Energy Theft Reduction Expert Group

24 April 2024



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Welcome and Introductions

Minutes of the Previous Meeting

The ETREG is invited to approve the minutes of the previous meeting.

Action Updates

Rosalind Timperley

ETREG Action Updates

Reference	Action	Owner	Target Date	Update
ETREG_08_01	Consider the new SME definitions being developed by DESNZ and assess the feasibility of identifying such consumers within REC systems, to better facilitate REC Parties discharging applicable licence obligations.	RECCo	Feb 2024	On going
ETREG_08_04	Work with RECCo on establishing what types of marketing content Distributors and Transporters would find valuable to promote reporting of network theft.	ETTOS Service Provider	Jan 2024	Engagement underway
ETREG_09_05	Organise face-to-face meetings with a morning start for the March, June, September and December ETREG meetings.	Technical Secretary	Feb 2024	On-going. Note, June ETREG to be replaced with Forum.
ETREG_10_02	Put forward additional suggestions for improvements to the TDIS scheme, for consideration by the TDIS Issues Group.	ETREG Members	Mar 2024	To be closed

ETREG Action Updates

Reference	Action	Owner	Target Date	Update
ETREG_10_03	Provide feedback on receiving information from the Theft Monitoring Service.	ETREG Members	March 2024	On agenda
ETREG_11_01	ElectraLink to provide an update on its Network Trial at the July meeting of the ETREG.	ElectraLink	July 2024	
ETREG_11_02	Consider engaging with meter manufacturers on preventing energy theft.	RECCo	May 2024	
ETREG_11_03	Share the theft amnesty proposal with people in your businesses (including decision makers) and gather their input to ensure that their feedback, including any prerequisite things that have to happen before an amnesty, can be built into the next version of the theft amnesty proposal.	ETREG Members	Apr 2024	On agenda
ETREG_11_04	Share examples of online articles that have been published as a result of the Network Engagement Service.	ETTOS Service Provider	Apr 2024	To be circulated with Headline Report
ETREG_11_05	Confirm how many police staff as part of the police partnership proposal.	RECCo	Apr 2024	Refer to draft strategic outline case

TMS Evaluation Report

Alessandro Scarlatti, Gemserv

Theft Monitoring Service PoC – Overview (1/2)

Context and Aim of the Service

- The recent report commissioned by RECCo and published January 2023 has estimated that **Energy Theft** of **between £0.9bn and £1.4bn** takes place every year (based on energy prices at that time).
- Much of the **UK population is exposed to uncontrolled and inaccurate information** about Energy Theft online and on social media platforms.
- **Social media** is being used to **systematically promote and market services to commit and facilitate Energy Theft**, and this will likely be a growing issue.
- The aim of the Theft Monitoring Service is to **facilitate understanding** of what information about Energy Theft is available, being promoted and trending online.
- This will **enable the industry to be better informed** and **adapt the response** to emerging trends and specific intelligence.

Theft Monitoring Service PoC – Overview (2/2)

Service Delivery

- The TMS engagement, supported by Gemserv's Threat Intelligence team, was commissioned by RECCo to run from September 2023 to April 2024. It delivered:
  - **29** TMS weekly reports
  - **4** monthly trends reports

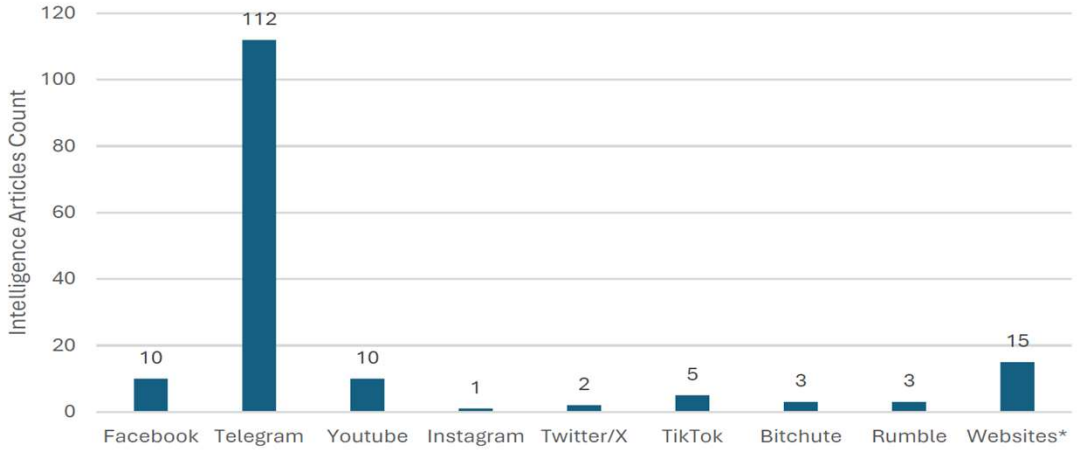
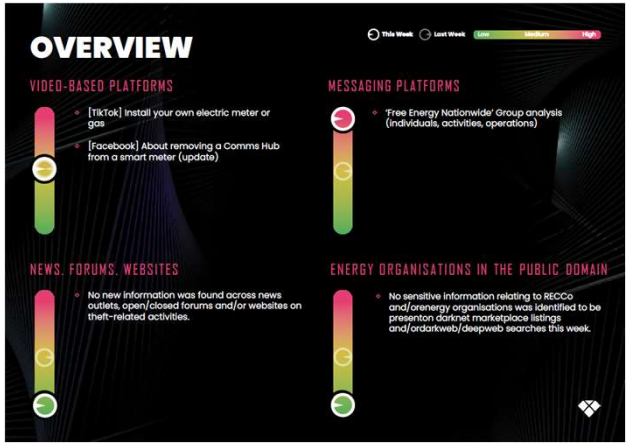


*Figure 1 PoC Overall Intelligence Articles Count (*websites include personal blogs, niche sites, forums, and similar sources)*





Theft Monitoring Service PoC – Status Update

TMS Evaluation Report and Data Protection Impact Assessment (DPIA)

- Gemserv is currently working on a '**TMS Evaluation Report**' for RECCo with the objective of detailing achievements of the PoC and summarising findings of the intelligence shared throughout the engagement.

- Below is the high-level structure of the report in its current form (note that minor alterations to the structure may be implemented):

1. Overview
   - Includes discussions on benefits, sources, keywords, reports enhancements, industry forum support
2. Common Themes and Key Findings
   - Includes detail analysis of groups and individuals' operations and motives (the why and how)
3. Major Groups and Key Individuals
   - Highlights detailed profiles of prominent groups and individuals identified during the PoC (the who)
4. Next Steps
   - Includes considerations for the future of the service
5. Conclusion

- In addition to the evaluation report, Gemserv and RECCo are working on a **DPIA** to understand and support how the intelligence can be utilised at its fullest in support to wider industry activities.

Theft Monitoring Service PoC – Next Steps

Timeline

- The first draft of the '**TMS Evaluation Report**' has been delivered to RECCo. Gemserv will incorporate any feedback received into a **final report** that will be delivered by **May 6th** in principle, however, this is contingent to the DPIA delivery.

- The **DPIA** is currently under development and more information regarding the timeline for delivery will be shared once agreed.

Theft Monitoring Service PoC – Considerations

What can we do with the intelligence gathered (discussion points)

- Inform RECCo's Energy Theft Reduction Strategy, including:
  - Energy Theft Awareness Strategy
  - Police Engagement and Partnership Feasibility study

- Explore if intelligence gathered could be passed to an IFED type police task force for Energy Theft for direct action

- Explore potential to take down problematic groups and sites – New Online Safety Bill may strengthen requests for content to be removed.

- Explore and assess how data and intelligence from the reports can be used in the Theft Data Portal for analysis in conjunction with other data.

- Share the intelligence with industry – how and who? Should Suppliers and Network Operators act on the intelligence individually or should action be centrally co-ordinated?

Energy Savings Trust – Theft Calculators

Aiyesha Andrade

Pre-Meeting Survey Results

1. Does your organisation use the electricity and gas Theft Calculators created by the Energy Savings Trust, which are available on the REC Portal?

More Details

Yes	1
No	1
Sometimes	0
Unsure	0



Pre-Meeting Survey Results

2. If you do use the Theft Calculators, do you have any changes/improvements you would like to see made to them?

2 Responses

ID ↑	Name	Responses
1	anonymous	It would be great if the theft calculators could work on a MAC OS operating system. At the moment we have to buy separate PCs to use the calculators. The baseline function on the commercial calcs doesn't work very well. The square footage of commercial sites is hard to find so this is a difficulty we encounter It would be great to get a baseline function for domestic sites. We find it hard to find out when a property was built Can we have access to the back-end macros so that we can build this into our internal operating system? More properties are getting heat pumps installed, can we include this in the calculator? Solar panels too? More guidance on the theft start dates would be beneficial
2	anonymous	N/A

Pre-Meeting Survey Results

3. If you do not use the Theft Calculators, how are you calculating energy theft volumes and could any lessons be learnt from your mechanism for inclusion in the Theft Calculators?

1 Responses

ID ↑	Name	Responses
1	anonymous	We simply base it on what the illegal connection was pulling (amps) when a tong test was carried out before removal, amount of power used in 24 hours, and then multiply it by how many days the theft was in place (this part is almost impossible). For sites where cannabis cultivation has occurred, we would base it on an 84 day time period which is how long it takes to cultivate a crop of cannabis (approximately). This unfortunately the only way of getting any idea of accuracy.

REC Obligations

Schedule 7 - Energy Theft Reduction
8.4. When assessment calculation tools are required to assess unrecorded units, Parties must utilise the Theft Assessment Calculator, unless otherwise agreed with the Code Manager.

Schedule 8 - Assessment of Unrecorded Units
12.2. When assessment calculation tools are required to assess unrecorded units, Parties must utilise the Theft Assessment Calculator most recently made available by the Code Manager.

- What prevents you from using the current tools?
- What enhancements do you think the tools require?
- If your organisation uses a different tool, have you notified the Code Manager?
- Do you have a better methodology for calculating unrecorded units, that you believe other Parties should be following?

R0155 – Change of Tenancy

James Hardy

R0155 – Change of Tenancy: Evidentiary Standards and Timescales

REC Update

- This Change Proposal seeks to address industry concerns with the Non-Domestic Change of Tenancy (CoT) process identified by Non-Domestic Suppliers, Third Party Intermediaries (TPIs) and Consumers and bring improvements to the CoT process.
- R0155 is currently in the Solution Analysis and Development stage until 28 June 2024. To support this, fortnightly workgroup sessions consisting of 5 suppliers (2 EUK affiliated, 2 ICoSS affiliated, and 1 non-affiliated), 5 TPIs, Ofgem, RECCo, and Code Manager representatives.
- Four workgroup sessions have occurred since the end of February, with a further two expected. The workgroup has explored the existing issues within the Change of Tenancy process and considered possible documentation that can be used as evidence for Change for Tenancies.
- The Code Manager has also engaged with other stakeholders to seek views and understandings.
- An industry Party Impact Assessment will occur during the summer, but the precise timings are TBC.

R0155 – Change of Tenancy: Evidentiary Standards and Timescales

Solution Development

- Solution Development Activities to date:
  - The Problem Statement has been reviewed and broken down separately for Non-Domestic Consumers, Suppliers and TPIs.
  - The Code Manager has engaged with legal resources to further understand the solution requirements, viability, and to deem what is in scope of R0155.
  - Reassessment of the issues with the CoT process, including from a Consumer perspective, and a review of the list of possible evidentiary documents.
  - Consideration of cost of, and level of, fraud to non-domestic industry due to fraudulent CoTs.
- Remaining Solution Development Activities:
  - Complete an assessment of the issues within the Change of Supplier process.
  - Consider whether a list of evidentiary items should be provided as a guidance document or incorporated into legal text.
  - Continued engagement with REC legal resources to clarify the legal requirements of the solution.

R0155 – Change of Tenancy: Evidentiary Standards and Timescales

Review of the Problem Statement

Non-Domestic Consumers may struggle to quickly and easily update a supplier when they become the new occupier or responsible bill payer for a property. This can include:

- Inconsistent requests from suppliers for proof they are the new occupier / responsible bill payer;
- Inconsistent time taken to have new billing account set up or new contract agreed with the supplier;
- Inconsistent treatment of request to change supplier (CoO flagged or not flagged, loss request objected to or not objected to);
- Risk of being held responsible for previous occupier / responsible bill payers debt and contract;
- Risk of being put on deemed prices (on assumption these are more expensive than contract terms).

Suppliers may struggle to quickly and easily update their billing and contractual records for non-domestic properties. This can include:

- Inconsistent updates from consumer leaving a property;
- Inconsistent updates from consumers taking over a property;
- Inconsistent quality of evidence provided;
- Risk of invalid / fraudulent requests to avoid debt or leave contracts before the expiry date.

Third Party Intermediaries (TPIs) may struggle to provide non-domestic consumers and suppliers with a service. This can include:

- Different processes for each supplier;
- Different evidence available from each consumer;
- Stuck in the middle.



Questions and Discussion

Police Partnership Strategic Case Consultation

Rebecca Lowe



Data Sourcing for Benford's Law

Rosalind Timperley

Identifying Theft Using Benford's Law

- At the February ETREG meeting the potential to trial detecting theft using Benford's Law was discussed.

- It was noted that to test this methodology would require Half-Hourly consumption data. It was also noted that in obtaining HH data to trial Benford's Law, there is potential to also create other theft hypotheses and then test these using the same data set.

- ETREG Members's views were sought on what information their organisation would require in order for their business to consider sharing data for this trial. Ensuring GDPR compliance was the key feedback point.

Obtaining Data To Trial the Methodology

RECCo has developed an obfuscation tool which when run will replace the MPAN with a revised reference that cannot be reversed. The same MPAN will always produce the same revised reference, meaning data sets from different sources can be combined without the MPAN ever being know.

Before Obfuscation

Supplier File

MPAN/MPRN	Date	Settlement Period	Consumption (KWhs)	Opening Meter Reading
14000375971239	1/1/2024	01	0.0134	98487.1
14000375971239	1/1/2024	02	0.0125	98487.3
2670008834366	1/1/2024	01	0.0243	129769.8
2670008834366	1/1/2024	02	0.0156	129770.2

RECCo Held TDIS Data

MPAN/MPRN	Type of Theft	Assessed Start Date	Assessed End Date
14000375971239	C	1/3/2023	1/9/2023
2670008834366	C	12/2/2023	13/1/2024
1408097653948	P	18/8/2023	10/9/2023
11976540876436	C	16/7/2023	8/11/2023

After Obfuscation

Supplier File

MPAN	Date	Settlement Period	Consumption (KWhs)	Opening Meter Reading
5cA9ndtwl812b	1/1/2024	01	0.0134	98487.1
5cA9ndtwl812b	1/1/2024	02	0.0125	98487.3
AfaTnd083iO6	1/1/2024	01	0.0243	129769.8
AfaTnd083iO6	1/1/2024	02	0.0156	129770.2

RECCo Held TDIS Data

MPAN/MPRN	Type of Theft	Assessed Start Date	Assessed End Date
5cA9ndtwl812b	C	1/3/2023	1/9/2023
AfaTnd083iO6	C	12/2/2023	13/1/2024
dafdyye97w00	P	18/8/2023	10/9/2023
KHi97Noey903	C	16/7/2023	8/11/2023

Securely Transferring and Storing the Data

A formal request for data will be issued from RECCo Ltd to all Suppliers seeking input data, with the following process proposed to be used to gather the data:



Step 1 (optional): Access obfuscation tool via secure API. Upload MPANs and receive list of obfuscated ids back. Add obfuscated ids to a CSV file that contains the metered data.

Step 2: A secure SFTP folder will be provided to load the files into. Note, if any MPANs were included in these files, the obfuscation tool will replace these automatically as part of pre-processing. After processing the files will be deleted from this folder (processing occurs daily).

Step 3. The processing will load the files into the Secure RECCo Azure Environment so that the analysis can be completed. After use, the loaded data will be deleted.

The Secure Environment

This secure environment created to hold and process the TRAS files for use in the Theft Estimation Methodology. As such it has been designed to comply with all GDPR requirements for holding personal data.

Security features include:

- Access limitations, both at system and individual table level
- Multi factor authentication
- White listing of IP addresses
- Prevention of screenshotting

Next Steps

A formal request for data will be issued from RECCo Ltd to all Suppliers requesting that they share the smart meter data for the purposes of trialing effectiveness of theft detection using consumption data.

The request will include:

- Details on the data items and format being requested
- Details on how the data will be utilised
- Details on how the data will be securely transferred and stored

Time period will be as far back as consumption data is held for each smart meter.

Theft Amnesty Feedback

All

Theft Amnesty Feedback

ETREG are invited to share the feedback they have gathered from their businesses in relation to the following action:

ETREG_11_03	Share the theft amnesty proposal with people in your businesses (including decision makers) and gather their input to ensure that their feedback, including any prerequisite things that have to happen before an amnesty, can be built into the next version of the theft amnesty proposal.

Forward agenda

All

Forward Agenda

May

- Theft Portal Feedback
- ETTOS Service Feedback
- Back testing of smart alerts
- Police strategic outline case feedback

June

N/A - Forum

July

August

September

We welcome suggestions for further forward agenda items

AOB

AOB Items

- Cadence of future ETREG meetings
- Item referred to ETREG by the Theft Issues Group:

Area	Consideration Points	Next Step
• Minimum standards in Unbilled Energy CoP – up for review (last reviewed pre-REC)? • Pre-REC best practice guidance • Job card template type process • Clear guidance on what is expected • Same format – easier to move into centralised function	Is the current documentation still correct?	First to be considered by ETREG

Appendix A – Meeting Schedule

2024 Meeting Schedule

- Calendar invitations have been issued for 2024 ETREG meetings
- All fall on the last Wednesday of the month, except December which has been brought forward two weeks due to Christmas.

Month	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Type	ETREG	ETREG	ETREG	ETREG	**Forum**	ETREG	ETREG	ETREG	**ETREG**	**Forum**	ETREG
Location	Remote	Face to Face	Remote	Remote	Face to Face	Remote	Remote	Face to Face	Remote	TBC	Face to face
Notes					Avoid UKRPA conference date. Hold poll on whether next forum should be face to face					Location subject to poll results	

Energy Theft Forum

The draft agenda items are as follows:

Presentations

- Overview of REC Theft CPs
- Energy Theft Reduction Hub Request for Feedback
- ETTOS Marketing Plan overview
- Overview of SDEP Theft related changes
- Theft Calculator (mini workshop on potential changes)

Breakout Groups

- Share your challenges and seek guidance
- Share your views on wider incentives

We'll also be seeking case studies from parties on successes they have had. We are particularly interested in successes relating to freeman on the land cases.