

2024 CREG Incentive BRP Settlement – Design note

**Analysis on faster BRP settlement and impact
on BRP financial guarantee.**



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1. Introduction

1.1 Context

Due to technological developments (i.e. smart/digital meter roll out), societal benefits can be realised. An opportunity lies in looking at the timing of the current settlement process for BRPs. The current settlement process for BRPs can take up to 5 months. This is mainly driven by the DSO allocation process. As the provisional allocations become more mature due to the availability of digital meters, they can be used for provisional settlement. An important improvement can be realized for the BRPs, as a shorter settlement process positively impacts their financial management, accelerating payment of BRP services by Elia and thus decreasing uncertainty for the BRP. Indeed, the invoices and credit notes represent significant amounts. A long invoicing and payment time consequently gives rise to financial uncertainty for current and future BRPs. Additionally, by shortening the settlement process, the reduction in risk can lead to a reduction in financial guarantees provided by the BRP to cover this risk. This leads to a lower cost for the BRPs. This reduction of uncertainty and costs is in line with Elia's ambition to remove barriers for new BRPs and improve the BRP way of working.

A long settlement process comes with the risk of high outstanding amounts in case a BRP would become insolvent. Insofar this risk is not covered (e.g. by a financial guarantee), this could in turn translate into a cost for society, when financial costs are socialized at BRP insolvency. Shortening this period leads to potential lower risks for both Elia (and consequently society) and the BRP.

In this study, Elia proposes to shorten and improve the settlement process. This is done by assessing and evaluating aspects that are under its control, as well as defining measures for continuous improvement in areas where collaboration with other parties is required, such as the DSOs and their subcontractor Atrias who supports the underlying processes for DSO allocations. In a second step, an updated system of financial guarantees is proposed, in function of the improved settlement process.

Finally, market processes are increasingly happening more closely to real-time. Therefore, Elia aims to continuously evaluate and build on this proposition for faster settlement in the future. As digital capabilities develop further, and barriers for settlement are removed, Elia will further reduce the settlement timeline, reducing uncertainty for BRPs as well as the need for financial guarantees, and bringing settlement closer to delivery.

1.2 Objective and scope

In context of CREG Decision (B)658E/84, the CREG provided the incentive on Faster Settlement. The overarching goal of this incentive is to analyse whether BRP services can be provisionally settled faster, via the use of the existing provisional allocations generated by Atrias, and/or by reducing other aspects of the invoice lead time. In the current way of working, BRP services are settled for month M in month M+2.

A second goal is to analyse whether, historically, the financial guarantees provided by BRPs were sufficient to cover the risks related to invoicing. Given these historical risks, and a proposed reduction in settlement time, a proposition is made as to how the financial guarantees could be adapted.

Finally, the incentive asks to consult the proposed improvements following from the analyses and to provide a roadmap on the implementation of the changes, depending on whether they require a change to the Terms & Conditions BRP (hereafter 'T&C BRP').

This document serves as the design note on both the proposition for introducing a provisional settlement based on provisional allocations and evaluating the timing of the settlement process as a whole, as well as adapted financial guarantees, and is presented to the market for public consultation. This design note includes a proposition for an implementation plan. Market parties are welcome to provide feedback on this first proposition as well. Elia will finalize this implementation plan by the end of 2024, as specified in the incentive.

The public consultation starts on 30/08/2024, with a duration of 4 weeks (i.e. until 27/09/2024 included). Market parties are kindly requested to submit their feedback as outlined on the webpage.

2. Terminology

In context of this incentive, certain terms were defined. The below list provides an overview of the terms used in this study, and a brief explanation.

Term	Explanation
Atrias	Atrias is a joint initiative of the Belgian distribution system operators (DSOs) for electricity and gas. Atrias manages the market facilitation documentation for and in close consultation with the DSOs. They also develop and manage a platform for neutral, objective consultation and data exchange between grid operators, suppliers, and regional regulators.
CD	Calendar day(s).
Coverage	The extent to which the risk is covered by the financial guarantee, expressed as a percentage. If coverage is e.g.: 80%, this means that the financial guarantee covers 80% of the risk (outstanding amounts) at BRP insolvency. It is the part of the risk that can be recovered via the financial guarantee.
Delivery period	The period of time for which invoices and credit notes are drawn up. If the delivery period is one month, the invoice or credit note will cover all imbalances for a particular month.
Exposure	The amount of risk that remains uncovered, expressed as a percentage. When the coverage is 80%, the exposure is 20%. This is the amount that could not be recovered by Elia in case a BRP would become insolvent.
Financial guarantee	The financial guarantees as defined within the T&C BRP. This guarantee is provided by the BRP either in the form of a cash deposit or, as in most cases, a bank guarantee. The bank guarantee has a lengthy process for BRPs to update, which is taken into account in the current and proposed system for financial guarantees.
M	<p>Delivery month/ Month to be allocated.</p> <p>$(M+1)+30 \text{ WD} = 30 \text{ working days starting as of } 1^{\text{st}} \text{ calendar day of the month after month M, the delivery month/month to be allocated.}$</p> <p>For instance, if the delivery month/month to be allocated (M) is August 2024, “$(M+1)+30 \text{ WD}$” corresponds to the 30th working day starting as of the 1st of September 2024, which is the 11th of October 2024.</p>
Payment term	The amount of time a BRP has to pay their invoice.
Qh	Quarter-hourly.

Risk	Sum of the amounts that would be outstanding at the time of BRP insolvency. This depends in term on the Settlement timeline. The longer the Settlement timeline, the larger the amount at risk in case of BRP insolvency.
Settlement	The settlement process as a whole. It contains the different steps in settlement, in the following order: delivery, invoicing, payment term, suspension term, suspension.
Suspension term	If a BRP does not pay its invoice, the suspension period will start ¹ . The BRP has this period to schedule meetings with Elia to provide explanation for late payment, prove that they will pay the invoice, and/or pay the invoice. If the BRP cannot pay the invoice during the suspension period or provide reasonable assurance that they will be able to pay the invoice after the suspension period, they will be suspended at the end of the suspension period.
WD	Working day(s).

3. AS-IS processes

This section describes the current processes for settlement and related financial guarantees. It serves to provide a description of the starting conditions, and as a basis for the analysis and comparison with the proposed new way of working.

3.1 Settlement

3.1.1 BRP balancing perimeter and the tariff for imbalances

Pursuant to the Federal Grid Code², every BRP is responsible for planning and utilising all reasonable means to maintain the balance within its balancing perimeter on a quarter-hourly basis. The BRP balancing perimeter consists of all injections and offtakes for the delivery points for which the BRP is responsible, as well as their purchases and sales of energy, within Belgium and internationally. The BRP is considered to be imbalanced for a certain quarter-hour if there is a difference between the sum

¹ Note that in context of the incentive, Elia only considers suspension as a consequence of BRP failure to pay an invoice. Other reasons for BRP suspension include gaming the system and/or endangering the security of the grid. For the complete details on BRP suspension, Elia refers the reader to article 9 of the T&C BRP, which can be found on the Elia [website](#)

² The Belgian Federal Grid Code can be found [here](#)

of total injection and purchases on the one hand and total offtake and sales on the other hand, including active grid losses attributable to said BRP, during this quarter-hour.

According to Table 2 of Article 55.1 of the guideline on electricity balancing³, seen in Figure 1 below, the plus or minus sign in front of the imbalance of a given BRP determines whether the tariff for maintaining and restoring the residual balance of the BRPs reflects a purchase tariff or sale tariff by Elia. A positive imbalance corresponds to an excess in injection of energy by the BRP. The tariff that applies in this scenario is a purchase tariff for surplus energy, which is therefore paid by Elia to the BRP if the tariff for balancing energy is positive.

In contrast, a negative imbalance corresponds to an insufficient injection of energy by the BRP. The tariff that applies in this scenario is a sale tariff for an energy shortage, which is therefore paid by the BRP to Elia if the tariff for balancing energy is positive.

Payment for imbalance		
	Imbalance price positive	Imbalance price negative
Positive imbalance	Payment from TSO to BRP	Payment from BRP to TSO
Negative imbalance	Payment from BRP to TSO	Payment from TSO to BRP

Figure 1: Table 2 of Art 55.1 of the guideline on electricity balancing

3.1.2 Invoicing and credit note principles

Depending on the sign of the imbalance tariff and the sign of the imbalance volume per quarter hour, the BRP will either have an amount to pay to Elia, or vice versa. The sum of all amounts over all quarter-hours for a given month, will lead to either an invoice or a credit note for the BRP.

3.1.3 Timing of invoices

Invoices are determined on a monthly level. As such, a monthly delivery period is considered. The payment of invoices is contractually defined in the T&C BRP⁴. The below overview provides an outline of the relevant steps in the process; this is visualized in Figure 2 below:

- The data for delivery in a certain month M becomes available throughout months M, M+1 and M+2. The data for points connected to the Elia grid start to become available as of D+1. The provisional DSO allocations are available to Elia as of D + 5 and become gradually more mature as time progresses. This data is in principle final 30 WD after month M ((M+1) +30 WD) according

³ The Regulation (EU) 2017/2195 establishing a guideline on electricity balancing ('EBGL') can be found [here](#)

⁴ For more information on invoicing, please see Article 5 of the T&C BRP, found on the [Elia website](#).

the UMIG Market processes⁵. Elia sends out the invoice within one month after having received the final data from Atrias. Typically, this happens 5 WD after receiving the data, but this can take longer in certain situations. In order to generate the invoice, all measured data are combined with data on BRP internal and external commercial trades and grid loss attributable to the BRP. The quarter-hourly data is then multiplied with the final imbalance tariff applicable for said quarter hour. This final imbalance tariff data is final on (M+1) + 15 CD + 1 WD. The sum of the quarter-hourly values then yields the invoice.

- The BRP is assumed to have received the invoice 3 CD after it was sent out by Elia and has 30 additional CD to pay the invoice.
- In case Elia notices the BRP does not pay the invoice after the allowed 30 CD, Elia can start the financial guarantee recovery procedure. This is done by sending a formal notice to the BRP via registered letter. The BRP is assumed to have received this letter after 3 CD, and after 7 more CD the financial guarantee can be recovered.
- At the same time the financial guarantee recovery process is started, the BRP suspension period can be started. This is done by sending a formal notice to the BRP via registered letter, notifying the BRP of the upcoming suspension. The BRP has 10 CD to rectify the situation. If the BRP fails to do this, the suspension starts at the earliest after 10 additional CD, or 35 CD at most.

By following the steps as contractually outlined, if a BRP becomes insolvent in month M, Elia can only determine this in month M+3, after the BRP has received the invoice for month M and failed to pay it. Therefore, when a BRP becomes insolvent, in month M, Elia will use the financial guarantee available in month M+3. Given the BRPs failure to pay the invoice for month M, it is assumed that the BRP will also no longer pay the invoices for M+1, M+2 and M+3. In addition to covering invoice amounts of months M, M+1, M+2 and M+3, the financial guarantee can also be used to cover any invoice amount generated in month M+4, due to the length and timing of the suspension procedure. In total, the financial guarantees should serve to cover a period of 4,5 months in the AS-IS settlement process.

For example, if a BRP were to become insolvent in September, Elia would notice this in December. The delivery of October, November, December (and potentially January) still have to be paid by the BRP, as shown in Figure 2.

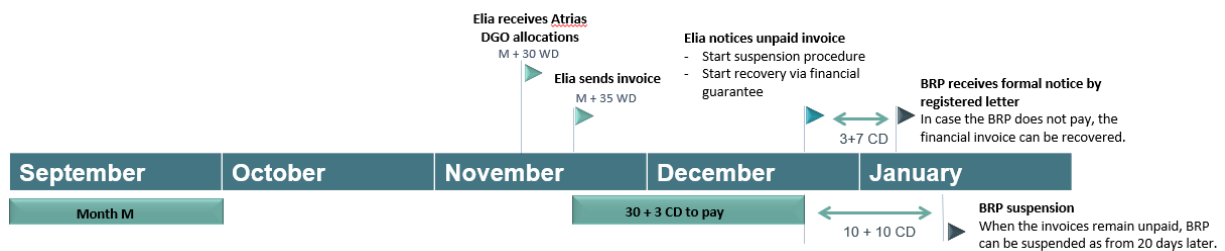


Figure 2: Settlement timeline

⁵ The relevant documentation on the UMIG market processes can be found [here](#).

3.2 Financial guarantees

3.2.1 Description of the financial guarantee system

The BRPs are required to provide Elia with a financial guarantee, as described in the T&C BRP⁶. The financial guarantee serves to cover the risk for Elia, and society as a whole, for the requested and punctual fulfilment of all the obligations arising from the T&C BRP, including, but not limited to, the payment of the tariffs for Imbalance and/or inconsistency. Within the scope of this analysis, only the payment of the tariffs for Imbalance, in the form of invoices, is considered.

For all details concerning the modalities of the financial guarantees, we refer the reader to the T&C BRP. It is however relevant to clarify how the financial guarantees are determined. There are 2 metrics calculated to determine the financial guarantee of a BRP. The guarantee is then established according to the highest of the two metrics:

1. Highest invoice of the last 12 months. Every month, the past 12 monthly invoices of a BRP are evaluated. The BRP is obliged to have a financial guarantee that is higher than at least the highest invoice of the last 12 months.
2. Position of the BRP. It is calculated for a given month and put in tranches. A 5% imbalance of the upper bound of the position tranche is taken over a period of 31 days and multiplied with an imbalance price of 50 EUR/MWh. This is summarized in the following formula:

$$\text{Financial guarantee} = 31 \text{ days} \times 24 \text{ hours} \times 5\% \times 50 \frac{\text{EUR}}{\text{MWh}} \times \text{BRPMaxPositionByTranche}$$

Figure 3 provides an overview of the guarantee required of the BRP, based on their position.

⁶ For more information on the financial guarantees, please see article 18 of the T&C BRP.

Positie van [BRP] (BRP-P)	Waarde variabele waarborg
BRP-P ≤ 50 MW	€ 93.000
50 MW < BRP-P ≤ 100 MW	€ 186.000
100 MW < BRP-P ≤ 200 MW	€ 372.000
200 MW < BRP-P ≤ 300 MW	€ 558.000
300 MW < BRP-P ≤ 450 MW	€ 837.000
450 MW < BRP-P ≤ 600 MW	€ 1.116.000
600 MW < BRP-P ≤ 750 MW	€ 1.395.000
750 MW < BRP-P ≤ 900 MW	€ 1.674.000
900 MW < BRP-P ≤ 1050 MW	€ 1.953.000
1050 MW < BRP-P ≤ 1200 MW	€ 2.232.000
1200 MW < BRP-P ≤ 1500 MW	€ 2.790.000
BRP-P > 1500 MW	€ 3.000.000

Figure 3: Financial guarantee based on BRP position

The position of the BRPs is calculated as follows: The BRP position is the maximum of the daily averages of offtakes attributed to the BRP, as it is also calculated in the process of determining the BRP maximum authorized day-ahead imbalance⁷. The daily averages are based on the sum of the quarter-hourly values of:

- The offtakes measured at offtake points in the Elia-grid; and
- The CDS allocations, if these are net offtakes; and
- The distribution allocations, if these are net offtakes; and
- The external commercial trade schedules for export; and
- The internal commercial trade schedules.

Finally, the financial guarantee required of the BRP depends on both metrics, of which the highest is taken. Some examples to clarify:

- A BRP with position 1.600MW, and a highest invoice of 4 M EUR. This BRP will need to provide a guarantee of 4 M EUR, as this is higher than the value taken from the table (3M EUR).

⁷ For further information on the BRP maximum authorized day-ahead imbalance, please see article 24.1 of the T&C BRP.

- A BRP with no invoices in the past 12 months, and a position of 650MW. Given that this BRP has no invoices, their financial guarantee is determined solely by their position. Consequently, the BRP needs to provide a guarantee of 1.395 M EUR (as defined in the table).

3.2.2 Update frequency of the financial guarantee

In today's system, the financial guarantees of the BRPs are evaluated on a monthly basis. Thresholds were defined to determine when a BRP needs to upgrade their financial guarantee⁸. The key aspects are the following:

- In case the BRP position is exceeded by 20% of the reference position, for at least 2 days in any given month, the BRP is expected to increase their guarantee according to the new position. The positions should never be 40% higher than the reference position.
- The financial guarantee should always be higher than the highest invoice of the past 12 months, received by the BRP. As soon as a BRP receives an invoice higher than their financial guarantee, the guarantee should be updated.
- The BRP always has 3 weeks to update their guarantee.
- In case the financial guarantee is lower than the required amount, for at least 3 months, the BRP can submit a request for approval to Elia to lower the financial guarantee.

3.2.3 Historical analysis of the risk of the financial guarantee being too high or too low

In the framework of this CREG incentive, a historical analysis was made of the risk of the financial guarantee being too high or too low. This section provides a summary of the key findings.

3.2.3.1 Invoice-based risk

In order to answer the questions whether the financial guarantees were too high or too low, Elia analysed the historical data on invoices and credit notes from all BRPs, for the period 2021-2023.

Due to confidentiality reasons, the data will not be showed, but was shared with CREG in an earlier phase of this incentive. However, the following trends were observed:

- In the run-up to the energy crisis of summer '22, the financial guarantees were mostly below the risk, and coverage was even lower. Coverage is typically lower than the financial guarantees, since the amount of financial guarantees also includes amounts provided by BRPs for which there are no underlying invoices, or for which the sum of underlying invoices is smaller than their provided financial guarantee. As such, these amounts are not counted in the coverage, since the financial guarantees of one BRP could not be used to cover the risk of another BRP.
- For the period July-September '22, Elia observed that the risk increased driven by higher energy prices, while the financial guarantees (and in turn coverage) increased much more slowly. The delay in increase is due to the fact that the invoices are sent out in (M+1) + 30 WD, after which it takes an additional month to update the financial guarantee.

⁸ The full information on updates of the BRP financial guarantees can be found in article 18.4 of the T&C BRP.

- After the height of the energy crisis, the financial guarantees remain at more or less the same level for about a year. This is due to the fact that, as explained in section 3.2.1, the financial guarantees are determined by at least the highest invoice of the past 12 months. It was observed that risk goes down (since the underlying invoice amounts decrease), but the guarantee remains at the same level.
- Finally, within the current system it is to be expected (and observed) that the coverage will always be lower than the risk. This is due to the fact that there is a mismatch in number of invoices used to calculate the financial guarantee (1, even if it is the highest in a 12-month period) compared to the number of invoices in the risk (4.5).

Similar observations can be made when analysing data of individual BRPs (omitted due to confidentiality reasons), though there are large differences. The risk is covered quite well for some BRPs (up to 100%), and quite poorly for others (as low as 20%). For a number of BRPs, we observe large swings in coverage, independent of the energy crisis. Finally, there seems to be a lag between coverage and risk. Given that the financial guarantee is based in part on the highest invoice of the past 12 months, and that an invoice only arrives in M+2 after the delivery period, this lag is at least in part related to the length of the settlement process.

3.2.3.2 Position-based risk

Additionally, Elia analysed the risk for BRPs with no or very few invoices. Often these are the so-called ‘trader BRPs’, i.e. BRPs with no physical offtake. As they are not exposed to forced outages or offtake forecast errors, they tend to be balanced most of the time. While these BRPs represent a limited risk based on historical data, there are still inherent risks to the functioning of a BRP that could lead to future large invoices. Indeed, e.g.: a manual error, causing a BRP to leave an open position, or an unexpected outage (for BRPs with physical injection), could still lead to a large future invoice, also for BRPs which have historically no or few invoices.

As explained in section 3.2, the financial guarantee is determined in part based on the position a BRP takes. In the current financial guarantee system, this is multiplied by a fixed imbalance price of 50 EUR/MWh. However, we observe that in the analysis period, the average imbalance price was around 122 EUR/MWh. Comparing this with the positions BRPs take, and the related financial guarantees, leads to the below Table 1.

Table 1: Time (in hours) needed for a BRP to spend its financial guarantee at their max imbalance, depending on the imbalance price value

		Imbalance price percentile					
		Guarantee amount	10%	25%	50%	75%	90%
BRP position (MW)	10	93.000 €	57	82	122	194	267
	25	93.000 €	163	113	76	48	35
	50	93.000 €	65	45	30	19	14
	250	558.000 €	33	23	15	10	7
	500	1.116.000 €	39	27	18	12	8
	4000	3.000.000 €	39	27	18	12	8
			13	9	6	4	3

The table is structured as follow:

- The columns represent the percentiles of the observed imbalance price during the analysis period. The median imbalance price was 122 EUR/MWh; the 90th percentile of the imbalance price is 267

EUR/MWh, meaning that 90% of the time the imbalance price was at or below 267 EUR/MWh; 10% of the time it was higher.

- The rows represent positions taken by BRPs (in MW), and the corresponding amount for financial guarantee. For example, if a BRP takes a position of 250 MW, their guarantee will amount to 558.000 EUR.
- Finally, the cells at the intersection of the rows and columns represent the time, in hours, it would take for a BRP to incur an invoice the size of their guarantee at a 100% imbalance. Continuing on the example of the BRP with position 250 MW, and financial guarantee 558.000 EUR, assuming a median imbalance price of 122 EUR/MWh, it would take this BRP 18 hours of 100% imbalance to incur an invoice the size of its financial guarantee.
- Especially for BRPs with larger positions, or at higher imbalance prices, it can be observed that a financial guarantee can be lost in a relatively short amount of time. Additionally, the amount covered by financial guarantees is not equal between positions taken by BRPs, and varies depending on the imbalance price.

3.2.3.3 Conclusions of the historical analysis of the financial guarantees

The following conclusions were made:

- The period of 4.5 months risk to be covered by financial guarantee is too long. There is a gap between the risk and the coverage, due to possible outstanding amounts over several months, only partly offset by basing the financial guarantee on the highest invoice of the past 12 months.
- There are differences in risk and exposure between the BRPs, and over time. This is true for both the invoice-based risk and the position-based risk.
- The current system of financial guarantees is relatively inflexible to changing market conditions. This is due on the one hand to the inherent inflexibility of the 12-month highest invoice rule, which keeps financial guarantees elevated after a crisis subsides. On the other hand, this is due to the assumption of taking 50 EUR/MWh as a reference imbalance price, regardless of the actual imbalance price in the market.

4. TO-BE processes

4.1 Settlement

4.1.1 Purpose of the TO-BE process

As described in section 1.1, due to the improving and faster availability of metering data and allocations generated by adding more digital meters and by upgrading calculation engines, there are growing possibilities for faster provisional settlement, with the aim of reducing costs and uncertainty for BRPs. This section describes the proposition for provisional settlement based on the provisional DSO allocations.

4.1.2 Inputs for the TO-BE settlement process

A provisional settlement can be achieved by using the provisional DSO allocations in a provisional invoicing cycle and by reviewing the payment terms. These improvements are inspired on a comparison with practices in terms of settlement with TSOs from neighbouring countries.

The adaptations, based on a system of provisional allocations and reduction in payment terms, are clarified in the following sections.

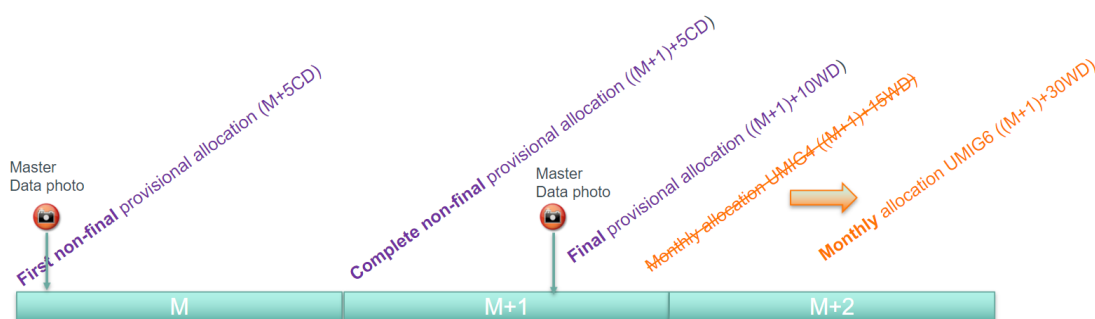
4.1.3 Provisional allocations

4.1.3.1 “Provisional allocations” concept

As of the go-live of UMIG6 in November 2021, the market parties (including Elia) receive provisional DSO allocations in addition to the monthly validated DSO allocations they were already receiving before. However, with the go-live of UMIG6, the monthly validated DSO allocations are exposed on $(M+1) + 30$ WD, which is 15 WD later than under UMIG4 ($(M+1) + 15$ WD).

The provisional allocations consist of messages that are sent every day between $M+5$ CD and $(M+1) + 10$ WD. The publication is sent with a delay of 5 CD vis à vis the delivery day. For each day of the period for which the calculation is made, a provisional allocation is calculated based on the available measurement data and an estimation for metering data not available on a Qh basis.

For the classical continuous meters (AMR), a photo of the Master Data and the measurement data is taken daily to take into account any changes. For all the other measurement types, the calculation of the provisional allocation will always be based on a photo, taken at the time of the first calculation of the provisional allocation for month M ($M + 5$ CD), of the source data (Master data and metering data) foreseen at the beginning of month M for the entire month M. The last provisional allocation is calculated at $(M+1) + 10$ WD (referred to as “final provisional allocation(s)” in this report), and is based on a new photo, taken at $(M+1) + 10$ WD, containing the most recent source data for the entire month M. It contains the most recent master data and includes unvalidated Qh values for smart meter regime 3.



The calculation of the provisional allocation will always be based (except for automated meter read (> 56 kVA or > 80A) that are read continuously, where non-validated volumes are used) on a photo, taken at the time of the first calculation of the provisional allocation for month M, of the source data (Master data and metering data) foreseen at the beginning of month M for the entire month M. For the final provisional allocation calculated in $(M+1) + 10$ WD, a photo taken in $(M+1) + 10$ WD, containing the source data for the entire month M, will be used as a basis.

It is important to mention that in the initial and current UMIG scope, the provisional data are not meant for financial (invoicing) settlement purposes and are meant to be used as information to optimize the balancing and purchasing BRP processes.

The provisional allocation is a process whereby unvalidated allocation data is sent to the BRPs and Elia prior to monthly allocation. In this way, they obtain an initial estimate of the energy flowing on the network for which they are responsible and can then optimize their processes (balancing and purchasing) within their own organization.

An analysis of the precision of the provisional allocations (compared to the monthly allocations) has been made by Elia in the context of this incentive, and it was evaluated as to whether these can be used for provisional publication and provisional invoicing.

4.1.3.2 The precision of the provisional allocations (Qh based)

The analysis of the precision of the provisional allocations focused on 3 key moments in the process and includes a monthly comparison of allocations and invoices by BRP:

- When provisional allocations are complete but not final ((M+1) + 5 CD), referred to as “**non-final provisional allocations**” in this report.
- When provisional allocations are complete and final ((M+1) + 10 WD), referred to as “**final provisional allocations**” in this report.
- When **monthly validated allocations** are complete and final ((M+1) + 30 WD), referred to as “base invoice” in this report.

A snapshot of the data serving for BRP imbalance settlement was taken on (M+1) + 5 CD (+ 1 WD) and (M+1) + 11 WD because the data exposed by Atrias during the night only appear in Elia tools on the next morning. The analysis was done over the data of the year 2023 as from when it was available and snapshotted by Elia. The analysis was done in MWh in order to have a clear understanding of the deviations in volumes and in EUR, in order to have a view on the deviation for the BRP between its provisional invoice compared to its final invoice.

The results of the analysis showed that in the current stage, only a provisional invoice based on the final provisional allocations can be considered. The precision of the provisional invoices in the analysis based on the non-final provisional allocations has been evaluated as insufficient.

On average, a 6% error⁹ in volumes and a 4% error in EUR for the final provisional allocations on an aggregated level for 2023 has been observed. Elia continued the analysis for the first four months of 2024, which leads to similar results. Note that besides this average, on an individual BRP level, higher deviations were observed going from 10 – 15% for invoices with a corresponding amount in EUR.

⁹ Error percentage (%): It corresponds to the percentage represented by the deltas absolute in EUR or MWh* compared to the sum of the absolute values in EUR or MWh of the amounts of invoices and credit notes issued during the base settlement (after (M+1) + 30 WD) to all the BRPs.

*Deltas Absolute (in EUR and MWh): The sum of the absolute values of the deltas in EUR and MWh between the amounts of the invoices or credit notes issued during the base settlement (after (M+1) + 30 WD) to each BRP and the amounts of the invoices or credit notes that we would have issued using the provisional allocations on the 5th Calendar Day or 10th Working Day after month M to the same BRP.

For the non-final provisional allocation, a 30% error in volumes and a 24% error in EUR on an aggregated level for 8 months of 2023 was observed. The analysis for the first four months of 2024 leads to similar results.

The precision is significantly lower for the non-final provisional allocations (on (M+1) + 5 CD compared to the final provisional allocations (on (M+1) + 10 WD). This is due to the following reasons:

- The master data photo did not take place yet (only on (M+1) + 10 WD). This means that in case of master data changes (i.e. portfolio switch) during a month, the non-final provisional allocations wouldn't take it into account. Furthermore, the master data photo includes also more updated metering data and less estimated load profiles.
- The data of the last part of the month is not mature enough as the infeed is still in the validation process at that moment.

Finally, Elia investigated and compared a number of other possible scenarios. An overview of the different scenarios that were considered can be found in Appendix 7.1.

4.1.3.3 Monitoring of the provisional allocations

The data precision of the provisional allocations (see previous section) will be monitored and improved over time.

Synergrid created in 2023 a Working Group PDG Forecasting & Settlement, with one of the objectives being to: *"Allow the provisional allocation process to answer forecasting and/or BRP invoicing needs"*.

Different actions have been evaluated within the Working Group, leading to the below concrete measures:

1. **IT quality indicators:** DSOs will increase monitoring using a developed daily report by Atrias which runs once the provisional allocations are generated in order to check if the sent values are complete and don't show abnormal values (negative, double, etc.). The alerting of the market parties (Elia, DSOs and BRPs) is in the design and implementation phase. The actions to be taken in case of alert need to be discussed. These alerts will be used by Elia to determine whether or not it can proceed to provisional invoicing for a given month.
2. **Monthly ex-post monitoring:** Monthly ex-post monitoring will be structurally embedded in the DSO processes. In order to operationalise this point, DSOs will ask Atrias for the industrialisation of an ex-post report, showing the deviations of the provisional allocation to the final allocation. This report can then be an input for a recurring discussion amongst network operators (i.e. DSO/TSO).

3. **Looplosses check:** Elia and DSOs/CDSOs will perform a Looplosses (PBO)¹⁰ check on a monthly basis based on the provisional allocations between (M+1) + 5 CD and (M+1) + 10 WD. A threshold will be determined by both Elia and DSOs/CDSOs. A threshold that can be changed if statistically substantiated if in the future more data is available. If this threshold is reached, the provisional invoicing will be deactivated for the concerned month. The impact on the workload of the operational teams of Elia/DSO still needs to be investigated and tested.
4. **AMR/Infeed completeness reports:** Reports of AMR/Infeed completeness in the provisional allocations will be made available (by Atrias) to operational teams within the DSO's.
5. **Additional master data photo:** The DSOs requested Atrias to develop an additional master data photo regarding smart meter data of meters in smart meter regime 3, scheduled for implementation in October '24. This master data photo is to be taken on the provisional allocations on the (M+1) + 6 CD, which would allow the provisional allocation to be improved and added with additional available Qh data at that moment. For now, this improvement could benefit market parties for forecasting purposes. On the longer term, Elia will investigate if this could also benefit an earlier provisional invoice.
6. **Improved monitoring platform:** Elia implemented a more effective platform that monitors the messages received from ATRIAS in the metering tools. For instance, messages with incorrect format or unknown exchange key will be identified and an Elia operator will be warned and will mitigate the issue. Elia will also put in place some additional sanity checks to make sure that desynchronization of its tool calculating the (preliminary) imbalance volumes with other tools (internal or external, including ATRIAS) providing essential data are identified.

Finally, a broader project with target to discuss the use of more real 15' values in the allocation and the impact this has on the settlement calculation will be discussed with all concerned stakeholders. Issues will be tackled in order of importance with on top of the backlog the use of SMR1 quarter hour values in allocations and the review of the scope and calculation method of the master data photo (with this perspective of more Qh values). Other topics on the backlog still need further analyses such as the reduction of the MIG6 timing of the monthly allocations and replacing missing metering values by estimations.

The monitoring of the provisional allocations will also be part of the BRP activities, as the BRP has a better view on its portfolio and expected allocations. This means that the BRP should proactively and prior to the creation of the provisional invoice warn Atrias or the DSO community (and Elia) of relevant deviations in the (final) provisional allocations. These warnings or questions should be submitted as outlined in Service Desk - Documentation¹¹, as is currently the case, being the known pathway for market parties to log potential issues.

¹⁰ The LoopLosses (PBO) consists in a monthly consistency check performed by Elia upon receipt of allocations from DSOs. This check consists in verifying that the total volume allocated by each DSO is in line with the infeed of which Elia is aware of for the DSO (infeed metered (4.2) and exchanges between DSOs (4.4)). If the result of this check is different from 0 then this residual volume must be allocated to the BRP appointed by the DSO for the LoopLosses (PBO) responsibility.

¹¹ The service desk page can be found [here](#).

4.1.4 Benchmark with TSOs from neighbouring countries

Before implementing a settlement process based on provisional allocations, it seemed pertinent to investigate the experiences of the TSOs of neighbouring countries. The results are outlined below.

4.1.4.1 RTE (France)

The settlement process at RTE is as follows:

- A delivery period is one month.
- The invoice/credit note is sent out at the end of the month. The BRP has 30 days to pay in case of an invoice.
- In order to send out the invoice immediately at the end of the delivery month, a system of provisional allocations is used.
- The suspension period is 3 CD, starting at the end of the payment term.
- As data becomes more mature, invoices can be regularized (if need be) in M+3, M+6 and M+12.

4.1.4.2 TenneT (The Netherlands)

The settlement process at TenneT is as follows:

- A delivery period is one week.
- The invoice/credit note is sent out 10 WD after the delivery week. The BRP has 2 WD to pay in case of an invoice.
- In order to send out the invoice quickly at the end of the deliver week, a system of provisional allocations is used.
- The suspension period is 7 WD, starting at the end of the payment term.
- TenneT does not use a system of provisional invoices. The provisional data is made available to the BRPs on a daily basis and is considered final at the time of invoicing. The BRP is required to monitor the data used for invoicing, and to take it up with the DSO in case of irregularities. TenneT does not take final responsibility in the data quality.

4.1.4.3 50Hz (Germany)

- A delivery period is one month.
- The invoice/credit note is sent out 42 WD after the delivery month. The BRP has 14 CD to pay in case of an invoice.
- No provisional allocations are used.
- The suspension period is 7 CD, starting at the end of the payment term.

4.1.4.4 Lessons learned from the benchmark

The benchmark leads to a number of interesting observations, considered in this study:

1. Both RTE and TenneT use a system of provisional allocations for invoicing. This allows for faster invoicing, and consequently risk reduction. Additionally, faster invoicing has the benefit that invoicing is closer to delivery, which allows to avoid discussions in case of issues.
2. In The Netherlands, the BRP and the DSO are responsible for following up on the data quality of the provisional allocations.
3. Both TenneT and 50Hz consider significantly shorter payment terms than Elia does today. For TenneT this is 7 WD, for 50Hz 14 CD. Today at Elia, this is 30 CD. A shorter payment term leads in turn to a shorter settlement process and consequently reduction in risk.

4. RTE, 50Hz and TenneT consider significantly shorter suspension terms than Elia. For RTE this is 3 CD, for 50Hz 7 CD and for TenneT 7 WD. Today at Elia, this is 20 CD. Similar to a shorter payment term, this reduces the settlement process and consequently reduces risk.

4.1.5 Proposition for Faster Settlement

Taking into account the lessons learned on the analysis of Atrias provisional allocations in section 4.1.3, and the benchmark of TSOs of neighbouring countries in section 4.1.4, Elia believes the settlement period can be significantly reduced. The below timeline in Figure 4 shows the proposition for Faster Settlement. This is outlined in detail below the figure.

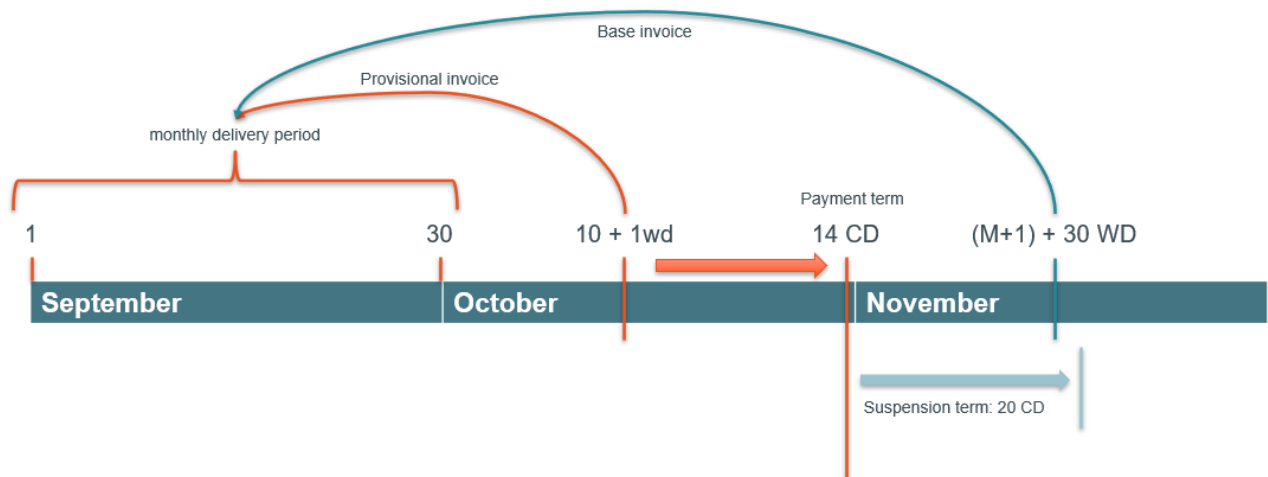


Figure 4: Proposition for Faster Settlement

The proposition for Faster Settlement consists of the following aspects:

- **Delivery period:** As is the case today, the delivery period would consist of 1 month. In the timeline, the month September is taken as an example.
- **Provisional invoice:** As the analysis on the Atrias provisional allocations in section 4.1.3 shows, the provisional allocations after 10 WD could be used for provisional invoicing. Allowing one or two more working days for drafting the invoice, a first provisional invoice could be sent out on (M+1) + 11WD or 12WD. On the longer term, the provisional invoice will be adjusted based on the maturity level of the analysis of the precision of the provisional allocations. This is explained in detail in section 4.1.3.3.
- **Base invoice:** A second invoice, the base invoice, will be sent out at the latest one month after (M+1) + 30 WD. This is the same moment as when the invoice is normally sent out today. At this point in time, the Atrias allocations are final. This invoice then serves to cover the delta between the amount invoiced based on the provisional allocations and the amount invoiced based on the final allocations.
- **Regularization invoice:** A third and final invoice, the regularization invoice *can* be sent out at M + 6M. This is only done in case of a rerun of the allocations. Only the impacted BRPs will receive the regularization invoice.
- **Payment term:** As was shown in the benchmark with TSOs from neighbouring countries (section 4.1.4), Elia's current payment term of 30 CD is relatively long. Reducing the payment term leads to a reduction in financial risk. The reduction in risk, in turn leads to a lower financial guarantee for BRPs. See also section **Error! Reference source not found.** on the quantitative assessment of settlement, risk and financial guarantees. Therefore, Elia proposes to reduce the payment period

to 14 CD. The new payment term will be aligned with the Access Holder payment terms and will coincide approximately 1 month after the delivery period month. Elia is aware that this change, in combination with an earlier invoice, might lead to the first invoice in the new system coinciding with the last invoice in the previous system. In order to avoid payment difficulties for BRPs, a transition plan is proposed in section 5.3.

- **Suspension term:** While investigated, the suspension term remains unchanged. Similar to the payment term, a reduction in suspension term could lead to a reduction in risk and financial guarantee. However, since the suspension term is also an important period for an Access Holder to find a new BRP, in case their current BRP will be suspended, it seems unfeasible to reduce at this point in time. Neighbouring TSOs can apply shorter suspension terms, as they have a system in place to temporarily assign an 'emergency' BRP for Access Points for which the current BRP is suspended. Such a system does not exist at Elia today.
- **Update of the financial guarantee:** as is the case today, any new invoice might lead to a required update of the financial guarantee. When the BRP is issued a warning that they have to increase their financial guarantee, they will have 30 CD to do so. Additionally, Elia will as of now issue warnings when BRPs can lower their financial guarantee as well. The BRP is not obliged to lower their financial guarantee when they receive this warning (e.g. if the BRP predicts an increase in the near future). This is explained in more detail in section 4.2.5.

Note that the Atrias process only concerns the DSO allocations. As such, any differences between the invoices will mostly be due to increasing maturity in the DSO allocations. From this follows that the impact on BRPs will be in relation with the share of DSO allocations in their balancing perimeter. For BRPs with no DSO allocations there should be, except in exceptional cases, no differences between the provisional and the base invoice. In the rare occasion where there would be differences not related to the DSO allocations, this will most likely be due to changes in the imbalance price. The imbalance price is final on M+1 + 15 CD.

4.1.6 Scope definition for the provisional invoice

As explained in section 4.1.5, there will be a delta between the provisional invoice and the base invoice. This is mainly due a.o. to the difference between the final provisional allocations and the monthly allocations.

This creates a risk that a BRP might be invoiced or credited too much or too little in the provisional invoice, to be rectified in the base invoice. This would have an inverse effect on the defined goal of reducing the risk through faster settlement. In order to mitigate this risk, the possibility was analysed to partially invoice BRPs based on the precision of the provisional allocations. As explained in section 4.1.3.2, there is on average a 6% error on the provisional allocations (in volume), with peaks to 10% and, very rarely, 15%.

An analysis of a 14-month time period shows that Elia issued 230 invoices for 255 M EUR and 59 credit notes for 35 M EUR. If provisional allocations would have been invoiced/credited at 100%, of these documents, 72 invoices would have been "over-invoiced" for a sum of 4 M EUR and 33 credit notes would have been "over-credited" for a total of 1 M EUR.

In order to mitigate the above effects, Elia proposes to limit the provisional invoice and credit note to 90% of the invoice amount determined via provisional allocations. The 10% decrease will compensate partly for the deviation on the provisional allocation versus the monthly allocation. As an example, consider the following (theoretical) situation:

- The provisional allocations for a month M show that the invoice for a certain BRP would be 100 kEUR.
- The BRP is then provisionally invoiced in (M+1) + 11 WD for 90% of this amount, i.e.: 90 kEUR.
- In (M+1) + 30 WD the final allocations show that the actual invoice amount is 95 kEUR.
- The BRP will then receive a base invoice for 5 kEUR, i.e.: the delta between the amount invoiced provisionally (90 kEUR) and the final amount (95 kEUR).
- The situation where a BRP would have been invoiced too much (100 kEUR) is thus avoided.

Applying this principle, only 15 invoices would have been “over-invoiced” for a sum of 1 M EUR and 8 credit notes would have been “over-credited” for a total of 0.6 M EUR.

Finally, Elia observed that the deviation on the provisional invoice is more important on limited invoice amounts. As limited invoice amounts have less impact on the risk mitigation as a whole, Elia proposes to withhold provisional invoices < 50 kEUR and credit notes < 50 kEUR. In those cases, only the base invoice will be sent out. This would limit the administrative process for all parties. In the observed document amount, 79 (27%) provisional documents of the 289 would be avoided for an amount of 657 kEUR.

4.1.7 Summary of the TO-BE settlement process

This section contains a summary of the key points proposed by Elia on the faster settlement process. **Elia kindly invites market parties to provide their feedback on these key points in response to this public consultation.**

1. Elia will start the daily publication of imbalance volumes. These volumes can be used by BRPs for their forecasting purposes, and to provide an insight in upcoming invoices.
2. The provisional allocations will be used to issue provisional invoices and credit notes, in (M+1) + 11 WD.
3. The BRPs are expected to monitor these provisional allocations and warn concerned DSOs and Atrias in case of irregularities.
4. The provisional invoices and credit notes will only cover 90% of the provisional allocations, in order to avoid over-invoicing and -crediting. Provisional invoices and credit notes with amounts smaller than 50 kEUR will not be issued, but instead invoiced with the base invoice.
5. The payment term of invoices will be reduced from 30 CD to 14 CD.

4.2 TO-BE financial guarantees

4.2.1 Link between the updated settlement period and the financial guarantees

As outlined in section 3.2.1, the financial guarantee serves to cover the risk for Elia and society in case a BRP were to become insolvent, and not pay back outstanding invoice amounts. However, as discussed in section 3.2.3, historically the financial guarantees were not always well adjusted to the risks in the market. Additionally, at certain times they were too low to cover the risk.

The proposition for Faster Settlement leads to a sizeable reduction in the settlement period, from 4.5 (as illustrated on Figure 2) to 2.5 months (as illustrated on Figure 4). As such, it seems pertinent to propose an update to the financial guarantee system, which on the one hand covers better the risks in the market, and on the other hand is adapted to a new settlement period of 2.5 months.

4.2.2 Updated financial guarantee formulas

As explained in section 3.2.3, the current system of financial guarantees is poorly adapted to changes in risk in the market. Within the revised financial guarantee system, Elia takes into account these concerns. The new financial guarantee system would still be based on 2 formulas, of which the maximum value is taken as the financial guarantee, but take into account better current market conditions, and the reduction in the length of the settlement period.

The proposed formulas are the following:

- Invoice-based financial guarantee:

$$\text{Invoice guarantee} = w_1 \times \text{InvoiceAmount}_{m-3} + w_2 \times \text{InvoiceAmount}_{m-2} + w_3 \times \text{InvoiceAmount}_{m-1}$$

Where:

- w_1, w_2, w_3 are the weights associated with the invoice amounts of the past 3 months; and
- $w_1 + w_2 + w_3 = \text{Length (expressed in month) of the settlement period}$; and
- $\text{InvoiceAmount}_{m-x}$ is the invoice amount of x months ago. In case of a credit note, this would have a negative sign.
- $\text{InvoiceAmount}_{m-3}$ and $\text{InvoiceAmount}_{m-2}$ will be the base invoice amounts. As the base invoice amount of m-1 is not yet available in m, $\text{InvoiceAmount}_{m-1}$ will be the 100% provisional invoice amount (i.e. before the 90% correction is applied)

- Position-based financial guarantee:

$$\text{Position guarantee} = 12 \times \text{Position} \times \text{averageImbalancePrice}_{m-1}$$

Where:

- Position is the portfolio size of the BRP (as defined in section 3.2) .
- $\text{averageImbalancePrice}_{m-1}$ is the average imbalance price of the previous month. In case this price would be below 50 EUR/MWh, it will be set to 50 EUR/MWh.

- Financial guarantee to be provided by the BRP:

$$\text{Financial guarantee} = \max(\text{Invoice guarantee}, \text{Position guarantee})$$

The following sections contain more information on the reasoning behind the two formulas, the update frequency of the financial guarantees and the performance of the new financial guarantees on the historical data.

4.2.3 Invoice-based financial guarantee

The proposed formula for the invoice-based financial guarantee no longer looks back 12 months, to the highest invoice within those 12 months, but rather at the past 3 months. A weighted average sum of the past 3 invoices is taken as invoice-based financial guarantee, where the invoice of the past month (m-1) gets a higher weight than the invoice of 3 months ago (m-3). This way, up- and downward trends in invoices will be captured much better in the financial guarantee. By using 3 invoices, instead of just one single month, outliers do not weigh as heavily. In this context, the invoice amount considered is the amount issued from the base invoice for m-3 and m-2, and the provisional invoice for m-1. This last amount is the provisional invoice amount before applying the 90% correction.

The sum of the weights of the invoices of the past 3 months is set to add up to the number of months in the settlement period. As proposed in section 4.1.5, the new settlement timeline would add up to 2.5 months. Consequently, the sum of the weights will also add up to 2.5 months. In this case, this would be done as follows:

- $w_1 = 0.5$
- $w_2 = 0.75$
- $w_3 = 1.25$

As stated before, Elia has the ambition to further improve the settlement processes in the future, e.g. by further improving the provisional allocations. When this leads to a significant further reduction in settlement time, or even the possibility for weekly settlement, the weights of the financial guarantee can be further adapted. A shorter settlement period would then lead to a smaller sum of weights, and consequently smaller financial guarantee.

As an example, consider a BRP which has the following 3 past invoices (credit notes):

- m-3: invoice 100.000 EUR
- m-2: credit note 20.000 EUR
- m-1: invoice 80.000 EUR

The BRP will be expected to provide a financial guarantee of:

$$\text{Invoice based financial guarantee} = 0.5 \times 100.000 + 0.75 \times 20.000 + 1.25 \times 80.000 = 135.000$$

As mentioned in section 4.2.2, if the invoice-based guarantee for this BRP is higher than the position based one, then this value will be taken as overall financial guarantee.

4.2.4 Position-based financial guarantee

The proposed formula for the position-based financial guarantee now better considers the current conditions in the market. This is done by using the average imbalance price of the past month.

This is multiplied by the position of the BRP. Indeed, the larger the BRP portfolio size, the larger the potential imbalance and imbalance invoice a BRP can incur in case they are not able to balance their portfolio. The financial guarantee system is only designed to cover the risk following from the normal way of working of a BRP and cannot reasonably be designed in order to cover malicious behaviour, e.g.: BRPs intentionally gaming system. Note that in this case, BRPs can also be suspended via Article 9 of the T&C BRP.

Assuming that the risk thus only follows from an accidental open position created by the BRP, Elia requires the BRP to cover 12 hours of total imbalance (i.e.: 100% the BRP position), at a price reflecting the average imbalance price in the current market conditions, thus arriving at the formula for the position-based financial guarantee.

As an example, consider a BRP which has a position of 100 MWh (e.g. consisting of 50 MWh on average of External Commercial trades, and 50 MWh of Internal Commercial trades). If the average imbalance price of the last month was 150 EUR/MWh, then the BRP will be expected to provide a financial guarantee of:

$$\text{Position based financial guarantee} = 100\text{MWh} \times 150 \frac{\text{EUR}}{\text{MWh}} \times 12 = 180.000 \text{ EUR}$$

As mentioned in section 4.2.2, if the position-based guarantee for this BRP is higher than the invoice-based guarantee, then this value will be taken as overall financial guarantee.

4.2.5 Update frequency of the financial guarantee

In reassessing the financial guarantee system, Elia has evaluated the thresholds for updates to the guarantees as well. In order to find a balance between avoiding monthly updates to the guarantees, but still having a financial guarantee that is well adjusted to the market, the following is proposed, based on an analysis of the historical data:

- The financial guarantee has to be increased when the required amount exceeds 130% of the current financial guarantee amount, or when the delta between the current and the required amount is larger than 500 kEUR, regardless of whether this follows from the invoice-based or position-based guarantee. Additionally, the delta between the current and required amount has to be at least 15 kEUR. In case the delta is smaller than 15 kEUR, no update is required.
- Similarly, when the required financial guarantee falls below 70% of the current guaranteed amount, or when the delta between the required and the current amount is larger than 500 kEUR, the BRP can lower their financial guarantee. Similar to the increase, this reduction can only happen if the delta between the required and the current guarantee is at least 15 kEUR. In contrast to the current system, Elia will proactively warn the BRP in case a reduction is permitted. The BRP is not obligated to lower their financial guarantee.
- When the BRP receives a notification to update their financial guarantee, this has to be done within 30 CD.
- Finally, the financial guarantee of each BRP will be evaluated at the time the provisional invoice for the previous month is calculated (regardless of whether it is sent out, e.g. if smaller than 15 kEUR). This evaluation will happen based both on the amount of the past 3 invoices (with the most recent one being the provisional invoice) and the position of the BRP at that time.

The analysis on the historical data shows that on average, this should lead to around 3 or 4 changes per year for most BRPs. In situations where risk in the market is rapidly increasing (e.g.: during the energy crisis) or decreasing, the financial guarantees will need to be updated more frequently. This is the desired effect, since the financial guarantee serves to cover the risk.

4.2.6 Quantitative assessment of the financial guarantee system on the historical data

In order to assess the impact of the new financial guarantee system, a what-if analysis was performed on the historical data of the period 2021-2023. This was the same dataset used in the prior analysis to assess whether the financial guarantees were too high, or too low.

The what-if analysis examines what would have been the historical financial guarantees for the BRPs, and corresponding exposure and coverage for Elia if the alternative financial guarantee system would have applied. The results can be found in the below Table 2.

Table 2: Numerical analysis of the financial guarantee system

Nr	Scenario	All BRP data		
		Financial guarantee relative to base scenario	Coverage	Exposure
0	Settlement time, financial guarantee			
1	4.5M, current formula	100%	45%	55%
2	4.5M, new formula (w: 4.5)	162%	90%	10%
3	3M, new formula (w: 3)	113%	81%	19%
4	3M, new formula (w: 2.5)	101%	74%	26%
5	2.5M, new formula (w: 2)	89%	75%	25%

The table shows the key figures on financial guarantees, coverage and exposure for different scenarios, on an aggregated level across all BRPs. The data used for the table is the historical invoicing data of 2021-2023, showing relative values due to confidentiality reasons. The content of the table is best explained by stepping through the different rows:

0. The column names. The columns included in the table are the following:

- Settlement time, financial guarantee: shows the timeline considered for settlement, and the details on the guarantee formula.
- Financial guarantee relative to base scenario: shows the financial guarantees provided by all BRPs for a given scenario in relative amounts to the financial guarantee amounts provided in the current scenario (AS-IS situation) (set at 100%).
- Coverage: the percentage expression of the coverage of the risk through the financial guarantee, i.e. Average covered amount/outstanding amount.
- Exposure: similar to coverage, for the exposure.

1. The first rows shows the AS-IS scenario, with a 4.5 month settlement period and the financial guarantee system currently in place. It can be observed that this comes with significant exposure (55%).
2. Next, we see the (hypothetical) situation where the settlement period would not be adapted, but the new financial guarantee system would be applied. In this case the formula as presented in section 4.2.2 is applied, with the weights adding up to 4.5 (i.e.: the number of months in the settlement period). Exposure is drastically reduced, but financial guarantees would also have to be increased by 62%. As demonstrated in the text, the goal is to reduce the settlement time, and as such this scenario is not considered as an option.
3. Then follows the scenario where the settlement time would be decreased by using provisional allocations, without reducing the payment term to 14 CD, and thus keeping it at 30 CD. The coverage (in relative terms) is slightly lower in this scenario, though remains the same in absolute terms. There would still be a need to slightly increase the financial guarantees, by 13%.
4. In order to offset the required increase in financial guarantees, there is the additional possibility to adapt the weights, as is done in row 4. By departing from the principle that the weights should add up to the number of months, the financial guarantees can remain at similar levels compared to today. In this case the weights would sum to 2.5 rather than 3.
5. Finally, the last row goes one step further. As was discussed in section 4.1.5, Elia proposes to reduce the payment term from 30 CD to 14 CD. Continuing with the principle of slightly decreasing the weights (i.e. not having the weights add up to the number of months in the settlement period),

this scenario leads to a decrease in required financial guarantees, while keeping exposure at similar levels.

From this analysis, it is clear that a trade-off is to be made. Within this document, Elia proposes to reduce the payment to 14 CD. This has the benefit that risk in absolute terms is lower, and a reduction in financial guarantees, compared to today, can be realized. Elia kindly invites market parties to provide feedback on this reduction in payment term, to achieve a reduction in financial guarantee.

For information, the below table shows an overview with the weights used in the different scenarios.

Table 3: weights applied in the numerical analysis

	month	m-3	m-2	m-1
	weight for month	w1	w2	w3
Sum of weights	4,5	1	1,5	2
	3	0.5	1	1.5
	2.5	0.415	0.83	1.25
	2	0.33	0.66	1

4.2.7 Summary on the TO-BE financial guarantee system

This section contains a summary of the key points proposed by Elia on the update to the financial guarantee system. **Elia kindly invites market parties to provide their feedback on these key points in response to this public consultation.**

1. Elia retains 2 metrics to calculate the financial guarantees required of the BRPs. These are based on their position and their invoices. The maximum of the 2 metrics is taken as the financial guarantee.
2. The position-based financial guarantee takes into account the current imbalance price in the market, by incorporating the previous month average imbalance price.
3. The invoice-based financial guarantee looks at the 3 most recent invoices, and assigns weights based on their proximity to today. The sum of the weights reflects the length of the settlement period.
4. By reducing the settlement period, and calibrating the weights, Elia can obtain a significant reduction in exposure. This in turn leads to a reduction in financial guarantees for the BRPs.
5. The update frequency is based on exceeding a 30% threshold, or at least 15kEUR in absolute terms. In case the delta is larger than 500 kEUR (in upward direction), the financial guarantee always needs to be updated.
6. The financial guarantees will be evaluated monthly. In case an increase is required, the BRP has 30 CD to do so.

5. Implementation plan

The proposition for Faster Settlement and updates to the financial guarantee system will, for the most part, require adaptations to the T&C BRP. Certain smaller changes can be made without an update to

the T&C BRP. This section structures the envisioned timeline for implementing and go-live of the proposition for Faster Settlement.

5.1 Implementations without need to modify the T&C BRP

There are two propositions for change which would not require a modification to the T&C BRP:

1. The daily publication of imbalance volumes.
2. A warning system for BRPs when they can lower their financial guarantees.

Elia is currently working on making the required changes to provide both items to the BRPs. Both the daily publication and the warning system for lowering financial guarantees will be available to the market by the due date defined in the incentive, i.e.: end Q4 2024.

5.2 Implementations with a need to modify the T&C BRP

The transition towards Faster Settlement has as a consequence that BRPs will receive their invoices faster, with a shorter payment term. In order to ensure that this creates no payment difficulties for the BRPs a transition plan is proposed in the next section. The timing of the transition follows from the timeline for changes to the T&C BRP, and time required for the market parties and Elia to prepare for Faster Settlement, as described in this section.

The below paragraph provides market parties with a first indication of the timing and implementation. Elia warns the market parties that this timing and plan is dependent on other changes required to the T&C BRP as well. **It is therefore a first estimate, and not a guaranteed timeline.**

The proposed timeline is built up as follows:

- The public consultation on the proposed design will take place, in the context of the present incentive, from 30/08/2024 until 27/09/2024 (included).
- After consultation, Elia will analyse the feedback received from the market parties on the design and on the implementation plan, and propose modifications where relevant. The changes required in the T&C BRP will be drafted.
- The T&C BRP can be consulted when the incentive is finalized (set for 31/12/2024). This means that Elia has scheduled that the changes to the T&C BRP, required in context of this incentive, and depending on the market party feedback, will be consulted in 2025, for one month.
- **Note:** Other changes are required to the T&C BRP as well. Consequently, the exact start date of the public consultation of the T&C BRP in 2025 is not yet known.
- After the market feedback has been incorporated in the T&C BRP, the T&C BRP will be submitted to CREG for regulatory approval.
- One month after CREG approval, the T&C BRP will enter into force.
- Currently, Elia envisions that the updated T&C BRP *could* enter into force as of June 2025. In order to avoid for the BRPs to have to make changes to their invoice handling during the summer, the month of September is foreseen for the transition (see next section).

Several changes are required to Elia tools and processes to accommodate the proposition for Faster Settlement, which are on track to be implemented by the envisioned date of June 2025.

Market parties are kindly requested to provide feedback as to whether it is feasible for them to implement the necessary changes to their processes and tools by June 2025.

The feedback provided will be incorporated in the final implementation plan provided towards Q4 2024.

5.3 Transition plan

As outlined in the previous section, September 2025 would be foreseen as the transition month. Even though the updates to the T&C BRP could go live as of June 2025, Elia appreciates that the summer months are not ideal for transitioning to a new settlement procedure.

Therefore, the following plan is presented:

- The invoice for July will be the last invoice in the current system. It would be sent out in July + 35 WD, i.e. mid September.
- The provisional invoice for August (the first invoice in the new system) would be sent out in August + 11 WD, i.e. mid September.
- Consequently, the BRP will have to pay 2 invoices in September, one for July and one for August. The August invoice would have a shorter payment term (14 CD) than the July invoice (30 CD).
- As such, it is proposed that September would be the transition month in which the BRPs receive 2 invoices. The last invoice in the current system is to be paid according to the current rules. For the first new provisional invoice, the BRP would exceptionally receive an additional 14 CD of payment term. The next provisional invoice (for the delivery month of September) would be received by the BRP mid- October, and the BRP would receive 14 CD to pay it, according to the new system.

6. Conclusion and summary of the questions in the public consultation

In context of the incentive on Faster Settlement, Elia was tasked with evaluating and improving the current settlement timeline. In function of the improvements made to the settlement process, the financial guarantee system was evaluated and updated as well.

Within this text Elia described its proposition for faster settlement. In this proposition, the provisional allocations would be used to provisionally invoice BRPs on (M+1) + 11 WD. The payment term is reduced, shrinking the settlement timeline from 4.5 months to 2.5 months.

Following from the decrease in settlement time, and an evaluation of the current system of financial guarantees, a new system of financial guarantees is proposed. The updated system provides new formulas for both invoice- and position-based risk, in order to follow actual risk in the market more closely. The risk following from a settlement timeline of 2.5 months is covered better than before, while achieving a reduction in financial guarantees for the BRPs.

The market parties are kindly invited to provide feedback to the proposition for faster settlement and adapted financial guarantees within this design note. Sections 4.1.7 and 4.2.7 summarized the key points under consultation for faster settlement and the financial guarantees, respectively. These are repeated below. Finally, a proposition for the implementation plan and timeline was provided as well. Market parties are kindly invited to provide their feedback on this, after which it will be finalized by Q4 2024.

Faster settlement:

1. Elia will start the daily publication of imbalance volumes. These volumes can be used by BRPs for their forecasting purposes, and to provide an insight in upcoming invoices.
2. The provisional allocations will be used to issue provisional invoices and credit notes, in (M+1) + 11WD.
3. The BRPs are expected to monitor these provisional allocations and warn the DSOs and Atrias in case of irregularities.
4. The provisional invoices and credit notes will only cover 90% of the provisional allocations, in order to avoid over-invoicing and -crediting. Provisional invoices and credit notes with amounts smaller than 50 kEUR will not be issued, but settled in the base invoice.
5. The payment term of invoices will be reduced from 30 CD to 14 CD.

Financial guarantees:

6. Elia retains 2 metrics to calculate the financial guarantees required of the BRPs. These are based on their position and their invoices. The maximum of the 2 metrics is taken as the financial guarantee.
7. The position-based financial guarantee takes into account the current imbalance price in the market, by incorporating the previous month average imbalance price.
8. The invoice-based financial guarantee looks at the 3 most recent invoices, and assigns weights based on their proximity to today.
9. By reducing the payment term, and calibrating the weights, Elia can obtain a significant reduction in exposure. This in turn leads to a reduction in financial guarantees for the BRPs.
10. The update frequency is based on exceeding a 30% threshold, or at least 15kEUR in absolute terms. In case the delta is larger than 500 kEUR (in upward direction), the financial guarantee always needs to be updated.
11. The financial guarantees will be evaluated monthly. In case an increase is required, the BRP has 30 CD to do so.

7. Appendix

7.1 Settlement scenarios considered

The proposition on Faster Settlement was outlined in section 4.1.5. In addition to the selected scenario, Elia investigated a number of other scenarios as well. The below table provides an overview of the different scenarios that were considered, with some benefits and drawbacks. In the end, the final scenario in this table was chosen.

Invoicing frequency	Scenario detail	Advantages	Disadvantages
Daily	Elia invoices BRP with no physical offtake on a daily base D+2 BRPs with a payment term of 7 days	<ul style="list-style-type: none"> - Risk mitigation for nomination error not covered by guarantees - Guarantee can cover almost all risk 	<ul style="list-style-type: none"> - Non-level playing field for BRPs with no physical offtake - Short payment terms could lead to payment difficulties for BRPs with no physical offtake - Increased implementation & operational follow-up
Weekly	Elia invoices all BRPs on weekly base 10 WD after the last day of the week with payment terms of 7 days	<ul style="list-style-type: none"> - Risk mitigation with limited bank guarantee (1 month) - System working in the Netherlands 	<ul style="list-style-type: none"> - Low quality of invoices due to use of DSO provisional allocations intramonth (photo missing) - Large decrease in payment term
Bi-Weekly	Elia invoices all BRPs every two weeks (**) 10 WD after the last day of the week with payment terms of 7 days or 2 weeks (**) first gate contains 14 days, second gate contains whole month	<ul style="list-style-type: none"> - Risk mitigation with limited bank guarantee (2 month) - Moves in the right direction of settling intramonth 	<ul style="list-style-type: none"> - More complex to implement on Elia / BRP side - Large decrease in payment term - Limited gain versus earlier monthly settlement - Precision of DSO provisional allocations not yet proven
Monthly (1)	Elia invoices all BRPs on monthly base on the 6WD after the month M with payment terms of two weeks	<ul style="list-style-type: none"> - Risk mitigation with limited bank guarantee (2,5 months) - Ease of implementation 	Higher risk on precision of DSO provisional allocations for last week of the month
Monthly (2)	Elia invoices all BRPs on monthly base on the 11WD after the month M with payment terms of two weeks	<ul style="list-style-type: none"> - Risk mitigation with limited bank guarantee (2,5 months) - Quality of invoices good due to acceptable proven quality of final PA in current state - Ease of implementation 	Slightly higher risk for Elia, translated in higher bank guarantee compared to faster invoicing frequencies