Energy Theft Reduction Expert Group

31 May 2023

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Agenda

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06 Theft Epics Overview

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Welcome and Introductions

Aiyesha Andrade

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Minutes of the Previous Meeting

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

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Action Updates

Roz Timperley

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Action Updates

Reference	Action	Owner	Target Date	Update
ETREG_01_01	Include working with the police on the list of potential agenda topics for the June Forum. Areas for consideration include ensuring consistent engagement across police forces and provision of education (e.g. on actioning warrants associated with freeman on the land situations).	RECCo	June 2023	Included in forum agenda – action to be closed
ETREG_01_02	Include improving data collection and reporting to the list of potential agenda topics for the June Forum. Areas for consideration include improving the quality of information accessible from police, councils and similar; identifying different sources of data that could provide insight on theft; and discussing whether Suppliers should be submitting data on theft associated with crypto currency mining and cannabis cultivation.	RECCo	June 2023	Included in forum agenda – action to be closed
ETREG_01_03	Explore the potential to engage with water companies, particularly around the potential to identifying crypto currency related theft via water consumption.	RECCo	June 2023	Included in forum agenda – to be kept open as engagement with water companies not yet commenced.
ETREG_01_04	Share suggestions on agenda topics for the June Theft Stakeholder Forum.	ETREG Members	May 2023	Action to be closed.

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Action Updates

Reference	Action	Owner	Target Date	Update
ETREG_02_01	Share information with RECCo via the technicalenquiries@recmanager.co.uk mailbox on the costs to complete energy theft investigations, to help in understanding the value of the Theft Detection Incentive Scheme relative to these costs.	ETREG Members	May 2023	No information received. Do ETREG Members believe that an anonymous survey would be helpful?
ETREG_02_02	Send any post meeting further suggested changes to the Theft Detection Incentive Scheme (TDIS) to technicalenquiries@recmanager.co.uk.	ETREG Members	May 2023	None Received
ETREG_02_03	Send any post meeting additional requirements for the Energy Theft Portal to technicalenquiries@recmanager.co.uk.	ETREG Members	May 2023	None Received
ETREG_02_04	Send any post meeting comments on settlement of identified energy theft under MHHS to technicalenquiries@recmanager.co.uk.	ETREG Members	May 2023	None Received

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Action Updates

Reference	Action	Owner	Target Date	Update
ETREG_02_05	Send any questions on how the Ofgem prepayment meter guidance applies in cases of theft to technicalenquiries@recmanager.co.uk, so that clarification can be sought from Ofgem ahead of the forum if required.	ETREG Members	May 2023	None Received. Survey set up for Energy Theft Forum Attendees
ETREG_02_06	Add pipeline theft; requests from police forces for payment; and Ofgem prepayment meter guidance to the forum agenda.	RECCo	June 2023	Included in forum agenda – action to be closed
ETREG_02_07	Email technicalenquiries@recmanager.co.uk with processes or documentation which could aid RECCo in mapping out end-to-end theft processes.	ETREG Members	May 2023	One process shared
ETREG_02_08	Confirm if there is guidance available on finding information on the REC Portal.	REC Code Manager	May 2023	The only guidance that is available is REC User Guides - REC Portal and Committee Workspaces User Guide (Members) (turtl.co) which touches on Committee spaces. See the "Useful Shortcuts" on the Homepage for link to Theft Hub.

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TDIS Update

Anton Moden

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2022-23 Reporting Year

Final Data Submission

- The final submission deadline has passed, with submissions due by 2 May 2023.

Provisional Totals

- The Code Manager published provisional total confirmed theft figures via the Dashboard on 23 May 2023.

Review & Query Window

- The review and query window is open for 20 WDs, closing on 21 June 2023.
- New functionality has been provided to allow for reviewing of individual Supplier Investigation IDs

Final Totals

- The Code Manager aims to publish final total confirmed theft figures via the Dashboard on 18 July 2023 subject to any unresolved disputes or queries.

Payments Communicated

- Incentive payment amounts will be communicated within 144 days of the end of the Reporting Year, i.e. by 23 August 2023.
- Invoices will be provided by RECCo Finance.

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2023-24 Reporting Year

Changes made for the 2023-24 Scheme Year:

- Introduction of a data submission cut-off for confirmed thefts
- Results published by the Code Manager solely via the Performance Assurance dashboards
- Introduction of a formal query window
- Theft investigations to be reported once initiated, with updates submitted in subsequent months if appropriate

1 June 2023
Submit April 2023 data

→

20 June 2023
Totals available on the dashboard

→

Review and query totals within **10 WDs**

→

3 July 2023
Submit May data and any updates to April data

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Useful Resources

- Schedule 7 – Energy Theft Reduction
- Energy Theft Incentive Scheme Reporting Timeframes
- File Validation Wiki

For any specific issues, or to share any suggestions on future improvement, please contact the REC Service Desk.

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PERFORMANCE ASSURANCE DASHBOARD DEVELOPMENTS RELATED TO ENERGY THEFT

Anton Moden

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Dashboard Updates

UPDATE	PARTIES AFFECTED	RELEASE DATE
Theft Target Publication	Energy Suppliers	February 2023
Release Notes Tab	All	March 2023
Theft Row Detail Tab	Energy Suppliers	May 2023
Additional Theft Visuals	Energy Suppliers	May 2023
Data Cleanse Summary Tab	Suppliers & DNOs	May 2023
Data Export/Download Functionality	All	May/June 2023
Use Case Walkthroughs	All	June 2023
MPxN Publication by Default	Suppliers & DNOs	July 2023
Dashboard Viewer Permissions	All	TBC

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Useful Resources

- The recordings of the various webinars held on dashboard go-live are available on the REC Portal:
  - Performance Assurance Dashboards (REC Parties) Webinar
  - Performance Assurance Dashboard (Service Providers) Webinar
  - Performance Assurance Dashboards Post Go-Live Webinar
  - Performance Assurance Webinar (12 January 2023)
- The dashboard user guide, detailing the process for accessing and using the functionality available within the dashboards is also available on the User Guides area of the Portal here.
- For any specific issues, or to share any suggestions on future improvement, please contact the REC Service Desk.

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Detecting Theft Using Smart Meter Data

Jason Salmon

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Detecting Theft Using Smart Meter Data

RECCo has initiated a project to establish whether Smart Meter Data can be used to indicate potential theft. Engagement has commenced with DCC on obtaining data and we are also liaising directly with Suppliers.

The intention is that smart meter data will be obtained which will enable a back test to be conducted using RECCo held confirmed theft data.

We have three asks of ETREG Members:

1) We are seeking Suppliers who can provide us with permission to request their smart alert data from DCC. The permissions received would be shared with Ofgem by DCC, alongside information showing how the data will be transferred, stored and processed in compliance with GDPR to obtain Ofgem permission for smart alert data to be provided. RECCo would analyse the data looking for patterns in smart alerts that precede confirmed thefts but are uncommon in the general population.

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Detecting Theft Using Smart Meter Data

2) DCC cannot open the files sent over its network, which limits the analysis that can be carried out using DCC obtained smart data. We are seeking Suppliers who store smart data and would be willing to share that data with RECCo. We are particularly looking for daily consumption data, which could be mapped against the smart alerts to identify if there are alert patterns that immediately precede a sustained drop in consumption. For pre-payment customers we would also be seeking to analyse changes in top-up frequency and self-disconnections to map to smart alerts.

3) A consultation has been issued to market participants seeking information on how they use smart data in theft detection and any challenges they experience that may limit how it can be utilised. ETREG Members are encouraged to respond to this consultation.

The ETREG is invited to comments on the above points

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Detecting Theft Using Smart Meter Data

Examples of the alert types that are being reviewed and validated with the DCC to understand the scenarios in which they would normally be generated.

Building on this, the analysis will seek to determine if there are combinations and frequency of alert types that could indicate a potential instance of energy theft.

0x8F01	Active Power Import above Load Limit Threshold
0x8F1D	GSME Power Supply Loss
0x8F33	Supply Disabled then Armed - Load Limit triggered
0x8F35	Supply Outage Restored
0x8F36	Supply Outage Restored - Outage >= 3 minutes
0x8F37	Supply Outage Restored on Phase 1
0x8F38	Supply Outage Restored on Phase 1 Restored - Outage >= 3 minutes
0x8F39	Supply Outage Restored on Phase 2 Restored
0x8F3A	Supply Outage Restored on Phase 2 Restored - Outage >= 3 minutes
0x8F3B	Supply Outage Restored on Phase 3 Restored
0x8F3C	Supply Outage Restored on Phase 3 Restored - Outage >= 3 minutes
0x8F3E	Unauthorised Communication Access attempted

0x8145	Clock adjusted (within tolerance)
0x8184	Valve tested
0x81A1	Battery Cover Closed
0x81AC	Error Measurement Fault
0x81B2	Error Unexpected Hardware Reset
0x81B3	Error Watchdog
0x81B4	Excess Gas Flow Beyond Meter Capacity
0x81B5	Flow Sensor Detects Air in Gas Flow
0x81B6	Flow Sensor Detects Reverse Flow of Gas
0x81B7	Incorrect phase sequencing
0x81B8	Incorrect Polarity
0x81B9	Meter Cover Closed

0x8F73	Unauthorised Physical Access - Battery Cover Removed
0x8F74	Unauthorised Physical Access - Meter Cover Removed
0x8F75	Unauthorised Physical Access - Strong Magnetic field
0x8F76	Unauthorised Physical Access - Terminal Cover Removed
0x8F77	Unauthorised Physical Access - Second Terminal Cover Removed

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Detecting Theft Using Smart Meter Data

Consultation detail

1. Does your organisation currently utilise smart meter data and alerts as part of its theft detection and prevention activities?
   a) If yes, what smart meter data sets are currently used? For example, tamper alerts, power outage alerts, daily consumption, half-hourly consumption, etc
   b) If no, please provide information on reasons for this? For instance, is it an area that has not been explored; does the volume of smart alerts received make their use challenging?
2. What other data items does your organisation currently utilise within theft detection and prevention activities?
3. Are there any data quality issues currently being experienced that impair the ability of your organisation to use smart meter data for theft detection and prevention activities?
4. Are there any process or governance issues that impair the ability of your organisation to use smart meter data, or other relevant data, for theft detection and prevention activities?
5. What additional data items (smart meter or otherwise) would your organisation utilise within theft detection and prevention activities if they were available?
6. Do you have any other comments?

The ETREG is invited to comments on the above questions

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Police Unit Draft Operating Plan

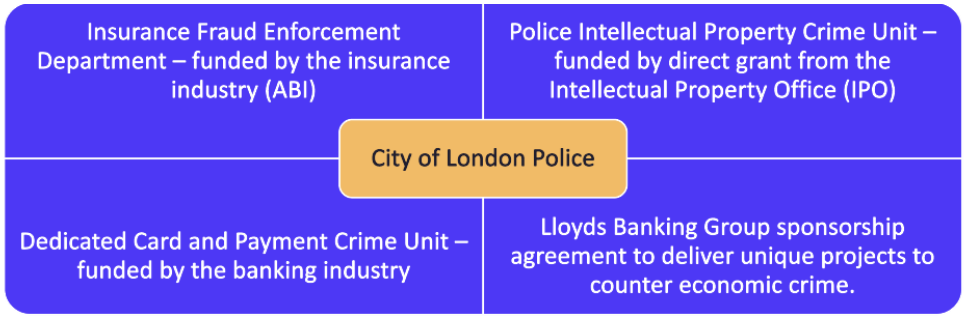
Jon Dixon

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Energy Theft Enforcement Department

A paper (ETREG_03_05) has been shared with ETREG members providing an overview of an opportunity to enter into a partnership with the City of London Police to create a dedicated Enforcement Department to tackle Energy Theft nationally.

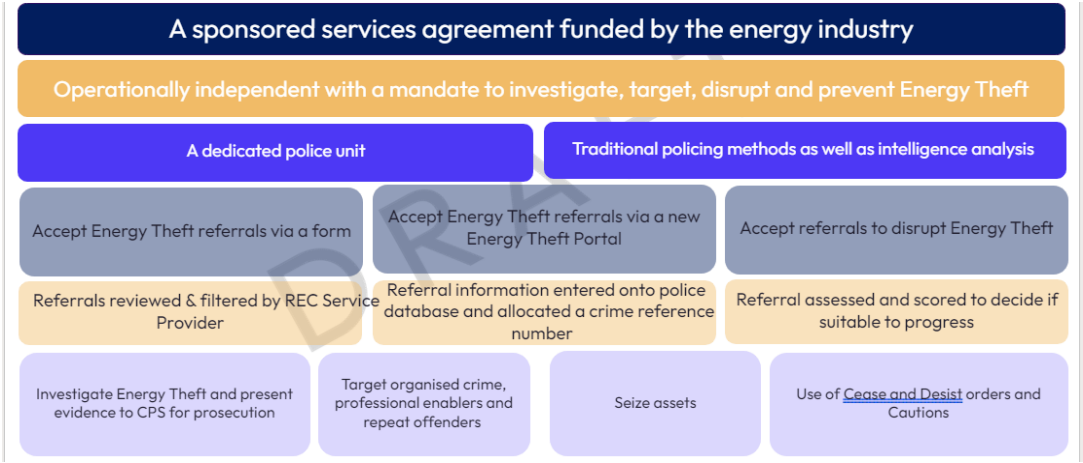
A partnership approach has been developed by the City of London police for managing some economic crimes



Insurance Fraud Enforcement Department (IFED)



An Energy Theft Enforcement Department could be set up using a similar approach



Costs would be £1M minimum per year for initial task force, with a minimum 3-year commitment

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Energy Theft Enforcement Department

ETREG's views are sought in relation to the following areas:

- What are your views on the viability of the scheme?
- Do you have any views on potential timescales?
- How do you feel about the estimated cost?
- Do you have any views on the target operating model?

The ETREG is invited to comment on the above questions via the whiteboard.

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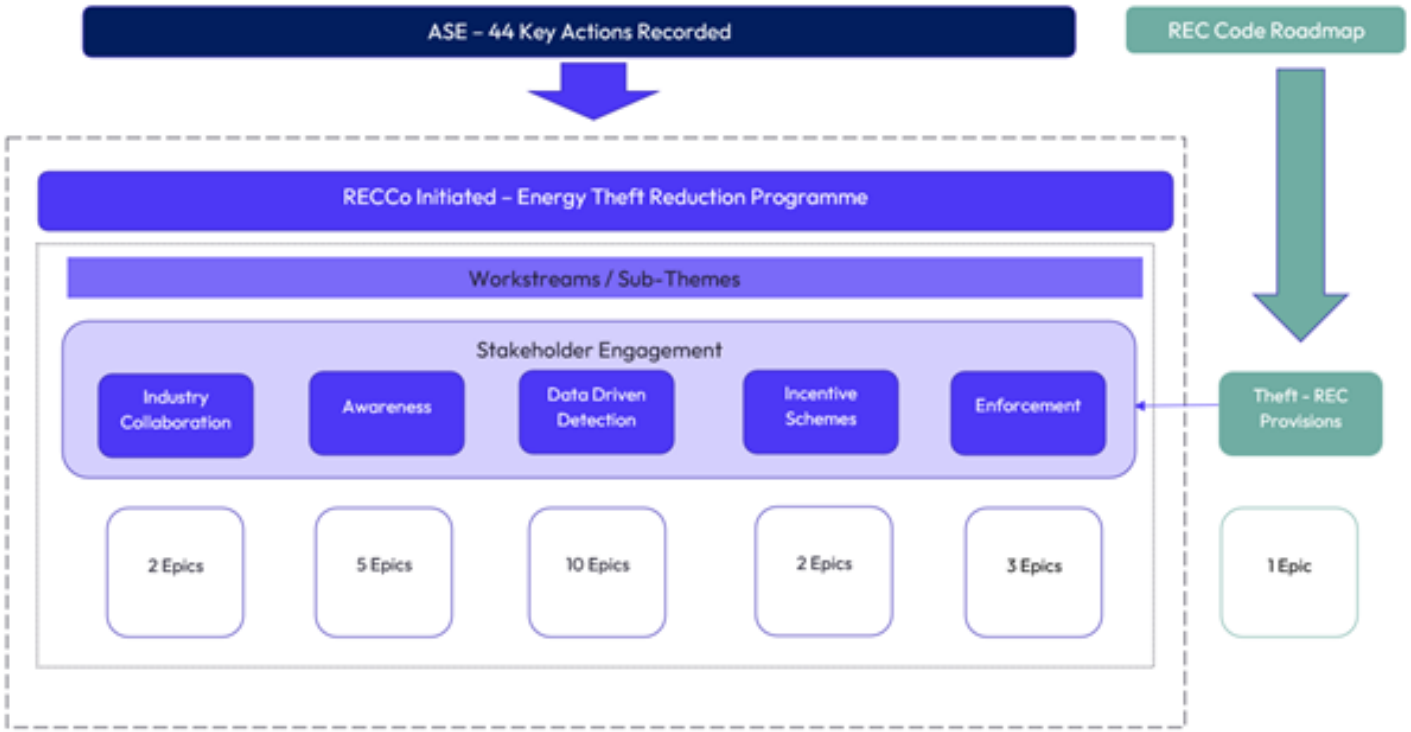
Theft Epics Overview

Rebecca Lowe

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Theft Epics

- The paper issued prior to the meeting details the 44 ASE actions from the workshop in November and how these link to the Theft Epics that make up RECCos Energy Theft Reduction Programme
- An action may link to various epics and vice versa, this may also evolve over time as projects and change proposals progress
- Feedback is requested on if the Epics adequately cover the ASE actions or if there any gaps that the Epics fail to address.
- Also, any feedback if an ASE action should link to an Epic but currently does not.



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Theft Epics

These are just 2 examples of how the tables show the links between Epics and ASE actions

- An example from Table 1 is action ASE039: Identify useful theft predictors (Hypothesis bank and prove/disprove with pilots) - Cheshire DCC alerts which links to three Epics:

TE011: Obtain Smart Meter Data, relevant to Energy Theft
TE016: Back testing of theft detections
TE007: Pilot Data Driven Detection Service

ASE038	DATA COLLECTION, SHARING AND INSIGHTS	Collection (Roadmap of data required)	Governance to access the data Obligations to provide and overcome blockers and release	TE013 TE014 TE018
ASE039	DATA COLLECTION, SHARING AND INSIGHTS	Centralised data analysis	Identify useful theft predictors (Hypothesis bank and prove/ disprove with pilots) - Cheshire DCC alerts	TE011 TE016 TE007
ASE040	DATA COLLECTION, SHARING AND INSIGHTS	Centralised data analysis	QA Feedback loop	TE016 TE007

- An example from Table 2 is Epic TE007:Pilot Data Driven Detection Service which link to ASE actions:

ASE039: Identify useful theft predictors (Hypothesis bank and prove/disprove with pilots) - Cheshire DCC alerts
ASE040: QA Feedback Loop
ASE041: Identify pre-theft predictors (e.g. self disconnection, targeted advertising in areas of high theft)

TE007	**Pilot Data Driven Detection Service**	**FOR:** RECCo, REC Parties **WHO:** Want to trial a data driven theft detection system and learn **OUR:** Production data driven theft detection system **IS/ARE:** Incrementally built up **THAT:** The exposure to risk to wider industry is reduced	**Data Driven Detection**	ASE039 ASE040 ASE041
TE008		**FOR:** REC Parties, RECCo, BEIS, Ofgem, Consumers, Consumer Bodies (e.g., Citizens Advice, Which etc.) **WHO:** Want to improve the Theft Estimation methodology by		

The ETREG is invited to provide any feedback on how the ASE actions are linked to Theft Epics including gaps identified

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June Forum Planning

Rosalind Timperley

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June Forum: Event Structure and Content

No.	Agenda Item	Approach
1	Welcome and Introductions	
	Part 1 - Updates on Energy Theft Activities	
2	Update on RECCo Theft Initiatives	Presentation from RECCo
3	Crimestoppers Marketing Campaign and Annual Performance Update	Presentation from Crimestoppers
	Part 2 - Energy Theft Under REC	
4	Police Engagement	Discussing the problems industry experience in engaging with Police Forces and how to address these. Presentation followed by whiteboard post it note session, with the following questions: • The problems - "What problems do you experience in engaging with police forces?" • The solutions - "What can/should the industry do to address these problems?" Close with summary of the issues and solutions put forward and the next steps
5	Ofgem Code of Practice on involuntary prepayment installations	Presentation answering any questions received ahead of the session

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June Forum: Event Structure and Content

No.	Agenda Item	Approach
		Part 2 - Energy Theft Under REC (Continued)
6	Improving Data Collection and Reporting	Discussion on improving data collection and reporting. Presentation followed by whiteboard post it note session, with the following questions: • Data Sources - "What current data sources could be improved and how?" And "What additional data sources could provide insight on theft?" • Sharing Data in a useful format - "What would you like to see reported via the Energy Theft Portal?" and "Are there other non-portal reports that you feel would be beneficial?" Close with summary of the points put forward and the next steps
		Part 3 - Interactions with Non-REC Energy Theft Activities
7	Engagement with water companies	Discussion on exploring the potential to engage with water companies. Presentation followed by whiteboard facilitated sharing of ideas and questions
8	Liquid Energy Theft	Discussion on liquid energy theft from pipelines located next to gas assets and the implications for REC from a safety perspective. Presentation followed by a poll with the following questions. • Do you feel that any provisions are needed in REC to address situations where a theft occurs from a pipelines located next to gas asset? (Yes/No Poll) • If yes, please give details (free text) Close with summary of the points put forward and the next steps

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June Forum: Event Structure and Content

No.	Agenda Item	Approach
	Part 3 - Interactions with Non-REC Energy Theft Activities	
9	Third Party (after the meter) Theft: Supplier Role	Discussion on what level involvement Suppliers should have in investigations to assist their customer. Presentation followed by poll • "Do you believe guidance and/or mandatory requirements on this topic should be included in REC?" (Poll options: Guidance/Mandatory REC requirements/Do not believe anything is needed) • "If yes, please provide details of what information you believe should be captured? (free text) Close with summary of the points put forward and the next steps
10	Third Party (after the meter) Theft: Demand Side Response	Discussion on potential for theft where energy is stolen and then sold back into the system via demand side response. Presentation followed by poll session, with the following questions: • "Do you believe this is an area that needs industry consideration?" (Yes/No Poll) • "If yes, what future data sets would be required to monitor energy being stolen in this way" • "What regulation/system changes would reduce the risk of this type of theft occurring, e.g. meter level mapping that ensures that all EVs and battery energy fed into the system cannot exceed that taken off by each specific EV/battery or exceed stated micro generation capacity)" Close with summary of the points put forward and the next steps
	Part 4 - Close	
11	Q&A Session	Opportunity for attendees to raise any theft related questions they would like with the forum panel members (RECCo attendees plus Crimestoppers)
12	Topics for next Forum and Feedback	Opportunity to forum attendees to suggest topics for the next Energy Theft Forum and provide feedback on this forum

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June Forum: Distribution Lists

The following distribution lists were used to issue invitations to the forum:

- The Energy Theft Distribution List (this was set up after the November Energy Theft ASE and contains all ASE attendees, spanning REC Parties and non-parties such as the police and fire brigade)
- The REC Friday Round up Bulletin distribution list (this bulletin is issued to all REC Parties)
- UKRPA Members

The ETREG is invited to comment on the proposed agenda and any additional groups that should also be invited.

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Forward agenda

All

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We will populate agenda when milestones of Epic delivery are known

28 June – Theft Stakeholder Forum

- Actions tracker and progress since ASE
- High level proposals for 2024/25 TDIS
- Review Actions

July

- Feedback from Forum
- End to End Process Update

August

- TBC

September

- Review draft CP: 20
- 24/25 TDIS proposal
- Review draft CP: making TREG a REC committee

October

- TBC

November

- Replace with Forum?

We welcome suggestions for further forward agenda items

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AOB

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