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# Prospering Together: Engaging Communities in the Energy Revolution

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Prospering from the Energy Revolution was a five-year innovation programme, funded by UKRI and delivered by Innovate UK and EPSRC, to trial and develop smart local energy systems. From 2018 to 2023 it invested around £104m in over 90 projects, involving more than 300 organisations. This report explores how projects approached communication, engagement and participant acceptance, and what lessons can be learned for future projects and programmes.

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This report explores some of the diverse ways in which engagement and communication has been undertaken across the 90+ projects in the Prospering from the Energy Revolution (PFER) programme. It unpacks how over the past five years, participant acceptance of Smart Local Energy Systems (SLES) has been achieved and what lessons can be learned to take forward into future projects and programmes.

Our energy system is transforming, but people do not want to have things 'happen' to them, with decisions having already been made about where their energy will come from, or how it will be managed. Citizens have an effective veto on net zero delivery; imposing solutions won't work. This was so clearly demonstrated recently in Whitby, with the scrapping of a hydrogen village trial due to overwhelming local opposition.

Consent and active participation are critical to so much of the net zero transition, which will transform how we heat our homes, how we travel about, and when and how we use electricity. Our energy use will be managed in smarter and more integrated ways, for example, automating heating and car charging, to balance our grid and make best use of renewable energy. Trusting and consenting to these changes requires a clear understanding of the benefits, and what's important to people locally; what works in Manchester might not work in Rugeley. This is why early and ongoing engagement with communities is so important and why this report seeks to understand the lessons that can be learned from how PFER worked with people in places.

PFER has witnessed unprecedented changes to the UK political, social and energy landscape in the past five years since its inception - from the passage of the Climate Change Act through a pandemic, Brexit, a cost of living crisis and the invasion of Ukraine. It has seen four Prime Ministers in office, each with their own vision for the future energy system.

Enduring these challenges, PFER has continued to explore how 'new, smarter, local energy approaches can deliver cleaner, cheaper energy services that would lead to more prosperous and resilient communities, and a more efficient energy system.'<sup>1</sup> PFER's lessons from real-world implementation and evaluation of SLES will be important to ensure that place-based delivery of clean, smart and cheaper energy can be expanded across the UK. This report's findings highlight that engagement, when prioritised and given adequate resources, is fundamental to a successful outcome. This learning about engaging people in their places is perhaps as important to the future energy system as the technical and technological interventions will be in the long term, because people need to be invested in their future and the transformations that will take place in their homes, businesses and communities.

Detailed case studies and several examples of creative, expansive and innovative engagement are outlined in the report to demonstrate that building consent for and acceptance of SLES should be an important part of any project because it enables results to be more impactful and for communities to buy in to a cleaner, more resilient energy future.

<sup>1</sup> <https://apply-for-innovation-funding.service.gov.uk/competition/158/overview>



## Lessons for future innovators and projects



**Engage early** - community and stakeholder engagement should be included in project plans from the outset.



**Trusted intermediaries** - Community energy organisations and local authorities played key roles in some PFER projects as the interface between the project and citizens; they are widely recognised as being more trusted than energy suppliers. Encouraging engagement and partnering with organisations that have ongoing interaction with communities in the bidding process for new funding is recommended.



**Engagement takes time** - engagement should be ongoing, ideally beyond the life of time-bound projects. Projects that had existing energy communities where citizens were already aware and engaged didn't need to do as much educational groundwork as those that didn't. It is important to keep people updated on progress, and provide opportunities to feedback.



**Resource and skills** - effective engagement needs to be adequately budgeted for, in terms of ensuring that the projects have both dedicated engagement staff with the right skills, and also resources to pay for stakeholder time and/or incentives.



**Consent** - not all participants will want to actively engage in projects, but it is crucial that all communities and individuals affected by changes to the energy system are given clear information and the opportunity to voice concerns. If the energy system is to benefit from full demand side flexibility, citizens will need to agree to having heavy loads in their households managed, which is only effective if automated. Householders need to maintain control but will ultimately be contracting with their supplier or a third-party aggregator who will manage non-time critical loads for them, for example, when their car is charged or water is heated.



**Fairness and a just transition** - Community energy organisations, the third sector and local authorities often act as 'the social conscience' in our energy system by highlighting the plight of those in fuel poverty and considering how to address social hardship caused by inadequate housing and the high cost of energy. This vital role needs to be recognised and resourced.



**Early adopters** - engaging with those individuals who are keen to become actively involved, learn more, or go first, can have important snowballing or peer-learning impacts across the wider project, encouraging the early majority to follow.



**Space for creativity** - try new things and look to different disciplines for inspiration. The third sector climate campaigning organisations are using much more innovative and creative engagement techniques than the energy sector, including arts and cultural initiatives to engage people and encourage diversity.



**It's not all about energy** - many stakeholders are values-driven and therefore energy-based information is an ineffective way to engage them. Most people care about where they live so engaging them in conversations about how their place could be better in future can be effective.



**...but it's important to share the energy benefits** - focusing on solutions for the immediate worries of households and emphasising the impact that SLES will have on consumers' bills have both been highlighted as important in building the appeal and public awareness and support for SLES. <sup>2</sup>



**Plan for things going wrong** - thinking about what to do when things don't go to plan is essential. Suppliers may drop out, people may be unhappy with the pilot and project partners need to be ready to respond. People may have questions - what happens at the end of a trial, do the householders own the assets? Do they get removed? Being able to give clear answers is important.

<sup>2</sup> [https://iuk.ktn-uk.org/wp-content/uploads/2023/03/PUBLIC-AWARENESS-AND-APPEAL-OF-SMART-LOCAL-ENERGY-SYSTEMS\\_FINAL.pdf](https://iuk.ktn-uk.org/wp-content/uploads/2023/03/PUBLIC-AWARENESS-AND-APPEAL-OF-SMART-LOCAL-ENERGY-SYSTEMS_FINAL.pdf)



## Lessons for funders/ programme designers



**Cross-project learning** - a collaborative approach to information exchange and feedback fosters a sense of camaraderie within a consortium and enables more informed decision making, streamlined processes, and greater efficiency. Cross project learning in future programmes would help accelerate the energy transition.



**Enabling effective partnerships** - bringing diverse stakeholders together in consortium can come with operational barriers. Enabling a better knowledge of how diverse stakeholders (e.g. local authorities) 'work' before the project commences, can enable more effective stakeholder engagement.



**Feedback and results** - finding ways of engaging stakeholders with the results, and sharing the findings of the projects as well as with the process is important. People have dedicated time and support to the process and sharing outcomes and lessons and acknowledging the role they have played is rewarding and may encourage further engagement beyond the project.

## Effective engagement methods used across the Prospering from the Energy Revolution programme



**Listen** – Listening to what people care about and framing engagement around this can be more effective than presenting a solution. Knowing more about community interests and what resonates with particular people can help tailor information provision and the wider project design to maximise interest and engagement.



**Explain simply** - people need simple information in formats they use to ensure they understand technical information. Engaging people earlier in the process may enable the development of resources and materials that are even easier to understand.



**Show me something** - having something visual to enable discussion and understanding has had a positive impact on engagement across the programme.



**One size doesn't fit all** – use different formats to engage a diverse population. Digital engagement won't work for those not online, and events during the working day won't work for people at work etc.



**Taking the time/having a cuppa** - people are busy, but taking the time to meet with them and get to know them has been a successful strategy.



**Meet you where you are** - meeting in familiar surroundings enables engagement of diverse stakeholders in different areas of the project. Meeting people where they are also extends to understanding the diversity of the audience and tailoring approaches accordingly.



**Dedicated social media/engagement resource** - genuine and impactful two-way dialogues can be initiated via social media, but time and resources need to be dedicated to it so that it can be done effectively.



## Other lessons



**COVID-19** - a lot of plans needed changing due to the impact of the pandemic on outreach. But a positive knock-on effect was that this enabled more use of virtual tools, which in turn broadened the reach of the engagement in some projects. This engagement would not have been used in the same way otherwise, despite being available.



**Engaging with the project team** - engaging with stakeholders may not be seen as a priority by people in technical roles, and the approaches most successful for communities, may be incompatible with conventional ways of industrial or academic partners. Highlighting the successful outcomes of the PfER programme that were brought about by the user-centric methodologies could help overcome or remove similar future barriers.



**Young people** - Many projects realised the importance of engaging with young people after they had commenced and this element of dialogue had to be brought in subsequently. The next generation is key to the delivery of the energy system transformation; they need to understand and be inspired by the challenges and opportunities that lie ahead. Future projects should be developed with this element in the design phase as it may shape how the project is carried out.



**Positive place-based visions for the future** - people are inherently connected to where they are and can be mobilised around a positive vision for the future of where they live and work. SLES are a key part of realising places where we have cleaner air, healthier homes, more sustainable travel options. Place-based approaches enable people to have a say in the transformation of their communities.

It is evident that when engagement is given sufficient resources and thoughtful consideration, it significantly enhances the effectiveness of a project and participant acceptance of the energy system. By actively involving people in the places where projects are implemented, they can harness and develop a sense of belonging and ownership in shaping the collective future.

The Accelerating Net Zero Delivery report by PWC for PfER demonstrates that a place-based approach delivers double the energy savings and social benefits for a third of the cost, but critically this can lead to outcomes that are people really care about, including warmer healthier homes, cleaner greener jobs, lower energy bills and cleaner air.<sup>3</sup> It's opportunities like these that need to form the basis of real participation in our energy transition going forward, if we are to create more prosperous and resilient communities, and a more efficient energy system.

We need the consent and trust of people and it is therefore crucial to ensure that stakeholders understand the technological advancements driving the projects and that they are included from the outset in the process of design and implementation. People's opinions and perspectives hold significant value; many aspire to be active participants in decision-making rather than passive recipients of predetermined outcomes - and they can help deliver better projects and impacts as a result.

<sup>3</sup> <https://www.ukri.org/publications/accelerating-net-zero-delivery/>



# 1. Introduction

Smart local energy systems can only be effective if their development involves the people that will be using them. In order for community stakeholders to be a part of the process, the systems need to be developed collaboratively. Building consent is vital to ensure that stakeholders understand and are empowered by the energy transition and don't feel like things are just happening to them. This report presents an overview of how the different projects in the Prospering from the Energy Revolution (Pfer) programme incorporated engagement and consent building into their activities.

Pfer was announced in the 2017 Industrial Strategy as a challenge fund for business and researchers to work with local organisations to accelerate innovation in smart local energy systems (SLES). One of the project evaluation criteria was the **participant acceptance** of the SLES designs.<sup>4</sup> **This report explores the engagement that has taken place across the programme with a broad spectrum of participants and stakeholders, to uncover some specific learnings from how participant acceptance has been sought, as well as broader lessons that can be taken forward into SLES development and future challenges and programmes that Innovate UK oversee.**

Participant acceptance is important because people need to buy in or consent to the changes to the energy systems that are necessitated by climate change and that will be required to shift towards cleaner energy. Because SLES enable more dynamic management of the energy system, consent and trust within communities is a key factor to their success. Without adequately explaining, involving and building consent amongst people, the changes that are required could be met with uncertainty and resistance.

People do not want to have things 'happen' to them, with decisions having already been made about where their energy will come from, or how it will be managed. And this is why early and ongoing engagement with communities is so important and why this report seeks to highlight the lessons that can be learned from how Pfer worked with people in places.

It is important to note that this report is not an exhaustive look at all of the engagement interventions that have been undertaken. Nor is it focused on the specific details of 'what' each project was delivering. Instead it considers a selection of activities that were undertaken and focuses on 'how' people were informed of/engaged in/ involved with the process, to understand the role of stakeholder engagement, active participation and agency in the successful implementation of SLES.

Looking at project activities, speaking with project team members and drawing on written output from across the programme, the report highlights the methods that have been utilised to work with communities on place-based energy transformation. It identifies some creative ways in which the projects have been delivered, as well as areas where more engagement could have been undertaken. It builds on previous research relating to engagement across the programme, which looks into stakeholder and user groups in detail.<sup>5</sup>

This report has been produced to capture insights from across the programme to inform future activity. Taking these insights collectively, it offers some general lessons learned from across the programme, as well as some specific recommendations for Innovate UK to take forward into the engagement activities of subsequent projects, particularly the Net Zero Living project, which kicked off in November 2022.

## Prospering from the Energy Revolution

Engaging over 300 organisations, with a budget of £104 million, the five year programme (2018-2023) has demonstrated across over 90 projects that SLES can provide clean and more affordable energy, while attracting investment and creating high-value jobs.

### The projects include:

-  3 full-scale demonstrators
-  11 concept design projects
-  10 detailed design projects
-  16 projects on key technology components
-  26 projects on energy data access, digitalisation, open-source solutions and apps
-  17 earlier 'fast start' projects

Pfer set out to prove that *'new, smarter, local energy approaches can deliver cleaner, cheaper energy services that would lead to more prosperous and resilient communities, and a more efficient energy system.'*<sup>6</sup>

<sup>6</sup> <https://apply-for-innovation-funding.service.gov.uk/competition/158/overview>

<sup>4</sup> <https://es.catapult.org.uk/report/public-awareness-and-appeal-of-smart-local-energy-systems/#:~:text=Public%20awareness%20and%20appeal%20of,the%20public%20acceptance%20of%20SLES.>

<sup>5</sup> <https://www.energyrev.org.uk/outputs/insights/how-can-smart-local-energy-systems-projects-and-policies-engage-more-effectively-with-the-public/>; <https://www.sciencedirect.com/science/article/pii/S0301421522004980#fn6>



## What are SLES?

Smart local energy systems are place-based initiatives which bring together a range of energy issues, typically including heat, power and transport, to reduce emissions in an integrated way, while promoting local jobs and business growth, and more prosperous and resilient communities.<sup>7</sup>

<sup>7</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1003778/smart-systems-and-flexibility-plan-2021.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1003778/smart-systems-and-flexibility-plan-2021.pdf)



The following excerpt was taken from a PfER participant briefing, which is useful to understand the programme's framing of engagement:

*User engagement can happen through a multitude of ways, including informing (media or social media), communicating (events, workshops, presentations), involving (direct interaction, e.g. consultation, training, drop-in sessions), empowering (allowing users to take more control over their energy), and technical means (online dashboards and apps, gamification) (Gupta and Zahiri, 2020).<sup>8</sup>*

The case studies in this report below will provide more information on how these sorts of interactions took place within the PfER programme.

<sup>8</sup> Hardy, J., Morris, M., Ford, R. and Bray, R. 2022. Decision Theatre participant briefing. Energy Revolution Research Centre, Strathclyde, UK. University of Strathclyde Publishing. [https://www.energyrev.org.uk/media/1991/energyrev-decisiontheatre\\_annex\\_final\\_202207.pdf](https://www.energyrev.org.uk/media/1991/energyrev-decisiontheatre_annex_final_202207.pdf)

## The UK energy policy landscape

PfER has witnessed unprecedented changes to the UK political, social and energy landscape in the past five years since its inception - from the passage of the Climate Change Act through a pandemic, Brexit, a cost of living crisis and the invasion of Ukraine. It has seen four Prime Ministers in office, each with their own vision for the future energy system. It is important to contextualise the programme in these changing dynamics. It is possible to trace the Government's commitments to the programme's aims and objectives over the past five years, though the framing has shifted somewhat.

Following her Industrial Strategy<sup>9</sup> in 2017 - in which PfER was announced 'as a means of developing the smart systems that could shift to clean, affordable and renewable energy' - Prime Minister Theresa May enshrined a mandatory commitment to reach Net Zero by 2050 into UK law in 2019.<sup>10</sup>

Applications were encouraged to the PfER challenge fund as SLES designs were identified as an important missing link which can prove the benefits of locally integrated systems:

*"PfER ISCF aims to prove by 2022 that new, smarter, local energy approaches can deliver cleaner, cheaper energy services. They can do this by integrating new technologies, smart systems, market solutions and consumer engagement into business models that are investable in the long term. This will lead to more prosperous and resilient communities, and a more efficient energy system."<sup>11</sup>*

There have been major shifts in Government energy strategy subsequently.<sup>12</sup> In 2021, the Net Zero Strategy<sup>13</sup> identified PfER as a priority for local energy, and the Smart Systems and Flexibility Plan stated that the government will work with industry to closely monitor learnings from the programme through to its end in March 2023 and work with key organisations to ease barriers to the delivery of smart, local energy solutions.<sup>14</sup> With the Russian invasion of Ukraine and the cost of living crisis hitting in 2022, the British Energy Security Strategy<sup>15</sup> shifted the energy policy discourse, with explicit focus on SLES somewhat diminished, in favour of an emphasis on 'energy security' - shoring up domestic supplies of energy - including oil and gas supplies.

<sup>9</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/664563/industrial-strategy-white-paper-web-ready-version.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/664563/industrial-strategy-white-paper-web-ready-version.pdf)

<sup>10</sup> In an amendment to the 2008 Climate Change Act

<sup>11</sup> <https://apply-for-innovation-funding.service.gov.uk/competition/155/overview#supporting-information>

<sup>12</sup> Ten Point Plan, 2020 Energy White Paper, Transitioning to a net zero energy system: Smart Systems and Flexibility Plan 2021, Net Zero Review 2021, Hydrogen Strategy, Heat and Buildings Strategy, British Energy Security Strategy, Powering Up Britain, Responding to the Independent Review of Net Zero's Recommendations

<sup>13</sup> <https://www.gov.uk/government/publications/net-zero-strategy>

<sup>14</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1003778/smart-systems-and-flexibility-plan-2021.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1003778/smart-systems-and-flexibility-plan-2021.pdf)

<sup>15</sup> <https://www.gov.uk/government/publications/british-energy-security-strategy/british-energy-security-strategy>



This framing has continued in the subsequent Growth Plan<sup>16</sup> in 2022, and the Powering Up Britain Strategy<sup>17</sup> in 2023. Whilst reference to SLES is missing in Powering Up Britain, it states that:

*“The government will incorporate flexibility and smart technologies into energy efficiency and heat policies, including regulations, assessment methodologies, subsidy schemes and market mechanisms.”<sup>18</sup>*

This change of framing is significant because the emphasis initially placed on people, essentially the resilient communities and engaged consumers that were identified as important, is less prominent than at the outset of the programme. But as this report highlights, the participants in the projects across PfER are fundamental to their success. The disconnect between place-based delivery and national policy needs to be addressed.

PfER’s lessons from real-world implementation and evaluation of SLES will be important for these activities to be implemented successfully - including the insight related to participant acceptance. Findings highlight that **engagement, when prioritised and given adequate resources, is fundamental to a successful outcome.** This learning shows that engaging people in their places is perhaps as important to the future energy system as the technical and technological interventions will be in the long term because people need to be invested in their future and the transformations that will take place in their communities.

<sup>16</sup> <https://www.gov.uk/government/publications/the-growth-plan-2022-documents>

<sup>17</sup> Powering up Britain is a reimagining of the Net Zero Strategy produced to respond to a legal challenge about the lack of implementation detail in the 2021 version that [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1147340/powering-up-britain-joint-overview.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1147340/powering-up-britain-joint-overview.pdf)

<sup>18</sup> [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1147340/powering-up-britain-joint-overview.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1147340/powering-up-britain-joint-overview.pdf)

## 2. Changing dynamics – active engagement

Since 2018, the broader policy landscape has also continually shifted. Since the beginning of the PfER project, Brexit, the Russian invasion of Ukraine and increased cost of living are all landscape changes that have had an impact on the energy system, but also on how it is perceived by businesses, communities and households. Other significant developments have also played a role in altering how climate change is considered by a broader public.

In late 2018, the UK’s first Climate Emergency motion was passed in Bristol, creating a significant wave of local commitment to decarbonisation, with over 340 councils following suit.<sup>19</sup> This development has been followed by several local authorities seeking to engage their residents in developing and planning for the delivery of action plans to meet the targets in their emergency declarations.

In Spring 2020, Climate Assembly UK brought together 100+ people from all ‘walks of life and of all shades of opinion to discuss how the UK should meet the UK’s 2050 legally binding net zero target.’<sup>20</sup> Meeting over six weekends, they heard balanced evidence on the choices the UK faces, discussed them, and made recommendations about what the UK should do.

Their final report was published on Thursday 10 September 2020.<sup>21</sup> Similar local conversations have enabled citizen participation in the formation and development of climate plans in several areas across the country ( e.g. Leeds Climate Change Citizens’ Jury/Big Leeds Climate Conversation, Oxford Citizens Assembly on Climate Change, Lancaster People’s Jury on Climate Change, Devon Net Zero Citizens’ Assembly).

Proponents of deliberative democracy/participatory engagement have long discussed the benefits of engaging people in the decisions that affect them, giving them agency and ensuring that things don’t just ‘happen’ to them.<sup>22</sup> There is an increasing understanding in the energy and climate domains - brought about in part through these high profile, significantly resourced public engagement activities - that there is a legitimate need for diverse community stakeholders to be involved in making place-based decisions about addressing climate change.<sup>23</sup> For SLES to deliver dynamic changes to the energy system that can decarbonise and decentralise it, people either need to engage with, or at least consent to its development. The next section of the report explores how active engagement took place across the PfER programme.

<sup>19</sup> <https://cape.mysociety.org/>

<sup>20</sup> <https://www.climateassembly.uk/>

<sup>21</sup> <https://www.climateassembly.uk/>

<sup>22</sup> e.g. Fournier P (ed.) (2011) *When Citizens Decide: Lessons from Citizen Assemblies on Electoral Reform*. New York: Oxford University Press

<sup>23</sup> Sandover, R., Moseley, A., & Devine-Wright, P. (2021). Contrasting Views of Citizens’ Assemblies: Stakeholder Perceptions of Public Deliberation on Climate Change. *Politics and Governance*, 9(2), 76–86. doi: <https://doi.org/10.17645/pag.v9i2.4019>; The messy politics of local climate assemblies Lewis, P., Coxcoo, R., Ainscough, J., Willis, R. 7/06/2023 In: *Climatic Change*. 176, 10 p.; Deliberative Democracy and the Climate Crisis Willis, R., Curato, N., Smith, G. 31/03/2022 In: *Wiley Interdisciplinary Reviews: Climate Change*. 13, 2



## 3. Engagement in PFER

### Engagement approaches

Engagement between project teams and stakeholders can play a crucial role in achieving successful outcomes. One of the fundamental distinctions in approach lies in one-way versus two-way communication. Both are important but serve distinct purposes.

One-way communication primarily involves the dissemination of information from the project team to stakeholders, with limited opportunities for feedback or dialogue. This approach is often used for sharing information, updates, and notification about decisions.

Two-way engagement is participatory and emphasises open and continuing dialogue between project teams and stakeholders. It encourages active participation, collaboration, and the exchange of ideas, enabling stakeholders to provide valuable insights, express concerns, and contribute to decision-making processes. Two-way engagement fosters a sense of inclusivity, enhances trust, and promotes a shared understanding of project objectives, ultimately leading to more effective and sustainable project outcomes.

This report will consider both types of engagement that took place, and draw insights from both - especially key learnings that can be taken forward to future projects.



## PfER programme-level engagement

In terms of one-way engagement, the PfER programme took steps to ensure that people external to the project could be informed about and engaged with its process.

Resources that have been developed include videos; some are specifically project-based, others are programme-wide - **Voices from the Energy Revolution**,<sup>24</sup> **Six in Sixty**<sup>25</sup> webinars. Over 60 episodes of the **Local Zero**<sup>26</sup> podcast have been recorded. Many of the projects in the programme have dedicated websites, the original programme<sup>27</sup> pages on the UKRI website held case studies and blogs, and the **EnergyRev**<sup>28</sup> website hosts all the academic outputs from the programme.

With so many projects in the PfER programme, analysis on stakeholder engagement cannot be exhaustive. Instead in this report, key examples have been explored through analysing written outputs and speaking with members of various project teams from across the programme.

It is important to note at the outset that all projects were impacted by COVID-19 to some degree. Many of the in-person elements of projects became virtual and some of the tangible elements of the demonstrators could not maximise their full potential. Specific examples of how projects managed the pandemic are explained in more detail below.

The next section of the report offers some detailed case studies where two-way engagement was designed into project plans from the outset, and explores the diverse approaches and outcomes. The following sections go on to consider some of the more general engagement activities across projects. Some of the more creative engagement activities are then considered before an insight section unpacks some of the key learnings.



<sup>24</sup> <https://www.energyrev.org.uk/news-events/news/voices-from-the-energy-revolution-revisit-on-youtube/>

<sup>25</sup> <https://www.youtube.com/watch?v=hTOTEHLHT8UU>

<sup>26</sup> <https://www.localzeropod.com/>

<sup>27</sup> <https://www.ukri.org/what-we-offer/browse-our-areas-of-investment-and-support/prospering-from-the-energy-revolution/>

<sup>28</sup> <https://www.energyrev.org.uk/>



## 4. Case studies – User-centric design

### Project LEO

Project LEO (Local Energy Oxfordshire) - a full demonstrator PfER project-focused on balancing energy use at the grid edge closest to homes and businesses, through running trials of new technologies and services across Oxfordshire. Project LEO strived for stakeholder engagement across its diverse activities. At the outset, stakeholder engagement principles were identified for the project.

#### Project LEO Stakeholder engagement principles:

Stakeholders in Project LEO are considered to be individuals, groups or organisations who may affect, be affected by (or perceive themselves to be affected by) a decision, activity or outcome of the project.

Project LEO uses the Accountability Standard's definition of stakeholder engagement as follows:

*"Stakeholder engagement is the process used by an organisation to engage relevant stakeholders for a clear purpose to achieve agreed outcomes. It is now also recognised as a fundamental accountability mechanism, since it obliges an organisation to involve stakeholders in identifying, understanding and responding to sustainability issues and concerns, and to report, explain and answer to stakeholders for decisions, actions and performance."*

#### Reasons for engaging with stakeholders include:

- Raising awareness
- Gaining support and direct/indirect participation
- Encouraging investment
- Understanding how stakeholders can impact on the project (and vice versa)
- Soliciting and acting on feedback about the project, and finally
- Understanding that stakeholder engagement provides a learning opportunity for the project.

Project LEO has produced a number of reports, which outline learnings and recommendations for future work. The smart and fair neighbourhoods (SFN) trials in the project have underlined that "everyone needs to take part in this transformation, and can derive many kinds of value from doing." SFN also supports research that shows how important the perception of 'fairness' is to getting buy-in for change. Therefore the ethical design and delivery of projects will be key to their success.<sup>29</sup> A report on the stakeholder engagement experiences across the project has recommended the following:

1. Work to understand stakeholders' processes, priorities, concerns and needs
2. Work with and nurture trusted relationships
3. Recognise, value and make use of stakeholders' input
4. Plan to evaluate, learn and adapt engagement approaches where needed
5. Provide sufficient time and resources for engagement, for all parties and at different times
6. Ensure engagement activities follow ethical principles.<sup>30</sup>

<sup>29</sup> <https://project-leo.co.uk/wp-content/uploads/2023/03/D3.10-V0.7-Publication.pdf>

<sup>30</sup> <https://project-leo.co.uk/wp-content/uploads/2023/03/BO-stakeholder-engagement-for-Publication.pdf>

### At a glance

- Project LEO identified a set of stakeholder engagement principles at the outset embedding the approach across the project activities
- Its 'smart and fair neighbourhoods' trial has highlighted how important the concept of fairness is to getting buy-in to change
- Understanding and developing relationships with stakeholders and providing sufficient resources for engagement are amongst some of the recommendations from the project.





# Greater Manchester Local Energy Market (GMLEM) Citizens' Jury

As part of PFER, GMLEM was a two year project from July 2020 to June 2022 in which Greater Manchester Combined Authority (GMCA) and 11 partners collaborated to adapt the local energy system to accommodate shifts in supply and demand from the expected increases in electric vehicles (EV).<sup>31</sup>

Carbon Co-op were commissioned by GMCA to organise a citizens' jury to ensure that the community was involved with developing plans and decision making and that the local energy market could be designed with a much broader understanding of people's needs and challenges. The jury was important to ensure transparency and accountability in decision making for GMLEM.<sup>32</sup>



## Jury selection process:

### 1

#### Phase one

- Jury recruitment involved touring to 14 sites<sup>33</sup> in Greater Manchester by bike with an interactive stand, engaging with various communities and organisations
- No specific qualifications or skills were needed, just a willingness to share views and opinions on energy and listen to others
- Various interactive tools like magnetic icons and insight postcards were used to hold conversations and explain energy systems to capture people's future energy needs and challenges

### 2

#### Phase two

- In-depth interviews were conducted with EV drivers and heat pump users to gather diverse perspectives
- Over 200 people were engaged who are often excluded from energy conversations due to the technical and complex nature of the topic

The jury explored the key everyday factors that should be considered when deciding who owns and operates the local energy market and what role GMCA plays going forward. During six sessions, the jury was presented with a number of scenarios to deliberate on and then voted anonymously for the scenario they would most like to see.

The 12 person jury, which reflected the demographics of Greater Manchester, gathered for six days in late April/early May 2022 to grapple with a central question of how GMLEM should be owned and governed. The jury heard expert witnesses, critical friends were enlisted in the process to answer technical questions, and steps were taken to minimise the bias of project coordinators in the proceedings - including the recruitment of an oversight panel.<sup>34</sup> The outcome of the citizen's jury was a jury statement. The following was included in the jury statement (emphasis added):

***"Having considered our opinions and recommendations, we feel that development of the Local Energy Market should not and cannot wait until 2038. We acknowledge there needs to be a technological, legislative and regulatory change and assert that we need an increase in political will to enact this. To this end, greater education, engagement and communication between all stakeholders is imperative, from individual residents up to commercial bodies."***<sup>35</sup>

As the LEM platform will be used by commercial properties, owner occupiers, social housing tenants and the public sector, it must consider the needs of these diverse groups and also needs to be intuitive, easy to use and understandable.<sup>36</sup> Using the jury at the outset of the project enabled energy planners to design a secure and flexible system that put consumers at its heart.

<sup>34</sup> Details on this process and the findings of the jury can be found here: [https://cc-site-media.s3.amazonaws.com/uploads/2022/06/CarbonCoop\\_GMLEMCitizenJury\\_Report\\_v3.docx.pdf](https://cc-site-media.s3.amazonaws.com/uploads/2022/06/CarbonCoop_GMLEMCitizenJury_Report_v3.docx.pdf)

<sup>35</sup> *Ibid.*

<sup>36</sup> <https://carbon.coop/2022/04/citizens-jury-people-powered-energy-transition/>

## At a glance

- GMLEM partners organised a citizens' jury to ensure that the local energy market was co-designed with a broader understanding of people's needs and challenges
- 12 people were recruited in a two-stage process for six sessions to answer the question 'How should GMLEM be owned and governed?'
- The jury statement produced following their deliberations concluded that further education and engagement between all stakeholders is imperative as the development continues.



<sup>31</sup> <https://www.greatermanchester-ca.gov.uk/what-we-do/environment/energy-supply/>

<sup>32</sup> <https://carbon.coop/portfolio/gmlem-citizens-jury/#:~:text=The%20citizens'%20jury%20will%20see,the%20jury%20has%20now%20closed>

<sup>33</sup> Including housing association community events, supported living centres, shopping malls, charities, refugee resource centres



## Zero Carbon Rugeley (ZCR)

The premise of ZCR at the outset was to design a SLES at the town scale. Rugeley was already home to a power station and the town had plans to build a smart home development of 2,300 houses on the site of the power plant, giving an opportunity to reduce grid constraints by managing energy demand across the wider community. The project's objective was to build a SLES-ready community.

Community engagement was a significant element of ZCR's application for PFER funding. Core principles were established at the outset of the project - including 'user centric design' - based on the understanding that if users shape performance of the local energy system, they need to be involved in the project from the outset. In taking this approach, the user view could be included in all elements of the project.

***"This was a fundamentally different way of development. Instead of informing the community of what was going to happen, and then they tell us why they don't want it, they became involved in the design at the outset."*** Member, ZCR team

Because this approach was very different to conventional ways of managing engagement within energy projects, it was also important to communicate the principles to the project team.

All of the engagement in the project was iterative, but the first phase was exploratory. The audience was everyone living/working in or travelling through Rugeley. This initial engagement was required to understand the community, the importance of its energy heritage (the original power station), peoples' memories and what it meant. The idea of building on the site of the power station was a barrier for some - the coal power plant was previously a massive community hub, and therefore framed for some as a loss rather than a positive 'green' future.

The project conducted an 'energy heritage walk' through the town. This was to understand what was there before the power station - and understand how things have changed. This enabled a framing around the net zero future as part of that change, not as a loss.

This exploration informed the following engagement as it enabled the team to develop more specific resources.

Engagement activities across the project included a community animation, and although COVID-19 had a big impact on in-person events, the project hosted a community event that engaged 100-200 people. In the third year of the project, pop-up events went to community venues to engage with people 'in their spaces'.

Whilst not a planned engagement, the project's 'community ambassadors' have become one of the biggest legacies of the project. The project held small, intensive workshops with those that were really interested - a core group of people - and this led to the introduction of community ambassadors, because this group wanted to get more involved. Developing deeper relationships with a small group of people has been influential in the longer term; building trust enabled high quality inputs to be obtained. And this group has enabled the wider community to be engaged through peer circulation and 'snowballing' of messages. They became trusted intermediaries between the project and local residents.

And whilst these people didn't know each other before the project, they have become friends and subsequently set up a community group - EcoRugeley - as a result of the project. Project representatives suggest that this could be made a paid role in future projects, due to the significant time commitment and subsequent positive outcomes of such participation. The group has also had training on thermal imaging and energy efficiency, so they can get actively involved in improving the community as well. Some key lessons were learned by the team throughout the project.

***"We had a big 'lessons learnt' event and one thing that brought tears to my eyes was that members of the project team said they would never do anything without community engagement again."*** Member, ZCR team

Evening and weekend events were more successful than day time activities, and there is a limit to what you can ask people to contribute for free. There was some resistance from consortium members not experienced in community engagement to attending evening and weekend events. However the benefits to the project of holding such events became clear.

Integrating a project to map mobility in the town that was funded separately was attempted. People were not keen to engage in this - highlighting both the importance of co-creation and understanding that there is a limit to what you can ask of people. Understanding where people are and designing the project from this starting point is key.

COVID-19 presented some key learnings for the project too. It enabled the team to understand how to use social media effectively - as a form of two-way discourse, instead of just a dissemination tool. Understanding this approach meant that people who would not normally engage with energy/low carbon projects could be reached. And the team replied to every message received - this approach is very time intensive and a key learning was that projects need to employ someone to dedicate time to this area.

An interesting and transferable approach to engagement has been developed by ZCR, but key to the success is having people on the ground who can build 'real' relationships with the community.

## At a glance

- User-centric design shaped the project, making it iterative - this was an approach that needed buy-in from the project team as well as the community
- Exploratory engagement was undertaken to understand the community and its 'energy heritage' which was helpful to frame the SLES as part of a longer journey
- Whilst not planned for, the project's community ambassadors became one of its biggest assets
- There is a limit to what you can expect people to do - and designing the project with them will help in understanding what this is.



## Green Smart Community Integrated Energy Systems - GreenSCIES

GreenSCIES was a project to design a heat network with heat recovery from a data centre in Islington. Alongside heat, solar energy and EV infrastructure installation were also incorporated to deliver low cost, low carbon energy to the local community. A key part of the project was to take the lessons from Islington and replicate GreenSCIES in different contexts. In Sandwell, the plan was to develop a very low temperature heat network and recover waste heat for local services (hospital, supermarket, foundry) and in Barnsley, South Yorkshire Mayoral Combined Authority sought to recover heat from glass manufacturing and store it in disused coal mines. With a large consortium of 15 partners, including local and regional authorities, universities, SMEs and large companies, the project would see six months of a feasibility study in 2019 before moving towards detailed design. Financial viability and community engagement were important elements of the project.

From the outset, the GreenSCIES project adopted a systems-based approach with collaboration and inclusion central elements to the engagement process, which was underpinned by some key principles:

- collaborative inquiry – undertaking research with rather than on people, in order to reach shared understanding
- develop new and creative ways of looking at things, learn how to act to change things and discover how to do things better
- multiple perspectives – actively seeking viewpoints and perceptions.<sup>37</sup>

<sup>37</sup> Akos Revesz, Chris Dunham, Phil Jones, Carole Bond, Russell Fenner, Sagar Mody, Rajvant Nijjar, Catarina Marques, Graeme Maidment, A holistic design approach for 5th generation smart local energy systems: Project GreenSCIES, Energy, Volume 242, 1 March 2022, 122885

For the first phase of the project in Islington, residents from two council estates were invited to get involved in the project early on, with workshops at Islington Library and a local theatre. This was an opportunity to introduce the project and set the context - explaining the technical details of the systems. There were posters and flyers on SLES, a bench outside the library, as well as small demonstrations for people to interact with and a short video.

At the workshops, people were asked for their opinions about investing in the system. The workshops engaged with residents - some of whom were early adopters; others less so - but hearing from a range of people enabled the development of a proposition that worked for all. The perspectives heard impacted the proposed business model to some extent. And when the team conducted surveys it transpired that people were really interested in 3D models of the homes.

With the advent of COVID-19, the detailed design phase from March 2020 was moved online. A lot of people coming to the workshops had to adapt to the new format and this delayed some things.

With replicability as another guiding principle, Islington's experience was then used to inform the other GreenSCIES projects. The learning that came from engaging local authorities in the project is explored in more detail later in the report.

## At a glance

- A key element of the GreenSCIES project was to take the lessons from the Islington project and replicate it in different contexts
- GreenSCIES operated with a systems-based perspective which integrated collaboration and inclusion into the engagement process
- The feedback on the proposed business plan at the initial stakeholder workshops had an impact on the plan as it progressed.



## 5. Methods of engagement – synthesis across projects

The case studies above highlighted some of the ways that engagement was designed into particular projects from the outset. But engagement was an important feature across the programme, and many of the projects held **public meetings**, organised **exhibitions** or conducted **surveys**. All had project **websites** and most engaged in **social media**. This is demonstrated by the research on PFER engagement undertaken as a part of EnergyRev, which synthesised a typology of all user and community engagement employed by project partners (see Table 1).

### User and community actors engaged by PFER project partners. (Adapted from: Soutar et al. 2022)<sup>38</sup>

		User focus groups	User installs/trials	User interviews	User surveys	No. of user focused practices	
Demo	ESO		●	●	●	3	
	LEO		●	●		2	
	ReFLEX	●	●	●	●	4	
Design	Girona		●		●	2	
	GMLEM			●		1	
	GreenSCIES					0	
	LMEX				●	1	
	MHEK		●	●	●	3	
	PIRI					0	
	REMeDY			●	●	2	
	RESO				●	1	
	ZCR					0	
	Total no. of user-focused methods		1	5	6	7	

Whilst this report does not attempt to capture insight on all of the recorded engagement activities from across the programme, this section attempts to capture a snapshot of the diverse approaches throughout PFER with insight derived from interviews with project partners and the resources that were developed to support their work. Whilst there was of course commonality in approaches, the focus here is on nuance and what worked well.

Community exhibit/event	Community surveys	Community webinar	Community workshops	Community social media	Community website/press	No. of community-focused practices
				●	●	2
	●	●	●	●	●	5
●		●	●	●	●	5
	●			●	●	3
		●	●	●	●	4
●			●	●	●	4
	●	●	●		●	4
●			●	●	●	4
			●	●	●	3
	●		●	●	●	4
		●			●	2
			●	●	●	3
3	4	5	9	10	12	Total no. of community-focused methods

<sup>38</sup> Iain Soutar, Patrick Devine-Wright, Melanie Rohse, Chad Walker, Luke Gooding, Hannah Devine-Wright, Imogen Kay, Constructing practices of engagement with users and communities: Comparing emergent state-led smart local energy systems, Energy Policy, Volume 171, 2022, <https://doi.org/10.1016/j.enpol.2022.113279>



## Community engagement

There are several examples from across PFER of specific, additional ways of engaging with project communities.

### Milford Haven Energy Kingdom: Demonstrators

Milford Haven Energy Kingdom (MHEK) was a detailed design project in the PFER programme, exploring the potential of zero carbon hydrogen alongside renewables across Milford Haven, Pembroke and Pembroke Dock. Two **demonstrators** - the MHEK hybrid heating system and the MHEK hydrogen refueler for Riversimple hydrogen cars - were developed to enable people to see these new technologies for themselves.

This project highlights the importance of engaging with a broad spectrum of partners and stakeholders. Businesses, renewables companies, and all levels of Government were interested in the demonstrators and their potential to transform and decarbonise the area. Whilst the project had an engagement plan, a lot of the project's engagement activities were organic, or evolved with the project.

Engagement days showcasing the cars took place, however, due to COVID-19, the cars did not reach as many people as hoped, so the project needed to work with a more limited set of users. However, the project team realised that they could work with schools and design educational resources - the cars subsequently visited 30 schools in the area. The project also invested in solar kits to electrolyse hydrogen in front of children's eyes, so that they could relate it back to the car.

The project developed a 'virtual engagement platform' - a 360° view of the demonstrators - which has been promoted widely and has enabled an understanding of the importance of visual information in engaging with stakeholders.

*"As people heard about it, they wanted to know more, we had a realisation that it had broad appeal and people were reaching out."*  
MHEK project representative

### ReMEDY: Green Love Southend

ReMEDY (Revolution in Energy Market Design) was a project part-funded by PFER to produce a local energy system design covering the whole of Southend-on-Sea.<sup>39</sup> The project team enlisted Energy Unlocked to engage the public about the role of energy systems in net zero, support the research consortium to develop a 'case study' on the project learning that is useful both for the borough, and for other areas in the country, and to embed the learning in a Southend net zero strategy.<sup>40</sup>

Green Love Southend was a **six week event** that ran in the Spring of 2022, during which residents, businesses and organisations were offered opportunities to join workshops to understand their energy bills, explore low carbon technologies, join conversations, share and learn. Businesses were offered energy data to help develop low carbon plans. Stakeholders were invited to share and learn what they can do together to put Southend on the path to net zero. A map was developed to showcase the 23 businesses and organisations that committed to Green Love Southend.



Green Love Southend Map

<sup>39</sup> [https://shapuk.files.wordpress.com/2020/04/zcr\\_final-pfer-ukri-release\\_feb.pdf](https://shapuk.files.wordpress.com/2020/04/zcr_final-pfer-ukri-release_feb.pdf)

<sup>40</sup> <https://www.netzeroremedy.uk/>



## ReFLEX Orkney: Experience Centre

ReFLEX (Responsive Flexibility) Orkney was designed to link local electricity, transport and heat networks into one controllable, overarching system. As a part of the project, the **ReFLEX Experience Centre** was set up in Kirkwall co-locating the customer team's office and a workshop for preparing vehicles. This hub has enabled customers to come in to speak to staff, take test drives, and collect their new vehicles. It offers a coordinating service for people to get multiple products (EVs and chargers) in one place and guides them through sometimes complex customer journeys.

As well as handling all public enquiries, the ReFLEX customer team also provided administrative support for suppliers and gathered data for the research aspect of the project.

ReFLEX Orkney Ltd, Orkney's local energy services business set up during the project, continued after the end of the project.

## Energy Superhub Oxford: Home visits

Energy Superhub Oxford (ESO) is one of PFER's demonstrator projects. It is building a hybrid battery, an EV charging network and a heat network consisting of ground source heat pumps in over 60 properties. Diverse stakeholders were involved in the project, but significant engagement was undertaken with residents.

Initially large meetings were planned to explain technical information about heat pumps, but these weren't possible due to COVID-19. Instead, the project manager engaged with **house-to-house visits** and explained on the doorstep - direct interaction with all 60 houses in the project. This personal approach - taking time and having a cup of tea - enabled a better understanding of the project. People were asking questions in a safe space, not in a big group - and this enabled 'handholding' through the process.

Because these social housing residents were selected by the housing association, they had no say over whether they had a heat pump system installed in their homes. However, by engaging regularly and visiting them all every two months, the project manager felt this directly gave them some power back. Speaking individually to each of them about the heat pump and training them how to use it gave them assurances and confidence about the new system. And by identifying the chattiest people on the street, informal community champions and pioneers across the project emerged who would 'go first' - and could then share their experiences, getting more people engaged because they were hearing about developments through people they trust. These people were also important sources of local knowledge to feed back into the project.

## Project LEO: Writing for lay people and mapping energy use

Project LEO created a role on the team specifically for a **person who could translate the technical project information into jargon-free resources**, and developed a **glossary of terms** and **visual material** to ensure that understanding of - and subsequently engagement with - the project could be maximised.

Project LEO also developed a **local area mapping tool**, LEMAP. It provides three engagement routes:

- participatory mapping - where local residents help build the local energy map by providing information on their energy use
- a story map approach which can visualise key energy outcomes
- chat forums.

The process was successful in growing engagement and helping non-expert participants to understand the current shape of their local energy system and identify opportunities for interventions.

## Broader engagement and dissemination

A central element of the GreenSCIES project was to take the initial findings from the project in Islington and see which elements could be replicated in different contexts. Projects in Barnsley<sup>41</sup> and Sandwell<sup>42</sup> were developed. A key learning of this element of the project was that engaging with local authorities can be complex. They are very diverse in terms of day-to-day operation, decision making structures, and how different departments interact with each other. Not all local authorities have experience of such projects, or an established energy team. Regular communication across the project helped and as a project legacy a **Centre of Excellence**<sup>43</sup> is being developed to bring together some of the project partners into an alliance, to provide training and consultancy for local authorities.

Similarly, as the PFER programme was nearing completion, the ESO project held an **open day** in order for local authorities to hear from the partners, ask questions, network and share ideas with other local authorities, as well as visiting the battery storage site and EV charging hub.<sup>44</sup>

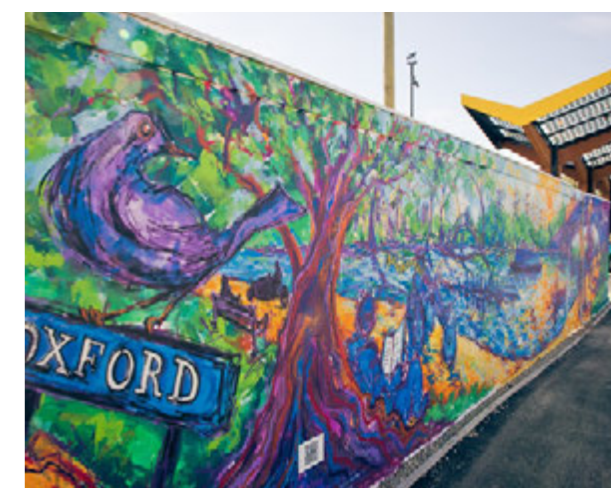


## Creative engagement approaches

### ESO: Art-based activities

Local school children have been engaged in various ways with the ESO project. In December 2021, primary school children across Oxfordshire were set the challenge of creating an **EV inspired picture**, with winning entries being displayed at the opening of the ESO EV charging hub at Redbridge Park and Ride.<sup>45</sup>

Then in November 2022, children from St Swithun's CE Primary School worked with local artist Andrew Manson and Sandy Kelly from EDF Renewables UK on '**Project Pylon**' to create and design their own electricity pylons out of willow. The winning team's design has been incorporated into the **mural** at the EV charging hub. The mural encapsulates the many elements of the ESO project, including the ground source heat pumps, giant battery and EV charging. QR codes within the mural provide further information about the constituent parts of the project.<sup>46</sup>



41 To recover heat from glass manufacturing in the summer - store it in disused coal mines and use it in the winter.

42 Very low temperature heat network - recover heat for local services including a supermarket, a hospital and a foundry.

43 <https://greenscies.com/>

44 <https://energysuperhuboxford.org/energy-superhub-oxford-local-authority-open-day-15th-march/>

45 <https://energysuperhuboxford.org/electric-vehicle-art-competition-local-pupils/>

46 <https://energysuperhuboxford.org/project-pylon-school-children-superhub-mural-design/>



## LEO: Smart and Fair Neighbourhoods trial

The Westmills SFN trial is focused on building consent and engaging communities in the context of the combined Westmill solar and wind farms. The trial aims to explore how these renewable energy assets, along with potential battery storage, can enable participation in local flexibility markets and foster commercial innovation in community investment and leadership within a zero carbon local energy system. The Westmills Sustainable Energy Trust (WeSET) has developed a comprehensive range of **educational materials** about sustainable energy for a wide range of ages that are designed in a compelling, easy-to-understand way.<sup>47</sup>

Another part of this project is the development of the People's Power Station 2.0. Whilst still in creation, the **People's Power Station 2.0** is a cloud-based software tool which will deliver a host of insights about how to decentralise the energy system and make it more interactive. One element of the People's Power Station 2.0 is the piloting of live **community energy 'dashboards'**, to illustrate to communities the most useful data in helping them inform behaviour change.<sup>48</sup>

## EDUL: Energy Data in the UK Landscape: creatively engaging young people

EnergyREV was a key part of PFER. A consortium of over 60 researchers from 22 universities, and focused on interdisciplinary and whole-systems research, EnergyREV is one of the most significant international academic programmes delivering research to accelerate the uptake, value and impact of SLES.

EnergyREV produced three main categories of outputs:

- Insights and Tools - reports and resources for a broad range of stakeholders;<sup>49</sup>
- Academic Outputs - journal papers, conference papers and presentations;
- In Our Words - brief, short, accessible videos highlighting some of our emerging insights, tools and academic outputs.

One of the tools produced was from the EDUL project - the outputs of which have been created and disseminated in creative ways.

<sup>47</sup> <https://www.weset.org/learn/resources/>

<sup>48</sup> <https://project-leo.co.uk/case-studies/peoples-power-station-2-0/>

<sup>49</sup> Academics interested in Energy Research, Industry actors including innovation team representatives (those who work for energy institutions in various capacities), and UKRI representatives.

<sup>50</sup> <https://www.energyrev.org.uk/outputs/tools/edul-energy-data-in-the-uk-landscape/>

The initial EDUL research project was exploring the energy data landscape to try and identify gaps and challenges. The consultation initially rolled out was restricted to stakeholders within the energy system. Residents and particularly young people were excluded by the approach. The original plan was to disseminate findings of the project with a schools roadshow. But the researchers realised when thinking about the presentation of the outcomes, that there was a much more significant opportunity to do further research, and listen to a demographic that was not being heard in consultation. So researchers at Coventry University took the data and developed a resource to engage young people and, crucially, to find out their opinions.

A workshop was developed for GCSE and A Level students - containing a combination of participatory activities and some lecturing. The participating schools selected the students to take part based on the subjects they were studying. Participants were selected from computer science, geography and other humanities subjects, with the assumption that these students would be interested and engaged in the subject matter. The rationale was that with the delivery of Net Zero by 2050, SLES will need to be installed in the coming decades, so inspiring the careers of the future engineers of these systems is important.

The idea was to teach the participants both about SLES, energy data and ethics, AI and integration, and about how to test these in comparison to the current system.

Four workshops have been conducted with 200 students and focus groups took place with 15 selected participants. The **toolkit** that has subsequently been developed to accompany the workshop offers:

- a simple overview of the current energy system and how SLES might provide solutions to shortfalls.
- An age-appropriate explanation of how cyber-physical systems, machine learning and digital architectures support the delivery and integration of SLES.
- An exploration of energy ethics, including an insight into an 'energy utopia': an idealised description of a just, fair energy system draw from interviews with energy stakeholders.<sup>50</sup>

*"The process uncovered some clear learning. Traditional presentation style information sharing was important to offer information, but was less effective than the practical activities, which were incredibly successful - as was the peer-to-peer approach of having the participants engage in groups."* Charlie Ingram, Coventry University

The workshop used boxes to represent the energy data system, drawings on the floor to represent information sharing and playpen balls to throw (representing the swift nature of data sharing between organisations). Dropping the balls represented unsafe data practice (not secure end-to-end). This was followed by some group work considering the ethical considerations of different scenarios.

The researchers learned some significant methodological lessons from the first workshop and through iteration the delivery model improved. Improvements include more questioning approaches, which have enabled better call and response engagement. Understanding the shyness of some young people was also really important, as well as understanding that complex terms may need to be explained at every step of the process in order to not 'lose' people in the technical language.

More practically, working with a longer lead time to recruit schools will be important for rolling out the workshop and resources - planning at least a term in advance is key.

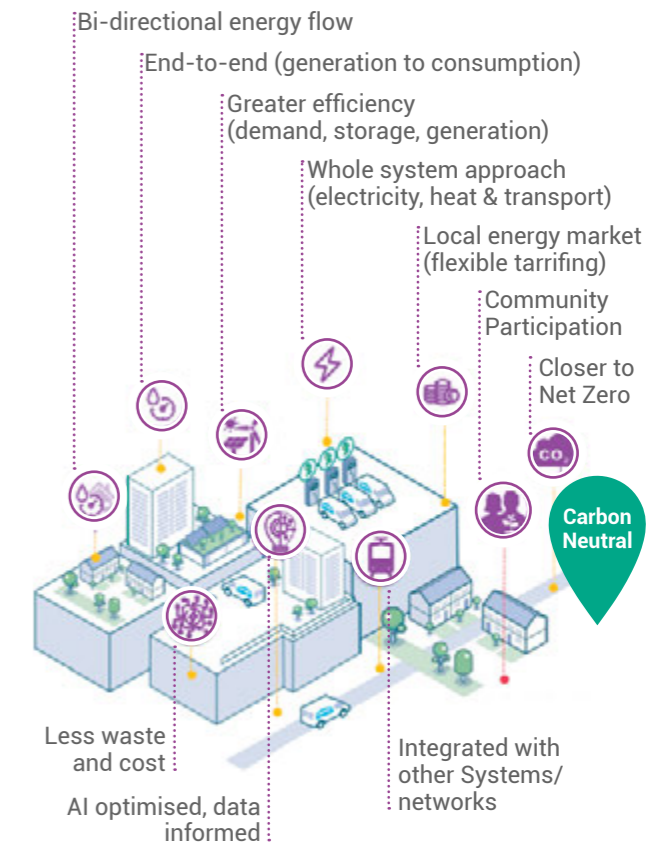
As an alternative to traditional reporting methods, the voices and opinions of these young people have been made into a script for a **theatre show** using the medium of 'headphone verbatim' or 'evaluative performance'.<sup>51</sup>

<sup>51</sup> In this style of theatre performance, actors wear headphones through which they hear participants' voices; they then repeat those voices as immediately and exactly as possible. This allows audience members to hear authentic, yet anonymous opinions and experiences.

<sup>52</sup> Ingram, C., Halford, A., Gaura, E. (2023). Resource pack for workshop participants. EnergyREV, University of Strathclyde Publishing: Glasgow, UK. <https://www.energyrev.org.uk/outputs/tools/edul-energy-data-in-the-uk-landscape/> Taken from: Healey, D. (2021). [Conference Presentation] MJ Future Forum Conference, Warwick

A short theatre performance research event was held to 'humanise the data' and enable interested academics, policymakers, and other industry professionals to experience an experimental sharing of young people's views. The performance was followed by a post show discussion to gather insights about its effectiveness as a dissemination tool.

## Smart Local Energy Systems



**CO<sub>2</sub>** **Decarbonised** - Renewable-based low-carbon energy system. Competitive through a drop in production costs.

**Decentralised** - Local production methods allow for renewable energy to be generated and traded locally.

**Democratised** - Locally invested, to encourage behavioural and social changes required.

**Digitalised** - Digital network of production, distribution and supply. Enables local data tracking and responsive generation, reducing generation requirements

Description of SLES from EDUL Student Resources<sup>52</sup>



## 6. Insights

### Insights from PFER on public awareness and appeal

A number of lessons from the PFER programme have already been captured in written outputs.<sup>53</sup> These are not replicated here in great detail, but some of the key findings are outlined below.

In an insight briefing on skills and capabilities, the facilitation of better working relationships between stakeholders was identified as one of four crucial areas where progress could help realise the wider value of SLES.<sup>54</sup>

A recent report on public awareness and appeal of SLES highlighted a number of lessons that support the success of future SLES.

- A range of citizen engagement activities should be used to build awareness and appeal of SLES projects, such as surveys, citizens' juries or workshops.
- Support this with information from impartial organisations that are trusted by consumers, such as Citizens Advice.
- Promoting SLES benefits that address consumers' immediate concerns, e.g. accessing low-cost decentralised energy, could increase the impact of these awareness-building activities.

<sup>53</sup> For example: <https://project-leo.co.uk/reports/barriers-and-opportunities-for-stakeholder-engagement/>; <https://www.energyrev.org.uk/outputs/academic-outputs/better-together-harnessing-social-relationships-in-smart-energy-communities/>; [https://iuk.ktn-uk.org/wp-content/uploads/2023/03/PUBLIC-AWARENESS-AND-APPEAL-OF-SMART-LOCAL-ENERGY-SYSTEMS\\_FINAL.pdf](https://iuk.ktn-uk.org/wp-content/uploads/2023/03/PUBLIC-AWARENESS-AND-APPEAL-OF-SMART-LOCAL-ENERGY-SYSTEMS_FINAL.pdf); <https://project-leo.co.uk/reports/designing-smart-and-fair-neighbourhood-trials-ethically/>; <https://www.equans.co.uk/sites/g/files/tkmtob116/files/2023-04/WP17-D12-4%20Community-centric%20design%20guide.pdf>

<sup>54</sup> [https://www.ukri.org/wp-content/uploads/2022/11/IUK-14112022-Smart-local-energy-systems\\_Skills\\_and\\_capabilities\\_final.pdf](https://www.ukri.org/wp-content/uploads/2022/11/IUK-14112022-Smart-local-energy-systems_Skills_and_capabilities_final.pdf)

- Use simple, non-technical language to ensure understanding of the SLES concept. This is important as higher understanding is linked to greater appeal.
- The public believes using a local community group to manage a SLES will garner more public support than an unfamiliar private company.
- Adopt a user-centric approach, in which the accessibility needs of the community are assessed, to ensure everyone has a chance to participate in the SLES.
- Services that are appealing to the public typically entail generating or using low carbon power locally.
- It is important to resolve any problems with the service promptly (within hours or days) to ensure a good customer experience and long-term customer engagement.
- Identifying likely problem areas and planning solutions in advance will support future SLES in delivering the desired customer service.
- Recording levels of engagement across target audiences and the outcome of each community engagement activity will enable SLES to identify any improvements for future engagements.

The findings of this report broadly align with these recommendations for future SLES. Here we can also offer some insight on communication and engagement with stakeholders from across the programme that will also be of use specifically for future Innovate UK activities, particularly the Net Zero Living programme.



## Insight - Lessons for future innovators and projects



**Engage early** - Those projects in the PFER programme that had engagement as a central strand of their plan and were engaging stakeholders in the design phase highlighted clear benefits from such an approach. Innovate UK should be explicit about the need for community and stakeholder engagement plans in funding applications. Encouraging engagement of relevant communities in the bidding process would be a welcome extension of this.



**Trusted intermediaries** - Community energy organisations and local authorities played key roles in some PFER projects as the interface between the project and citizens, being widely recognised as being more trusted than energy suppliers. Encouraging engagement and partnering with organisations that have ongoing interaction with communities in the bidding process for new funding is recommended.



**Engagement takes time** - Engagement should be ongoing, ideally beyond the life of time-bound projects. Projects that had existing energy communities where citizens were already aware and engaged needed to do less educational groundwork than those that did not. It is important to keep people updated on progress, and provide opportunities to feed back.



**Resource and skills** - Effective engagement needs to be adequately budgeted for, terms of ensuring that the projects have not only dedicated engagement staff with the right skills, but also resources to pay for stakeholder time and/or incentives.



**Consent** - Not all participants will want to actively engage in initiatives, but it is crucial that all communities and individuals affected by changes to the energy system are given the opportunity to voice concerns. If the energy system is to benefit from full demand side flexibility, citizens will need to agree to having heavy loads in their households managed, which is only effective if automated. Householders need to maintain control but will ultimately be contracting with their supplier or a third-party aggregator who will manage non-time critical loads for them, for example, when their car is charged or water is heated.



**Fairness and a just transition** - Community energy organisations, the third sector and local authorities often act as 'the social conscience' in our energy system by highlighting the plight of those in fuel poverty and considering how to address social hardship caused by inadequate housing and the high cost of energy. This vital role needs to be recognised and resourced.



**Early adopters** - As seen through the introduction of community champions or alike in several projects, engaging with those individuals who are keen to become actively involved, learn more, or go first, can have important snowballing or peer-learning impacts across the wider project, encouraging the early majority to follow. Identifying those people, valuing their role and creating a space for them to bring people with them has been a key determinant of success and this role should be built in to future projects.



**Space for creativity** - Trying new things and looking to different disciplines for inspiration. Zero Carbon Rugeley and the EDUL project showed that insights and approaches from other sectors can be effectively deployed in the energy space. ZCR highlighted that even though engagement was factored in from the outset of the project, reporting and success is still largely determined by quantitative metrics. If the methodologies and approaches to engagement - and indeed its importance - are changing, the metrics for project success also need consideration.



**It's not all about energy...** - An important consideration highlighted by interviewees was that many stakeholders are values driven and therefore energy-based information is an ineffective way to engage them. As Net Zero Living is concerned with governance and community action, this is an important consideration to take forward.



**...but it's important to share the energy benefits** - Focusing on solutions for the immediate worries of households and emphasising the impact that SLES will have on consumers' bills have both been highlighted as important in building the appeal and public awareness and support for SLES.<sup>55</sup>




**Plan for things going wrong** - Thinking about what to do when things don't go to plan is essential. Suppliers may drop out, people may be unhappy with the pilot and project partners need to be ready to respond. People may have questions - what happens at the end of a trial, do the householders own the assets? Do they get removed? Being able to give clear answers is important.

<sup>55</sup> [https://iuk.ktn-uk.org/wp-content/uploads/2023/03/PUBLIC-AWARENESS-AND-APPEAL-OF-SMART-LOCAL-ENERGY-SYSTEMS\\_FINAL.pdf](https://iuk.ktn-uk.org/wp-content/uploads/2023/03/PUBLIC-AWARENESS-AND-APPEAL-OF-SMART-LOCAL-ENERGY-SYSTEMS_FINAL.pdf)



## Insight - Lessons for funders/programme designers

 **Cross-project learning** - Numerous successful interventions occurred across the programme's diverse activities. Many projects iterated because they were learning by doing and then improving their approaches. Building in mechanisms to future programmes to enable this iterative learning to be shared and disseminated between projects regularly throughout the duration of the programme, could help enable more cross-fertilisation of approaches. Embracing a culture of learning from current projects and building in mechanisms to actively share those insights within the wider consortium through regular feedback, would not only illuminate effective strategies, but shed light on potential pitfalls and highlight innovative solutions. This collaborative approach to information exchange and feedback not only fosters a sense of camaraderie within a consortium but enables more informed decision making, streamlined processes, and greater efficiency.

 **Enabling effective partnerships** - As highlighted by the GreenSCIES and ReFLEX Orkney project, bringing diverse stakeholders together in a consortium can come with operational barriers. Enabling a better knowledge of how diverse stakeholders (e.g. local authorities) 'work' as projects commence may be helpful for ensuring effective stakeholder engagement from the outset.



**Engagement with results** - Finding ways of engaging stakeholders with the results of the projects as well as with the process is important. If people have been involved in the design of projects, they should be informed of the outcome as well as plans for the future of any initiative after the end of the project time frame. This will maintain buy-in and enable participation to continue.



## Insight - Effective engagement methods used across the PFER programme



**Listen** - Listening to what people care about and framing engagement around this can be more effective than presenting a solution. Knowing more about community interests and what resonates with particular people can help tailor information provision and the wider project design to maximise interest and engagement.



**Explain simply** - GMLEM used magnets and postcards to explore the concepts; Project LEO hired someone to 'dejargonise' the technical energy language. Community voices need to be fed into programmes, but in order for engagement to be effective, people need simple information to ensure they understand. Engaging people earlier in the process may enable the development of resources and materials that are even easier to understand.



**Show me something** - MHEK used visual 360° displays, ZCR took people on a walk, and EDUL used balls to explain the energy infrastructure - each of them highlighting the positive impact that having something visual to enable discussion and understanding of SLES has on engagement.



**One size doesn't fit all** - Use different formats to engage a diverse population. Digital engagement won't work for those not online, and events during the working day won't work for people at work. Varying the methods and organisation of engagement activities can help to maximise participation and engagement.



**Taking the time/having a cuppa** - People are busy, but taking the time to meet with them and get to know them was a successful strategy in Islington, Oxford and across other PFER projects.



**Meet you where you are** - Meeting in familiar surroundings enabled engagement of diverse stakeholders in different areas of the project - from GMLEM's tour of GM, to ESO's home visits, people engage more if you come to them. Meeting people where they are also extends to understanding the diversity of the audience. To reach the shy students, the EDUL team tweaked their workshop plan, and community ambassadors have been successfully introduced in many projects to enable self-selection of the most active participants to champion the project with other community members.



**Dedicated social media/engagement resource** - Genuine and impactful two-way dialogues can be initiated via social media, but time and resources need to be dedicated to it so that it can be done effectively.



## Other lessons



**COVID-19** - A lot of plans needed changing due to the impact of the pandemic on outreach plans. But a positive knock-on effect was that this enabled more use of virtual tools, which in turn broadened the reach of the engagement in some projects. This engagement would not have been used in the same way otherwise, despite being available.



**Engaging with the project team** - Engaging with stakeholders may not be seen as a priority by people in technical roles, and the approaches most successful for communities may be incompatible with conventional ways of industrial or academic partners. Highlighting the successful outcomes of the PfER project that were brought about by the user-centric methodologies could help overcome or remove similar future barriers.



**Young people** - Many projects realised the importance of engaging with young people after they had commenced and this element of dialogue had to be brought in subsequently. The next generation is key to the delivery of the energy system transformation; they need to understand and be inspired by the challenges and opportunities that lie ahead. Future projects should be developed with this element in the design phase as it may shape how the project is carried out.



**Positive place-based visions for the future** - People are inherently connected to where they are and can be mobilised around a positive vision for the future of where they live and work. SLES are a key part of realising places where we have cleaner air, healthier homes and more sustainable travel options. Place-based approaches enable people to have a say in the transformation of their communities.



## 7. Conclusion

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As the PfER programme draws to a close, there will be a lot of learning to digest and this report has captured a wealth of valuable insights to add to the mix. It is evident that when engagement is given sufficient resources and thoughtful consideration, it significantly enhances the effectiveness of a project.

By actively involving people in the places where projects are implemented, they can harness and develop a sense of belonging and ownership in shaping the collective future. We need the consent and trust of people to transform our cities and countryside and good citizen engagement is fundamental to this.

It is crucial to ensure that stakeholders understand the technological advancements driving the projects and are included from the outset in the process of design and implementation.

People's opinions and perspectives hold significant value; some aspire to be active participants in decision-making rather than passive recipients of predetermined outcomes - and they can help deliver better projects as a result.

The experience of PfER has demonstrated the effectiveness of these steps in fostering successful project outcomes when started early and adequately supported.

## Interviewees

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With thanks to the following for their contributions to this report:

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To explore all the learning from the Prospering from the Energy Revolution programme and its projects, see:

<https://iuk.ktn-uk.org/events/energy-smart-places-delivering-net-zero>