

Energy Theft Reduction Expert Group

27 March 2023



Agenda

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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_07_02	Electralink to present the proposed process for the theft investigations as part of the trial to ETREG members via the meeting	ElectraLink	Mar 2024	On agenda
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	June, Sept and Dec numbers to be confirmed nearer date and room booked
ETREG_10_01	Review and update Miro board	ETREG Members	March 2024	

ETREG Action Updates

Reference	Action	Owner	Target Date	Update
ETREG_10_02	Put forward additional suggestions for improvements to the TDIS scheme, for consideration by the TDIS Issues Group.	ETREG Members	March 2024	
ETREG_10_03	Provide feedback on receiving information from the Theft Monitoring Service.	ETREG Members	March 2024	
ETREG_10_04	Confirm the current status of the theft changes to the SDEP and understand what actions would be needed to give Gas Networks access.	Technical Secretary	March 2024	On agenda
ETREG_10_05	Include the SDEP on the agenda for the March ETREG meeting and back testing for Smart Alerts to the May agenda.	Technical Secretary	March 2024	SDEP Review on agenda

ElectraLink Network Trial

Michelle Simpson



Non-technical losses

Innovation Funding Project

Michelle Simpson
March 24

The Challenge

- Non-technical losses present a significant economic impact to all DNOs and consumers

- Non-technical losses can occur due to metering faults, theft from line/feeder tapping or hardware tampering before the meter in the LV network or after the meter within the premise boundary.

- Under Licence Condition 49, a DNO must take reasonable steps to identify and address unregistered sites

- The DNO is collecting LV monitoring data and there is a potential to develop insights from this data set

- The DNO is developing an innovation project proposal with the case being based on vulnerability

Update

- Following ETREG feedback Oct 24, E/L were asked to provide a process for Supplier field visit referrals from DNO
- DNO have requested phases for NIA proposal to be amended – simpler phase 1 leading to output which includes sites to be investigated.
- ENA Basecamp problem statement issued Feb 24 by NGED EPI124, Non-Technical Losses
- Same issue as NPG (mentioned in problem statement) – focus on network planning/theft/customer impacts (cost socialisation)
- Suggest process mapping is included in both submissions by E/L

EIP124 - Non-Technical Losses

Problem	Requirement
A report from the Retail Energy Code Company in December 2022 suggested that theft of gas and electricity cost consumers up to £1.4 billion a year, adding £50 to an average consumer's bill. At the same time, networks are increasing the visibility of their networks by installing larger volumes of monitoring equipment at distribution substations. Power quality monitoring equipment is being installed at primary substations and smart meters are making new data available. Similarly, work to understand energy efficiency has provided archetypes of homes with expected ranges of energy consumption, and there may be other relevant datasets that are newly available. This poses the question; are there new methods we can use to identify non-technical losses?	A solution that can be replicated across the UK. This can include completely novel solutions or those that build on existing techniques. If proposals include machine learning and AI, please include an explanation of how training data will be obtained, and results validated.

Questions/Feedback???



Appendix

2: The analysis proposal

Compare ElectraLink's unique and existing MPAN-level electricity consumption data with LV monitoring data to undertake detailed analytics to develop a deeper understanding of non-technical losses that will support the identification of theft and/or potential LV network issues at a premise level.

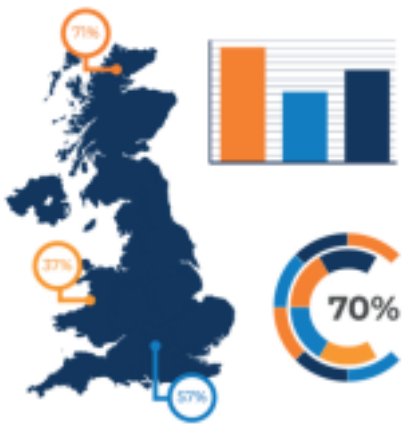
C. 2500 to 3000 feeders 50 to 100k properties

- Phased approach:

Phase 1	Phase 2	Phase 3
• Analysis 2022/23 data • Develop & test outputs / insights /analytics	Field investigations and output Improve process, analytics and dashboard Identify & include additional theft data	Digitalised process Automatic input of LV data (API) Finalised analytics & dashboard

The Analysis outcomes

- MPAN-level consumption aggregated per feeder, based on aggregated Half Hourly (HH) data for I&C MPANs and profiled Non-Half Hourly (NHH) meter advances for SME/Domestic MPANs
- A comparison of LV monitoring data per feeder
- Identified patterns and trends per feeder and comparisons across the LV network
- Identified significant sustained step change difference or inconsistences at a feeder level
- Identify any potentially anomalous MPANs based on consumption-level changes and data gaps that require further investigations
- Profiles of theft or other issues in the region that can be used to develop the develop a probabilistic non-technical losses cause detection approach





4: Application Scope

- The application scope incudes:
  - Analytics exercise
  - Reviewing the analysis and selecting areas to target
  - Feeder metering anomalies
  - Field inspection to identify 'theft in conveyance' – overhead lines, lamp posts, tapping into joints etc
  - Unregistered site identification
  - Meter inspections within the premise boundary (note under Rights of Entry Act, DNOs can enter to inspect however DNO requests that Suppliers should undertake these)
  - Make safe of meters
  - Associated administration including recovery of unpaid electricity charges





Options For Discussion.....



- Rely on voluntary supplier co-operation
- DN cover costs as part of innovation funded trial
- DN cover costs from own revenue
- Insert targeted obligation to cooperate into code (or licence)
- RECCo cover suppliers costs as part of Theft Reduction Strategy
- Allow costs of investigations as part of trial to be recovered through TDIS by treating them as confirmed thefts irrespective of result
- DN funds however offsets cost via Supplier TDIS recovery mechanism – confirmed thefts only
- Extend TDIS to include DN identified thefts

ElectraLink

Contact Details

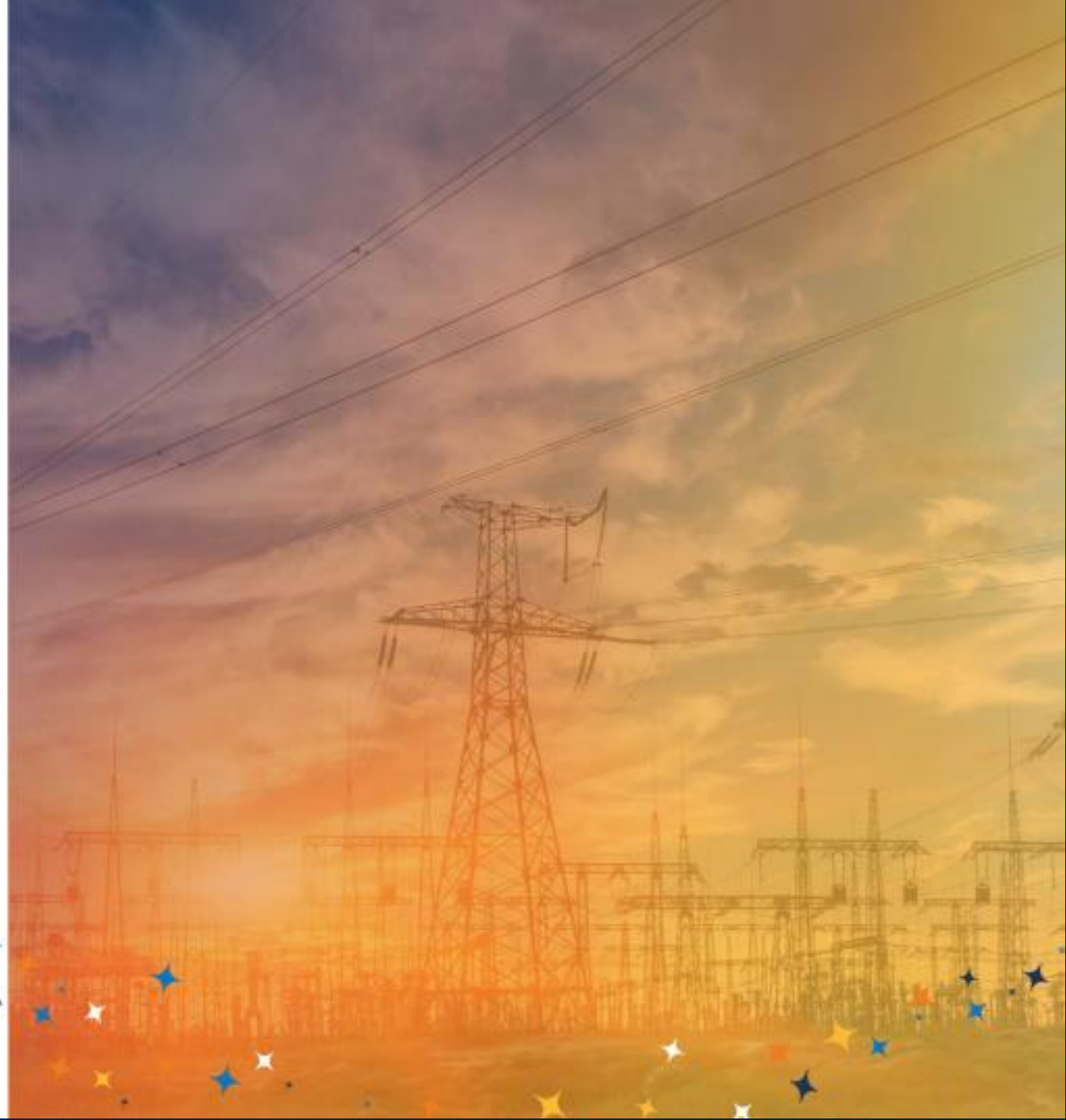
Michelle Simpson

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CERTIFIED ISO 9001 ISO 14001 ISO/IEC 27001

UKAS MANAGEMENT SYSTEMS 001

electralink.co.uk



Sharing Theft Information via the SDEP

Elise Handy

Secure Data Exchange - Theft General Queries

- Secure Data Exchange Portal (SDEP) – Energy Suppliers and electricity Distribution Network Operators securely exchange customers' personal data, and raise / track queries related to specific use cases

- SDEP Review carried out – two Change Proposals raised to enhance functionality (R0122) and introduce new use cases (R0121)

- Suggested new use case for Theft in R0121:
  - General Query (no direct escalation route, other than Contract Manager General Query)
  - Gas (Supplier-Supplier) and Electricity (Supplier/DNO to Supplier/DNO) versions
  - Proposal supported by working group attendees (including liaison with relevant colleagues)
  - General obligation to use SDEP effectively way and resolve queries promptly

- Proposed legal text in Schedule 8 - Unbilled Energy Code of Practice:
  Secure exchange of information between Network Parties and Energy Suppliers
  6.21. Energy Suppliers and DNOs may raise queries and otherwise securely exchange personal data relating to a Consumer with other Energy Suppliers and DNOs in respect of Energy Theft, via the Secure Data Exchange Portal using Market Messages PT00xx Theft General Query (Elec) and PT00xx Theft General Query (Gas).

- R0121 consultation until 22 March – Final Change Report publication due 12 April

Secure Data Exchange – System users

- SDEP access provided only to Energy Suppliers and electricity Distribution Network Operators
- Use by other parties (e.g. MEMs / Gas Transporters) discussed (e.g. R0006) but not formally proposed under the REC to date
- Code Manager open to considering progressing change to broaden use if there is support and cost effective business case
- Timescales for any such change may be impacted by other large change including MHHS

The ETREG is invited to NOTE the update

Theft Amnesty Update

Lynne Fallon

Police Partnership and Engagement

Jon Dixon

Energy Theft Forum

Rosalind Timperley

Energy Theft Forum

The next Energy Theft Forum is provisionally going to be held in June, so that the forums occur the same months each year.

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 (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.

Network Engagement Services

Kristina Jusyte

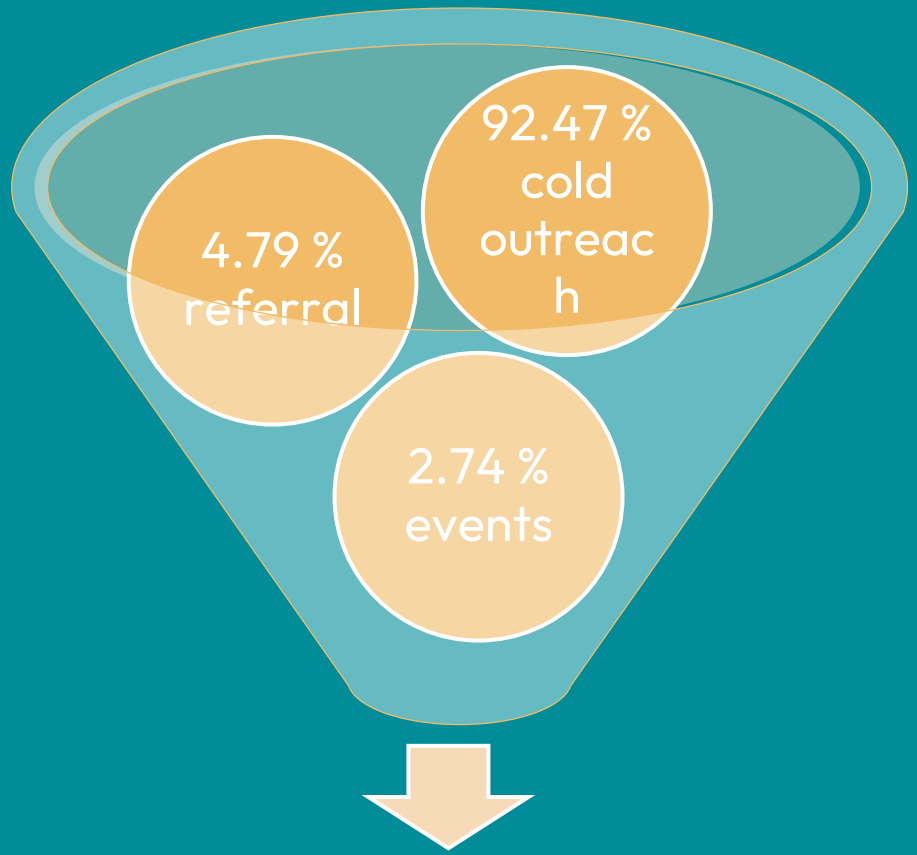
STAY ENERGY SAFE

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Existing Partnerships
Electrical and Construction
Retail and Hospitality
Property

Outreach

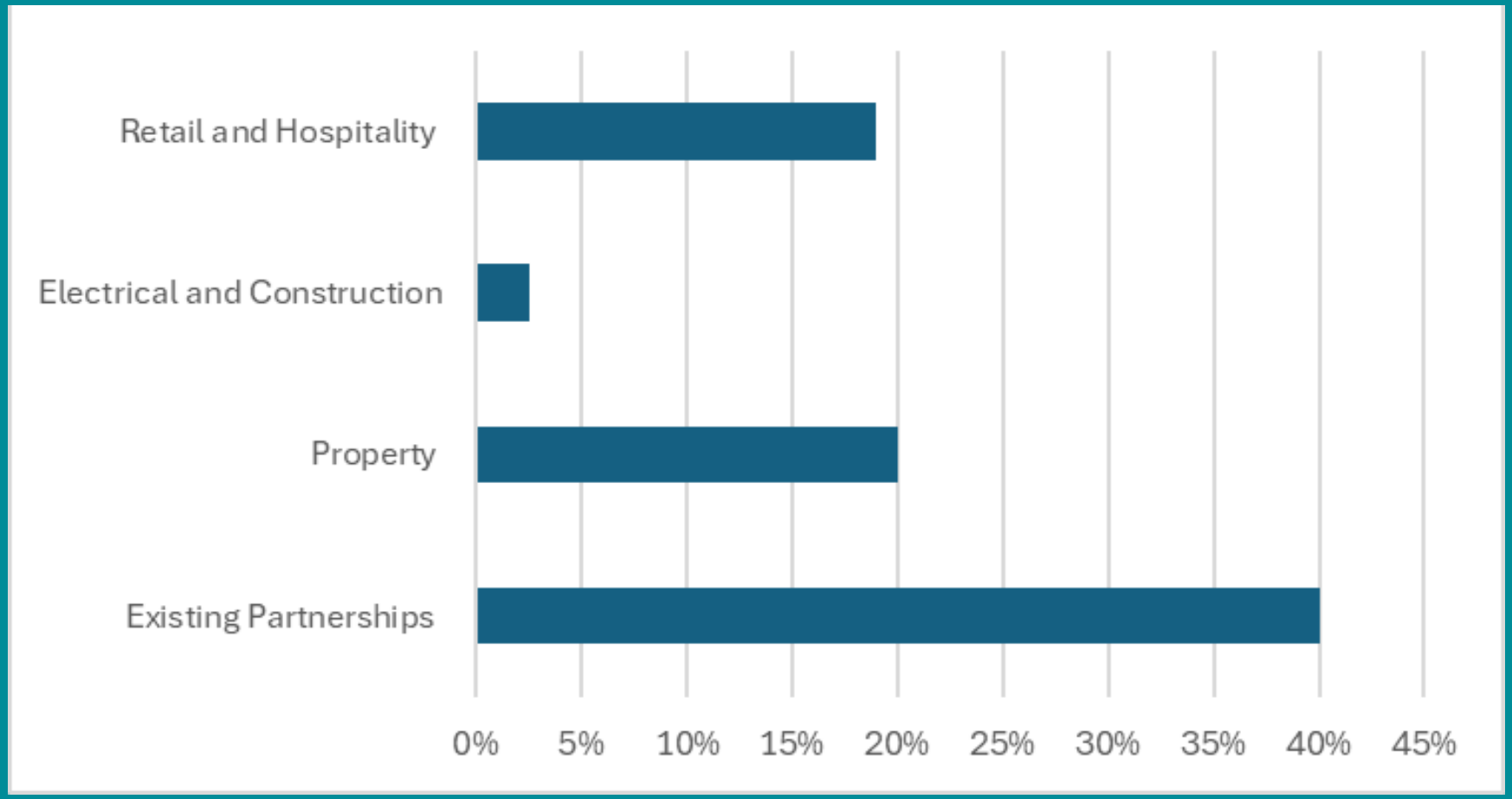


Contact pipeline

STAY ENERGY SAFE

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Response rate



STAY ENERGY SAFE

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Engagement activities



STAY ENERGY SAFE

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Success stories

ACS | the voice of local shops

DCN
DISTRICT COUNCILS' NETWORK
BETTER LIVES – STRONGER ECONOMIES

NATIONAL FEDERATION OF FISH FRIERS
Est. 1913

the bfa The British Franchise Association

fsb 50
Federation of Small Businesses

NATIONAL HOUSING FEDERATION

STAY ENERGY SAFE
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Engagement activities

Professional industry organisations

- Trade bodies
- Federation
- Associations
- Membership organisations
- Professional Associations

Businesses

- Electricians
- Construction
- Plumbing
- Facilities
- Maintenance



STAY ENERGY SAFE

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Thank you

Any questions?

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Forward agenda

All

Forward Agenda

April

- Energy Savings Trust (TBC)
- Theft Calculator (TBC)
- Data sourcing for Benford's Law
- Police Partnership Strategic Case Consultation (TBC)
- TDIS Issues Group Update (TBC)

May

- Theft Portal Feedback
- ETTOS Service Feedback
- Back testing of smart alerts

June

N/A - Forum

July

August

We welcome suggestions for further forward agenda items

AOB