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# SOLUTION DEVELOPMENT REPORT

## R0173 – IMPROVEMENTS TO THE THEFT DETECTION INCENTIVE SCHEME (TDIS)

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## 1 SUMMARY

The Theft Detection Incentive Scheme (TDIS) exists to incentivise Suppliers to resolve Energy Theft however, as noted in the Ofgem letter dated 14 November 2023, Suppliers' overall performance has been around 40% of their targets.

While several incremental improvements have been made to the TDIS, the key design principles are unaltered from those developed around a decade ago, which were based on the output of Ofgem's review of Energy Theft arrangements. In particular, the scheme rewards only the discovery of Confirmed Energy Thefts, and to a value determined in part by the Suppliers performance relative to their competitors. Based upon reported Confirmed Energy Thefts, the scheme has not been wholly effective in incentivising all Energy Suppliers to undertake investigative activity. We understand that a key problem for Energy Suppliers is the uncertainty of being able to recover or offset the direct cost of investigations, as compared to the indirect socialised cost of Energy Theft remaining undiscovered and any net liability to fund the TDIS.

This Change proposes to extend the scope of the TDIS such that it not only rewards the successful detection of a Confirmed Energy Theft, but also allows for the recovery of reasonable costs of undertaking qualifying Energy Theft Desktop and Site Visit Investigations, which may not always lead to a Confirmed Theft. It is hoped that this change will provide Energy Suppliers greater certainty of a return on investment in tackling Energy Theft, and better incentivise appropriate behaviours. This should increase the overall number of investigations and correlating number of Confirmed Energy Thefts that are found and rectified. This will reduce the cost of electricity and gas to bill-paying Consumers and mitigate the risk to health and safety of undiscovered meter tampers or other illegal interference.

The change will also require that all Energy Suppliers report on the outcome of all Energy Theft Tip Off Service (ETTOS) leads that are referred to them. This feedback will help improve the efficacy and future development of this service, that all Energy Suppliers pay for through REC Charges.

## 2 SOLUTION DEVELOPMENT APPROACH

This Change was raised following the first Theft Issues Group (TIG) on 24 April 2024 and attendees were invited to offer solutions to improve the TDIS. At the TIG meeting on 29 May 2024, the Code Manager brought four potential options for improvements to the TDIS for discussion as follows:

- Payment for all investigations
- Payment for site visits
- Payment for specific lead sources
- Enhanced payment for targeted activities.

TIG attendees' preference was the option for payment for **all investigations** and it was agreed for this solution to be further developed and presented at the following meeting on 26 June 2024. The draft definitions for changes to Schedule 1, calculations and legal text for Schedule 7 and alterations to the PARC were agreed to be drafted for 31 July 2024. TIG attendees were invited to contribute to and refine the proposed solution for all investigations.

The Solution Development Report and draft, red-lined legal text were presented at the TIG meeting on 28 August 2024 in preparation for Party Impact Assessment. At this meeting it was queried whether an alternative calculation could be explored. It was agreed to investigate moving the calculation of Confirmed Energy Thefts to the same basis as the new investigation payments i.e. pay out at the Theft Detection Value (TDV) and then socialise the costs. This investigation was completed and is detailed within section 5 of the Solution Development Report.

Data analysis on some example calculations for the proposed solution was provided which can be found here. These values were driven by assumptions regarding performance against target and investigation conversion including proportion of investigations leading to Site visits.

## 3 PROPOPSED SOLUTION OVERVIEW

The solution under R0173 will provide an incentive payment for investigations completed. This may be an investigation completed resulting in a Confirmed Energy Theft and these incentive payments will continue to be valued on the existing scheme mechanism, or through investigations that have concluded but not converted into a Confirmed Energy Theft. This will provide differential levels of payments for Energy Theft Desktop and Site Visit Investigations. Energy Theft Desktop Investigations will only result in an incentive payment where it relates to an ETTOS lead and this requirement is documented within the Schedule 1 definitions.

### NEW DEFINITIONS FOR SCHEDULE 1

To enable calculations to incorporate incentive payments for Energy Theft Desktop and Site Visit Investigations, new definitions are proposed within Schedule 1.

- Completed but Unconfirmed Theft Investigation
- Energy Theft Desktop Investigation
- Energy Theft Site Visit Investigation.

For Energy Theft Desktop Investigations and Energy Theft Site Visit Investigations, the proposed definitions detail the minimum requirements and evidence needed for it to meet the criteria.

## CALCULATIONS AND PAYMENTS

R0173 proposes that the Code Manager calculates incentive payments based on both Confirmed Energy Thefts and Completed but Unconfirmed Theft Investigations and this is detailed within Schedule 7, Annex 3. Payments for Unconfirmed Theft Investigations are proposed to be based on a fixed percentage of the TDV with costs socialised based on market share. This was determined as it is the simplest and most predictable for Parties.

Below are the existing calculations in black regarding the Supplier's performance against the performance of the rest of the Suppliers within the respective pot. The additional formula is in red which applies the multiplier for the Energy Theft Desktop or Site Visit Investigations to the TDV and then socialising it across the market share. Note that incentive payments will be limited to Energy Theft Desktop Investigations where an ETTOS reference has been provided (being the criteria determined for the TDIS Reporting Year). These calculations are referenced within Schedule 7.

$$\text{Theft Debit/Credit}_S = X * \left(\frac{STD}{TTD}\right) - (X * FMPS) + V_S * MS * TDV + D_S * MD * TDV - \left(\sum_S (V_S * MS * TDV + D_S * MD * TDV)\right) * FMPS$$

*Where:*

*X is the total incentive pot value of the relevant consumer segment of the TDIS, amended in line with the percentage change in the 'Consumer Price Index' between the index published for the start and the end of the TDIS Regulatory Year.*

*STD is the number of Confirmed Energy Thefts recorded by the Energy Supplier in the relevant consumer segment.*

*TTD is the total number of Confirmed Energy Thefts recorded in the TDIS Reporting Year for the relevant consumer segment.*

*FMPS is the final Metering/Supply Meter Point market share of the TDIS Qualifying Supplier in the TDIS Reporting Year for the relevant consumer segment (being the TDIS Qualifying Supplier's market share as a percentage of the Metering/Supply Meter Points of all the TDIS Qualifying Suppliers based on the figures used at the start of the TDIS Reporting Year).*

*VS is the number of Completed but Unconfirmed Theft Investigations that were concluded as an Energy Theft Site Visit for Energy Supplier S.*

*DS is the number of Completed but Unconfirmed Theft Investigations that were concluded as an Energy Theft Desktop Investigation for Energy Supplier S.*

*MS is the applicable percentage referred to in Paragraph 4.2 for Completed but Unconfirmed Theft Investigations that were concluded as an Energy Theft Site Visit Investigation.*

*MD is the applicable percentage referred to in Paragraph 4.2 for Completed but Unconfirmed Theft Investigations that were concluded as an Energy Theft Desktop Investigation.*

$\sum_S$ *is the sum over all Energy Suppliers.*

## DESKTOP AND SITE VISIT THEFT INVESTIGATION MULTIPLIERS (MS)

The multipliers for the Number of Completed but Unconfirmed Theft Investigations for the first TDIS Reporting Year will be documented within the Theft Target Methodology (TTM).

The multipliers are proposed to be

- 20% for Energy Theft Desktop Investigations
- 50% for Energy Theft Site Visit Theft Investigations
- 100% for Confirmed Energy Thefts.

These are based on the perceived effort of carrying out each level of investigation/confirmation. These are a single multiplier rate rather than a different multiplier rate for each pot as the TDV already varies by pot. Suppliers would not receive multiple payments for the same Energy Theft Investigation/confirmation.

The table below demonstrates what these multipliers look like based on the current levels of TDV. Please note that the TDV values presented are from the 2024/25 Scheme Year but will not be the actual values applied for 2025/26 Scheme Year and are only provided to illustrate the solution.

| Fuel | Segment | Theft Detection Value | Confirmed Theft (100%) | Energy Theft Site Visit Multiplier (50%) | Energy Theft Desktop Investigation via ETTOS Lead (20%) |
|---|---|---|---|---|---|
| Elec | Domestic | £470.12 | £470.12 | £235.06 | £94.02 |
| Elec | Non-Domestic | £1,462.07 | £1,462.07 | £731.04 | £292.41 |

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|---|---|---|---|---|---|
| Gas | Domestic | £1,247.42 | £1,247.42 | £623.71 | £249.48 |
| Gas | Non-Domestic | £2.158.03 | £2.158.03 | £1,079.02 | £431.61 |

## ALTERATIONS TO SCHEDULE 7

As well as the calculations within Schedule 7, Annex 3, section 8.3, updates are required to allow the determination of new parameters as part of the TTM process.

All Energy Theft Investigations are required to be submitted to the Code Manager as the investigation commences. Once the investigation has concluded, details of the Energy Theft Investigation must be resubmitted with the outcome of the investigation and include whether the investigation was concluded as an Energy Theft Desktop Investigation or Energy Theft Site Visit Investigation. These submissions must be compliant with the Performance Assurance Reporting Catalogue (PARC) definition for Residential and Commercial Outcome files as well as the TDIS Reporting Timeframe.

Schedule 7 will also require alterations to include Completed but Unconfirmed Theft Investigations to the TDIS Summary Report, Indicative TDIS Summary Report and the Final TDIS Reporting Year Summary Report alongside Confirmed Energy Thefts to allow Parties to monitor their performance and performance of the relevant scheme pots.

It will also provide clarity in that all reported Confirmed Energy Thefts and Completed but Unconfirmed Theft Investigations are required to meet the applicable definitions within the Code and that the PAB reserves the right to audit the evidence associated with these definitions.

## PARC CHANGES

This Change Issue adds a new data submission requirement to the Residential and Commercial Outcome files to include a new field in the Investigation Outcome Block.

| Field Name | Mandatory / Conditional / Preferred | Type | Length | Column Number in File Validation | Description / Permitted values |
|---|---|---|---|---|---|
| **Theft Investigation Type** | M | Char | 1 | 35 (Commercial)<br>29 (Residential) | Indicates the type of theft investigation activity completed - this should be populated based on the type of investigation performed at the point of submission (NB: this means it is likely that investigations will initially be submitted with D and then may be subsequently be submitted with V).<br><br>Permitted values:<br>D - Desktop Investigation<br>I - Incomplete<br>O - Other<br>V - Site Visit |

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| | | | | | Where 'D' or 'V' is selected this must meet the criteria specified within the REC definition schedule for the relevant Investigation Type. |

In addition, a second new field will be included in the Investigation Outcome Block to contain the ETTOS Lead reference as provided by Crimestoppers.

| Field Name | Mandatory / Conditional / Preferred | Type | Length | Column Number in File Validation | Description / Permitted values |
|---|---|---|---|---|---|
| **Information Source Reference - ETTOS Lead** | C | Char | 25 | 36 (Commercial)<br>30 (Residential) | As provided by Crimestoppers - ETTOS leads. Populate where Theft Lead Source is C-Crimestoppers or an ETTOS lead is matched to an existing open investigation with any Theft Lead Source, otherwise leave blank. |

In addition, it is proposed a number of fields that, based on experience from operating the scheme, are not currently required are removed in order to minimise the amount of personal data collected under the scheme.

## 4 DRAFT LEGAL TEXT

The legal text changes to deliver the proposed solution to R0173 can be found here.

## 5 OTHER SOLUTIONS CONSIDERED

### 5.1 ALTERNATE DESIGN

Under the alternative design, there is a varied calculation method within Schedule 7 proposed. All other elements of the R0173 solution remain the same.

Payments would still be due for the same activities however the existing payment for Confirmed Energy Thefts would be calculated consistent with the new calculations for investigations i.e. for each Confirmed Energy Theft the Supplier would be eligible to receive a payment at a fixed value (the relevant TDV) and the costs socialised based on market share. Suppliers would have certainty of the payment value, but the socialisation cost would be dependent on other Party action and would not be known until the end of the scheme year.

At a high level, the directionality of payments (i.e. whether the Supplier received a net debit or credit) would remain the same. Parties confirming a larger than market share proportional of all Confirmed Energy Thefts would receive a payment and those confirming a below market share of thefts would be liable for a debit into the scheme.

Under this solution, the calculations in Schedule 7 would be updated as follows, with green showing the additional changes under this alternative proposal, and the text in red is common to both proposals:

$$Theft\ Debit/Credit_S = STD * TDV + V_S * MS * TDV + D_S * MD * TDV - \left(\sum_S (V_S * MS * TDV + D_S * MD * TDV) + TTD * TDV\right) * FMPS$$

## 5.2 IMPACT OF ALTERNATE DESIGN

Examining the alternative solution, it can be shown that mathematically the effect of the change compared to the current TDIS calculations is that all debits and credits are scaled by the percentage of the overall performance against target for each incentive pot. Appendix A and B illustrate this algebraically and using an example set of payments based on dummy data.

For example, for the 2023/24 theft year overall Parties confirmed 52% of the domestic electricity target and debits/credits for that year would be 52% of those currently calculated.

For reference the performance by segment and fuel for the past two theft years is as follows:

| Fuel | Segment | 2022/23 % of Target Confirmed | 2023/24 % of Target Confirmed |
|---|---|---|---|
| Electricity | Domestic | 42% | 52% |
| Electricity | Non-Domestic | 29% | 56% |
| Gas | Domestic | 51% | 69% |
| Gas | Non-Domestic | 6% | 16% |

This has the following consequences:

- Whilst overall targets are not achieved and there is significant divergence in performance across Suppliers the magnitude of payments to over-performers and from under-performers is significantly reduced.
- Parties who are disengaged from the scheme (i.e. report no investigations or Confirmed Energy Thefts) would see a reduced liability to the scheme in relation to Confirmed Energy Theft compared to the current position (unless and until the overall targets are achieved, at which point their liability would be higher). This would be offset (to an unknown degree) by the liability relating to the new payments for investigations.
- If the overall target for a pot is exceeded, then the value of debits/credits could be higher than under the current methodology.
- The payments for Confirmed Energy Thefts would no longer be related to Supplier targets (compared to the current arrangement where it is an input to the overall pot value).

- Whilst the direct payment for a Confirmed Energy Theft would become more predictable (equal to TDV) the **net** payment would remain dependent on other Suppliers' performance due to the requirement to socialise the costs of the scheme and hence the **net** value per confirmed theft would continue to vary by Supplier dependent on relative performance and market share.

### 5.3 CODE MANAGER DETERMINATION

The Code Manager has determined that this alternative solution should not be progressed for the following reasons:

- The overall value of the scheme is reduced (assuming, as is likely, there continues to be an overall under performance against target) and in particular disengaged Suppliers/those significantly behind target face a reduced liability. Ofgem and RECCo have a significant focus on addressing Energy Theft and in this context (including Ofgem's previous open letter to Suppliers) a reduction in the incentive scheme size of approximately 50% is not consistent with making progress in this area.
- The change does not alter that the net position by Supplier under the scheme is dependent on overall market performance and hence cannot be fully predicted at the start of the scheme year and therefore does not add benefit compared to the current payment of Confirmed Energy Thefts.
- Feedback from Suppliers actively involved in the investigation of Energy Theft is that significant money is spent on this activity and reducing the scale of the scheme would therefore likely act as a disincentive to continue work in this area.
- The decoupling of the scheme calculations from the theft target impairs the ability of the scheme to incentivise Suppliers to meet their target and could allow Suppliers overall actions to indirectly determine how large the scheme is and how much effort/resource they put into addressing Energy Theft. This would negatively impact the overall expectation for addressing Energy Theft in the industry.

This alternative solution has been determined to have a weaker impact on the REC arrangements concerning Energy Theft and does not provide sufficient alternative benefits that mitigate the reduced incentive for Suppliers to address Energy Theft compared with the proposed solution.

## 6 CONSULTATION

A Consultation will be published on 18 October 2024 and close on 08 November 2024.

## 7 IMPLEMENTATION

To align with the 2025/26 TDIS Reporting Year, this Change Issue is targeting a 01 April 2025 implementation date.

RETAIL ENERGY CODE

## 8 APPENDIX A – ALTERNATE SOLUTION RELATION TO EXISTING CALCULATION

The below shows based on the current calculation of Confirmed Energy Thefts (proposed to be retained under this solution) is proportional to the calculation for Confirmed Energy Thefts under the alternate solution:

1. Current calculation:

$$Payment = X * \left(\frac{STD}{TTD}\right) - (X * FMPS)$$

2. Alternate solution calculation (for confirmed thefts):

$$Payment = TDV * STD - FMPS * TTD * TDV$$

3. Based on scheme definitions:

$$X = TDV * Target$$

$$TTD = \sum STD$$

4. Substituting based on (3) into (2):

$$Payment = \frac{X}{Target} * STD - FMPS * TTD * \frac{X}{Target}$$

5. Multiplying the first term by TTD/TTD:

$$Payment = \frac{TTD}{TTD} * \frac{X}{Target} * STD - FMPS * TTD * \frac{X}{Target}$$

6. Rearranging and taking out common terms:

$$Payment = \frac{TTD}{Target} * \left(X * \left(\frac{STD}{TTD}\right) - (FMPS * X)\right)$$

This is just (1) multiplied by TTD/Target, i.e. the original value multiplied by the total Confirmed Energy Thefts in the pot divided by the total target for the pot, that is to say the percentage of the overall performance against target for the incentive pot.

RETAIL ENERGY CODE

## 9 APPENDIX B – ALTERNATE SOLUTION WORKED EXAMPLE

The following sets out a simple worked example for the alternate calculation using dummy data and a small number of Suppliers. The calculation is not impacted by the use of a small number of Suppliers and hence this serves to illustrate the alternate solution is proportional to the original calculation for Confirmed Energy Thefts.

For illustrative purposes a TDV of £500 has been applied, and the following market share, Theft Targets and Confirmed Energy Thefts have been assumed:

| Supplier | Market Share | Target | Confirmed Thefts |
|---|---|---|---|
| A | 40% | 400 | 210 |
| B | 30% | 300 | 135 |
| C | 25% | 250 | 155 |
| D | 5% | 50 | 0 |

This results in a pot size of £500,000 (total target 1,000 * £500).

Based on this scenario 500 Confirmed Energy Thefts are identified, i.e. 50% of the target is met overall.

Calculations for the two methods have been applied in the below table:

| | Current Calculation | | Alternate Calculation | | | % of Original Debit/Credit |
|---|---|---|---|---|---|---|
| Supplier | % Share of Thefts | Debit/Credit | Payment | Socialisation Charge | Debit / Credit | |
| A | 42% | £10,000 | £105,000 | -£100,000 | £ 5,000 | 50% |
| B | 27% | -£15,000 | £67,500 | -£75,000 | -£ 7,500 | 50% |
| C | 31% | £30,000 | £77,500 | -£62,500 | £15,000 | 50% |
| D | 0% | -£25,000 | £0 | -£12,500 | -£12,500 | 50% |

From this, it can clearly be seen that the alternate method is equal to 50% of the original calculation value – i.e. the same as the overall percentage of the target that was achieved.