CarbonCo–op

WP5 D3: RetroMeter Dissemination Report

RetroMeter Alpha (SIF)

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Author: Natalie Merrick

1. Introduction

This report shares the dissemination of project work as part of the WP5 deliverable. This covers webinars, blog posts and briefing notes which have been published during the project timeline or are scheduled after the project end date.

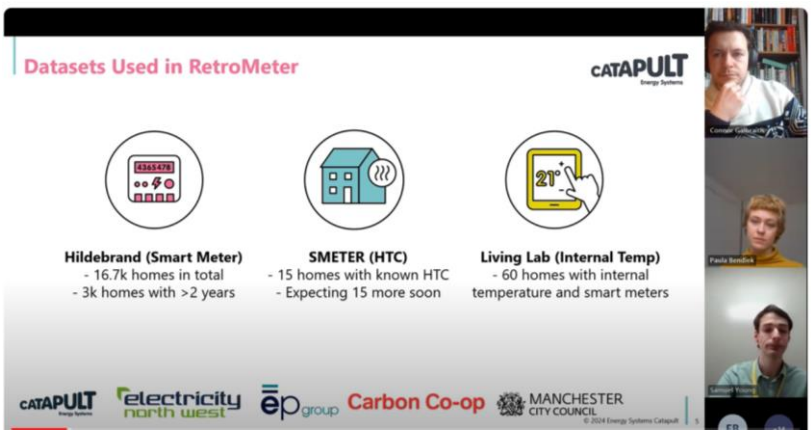
Using a stakeholder register which was populated by all project partners, Carbon Co-op created an email distribution list to disseminate the learning from RetroMeter. This register contains more than 120 stakeholders who are likely to have an interest in RetroMeter, including other stakeholders who are also focused on metered energy savings, stakeholders working in innovation, in the net zero space, in data science, in standards, and in relevant science and technology; stakeholders in the building and engineering sector, local government stakeholders, housing providers and retrofit providers; financial institutions, actors in energy markets including electricity DNOs and energy suppliers, and research centres and academics. Each dissemination output was and will be shared with this network to encourage engagement and sharing of knowledge.

2. Webinars and podcasts

2a. Webinar 1: 'Calculating metered energy savings from retrofit - methodology findings from the RetroMeter project'

13th March 2024

The first webinar, 'Calculating metered energy savings from retrofit' was led by data scientists at Energy Systems Catapult to discuss methodology findings from the RetroMeter project in calculating metered energy savings from retrofit.



Measuring the savings involves comparing how much energy was used after the retrofit with a "counterfactual", i.e. how much energy the household would have used in the same period had the retrofit not happened. This webinar discussed how you actually calculate the counterfactual in the UK context through the RetroMeter project, drawing on work done internationally via OpenEEMeter.

The webinar covered how the models work, in what circumstances the models can be used, the performance (accuracy, bias) of different models and data sources and data accessibility issues for data needed for different models.

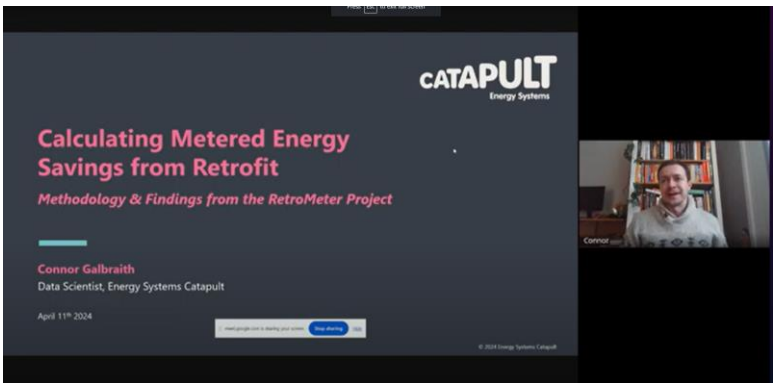
The meeting was recorded and shared with those registered and in attendance of the webinar and is available to watch on Carbon Co-op's You Tube channel.[1]

2b. Webinar 2: Eco-home lab

11th April 2024

Energy Systems Catapult and Carbon Co-op presented on RetroMeter at the Eco-home lab on 11th April. The session focussed on the latest work on the development of metered energy savings methodologies on the RetroMeter project, where Energy Systems Catapult joined to discuss this work.

Carbon Co-op's Eco Home lab is a regular monthly forum for people taking control of their home energy usage and generation, using open-source hardware and software to gain a better understanding of energy in our homes, how to make the best use of the energy we generate and reduce energy waste.



The audience included people who monitor energy usage in their own homes in detail, some of whom have analysed their own energy data before and after retrofit. This offered a different perspective to the research as this audience offered real-life perspective. A recording of the webinar can be found on Carbon Co-op's YouTube channel. [2]

2c. Webinar 3: UKRI RetroMeter Show and Tell

Scheduled for 24th April 2024

[1] Calculating metered energy savings from retrofit - methodology findings from the RetroMeter project' https://www.youtube.com/watch?v=xFAKJqu-tnQ
[2] https://www.youtube.com/watch?v=R-efrpWvdik

The Show and Tell is the public webinar on the project outputs organised by UKRI. The slides from this event will be published alongside this report.

2d. Webinar 4: Ep Group

Scheduled for the end of April

Ep Group will be hosting a webinar to be delivered in the last week of April, targeting an audience of financial institutions. The webinar focus will be 'Making energy efficiency more investable through metered efficiency'. The slides will be available on the Electricity North West website. (The link to where we will upload all documents is: RetroMeter Alpha phase.[3]

2e. Podcast

Scheduled for May 2024

Energy Systems Catapult are recording a podcast as part of data and Artificial Intelligence in energy series, on the theme of "Data and AI for retrofit metered energy savings".

3. Blog posts

3a. Blog post 1: 'Using Metered Energy Savings to make energy efficiency more investable', Ep Group

5th February 2024

The first blog post for the RetroMeter project was published by Ep Group, and considers the potential of using metered energy savings to make energy efficiency more investable. It highlights the significance of private investment into energy efficiency in order to reach climate targets and address other issues of fuel poverty and energy security.

[3] https://www.enwl.co.uk/future-energy/innovation/strategic-innovation-fund/retrometer/retrometer-alpha/

The blog also discusses the barriers that exist in investing in energy efficiency. This includes the small-scale and heterogeneous nature of energy efficiency projects, the lack of data, past present and future, together with the performance risk of projects not delivering energy savings. The combination of these factors creates uncertainties and risk for financial institution investment.

However, metered energy savings have the opportunity to enable energy efficiency to be more like energy supply, and therefore more investable. The RetroMeter project is developing an approach to metered energy savings and planning to apply it to residential retrofit project in Manchester. The blog post can be read here.[4]

3b. Blog post 2: 'Why metered energy savings?' Carbon Co-op

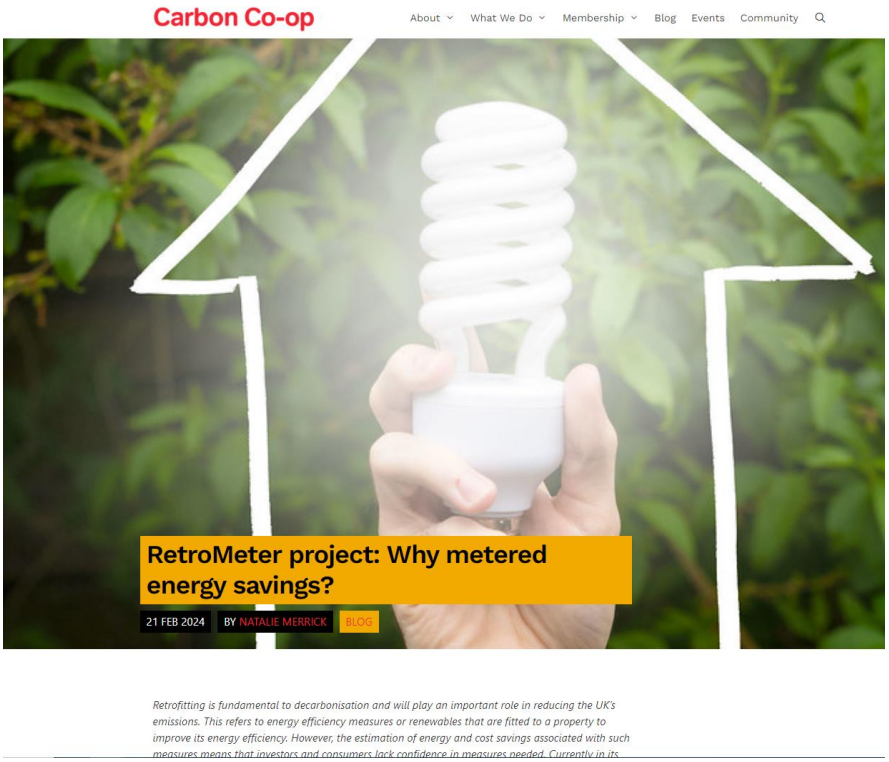
21st February 2024

Carbon Co-op published a blog post to discuss the demand for metered energy savings, not only in the context of financial investment, but particularly in relation to creating greater homeowner and landlord confidence in retrofit measures.

Householders play a crucial role in the energy transition through energy savings. Therefore, it discusses how using a meter-based method that calculates avoided energy use by comparing actual energy use post-intervention to a weather normalised counterfactual can be more beneficial than the current deeming

[4] 'Using Metered Energy Savings to make energy efficiency more investable https://www.onlyelevenpercent.com/

methodology used in the UK and Europe. The method that is being developed through the RetroMeter project therefore provides an opportunity to apply figures on savings and measurements. The blog discusses how demonstrating the value of metered energy savings and the integration of data management into the customer retrofit journey could play a role in making retrofit energy efficiency measures more appealing and attainable based on improving the reliability of energy savings estimates.



It also highlights how this approach is significant as it can unlock pay for performance, which holds immense promise for accelerating energy efficiency in buildings, aligning interests of stakeholders, eliminating financial barriers and driving market transformation. The blog post can be found on Carbon Co-op's website.[5]

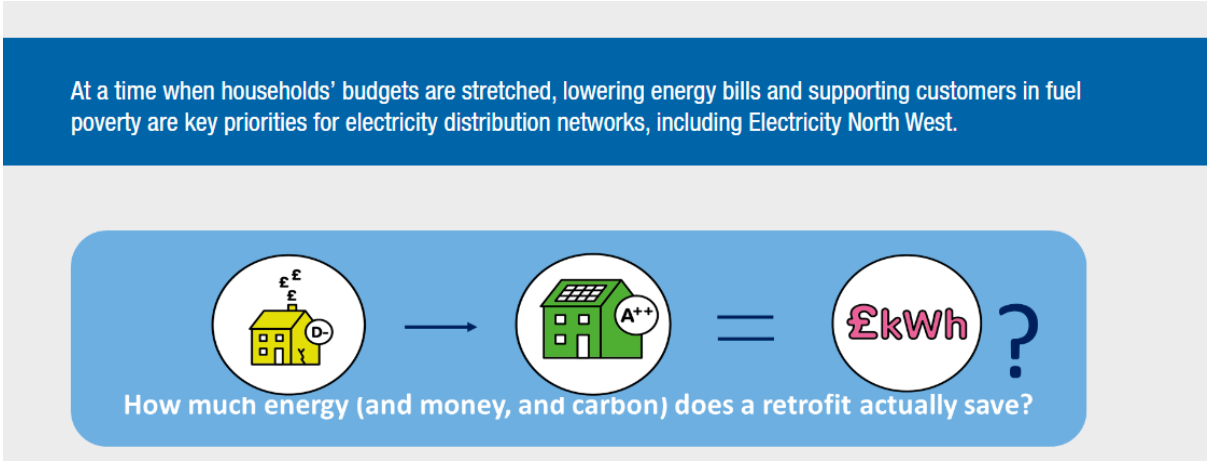
3c. Blog post 3: 'Innovative project supports customers' ENWL

25th March 2024

Electricity North West (ENWL) published a blog post to discuss how the RetroMeter project will bring energy efficiency approaches together with flexibility. As we move to using electricity for heat and transport, network benefits are becoming more crucial. RetroMeter will realise and stack both new and existing revenue streams, by bringing energy efficiency approaches together with flexibility.

[5] 'Why Metered Energy Savings' https://carbon.coop/2024/02/retrometer-project-why-metered-energy-savings/

This will support meeting demand reduction targets in the most cost-effective manner possible.



It specifically highlights key problems for the distribution network operator, and how the RetroMeter project needs to address them.

1. How do you baseline and then measure the savings in order to quantify the impact of using home energy efficiency measures to provide a demand reduction in return for payment?
2. Where the DNO is forecasting the demand growth on the network associated with the electrification of heat, how can energy savings from retrofit efficiency measures be taken into account?
3. How do electric heating installers quantify the effect of retrofit energy efficiency measures when deciding what equipment to install?
4. How do you articulate the benefits of retrofit energy efficiency measures to stakeholders, as part of the DNOs role in the transition towards net zero?

The blog can be found on Electricity North West's website.[6]

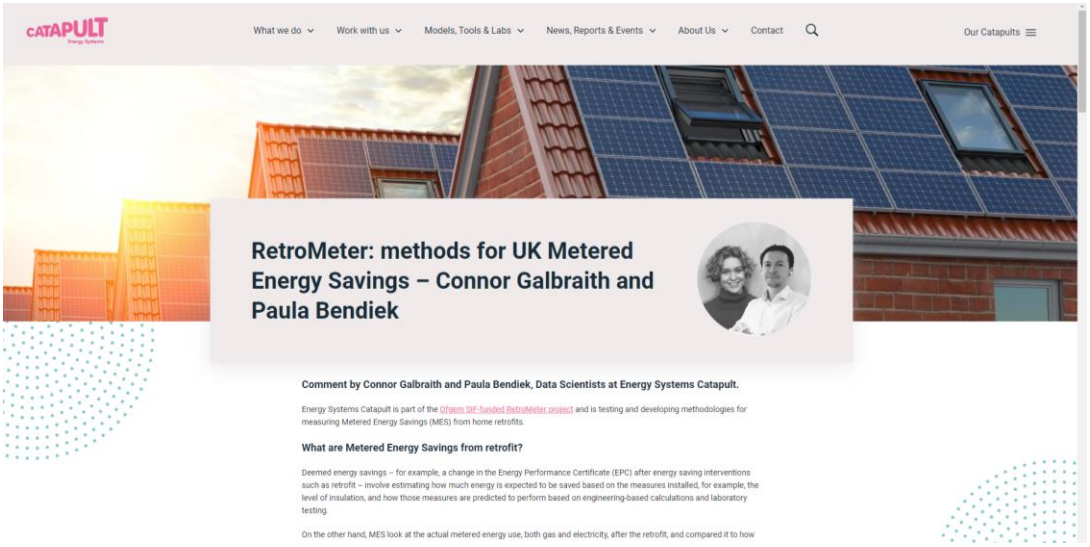
3d. Blog post 4: RetroMeter: methods for UK Metered Energy Savings, ESC

8th April 2024

ESC published a blog post on their website to discuss the methodology for metered energy savings in the UK context and how this has been developed and tested throughout the alpha phase of the RetroMeter project. Carbon Co-op worked with ESC on drafting a blog post and some of the content proved to be suitable as a briefing post. The blog can be found on ESC's website.[7]

[6] Innovative Project Supports Customers https://news.enwl.co.uk/blogs/innovative-project-supports-customers

[7] RetroMeter: methods for UK Metered Energy Savings https://es.catapult.org.uk/insight/retrometer-methods-for-uk-metered-energy-savings-connor-galbraith-and-paula-bendiek/



4. Sectoral briefing notes

Carbon Co-op coordinated briefing notes for the project. This was done through a process of collaboration with partners to identify key audiences and key questions each audience might ask. Project partners collaborated to provide content under each question heading. Carbon Co-op coordinated further collaboration to customise individual briefing notes customised for each audience. These have been circulated for further review by partners, and will be finalised, formatted and disseminated to the target audiences.

Custom briefing notes were produced for:
- policy makers
- investors
- retrofit providers
- householders
- electricity network operators
- energy suppliers

The briefing notes are available on ENWL's website.[8]

[8] RetroMeter Briefing Notes https://www.enwl.co.uk/future-energy/innovation/strategic-innovation-fund/retrometer/retrometer-alpha/

This table illustrates the process used to compile these briefing notes.

	Policy makers	**Financers and investors** - Public bodies Private investors	**Retrofit providers** - Contractors Local authorities Housing providers	**House-holds**	**Electricity DNOs**	**Energy suppliers**
What are metered energy savings from retrofit?	Yes	Yes	Yes	Yes	Yes	Yes
What are the benefits of metered energy savings?	Yes	Yes	Yes	Yes	Yes	Yes
How are metered energy savings relevant for households?				Yes		
How are metered energy savings relevant for – retrofit providers?			Yes			
How are metered energy savings relevant for investors / financiers		Yes				
How are metered energy savings relevant for electricity network operators?					Yes	
How are metered energy savings relevant for energy suppliers?						Yes
What is the RetroMeter project?	Yes	Yes	Yes	Yes	Yes	Yes
What types of households / retrofits could RetroMeter metered energy savings methodologies be applied to?	Yes	Yes	Yes	Yes	Yes	Yes
What are the methodologies being tested under RetroMeter ?	Yes	Yes	Yes	Short version	Yes	Yes
How were the methodologies tested?	Yes		Yes		~~Y~~es	Yes
How accurate are the methodologies?	Yes	Yes	Yes	Summary table only	Yes	Yes
How applicable are metered energy savings at the individual household level vs aggregated across larger numbers of households?	Yes	Yes	Yes	Yes	Yes	Yes
How much does the accuracy of the methodologies affect the energy cost savings / financial returns?		Yes			Yes	
What data is needed for metered energy savings and what are the possible sources?	Yes		Yes	Yes		Yes
What would a data warehouse for metered energy savings mean and how might it be set up?	Yes?					
What are possible ways forward for piloting and implementing metered energy savings?	Yes	Yes	Yes			Yes
What sort of business models could there be which leverage metered energy savings? What types of organisations and people could use metered energy savings, and how?	Yes	Yes	Yes	Yes	Yes	Yes
What are the possible policy enablers and blockers for metered energy savings?	Yes				Yes (electricity related)	

5. Conclusion

There has been a range of dissemination activity during the project, and dissemination material is prepared and dissemination events scheduled for shortly after the end of the project. This dissemination with ensure that the learning from the RetroMeter Alpha phase is available to a wide audience including energy efficiency, retrofit and energy distribution stakeholders.