

Written evidence submitted by Resilience Network CIC (COM0116)

Resilience Network CIC (ResNet) is a Bristol-based community energy group developing a community-based shared domestic solar energy scheme. It has completed a funded feasibility study and is entering a business planning stage, currently aim to deliver a limited pilot on 40 homes spread across all 5 of Bristol's parliamentary constituencies during 2025 or in early 2026.

At what scale could this unlock community energy? There is no reason this scheme could not extend across the UK, with 40-50GW being the rooftop potential estimated by CPRE. If scaled steadily, ResNet's model could extend across the UK, lowering fuel bills for all by 30% or more.

There may be other possibilities, but this is one way that communities could own and run a substantial proportion of their own energy supply, in alignment with government plans to achieve net zero by 2030 using primarily solar energy, and onshore and offshore wind.

This document:

- A. Describes **the opportunity** - in **section A**
- B. Responds to the **consultation questions** - in **section B**
- C. Provides **further information** - in **section C**

A: Introduction

Resilience Network offers a bold and scalable vision for revolutionizing community energy in the UK. The government's commitment of £400 million per year to double community energy capacity is laudable, and we propose a paradigm shift to go with this: a hundredfold increase in community-owned generation by 2030, reaching 40-50 GW of rooftop solar. This submission outlines how our approach leverages government support, local collaboration, and innovative models to achieve this transformation without relying solely on government funds.

1. The Opportunity: A Hundredfold Scale-Up

- **Current State:** Community energy contributes only 400 MW to the UK's 40 GW of renewables.
- **Potential:** Rooftops in urban areas have the capacity for an additional 40-50 GW of solar, as estimated by the CPRE.
- **Our Proposal:** Scale community energy to match the UK's entire current renewable capacity by focusing on rooftop solar, empowering local communities, and reducing emissions at scale.

2. What Makes the Resilience Network Unique

- **Local Focus, National Impact:** By placing solar on rooftops, energy is generated and consumed locally, bypassing major grid infrastructure constraints and reducing transmission losses.
- **Community Ownership:** Every participant is part of a cooperative, ensuring that financial benefits stay within the community.
- **Cost Efficiency:** Our model reduces energy bills by 30-50%, with potential for further savings as systems are paid off.

- **Scalability:** We combine local pilots with a national framework, ensuring the model can expand across constituencies while addressing unique regional needs.

3. The Economic Case

- **Affordable Solar:** The cost of rooftop solar has plummeted. At current UK prices (£7,500 for a 6 kW system), installations pay for themselves in 15-20 years. With Australian-level costs (50% lower), payback periods could drop to under a decade.
- **Lower Energy Costs:** By removing the need for extensive grid transmission, rooftop solar delivers electricity directly to consumers at rates as low as 10p/kWh—potentially falling to 5p/kWh once systems are paid off.
- **Minimal Public Spending:** Government funds can focus on enabling infrastructure, policy streamlining, and initial pilot projects, while communities raise the majority of capital through cooperative models.

4. Environmental Impact

- **Emissions Reduction:** Scaling rooftop solar to 40-50 GW could offset millions of tonnes of CO₂ annually. In Bristol alone, installing solar on 90,000 roofs would cut emissions by 100,000 tonnes per year, contributing significantly to its 2030 net-zero target.
- **Electric Vehicle Integration:** Excess solar generation can power EVs, further reducing emissions from transport.
- **Resilience to 'Dunkelflaute':** Distributed solar generation paired with battery storage enhances energy security during periods of low wind and sunlight.

5. Policy Recommendations

- **Streamline Planning:**
 - Remove the 3.68 kW cap for rooftop solar without planning permission.
 - Simplify community energy project approvals to accelerate deployment.
- **Support Energy Storage:**
 - Incentivize battery storage for households and communities to maximize solar utilization.
- **Enable Third-Party Billing:**
 - Reinstate simplified mechanisms for community energy billing, ensuring transparency and fair cost allocation.
- **Invest Strategically:**
 - Use the £400 million annual funding to de-risk early-stage projects, support pilots, and provide low-interest loans for scaling up.

6. The Resilience Network Model in Action

- **Pilot Projects:** Launch in five constituencies (one per Bristol MP) with clusters of 100 homes, demonstrating local impact and scalability.
- **Collaborative Framework:** Our network brings together solar installers, legal experts, grid operators, and co-ops to deliver end-to-end solutions.

- **Immediate Benefits:** Early adopters see reduced bills, communities retain economic benefits, and MPs witness tangible results in their constituencies.

7. Conclusion

Resilience Network offers a clear path to a just energy transition. By combining community ownership, scalable models, and government support, we can achieve a hundredfold increase in community energy capacity by 2030. This vision aligns with national climate goals and empowers communities to take charge of their energy future.

Call to Action

We urge the government to adopt our recommendations, support pilot projects, and engage with Resilience Network to unlock the transformative potential of community-owned energy.

Further information is available on ResNet's Website – <http://resnet.org.uk>

B: Responses to Committee Questions

1. How could the Local Power Plan to be produced by Great British Energy build upon existing community energy support schemes?

The Local Power Plan should prioritize rooftop solar and urban renewable projects, as highlighted by the Council for the Preservation of Rural England's (CPRE) findings. With the potential to install 40-50 GW of solar in urban areas, the plan should enable joint initiatives between local authorities and community energy groups, integrating funding streams like the Community Energy Fund to maximize impact.

2. How should the energy market and licensing regulations be reformed?

Energy market reforms should simplify access to grid connections for community projects and promote local energy markets. Regulatory changes should allow energy trading within local substations without grid transmission charges, while enabling projects to exceed the current 3.68 kW rooftop solar limit without complex permissions.

3. How could existing government support mechanisms provide community energy projects with more financial certainty?

The Smart Export Guarantee (SEG) could be expanded to medium-scale generators and offer financial incentives for local balancing. The government should also establish mechanisms to de-risk community energy investments, ensuring predictable returns for community groups and funders.

4. What are the regulatory solutions to minimize high costs and delays for grid connections?

Adopting 'shallow connection' models, where only direct connection costs are charged to generators, can reduce financial barriers. Additionally, prioritizing grid upgrades in community energy hubs will streamline project implementation.

5. Should the local benefits of community energy projects be recognized in planning decisions?

Yes, community energy projects should be recognized as contributing to economic equity, local resilience, and carbon reduction. Formal recognition in planning decisions will drive investment and engagement.

6. What should be the role of Neighbourhood Plans and Local Area Energy Plans?

Neighbourhood and Local Area Energy Plans should serve as frameworks for integrating community energy projects. These plans should include specific targets for renewable energy adoption and storage, aligning with national decarbonization goals.

7. What is the potential for community energy to incentivize consumer demand flexibility?

Community energy projects, especially those integrating solar with storage, can effectively flatten demand peaks. Successful examples like the Bethesda Home Hub demonstrate the potential of local energy markets to incentivize demand flexibility, aligning consumption with generation patterns.

Conclusion

The Resilience Network urges the government to embrace these recommendations to unlock the transformative potential of community energy. By leveraging rooftop solar, supporting local energy markets, and fostering collaboration, the UK can achieve its net zero targets while empowering communities and reducing energy costs.

C: Further Information

1. Proven Track Record and Strategic Partnerships

Resilience Network's vision is built on a foundation of experience and collaboration:

- **Track Record:** Our team has previously delivered impactful projects such as *Lockleaze Loves Solar*, which demonstrated the feasibility of community-led solar energy projects on a smaller scale.
- **Partnerships:**
 - *Bristol Energy Co-op:* Expertise in community share raises and solar installations.
 - *Energy Local:* Proven systems for community energy sharing through household billing.
 - *Zenergy:* Comprehensive solutions for financing, solar installation, and billing integration.

- **Local Authorities:** Ongoing engagement with councils and MPs, including Bristol's Green-led council and key advocates like Carla Denyer.
- **Expert Collaborations:** Contributions from energy engineers like Dr. Andrew Crossland, who have pioneered solar and storage projects globally, bring unparalleled technical insight to the Resilience Network.

2. Roadmap to 2030

Our phased approach ensures a sustainable and scalable roll-out:

1. **2025:** Launch pilot projects in Bristol's five constituencies, each with around 10 homes. These clusters will test our community energy co-op model, third-party billing systems, and integration with battery storage.
2. **2026-2027:** Expand to additional regions, focusing on urban centres with high rooftop solar potential. Aim to install 2-3 GW of community-owned solar by the end of this phase.
3. **2028-2030:** Scale nationally, leveraging lessons from pilots and early expansions. Reach 40-50 GW of rooftop solar, ensuring every community can access affordable, clean energy.

3. Addressing Risks and Barriers

We recognize the challenges in scaling community energy and have proactively developed strategies to mitigate risks:

- **Grid Constraints:** By focusing on local consumption and storage, we minimize pressure on the national grid.
- **Upfront Costs:** Cooperative financing ensures inclusive participation, even for those without the means to invest upfront.
- **Policy Support:** Our recommendations for streamlined planning and billing align with government priorities, reducing administrative barriers.
- **Community Engagement:** We prioritize outreach and education to build trust and participation at every stage.

4. A Just Energy Transition

Central to our vision is the principle of fairness:

- **Affordability:** Significant reductions in energy costs will benefit low-income households, tackling energy poverty.
- **Inclusivity:** Renters, social housing tenants, and those without capital will have equal access to the benefits of rooftop solar through cooperative ownership.
- **Empowerment:** Communities will have a direct stake in their energy systems, fostering resilience and self-reliance.

5. Amplifying Impact Beyond Energy

The Resilience Network model is not just about energy generation—it's about community transformation:

- **Economic Revitalization:** Keeping energy savings local stimulates local economies.
- **Skills and Jobs:** The installation and maintenance of solar systems will create green jobs, supporting the UK's clean energy workforce.
- **Climate Leadership:** Achieving this vision positions the UK as a global leader in community energy innovation, inspiring other nations to follow suit.

6. Specific Asks for Government Action

To unlock the potential of this transformative vision, we request:

1. **Policy Alignment:** Adopt our recommendations for streamlined planning, expanded grid permissions, and supportive billing systems.
2. **Funding Support:** Allocate a portion of the £400 million annual funding to pilot projects that demonstrate the scalability of community-owned solar.
3. **Legislative Backing:** Strengthen the role of community energy co-ops in national energy strategy.
4. **Collaboration:** Partner with Resilience Network and other community energy leaders to refine and implement scalable solutions.

Conclusion: A Transformative Vision for the UK's Energy Future

Resilience Network is ready to lead the way in making community-owned energy a cornerstone of the UK's clean energy transition. By combining bold ambition with proven strategies, we can achieve a hundredfold scale-up of community energy by 2030—delivering financial, environmental, and social benefits to millions of households.

We invite the government to join us in this transformative journey, ensuring that every rooftop becomes a symbol of resilience, sustainability, and community empowerment.

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