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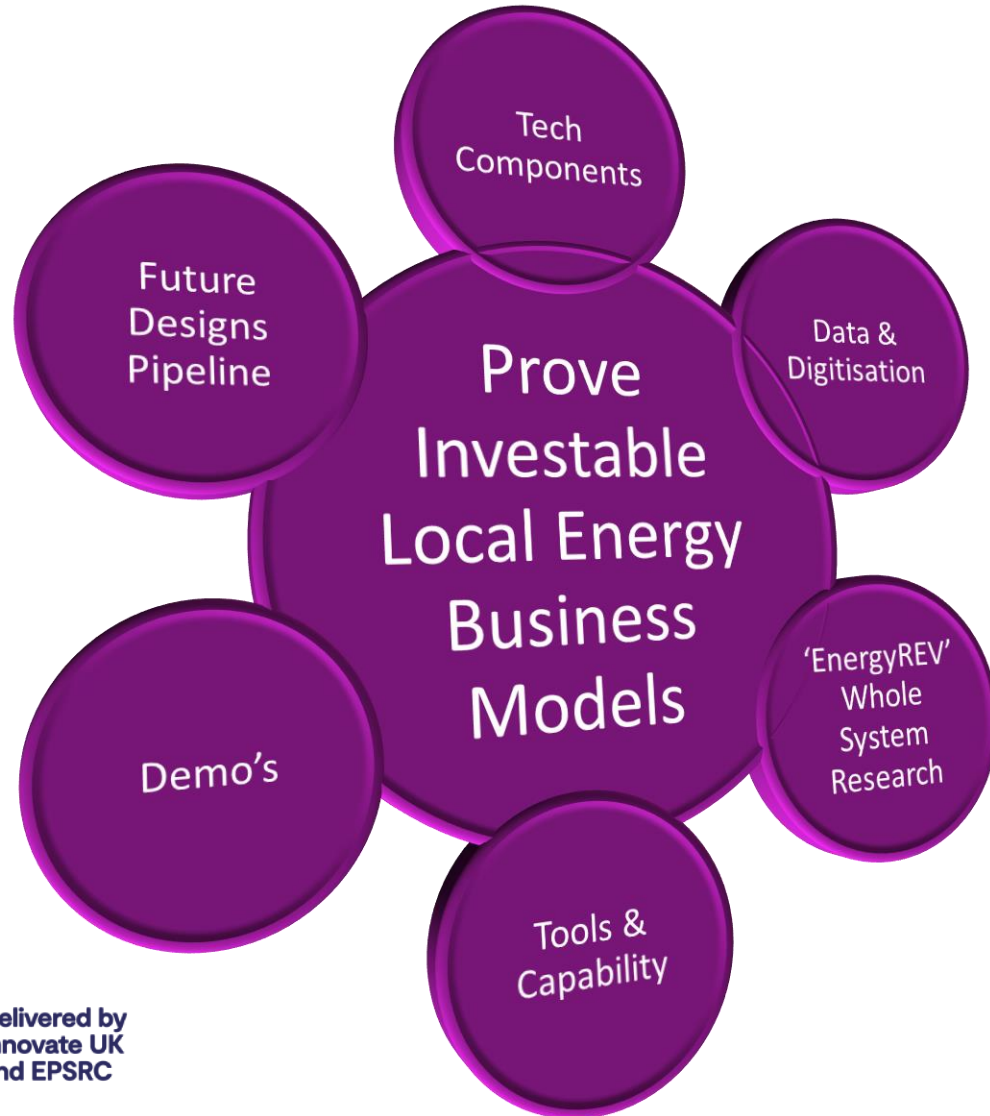
Prospering from the Energy Revolution Challenge

Insights from 5 years of innovation in energy-smart places

Sophie Kempthorne, Innovation Lead



Prospering from the Energy Revolution: Developing the potential of energy-smart places



All scoped to
work across



Power



Heat



Mobility



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Energy smart places: what are they?

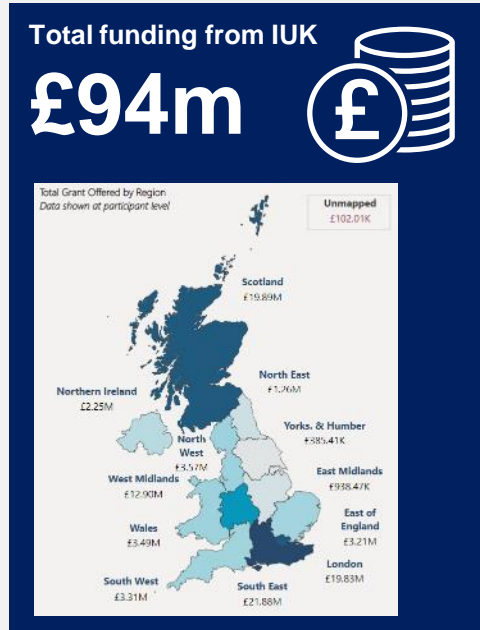


- intelligently join up and balance local energy supply and demand
- making the most of local resources, needs and opportunities
- enabling new services for users, cutting emissions and costs, and creating efficiency.



Delivery – in numbers

Since April 2018 there has been



Which has generated

93 projects
301 participants



4

Demonstrators
£35.1m

10

Detailed designs
£22.3m

16

Key Technology
Components
£4.8m

23

Data
Digitisation
£7.5m

Which has resulted in

326

Jobs retained and
created

All Data as at
28.09.22



52

Journal Publications
and Policy Papers
from EnergyREV

418 kt eCO₂
£9m

Savings projected for 2035
from 8 completed DDs

271

LAs and other
organisations on Net
Zero Go Platform

£782.6m

Realised co-investment
from match funding, equity
investments and others.

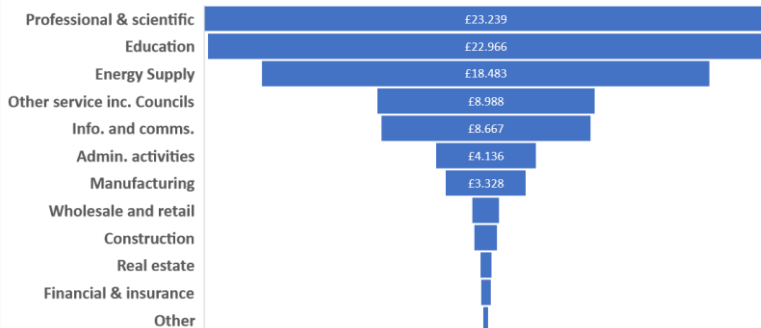
23

Intellectual Property
Registrations

72

new methods, products &
services

Grants by sector (£m)



...and 40 other projects.

And delivering levelling-up in practice



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Project Locations:



Demonstrators

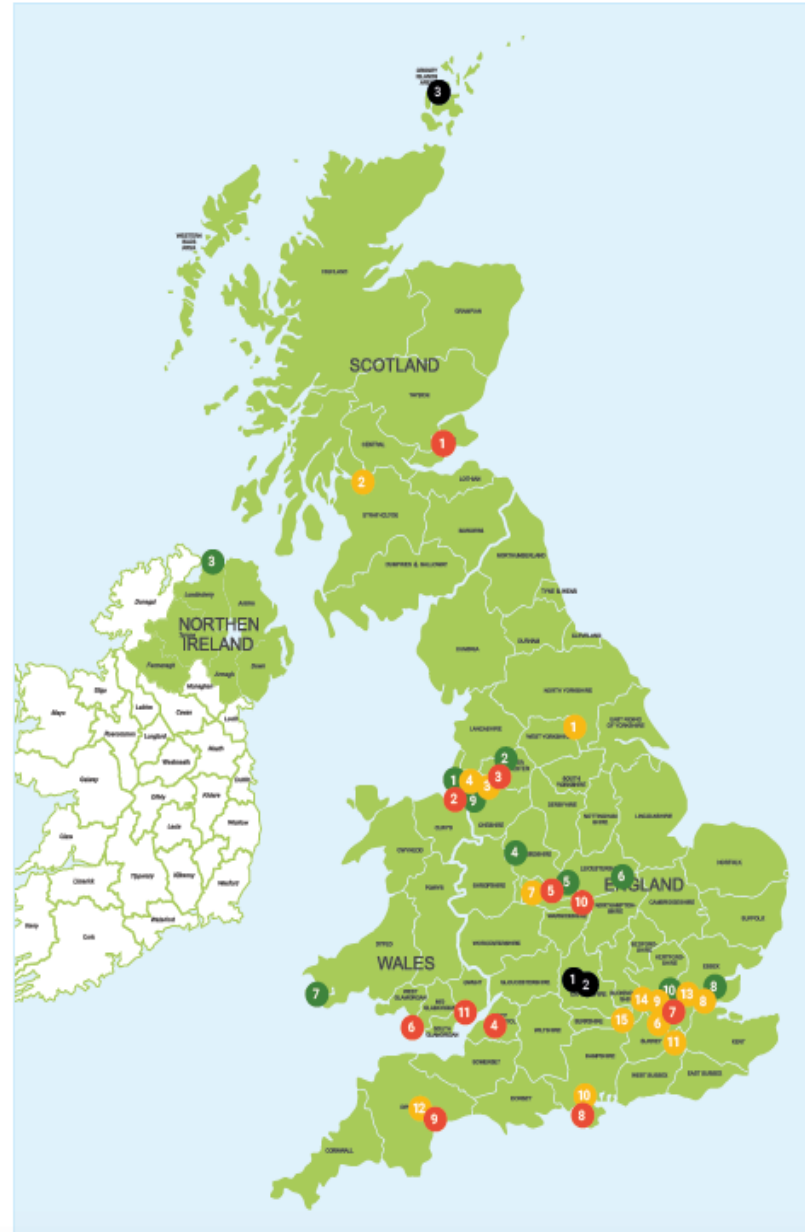
1. Project LEO
2. Energy Superhub Oxford (ESO)
3. ReFLEX Orkney

Detailed Designs

1. Multi-Vector Energy Exchange
2. Greater Manchester Local Energy Market
3. GIRONA
4. Zero Carbon Rugeley
5. West Midlands RESO
6. Peterborough Integrated Renewables Infrastructure (PIRI)
7. Milford Haven: Energy Kingdom
8. Project REMeDY
9. REWIRE-NW
10. GreenSCIES 2

Key Technology Components

1. Open Protocol Cloud Metering for Heat Networks
2. Domestic Infrastructure & Network Optimisation (DINO)
3. URBAN-X
4. v-powerChain
5. Seasonal Storage
6. BankEnergi
7. Rail-Charge
8. Hypervolt
9. CODES
10. Port Energy Systems Optimisation (PESO)



11. Maximising Grid Services from Electric Vehicles (M-GSEV)
12. Heat Networks as Flexible Grid Assets
13. EV Fleet-centred Local Energy System (EFLES)
14. SHOCENSI
15. ADVENT
16. Guru Engage

Concept Designs

1. WESLID
2. E-Port Energy
3. Greater Manchester Local Energy Market
4. Bristol Energy Smart System Transformation
5. BankEnergi
6. Intelligent Bridgend Energy System Designs
7. GreenSCIES
8. Energy Autonomous Community (Isle of Wight)
9. LEMDEx
10. DLT Micro-grid Management Platform
11. An Energy Revolution for Caldicot

There are also:

3 projects for modernising energy data access (MEDA)

9 projects for modernising energy data applications (MEDApps)

18 earlier 'fast start' projects



UK Research
and Innovation

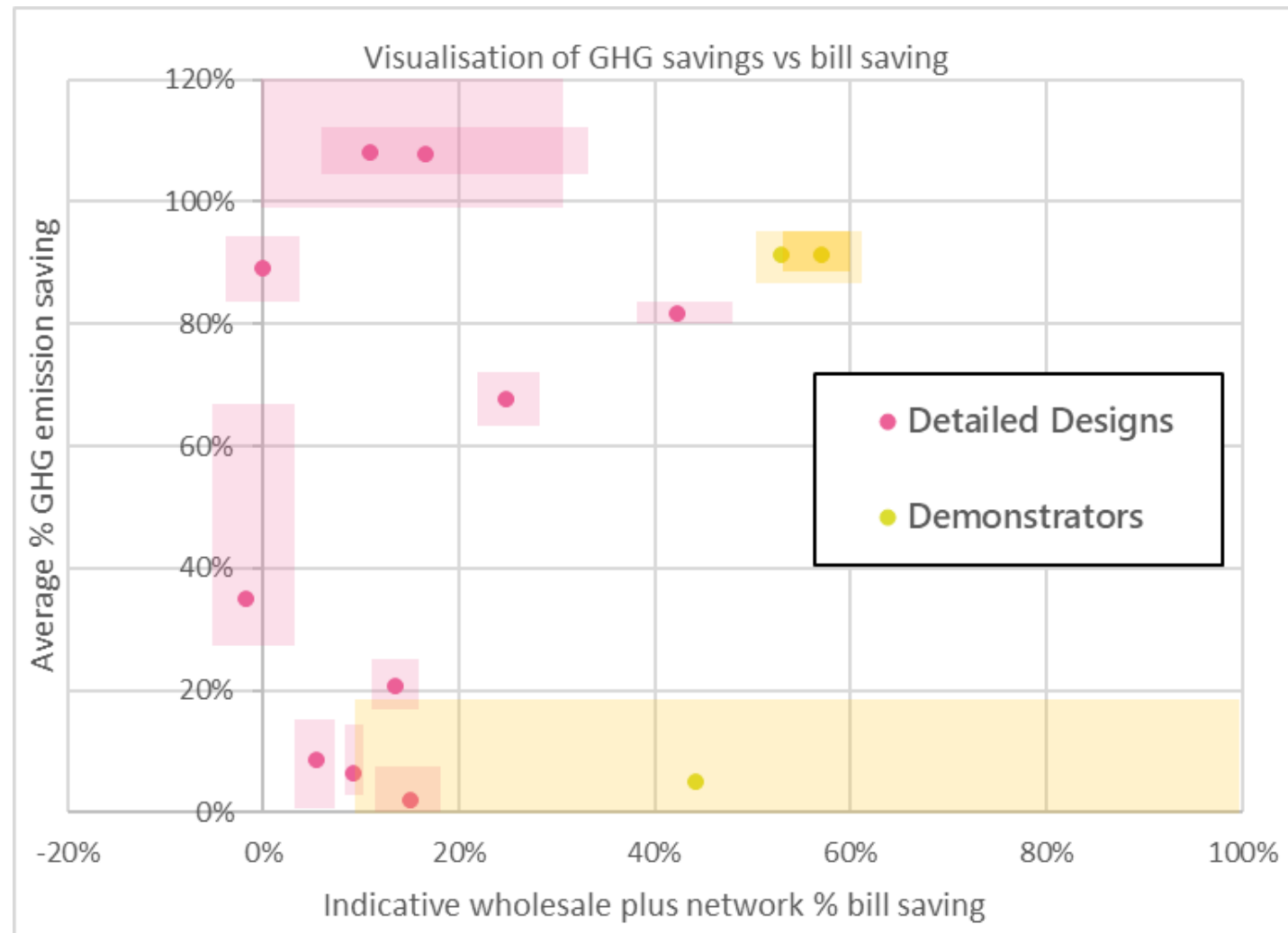
So what?

What have we learnt?

1. Yes we can!

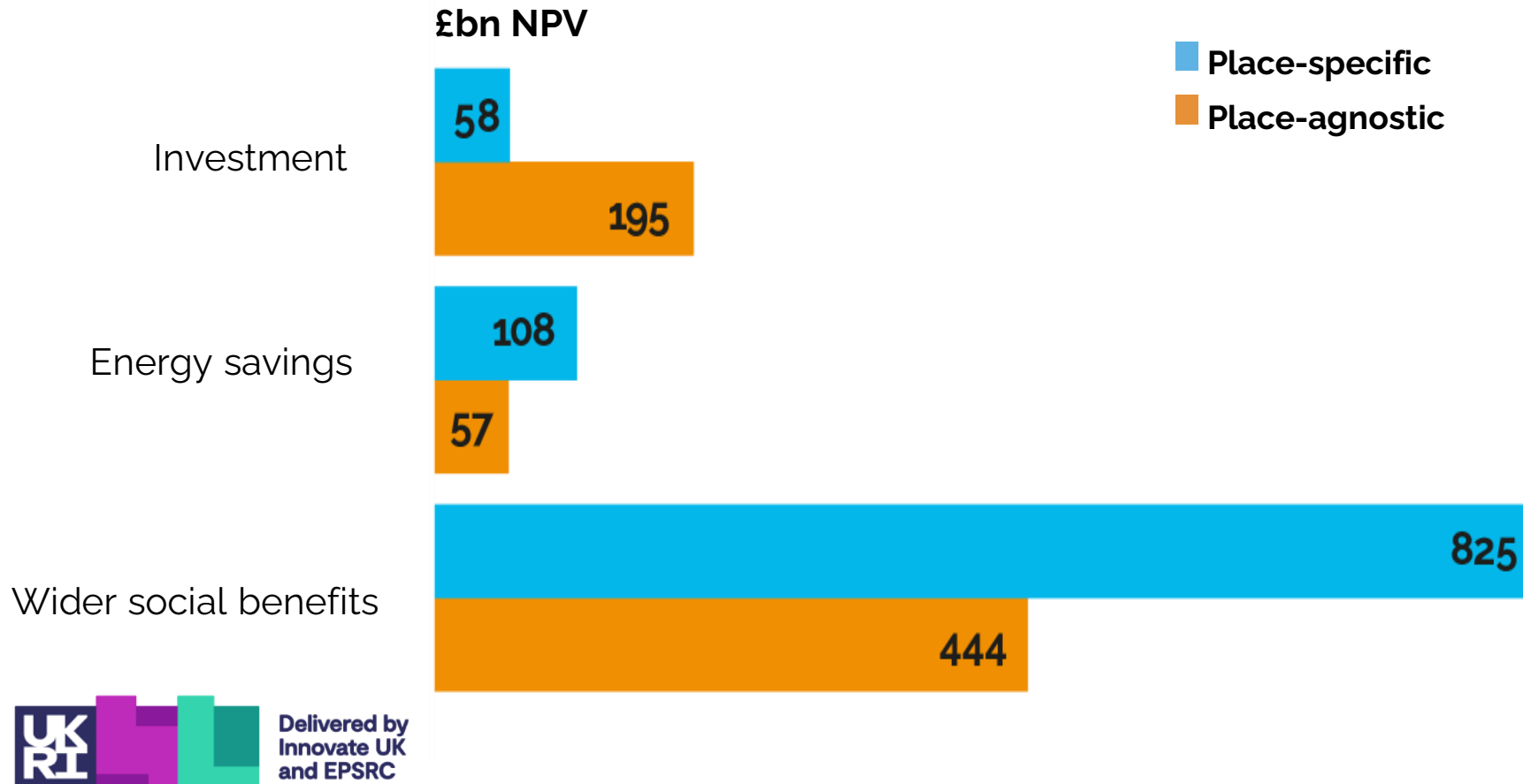


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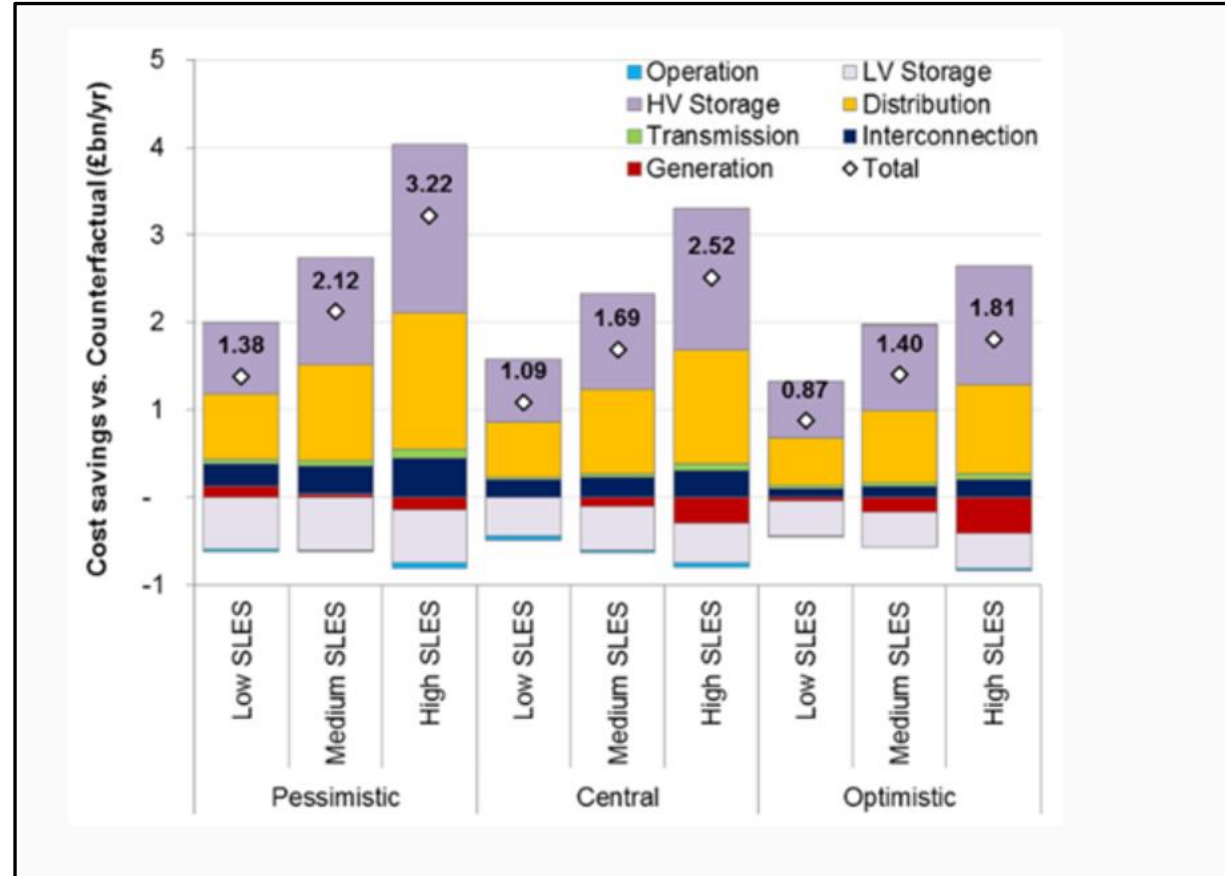
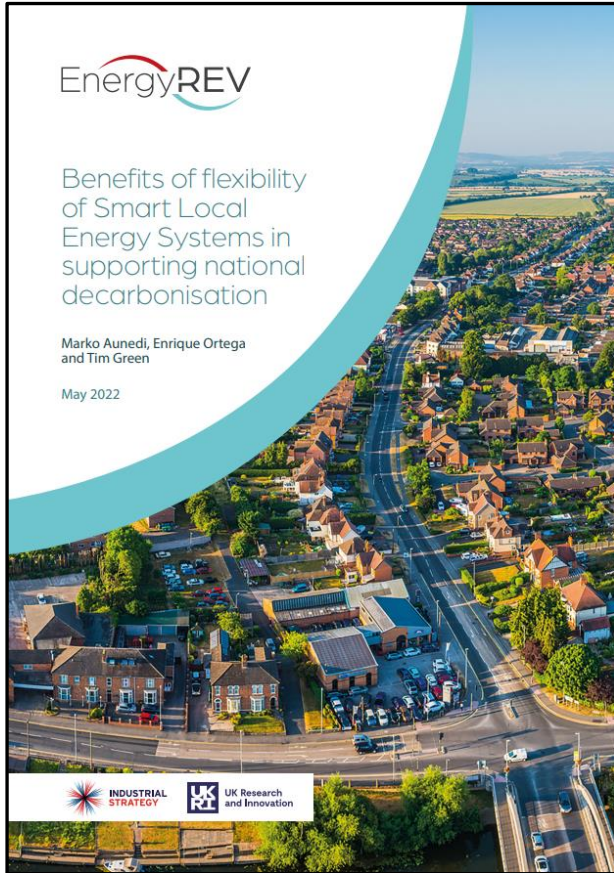


2. Creates huge benefits locally

Place-based approaches could save **£137bn** in investment cost and generate an additional **£431bn** in energy savings and wider social benefits

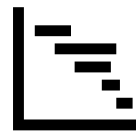


...and nationally everything else is harder and expensive without local action



But we've also learnt that securing these benefits needs concerted action from across the landscape.

Incrementality and delay will not deliver the best net zero outcomes for the UK.



Consultation

ofgem
Making a positive difference
for energy consumers

Future of local energy institutions and governance

Local NZ Plans & LAEPs



ofgem
Making a positive difference
for energy consumers


Regulation

£

Finance

UK
loo

Green Finance
Institute

3Ci

pwc

Local – National
Public - Private


Partnerships



NET
ZERO
GO



NET ZERO HUB

Skills & Capability


Department for
Energy Security
& Net Zero

ofgem


Digitalisation

Delivering a
Digitalised
Energy System

Energy Digitalisation
Taskforce
Chaired by Laura Sanda (CBE)

ofgem



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At the heart of enabling change: A national framework for local net zero delivery

Delivery Framework



System Governance

Building on the foundations of the Net Zero Strategy, clarify the respective roles of delivery ecosystem actors so that each role is attributed to the most effective level and with appropriate authority and accountability.

Portfolio Management

Building on the momentum of climate action and local area energy planning by UK places, bring a consistent methodology to integrated LCM portfolio design, management, implementation and reporting.

Capacity & Skills

Building on the Local Net Zero hub infrastructure, enhance their capabilities and services to support multi'-level local portfolios develop their plans and pipelines with Technical Assistance in parallel to national skills programme.

Funding & Financing

Building on the local mandate of the UKIB, furnish portfolio investment needs with a local Net Zero financing framework including core, borrowing, private and innovative investment instruments.



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