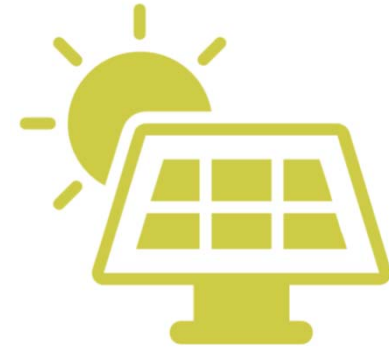




Anthony Poole
Head of Developers and Real Estate Sales

e-on

What do all these have in common?



Comfort, Sustainability, Resilience and Profitability

We focus on the people as well as the building.

Brits spend
92% of their
time indoors

Average office
worker spends 43
hours a week at
work



Mental health
and sickness
costs UK
business billions

A drop in
temperature can
lead to 20% less
employee
efficiency

Energy solutions are valuable to achieving



Lower operating costs

Reduced consumption of energy, water & waste disposal.

A positive impact on the bottom line.



Higher employee productivity

Improved working conditions and tenant satisfaction.



Improved corporate reputation

Better recruitment and retention of employees and a stronger corporate image.



Better marketability of a building

Shorter letting and sale periods.
A longer economic life.

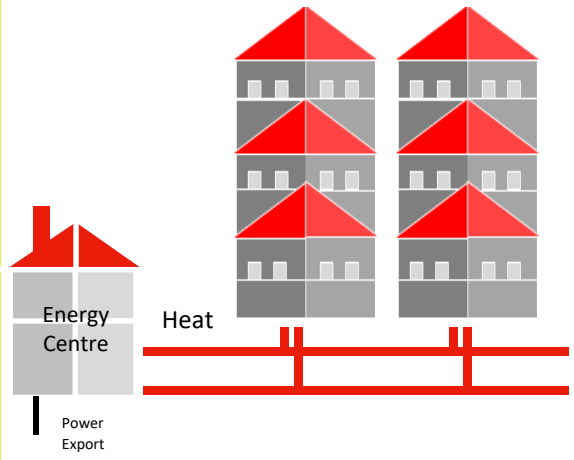


Greater resilience and lower risk

Slows rates of regulatory and physical obsolescence.
Maximises green building certifications.

Community Energy is an established business offering a Local Energy Networks solution to help cities and communities meet their CO₂ targets

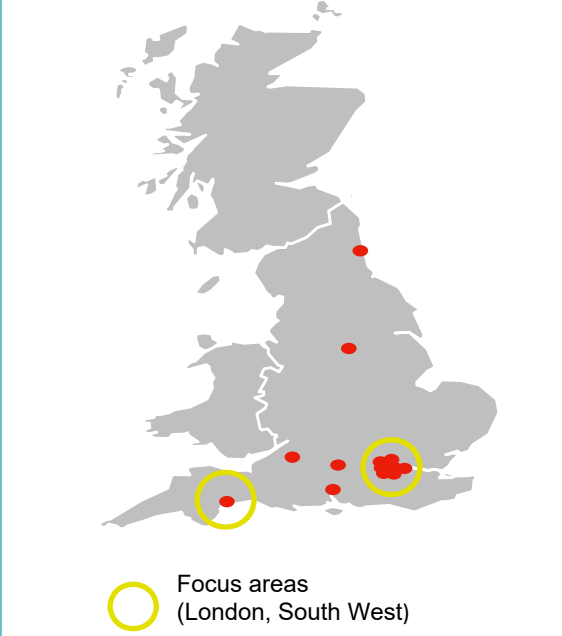
Community Energy designs, builds, funds & operates low carbon solutions allowing developers & local authorities to meet their carbon & renewable targets



Key Community Energy facts

No. of live projects	44
No. of operational connections	22k
No. of additional connections contracted	16k
Current annual heat demand (GWh) ¹	119
Forecasted annual heat demand (GWh) ²	192

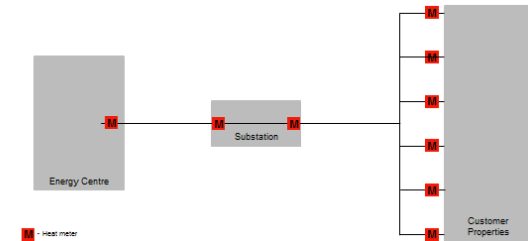
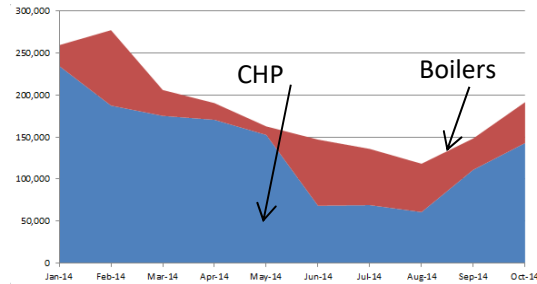
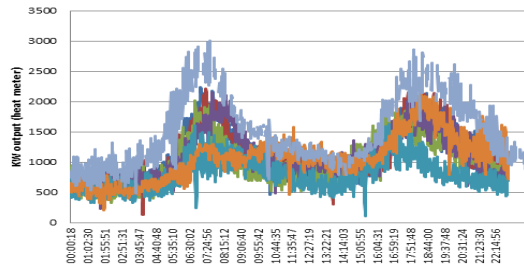
Current Portfolio



Focus areas (London, South West)

¹ Current heat demand includes Connection Fee, Right to Use projects and Citigen and Blackburn Meadow connections
² Forecasted heat demand is the average heat demand per customer pro rata to all contracted connections at project completion

Performance & optimisation



Big Data

- 13,000 Data Points monitored constantly measured and recorded
- c500 data points per site & anonymised customer data.
- Enables operation to be optimised to deliver performance.
- Fed into to optimise future designs.

Energy Centre optimisation

- Constant monitoring to ensure CHP/Biomass optimised.
- Aim to generate as little heat from boilers as possible.
- Keeping CHPs running takes constant monitoring and response to achieve availability i.e. Remote Resets, engineer despatch, repairs & service.

Site optimisation – thermal losses

- Requires constant monitoring required to maintain optimised state.
- Managing through build out.
- Interaction of user behaviour, physical assets and control.

Elephant & Castle

Size of Development: Re-development of the Heygate estate to provide c3000 residential units. Potential to supply 4500

Energy Centre Plant: 2 x 0.80MwE CHP,, 17MW gas boilers, thermal storage

Solution: NG Gas CHP injecting Biomethane offsite. District heating connecting a number of sites and private wire to Hotel. Potential to connect other sites



Energy from Renewable: 100%

Energy costs: ~15-30% saving on energy costs

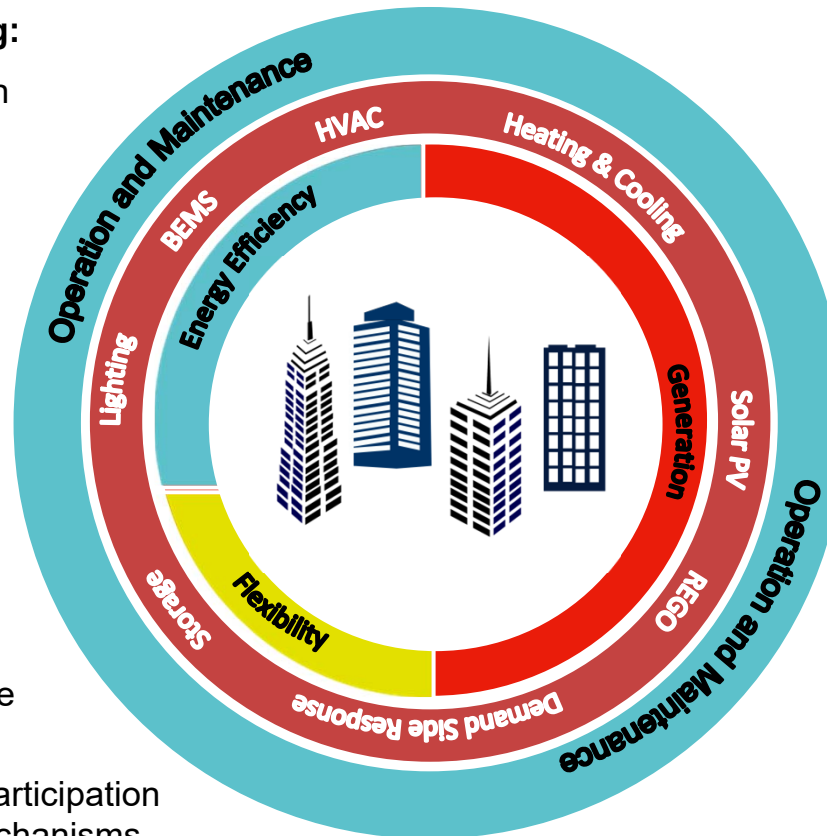
What an E.ON approach can look like...

Energy efficiency & well being:

- Remote control & optimisation of site assets for efficiency & comfort
- Data transparency & data analytics
- E.ON propriety products for lighting with integrated intelligent controls
- Integration of building's primary systems such as fire, security & access

Flexibility and resilience:

- Cost avoidance utilising onsite generation assets
- Income generation through participation in demand side response mechanisms utilising all assets



Generation:

- Heating and Cooling
- Remote operation & maintenance
- Design, installation & financing options
- Electricity supply backed by Renewable Energy Guarantee of Origin

Operation & maintenance:

- 25 year O&M contract
- Performance guarantees
- Retrofit latest technology 5-10 years following construction

Future for low carbon design

- **Electrically led** / heat pump based heating is suited to New Builds where we have high efficiency buildings
- **Heat pumps** could also be used to feed district heating networks, especially if there are waste heat sources or natural potential
- **CHP** could still be used, especially if electrically led, with energy storage
- **Energy storage solutions** are a game changer and should be incorporated in energy networks to maximise carbon savings and minimising utility costs
- **Lowering heat network operating temperature.**
- Better management of Network **Peak capacity** management
- **Hybrid networks** (Heat pumps, CHP, Energy Storage)



Why partner with E.ON?

Evaluate , Enhance , Execute and Maintain

- Early engagement is key to leverage cutting edge technology ensuring the best solution and operating strategy
- Tailored support & project management on new build & refurbishment projects at all stages.
- A proven track record and reliability.
- Scalable resources and expertise which is key to futureproofing energy infrastructure. Macro planning
- 4D's – Decentralised, Decarbonisation, Digital, Disruption
- A long term partner willing to invest in ensuring results while minimising time & resilience risk



Thank you for your time today

Find out more at eonenergy.com/solutions
or find us on **LinkedIn**



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