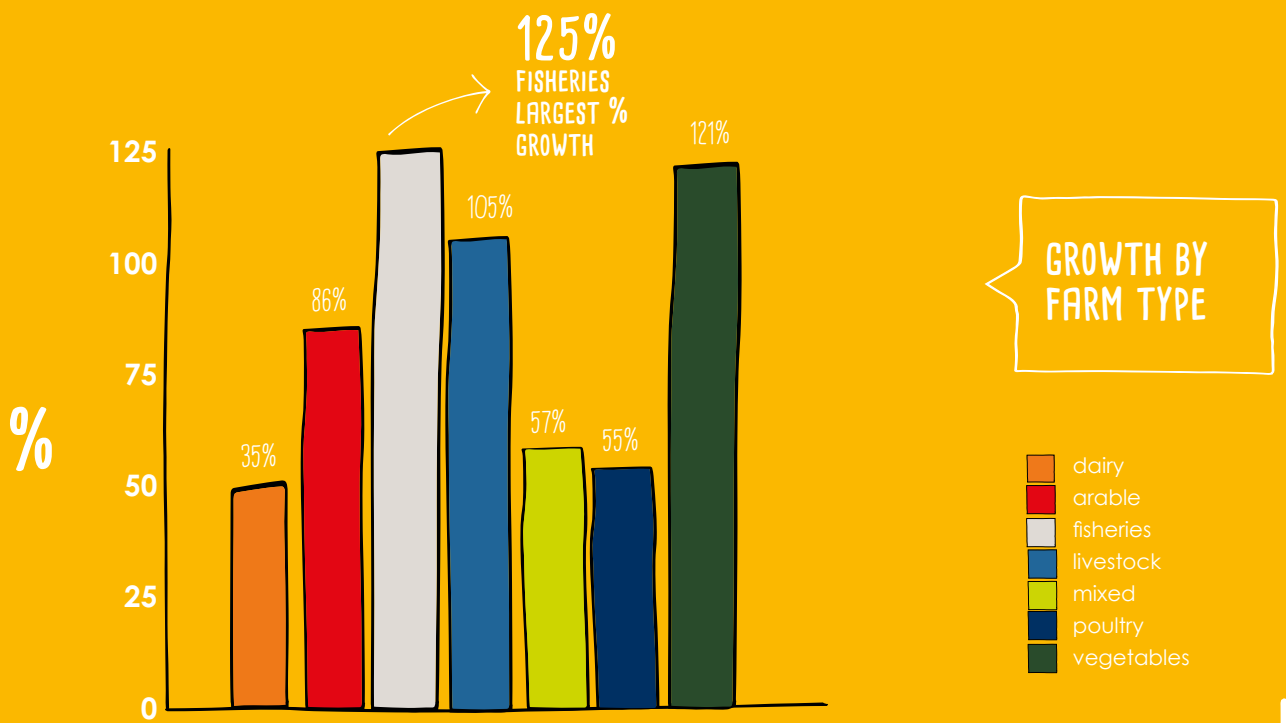
key highlights

- Number of farm-owned projects increased by 301 to 674 (up 81%)
- Farm generation now accounts for 5% of total independent generation capacity (23% of projects by number)
- Wholesale power generated by farm schemes worth £35m
- Onshore wind is fastest growing technology by number of sites (up 95%) followed by solar PV (78%) and hydro (60%)
- Arable farms account for largest number of projects (258), followed by livestock (207) and poultry (51)



GROWTH IN NUMBER OF FARM-OWNED PROJECTS BY TECHNOLOGY

- anaerobic digestion
- biomass
- co-fired biomass
- energy from waste
- hydro
- landfill gas
- onshore wind
- sewage gas
- solar PV



GROWTH BY FARM TYPE

- dairy
- arable
- fisheries
- livestock
- mixed
- poultry
- vegetables

methodology and sources

Figures have been compiled from publicly available project data from the Ofgem FiT Register and the Ofgem Renewables and CHP Register as at 31 December 2013.

For the purposes of the Energy Entrepreneurs Report, commercial-scale schemes are classed as those with a capacity of 50kW or more that are non-utility owned.

Value of generation is based on a wholesale energy price of £50.50 per MWh and household usage of 4.23 MWh a year.

Load factors for different renewable technologies are estimated as Anaerobic Digestion 66.5%; Biomass 59.8%; Co-Fired Biomass 62.3%; Energy from Waste 56.8%; Hydro 35.6%; Landfill Gas 57.4%; Onshore Wind 25.9%; Sewage Gas 44.6 %; Solar PV 10.02%. (Source : DECC)

Investment data is based on capital investment costs from DECC's Electricity Generation Costs report.

contact us

SmartestEnergy has been working with independent generators since 2001. We now have over 570 projects in our portfolio, representing over 31% of Great Britain's independent embedded renewable capacity.

SmartestEnergy, which has offices in London, Ipswich and Glasgow, is also a UK licensed business electricity supplier to large industrial and commercial organisations.

If you have any questions about the report or would like to use any of the data, please contact the Marketing team on marketing@smartestenergy.com or 020 7448 0900.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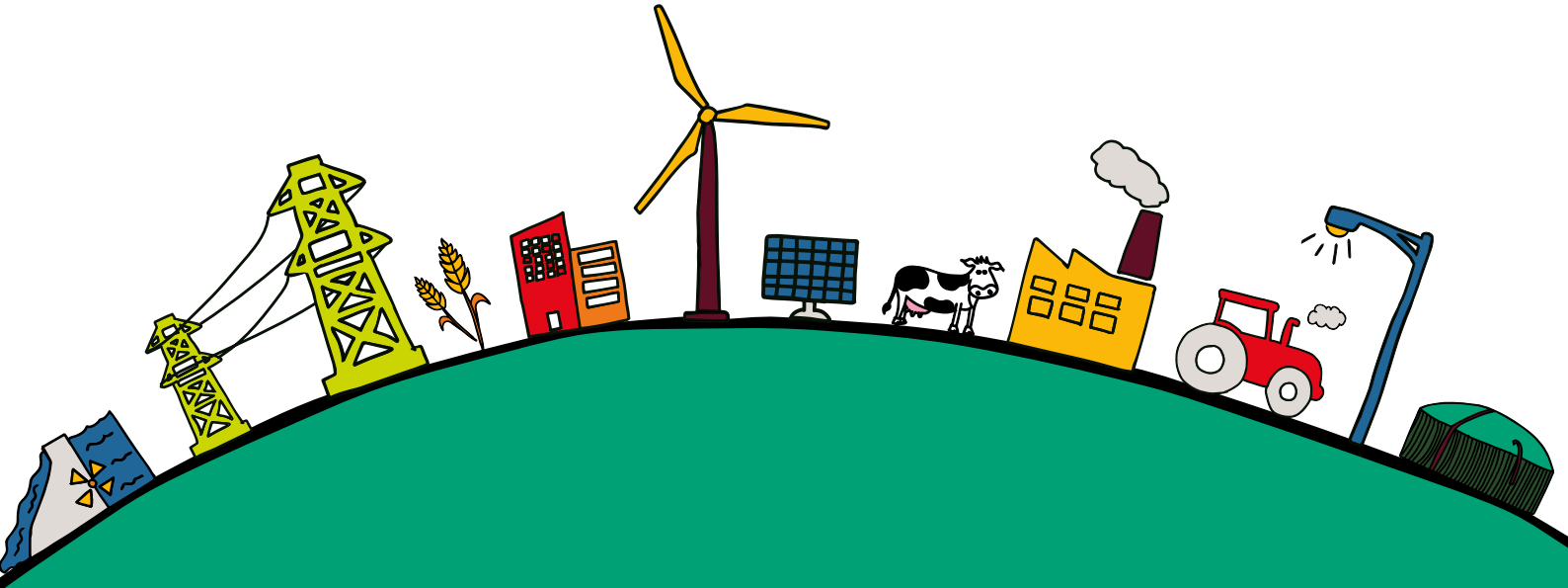

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