

# Memorandum

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**TO:** Susanne Baker  
**FIRM:** Joint Trade Associations  
**FROM:** Navin Waghe, Mark Bosley and Matthew Burt  
**DATE:** 28 September 2020  
**RE:** WEEE Compliance Fee for 2020

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## 1. Introduction

1.1 FTI Consulting has been instructed by the Joint Trade Associations (“JTA”) to propose a calculation methodology for the compliance fee (the “Fee”) in accordance with Regulation 76 of the Waste Electrical and Electronic Equipment Regulations 2013 (as amended) (“WEEE Regulations”). We understand that this memorandum will help inform the JTA’s proposal to the Department for the Environment, Food and Rural Affairs (“Defra”) for the Fee calculation methodology for the 2020 compliance year.

### Objectives of the WEEE Regulations and the Fee

1.2 Regulation 33 of the WEEE Regulations provides that any PCS which does not achieve compliance by collecting and treating WEEE in line with its members’ obligations (a target defined in tonnes) is able instead to pay a compliance fee in respect of the shortfall. The most recent Defra guidance on Fee design proposals was published in June 2020.

1.3 This guidance specifies in particular that:<sup>1</sup>

*“Proposals should:*

*- set out a methodology for calculation of a compliance fee across each WEEE collection stream that encourages schemes to take all reasonable steps to meet their collection target without recourse to the compliance fee;”*

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<sup>1</sup> Defra (June 2020), Guidance on submitting proposals for a WEEE Compliance Fee Methodology.

- 1.4 In addition, there is an implicit objective in the WEEE Regulations to incentivise the collection of WEEE from Local Authority Designated Collection Facilities (“LA-DCFs”). We understand from the JTA that this view is shared by Defra. The WEEE Directive, upon which the UK’s regulations were based, requires member states to establish a national network of “public collection points” for consumers.<sup>2</sup> The UK primarily uses the LA-DCF network to meet this obligation. This is further reinforced under Regulation 34 of the WEEE Regulations.<sup>3</sup> If an LA requests the collection of WEEE by a PCS, that PCS is obliged to organise collection regardless of the location of the LA-DCF. PCSs may not refuse these collections, irrespective of the cost to them, or whether they have met (or will meet) their collection target without this additional WEEE.

#### **Background**

- 1.5 We previously prepared an independent report on behalf of the JTA in 2014, which recommended a methodology for calculating the Fee. The Department for Business Innovation and Skills (“BIS”) – which was responsible for WEEE regulation at the time – adopted this proposal for the 2014 compliance year.
- 1.6 The Fee methodology that has been applied over the last four years is largely based on the method that we originally designed and which was proposed by the JTA. The methodology in each year has been updated to take account of specific market circumstances, however, the key features of the Fee methodology are that:
- (1) a separate Fee is calculated for each WEEE stream;
  - (2) the Fee per tonne is based on PCSs’ average direct costs of collection from LA DCFs;
  - (3) an escalator is applied which adjusts upwards the Fee per tonne according to the magnitude of the PCS’s shortfall versus its target;
  - (4) a different Fee escalator formula is applied for WEEE streams with an aggregate surplus against the aggregate national collection target. This means that the Fee is higher for streams that are in aggregate in surplus to reflect that, in such circumstances, all PCSs should be able to meet their targets for that stream through collections; and
  - (5) in certain circumstances, a zero Fee may be appropriate.

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<sup>2</sup> EU Directive 2012/19/EU, recital 14. Source: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32012L0019>

<sup>3</sup> Under which LAs have an automatic right of uplift of WEEE for their DCFs.

### **Instructions**

- 1.7 We have discussed with the JTA the issues that it considers have affected the functioning of the WEEE market during 2020. In addition, the JTA has provided us with feedback from Defra in respect of the 2019 Fee. We have been engaged to consider how the design of the Fee might be modified for 2020.
- 1.8 Specifically, we have been asked to consider how the Fee methodology can be adjusted to account for the exceptional impact of the global outbreak of a novel coronavirus (“Covid-19”).

### **Structure of this memorandum**

- 1.9 In the remainder of this memorandum, we:
- (1) summarise the core elements of the Fee methodology;
  - (2) explain the impact on the WEEE market of exceptional events during 2020;
  - (3) set out how the issues arising from the impact of Covid-19 might be addressed through temporary adjustments to the Fee calculation for 2020; and
  - (4) present a proposed revised formula for the 2020 Fee.

## 2. Summary of core elements of Fee methodology

- 2.1 In this section, we describe the core elements of the Fee methodology, which we are not proposing to change in the 2020 Fee, which are:
- (1) a separate Fee is calculated for each WEEE stream;
  - (2) the size of the Fee is based on the difference between a PCS's actual collections and a PCS's collection target;
  - (3) the Fee is based on the average direct costs of LA-DCF collections;
  - (4) the Fee reflects the proportion of WEEE collected from LA-DCFs by a PCS to meet its target; and
  - (5) variable administrative costs are included in the Fee for each WEEE stream unless it is a stream that has a zero Fee.
- 2.2 We briefly discuss each of these elements further below.
- 2.3 Elements (1) and (2) are core principles of the Fee which have applied since we proposed the first Fee formula in 2014. We consider that the reasoning behind these core principles remains sound, and does not require any adjustment for the impact of Covid-19. Therefore our proposal for the 2020 Fee methodology is still based on these principles.
- 2.4 Elements (3) and (4) were incorporated in 2017, when we added a 'WEEE source adjustment premium' to our Fee methodology to reflect that the cost of collecting WEEE from different sources can vary substantially. In particular, WEEE collected from LA-DCFs generally costs more to collect than WEEE from other sources. Consequently, we proposed the introduction of an adjustment to incentivise PCSs to collect WEEE from LA-DCFs, which has been included in the Fee methodology in all subsequent years.
- 2.5 We consider that the logic underpinning the WEEE source adjustment has not changed. We understand it is still more expensive to collect WEEE from LA-DCFs, so it remains necessary to incentivise the collection of WEEE from that source. Therefore we recommend that this adjustment continues to be applied.
- 2.6 In relation to element (5), we propose maintaining the 'variable administrative cost' which we introduced into our Fee methodology in 2018. Again, we consider that logic underpinning the inclusion of this element into the Fee methodology remains sound.

### 3. Impact of exceptional events during 2020

#### Background and issue

- 3.1 Covid-19 has had a severe adverse impact on the UK economy in 2020 as a result of the country-wide 'lockdown' which began on 23 March. Recent forecasts anticipate a 9% decrease in UK GDP this year.<sup>4</sup>
- 3.2 The exceptional measures taken in response to Covid-19 and its wider economic impact have also significantly affected collections of household WEEE and the functioning of the WEEE market. In particular, we understand that WEEE collections have been affected by the following factors stemming from Covid-19:
- (1) most LA-DCFs were closed or restricted as part of the country-wide lockdown for at least two months, and in parts of Scotland for around three months. Collections from other sources were also affected. This meant that the amount of WEEE that PCSs were able to collect in this period was very low;
  - (2) there is considerable uncertainty as to how the disruption to economic activity will affect the volumes of WEEE arising for the remainder of the year. It is possible that the volume of some types of WEEE could increase, but volumes of other types will be lower;
  - (3) where WEEE is arising, it is often at a higher cost than usual. We understand from the JTA that there are various factors causing this, including falling global recyclate prices resulting in increased treatment costs, disruption to the distribution of shipping containers and social distancing requirements disrupting operational efficiency; and
  - (4) due to factors (1) to (3), there is a risk that WEEE recyclers could go out of business.
- 3.3 The latest available data for actual household WEEE collections is up to Q2 2020, and is shown in the table below.

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<sup>4</sup> HM Treasury, Forecasts for the UK economy, July 2020 ([https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/900759/Forecomp\\_July\\_2020.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/900759/Forecomp_July_2020.pdf)).

**Table 1 – Total WEEE collection volumes 2020 to date, by stream**

Items	Q1 2020	Q2 2020	Q1 & Q2 2020	% of 2020 target
Large Household Appliances	58,251	27,774	86,025	46%
Display Equipment	10,798	3,817	14,615	37%
Cooling Appliances Containing Refrigerants	31,409	18,557	49,966	37%
Gas Discharge Lamps and LED Light Sources	1,122	436	1,558	34%
Mixed WEEE	32,001	13,497	45,498	34%
Photovoltaic Panels	61	30	90	104%
<b>Total</b>	<b>133,641</b>	<b>64,112</b>	<b>197,753</b>	<b>40%</b>

Sources: (1) Environment Agency for actual collections; and (2) Defra (March 2020), 2013 WEEE Regulations – Proposed Collection Targets for 2020.

- 3.4 This data reflects the impact of the factors discussed above; collections of WEEE volumes up to June 2020 are substantially below target for the year and total WEEE collections in Q2 2020 were approximately half of the total collections in Q1 2020.<sup>5</sup>

#### 2020 collection targets and Defra’s position

- 3.5 We understand that Defra set the 2020 collection targets prior to, and therefore without the knowledge of, the extent of the impact of Covid-19. Consequently the 2020 collection targets do not reflect the additional difficulty PCSs are experiencing with collecting WEEE this year. However, Defra stated its intention to take account of Covid-19 when the national targets were announced in March 2020:<sup>6</sup>

*“The Secretary of State has powers to set a compliance fee methodology at the end of the year and in doing so in 2020 will absolutely take account of the actual impacts that Covid-19 has had on collections during the year. That said, it is critically important that PCSs do all they possibly can to ensure that all WEEE that is available for collection is delivered into treatment facilities.”*

- 3.6 Defra expanded on this in its guidance published on 8 June 2020, as follows:<sup>7</sup>

*“When preparing the 2020 targets, surveys undertaken by Defra indicated that self-isolation and social distancing measures may significantly impact levels of WEEE collection. We now know this to be the case.*

<sup>5</sup> In its June 2020 guidance, Defra noted that “WEEE collection volumes have dropped significantly in Quarter 2 of 2020”.

<sup>6</sup> Defra (March 2020), 2013 WEEE Regulations – Proposed Collection Targets for 2020.

<sup>7</sup> Defra (June 2020), Guidance on submitting proposals for a WEEE Compliance Fee Methodology.

*A reduction in the availability of commonly used WEEE collection points such as Household Waste Recycling Centres, combined with reduced retail footfall (resulting in an overall reduction in sales of new equipment) has meant that WEEE collection volumes have dropped significantly in Quarter 2 of 2020. Although we do not yet know the extent to which these cumulative effects will impact on the volume of collections for the full year, we recognise an overall decrease in WEEE collection is highly likely.*

*In recognition of this likely decrease, we expect proposals submitted for the compliance fee methodology for the 2020 compliance year to have due regard to, and take account of, the actual impacts that COVID-19 has had on collections during this compliance year. That said, it remains critically important that PCSs do all they possibly can to ensure that all WEEE available for collection is delivered into treatment facilities.”*

## 4. Adjustments to the Fee formula for 2020

### Principles for setting the Fee formula

- 4.1 We continue to consider that the principles used to establish the Fee methodology in prior years remain appropriate. That is, the Fee methodology should be based on the following criteria:
- (1) effectiveness – the Fee should meet its objectives;
  - (2) cost reflectivity – the Fee should be based on the actual cost of collecting;
  - (3) transparency – the Fee methodology should be clear and understandable to PCSs;
  - (4) reasonableness – the administrative and cost burden of applying the Fee should not be excessive;
  - (5) feasibility – the data required to calculate the Fee must be available;
  - (6) robustness – it should not be possible to manipulate the system; and
  - (7) competition issues – the Fee should encourage and promote competition.
- 4.2 However, in light of the impacts of Covid-19 on the WEEE system discussed in Section 3, we consider it is appropriate to propose temporary adjustments to the Fee methodology for 2020. Defra has also recognised the importance of the impact of Covid-19, stating in its 2020 targets announcement that it will “*take account of the actual impacts that Covid-19 has had on collections during the year*”.<sup>8</sup> This implies that the Fee methodology for 2020 should not unfairly penalise PCSs (and hence producers) as a result of reduced collection volumes caused by the impact of Covid-19.
- 4.3 We consider that these adjustments will only be temporary for 2020, to mitigate the impacts of Covid-19. We consider that the temporary changes to the Fee methodology for 2020 which we propose are consistent with these principles set out above. We explain each adjustment below.

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<sup>8</sup> Defra (March 2020), 2013 WEEE Regulations – Proposed Collection Targets for 2020.



#### **Adjustment 1: Change to Fee threshold**

- 4.4 As described in Section 3, it is expected that there will be a significant overall collection shortfall compared to the targets in 2020, due to the impact of Covid-19. As we also explain in Section 3, we understand that Defra agrees it would be unfair to penalise PCSs by levying a Fee based on the higher collection targets set before the impact of Covid-19 was known. Therefore, where overall collections are below the target for a particular stream, we consider that the threshold collection volume at which a Fee is due should be set at a level lower than the collection targets set at the beginning of the year (the “**Covid Compliance Fee Threshold**”).
- 4.5 We propose that the Covid Compliance Fee Threshold for each PCS will be equal to its original target, multiplied by the ratio of actual total national collections to total target collections, for each stream, as measured at the end of 2020. For example, a PCS with a collection target of 1,000 tonnes for a stream that has an aggregate shortfall of collections in 2020 of 30% would have a Covid Compliance Fee Threshold of 700 tonnes. In effect, this adjusts the target for the impact of Covid-19 on WEEE collections.<sup>9</sup>
- 4.6 We understand that there could be a concern that this adjustment risks creating a perverse incentive for PCSs to collude not to collect so much WEEE this year to manipulate the Covid Compliance Fee Thresholds and so avoid costs. We do not consider that this a likely outcome, because we understand collecting PCSs typically collect WEEE under contracts and hence would have contracted commitments covering the remainder of 2020. To collaborate, PCSs would have to breach these contracts. For PCSs, the risks and downsides involved with breaching these contracts would materially exceed the short term benefits.

#### **Adjustment 2: Remuneration of collections between the Covid Compliance Fee Threshold and the collection target set at the beginning of the year**

- 4.7 Given the economic climate and to ensure that PCSs are suitably incentivised, we consider that PCSs that collect a surplus of WEEE (i.e. in excess of their Covid Compliance Fee Threshold) should receive remuneration for these collections.<sup>10</sup> This is because:
- (1) using the Covid Compliance Fee Threshold means that PCSs will not know their targets until the end of the year, and so they will not know how much WEEE they should collect throughout the year;

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<sup>9</sup> If a stream has an aggregate surplus in collections, the Covid Compliance Fee Threshold will be set equal to the original target. Therefore the Covid Compliance Fee Threshold cannot exceed the original target.

<sup>10</sup> However, this will not apply for any stream which has an overall surplus, because the remuneration would not be covered by fees paid. Currently this is only expected to be the case for the photovoltaic panels stream.

- (2) Defra’s guidance for submitting a Fee methodology for 2020 states *“it remains critically important that PCSs do all they possibly can to ensure that all WEEE available for collection is delivered into treatment facilities”*;<sup>11</sup>
  - (3) collecting PCSs will have contracts in place to collect WEEE based on the original 2020 targets and the 2019 targets, so may still be collecting with this objective; and
  - (4) PCSs (and hence their producer members) would otherwise be unfairly penalised where they have in good faith sought to meet the targets initially set for them.
- 4.8 We propose that ‘surplus’ collections should be remunerated on a similar basis to the Fee paid by PCSs with a shortfall, in that the remuneration is based on the cost per tonne of undertaking direct collections from LA-DCFs. Unlike the Fee calculation for PCSs that under-collect, we consider that the remuneration for surplus collections should not contain:
- (1) an escalator mechanism. This is to avoid the remuneration scheme being used by PCSs to earn a profit by significantly exceeding their collection targets in order to receive a fee per tonne significantly higher than the average cost of collection; or
  - (2) the WEEE source adjustment. We consider that it is not necessary to remunerate PCSs that collect a surplus if they collect more from LA-DCFs than the stream average.
- 4.9 However, we consider that the remuneration for surplus collections should include the variable administrative cost per tonne, as these are additional costs the PCSs will incur pro-rata through making additional collections in excess of the Covid Compliance Fee Threshold.
- 4.10 Consistent with the objective from prior years not to incentivise overcollection, we consider that collections in excess of the PCS’s original collection target set at the beginning of the year should not be remunerated. Therefore the maximum volume of collections for which a PCS would receive remuneration would be the difference between its Covid Compliance Fee Threshold and its original collection target set at the beginning of the year.
- 4.11 We considered three following alternative bases for setting the remuneration per tonne for collections above the Covid Compliance Fee Threshold:
- (1) the average cost per tonne of LA-DCF collections for the stream;
  - (2) the PCSs’ own average cost per tonne of LA-DCF collections for the stream; or
  - (3) the lower of PCSs’ own cost and the average cost for the stream.
- 4.12 We briefly discuss each option below.

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<sup>11</sup> Defra (March 2020), 2013 WEEE Regulations – Proposed Collection Targets for 2020.

#### *Average LA-DCF collection cost for stream*

- 4.13 The benefits of this approach are that: (i) the scheme is almost net neutral (for reasons we explain below, the total fees collected will slightly exceed the remuneration paid so there will be a slight surplus);<sup>12</sup> (ii) it does not rely on the collection of any data from PCSs in addition to that required to calculate the Fee; and (iii) it is simple and easy to understand.
- 4.14 We note that, under this approach, PCSs which have costs lower than the stream average will be able to profit from collecting additional WEEE in excess of the Covid Compliance Fee Threshold. This is a small possibility that could disadvantage other PCSs which consequently are able to collect less WEEE. However, as noted above, Defra has emphasised the importance of collecting all available WEEE in 2020.<sup>13</sup>

#### *PCSs' own cost of LA-DCF collections*

- 4.15 The benefit of this approach would be that remunerating PCSs based on their own collection costs would reduce the incentive for PCSs with lower costs to make additional collections. However, this approach also has disadvantages.
- 4.16 First, it would require all PCSs to submit cost data, including those not using the Fee, which PCSs would need to compile and the Administrator would need to analyse. This data would also require auditing, due to the risk that PCSs might overstate costs. We understand that this process would be costly and burdensome for PCSs.
- 4.17 Second, based on our understanding that PCSs' costs of collections per tonne can vary substantially, we consider it could result in some PCSs receiving relatively high remuneration per tonne, which could theoretically result in total remuneration exceeding the amount collected from the Fee. This would be undesirable.

#### *The lower of PCSs' own cost and the average cost for the stream*

- 4.18 This approach would still suffer from the first disadvantage of using PCSs' own costs i.e. it would impose a significant additional administrative burden on PCSs not using the Fee. However, it would address the second disadvantage of using PCSs' own costs (i.e. high remuneration per tonne, potentially in excess of total fees collected).

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<sup>12</sup> The fee per tonne paid on a shortfall will be slightly higher than the remuneration per tonne received on a surplus due to the factors explained in paragraphs 4.8 and 4.10.

<sup>13</sup> Defra (March 2020), 2013 WEEE Regulations – Proposed Collection Targets for 2020.

### *Conclusion*

- 4.19 We consider that remuneration based on the average cost of LA-DCF collections (rather than PCSs' own costs), is the most appropriate alternative. This is because we consider it unlikely that lower-cost PCSs will seek to benefit from this temporary adjustment to the Fee, both because the Fee methodology will not be selected until the end of the compliance year and because PCSs will not know their Covid Compliance Fee Threshold until after the end of the year. We also consider that it would be impractical and burdensome to adopt the alternatives, which would require all PCSs to submit cost data and for it to be audited.
- 4.20 Therefore, we propose that the remuneration is set based on the average cost per tonne of LA-DCF collections for the stream. We consider that the benefit of the incentive to make additional collections outweighs any small potential downsides.

### **Adjustment 3: Simplification of the Fee escalators**

- 4.21 For the last four years we have recommended the inclusion of two alternative escalators, termed the "normal" and "surplus" escalators. The applicable escalator depended on whether there was a surplus or a shortfall in total collections, compared to the aggregate target. The data presented in Table 1 shows that national collections for all streams except one have a substantial shortfall this year which would mean that, in prior years, the normal escalator would have been applied to the calculation of the Fees for those streams. The exception, shown in Table 1, is PV panels in which collections already appear to exceed the national target for the year. For simplicity, we propose that only the normal escalator should be applied to all streams this year.

### **Conclusion**

- 4.22 We consider that our proposed adjustments to the Fee methodology this year fulfil both the overall objectives for the Fee and Defra's specific guidance for 2020. In particular, our adjustments:
- (1) take into account the impacts that Covid-19 has had – and is expected to have – on the WEEE market in 2020, by reducing the collection thresholds below which a Fee is due. This avoids PCSs paying a high Fee due to circumstances outside of their control; and
  - (2) preserve the incentive for PCSs to continue to collect WEEE, by remunerating collections made above their Covid Compliance Fee Thresholds (up to their original targets).

## 5. Proposals for the 2020 Fee

### Summary of proposed Fee methodology

5.1 In summary, we consider that the Fee calculation for 2020 for each stream should:<sup>14</sup>

- (1) be based on the same principles as were adopted for the 2019 Fee;
- (2) reflect the proportion of WEEE collected from LA-DCFs by a PCS to meet its target for PCSs with a shortfall of collections;
- (3) include variable administrative costs for each WEEE stream, unless it is a stream that has a zero Fee;
- (4) include the escalator mechanism for PCSs with a shortfall of collections;
- (5) be based on Covid Compliance Fee Thresholds; and
- (6) remunerate PCSs that collect more than their Covid Compliance Fee Threshold as PCSs will not know their Covid Compliance Fee Threshold, and to continue to incentivise collections.

### Proposed 2020 Fee formula

5.2 We explain below the formulae which we propose should be used to calculate the Fee for 2020 for a given WEEE stream (denoted 'n'). We first set out the formulae for the Covid Compliance Fee Thresholds and WEEE source adjustment premium (which in principle is unchanged from prior years). We then present the revised Fee formula.

#### *Covid Compliance Fee Threshold*

5.3 As described in Section 3 above, where total national collections are below the total national target for that stream, we consider that when calculating the Fee payable each PCS's collection target set by Defra should be adjusted to take account of total collections in that stream.

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<sup>14</sup> In 2018 and 2019 we also included a 'Non-PBS participant uplift'. We understand that it is now mandatory for all PCSs to be included in the PBS scheme, so this uplift is no longer included in our Fee methodology.

5.4 The Covid Compliance Fee Threshold for each PCS will be equal to its original target as set by Defra, multiplied by the ratio of actual total collections to total target collections, for each stream. This should be calculated as follows:<sup>15</sup>

$$a_n = t_n * \left( \frac{C_n}{T_n} \right)$$

5.5 Where:

$a_n$  is the PCS's Covid Compliance Fee Threshold for the WEEE stream, in tonnes.

$t_n$  is the PCS's target for the WEEE stream as set by Defra, in tonnes.

$C_n$  is the total national actual collections for the WEEE stream, in tonnes.

$T_n$  is the total national target collections, set by Defra, for the WEEE stream, in tonnes.

5.6 The Covid Compliance Fee Threshold will be used as a basis to calculate the WEEE source adjustment premium, and the overall Fee payable or receivable by each PCS.

*WEEE source adjustment premium*

5.7 The WEEE source adjustment premium is calculated in the same way as explained in prior years, except this year, we propose that it should be calculated relative to the Covid Compliance Fee Threshold, rather than Defra's original target. The calculation is set out below:<sup>16</sup>

$$p_n = d * \left( a - \frac{l_n + s_n}{a_n} \right)$$

$d$  is the percentage amount by which the cost of LA-DCF collections exceeds the cost of other WEEE sources, expressed as a ratio.

$a$  is the average share of collections from LA-DCFs, as a proportion of all household collections in that WEEE stream, expressed as a ratio.

$l_n$  is the actual volume of collections from LA-DCFs, made by the PCS itself, in tonnes.

$s_n$  is that PCS's shortfall against its Covid Compliance Fee Threshold, in tonnes.

$a_n$  is the PCS's Covid Compliance Fee Threshold for the WEEE stream, in tonnes.

<sup>15</sup> As explained in Section 3, the Covid Compliance Fee Threshold cannot exceed the original target, therefore the maximum value of  $\frac{C_n}{T_n}$  is 1. The true mathematical formula would be:  $a_n = t_n * \min\left(1, \frac{C_n}{T_n}\right)$ .

<sup>16</sup> We propose that the precise mathematical formula would be:  $p_n = d * \max\left(a - \frac{l_n + s_n}{t_n}, 0\right)$

*Fee formula*

5.8 Our proposed Fee formula is set out below, in which the modifications compared to the 2020 Fee are highlighted in red. We have set out separately the Fee formula for a PCS that over-collected and under-collected. When the PCS is not in a deficit, the Fee will be negative, indicating remuneration will be paid to the PCS.

5.9 A PCS in a deficit (i.e. where  $c_n < a_n$ ) will pay a fee calculated as:

$$f_n = (a_n - c_n) \times \left[ k_n \times \left( 1 + \left( \frac{a_n - c_n}{a_n} \right)^2 + p_n \right) + v_n \right]$$

5.10 Otherwise, the PCS will receive remuneration for its collections which exceed the Covid Compliance Fee Threshold, up to its target set by Defra at the beginning of the year, calculated as:

$$f_n = [(\min(c_n, t_n) - a_n) \times (k_n + v_n)]$$

$f_n$  is the Fee for the relevant stream, in GBP.

$k_n$  is the weighted average net cost of collection from LA-DCFs for the stream, in GBP per tonne.

$a_n$  is the PCS's Covid Compliance Fee Threshold for the stream, in tonnes.

$c_n$  is the total amount of WEEE in that stream collected by that PCS, in tonnes.

$t_n$  is the PCS's original target for the stream as set by Defra, in tonnes.

$p_n$  is the WEEE source adjustment premium.

$v_n$  is the variable administrative cost per tonne, for that stream.

5.11 We set out illustrative examples of the Fee payable per tonne under different scenarios in Appendix 1 below.

5.12 Finally, for completeness, we set out below the fee formula for a stream where national collections exceed the national target, which also uses the normal escalator (as explained in paragraph 4.21):<sup>17</sup>

$$f_n = (t_n - c_n) \times \left[ k_n \times \left( 1 + \left( \frac{t_n - c_n}{t_n} \right)^2 + p_n \right) + v_n \right]$$

<sup>17</sup> This formula is the same as the formula for a stream in a deficit where the Covid Compliance Fee Threshold is equal to the national target (i.e.  $a_n = t_n$ ).

## Appendix 1

### Revised Fee calculation examples

A1.1 Below, we calculate the Fee that would be payable for an example WEEE stream in various scenarios, under this proposal.

A1.2 The example calculations are based on the following assumptions:

- (1) Total WEEE stream target collections: 20,000 tonnes
- (2) WEEE stream actual total collections: 16,000 tonnes
- (3) PCS's own collection target: 5,000 tonnes
- (4) PCS's total evidence collected: 3,000 tonnes
- (5) Aggregate share of WEEE collected from LA-DCFs by all PCSs: 70%
- (6) PCS's own collections from LA-DCFs: 2,500 tonnes
- (7) Weighted average cost per tonne of LA-DCF collections for all PCSs submitting data: £50
- (8) Weighted average cost per tonne of all other collections for all PCSs submitting data: £30
- (9) Variable administrative cost per tonne: £3.50

#### Covid Compliance Fee Threshold

A1.3 This PCS, which had an original target of 5,000 tonnes, would have a Covid Compliance Fee Threshold of 4,000 tonnes, calculated as follows:

$$5,000 \times \left( \frac{16,000}{20,000} \right) = 4,000$$

A1.4 The Covid Compliance Fee Threshold will be used to calculate the Fee payable or the remuneration receivable by the PCS.

#### Fee calculation for a PCS with a collection shortfall

A1.5 For a PCS with a collection shortfall (i.e. actual collections are below the Covid Compliance Fee Threshold), as in this example, the Fee calculation is as set out below. The Fee per tonne charge on the collection shortfall is:



$$£50 \times \left( 1 + \left( \frac{4,000 - 3,000}{4,000} \right)^2 + 0 \right) + £3.50 = \mathbf{£56.63/tonne}$$

A1.6 This amount is multiplied by the PCS's collection shortfall to calculate the total Fee for the PCS:

$$1,000 \times £56.63 = \mathbf{£56,630}$$

A1.7 The PCS's collection shortfall is 1,000 tonnes (calculated as the Covid Compliance Fee Threshold of 4,000 tonnes, subtract the PCS's actual collections of 3,000). Therefore the Fee payable by this example PCS is £56,630.

*WEEE source adjustment premium*

A1.8 The WEEE Source Adjustment Premium for this example PCS using the parameters above would be zero. This is because the total of the PCS's LA-DCF collections and the tonnes for which it pays a Fee exceed the national average share of PCS collections from LA-DCFs:

$$\frac{(2,500 + 1,000)}{4,000} = 0.875 = 87.5\% > 70\%$$

A1.9 Whereas, if the PCS's own LA-DCF collections were only 1,000 tonnes (and its total collections remained 3,000 tonnes), the WEEE Source Adjustment Premium would apply. In this case, an additional uplift to the Fee per tonne would apply, calculated as follows:

$$\frac{50}{30} * \left( 0.70 - \frac{(1,000 + 1,000)}{4,000} \right) = 0.33 = 33\%$$

*Revised Fee calculation including a WEEE source adjustment premium*

A1.10 The Fee payable on the collection shortfall by a PCS in this stream using the initial assumptions and the revised assumption in A1.9, would be £73.29 per tonne:

$$£50 \times \left( 1 + \left( \frac{4,000 - 3,000}{4,000} \right)^2 + 0.33 \right) + £3.50 = \mathbf{£73.29/tonne}$$

A1.11 The total Fee the PCS would pay would therefore be:

$$1,000 \times £73.29 = \mathbf{£73,290}$$

A1.12 The PCS's shortfall is 1,000 tonnes, so its Fee payable is £73,290.

### Remuneration calculation for a PCS with a collection surplus

- A1.13 Assuming now that the PCS had actual total collections of 4,500 tonnes, this exceeds the PCS's Covid Compliance Fee Threshold, and therefore it would receive remuneration. The amount of remuneration the PCS would receive per tonne in this example is the weighted average cost of LA-DCF collections for the stream, which is £50, plus the variable administrative cost, which is £3.50.
- A1.14 The PCS's actual total collections of 4,500 tonnes are below its original target set at the beginning of the year of 5,000 tonnes, so the PCS would receive remuneration for all of its collection surplus.
- A1.15 The PCS would receive total remuneration calculated as:  
$$(4,500 - 4,000) \times (£50.00 + £3.50) = \text{£}26,750$$
- A1.16 The PCS's surplus is 500 tonnes (calculated as the PCS's actual collections of 4,500 tonnes, subtract the Covid Compliance Fee Threshold of 4,000 tonnes). Therefore the remuneration receivable for this example PCS is £26,750.

## **Appendix 2**

### **Restrictions and limitations**

#### **Restrictions**

- A2.1 This report has been prepared solely for the benefit of the JTA for use for the purpose described in the introduction. FTI Consulting accepts no liability or duty of care to any person other than the JTA for the content of the report and disclaims all responsibility for the consequences of any person other than the JTA acting or refraining to act in reliance on the report or for any decisions made or not made which are based upon the report.

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