

1. Regulatory Triage Assessment

For Self-Certified Measures in Defra

Policy teams are advised to submit this assessment to their Better Regulation Business Partner, and, once signed-off, to upload the checklist alongside the relevant entry on SIPI. The assessment will need to be self-certified by Defra's BRU G7 Economist. The RTA fields have been amended to reflect the latest Better Regulation Framework updates which have introduced a de-minimis threshold, and a self-certification and call-in process.

Title of Measure	Amendments to the Packaging Waste Recycling Note (PRN) system
Lead Department/Agency	Defra
Expected Date of Implementation	01 Jan 2024
Origin (Domestic or International)	Domestic
Date of Assessment	26/01/2021
Lead Departmental Contact	Ian Atkinson
RMT ID / Legislative ID	

Rationale for intervention and intended effects

Under the *current* Producer Responsibility Obligations (Packaging Waste) Regulations¹, packaging producers that have an annual turnover of more than £2 million and handle more than 50 tonnes of packaging per year must demonstrate that they have met their statutory recycling obligations each year. This is achieved through the acquisition of evidence notes by *producers*, called Packaging Waste Recycling Notes (PRNs) and Packaging Waste Export Recycling Notes (PERNs), which are issued by accredited *reprocessors (recyclers) or exporters* for each tonne of eligible packaging waste recycled. PRNs and PERNs can be purchased from reprocessors/exporters directly by packaging producers or, more commonly, by compliance schemes acting on behalf of their producer members. Purchasing PRNs or PERNs from accredited reprocessors demonstrates that an equivalent amount of packaging waste has been recycled on their behalf, in order to meet their specific recycling obligations.

The current system has been criticised for the volatility and unpredictability of PRN/PERN prices, a lack of transparency, the potential for fraud in the system and increasing producer dependency on exports to meet recycling targets². The responses to the 2021 consultation on introducing Extended Producer Responsibility (EPR) for packaging³, however, demonstrated the difficulties in establishing a viable alternative payment mechanism for non-household packaging waste. None of the proposed options received majority support⁴, and 63% of respondents strongly disagreed with one or more of the options put forward. These objections related to the complexity and value for money of introducing a new payment mechanism and the potential for fraud in the proposed systems. In addition, 47% of consultation respondents agreed that there would be issues in not continuing with the PRN/PERN system until a new, comprehensive payment mechanism could be put in place (17% did not see any issues with this, while 35% were unsure). Based on these responses, and further stakeholder engagement with the Government's Advisory Committee on Packaging (ACP) and other industry bodies, we have decided to continue with the existing PRN/PERN system for all packaging waste as an interim solution. There will be a new separate payment made by producers to local authorities, via a Scheme Administrator (from 2024), for managing household packaging waste. This ensures that producers full net cost obligation is met for household waste, whilst allowing for some money to continue to go directly to reprocessors, thereby ensuring they are not paying twice. This additional payment is the collective modelled system cost for household waste, minus the price paid by reprocessors for the recyclates (which incorporates the value of the PRN that the obligated producer has purchased separately). This approach will then be reviewed in 2026/27, when more data on non-household waste is available.

¹ <https://www.gov.uk/guidance/packaging-producer-responsibilities>

² <https://www.nao.org.uk/report/the-packaging-recycling-obligations/>

³ <https://consult.defra.gov.uk/extended-producer-responsibility/extended-producer-responsibility-for-packaging/>

⁴ https://consult.defra.gov.uk/extended-producer-responsibility/extended-producer-responsibility-for-packaging/supporting_documents/23.03.21%20EPR%20Consultation.pdf

As stated above wider packaging EPR measures, which have been assessed separately within a packaging EPR IA, should address many of the shortcomings of the current PRN/PERN system, including:

- reducing the de minimis so producers with a turnover of more than £1 million a year and have handled at least 25 tonnes of packaging in the previous year will now have to report the amount of packaging they place on the market;
- requiring producers to take financial responsibility for the full net cost of managing household packaging they place on the market;
- introducing modulated fees, which are a mechanism by which those costs are recovered from producers and the costs are varied to reflect the costs of managing different packaging materials;
- more frequent data reporting on the tonnages and composition of packaging waste received by reprocessors and exporters.

However, it is viewed that further improvements to data reporting and the timeframes under which PRNs/PERNs are traded may be necessary to improve the functioning of the PRN/PERN market in the short term (until the introduction of business payments is reviewed again in 2026/27), which will be assessed in this RTA. As such the below issues provide a rationale for intervention to introduce further changes to the PRN/PERN system.

Asymmetric information and lacking transparency of data:

With current requirements, reprocessors and exporters only report data on packaging waste received, reprocessed and exported on a quarterly basis. The infrequency of reporting creates an environment for asymmetric information between packaging producers and those reprocessors/exporters which can cause inefficient allocation within the market. Additionally, lacking transparency of data makes it extremely difficult to monitor the market and make improvements on operations in the recycling sector.

Volatility of PRN prices:

The PRN system is an open market system, which means PRNs can be traded between accredited reprocessors/exporters and obligated packaging producers, whereby funding from the sale of PRNs and PERNs is used to fund increases in capacity in the recycling industry. This was designed to ensure the UK industry meets targets at the lowest possible cost, with the market allocating funding in the most efficient way. PRN and PERN prices tend to fluctuate depending on availability (supply) from reprocessors/exporters, versus the demand originating from obligated producers who must purchase them to meet their targets (based on packaging handled). However, there is usually an expected level of demand for PRNs from packaging producers (based on previous levels of packaging handled), whereas the supply of PRNs is dependent on reprocessors and exporters who issue them. This, coupled with asymmetric information issues as highlighted above, often leads to price volatility and fluctuations throughout the year as reprocessors/exporters can hold back the issue of PRNs and PERNs to drive up the price, which obligated packaging producers must purchase to meet their targets. There is concern this volatility in prices distorts the market to an extent that exporting is often favoured rather than reprocessing in the UK. This is because the value of PRNs and PERNs is the same, while the costs of exporting waste (and generating PERNs) are often much lower than the costs of reprocessing the same volume of waste in the UK (and generating PRNs), because of loss rates due to contamination and relative labour costs. This makes exporting waste and issuing PERNs a more stable business model when prices are volatile.

Due to these market failures, it is therefore necessary to intervene to improve information symmetry in the market which may influence PRNs and PERNs price stability. These interventions may encourage a new market equilibrium where PRNs and PERNs are sold at a price which is not based on fluctuations in demand, rather the price of collection, sorting and reprocessing and there is better transparency of information to prevent inefficiencies occurring in the market.

Viable policy options (including alternatives to regulation)

Alternatives to regulation:

A regulatory approach to producer responsibility has been in place since 1997 and has placed obligations on producers in respect of the packaging they handle. Asymmetric information in the market has enabled some businesses to influence prices of PRNs/PERNs and gain from volatility. A voluntary approach to address this market influence; and for businesses to increase their data reporting to monthly for PRN/PERN prices, revenue and reprocessing/export data; could be introduced. However, the success of a voluntary approach would be contingent on all businesses voluntarily complying to reach as close to information symmetry in the market as possible. Under a voluntary approach, and as has been seen within the history of the PRN system, there will be some businesses who will not abstain from attempting to influence the market voluntarily. Furthermore, it is not expected that all businesses would report every month voluntarily. A voluntary system would potentially still lead to gaps in reporting of key information, and therefore price volatility would likely still exist. Therefore, a voluntary approach to reporting reprocessing and/or price data more frequently is not expected to ease information asymmetry in the market. With regards to timeframes, producers must still purchase PRNs/PERNs to prove they have met their producer responsibility obligations. Without some sort of timeframe in place for the trade of PRNs/PERNs, there could be issues with meeting obligations within a reasonable amount of time. It would not be possible to take a voluntary approach with this as a timeframe must be set for producers to meet their obligations, otherwise they are unlikely to do so voluntarily. A timeframe will stay in place however options to change the workings of this are discussed below. As such, a non-regulatory option is not considered a viable option with regards to reforming the PRN and PERN system and therefore has not been appraised.

Baseline: Do nothing

The do-nothing scenario reflects the current policy situation where the Extended Producer Responsibility (EPR) regulations are brought into legislation in 2023, without further amendment. A separate regulatory impact assessment for EPR will outline interdependency with the PRN system and issues addressed. Under EPR a new de minimis threshold will be introduced, whereby producers in the PRN system with a turnover of more than £1 million a year that have handled at least 25 tonnes of packaging in the previous year will be required to report the amount of packaging, by material and packaging type, that they place on the market. The impacts of the new de minimis threshold on the newly obligated producers have been quantified in the EPR impact assessment. The de minimis change is therefore not considered as additional for this RTA assessment of changes to PRN/PERN reporting and is instead incorporated into the baseline.

A number of areas relevant to the PRN/PERN system are covered in the EPR impact assessment. For currently obligated producers, costs have been estimated assuming they continue to report data in the same manner as they do presently (i.e. uploading data onto the National Packaging Waste Database (NPWD)), with additional data reporting costs for producers also obligated to make payments towards the Full Net Cost of household packaging under EPR. On the reprocessor and exporter side, the EPR IA has modelled the costs to currently accredited businesses of reporting more granular data and compositional analysis as well as costs to unaccredited reprocessors and exporters who will now be mandated to report data.

The data reporting and timeframes options below are being consulted on, they are not either/or options but could be added together to form a suite of changes or used separately.

The following options are being considered with regards to the data reporting related to the issue and reporting of PRN/PERNs. There is no expressed preference over each option, this will depend on the results of the consultation:

DATA REPORTING

Option 1: Mandatory monthly reporting of reprocessing/export data

Under option 1 accredited reprocessors/exporters would be required to upload the data on packaging waste accepted and amount of evidence issued monthly, instead of quarterly.

Option 2: Mandatory monthly reporting of PRN/PERN prices and revenue data

In order to improve the transparency of the market and the information about the price and availability of PRNs throughout the year, we are proposing to make monthly reporting on the sales of PRNs mandatory for reprocessors/exporters. This would be in addition to the monthly volume reporting and would include data on the prices paid by producers/compliance schemes.

The following options are being considered with regards to the timeframes related to the issue and reporting of PRN/PERNs. There is no expressed preference over each option, this will depend on the results of the consultation:

TIMEFRAMES

Option 1: Reducing the timescale over which PRNs can be traded from an annual to a monthly or quarterly system

To improve the liquidity in the market, we are proposing to reduce the window during which a PRN/PERN can be sold. In order to ensure that reprocessors/exporters do not hold back evidence in the expectation of price rises at the end of the compliance year, evidence would only be valid if issued within a set period from the point of waste acceptance (the date on which packaging waste is received on site). This would mean that reprocessors and exporters would make evidence available to the market in a regular, timely fashion, thereby increasing the visibility and information available to producers and schemes.

Option 2: Extending the flexibility of the current compliance period

An extension mechanism would allow for increased flexibility. If the compliance period was extended, for a number of months, it would allow a 're-balancing' between compliance years. This would give increased time for market action, if there was a shortage of evidence for a specific material, by allowing packaging waste received after the end of the usual compliance period to be used to generate evidence, effectively a "carry-back" system. This may reduce pressure at the end of year and increase liquidity. The consultation seeks to establish how the extension mechanism should work in practice and how compliance period could be extended.

Option 3: Increasing the timescale over which PRNs can be traded from an annual to a multi-year or rolling system

To alleviate the annual price rises associated with 'end of year' deadline, it is proposed that targets move to a rolling or multi-year basis. This would give producers and reprocessors more time to respond to market conditions and price changes. Due to the issues surrounding this option 3 for timeframes, the government are not considering progressing with this unless there is significant backing after consultation response. This is discussed in the Assessment of Business Impacts section below.

Description of Novel and Contentious Elements (if any)

Does the measure have novel or contentious elements that may attract stakeholder or political interest, or which may require additional analysis?

No, the proposed measures are variations of the existing system which aim to improve information symmetry in the market and do not include any novel elements and are not viewed as contentious.

Assessment of Impacts on Business

The number of businesses obligated under the Regulations is approximately 9786⁵. Around this, high and low estimates have been assessed which have been shown in Annex 4. This takes into consideration estimates of the number of newly obligated producers and unaccredited reprocessors/exporters that will be captured by the upcoming EPR regulatory proposals. Within the PRN system businesses can be identified as either producers, who purchase PRNs/PERNs of an estimate total of 9786 businesses within the market, an 9124 of those are producers, and 662 are reprocessor/exporters⁶. In addition to this there are approximately 48 producer compliance schemes in total,⁷ of producers are members. This means approximately 8588 of producers are scheme members with the rest (536) being direct registrants. These figures consider estimates made in the EPR IA to account for the newly obligated producers.

The main impacts to business of the proposed options are familiarisation and ongoing admin data reporting costs of the suggested changes to regulatory measures proposed, and reporting more frequently. For each of the options these are set out in more detail below. Key assumptions can be found in Annex 4, along with low, central, and high estimates.

FAMILIARISATION COSTS

For each of the proposals to change data reporting requirements and timeframes within the PRN/PERN system, there will be familiarisation costs to all businesses to allow for time to read and familiarise with the changes. The breakdown of these costs and calculations can be found in Annex 4. It is assumed that although *producers* will not incur additional data reporting or timeframes costs compared to the new proposed obligations on *reprocessors/exporters* they will still have a vested interest in familiarising with the changes. As most of the proposals are minor changes to data reporting and timeframe systems already in place in the market, familiarisation costs to each both producers and reprocessors/exporters are expected to be small. All of the options could potentially be added together so we have assessed the familiarisation cost of *all* the changes assuming they are introduced at once as it is very difficult to unpick the difference in familiarising with 1 change versus a maximum of 6, they are likely to be similar as so small.

It has been suggested via stakeholder engagement that it could take between 1 and 16 hours to familiarise with *all* the changes together depending on the stakeholders involved⁸. For example, *producers* who are *members* of compliance schemes have indicated familiarisation should take 1 hour to a maximum of 2 hours, as information such as regulatory changes are disseminated via the schemes they are members of. Furthermore, the data reporting requirements do not directly impact producers so they will not have to change their processes, however we have assumed that they will be made aware of increased reprocessor reporting which should help with information

⁵See Annex 4 (Number of reprocessor/exporters plus number of producers, seen in Annex 4 Section I) See Annex 4

⁶ See Annex 4 Section I

⁷ Assumes that the same proportion of newly obligated producers become members of a compliance scheme. I.e. Data from <https://npwd.environment-agency.gov.uk/Public/PublicSummaryData.aspx> 2020 shows the split before EPR is introduced is 94% of producers in compliance schemes. Therefore this has been applied to our forecasting for the number of producers in the market (9124 in central case)

⁸ Information received from correspondence with stakeholders via email

asymmetry issues in the market. *Compliance schemes* have also suggested, in line with this estimation, it would take a 1 hour webinar to inform their members, we have assumed that it may take 8-16 hours for each compliance scheme to familiarise and disseminate the information via webinars. Whereas for *reprocessors and exporters*, where data reporting requirements will fall, it is anticipated to take around 1 working day (8 hours) up to a maximum of 2 days (16 hours) to familiarise and implement changes. For *directly registered producers* it may take them approximately 8-16 hours to familiarise with the changes since they will not benefit from compliance scheme dissemination of information expected to be via webinar, however this could be much less considering additional data reporting requirements will not be implemented by them. At consultation we will seek further views.

Overall, total one-off familiarisation costs on businesses are expected to range from around £272,000 in the low estimate to around £1.3 million in the high estimate, with a central estimate of around £324,000. There is a wide range of uncertainty in the number of businesses newly obligated once the de minimis falls, this has been described in Annex 4. The vast majority of the total familiarisation cost arises from producers in this estimate, however as the main data reporting changes will not apply to producers the familiarisation costs could be much less. However, considering the central estimate, total one-off familiarisation costs for producers are expected to be around £225,000 with around £93,000 expected for reprocessors/exporters and only around £6,700 falling on compliance schemes in total.

DATA REPORTING

Current data reporting requirements are enforced by the appropriate regulators, therefore any additional data reporting requirements under the following options would be enforced as an extension of the existing activities.

Option 1: Mandatory monthly reporting of reprocessing/export data

Currently, accredited reprocessors and exporters are required to upload the data on packaging waste accepted and amount of evidence issued onto the National Packaging Waste Database (NPWD) on a quarterly basis. Few operators upload data in real time, however many upload data at the end of each quarter as a batch upload. This means that there can be a significant lag in waste packaging being received by a reprocessor/exporter and the market being made aware of the tonnages.

This option proposes that the reporting is made monthly, instead of quarterly, to provide timely and more up to date data for producers and schemes. This data would then be published by the regulator in a formal dynamic report which would provide a more accurate and timelier picture of the market and overall compliance position against the total obligation. Reporting and publishing more frequently would inform monitoring of compliance and benefit collection of evidence. Compared to the status quo there would be increased one-off costs to businesses to familiarise with these changes, which have been incorporated into the total familiarisation costs.

Correspondence from stakeholders suggests that very few operators upload reprocessing data in real time, or automatically. With no robust suggestion to estimate the number of businesses who are able to do this, we have assumed that all reprocessors and exporters will face these extra data reporting costs in response from moving from quarterly to monthly. With feedback from stakeholders, reporting on exporting and reprocessing data takes approximately 2-4 hours on each occasion it is uploaded.

Under the current requirement to report quarterly, 4 reports are made annually entailing a total of around 8 hours of labour time up to a maximum of 16 hours over a year. Transitioning to monthly

reporting (12 reports a year) hence requires an additional 8 reports a year, which given feedback from stakeholders is equivalent to around 16-32 hours of additional labour time per year. Combining this with median hourly earnings⁹ and scaling up by the number of reprocessors/exporters (662 in the central case) we arrive at an estimate of between £172,000 (low) and £413,000 (high) annual ongoing costs with a central estimate of £185,000 annual ongoing costs as a consequence of increasing mandatory reporting from quarterly to monthly for export data.

Option 2: Mandatory monthly reporting of PRN/PERN prices and revenue data

Under the existing arrangements, it is estimated that only 10-15% of all PRN purchases each year take place on the 'open market', via a trading platform. Price information from these trades is currently made available, via the trade press and various websites, and is often used as a benchmark by compliance schemes (and direct registrants) and reprocessors/exporters when negotiating prices.

Most trades (85-90%), however, are bilateral exchanges between reprocessors/exporters and producers/compliance schemes based on annual/quarterly contracts for supply of evidence, where no reporting of prices is required (though revenue reporting is required at the end of the compliance year). This means that public information on the supply and demand of PRNs on the market is limited and reprocessors/exporters have an informational advantage over producers and Schemes.

Under the proposal for option 2, it would be made mandatory for *reprocessors and exporters* to report monthly on the price and availability of PRN/PERNs. This information would be reported to and managed confidentially by the regulator(s), who would collate, process and anonymise the transactions data, publish the aggregated tonnage totals and price averages. This would result in the relevant market information being available without compromising commercially sensitive information.

Compared to the status quo, there would be increased one-off costs to businesses to familiarise with changes in option 2, this has been incorporated into the total figure for familiarisation costs to business of the PRN changes above, since the changes are assumed to be released at once.¹⁰ With regards to reporting, reprocessors and exporters would face ongoing data reporting costs as a result of reporting monthly on price and availability data. In correspondence with stakeholders there has been feedback that all reprocessors and exporters should have access to the value of their PRNs/PERNs issued, whether claimed in that month or not, within their monthly profit and loss statements. This information should already be internally tracked, and it has been voiced that even the smallest reprocessors and exporters may have computerised accounting standard operating procedure in place. In this case, and with views from stakeholders, it is viewed that reporting prices and revenue data will take 2 working hours for each processor or exporter each month, possibly taking up to half a working day or the equivalent 4 hours to report on.

Monthly reporting of price and revenue data would hence entail an extra 24 and 48 hours over the course of a year. Combining these estimates with median hourly earnings¹¹ and then scaling up by the number of reprocessors and exporters (662 in the central case) we arrive at estimates of

⁹ ASHE Median Hourly earnings for waste supply, sewerage, waste management and remediation activities (assumed to increase by 2% inflation target annually), uplifted by ~22% to account for UK non-labour wage cost, this gives an approximate median hourly wage of £17.50

¹⁰ Familiarisation costs are based on the time it takes to familiarise with the regulatory changes, with regards to ASHE median hourly wages (for waste supply, sewerage, waste management and remediation activities) uplifted to account for non-wage labour costs

¹¹ ASHE Median Hourly earnings for waste supply, sewerage, waste management and remediation activities (assumed to increase by 2% target inflation annually), uplifted by ~22% to account for UK non-labour wage cost, this gives an approximate median hourly wage of £17.50

between £258,000 and £620,000 with a central estimate of £278,000¹² considering the ongoing data reporting costs of prices and revenue data alone.

If we consider both options 1 and 2 of data reporting proposals together, the total expected annual costs would range from around £430,000 in the low estimate, to £1 million in the high estimate, with a central estimate of £460,000.

TIMEFRAMES

Option 1: Reducing the timescale over which PRNs can be traded from an annual to a monthly or quarterly system

Currently reprocessors and exporters can withhold PRNs/PERNs from the market until prices are highest, usually at the end of the year, due to the current annual compliance timeframes. Option 1 for revising timeframes in the system, proposes to reduce the timeframe over which PRN/PERNs can be sold from the date of receipt of the packaging waste. This would therefore mean reprocessors are less able to withhold evidence until prices reach a peak, this may reduce the amount of volatility seen in the market and could have stabilising effects on prices. There is some uncertainty surrounding the effect of reducing the timeframes and by how much as it is dependent on behaviour change, however intuitively we would expect to see some stabilising effect on reducing the timeframes as it would give less opportunity to hold back supply of PRNs and offload at the end of a compliance year to drive up price.

Complying with this change, all businesses would face familiarisation costs to understand and familiarise with this new timeframe. This has been incorporated into the total figures for familiarisation above.

Option 2: Extending the flexibility of the current compliance period

There is currently some flexibility for producers and compliance schemes to meet their obligations under the PRN/PERN system. Producers and compliance schemes are permitted to buy PRNs/PERNs in December of the previous year to meet their obligations in the next if it is not needed to meet targets (known as 'carry over'), and/or they are able to buy PRNs/PERNs in January of the following year (including those from waste received in the previous December) to meet their obligations in the previous compliance year. Each compliance year has little or no impact on subsequent years. Producers/compliance schemes and reprocessors/exporters are also only able to trade their own 'physical' requirements for each tonne of packaging.

These limitations mean the PRN/PERN market is different from many other commodity markets, in which financial or speculative as well as physical traders can trade as frequently as they like. There is usually more flexibility in such markets, allowing sales to be banked for future years or borrowed from future years. These 'futures markets' allow for the risk to be shared from those that do not want it to those that do, or are best able to manage it. However, as the targets are on an annual basis, based on packaging placed on the market in a given year, 'banking' and 'borrowing' between years make it difficult to know if targets have been achieved.

This proposal suggests relaxing the current regulatory constraints in order to extend the current timeframe, which may improve the liquidity of the PRN/PERN market. The consultation seeks to

¹² See Annex 4 Section IV. It was assumed in the central case it would take 662 reprocessors and exporters an extra 24 hours of reporting on price and revenue data. Taking the median hourly wage this gives the central estimate of $24 * £17.5 * 662 = £278,040$

establish how the extension mechanism should work in practice. If this is used as an ad hoc way to be deployed in years where there is concern about the supply of evidence due to external factors (e.g. a drop in global demand for recyclate) and it maybe applies to materials on a case by case basis, there may be some ongoing familiarisation costs as and when there are years of concern. However, it is difficult to estimate the number of times over the appraisal period that these changes may occur if ad hoc, and therefore it has not been monetised at this stage however they are expected to be minimal. We cannot use past history to estimate the frequency of these occurrences and because of the potential changes to reporting and reduction in asymmetry of information any historical price changes would not form a robust pattern for future. Within the PRN system, most producers are members of a compliance scheme, this means that when there are PRN regulatory changes, they can be quickly disseminated via the compliance scheme which should mean minor updates such as this one should keep any ad hoc familiarisation costs to a minimum. Initial familiarisation costs of the proposal are included in the total familiarisation cost section above.

Option 3: Increasing the timescale over which PRNs can be traded from an annual to a multi-year or rolling system

Currently in the PRN/PERN market, demand is fixed by producers' obligations to obtain a set volume of PRNs/PERNs by the end of the year, giving them fewer opportunities to influence the market on the demand side. Reprocessors and exporters are also limited in the number of PRNs/PERNs they can sell in a given year by the targets on producers, however they are not obligated to sell, so they have more control over when to issue PRNs/PERNs at a point where the price is likely to be at its highest. This may happen in Q4 of the compliance scheme where producers must have their PRNs/PERNs for their compliance year.

For producers, moving to a multi-year system, would give more time to respond to high prices and behavioural change may occur where producers decide to produce less packaging and, as a result, reducing their obligation and the number of PRNs/PERNs they need to obtain. Moving from a single to a multi-year compliance timeframe could give reprocessors more time to increase their investment in infrastructure and improve their capacity in response to high PRN prices. Increases in infrastructure and reprocessing capacity would have positive wider impacts on the waste management system in the UK as the UK would be more able to cope with recycling increases from the wider CPR reforms. It would also have environmental benefits which are discussed below in the wider impacts section.

Setting targets over a 2 or 3 year or rolling period would be administratively more complex for the regulator, requiring calculations of obligations across multiple years, but may allow for the increased elasticity in supply and demand that would address some of the volatility issues. Currently the consultation is seeking views on how this could be implemented in practice and therefore the impacts of this have not been monetised at this stage.

The mechanism would require the use of 'historic data', based on the packaging handled submissions from previous years to calculate each producer's obligation. This may be problematic as the definition of producer is subject to change under EPR and with it the data that companies would submit, meaning there may be no data on which to base the rolling targets. At consultation, this will seek views on having more frequent in-year updates, where producers may have to submit new and/or revised data. Due to the issues outlined with this proposal, the Government is not considering progressing with this approach at this stage unless there is significant support or evidence provided

for it in the consultation response. If this option were to be progressed, we would need to seek further guidance on the setting of multi-year recycling targets.

Brief Assessment of Distributional Impacts

The above proposals to change data reporting and timeframes in the PRN/PERN system are expected to reduce information asymmetry in the market, with wider impacts leading to a potential reduction in price volatility in PRN prices. This is expected to have some effect on smoothing prices within the market, meaning prices may remain closer to historical norms for each material. As a consequence, reprocessors may no longer be able to benefit from inefficient market pricing which occurred before, leading to a reduction in income. This will simultaneously benefit producers who may experience lower costs for PRNs/PERNs. Consequently, a new market equilibrium may potentially occur, this describes an economic transfer in the sector which will have distributional impacts indirectly occurring because of the new PRN/PERNs proposals where producers, reprocessors and exporters have a better balance of information to inform decision making.

Brief Assessment of Small Business Impacts

With regards to the impacts on small and micro businesses, ONS data¹³ was used to estimate which businesses are likely to be SMBs by using SIC codes from which businesses are likely to be categorised¹⁴. This provides an indication for whether SMBs are likely to have a turnover between £1m and £2m. The average micro business within the SIC codes is estimated to have a turnover of £0.97m, while for small businesses the average turnover is £5.69m. This suggests that the regulation will exclude around 23,000 businesses from these regulations according to Eunomia¹⁵ and estimates that the average micro business will remain below the de minimis threshold. However, it is likely that some businesses in scope of the PRN changes will still be micro businesses (if they also handle more than 25 tonnes of packaging). According to Eunomia¹⁶, approximately, 75.1% of newly obligated businesses are micro (<10 employees) and 16.5% are small. Eunomia have assumed that is also the percentage case for currently obligated businesses however there is uncertainty surrounding this assumption¹⁷ and the percentage of already obligated producers who are small and micro could be much less. Therefore, it is estimated, with uncertainty, that approximately 92% of businesses in the system are small and micro therefore most of the familiarisation costs and extra data reporting requirements regarding changes to the PRN system

¹³ ONS data taken for 2019 from UK business: activity, size and location - Office for National Statistics (ons.gov.uk).

¹⁴ It is assumed that the majority of producers will be within the Manufacturing and Wholesale & Trade categories.

¹⁵ Eunomia (2019): Scenarios for Adjusting the Extended Producer Responsibility De Minimis Threshold <http://sciencesearch.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=20670&FromSearch=Y&Publisher=1&SearchText=Extended%20Producer%20Responsibility&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description>

¹⁶ Eunomia (2019): Scenarios for Adjusting the Extended Producer Responsibility De Minimis Threshold <http://sciencesearch.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=20670&FromSearch=Y&Publisher=1&SearchText=Extended%20Producer%20Responsibility&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description>

¹⁷ There is uncertainty with the Eunomia analysis since it suggests that there is a wide range of estimated additional businesses being obligated. This could be between 0 and 14,808 based on a 90% confidence interval. These high low estimates have been incorporated into the overall estimates for the businesses falling under the regulations, and are shown in Annex 4.

will fall on small and micro businesses. Those small and micro producers who are members of compliance schemes will face smaller familiarisation costs compared to those who may be direct registrants. This is because, as members of a compliance scheme, producers benefit from the scheme representing their businesses and share the responsibility of complying with new obligations, whereas direct registrants have the entire burden of responsibility in familiarising with regulations directly on them. To mitigate any increased costs to SMBs, the new de minimis will remain in place, which will exclude the smallest producers (including the average micro business). The lowering of the de minimis still represents a suitable threshold at which the number of obligated producers is increased in line with the polluter pays principle, whilst also exempting the smallest businesses without negatively impacting the policy objectives. This has been assessed in the EPR IA as this is seen as the baseline of the new PRN changes.

Brief Assessment of Wider Impacts

As a consequence of more frequent reporting within the PRN system and changes to timeframes there will be a number of wider impacts which may occur as a result.

Monitoring of the PRN/PERN system

With more frequent reporting of reprocessing and exporting data, regulators will find it easier to monitor the market and assess inefficiencies which may be occurring within the market as a consequence of volatility of PRN/PERN prices.

Information asymmetry reduced and reductions in price volatility

Additionally, increases in reporting and transparency in data across the market should decrease information asymmetry between supply and demand sides of the market. Behaviour change may occur as a consequence of having to be more transparent with PRN/PERN prices and revenue. This may mean that reprocessors/exporters are less likely to hold back PRNs/PERNs to profit from inflated prices, since new reporting proposals may create more accountability within the sector. As mentioned above, this coupled with increased ability to monitor the market, could reduce the amount of price volatility within the sector.

Infrastructure investment

Changing the timeframes within which PRNs can be traded or changing data reporting requirements to improve symmetry of information may give reprocessors and exporters more time to increase their business investment in infrastructure and improve their recycling capacity in response.

Environmental benefits

There may be environmental benefits as a consequence of the changes. As highlighted above, improvements in recycling capacity and businesses being better informed with reprocessing and export data as well as PRN/PERN prices. If PRN/PERN prices are high and businesses are better informed, they may respond by designing out waste and reducing the amount of packaging they put on the market.

Landfill tax

These changes are not expected to directly impact income generated from landfill taxation. Producers may decide, based on PRN/PERN prices whether or not to design out waste that goes to landfill, however this would be a behavioural change after complying and familiarising with the changes above and responding to the market. Therefore, it is not known what the impact would be on landfill tax receipts.

Summary of monetised impacts

<i>Total one-off Familiarisation costs:</i>	<i>£324,731</i>
<i>Total annual ongoing Data reporting costs</i>	<i>£463,400</i>
<i>BNPV</i>	<i>-£4,667,902</i>
<i>EANDCB</i>	<i>£542,294</i>

A 10 year appraisal consistent with the standard appraisal period has been used to appraise the changes to the PRN system. The price base year is 2019 and the present value base year is 2020, in line with better regulation framework guidance for all policies to be compared using consistent pricing and discounting. The discount rate used is the standard 3.5%.

Rationale for producing an RTA (as opposed to an IA)

Major changes to the producer responsibility system and the impacts on businesses have already been appraised in an IA for Extended Producer Responsibility (EPR), whereby all changes which will affect the PRN system have been reviewed there. This RTA covers expected proposals to address information asymmetry in the PRN/PERN system. As highlighted above these proposals bring minimal changes to data reporting requirements and timeframes under which the market operates and therefore will have a small direct impact on producers, reprocessors and exporters in the market, who will face familiarisation costs and new ongoing data reporting requirements. The net impacts of the option are below the regulatory de minimis threshold of +/- £5million for the EANDCB. With all changes considered, in total there is an estimated EANDCB of £0.54 million, therefore an RTA is proportionate for assessing these changes.

	Name, Role	Date
Departmental sign off		
Economist sign off (senior analyst)	Johanna Curtis	27/01/2022
Better Regulation Unit Sign off		
Confirmation of self-certification by the BRU G7 Economist		

Supporting evidence Annexes

The narrative in this section should provide evidence that supports the information in the summary template. For the majority of proposals this would be around 2-3 pages and no more than 6 pages of supporting information. The narrative should include the following items:

1. The policy issue and rationale for Government intervention

The 2021 consultation on reforms to the producer responsibility system for packaging waste included the continuation of the “PRN system”, established by the Producer Responsibility Obligations (Packaging Waste) Regulations, only as an interim solution for complying with recycling targets.

We are now proposing to retain the existing arrangements, including the PRN system, until at least 2026/27. The current PRN system has been subject to criticism due to the volatility in the price of evidence, lack of transparency for prices for evidence and associated revenue and compliance issues.

2. Policy objectives and intended effects

The accompanying consultation is seeking views on possible technical and administrative reforms to the way in which the existing PRN and PERN system operates for packaging waste recycling in order to address these issues. In particular, we are focusing on the following areas for reform:

- Reporting requirements on the sales of PRNs
- Reporting requirements on how the revenue from PRN sales is used
- Timeframes for the trading of PRNs

We are also asking for additional views and evidence on a number of additional changes to the PRN system, including:

- A ‘fit and proper person’ test for operators
- The interface with the introduction of the Deposit Return System (DRS)
- The introduction of a compliance fee for producers that fail to meet their obligation.

If these additional changes are deemed necessary after consultation stage, there will be further reviewed in a separate stage of changes, which may need a separate RTA or IA.

3. Policy options considered, including alternatives to regulation

DATA REPORTING

Option 1: Mandatory monthly reporting of reprocessing/export data

Option 2: Mandatory monthly reporting of PRN/PERN prices and revenue data

The following options are being considered with regards to the timeframes related to the issue and reporting of PRN/PERNs.

TIMEFRAMES

Option 1: Reducing the timescale over which PRNs can be traded from an annual to a monthly or quarterly system

Option 2: Extending the flexibility of the current compliance period

Option 3: Increasing the timescale over which PRNs can be traded from an annual to a multi-year or rolling system

4. Expected level of business impact

This section includes the key assumptions that have been made to support the analysis of the changes made to the PRN system with regards to changes in PRN reporting and timescales changes.

I. Number of Businesses Impacted under the PRN system

Number of reprocessors/exporters ¹⁸	Low	Central	High
Accredited	614	614	614
Unaccredited	0	48	124
Total reprocessors/exporters	614	662	738

¹⁸ Some analysis was done to estimate the number of reprocessors likely to come into scope under EPR regulations. Within the Pack Flow reports, Valpak estimate the tonnage of recycled packaging waste currently not captured via NPWD; packaging waste recycled by unaccredited reprocessors/exporters. Overall, these reports estimate that only 3% of packaging waste is not captured.

For the purposes of this analysis, we assume that this is recycled by reprocessors handling small tonnages and are therefore all small and micro businesses (SMBs). Generally, SMBs make up a large proportion of the number of businesses but a smaller proportion of revenue. ONS data shows that within the Materials Recovery sector, SMBs make up 93% of the businesses but 39% of revenue. Using revenue as a proxy for tonnage handled, we therefore assume that SMBs handle 39% of total packaging waste recycled. It is assumed that the majority of these reprocessors are already accredited¹⁰⁵. Based on these assumptions, it is estimated that 2.4% of businesses handle 1% of the tonnage¹⁰⁶. 7.2% of businesses therefore handle 3% of tonnage. Assuming therefore, that the 614 currently accredited businesses make up 92.8% of recyclers handling packaging waste, this leaves 48 businesses unaccredited. This was used as the central estimate.

Alternatively, assuming that all unaccredited businesses are micro, and using the same approach, currently obligated business make up 83.2% of total businesses in scope¹⁰⁷, leading to an estimate of 124 unaccredited businesses. This was used as the high estimate.

Number of Producers¹⁹	Low	Central	High
Producers that are scheme members	6,872	8,588	20,810
Direct registrants	429	536	1,299
Total	7301	9,124	22,109

Total Number of Businesses under PRN system	Low	Central	High
Total in PRN system	614+7301= 7,915	662+9124= 9,786	738+22109= 22,847

Number of Producer Schemes²⁰	48
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II. Estimated number of hours for familiarisation, by type of business (including schemes)

Hours needed to familiarise/transition²¹	Central	High
Direct registrants²²	8	16
Scheme members	1	2
Schemes	8	16
Reprocessors/Exporters	8	16

¹⁹ These low-high estimates took figures of producers from the Producer obligation tables in the National Packaging Waste Database (NPWD)⁴² and used additional regression analysis to estimate the number of producers below the current de minimis at different turnover levels. The estimates are in line with EPR assumptions <https://npwd.environment-agency.gov.uk/Public/PublicSummaryData.aspx>. The central estimate from this analysis was that a total of 9,124 producers would be obligated under the new de minimis scenario. However, the uncertainty level within the analysis is high, therefore the high estimate of number of producers stands at a total of 22,109. We assumed that the number of producers will grow by 0.4% per year, which is the average between 2015-2019⁴³.

²⁰ Producer obligation tables 2020 (in line with EPR as baseline) <https://npwd.environment-agency.gov.uk/Public/PublicSummaryData.aspx>

²¹ Estimates came from engagement with a small sample of stakeholders

²² Producers, either direct registrants or scheme members under schemes, we have assumed will familiarise with the reporting changes even though those extra responsibilities will not fall on them. Therefore the estimation of hours taken for producers could indeed be an overestimation

III. One-off Familiarisation costs to businesses (including schemes)

One-off Familiarisation costs	Low	Central	High
Direct registrants	8*429*£17.50 ²³ = £60,047.77	8*536*£17.50= £75,041.21	16*1299*£17.50= £363,675.18
Scheme members	1*6872*£17.50= £120,261.53	1*8588*£17.50 = £150,289.85	2*20810*£17.50= £728,355.60
Schemes	8*48*£17.50= £6,720.00	8*48*£17.50= £6,720.00	16*48*£17.50= £13,440.00
Reprocessors/Exporters	8*614*£17.50= £85,960.00	8*662*£17.50= £92,680.00	16*738*£17.50= £206,640.00
Total	£272,989.30	£324,731.06	£1,312,110.78

IV. Ongoing annual reporting costs to reprocessors and exporters

Ongoing annual reporting costs		Low	Central	High
Reporting Option 1	Additional hours in a year to report monthly reprocessing/export data	16	16	32
	Ongoing annual reprocessing data reporting cost	16*£17.5 ²⁴ *614= £171,920	16*£17.5*662= £185,360	32*£17.5*738= £413,280
Reporting Option 2	Annual hours taken for monthly reporting of price/revenue data	24	24	48
	Ongoing annual price/ revenue data reporting cost	24*£17.5*614= £257,880	24*£17.5*662= £278,040	48*£17.5*738= £619,920
Total	Total annual reporting cost	£429,800	£463,400	£1,033,200

5. Monitoring and Evaluation

The PRN system will be reviewed in 2026/27 when the introduction of business payments is reviewed. As has been expressed throughout the RTA, the PRN system is intrinsically linked with the functioning of the wider suite of policies within Resources and Waste, particularly EPR. These will all

²³<https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/ashe1997to2015selectedestimates> using ASHE median hourly wage for waste supply, waste management and remediation activities (2020) uplifted by ~22% to account for non-wage costs

²⁴ After year 1 we have assumed that over time wage will increase by target inflation 2% each year

be evaluated as part of a much larger programme evaluation of the Resources and Waste Strategy²⁵, known as RaWSEval. This multi-year, multi-million pound programme comes under the governance of the Resources and Waste Strategy Board and has its own Post Implementation Review (PIR) and evaluation plan. Monitoring change within this plan is focused on the intended outcomes of the Resources and Waste Strategy, namely reductions in resource use and waste production, as well as improvements in waste management, which we hope to see with the PRN reforms. An annual *Monitoring Progress* report will be published each year.²⁶

With regards to PRN specifically, the proposals for increases in data reporting will facilitate better monitoring of the sector. This will enable regulators to monitor PRN/PERN price fluctuations and therefore enable the government to assess the effectiveness of the reforms. Furthermore, as part of the EPR reforms, expectations have been set with regards to regulators responsibilities following the implementation of EPR, however more detailed monitoring plans in relation to the new PRN requirements will be finalised with the regulators in due course once the final proposals have been decided.

²⁵https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/907161/resources-and-waste-strategy-evaluation-plan.pdf

²⁶https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1036297/resource-waste-monitoring-progress-second-edition-nov-2021.pdf