

## PIAG Follow-up Project – Final Report

February 2023

Sustainability First is grateful to the Energy Systems Catapult (ESC) for their support over the past 18 months to continue to make the case on key recommendations from the PIAG work undertaken with CSE and concluded in 2021 to explore the public interest opportunities from access to smart meter data - see [PIAG Snapshot](#) - plus - [PIAG Microsite](#) .

This short report summarises our work over the past 18 months and the impact this has had in driving forward the PIAG recommendations and how these sit within the wider context of the growing focus on energy data and digitalisation.

### *The wider context*

In July 2021 the BEIS Energy Data & Digitalisation Strategy and Action Plan<sup>1</sup> was a welcome step in clarifying expectations across the energy data landscape - on better coordination, improved regulatory incentives for data transparency and visibility, and development of common standards for data interoperability.

The main-focus of the BEIS document was not consumer data but Sustainability First and CSE were nevertheless glad to see the commitment by BEIS and Ofgem to consider the recommendations from the final PIAG report:

*“The Public Interest Advisory Group on access to smart meter data for a public interest purpose, coordinated by charities Sustainability First and Centre for Sustainable Energy, has been exploring how smart meter data, on an anonymised and aggregated basis, could support government and regulatory oversight of the energy transition and aid public policy making. The government and Ofgem welcome the collaborative work undertaken by the Advisory Group and will consider the recommendations outlined in the Group’s final report, published in May 2021’. (p.11)*

Building on this, the Energy Digitalisation Taskforce report to BEIS (Jan 2022)<sup>2</sup> – which we were able to feed into - also recognised the importance of the PIAG recommendations and recommended that these be adopted.

Over the same period, faced with both the energy price crisis and the practical challenges of net-zero, the need for policy-makers to have access to a nationally representative and robust half-hourly data-set for household electricity and gas consumption has become ever-clearer and more pressing.

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<sup>1</sup> <https://www.gov.uk/government/publications/digitalising-our-energy-system-for-net-zero-strategy-and-action-plan>

<sup>2</sup> <https://es.catapult.org.uk/report/delivering-a-digitalised-energy-system/>

In particular, access to such data would enable policy makers to quickly see the impacts of current high prices on usage by different demographics as well as improve understanding of self-disconnection by prepayment customers, for example. We are aware that SERL<sup>3</sup> have plans for research in this area. BEIS have also recently requested additional data from suppliers to help them analyse the impacts of the Energy Bill Support Scheme<sup>4</sup>. However, neither initiative is likely to yield results quickly – highly necessary for managing through a crisis - and both can still only provide a partial picture. Having comprehensive, granular and more timely smart meter data linked to demographic information, as envisaged by PIAG, would address this need for the future. Hopefully the BEIS exercise will provide them with additional insights as to the value of and potential for a longer-term solution.

### *Our activities over the past 18 months*

Over the past 18 months we have met bilaterally (sometimes on multiple occasions) with the key players at whom the PIAG recommendations were directed – BEIS, Ofgem, the ENA, ONS, UCL and industry bodies. By continuing to focus on the key findings from the PIAG work – where there were wider developments and / or changes in personnel - we have helped keep the issue of access to smart meter data for a public interest purpose squarely on the agenda, including via a number of energy data events. We have also fed into formal consultations where relevant, as set out below.

Across Ofgem, BEIS and ONS we see a growing recognition of the value of smart meter energy data – not least to support their own analysis. We are clear that our in-depth work on PIAG to explore different use cases has helped this realisation.

Finally, the regular discussions we have had with the ESC as sponsors of this work over the past 18 months have been helpful to both parties in keeping abreast of developments.

### *Progress on the PIAG recommendations*

We set out in Annex 1 a summary of our headline recommendations from the final PIAG report and provide a brief assessment of progress. The main developments that we have championed and are particularly pleased to see are:

- **BEIS** energy statistics team - are actively exploring how to make use of more granular (monthly) data. For example, in compiling their statistical reports and

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<sup>3</sup> Smart Energy Research Lab - <https://serl.ac.uk/>

<sup>4</sup> <https://www.gov.uk/government/publications/electricity-meter-data-collected-through-the-energy-bills-support-scheme-privacy-notice/use-of-electricity-meter-data-collected-through-the-energy-bills-support-scheme-privacy-notice>

considering what more they can make available through NEED<sup>5</sup> on a sample basis. We responded to the initial BEIS consultation on developments to NEED and remain very supportive of the BEIS work which responds to that key PIAG recommendation.

- **Ofgem** Data Best Practice Guidance – Ofgem have consulted on their minded-to position that de-personalised smart meter data should be treated as system data for the purpose of the Data Best Practice Guidance and application of the “presumed open” principle. We responded in support of this proposal, which was also a key PIAG recommendation, to enable better use to be made of the data collected by the DNOs. We are encouraged by our discussions with Ofgem on this topic. These have also touched on the important question of how to ensure a consistent approach on smart meter data across DNOs, another PIAG theme.
- **UCL** are in the process of securing funding to continue with their SERL smart meter data repository (and have secured funding for a next phase in collaboration with University of Oxford that will look at collecting more detailed data from smart appliances etc). The PIAG work has provided helpful evidence in support of these funding bids. In line with our recommendation, SERL have made it easier for non-academic partners to access SERL data. Moreover, their first annual report - focused on what we highlighted as the neglected issue of heat - provides valuable summary data on which others can draw and unequivocally demonstrates the valuable new insights to be gained from half-hourly gas data. It is important that SERL is funded to continue producing these statistical reports which are a key route for widening access to smart meter data.
- **BEIS** have completed the proof of concept stage of their SMETER project, using smart meter data to assess the thermal efficiency of buildings. They are now looking at the questions around implementation and data access. This was one of the valuable use-cases that we highlighted around the use of gas data and we are pleased to see it being progressed.
- **BEIS** Smart Meter Innovation team are also, separately, exploring the feasibility of a Central Smart Meter Data Repository (taking the debate from being about *whether* the data is needed to *how* it might be delivered longer term). We welcome this BEIS initiative and have highlighted the PIAG work which we hope can provide useful context for that project (and avoid reinventing the wheel, for example on ‘public-interest’ use-cases). We are also aware of work in **ONS** starting to look at how they might access smart meter data as part of wider ONS work on an Integrated Data Service. PIAG had recommended that work continue on a longer-term solution with a “trusted processor” and we are therefore glad to see both the BEIS and ONS projects moving forward on that recommendation.
- Another element of “keeping doors open” that we had highlighted was the need to ensure that the **Future System Operator (FSO)** has access to smart meter data, noting that the ESO is currently reliant on aggregated BEIS statistics. We

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<sup>5</sup> NEED – National Energy Efficiency Data-Framework

raised this in our response to the BEIS FSO consultation and were pleased to see in the BEIS decision on the FSO remit, acknowledgment of the FSO's data needs and a new power for the FSO to obtain data from other energy licensees, networks included.

- **Other parties** are looking at how they can make use of (anonymised) data they hold to support wider public policy goals. This includes:
  - Smart DCC has put significant effort into exploring how to make better use of their meta-data, including work with Urban Tide to look at identifying homes in fuel poverty.
  - Electralink has also been developing uses of their meta-data, for example to provide insight on energy-use during the pandemic.
  - Elexon have committed to the open data principle and continue to develop their new Data Integration Platform in connection with market-wide half hourly electricity settlement, conceivably enabling an eventual data-hub.
  - The Centre for Net Zero (funded by Octopus Energy) have published various insight papers and analyses using Octopus Energy half-hourly customer data.
  - The need for better data on heat pump performance has been picked up by Dr Richard Carmichael at Imperial College whose paper drew on the PIAG work and advocated a crowd-sourced model for sharing data and learning.
  - The ESO and BEIS have been developing a proof of concept for a virtual energy system – and we have drawn to their attention relevant work undertaken for PIAG.

#### *Where progress has been slow*

One area where progress has been slower than we would have liked is in relation to the **role of networks (DNOs and GDNs)**. As a part of this final phase of PIAG we have engaged with the ENA, including the networks who are members of the ENA Data & Digitalisation Strategy Group, on a number of occasions.

- In relation to the recommendation that **electricity smart meter data be treated as system data** there are different views across DNOs - and some reticence - on how far they can or would wish to share de-personalised smart meter data with third parties. This includes understandable concern about how this would fit with their existing Privacy Plans and GDPR which we believe can be addressed by Ofgem allowing the companies to provide updated Privacy Plans. For technical reasons largely beyond their immediate control, some DNOs also still have major issues themselves in accessing the data. We hope that the Ofgem proposed revisions to the Best Practice Guidance will make clear to the DNOs that they do

need to treat suitably aggregated or anonymised smart meter data as system data and find ways to make it available. There may also be lessons DNOs can learn from Smart DCC who have been exploring the issues around anonymisation of data being treated as a form of processing.

- **Reviewing the Data Access and Privacy Framework (DAPF) and its operation** - as DNOs are becoming much clearer about the ways in which they can make use of smart meter data – and the wider benefits of so doing - we had recommended that this aspect of the **DAPF<sup>6</sup> be reviewed**. Given the strategic importance being attached to improving visibility of the low voltage network in ED2, such a review is now urgent and requires Ofgem and BEIS co-ordination. While we recognise the importance of privacy protections, we are concerned that an overly cautious approach risks undermining the evident value that could be got from smart meter data. It would be helpful to understand how the underlying intent of the Data Protection and Digital Information Bill (22-23) to ‘make provision about the disclosure of information to improve public service delivery’ might link to the DAPF.
- We were pleased to see UKPN starting to explore how individual customer data (rather than aggregated data) could be used through a trial, as provided for under the DAPF. However, our informal understanding is that getting approval for the trial was quite a burdensome process, at least in part because it was the first time it had been done. The ability to use individual data as part of a trial should be a key route to allowing more evidence to be collected on the benefits to networks of having that data. It is therefore important that this process is not unduly onerous. Building on the evidence which this trial should yield, there is a clear case for BEIS and Ofgem to review the arrangements for DNO access to smart meter data as part of the wider focus on energy data and digitalisation.
- **GDNs and Gas Smart Meter Data** – a lack of granular (half-hourly) gas consumption data remains a major gap – both in understanding household needs in the present energy price crisis and also in addressing planning for zero-carbon heat, including network planning. Frustratingly, there still seems to be little interest from GDNs in collecting **gas smart meter data** through Smart DCC as they see no direct benefit for their own operations. Yet in public policy terms this data is crucial to aid planning for heat decarbonisation. Electricity DNOs are not legally able to collect gas data at present and have no interest in doing so. Xoserve, the central data services provider for the gas industry, established Correla in 2021 to support data-service development and delivery. Neither has shown much interest so far in making gas profile and other gas data they hold publicly available for a wider ‘public interest’ purpose. As Ofgem starts thinking about RIIO GD3 there is an opportunity for them to look again at whether GDNs should be required to collect granular gas smart meter data.

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<sup>6</sup> Which currently only allows the networks to access consumption data that has been aggregated or anonymised as far as reasonably practicable.

*The need for an ongoing information exchange*

**Information exchange and oversight of activities** – through these various conversations we have also been reminded that a major benefit of the PIAG project was regular information exchange, facilitated among the wide stakeholder group that we brought together quarterly for over three years. Having been reminded of the benefits of this exchange among stakeholders who normally may not interact, we would like to add a further PIAG recommendation that ESC (or similar body) establishes a **Smart Meter Data and Public Policy information exchange** to fill this gap.

From where we stand now, we are satisfied that in relation to most of our key PIAG recommendations there is sufficient momentum for them to be taken forward once we step back. However as noted there are still areas where more progress is needed. Having a regular information exchange would also allow some level of focus and pressure to be maintained in these other, more intractable, areas.

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**February 2023**

## Annex 1: PIAG Recommendations – progress update

- **BEIS Energy Statistics to be expanded to respond to users' needs:** BEIS should use the existing powers they have under, for example, the Statistics of Trade Act 1947 to move to collect at least monthly metered consumption data (in place of annual) together with key metrics such as maximum demand.
  - **Progressing:** Monthly data collection being actively explored by BEIS. Collection of half-hourly data needs further consideration.
- **SERL to be extended beyond 2022 and access widened:** the UCL SERL database is now up and running and represents a unique resource spanning gas and electricity and linking energy consumption to socio-demographic and other data. We recommend that funding is provided for it to continue but that as a part of that, access should be extended to accredited researchers beyond the academic community and its scope broadened.
  - **Progressing:** Funding being pursued but still some gaps. Access broadened (although an academic 'lead' still required).
- **De-personalised smart meter data held by DNOs to be treated as "presumed open":** with DNOs now starting to collect and make use of smart meter data for their own operational and planning purposes and with an obligation on them to comply with Ofgem's Energy Data Best Practice Guidance, it should be made clear by Ofgem that where smart meter data is sufficiently aggregated it can be shared in the way that other system data is expected to be.
  - **Progressing:** Ofgem has consulted on a minded to position to deliver this. DNOs remain reticent and need to address in the context of their data strategies.
- **Smart meter data to be used to train models to improve the accuracy of current representations of energy demand:** given the current heavy reliance on models of energy demand to forecast the impacts of policy and other interventions on energy consumption, a priority for early action is to make smart meter data available to improve the models' predictive value by providing better representations of current demand patterns and better assessments of the impact of different types of intervention.
  - **Some progress:** Only available route currently is through SERL but this is an area of focus for SERL research
- **Time for a major push by Ofgem, BEIS and others on gas demand data:** Recognising the importance of heat decarbonisation and the challenge it presents, more focus needs to be placed on granular gas demand data for

analytical purposes. This includes short term opportunities to widen access to some existing data sources such as Xoserve<sup>7</sup> profiles data but also the need for Ofgem and BEIS to revisit expectations about GDNs' participation in Smart DCC and the interest that DNOs will have in accessing that data to help in planning for heat electrification.

- **No progress:** beyond the SERL report and the SMETER work there has been no movement on gas data. In the current energy crisis, the dearth of gas consumption data is a significant shortcoming.
- **Keep doors open and continue to reflect on potential pathways for a longer-term comprehensive solution to access to smart meter data for public-interest purposes:** As set out in Phase 1, the long-term solution requires access by a trusted processor to a comprehensive source of granular smart meter data. In taking decisions on half-hourly settlement or on the role of the FSO (future system operator), doors should be kept open where those bodies might facilitate access to data for a public interest purpose in the longer-term. As well as extending use of system-data and meta-data, all parties are urged to consider what role they might play in making aggregated and anonymised smart meter data more widely available.

As part of this longer term thinking we also argued for a review of the arrangements for DNOs to access smart meter data under the DAPF.

- **Progressing:** BEIS exploring feasibility and practicalities of a smart meter data repository and also an ONS investigation in train. FSO to have a new power to request data held by networks.
- DNO access to data under the DAPF – case for change becoming stronger.

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<sup>7</sup> Xoserve is the central data services provider for the gas industry, including data on gas transportation, balancing and settlement. Xoserve administers the UK Link system which holds data on the 24 million GB gas meter points.