

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

Workshop 3 20 November 2018

Welcome & PIAG update

Judith Ward
Sustainability First

Agenda – Workshop 3

- Colleague updates
- Recap - on **public interest ‘use-cases’**
- **Possible routes to smart meter data for a public interest purpose**

13.00 - Lunch

- **PIAG member contributions** – evolving roles to support possible smart-meter data-capture for a public interest purpose
- **General discussion**

15.15 - Break

- **Report from Ipsos MORI Expert Research Roundtable – 19 October 2018**
- **Final PIAG report** – initial scoping
- **AoB & Next Meeting – 4 April 2019**

Colleague Updates

- BEIS
- Ofgem
- Citizen's Advice
- DNO
- Elexon
- ESC
- UCL SMRP
- Other colleagues

**Public interest ‘use-cases’ :
data attributes, data requirements and
associated privacy & access implications**

PIAG Stimulus Paper 5

Simon Roberts

CSE

Stimulus Paper 5: Data attributes, data requirements and associated privacy & access implications

- Set of six 'archetype' public-interest use cases drawn from interviews with stakeholders

Archetype public interest use-cases

	Smart meter data required	Other data required
1. National and sub-national domestic sector energy statistics (more detail and quicker)	Yes	Other energy data
2. Local-level energy system planning (infrastructure and intervention planning and monitoring etc)	Yes	Other energy data
3. Data for analysis and modelling to support policy making, research and insight (e.g. household energy use, distributional impacts, policy impact evaluation)	Yes	Yes
4. Improved intervention design and targeting	Yes	Yes
5. Local electricity system 'live' monitoring to trigger reactions/interventions in real time	Not if 'live' sub-station data available	No
6. Service innovation and development and testing of early stage designs/algorithms etc	Yes	Yes

Stimulus Paper 5: Data attributes, data requirements and associated privacy & access implications

- Set of six ‘archetype’ public-interest use cases drawn from interviews with stakeholders
- Key smart meter data attributes to consider (e.g. temporal & spatial resolution) plus other data such as building and socio-demographic
- **All** use cases need individual level smart meter records to be captured and processed (because there is no database of all the data)
- Need to distinguish between **INPUT** data (to process to meet use case) and **OUTPUT** data (to share with users) – different privacy implications

1: National and sub-national energy statistics INPUTS

Smart meter data requirements

Temporal resolution	Annual	½ hourly	Below half-hourly
Spatial resolution	National	Pr	Property level
Data capture frequency	Yearly	Quarterly	Live feed

Other data requirements

Building information	None	Detailed fabric info for individual building
Socio-demographics	Area-level info	Single level data for hh marker? household
Other energy data	Will need non-domestic data for full energy stats, plus, ideally, household level data on generation and storage	

1: National and sub-national energy statistics **OUTPUT**

Smart meter data derived output

Temporal resolution	Annual	Average seasonal daily profiles, peaks etc	Below half-hourly
Spatial resolution	National	Anything above LSOA	Property level
Data release frequency	Yearly	Quarterly	Live feed

Stimulus Paper 5: Data attributes, data requirements and associated privacy & access implications

- Set of six ‘archetype’ public-interest use cases drawn from interviews with stakeholders
- Key smart meter data attributes to consider (e.g. temporal & spatial resolution) plus other data such as building and socio-demographic
- All use cases need individual level smart meter records to be captured and processed (because there is no database of all the data)
- Need to distinguish between INPUT data (to process to meet use case) and OUTPUT data (to share with users) – different privacy implications
- Questions: What is route to INPUT data? Role of ‘trusted processor’?

Possible routes to smart meter data for a public interest purpose

DRAFT Stimulus Paper 7

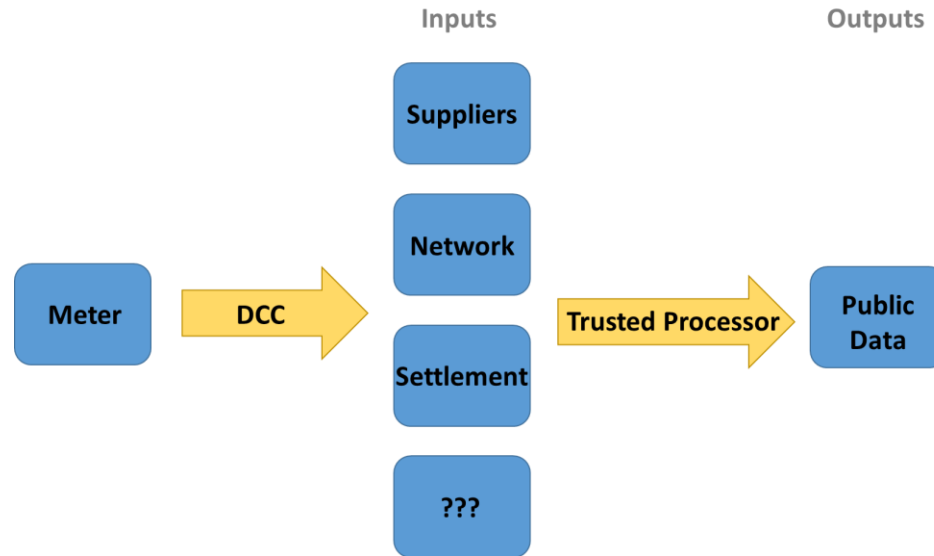
Maxine Frerk

Sustainability First

Introduction

- Outputs suitably aggregated and anonymised so should not raise fundamental privacy concerns – the challenge is the input data
- Strawman process
- Options for sources of input data
- Proposed criteria for assessing and initial assessment
- Trusted processor role
- Options for short and long term

Strawman process to access smart meter data for a public interest purpose



Potential sources for the input data

- Suppliers
- DNOs (elec)
- GDNs (gas)
- Settlement (Elexon – elec, Xoserve –gas)?
- Smart DCC?
- ONS (as DCC user)?
- ...Others????

Suggested criteria by which to assess routes to data for a public interest purpose

- Complexity
- Current data availability (short term)
- Comprehensive coverage (long term)
- Cost
- Legal basis
- Competence / consumer confidence

Strawman assessment of possible routes to the input-data to pass to a trusted processor

Source → Key Criteria ↓	Energy Supplier	Network (DNO)	Network (GDN)	Settlement Elexon Xoserve	Smart DCC	ONS - as a DCC user
Complexity	60+ suppliers	6 DNOs	4 GDNs	Single body	Single body	
Current data availability	Gas+ Elec SMETS1+2 Mostly monthly/ some half-hourly	Elec SMETS2 Aggregated? Subject to privacy plan (WPD)	Gas SMETS2 Not collected	None	No right to access to encrypted data (currently SMETS2 only)	No basis under DAPF for access without consent
Long term more comprehensive data availability	Gas+ Elec SMETS1+2 Monthly only for some	Elec SMETS1+2 Aggregated (or pre destruction?)	Gas SMETS1+2 May be collected	Elec - subject to Ofgem decision Gas - No plans	Gas+ Elec All - subject to legislation	Gas + Elec All - subject to legislation
Additional costs	Depends/supplier	Depends/DNO			Systems to capture & decrypt	DCC user costs per meter read
Legal Basis	Yes	Yes	Yes	Being considered	Not at present	None at present
Competence / trust	Are they all reliable?				Highly secure approved process	Trusted by consumers
Short term	Best option?					
Long term	Limited granularity & reliability questionable	Elec only - need gas too	Gas only - unclear if will collect	Elec only - need gas too	Require changes to smart metering systems & DCC role.	Require a legislative change. Costs of DCC use.

Trusted Processor Role

- Elements of trusted processor role for PI use cases:
 - Aggregation and publication – statistical purposes
 - Linking, de-identifying and providing secure access – research and modelling (requires access to other socio-demographic data)
- Digital Economy Act:
 - ONS is able to collect data from private companies for public interest purposes
 - ONS an accredited data processor – but others may be accredited in future (eg UK Data Archive currently working on similar basis with academics)
 - ONS guidance on arrangements for secure access – accredited researchers and projects

Early thoughts : possible routes to smart meter data for a 'public interest' purpose

- Many queries and unknowns
- Requires detailed work on licence, cost and other implementation approaches

Early thoughts : possible near-term routes to smart meter data for a ‘public interest’ purpose

- Suppliers the obvious short term option – have rights to the data even if only monthly
- Even monthly data would be a step change in accuracy and timeliness of national energy statistics
- BEIS currently collect annual data from suppliers
- ONS have the right to collect the data – could start to build framework for the future?
- Networks could be another option in the slightly longer term – though gas still a gap?

Early thoughts : possible longer-term routes to smart meter data for a ‘public interest’ purpose

- Longer term options highly dependent on how wider energy system and data landscape evolves
- Suppliers and networks remain options but not comprehensive coverage (esp gas)?
- Settlement reform could open opportunities but uncertain at present (and no plans on gas)?
- Other players (DCC, ONS, others) all need legislative change plus costs in collecting data purely for this purpose

Wider policy context for 'administrative data' & the Digital Economy Act 2017

James Denman

Ministry of Housing, Communities
and Local Government

Role & characteristics of a 'trusted data processor'

Simon Duddy & Darran Tucker

ONS

How might your role evolve to support smart meter data capture for a public interest purpose?

PIAG members :
Smart DCC, Elexon, EDF Energy,
Northern Powergrid,
Electricity System Operator, Electralink,
UCL SMRP, Energy Systems Catapult

General Discussion

- PIAG strawman process - incl 'trusted processor'
- Proposed criteria by which to assess possible routes to input-data
- Possible routes to smart meter input-data
 - Short-term
 - Long-term
- **Next steps** – feedback by 7 December. Final draft circulated to PIAG in December. Publish early 2019.

What consumer research reveals about customer thinking on privacy in relation to smart meter data for the public interest

**PIAG Expert Research Roundtable Report
19 October 2018**

Antonia Dickman
Ipsos MORI

Research Director & Head of Environment and Energy Research

Final PIAG report

Initial scoping

Maxine Frerk
Sustainability First

Final PIAG report – Proposed Structure

- Introduction
- Context - smart meter data; legal framework; wider government focus on data (DEA); international experience
- Public interest uses of smart meter data - defining the PI; use cases; distinguishing between ‘input’ and output ‘data’; the challenge around input data
- Consumer attitudes
- Routes to the data
- Principles / recommendations:
 - Principles for policy makers
 - Principles for users of PI data

PIAG workshop 4 – Thursday 4 April 2019.

- Final PIAG Workshop
- Draft final PIAG report. Likely publication May 2019
- Possible close-down event ? May / June 2019
- PIAG follow-on ?

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

www.smartenergydatapiag.org.uk

Maxine Frerk	maxine.frerk@sustainabilityfirst.org.uk
Judith Ward	judith.ward@sustainabilityfirst.org.uk
Nicky Hodges	nicky.hodges@cse.org.uk
Simon Roberts	simon.roberts@cse.org.uk

Centre for Sustainable Energy – www.cse.org.uk
Sustainability First - www.sustainabilityfirst.org.uk