

# Smart Meter Energy Data: Public Interest Advisory Group (PIAG)

Initial Meeting  
30 November 2017

# Welcome & Introductions

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Centre for Sustainable Energy.  
Bristol

# Agenda

- Introductions
- How we got here
- The link to the Smart Meter Research Portal (SMRP)
- Introduction to PIAG aims and themes
  - Have we got the right goals?
- Theme 1: What do actors want from data?
- Theme 2: Data Properties and the Public Interest
- Theme 3: Data Access and the Public Interest
- PIAG Modus Operandi and next steps

# How we got here

Judith Ward  
Sustainability First

# A new Smart Meter Research Portal (SMRP)

Simon Elam UCL  
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# Project Summary

- **The Smart Meter Research Portal (SMRP) will provide a secure, consistent and trusted channel for researchers to access high-resolution energy data, which will facilitate innovative energy research for years to come.**
- **Data will be collected via SMRP on a strictly voluntary basis.** SMRP data will only be collected with the explicit consent of households who have agreed to provide their smart meter data to SMRP for research purposes.
- Additionally, **SMRP's strict governance framework** will ensure that only accredited researchers will have access to anonymized data using established “5 Safes” protocols.

# SMRP – Project Details

**Project Duration:** 5 Years (Aug. 2017-2022)

**Project funding:** £6m from EPSRC

**Principal Investigator:** Tadj Oreszczyn

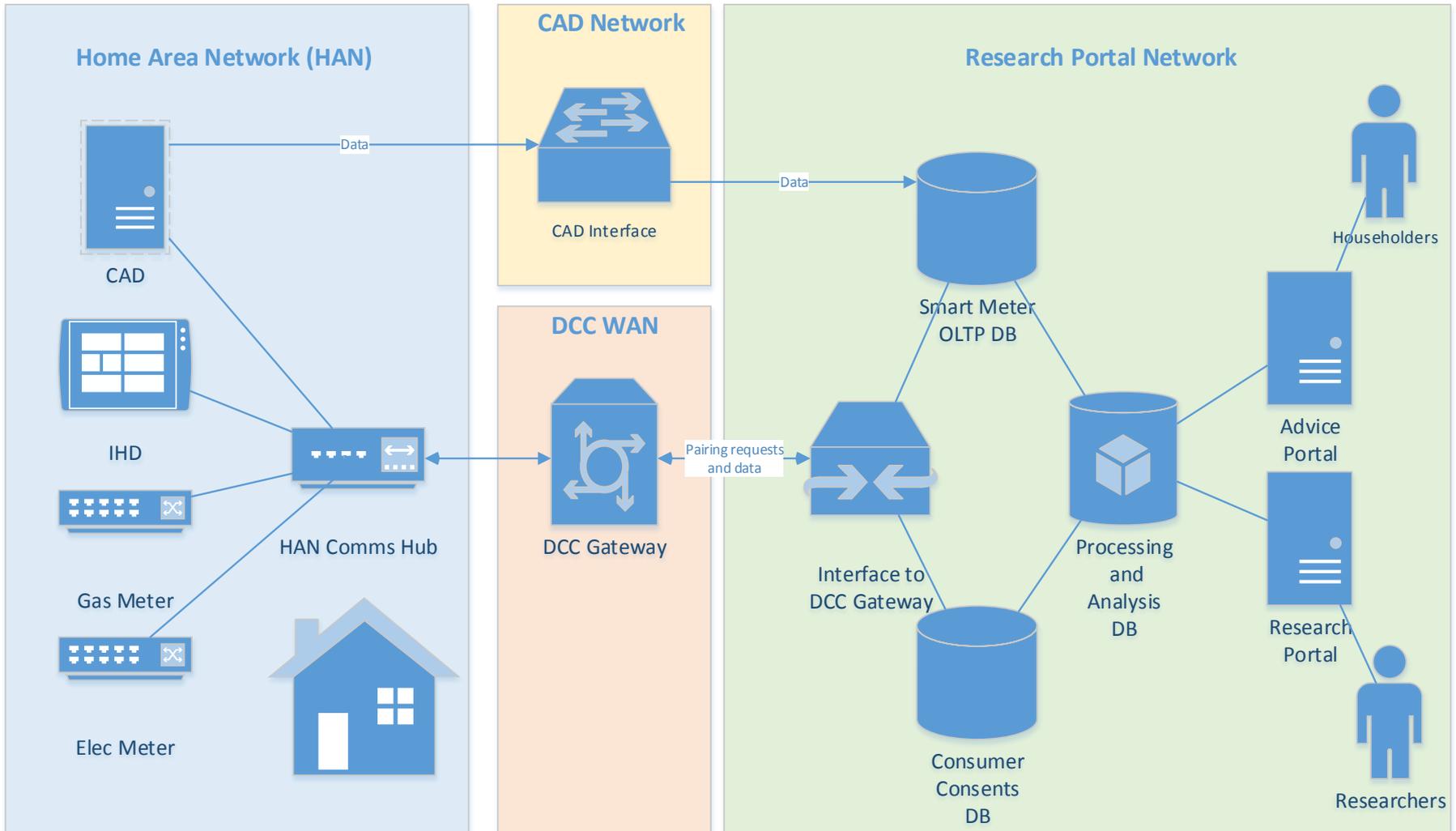
**Project Partners:**

- University College London
- University of Essex (UK Data Archive/Service)
- University of Edinburgh
- Cardiff University
- Loughborough University
- Leeds Beckett University
- University of Southampton
- The Energy Saving Trust

# Goals of the portal

- A consistent, trusted, and sustainable channel for researchers to access large-scale, high-resolution energy data, thereby providing a reliable empirical dataset for research;
- An effective mechanism for collecting or linking energy data alongside other variables from national surveys (e.g. EHS), administrative data (e.g. EPCs), or individual research projects;
- An Energy Advice Service for participants who want their smart meter data to be used for this purpose.

# SMRP System Diagram



# Ambition of the **research programme**

- Support government policy;
- Kick-start the development of new products, services and energy markets;
- Help provide solutions to the energy trilemma (security, affordability and environmental sustainability);
- Facilitate better research by developing best practice guidelines and methods to improve data security and enable innovative uses of smart meter data.

# SMRP Programme Summary

- Stream 0: Project Initiation
- Stream 1: Smart R to R
  - Research to support better research
- Stream 2: Smart Portal
  - Design, development and operation of the portal
- Stream 3: Smart EUED
  - End Use Energy Demand research
- Stream 4: Smart Transitions
  - Research to support the necessary transition to a flexible, low carbon, smart energy system in the UK.

# SMRP & PIAG

## Why SMRP & PIAG?

- RCUK funds research
  - Thus the academic research community are primary SMRP stakeholders.
  - Access to SMRP data is accredited researchers only.
- BUT wider public interest is important.
- SMRP will engage with a broad range of stakeholders.
- However an independent voice and focus on public interest issues is key.
- Builds on existing SF & CSE expertise in this area.

# Introduction to PIAG Aims & Themes

Maxine Frerk  
Sustainability First

# Recap – Smart Meter Rollout

- Supplier-led rollout
- Gas and electricity
- Requirement to take all reasonable steps to install in all homes and businesses by end 2020 (and to provide IHD – in home display)
- DCC now live providing national communications infrastructure and supporting SMETS2 meters
- 7.7 million meters now installed
- SMETS1 meters do not generally work on change of supplier – but will ultimately be adopted by DCC

# Recap – accessing smart meter data

- Data stored on the customer's meter
- Can be accessed by suppliers and network operators (subject to Data Access and Privacy Framework – DAPF)
- Can be accessed by third parties via DCC
- Need to register as DCC user and get customer consent
- Access to half hourly consumption
- Can be accessed by third parties via Consumer Access Device (CAD)
- Need to use DCC to “pair” the CAD
- Access to granular electricity consumption data (via wifi / broadband)
- Range of technical and tariff data also available

# Recap – data available

- **Meter Variant** (type of meter – e.g. single or twin)
- **Auxiliary Load Control Switch** – description
- **Payment Mode**
- **Consumption:**
  - 13 months of half hourly data
  - Daily Consumption
  - 10 second data sent over HAN (not recorded)
- Separate log for 2nd element if twin element meter
- **Debt management:**
  - Accumulated Debt
  - Debt Recovery rate
  - Disablement Threshold
  - Emergency Credit Limit / Balance
  - Low Credit Threshold
  - Non-Disablement Calendar
- **Tariff:**
  - Standing Charge
  - Tariff Block Price Matrix
  - Tariff TOU Price Matrix Type
  - Active Tariff Price
- **Technical:**
  - Profile Data Log (13 mths of half-hourly active & reactive import & 3 mths of active & reactive export)
  - Power Threshold – low, med, high
  - Average RMS voltage (when over threshold)
  - Max demand active power import
  - Max active power export
  - Alerts

# PIAG Aim

The over-arching aim of the PIAG is to bring together a range of relevant ‘public interest’ stakeholders to hold an informed and structured policy dialogue to explore how household smart meter energy data could be:

- put to appropriate use to better serve GB policy development and energy system transition;
- accessed for purposes of public policy by government and other organisations able to demonstrate a strong public interest remit.

*The Chatham House Rule applies to these meetings*

# PIAG Outputs

- Provide an independently-convened public interest view-point and platform to inform stakeholder thinking and the SMRP programme on the needs for and uses of smart meter data.
- Consider how public interest concerns are reflected in the current and evolving alternative routes for third party access, for example BEIS's review of the Data Access & Privacy Framework.
- Develop deeper understanding and ensure a high-quality debate on public interest benefits associated with smart meter energy data among key stakeholders.
- Develop and agree some high-level principles by which to test appropriate public interest uses of smart meter data.

# PIAG Themes

**Theme 1:** Interests of different ‘public interest’ actors and stakeholders in smart meter energy data

**Theme 2:** Data properties and the public interest

**Theme 3:** Data access and the public interest

# Discussion

- Are we addressing the right questions?
- What are the biggest challenges for stakeholders looking to use smart meter data in the public interest?
- How do we define the public interest?
- What are consumer privacy concerns?
- Does GDPR change things?
- What are the priority areas we should focus on?

# Theme 1

- **Interests of different ‘public interest’ actors and stakeholders in smart meter energy data**

# Smart meter data : sub-national perspective

Jess Britton  
University of Exeter

# The sub-national scale

- Sub-national public interest actors – local authorities, housing associations, health services, community groups, NGOs, social enterprises
- Long history of energy data being used sub-nationally, often partnership based models
- Plus ‘local’ energy models – municipal supply, community energy, local energy markets etc.
- A ‘smart revolution’? But how does smart meter data fit with the wider Smart Cities agenda?

# Some key issues

- Public interest benefits and barriers largely unquantified
  - Energy efficiency and fuel poverty
  - Local involvement in research and trials
  - Local areas as coordinators/brokers?
  - Local strategic energy planning
  - Energy system values flowing to local residents?
- Some issues felt particularly strongly at the sub-national scale (complexity, costs, capacity)
- Third party access and data sharing arrangements particularly important for sub-national actors

# Some questions!

- How can sub-national public interest users of smart meter data be actively engaged?
- Third party access is key – how do we recognise that the barriers and benefits of various third parties are different?
- What are the options to facilitate local public interest access to locally aggregated smart meter data?
- How can local data analytic capabilities be facilitated?
- What are the issues relating to multi-partner projects?

# Discussion – what data is needed?

- Provision of individual services direct to consumer (with consent)
- Assessment of need for services (or market opportunities)
- Scale of opportunity / identifying local areas – aggregated data
- Identifying individuals in need – more difficult
- Informing policy decisions
- Aggregated / anonymised data can provide information on scale of issue
- Linking to other data sources requires identifier?
- Informing energy system development (inc research on new solutions) – technical data
- Electricity or gas?

# Theme 2

- **Data properties and the public interest**

# Recap – Privacy rules

- Data Protection Act:
  - Data is “personal” if can be linked to an individual
  - Personal data can only be processed with consent or if other conditions are met (eg legal obligation)
  - Data that is suitably anonymised or aggregated so individuals can no longer be identified – no restrictions on use
- GDPR (next year)
  - Consent must be explicit (opt in)
- Data Access and Privacy Framework
  - Clarifies rights / restrictions for supplier / network access
- SEC rules
  - Managing consents
- Research standards / ethics

# Recap – Ofgem research (2011)

- Primary concerns were about data sharing leading to increased cold calling / marketing (“more noise and confusion”)
- Use by suppliers for providing energy efficiency and tariff advice welcomed – but lack of trust
- General support for use by “government” to manage national energy needs
- Some sensitivity around more granular data revealing lifestyle
- Want control over who gets data for what
- Some misgivings over systems and governance
- Low awareness of Data Protection Act

# Discussion – Privacy considerations

- Understanding where customer sensitivities lie:
  - How do we evidence this?
  - What research exists?
  - Current expectations?
- Changing the current framework for data access – issues for existing customers?
- Increasing the likelihood of “consent” to SMRP / public interest projects?

# Theme 3

- **Data access and the public interest**

# Discussion - Potential barriers

- Existing databases (NEED, LCNF etc)
  - Often annual data, smart meter data historic and anonymised, processed
- DCC Access:
  - Cost? Investment needed to become a DCC user?
  - Customer consent – more onerous than DPA?
  - Same process for public interest as commercial uses
- CAD:
  - Pairing process involves DCC (ie have to be or work through a DCC user)
  - Limited products currently available
  - Cost of CAD?
- SMRP
  - Limited to research community?

# PIAG Modus Operandi

- 18 month project
  - In parallel with DAPF review, GDPR – anything else?
- PIAG membership to represent broad range of public interest views:
  - Is anyone missing?
- Bilaterals / focus groups to explore issues in more depth
  - Whom else should we talk to?
  - Examples from outside the energy sector?
- Consciously “low key” communications

# Timetable

- **Initial Meeting – 30 November 2017**
- **Workshop 1 – mid-March 2018** – scoping discussion on future principles for ‘public interest’ use of smart meter data; exploration of the three themes.
- **Workshop 2 – Oct/Nov 2018** – discussion on emerging headlines & possible proposals to feed into final report, SMRP gateway review, DAPF review, etc.
- **Meeting on final report & principles – March 2019.**

# Smart Meter Energy Data: Public Interest Advisory Group (PIAG)

## Contacts

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