- CREG



Study on the transparency of the Belgian electricity market guaranteed by high quality fundamental data

Article 23, § 1, 1°, and 2° and § 2, second paragraph, 2°, 3°, 4°, 5° and 8°, of the law of 29 April 1999 on the organisation of the electricity market and Article 15/14, §1, 1° and 2° and § 2, second paragraph, 2°, 3°, 5°, 5° bis and 16°, of the law of 12 April 1965 on the transmission of gaseous and other products by pipeline.

Non-confidential

TABLE OF CONTENTS

TA	BLE C	OF COM	ITENTS	2				
EXI	ECUT	IVE SU	MMARY	3				
EXI	ECUT	IVE SU	MMARY (NL)	5				
EXI	EXECUTIVE SUMMARY (FR)							
1.	INT	TRODU	ICTION	9				
-	l.1.	Prev	vious study	9				
-	L.2.	Stuc	ly of the European Commission	10				
2.	DE	FINITIO	ON OF THE INCENTIVE	12				
2	2.1.	Wor	k upstream of the incentive	12				
		2.1.1.1	. Action taken following the first transparency study (1637)	12				
		2.1.1.2	Presentation of the incentive project to Elia	13				
		2.1.1.3	Elia's reaction to the incentive project	14				
		2.1.1.4	. Official presentation of the CREG incentive to the public (15 May 2018)	14				
		2.1.1.5	. Fine-tuning of the incentive	14				
		2.1.1.6	5. Summary of the fundamentals of the incentive	16				
2	2.2.	Fina	l definition of the incentive	17				
	2.2	2.1.	Legal framework	17				
		2.2.1.1	. Legal framework of the incentive	17				
		2.2.1.2	Legal framework for transparency	18				
		2.2.1.3	Belgian legal framework related to data reporting and transparency	26				
	2.2	2.2.	Background	27				
	2.2	2.3.	Definition	28				
3.	W	ORK OI	N THE INCENTIVE PRIOR TO ITS IMPLEMENTATION	32				
4.	RE	SULTS	OF THE INCENTIVE PER STREAM, UP UNTIL 30 JUNE 2020	35				
4	1.1.	Stre	am 1	36				
4	1.2.	Stre	am 3	37				
4	1.3.	Stre	am 2	40				
5.	PR	OSPEC	TS FOLLOWING THE INCENTIVE	41				
6.	CO	NCLUS	5ION	41				

EXECUTIVE SUMMARY

Pursuant to Article 23, §1, 1° and 2° and § 2, second paragraph, 2°, 3°, 4°, 5° and 8°, of the law of 29 April 1999 on the organisation of the electricity market (hereinafter referred to as the electricity law) and of Article 15/14, §1, 1° and 2° and §2, second paragraph, 2°, 3°, 5°, 5° bis and 16° of the law of 12 April 1965 on the transport of gaseous and other products by pipeline (hereinafter referred to as the gas law), the COMMISSION FOR THE REGULATION OF ELECTRICITY AND GAS (hereinafter referred to as the CREG) may, on its own initiative, carry out research and studies on the electricity and natural gas market.

This study is carried out in the context of the CREG's general policy note for the year 2020, which aims to determine whether the data provided to market participants by the Belgian electricity transmission system operator (hereinafter: Elia) and ENTSO-E guarantee the proper functioning of the market and the European transparency obligations.

The publication of the CREG study (F)1637 of 16 October 2017 highlighted the limited quality of the data made available to market participants by Elia via its website and the ENTSO-E platform. The CREG stated therein that the data provided by Elia frequently gave rise to questions from members of the CREG as to their accuracy. Firstly, the CREG wanted all market participants to have correct information on all the data made available by Elia, both on its website and on the ENTSO-E platform, and secondly, to improve the quality of the data received by Elia.

In March 2018, the European Commission published a study on the quality of the electricity market data of the transmission system operators, electricity supply disruptions and their impact on the European electricity markets. In the part of this study relating to an assessment of data quality, the ENTSO-E platform was analysed by the Commission in terms of data completeness, data accuracy, timeliness of publications and the user-friendliness of the platform. The Commission concluded its study with several recommendations to ENTSO-E.

In this context, the CREG introduced an incentive relating to the quality of the data made available to the market in the incentives aimed at improving the performance of the transmission system operator for electricity during the regulatory period 2020-2023. Implementing the definition of this incentive required various meetings between Elia and the CREG.

The objective of the incentive is to obtain high quality data on the Belgian market via consistency in the publication of data between the data made available by Elia and those of the ENTSO-E transparency platform, but also with the data that are transmitted by Elia to the CREG for reporting defined by the Electricity Act.

The verification of the data consistency is done through three streams of data:

- 1) **the data closest to real time** concern data covered only by the transparency regulation. The validity tests concern the data available on the Elia SFTP and on the ENTSO-E transparency platform.
- 2) the data validated by ELIA at the CREG after real time relate to the reporting data transmitted by Elia to the CREG and the transparency data of Elia and ENTSO-E. In addition to the validity tests for Stream 1, the intra- and inter-file validity tests on the reporting data transmitted by Elia to the CREG are added. The tests on this Stream are monthly and started on 15 April 2020 with data of January 2020. The data enter Stream 2 at the latest two months plus 15 days after the last day of the month relating to the data;

3) the historical data available on the Elia and ENTSO-E platforms: Stream 3 is a sub-part of Stream 2 which deals only with 'Cartography' data. The data from Stream 2 switch to Stream 3 as soon as a new month powers Stream 2. The historical Stream starts on 5 January 2015 and the date is not sliding. The tests on this Stream are carried out daily.

For Stream 1, the score obtained depends on the number of correct data divided by the number of data tested. If this percentage is higher or equal to 99 %, the score obtained is 1. If this percentage is below 90 %, the score obtained is 0. If there is an IT failure on ENTSO-E's or on Elia's side, a score of '0' is given to Elia. For Stream 2 and 3, a point is awarded when all the data in all the Stream data series for the month concerned are correct and, conversely, a score of zero is awarded if at least one incorrect data item for the Stream is identified by the CREG. For stream 1&3, if no error could be detected due to a CREG IT failure or the programmes carrying out the checks, a score of 1 is obtained for Elia. Since the start of the data quality incentive until the end of June 2020, Elia has achieved for Stream 1 a data accuracy rate (= identical data published on the SFTPs of Elia and ENTSO-E) of 99 % or more for 172 days out of 182, which means that 100 % of the financial amount of the incentive was obtained for the vast majority of days for Stream 1. Most of data issues detected on Stream 1 are due to IT issues coming from the ENTSOE platform and not from Elia publication. It should be noted that for Stream 1, around 40 tests are carried out every day and between 150,000 and 350,000 data are checked daily. As for Stream 3, as of 30 June 2020, 5 days with no error at all resulted in a score of 1 for the incentive while the other days tested showed a score of 0. Beyond the incentive score, the percentage of correct data compared to the number of data tested is 98.42 % in average. Stream 2 allowed Elia to obtain a score of 1/6 over the first six months of the year (one month out of the 6 months tested presented no error at all). Beyond the incentive score, the percentage of correct data compared to the number of data tested is close to 100 %, but some items remained erroneous (like the volumes and prices of aFRR and mFFR), which can have a high impact for a market participant.

The data quality incentive has allowed Elia to review all of the data it publishes to the market and to understand the definition of each of them and their interactions. This work also made it possible to make contact with various parties that have an impact on data quality: ENTSO-E, data providers (JAO, EEX), neighbouring TSOs (RTE and TENNET), etc.

Since 2017, Elia has been reviewing its data management strategy to become a data-centric company. The incentive has a very positive effect and is a real boost to help Elia to achieve this goal for Transparency data. In line with this and with the obligations incumbent on the Belgian market in the context of REMIT, Elia will provide the Belgian market participants with a platform for publishing inside information.

Note that the incentive is limited to the Belgian market and can therefore only improve the Belgian market data. Nevertheless, the Belgian market is not in isolation from other markets and it therefore seems inevitable that the quality of data from other countries in the CWE region in which Belgium is embedded should also be improved. To do this, it is important to make regulators, TSOs and market participants aware that the price of high quality data is important for everyone. If we want to have a transparent market with a correct and efficient transparency platform, we must act together. The Transparency Regulation requires TSOs in Europe to provide their information to the ENTSO-E platform but, at present, the European statistics via this platform are not usable.

EXECUTIVE SUMMARY (NL)

Op grond van artikel 23, § 1, 1° en 2° en, § 2, tweede lid, 2°, 3°, 4°, 5° en 8° van de wet van 29 april 1999 betreffende de organisatie van de elektriciteitsmarkt (hierna: de elektriciteitswet) en artikel 15/14, § 1, 1° en 2° en, § 2, tweede lid, 2°, 3°, 5°, 5° *bis* en 16° van de wet van 12 april 1965 betreffende het vervoer van gasachtige producten en andere door middel van leidingen (hierna: de gaswet) kan de COMMISSIE VOOR DE REGULERING VAN DE ELEKTRICITEIT EN HET GAS (hierna: de CREG) op eigen initiatief onderzoeken en studies uitvoeren in verband met de elektriciteits- en aardgasmarkt.

Deze studie wordt uitgevoerd in het kader van het beleidsplan van de CREG voor het jaar 2020, dat tot doel heeft na te gaan of de gegevens die de Belgische transmissienetbeheerder voor elektriciteit (hierna: Elia) en ENTSO-E aan de marktspelers verstrekken, de goede werking van de markt en de Europese transparantieverplichtingen waarborgen.

Uit de studie (F)1637 van de CREG van 16 oktober 2017 is gebleken dat de gegevens die Elia via zijn website en via het ENTSO-E-platform aan de marktspelers ter beschikking stelt, aan kwaliteit te wensen overlaten. De CREG vermeldde hierin dat de gegevens meegedeeld door Elia regelmatig aanleiding gaven tot vragen van de leden van de CREG over de juistheid ervan. De CREG wenste enerzijds dat alle marktspelers over correcte informatie beschikken over alle gegevens die Elia ter beschikking stelt, zowel op zijn website als op het ENTSO-E-platform, en anderzijds dat de kwaliteit van de door Elia ontvangen gegevens verbetert.

In maart 2018 heeft de Europese Commissie een studie gepubliceerd over de kwaliteit van de gegevens over de elektriciteitsmarkt van de transmissienetbeheerders, de verstoringen van de elektriciteitsbevoorrading en de impact ervan op de Europese elektriciteitsmarkten. In het deel van deze studie dat betrekking heeft op de beoordeling van de kwaliteit van de gegevens, is het ENTSO-Eplatform door de Commissie onderzocht op het vlak van volledigheid van de gegevens, de nauwkeurigheid ervan, de actualiteit van de publicaties en de gebruikersvriendelijkheid van het platform. De Commissie sluit haar studie af met een aantal aanbevelingen aan ENTSO-E.

In dat verband heeft de CREG een stimulans met betrekking tot de kwaliteit van de gegevens die aan de markt ter beschikking worden gesteld toegevoegd aan de stimulansen ter bevordering van de prestaties van de transmissienetbeheerder voor elektriciteit tijdens de regulatoire periode 2020-2023. Voor de definitie van deze stimulans waren talrijke vergaderingen nodig tussen Elia en de CREG.

Het doel van de stimulans is om kwalitatieve gegevens over de Belgische markt te verkrijgen via een coherentie in de publicatie van gegevens die door Elia ter beschikking worden gesteld en gegevens op het ENTSO-E-transparantieplatform, maar ook van de gegevens die door Elia worden doorgegeven aan de CREG voor de rapporteringen bepaald in de elektriciteitswet.

De coherentie van de gegevens wordt gecontroleerd via drie gegevensstromen ("Streams"):

- 1) **de gegevens het dichtst bij "***real time***"**, zijn de gegevens die uitsluitend onder de transparantieverordening vallen. De validiteitstests hebben betrekking op de gegevens die beschikbaar zijn op de SFTP's van Elia en op het transparantieplatform ENTSO-E.
- 2) de door Elia gevalideerde gegevens bij de CREG na real time betreffen de rapporteringsgegevens die door Elia aan de CREG zijn overgemaakt en de transparantiegegevens van Elia en ENTSOE-E. De interne validiteitstest van de bestanden en de validiteitstest tussen de bestanden van de rapporteringsgegevens door Elia overgemaakt aan de CREG, worden aan de validiteitstests van Stream 1 toegevoegd. De tests op deze Stream gebeuren maandelijks en zijn op 15 april 2020 van start gegaan met de gegevens van januari 2020. De gegevens worden uiterlijk twee maanden plus 15 dagen

na de laatste dag van de maand waarop de gegevens betrekking hebben in Stream 2 ingevoerd;

3) de historische gegevens beschikbaar op de Elia en ENTSO-E-platformen: Stream 3 is een onderdeel van Stream 2 en heeft alleen betrekking op de cartografische gegevens. De gegevens van Stream 2 worden overgeschakeld naar Stream 3 zodra een nieuwe maand wordt toegevoegd aan Stream 2. De historische Stream begint op 5 januari 2015 en de datum is niet verschuifbaar. De tests op deze Stream worden dagelijks uitgevoerd.

Voor Stream 1 is de behaalde score afhankelijk van het aantal correcte gegevens gedeeld door het aantal geteste gegevens. Als dit percentage hoger is dan of gelijk is aan 99 %, is de behaalde score 1. Als dit percentage lager is dan 90 % zal de behaalde score 0 zijn. In geval van een informaticafout van ENTSO-E of Elia zal Elia een score 0 behalen. Voor de Streams 2 en 3 wordt een punt toegekend indien alle gegevens van alle datareeksen van de Streams voor de betreffende maand correct zijn en omgekeerd wordt een score nul toegekend indien de CREG minstens één onjuist gegeven voor de Stream heeft genoteerd. Als er voor de Streams 1 en 3 door een informaticafout van de CREG of van de programma's die de controles uitvoeren geen fout kon worden vastgesteld, zal Elia een score 1 behalen. Vanaf de aanvang van de stimulans voor de kwaliteit van de gegevens tot eind juni 2020 heeft Elia op 172 van de 182 dagen een correct datapercentage (= identieke gegevens gepubliceerd op de SFTP's van Elia en ENTSO-E) van 99 % of meer behaald voor Stream 1, wat betekent dat 100 % van het financiële bedrag van de stimulans voor de overgrote meerderheid van de dagen voor Stream 1 is verkregen. Het merendeel van de dataproblemen vastgesteld voor Stream 1 zijn te wijten aan informaticaproblemen van het Entso-E platform en niet aan de publicatie door Elia. Voor Stream 1 worden dagelijks een veertigtal tests uitgevoerd en dagelijks tussen 150.000 en 350.000 gegevens gecontroleerd. Per 30 juni 2020 hebben in Stream 3 vijf dagen zonder fouten geleid tot een score van 1 van de stimulans, terwijl de andere geteste dagen een score van 0 behaalden. Naast de indicatieve score bedraagt het percentage van correcte gegevens ten opzichte van het aantal geteste gegevens gemiddeld 98,42 %. Stream 2 gaf Elia een score van 1/6 voor de eerste zes maanden van het jaar (één van de 6 geteste maanden had geen fouten). Naast de score van de stimulans, bedraagt het percentage van correcte data ten opzichte van het aantal geteste data bijna 100 %, maar sommige elementen bleven incorrect (aFRR en mFFR volumes en prijzen), wat voor een marktspeler een grote impact kan hebben.

De stimulans voor de datakwaliteit maakte het voor Elia mogelijk om alle gegevens die zij op de markt publiceert opnieuw bekijken en de definitie van elk van die gegevens en hun interacties begrijpen. Dit werk heeft ons ook in staat gesteld contact te leggen met verschillende partijen die ene impact hebben op de kwaliteit van de gegevens: ENTSO-E, dataleveranciers (JAO, EEX), naburige TNB's (RTE en TENNET), enz.

Sinds 2017 herziet Elia haar databeheerstrategie om een onderneming te worden die gericht is op data. De stimulans heeft een zeer positieve invloed en betekent voor Elia een echte boost bij het behalen van de doelstelling in verband met datatransparantie. In lijn met dit principe en met de verplichtingen voor de Belgische markt in het kader van REMIT, zal Elia de Belgische marktdeelnemers een platform bieden voor de publicatie van informatie met voorkennis.

We merken op dat de stimulans beperkt is tot de Belgische markt en derhalve alleen de gegevens voor de Belgische markt kan verbeteren. De Belgische markt staat echter niet los van de andere markten en het lijkt dan ook onvermijdelijk dat ook de kwaliteit van de gegevens uit de andere landen van de CWEregio waarin België is ingebed, moet worden verbeterd. Daartoe is het belangrijk dat de regulatoren, de TNB's en de marktspelers ervan bewust worden gemaakt dat de prijs van een goede gegevenskwaliteit iedereen aanbelangt. Als we een transparante markt met een correct en efficiënt transparantieplatform willen, moeten we gezamenlijk optreden. **Krachtens** de transparantieverordening moeten TNB's in Europa hun informatie verstrekken aan het ENTSO-E platform, maar op dit moment zijn de Europese statistieken via dit platform niet bruikbaar.

EXECUTIVE SUMMARY (FR)

En vertu de l'article 23, § 1, 1° et 2° et, § 2, deuxième alinéa, 2°, 3°, 4°, 5° et 8°, de la loi du 29 avril 1999 relative à l'organisation du marché de l'électricité (ci-après : la loi électricité) et de l'article 15/14, § 1, 1° et 2° et, § 2, deuxième alinéa, 2°, 3°, 5°, 5° *bis* et 16°, de la loi du 12 avril 1965 relative au transport de produits gazeux et autres par canalisations (ci-après : la loi gaz), la COMMISSION DE REGULATION DE L'ELECTRICITE ET DU GAZ (ci-après : la CREG) peut, d'initiative, effectuer des recherches et des études relatives au marché de l'électricité et du gaz naturel.

Cette étude est réalisée dans le cadre de la note de politique générale de la CREG pour l'année 2020 qui vise à déterminer si les données fournies aux acteurs de marché par le gestionnaire de réseau de transport belge d'électricité (ci-après : Elia) et ENTSO-E garantissent le bon fonctionnement du marché et les obligations européennes de transparence.

La publication de l'étude CREG (F)1637 du 16 octobre 2017 a permis de mettre en évidence la qualité limitée des données mises à la disposition des acteurs du marché par Elia via son site Web et la plateforme ENTSO-E. La CREG y mentionnait que, fréquemment, les données communiquées par Elia suscitaient des questions de la part des membres de la CREG sur leur exactitude. Tout d'abord, la CREG souhaitait que l'ensemble des acteurs du marché disposent d'une information correcte sur l'ensemble des données mises à disposition par Elia, tant sur son site Web que sur la plateforme ENTSO-E et ensuite, que les données reçues par Elia soient de meilleure qualité.

En mars 2018, la Commission Européenne a publié une étude concernant la qualité des données du marché de l'électricité des gestionnaires de réseau de transport, les perturbations de l'approvisionnement en électricité et leur impact sur les marchés européens de l'électricité. Dans la partie de cette étude qui concerne l'évaluation de la qualité des données, la plateforme ENTSO-E a été analysée par la Commission en matière de complétude des données, d'exactitude des données, de temporalité des publications et de la convivialité de la plateforme. La Commission clôture son étude par certaines recommandations à ENTSO-E.

Dans ce contexte, la CREG a introduit un incitant relatif à la qualité des données mises à la disposition du marché dans les incitants destinés à l'amélioration des performances du gestionnaire de réseau de transport d'électricité au cours de la période régulatoire 2020-2023. La mise en place de la définition de cet incitant a nécessité de nombreuses réunions entre Elia et la CREG.

L'objectif de l'incitant est d'obtenir des données de bonne qualité sur le marché belge via une cohérence de la publication des données entre les données mise à disposition par Elia et celles de la plateforme de transparence ENTSO-E mais également avec les données qui sont transmises par Elia à la CREG pour des reportings définis par la loi électricité.

La vérification de la cohérence des données se fait au travers de trois groupes (« Streams ») de données :

- 1) **les données les plus proches du temps réel** concernent les données couvertes uniquement par la règlementation de transparence. Les tests de validité concernent les données disponibles sur le SFTP Elia et sur la plateforme de transparence ENTSO-E.
- 2) les données validées par Elia à la CREG après le temps réel concernent les données de reporting transmises par Elia à la CREG et les données de transparence de Elia et ENTSOE-E. Aux tests de validité du Stream 1 sont ajoutés les tests de validité interne au fichier et entre les fichiers sur les données de reporting transmises par Elia à la CREG. Les tests sur ce Stream sont mensuels et ont débuté le 15 avril 2020 avec les données de janvier 2020.

Les données rentrent en Stream 2 au plus tard deux mois plus 15 jours après le dernier jour du mois concerné par ces données ;

3) les données historiques disponibles sur les plateformes Elia et ENTSO-E : le Stream 3 est une sous-partie du Stream 2 qui porte uniquement sur les données de la cartographie. Les données du Stream 2 passent en Stream 3 dès qu'un nouveau mois vient alimenter le Stream 2. Le Stream historique débute le 5 janvier 2015 et la date n'est pas coulissante. Les tests sur ce Stream sont faits quotidiennement.

Pour Stream 1, le score obtenu dépend du nombre de données correctes divisé par le nombre des données testées. Si ce pourcentage est supérieur ou égal à 99, le score obtenue sera 1. Si ce pourcentage est inférieur à 90 %, le score obtenu sera 0. En cas d'une erreur informatique de la part de ENTSO-E ou Elia, Elia recevra un score de 0. Pour les Streams 2 et 3, un point est accordé lorsque toutes les données de l'ensemble des séries de données des Streams pour le mois concerné sont correctes et, a contrario, un score de zéro est accordé si au moins une donnée incorrecte pour le Stream est constatée par la CREG. Pour les Streams 1 et 3, si aucune erreur n'a pu être détectée en raison d'une défaillance informatique de la CREG ou des programmes effectuant les contrôles, un score de 1 est obtenu pour Elia. Depuis le début de l'incitant portant sur la qualité des données jusqu'à la fin de juin 2020, Elia a atteint pour le Stream 1 pour 172 jours sur 182 un taux de données correctes (= données identiques publiées sur les SFTP's d'Elia et d' ENTSO-E) supérieur ou égal à 99 %, ce qui signifie que 100 % du montant financier de l'incitation est obtenu pour la grande majorité des jours pour le Stream 1. La plupart des problèmes de données détectés sur le Stream 1 sont dus à des problèmes informatiques provenant de la plateforme ENTSO-E et non de la publication par Elia. Notons que, pour le Stream 1, une petite quarantaine de tests est effectuée chaque jour et qu'entre 150.000 à 350.000 données sont contrôlées quotidiennement. Au niveau du Stream 3, au 30 juin 2020, 5 jours sans aucune erreur ont donné lieu à un score de 1 de l'incitant tandis que les autres jours testés affichaient un score égal à 0. Au-delà du score incitatif, le pourcentage de données correctes par rapport au nombre de données testées est de 98,42 % en moyenne. Le Stream 2 a permis à Elia de récolter, sur les six premiers mois de l'année, un score de 1/6 (un mois sur les 6 mois testés ne présentait aucune erreur). Au-delà du score incitatif, le pourcentage de données correctes par rapport au nombre de données testées est proche de 100 %, mais certains éléments sont restés erronés (comme les volumes et les prix de aFRR et mFFR), ce qui peut avoir un impact élevé pour un participant au marché.

L'incitant qualité de données a permis à Elia de revoir l'ensemble des données qu'elle publie vers le marché et de comprendre la définition de chacune d'entre-elles et leurs interactions. Ce travail a permis également de prendre contact avec différentes parties qui ont un impact sur la qualité des données : ENTSO-E, les fournisseurs de données (JAO,EEX), les GRT voisins (RTE et TENNET), etc.

Depuis 2017, Elia revoit sa stratégie de gestion des données pour devenir une entreprise axée sur les données. L'incitant a un effet très positif et est un véritable coup de pouce pour aider Elia à atteindre cet objectif pour les données de transparence. Conformément à ce principe et aux obligations qui incombent au marché belge dans le cadre de REMIT, Elia va mettre à disposition des acteurs de marché belge une plateforme de publication des informations privilégiées.

Notons que l'incitant se limite au marché belge et ne peut donc qu'améliorer les données du marché belge. Néanmoins, le marché belge n'est pas isolé des autres marchés et il semble donc inévitable qu'il faille également améliorer la qualité des données des autres pays de la région CWE dans laquelle la Belgique est imbriquée. Pour ce faire, il est important de conscientiser les régulateurs, les GRT et les acteurs du marché que le prix d'une bonne qualité des données est l'affaire de tous. Si on désire un marché transparent avec une plateforme de transparence correcte et efficace, il faut agir ensemble. La règlementation de transparence demande aux GRT d'Europe de fournir leurs informations à la plateforme ENTSO-E mais, à l'heure actuelle, les statistiques européennes via cette plateforme ne sont pas utilisables.

1. INTRODUCTION

1. Pursuant to Article 23, §1, 1° and 2° and § 2, second paragraph, 2°, 3°, 4°, 5° and 8°, of the law of 29 April 1999 on the organisation of the electricity market (hereinafter referred to as the Electricity Act) and of Article 15/14, §1, 1° and 2° and §2, second paragraph, 2°, 3°, 5°, 5° bis and 16° of the law of 12 April 1965 on the transport of gaseous and other products by pipeline (hereinafter referred to as the Gas Act), the COMMISSION FOR THE REGULATION OF ELECTRICITY AND GAS (hereinafter referred to as the CREG) may, on its own initiative, carry out research and studies on the electricity and natural gas market.

2. This study is carried out in the context of the CREG's general policy note for the year 2020, which aims to determine whether the data provided to market participants by the Belgian electricity transmission system operator (hereinafter: Elia) and ENTSO-E guarantee the proper functioning of the market and the European transparency obligations.

1.1. PREVIOUS STUDY

3. In the context of the study on the functioning of the wholesale electricity market and the preparation of the transparency study referred to below, the CREG verified the consistency of the 5 datasets available both on the Elia website and on the SFTP platform of ENTSO-E: nuclear generation (hourly data on ENTSO-E, quarter-hourly data on Elia, hourly level resets), grid load (quarter-hourly data), imbalance tariffs (hourly data), physical flows (hourly data on ENTSO-E, quarter-hourly data on Elia, hourly level resets) and total nominated capacity (hourly data). The data sets were downloaded on 31 March 2017, 1 June 2017 and 17 July 2017 and covered the period from January 2015 to December 2016. The verifications carried out resulted in the following findings: 1) correct data for nuclear generation and imbalance tariffs; 2) some missing data for total grid load; 3) inconsistency of total nominated capacity data; and 4) impossibility to compare physical flow data with different definitions.

4. In 2017, the CREG carried out the study (F)1637 on the application of European and Belgian legislation on the transparency of the Belgian wholesale electricity and natural gas markets.¹Following meetings with market participants and transmission system operators (hereafter: TSOs), this study highlighted shortcomings on the part of ENTSO-E with regard to the service required by the transparency regulations, as well as concerns about the quality of the data for the electricity market via the data published on both the ENTSO-E platform and the Elia platform.

From meetings with the market participants, it appears that the main shortcomings of the ENTSO-E platform are the following:

- the lack of user-friendliness and ease of use, such as slow page loading, the lack of automatic date updates on a data page, inefficient filters, layout problems, interfaces not adapted to the reality of countries, inadequate formats for data extraction;
- the content: the inconsistency of formats between TSOs, and data quality.

¹ <u>https://www.creg.be/sites/default/files/assets/Publications/Studies/F1637EN.pdf</u>

From the meeting with the electricity TSO Elia, the following findings were confirmed:

- there is a significant risk that a unit of less than 100 MW may, at any given moment, have a significant impact on prices;
- Elia only checks the correct reception of the sending of data files and not the actual data sent to ENTSO-E. Moreover, Elia does not carry out validity checks (completeness and accuracy) of its data available on the ENTSO-E platform;
- it does not appear that ENTSO-E has put in place plausibility checks for the data received. Once informed by the CREG, ENTSO-E neither corrects the erroneous data found within a reasonable time nor informs market participants of the existence of such errors pending their correction;
- the CREG had previously carried out a check on 5 datasets (January 2015 December 2016) and this had led to the following observations:
 - the inconsistencies observed between the "same" data published by Elia and ENTSO-E. Two reasons have been highlighted: on the one hand, ENTSO-E does not indicate on its SFTP server that it is in test phase or that the published data are not validated and, on the other hand, ENTSO-E and Elia data are in a different UTC/GMT format;
 - missing data are available in the files downloaded for these checks;
 - the daylight-saving time was not correctly reflected in the data;
 - the different formats of the numbers displayed showing inconsistencies between the data according to the platforms consulted (Elia/ENTSO-E);
 - the differences between data calculated or measured at borders.
- The CREG found anomalies in the data published on Elia's website which may restrict market participants' access to these data;
- Elia makes only part of the data sent to the ENTSO-E platform available to market participants.

5. Following this study, regular meetings between the CREG and Elia were set up to discuss and move forward together for a better functioning of the market. The CREG also held meetings bilaterally or in consultation with other regulators and with ENTSO-E.

1.2. STUDY OF THE EUROPEAN COMMISSION

6. In March 2018, the European Commission published a study on the quality of the electricity market data of the transmission system operators, electricity supply disruptions and their impact on the European electricity markets².

The purpose of this study was to:

assess the completeness and quality of the electricity market data reported by the TSOs;

² <u>https://ec.europa.eu/energy/sites/ener/files/documents/review_of_the_entso_e_plattform.pdf</u>

- identify and address data gaps relating to interruptions to electricity generation and supply;
- assess their impact on consumers and the market.

The study covered the period 2010-2016 and the 28 Member States of the European Union.

7. For the part of the study relating to data completeness and data quality, an analysis of the ENTSO-E platform was carried out in terms of data completeness, data accuracy, timeliness of publications and the user-friendliness of the platform.

8. In terms of completeness, the aim was to check whether all the elements prescribed by Regulation 543/2013³ were available on the transparency platform in geographical and temporal terms. The assessment found that many of the data were incomplete, ranging from a few hours to an entire year. To do this, two examples were given: only one third of the countries had reported a complete time series for total load and only one complete time series was available for DAM prices⁴. It is recalled that this situation is problematic because, even if only 1 % of the data is missing, it can make the entire time series useless for various analyses. The study also mentions the fact that no overview of data completeness was available, making it difficult to use the data from the transparency platform.

9. In terms of data accuracy, the aim was to identify whether the data contained on the platform was correct. To do this, the platform data was compared with third-party data. Four issues were identified:

- 1) inconsistency with other ENTSO-E data;
- 2) inconsistency with data from other sources;
- 3) information regarding the inaccuracy of the data was not communicated to the user; and
- 4) inaccuracy of the data definition.

10. With regard to the timeliness of the publication, certain shortcomings were identified: the UMM⁵ data were inconsistent with other sources or were filled in several times or did not provide the chronology for the same outage. The data was overwritten each time it was updated and, therefore, the history was not available. Moreover, the deadline for the publication of certain data was not respected.

11. Finally, the user-friendliness of the platform was assessed. Various problems were identified, including the following:

- on the website: the slowness of the site, the lack of practicality as it did not allow a limitation to one country or a selection of desired data;
- in terms of automatic download: few users were familiar with the various interfaces including SFTP⁶ and the API⁷;
- the display of data availability and the reason for unavailability of data;
- data documentation;

³ <u>https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:163:0001:0012:EN:PDF</u>

⁴ Day-ahead

⁵ Urgent Market Message

⁶ Secure File Transfer Protocol

⁷ Application Programming Interface.

- user support was managed individually and there was no Q&A⁸ to allow people to flag up the quality problem with certain data and the handling of questions was very slow.

12. The study by the European Commission calls on ENTSO-E to improve the completeness, accuracy and timeliness of the data. With regard to completeness, it calls for 100 % completeness of the time series of load, price and generation data. Inconsistencies in the data with other sources must be resolved or explained. UMM data must be displayed in chronological order and the different versions must be kept. Recommendations on improving the use of the platform are also proposed: 1) improving information and navigation; 2) introduction of a data quality log; 3) introduction of automatic quality reports; and 4) publication of machine-readable metadata.

13. In this context, the CREG introduced an incentive relating to the quality of the data made available to the market in the incentives aimed at improving the performance of the transmission system operator for electricity during the regulatory period 2020-2023. Implementing the definition of this incentive required various meetings between Elia and the CREG.

14. Today, Belgium is the only country to have introduced an incentive to improve the quality of the fundamental data necessary for the proper functioning of the electricity market.

2. **DEFINITION OF THE INCENTIVE**

2.1. WORK UPSTREAM OF THE INCENTIVE

2.1.1.1. <u>Action taken following the first transparency study (1637)</u>

15. The first meeting with Elia on data quality was held at the end of 2017 and was a follow-up to study 1637. The aim was to provide initial responses to the problems highlighted by the study, but also to draw up an action plan to address them.

16. As regards the publication of the outages of power plants below 100 MW that was not available on the Elia website, the CREG considered that there was a not insignificant risk that a unit below 100 MW could, at a given moment, have a significant impact on prices. As such, the CREG recommended that all *outages* of more than 25 MW per generating unit be reported by Elia to ENTSO-E. This recommendation is based on the REMIT regulations, which do not set any capacity limits, unlike transparency. The non-disclosure of these data could have considerable repercussions, both for the market and for any participant who has not disclosed the information required by REMIT⁹. This important responsibility lies with the market participants directly concerned. In effect, Article 4(1) of REMIT stipulates that it is the "*Market participants [who] shall publicly disclose in an effective and timely manner inside information which they possess* [...]"; Elia does indeed receive data from power plants with a maximum generation capacity of less than 100 MWh, but currently, a data filter has been set up to meet the requirement of the Transparency Regulation: the publication of data from power plants with a maximum generation capacity of 100 MWh or more. Elia is not against lowering the threshold, but wanted European consultation on the subject. This took place through a consultation

⁸ Question & Answers

⁹ https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32011R1227

carried out by ACER in the context of the disclosure of inside information in July 2019. However, at present, no European threshold has yet been established.

17. With regard to the monitoring of the transmission of data, the study revealed that Elia only checked that the ENTSO-E platform received the data correctly, but not the content sent. This monitoring will be implemented in the project to harmonise data flows on various platforms, allowing data from the same IT process to be sent both to the Elia website and to the transparency platform. This guarantees a unique tool for the disclosure of data to third parties.

18. At the ENTSO-E level, the lack of user-friendliness, the difficulty of use, the slow loading of data pages, the inefficient filters, the layout problems and the interfaces which are not adapted to the reality of the platform were partly resolved by the launch of an SFTP server in 2019.

The CREG, having checked the data on ENTSO-E, alerted the platform about the errors as soon as they were identified. ENTSO-E does not correct the data and does not report erroneous data to users. The problems encountered on the ENTSO-E platform have two possible sources: a problem related to the loading on the platform (IT problem) or a problem of erroneous data (ENTSO-E is dependent on the data sent by the TSOs). ENTSO-E has planned to develop a plausibility check of the data.

19. With regard to the problems of publishing data on the Elia site, issues communicated to Elia were corrected. To inform user when an IT problem occurs and impacts data quality, Elia put in place a process to add a banner on concerned publications. Moreover, a project was launched to harmonize flows between Elia and ENTSO-E on some publications.. Concerning the data for the time change: for the 25th hour, a manual file was created for the publication of March 2017. Likewise for October 2017. The manual process will be continued for the next few years. In addition, in terms of data recalculated at the borders, the history is republished until January 2015.

2.1.1.2. <u>Presentation of the incentive project to Elia</u>

20. The CREG presented an outline of the incentive to Elia in February 2018.

21. The CREG reiterated that CREG study (F)1637 of 16 October 2017 highlighted the limited quality of the data made available to market participants by Elia via its website and the ENTSO-E platform. Moreover, the CREG reiterated that the data provided by Elia frequently gave rise to questions from members of the CREG as to their accuracy.

22. Firstly, the CREG wanted all market participants to have correct information on all the data made available by Elia, both on its website and on the ENTSO-E platform, and secondly, to improve the quality of the data received by Elia.

23. To achieve the desired results, the CREG wanted to develop data validity tests based on 3 datasets:

- 1) **the data closest to real time**: the validity tests would only cover the datasets available on the Elia and ENTSO-E platforms for the current month;
- the data transmitted by Elia to the CREG after real time: the validity tests would relate to the datasets available both in the CREG Data Warehouse and on the Elia and ENTSO-E platforms;
- 3) **the historical data available on the Elia and ENTSO-E platforms**: the validity tests developed would be identical to the tests developed in point 2 but would be undertaken sequentially over all the months available on the ENTSO-E platform.

2.1.1.3. <u>Elia's reaction to the incentive project</u>

24. Elia's transparency team believes that the incentive needs some fine-tuning and clarification of the proposed definition. They raised the following points:

- the scope of the data: is the annually-tested dataset stable or does it vary over the years of the incentive?
- what about a case of *force majeure* affecting a platform due to an application problem? For the CREG, *force majeure* does not apply to market participants because they need the data at any time of day. However, by including in the incentive a percentage of correct data (e.g. 95 %), a certain flexibility could be taken into account for the data closest to real time;
- The way in which the validity tests will be established;
- the concept of primary data owner: Elia agrees to take into account¹⁰ in the incentive only the data of which it is the primary data owner.

2.1.1.4. Official presentation of the CREG incentive to the public (15 May 2018)

25. At the workshop on transparency, REMIT and the financial instruments, organised by the CREG in May 2018, a first presentation of the incentive was made to an informed public.

The data quality incentive is a financial incentive of maximum € 5,000,000 per year. It is focused on three databases: the Elia website, the ENTSO-E transparency platform and the CREG Data Warehouse powered by Elia.

Every day of the year, the CREG will apply validity tests to check that the data in the various databases are available, accurate and consistent. Elia will be informed daily of any errors identified by the CREG. As such, for each day of the year, one point is awarded to Elia if no errors are identified during the validity tests carried out on that day. A score of zero is awarded to Elia if at least one error is identified by the CREG.

The maximum incentive is obtained by Elia during a year if the average score during that year is equal to 1. On the contrary, no incentive is obtained by Elia during a year if the average score during that year is equal to 0. For intermediate scores, a linear extrapolation will be applied.

2.1.1.5. <u>Fine-tuning of the incentive</u>

26. During the second half of 2018, the CREG held numerous bilateral meetings with Elia in order to fine-tune the final definition of the incentive. The various themes discussed during these meetings are detailed below.

27. The **scope** of the incentive was fine-tuned and clarified.

The incentive is based on data 'Cartography', which includes the complete inventory of data concerning the Belgian market, whether Elia is a data owner or a data provider. It will be adapted according to new products that may be created in the context of new publications required by the change of legal basis (e.g. the winter package revising Regulation 514 and 543).

¹⁰ or PDO

28. The issue of the primary data owner was raised repeatedly.

For the CREG, the incentive needed to cover all data, irrespective of whether Elia is the primary data owner or whether the data is provided to it by third parties. The CREG reiterated that it was Elia that allowed the Belgian data to be reported via parties other than Elia, such as EEX and JAO.

Elia insisted that there are two categories of data. The first concerns data for which Elia is the primary data owner and the second concerns data for which Elia is not the primary data owner or depends on external parties. In the latter category, a distinction must be made between JAO and EEX, on the one hand, and suppliers, on the other. For the latter category, the data owner may took 2 to 3 months to rectify a notification of an error made by Elia. As the assessment of the data quality is binary, Elia found the incentive too penalising if the data is not under its responsibility, given that Elia would be penalised as long as the data was not correct. However, the correction time depends on the data owner and not on Elia. Elia takes action in relation to third parties who provide data in the event of a consistency problem, but did not wish to be penalised in the long term for a problem relating to a third party. Elia reiterated that it does not have full control over the data of third parties. Elia therefore showed an interest in a weighting of the data to take this into account. The CREG was open to a certain flexibility in the incentive. It will therefore be necessary to find an arrangement for the incentive, for data over which Elia does not have full control.

With regard to the historical data, the time interval taken into consideration was between 5 January 2015 and the month preceding the last data report sent by Elia to the CREG. Elia drew attention to the fact that certain data have evolved over time. Elia asked the CREG to take into account the life cycle of the data to establish the history. The CREG asked Elia, if this approach is taken, to define the life cycle of the various items in the mapping for the Belgian market data.

29. Various discussions also touched on the subject of the **validity tests** that the CREG wishes to implement.

The **frequency of the tests** was specified by the CREG. The CREG plans to carry out daily tests on historical data (loop on the number of possible months depending on IT availability) and on non-validated data. As for tests, including data reporting, these will be carried out on a monthly basis.

There may be a **publication time lag** between the Elia and ENTSO-E platforms as a result of the time lag in downloading data, which may have a significant impact on the validity tests. It is necessary to identify the time the publications are downloaded from the various sources (Elia, ENTSO-E) so that the latency time between downloads is taken into account in the methodology proposed by the CREG.

The **level of granularity of the published information** may differ between the publication platforms, according to Elia. The level of accuracy could be defined by the lowest common denominator or by item in the cartography. The CREG was of the opinion that the level of detail should not be too complex and preferred to take a general rule and allow exceptions.

Levels of accuracy and variance between data needed to be defined for data comparison. Elia was of the opinion that a deviation of 1 MW or a percentage deviation per data item should be taken into account.

Test results will be provided to Elia on a daily basis to report any inconsistencies detected. The means of transmission must still be defined: File box or SFTP.

30. The issue of non-publication due to compelling reasons was raised by Elia.

The CREG's position to make data available 24 hours a day, 7 days a week appeared untenable for Elia. Indeed, it is inevitable that there will be publication failures due to external or internal causes (upgrades, reboots, etc.). The CREG wishes to limit the unavailability of the data as much as possible and therefore asked Elia to guarantee the availability of the data during office hours as a minimum and

to provide the unavailability statistics of the publications over a year and the timings of the automatic updating processes of the Elia website. The CREG may possibly take into account certain unavailabilities if these are envisaged in a notification sent to the CREG.

31. The **methodology for calculating** the incentive was discussed between Elia and the CREG.

Two methods can be applied:

- the first method is explained in the note on the modality of incentive regulation. "Each day of the year, one point is awarded when all the data in a dataset present in the two or three databases at the set time are correct. Conversely, a score of zero is awarded if at least one incorrect item of data is identified by the CREG";
- the second method is to apply scores by Stream.

These methods may include a margin of tolerance for certain data. The higher the margin of tolerance, the lower the score obtained. However, for the historical Stream and Stream 2 which are not linked to IT problems, the CREG will not allow any flexibility.

In the event of a legislative change that would require a new product to be introduced on the market, the CREG agreed to give Elia the time to implement the new product in its infrastructure. Nevertheless, it will not provide additional time for possible consistency problems with the ENTSO-E definitions as in this case Elia is aware of the changes in ENTSO-E and the potential differences in the definitions. In the above-mentioned case, Elia will have to adapt the cartography provided to the CREG and the tests will be carried out on this basis.

Consideration could also be given to flexible testing of historical data to allow Elia to correct the data highlighted as erroneous by the CREG. A period of X days (X to be defined) between the test of a given historical month and the rest of the same month could be defined.

2.1.1.6. <u>Summary of the fundamentals of the incentive</u>

- 32. The incentive is based on 3 Streams of data:
 - Stream 1 concerns the data covered by the transparency regulation and focuses on the data included in the mapping. The validity tests concern the data available on the Elia SFTP and on the ENTSO-E transparency platform. The tests on this Stream are carried out daily.
 - Stream 2 concerns the reporting data transmitted by Elia to the CREG to supply its Data Warehouse as well as the transparency data. In addition to the Stream 1 validity tests, the intra- and inter-file validity tests on the reporting data transmitted by Elia to the CREG and the tests between the CREG Data Warehouse files and the files on the transparency platforms are also included. Tests on the Stream 2 are monthly. The data enter into Stream 2 for a maximum of two months plus 15 days after the last day of the month concerned in order to meet the CREG's legal deadline for the annual report.
 - Stream 3 concerns the transparency data and the data historically provided to the market and therefore focuses on the 'Cartography', which includes both the tests between the Elia- ENTSO-E transparency data and the tests between the data of the CREG reports transmitted by Elia to the CREG and the Elia- ENTSO-E transparency data. The tests on this Stream are carried out daily. Stream 3 is a sub-part of Stream 2 which only pertains to the transparency data and the CREG reports, enabling a check on transparency data. The data from Stream 2 switches to Stream 3 as soon as a new file supplies Stream 2. The historical Stream starts on 5 January 2015 and the date is not sliding. Discussions on the flexibility of testing historical data may be considered. The CREG points out that a period of X days

(X to be defined) between the test of a given historical month and the rest of that month should enable Elia to correct the data reported as erroneous by the CREG to Elia.

2.2. FINAL DEFINITION OF THE INCENTIVE

2.2.1. Legal framework

2.2.1.1. Legal framework of the incentive

33. The application of Article 12, §§ 2, 5 and 8 of the Law of 29 April 1999 on the organisation of the electricity market led to the adoption of Decree (Z)1109/10 of 28 June 2018 laying down the tariff methodology for the electricity transmission network and for electricity networks with a transmission function for the regulatory period 2020-2023 (hereinafter: the tariff methodology). Article 23, §1, of the tariff methodology provides as follows (translation):

"Incentives may be given to the system operator to encourage it:

- 1) to promote market integration and security of supply;
- 2) to improve the quality of service;
- 3) to foster innovation;
- 4) to promote the equilibrium of the system; and
- 5) to enhance continuity of supply.

Without prejudice to the provisions of Art 23 to Art 28, after consulting the system operator and market participants, the CREG shall, prior to the introduction of the tariff proposal, set the final arrangements for determining these incentives, in particular the method of calculating the indicators used and the method of setting the objectives".

34. Article 25 of the tariff methodology states that (translation):

§ 1. The quality of service of the system operator shall give rise to the granting of three incentives.

The first incentive is based on the satisfaction of users of the system who have benefited from a new connection (or a substantial modification of an existing connection), in particular as regards compliance with deadlines and budgets previously agreed between the system operator and the user. This incentive is based on an annual satisfaction survey of users whose connection was completed in the previous year. Without exceeding ξ 1,350,000.00 per year, the maximum annual amount of this incentive amounts to 0.06 %*RAB*minimum (S; 40 %). The system operator envisages ex ante in its tariff proposal, for each year of the regulatory period 2020-2023, an amount of ξ 700,000.00 as an element of its total income.

The second incentive is based on the satisfaction of all system users. This incentive is based on two satisfaction surveys conducted alternately every two years. The first biannual survey is sent only to the members of the User Group of the system operator in order to assess the quality of the organisation of this User Group as well as the quality of the administrative follow-up carried out by the system operator. The second biennial survey is addressed to all users of the system in order to assess their general satisfaction with their commercial relationship with the system operator. Without exceeding €2,530,000.00 per year, the maximum annual amount of this incentive amounts to 0.12 %*RAB*minimum (S; 40 %). The system operator envisages ex ante in its tariff proposal, for each year of the regulatory period 2020-2023, an amount of €1,250,000.00 as an element of its total income.

The third incentive depends on the quality of the data made available to the market by the system operator on its website and on the ENTSO-E website. Without exceeding €5,000,000.00 per year, the maximum annual amount of this incentive amounts to 0.24 %*RAB*minimum (S; 40 %). The system operator envisages ex ante in its tariff proposal, for each year of the regulatory period 2020-2023, an amount of €1,850,000.00 as an element of its total income.

The rest of this study will focus on this latter incentive.

2.2.1.2. Legal framework for transparency

35. Commission Regulation (EU) No 543/2013 of 14 June 2013 on submission and publication of data in electricity markets and amending Annex I to Regulation (EC) No 714/2009 of the European Parliament and of the Council is the legal framework for transparency.

36. The objective of this regulation is to "*lay down the minimum common set of data relating to generation, transportation and consumption of electricity to be made available to market participants. It also provides for a central collection and publication of the data"*.

37. Article 3(1) of this Regulation states that:

"A central information transparency platform shall be established and operated in an efficient and cost effective manner within the European Network of Transmission System Operators for Electricity (the 'ENTSO for Electricity'). The ENTSO for Electricity shall publish on the central information transparency platform all data which TSOs are required to submit to the ENTSO for Electricity in accordance with this Regulation.

The central information transparency platform shall be available to the public free of charge through the internet and shall be available at least in English.

The data shall be up to date, easily accessible, downloadable and available for at least five years. Data updates shall be timestamped, archived and made available to the public".

38. Article 4 details how the data are submitted to the TSO and how the publication of the data is carried out on the transparency platform. Article 4(1) details the submission of data:

"Primary owners of data shall submit data to TSOs in accordance with Articles 6 to 17. They shall ensure that the data they provide to TSOs [..] are complete, of the required quality and provided in a manner that allows TSOs or data providers to process and deliver the data to the ENTSO for Electricity in sufficient time to allow the ENTSO for Electricity to meet its obligations under this Regulation in relation to the timing of the publication of information. TSOs [..] shall process the data they receive and provide them to the ENTSO for Electricity in due time for publication".

Article 4(3) states that

"TSOs shall be considered as primary owners of data for the purposes of Articles 6 to 17, except when stated otherwise".

Article 4(6) states that

"National regulatory authorities shall ensure that the primary owners of the data, TSOs and data providers comply with their obligations under this Regulation".

39. Articles 6 to 17 therefore set out the various data to be supplied to the market. The table below lists only the articles and data type. The details of the data are set out exhaustively in Regulation 543/2013.

40. You will find the summary table below.

Article	Data to be provided					
Article 6	Information on total load					
	 For their control areas, TSOs shall calculate and submit the following data to the ENTSO for Electricity for each bidding zone: a) the total load per market time unit; b) a day-ahead forecast of the total load per market time unit; c) a week-ahead forecast of the total load for every day of the following week, which shall for each day include a maximum and a minimum load value; d) a month-ahead forecast of the total load for every week of the following month, which shall include, for a given week, a maximum and a minimum load value; e) a year-ahead forecast of the total load for every week of the following year, which shall for a given week include a maximum and a minimum load value; 					
Article 7	Information relating to the unavailability of consumption units					
	 For their control areas, TSOs shall provide the following information to the ENTSO for Electricity: a) the planned unavailability of 100 MW or more of a consumption unit, including changes of 100 MW or more in the planned unavailability of consumption units, lasting at least one market time unit, specifying: bidding zone, available capacity per market time unit during the event, reason for the unavailability, the estimated start and end date (day, hour) of the change in availability; b) changes in actual availability of a consumption unit with a power rating of 100 MW or more, specifying: bidding zone, available capacity per market time unit during the event, reason for the unavailability of a consumption unit with a power rating of 100 MW or more, specifying: bidding zone, available capacity per market time unit during the event, reason for the unavailability, of a consumption unit with a power rating of 100 MW or more, specifying: bidding zone, available capacity per market time unit during the event, reason for the unavailability, the start date and the estimated end date (day, hour) of the change in availability. 					
Article 8	Year-ahead forecast margin					
	For their control areas, TSOs shall calculate and provide for each bidding zone the year-ahead forecast margin evaluated at the local market time unit to the ENTSO for Electricity.					
Article 9	Transmission infrastructure					
	TSOs shall establish and provide information on future changes to network elements and interconnector projects including expansion or dismantling in their transmission grids within the next three years, to the ENTSO for Electricity. This information shall only be given for measures expected to have an impact of at least 100 MW on cross zonal capacity between bidding zones or on profiles at least during one market time unit. This information shall include: a) the identification of the assets concerned;					

b) the location; c) type of asset; d) the impact on interconnection capacity per direction between the bidding zones; e) the estimated date of completion Article 10 Information relating to the unavailability of transmission infrastructure For their control areas TSOs shall calculate and provide to the ENTSO for Electricity: a) the planned unavailability, including changes in the planned unavailability of interconnections and in the transmission grid that recross zonal capacities between bidding zones by 100 MW or more during at least one market time unit, specifying: - the identification of the assets concerned, - the location, - the estimated impact on cross zonal capacity per direction between bidding zones, - reasons for the unavailability, - the estimated start and end date (day, hour) of the change in availability; b) changes in the actual availability of interconnections and in the transmission grid that reduce cross zonal capacities between bi zones by 100 MW or more during at least one market time unit, specifying: the identification of the assets concerned, - the estimated start and end date (day, hour) of the change in availability; b) changes in the actual availability of interconnections and in the transmission grid that reduce cross zonal capacities between bi zones by 100 MW or more during at l	
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 b) changes in the actual availability of interconnections and in the transmission grid that reduce cross zonal capacities between bi zones by 100 MW or more during at least one market time unit, specifying: the identification of the assets concerned, the location, the type of asset, the estimated impact on cross zonal capacity per direction between bidding zones, 	
- the estimated impact on cross zonal capacity per direction between bidding zones,	dding
- reasons for the unavailability,	
 the start and estimated end date (day, hour) of the change in availability; 	
 c) changes in the actual availability of off-shore grid infrastructure that reduce wind power feed-in by 100 MW or more during at leas market time unit, specifying: the identification of the assets concerned, 	st one
- the location,	
- the type of asset,	
 the installed wind power generation capacity (MW) connected to the asset, 	
 wind power fed in (MW) at the time of the change in the availability, 	
- reasons for the unavailability,	
- the start and estimated end date (day, hour) of the change in availability.	
Article 11 Information relating to the estimation and offer of cross zonal capacities	
For their control areas TSOs or, if applicable, transmission capacity allocators, shall calculate and provide the following information t ENTSO for Electricity sufficiently in advance of the allocation process:	to the

	a) the forecasted and offered capacity (MW) per direction between bidding zones in case of coordinated net transmission capacity based capacity allocation; or						
	b) the relevant flow based parameters in case of flow based capacity allocation.						
	In relation to direct current links, TSOs shall provide updated information on any restrictions placed on the use of available cross-border capacity including through the application of ramping restrictions or intraday transfer limits not later than one hour after the information is known to the ENTSO for Electricity.						
	Operators of direct current links shall be considered as primary owners of the updated information they provide.						
	TSOs or, if applicable, transmission capacity allocators, shall provide a yearly report to the ENTSO for Electricity indicating:						
	a) the main critical network elements limiting the offered capacity;						
	b) the control area(s) which the critical network elements belong to;						
	c) the extent to which relieving the critical network elements would increase the offered capacity;						
	d) all possible measures that could be implemented to increase the offered capacity, together with their estimated costs.						
Article 12	Information relating to the use of cross zonal capacities						
	For their control areas, TSOs shall calculate and provide the following information to the ENTSO for Electricity:						
	a) in case of explicit allocations, for every market time unit and per direction between bidding zones:						
	 the capacity (MW) requested by the market, 						
	 capacity (MW) allocated to the market, 						
	 the price of the capacity (Currency/MW), 						
	 the auction revenue (in Currency) per border between bidding zones; 						
	b) for every market time unit and per direction between bidding zones the total capacity nominated;						
	 prior to each capacity allocation the total capacity already allocated through previous allocation procedures per market time unit and per direction; 						
	d) for every market time unit the day-ahead prices in each bidding zone (Currency/MWh);						
	e) in case of implicit allocations, for every market time unit the net positions of each bidding zone (MW) and the congestion income (in Currency) per border between bidding zones;						
	f) scheduled day-ahead commercial exchanges in aggregated form between bidding zones per direction and market time unit;						
	g) physical flows between bidding zones per market time unit;						
	h) cross zonal capacities allocated between bidding zones in Member States and third countries per direction, per allocated product and						
	period.						
Article 13	Information relating to congestion management measures						
	For their control areas TSOs shall provide the following information to the ENTSO for Electricity:						
	a) information relating to redispatching per market time unit, specifying:						
	- the action taken (that is to say production increase or decrease, load increase or decrease),						

	- the identification, location and type of network elements concerned by the action,
	- the reason for the action,
	 capacity affected by the action taken (MW);
	 b) information relating to countertrading per market time unit, specifying:
	 the action taken (that is to say cross-zonal exchange increase or decrease),
	- the bidding zones concerned,
	- the reason for the action,
	 change in cross-zonal exchange (MW);
	c) the costs incurred in a given month from actions referred to in points (a) and (b) and from any other remedial action
Article 14	Forecast generation
	For their control areas, TSOs shall calculate and provide the following information to the ENTSO for Electricity:
	a) the sum of generation capacity (MW) installed for all existing production units equalling to or exceeding 1 MW installed generation
	capacity, per production type;
	b) information about production units (existing and planned) with an installed generation capacity equalling to or exceeding 100 MW. The
	information shall contain:
	- the unit name,
	- the installed generation capacity (MW),
	- the location,
	- the voltage connection level,
	- the bidding zone,
	- the production type;
	c) an estimate of the total scheduled generation (MW) per bidding zone, per each market time unit of the following day;
	d) a forecast of wind and solar power generation (MW) per bidding zone, per each market time unit of the following day.
Article 15	Information relating to the unavailability of generation and production units
	For their control areas, TSOs shall provide the following information to the ENTSO for Electricity:
	a) the planned unavailability of 100 MW or more of a generation unit including changes of 100 MW or more in the planned unavailability
	of that generation unit, expected to last for at least one market time unit up to three years ahead, specifying:
	- the name of the production unit,
	- the name of the generation unit,
	- location,
	- bidding zone,
	- installed generation capacity (MW),
	- the production type,

	- available capacity during the event,
	- reason for the unavailability,
	 start date and estimated end date (day, hour) of the change in availability;
b	
	- the name of the production unit,
	- the name of the generation unit,
	- location,
	- bidding zone,
	 installed generation capacity (MW),
	- the production type,
	- available capacity during the event,
	- reason for the unavailability, and
	- start date and estimated end date (day, hour) of the change in availability;
c)	
	of that production unit, but not published in accordance with subparagraph (a), expected to last for at least one market time unit up to
	three years ahead, specifying:
	- the name of the production unit,
	- location,
	- bidding zone,
	- installed generation capacity (MW),
	- the production type,
	- available capacity during the event,
	- reason for the unavailability,
	- start date and estimated end date (day, hour) of the change in availability;
d	
	published in accordance with subparagraph (b), expected to last for at least one market time unit, specifying:
	- the name of the production unit,
	 location, bidding zone,
	 installed generation capacity (MW),
	- the production type,
	 available capacity during the event,
	 available capacity during the event, reason for the unavailability, and

	- start date and estimated end date (day, hour) of the change in availability.							
Article 16	Actual generation							
	 For their control areas, TSOs shall calculate and provide the following information to the ENTSO for Electricity: a) actual generation output (MW) per market time unit and per generation unit of 100 MW or more installed generation capacity; b) aggregated generation output per market time unit and per production type; c) actual or estimated wind and solar power generation (MW) in each bidding zone per market time unit; d) aggregated weekly average filling rate of all water reservoir and hydro storage plants (MWh) per bidding zone including the figure for the same week of the previous year. 							
Article 17								
i a 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	 For their control areas, TSOs or where applicable operators of balancing markets, where such markets exist shall provide the following information to the ENTSO for Electricity: rules on balancing including: processes for the procurement of different types of balancing reserves and of balancing energy, the methodology of remuneration for both the provision of reserves and activated energy for balancing, the methodology for calculating imbalance charges, if applicable, a description on how [] balancing [] is carried out); prices paid by the TSO per type of procured balancing reserve and per procurement period (Currency/MW/period); accepted aggregated offers per balancing time unit, separately for each type of faserve; prices paid by the TSO for activated balancing energy (MW) per balancing time unit and per type of reserve; prices paid by the TSO for activated balancing energy per balancing time unit and per type of reserve; prices paid by the TSO for activated balancing energy per balancing time unit and per type of reserve; price information shall be provided separately for up and down regulation; imbalance prices per balancing time unit; total imbalance of the control area, specifying: the expenses incurred to the TSO for procuring reserves and activating balancing energy, the net income to the TSO after settling the imbalance accounts with balance responsible parties; ii f applicable, information regarding Cross Control Area Balancing per balancing time unit, specifying: the volumes of exchanged bids and offers per procurement time unit, maximum and minimum prices of exchanged bids and offers per procurement time unit, volume of balancing energy activated in the control areas concerned. 							

2.2.1.3. Belgian legal framework related to data reporting and transparency

41. The legal basis for the reporting of the data provided by Elia to the CREG is the Electricity Act. In chapter 3, concerning the TSO, all the data that Elia has to publish are detailed in the following articles:

- Article 8, § 1, 13°: "TSOs shall publish all relevant data related to network availability, network access and network use, including a report on where and why congestion exists, the methods applied for managing the congestion and the plans for its future management";
- Article 8, § 1,14°: "TSOs shall publish a general description of the congestion management method applied under different circumstances for maximising the capacity available to the market, and a general scheme for the calculation of the interconnection capacity for the different timeframes, based upon the electrical and physical realities of the network";
- Article 8, § 1bis, "TSOs shall publish all relevant data concerning cross-border trade on the basis of the best possible forecast. In order to fulfil that obligation the market participants concerned shall provide the TSOs with the relevant data". TSOs shall publish at least:
 - a) annually: information on the long-term evolution of the transmission infrastructure and its impact on cross-border transmission capacity;
 - b) monthly: month-ahead and year-ahead forecasts of the transmission capacity available to the market, taking into account all relevant information available to the TSO at the time of the forecast calculation (e.g. impact of summer and winter seasons on the capacity of lines, maintenance of the network, availability of production units, etc.);
 - c) weekly: week-ahead forecasts of the transmission capacity available to the market, taking into account all relevant information available to the TSOs at the time of calculation of the forecast, such as the weather forecast, planned network maintenance work, availability of production units, etc.;
 - daily: day-ahead and intra-day transmission capacity available to the market for each market time unit, taking into account all netted day-ahead nominations, dayahead production schedules, demand forecasts and planned network maintenance work;
 - e) total capacity already allocated, by market time unit, and all relevant conditions under which this capacity may be used (e.g. auction clearing price, obligations on how to use the capacity, etc.), so as to identify any remaining capacity;
 - f) allocated capacity as soon as possible after each allocation, as well as an indication of prices paid;
 - g) total capacity used, by market time unit, immediately after reservation;
 - as closely as possible to real time: aggregated realised commercial and physical flows, by market time unit, including a description of the effects of any corrective actions taken by the TSOs (such as curtailment) for solving network or system problems;
 - i) ex-ante information on planned outages and ex-post information for the previous day on planned and unplanned outages of generation units larger than 100 MW.

42. Article 23, Chapter IV, concerning the regulatory authority, lays down the tasks of the CREG, which are, inter alia:

- "monitoring transparency and competition on the electricity market in accordance with Article 23bis" (§2.3°);
- "monitoring the level of transparency, including wholesale prices, and scrutiny of electricity companies' compliance with transparency obligations" (§2,5°).

2.2.2. Background

43. The decision on determining the incentives, including the one which is the focus of this study, was adopted in draft form at the meeting of the CREG Management Committee on 15 November 2018.

44. In accordance with its internal regulations, the CREG submitted the draft decision, together with all the relevant documents, for public consultation for a period of three weeks. The CREG received responses from Elia, Febeliec, Febeg and REstore. REstore was the only party not to react to the data quality incentive.

45. The main comments received through this consultation were the following:

- Febeliec hoped that such an incentive would only be implemented if it compensates Elia's significant efforts in this area. The CREG confirmed to FEBELIEC that an amount close to € 0 per year would currently be obtained if the proposed incentive was already applied. In this way, obtaining an incentive will only reward Elia for making significant efforts in this area.
- Febeg wondered if it would not have been useful to take into account the realisation of the publication in quasi real time of the imbalance of the BRPs or the realisation of a platform for Belgium for the publication of insider information in the context of REMIT. The CREG has opted to focus on transparency, given that ENTSO-E has an operational platform dedicated to this. These transparency data cover a broad spectrum of the wholesale electricity market, much broader than the data covered by the REMIT regulation alone.
- Elia also asked for clarification on the following issues:
 - the data which are dependent on sources external to Elia: a clarification on the procedure for deleting data when they are incorrect;
 - the basic documents of the incentive: the cartography and the document containing the validity tests must be stable and any changes must be made through a bilateral agreement;
 - a definition of the following concepts: "ENTSO-E SFTP", "the correct format", "the rounding rule", the "15kW(h) deviation rule" on consistency testing; the procedure for contesting the results and the procedure for taking planned IT maintenance into account;
 - remarks on the accuracy of the test window per Stream, based on data comparisons based on mapping, on the concept of simultaneity of data;

The CREG responded to the various concerns of Elia and, in some cases, made the changes required for the final decision on the incentive.

2.2.3. Definition

2.2.3.1.1. Objective

46. The objective of the incentive is to obtain high quality data on the Belgian market via consistency in the publication of data between the data made available by Elia and those of the ENTSO-E transparency platform, but also with the data that are transmitted by Elia to the CREG in the context of the reporting defined by the Electricity Act.

2.2.3.1.2. Definition of Data Streams

- 47. To achieve this objective, three "Streams" of data have been defined:
 - The first group of data (Stream 1) concerns the non-validated data, i.e. data available on the Elia SFTP ¹¹and the ENTSO-E SFTP¹², but that Elia has not yet sent to the CREG. The scope of the data which is part of Stream 1 concerns the data from the reports identified by Articles 6 to 17 of Regulation 543/2013 (hereinafter referred to as the Cartography).
 - The second group of data (Stream 2) concerns validated data, i.e. CREG Reports¹³ data and transparency data (Elia SFTP and ENTSO-E SFTP) relating to the month for which the CREG receives the data validated by Elia. The scope of the data transmitted monthly to the CREG is exhaustively described in the Tests Reports, while the scope of the transparency data is included in the Cartography.
 - The last group of data (Stream 3) concerns historical data, i.e. transparency data (Elia SFTP and the ENTSO-E SFTP) and data from CREG Reports prior to the last month of reporting data transmitted by Elia to the CREG until 5 January 2015, or if the data/report does not exist on 5 January 2015, until the creation of the data/report. The scope of the data which is part of Stream 3 is exhaustively described in the Cartography. Nevertheless, the part of the Elia reporting data sent to the CREG, which concerns transparency data, will also be tested in Stream 3.

2.2.3.1.3. Validity test

48. Validity tests are carried out on each Stream.

<u>Stream 1</u>

49. The validity tests for **Stream 1** concerning non-validated data are based on the Cartography data available on the Elia SFTP and on the ENTSO-E SFTP. These validity tests will be carried out between the Elia SFTP and ENTSO-E SFTP data every day of the year.

- 50. The CREG considers **not validated data** to be correct if it meets all of the following criteria:
 - It is defined and precise¹⁴ at the defined time "t", i.e. between the day "D" of the download and the data of day M+2+15D corresponding to the last CREG Reports sent to the CREG

¹¹ Elia SFTP: Data from the Elia Transparency Platform (Elia SFTP, JAO SFTP, EEX SFTP)

¹² ENTSO-E SFTP: Data from the ENTSO-E Transparency Platform (GUI and ENTSO-E SFTP)

¹³ CREG Reports: Recurrent reporting data relating in particular to Transparency supplied by Elia and fed into the CREG data warehouse.

¹⁴ Precise, i.e. not missing, in the right format and respecting the rounding rule

relating to month M. For practical reasons of uploading Elia data by ENTSO-E, a tolerance of one hour is applied to these data: when the data is downloaded, the data of the hour preceding the download time may be absent from the ENTSO-E or Elia data sets. For example, when the CREG starts downloading the data closest to real time between 9.00 and 10.00 a.m., the consistency tests of the Elia- ENTSO-E data will be carried out until hour h-2, i.e. 7.00-8.00 a.m. of the download day;

- It passed the consistency tests. They check that the value of the data on the Elia SFTP is equal to the value of the same data on the ENTSO-E SFTP by following the rounding¹⁵ and deviation¹⁶ rules. If it is not possible to directly compare the data on the Elia SFTP and the ENTSO-E SFTP, because the granularity of the data is different (e.g. the data are in quarter-hourly format on the ENTSO-E SFTP and in hourly format on the Elia SFTP or the data are available per generation unit on the Elia SFTP and the data are aggregated for all units on the ENTSO-E SFTP), the CREG will apply a conversion formula, provided by Elia, making it possible to compare the data. If Elia does not provide the CREG with the conversion formula for one of the possible validity tests, the CREG will consider itself unable to carry out that test and an error will be counted for that test;
- It is present simultaneously on the Elia SFTP and the ENTSO-E SFTP.

<u>Stream 2</u>

51. The validity tests for **Stream 2** are monthly and pertain to the data transmitted to the CREG (the CREG Reports / Tests Reports), the Mapping data present on the Elia SFTP and the ENTSO-E SFTP.

- 52. The CREG considers **a validated data** to be correct if it meets all of the following criteria:
 - It is defined and precise at the defined time "t" (it therefore concerns data relating to month "M" for data received in M+2+15D). For example, the CREG expects all the data communicated by Elia to the CREG relating to January 2020 to be sent to it by 15 April 2020 at the latest.
 - It passed the consistency tests put in place by the CREG:
 - On the data in the CREG Reports: the consistency tests correspond to all the tests described in the Tests Reports;
 - On the Cartography data present on the Elia SFTP, the ENTSO-E SFTP and, if applicable, in the CREG Reports/Tests Reports: the consistency tests verify that the value of the data on the Elia SFTP is equal to the value of the same data on the ENTSO-E SFTP and, if applicable, to the value present in the CREG Reports by following the rounding and deviation rules. If it is not possible to directly compare the data on the Elia SFTP, the ENTSO-E SFTP and/or the CREG Reports, because the granularity of the data is different, the CREG will apply a conversion formula provided by Elia to compare the data. If Elia does not provide the CREG with the

¹⁵ Currently, the ENTSO-E platform has different rounding rules for volumes depending on the channel used. In effect, the data available via the display screen, the data download and the GUI are rounded to MW/MWh while the data available via the SFTP are not rounded and have two decimal places. The presentation of the data on ENTSO-E SFTP may still change between now and the final commissioning of the tool. It will be necessary to determine the rounding rule to align with that used on ENTSO-E.

¹⁶ For data on electricity volumes, the CREG will tolerate a deviation of less than 15 kW(h), except in the case of an alternative proposal formulated by Elia and previously approved by the CREG, while for data concerning electricity prices, no deviation will be tolerated. This rule may have to be adapted according to the rounding rule applied later on.

conversion formula for one of the possible validity tests, the CREG will consider itself unable to carry out that test and an error will be counted for that test.

The validity tests including the data from the CREG Reports will only be activated once the data have been sent by Elia. A dataset not communicated by Elia to the CREG within the time limit (M+2 +15D) will be considered as received for the calculation of the incentive and an error will be counted for this test.

Stream 3

53. The validity tests for **Stream 3** relate to data prior to the last month of reporting data transmitted by Elia to the CREG. The tests are carried out every day on the Cartography data present on the Elia SFTP, the ENTSO-E SFTP and in the CREG Reports / Tests Reports.

- 54. The CREG considers **a historical data** to be correct if it meets all of the following criteria:
 - It is defined and precise at the defined time "t", considering that only one month of data will be tested daily among the possible historical data;
 - It passed the consistency tests put in place by the CREG. They check that the value of the data on the Elia SFTP is equal to the value of the same data on the ENTSO-E SFTP and possibly equal to the data in the CREG Reports / Tests Reports by following the rounding and deviation rules described. If it is not possible to directly compare the data on the Elia SFTP, the ENTSO-E SFTP and/or the CREG Reports, because the granularity of the data is different, the CREG will apply a conversion formula, provided by Elia, which makes it possible to compare the data. If Elia does not provide the CREG with the conversion formula for one of the possible validity tests, the CREG will consider itself unable to carry out that test and an error will be counted for that test;
 - It is simultaneously present on the Elia SFTP, on the ENTSO-E SFTP and, if the data is also part of the Tests Reports, on the CREG Reports.

Summary of the Streams

55. All the validity tests are shown in the schematic form below:

	Stream 1	Stream 2	Stream 3
Application time window of the validity tests	From D Day until M+1+15D or M+2+15D	From month M+1+15D to month M+2+15D	From 05JAN2015 to month M+2+15D or M+3+15D
Period tested	All data of the controlled period.	All data of the controlled period.	One month at random, on the whole studied period, excluding the months studied the last 15 days.
Test frequency	Daily	Monthly	Daily
Test of the data on Elia's SFTP ?	Yes	Yes	Yes
Test of the data on EntsoE's SFTP ?	Yes	Yes	Yes
Include a subset (=transparency data) of validated data from Elia received by CREG?	No	Yes	Yes
Include all validated data from Elia received by No CREG?		Yes	No

Exceptions

56. For data for which Elia is not the primary owner or for which Elia relies on external sources, Elia will be notified by the CREG of the inconsistencies detected as from Stream 1 and will have to prove, in order to remove this data from the scope of the incentive, that it has requested in writing via a letter that can be sent electronically at least twice (notification letter and reminder) to the supplier of the said data that the supplier correct the said data. The CREG therefore asks Elia to send a first (possibly electronic) letter of notification to the primary data owner and, if this first letter is not acted upon within fifteen calendar days, to send a second (possibly electronic) letter to the primary data owner to warn him of the errors in his publication. If, however, the primary data owner does not react to this second (possibly electronic) mail, the data will be removed from the scope of the incentive for each Stream two calendar weeks after the second notification by Elia. The CREG asks to be provided with a copy of the two (possibly electronic) letters that Elia would send to the primary data owner, and also asks to receive the responses provided by the primary data owner. This procedure applies Stream by Stream.

57. However, the CREG may accept that, in certain circumstances, a dataset may not fall within the scope of this incentive. This may be the case in particular if a mix of data from multiple primary data owners is randomly/simultaneously published by ENTSO-E. Elia will have to provide adequate justification and sufficient evidence to this effect.

2.2.3.1.4. Calculation of the incentive

58. For all Streams, and in order to allow IT maintenances planned and communicated in advance by Elia to the CREG, the CREG may decide not to carry out validity tests during a limited number of periods of unavailability resulting from such maintenances, the duration of which, communicated by Elia, must be limited. Outside the planned maintenance periods, the CREG will carry out these daily tests during a time slot agreed between the parties.

<u>Stream 1</u>

59. For Stream 1, every day of the year, a percentage calculation of correct data will be carried out on the data checked by the CREG. The CREG applies a partially proportional incentive calculation method for Stream 1 given the possible errors linked to the data closest to real time. As such, on each day of the year, the amount of incorrect data and correct data for all datasets checked will be calculated, in order to determine the percentage of correct data. The table below shows, for each percentage of correct data, the percentage of corresponding Stream 1 incentive amount.

% correct data	% perceived incentive
[0% - 90%[0
[90% - 91%[10
[91% - 92%[20
[92% - 93%[30
[93% - 94%[40
[94% - 95%[50
[95% - 96%[60
[96% - 97%[70
[97% - 98%[80
[98% - 99%[90
[99% -100%]	100

Table 1: Perceived incentive by percentage of correct data

A score of 90 % or more correct data per day will result in a non-zero percentage of the incentive tranche being awarded for that day. From then on, either 1/365th or 1/366th of the 'Stream 1' incentive will apply each day. For example, suppose that on day D, the checks made by the CREG indicate that 92 % of the Stream 1 data are correct, Elia would be allocated 30 % of 1/365th (or 1/366th) of 1/3 of the total annual amount of the incentive. The annual amount awarded to Elia is equal to the sum of the daily amounts obtained for the relevant year "Y".

<u>Stream 2</u>

60. For Stream 2, a point is awarded when all the data in all the Stream 2 data series for the month concerned are correct and, conversely, a score of zero is awarded if at least one incorrect data item for a Stream 2 data item is identified by the CREG. A score out of 12 will therefore be obtained by Elia. The maximum amount obtained by Elia will therefore be 12/12th of the amount of the incentive allocated to Stream 2. The minimum amount for Stream 2 will therefore be equal to '0 %' of the Stream 2 incentive amount and the intermediate amounts are obtained by linear interpolation. For example, for year "Y", suppose that Elia obtains a score of 11/12, Elia would therefore receive 11/12th of 1/3 of the total annual amount of the incentive.

<u>Stream 3</u>

61. For Stream 3, each day of the year, one point is awarded when all Stream 3 data items within the selected time window are correct. Conversely, a score of zero is awarded if at least one incorrect item of data for a data item from Stream 3 is identified by the CREG. If Elia obtains a score of 326 for Stream 3 in a leap year, Elia would score 326/366th of 1/3 of the total annual incentive amount.

<u>Conclusion</u>

62. As a consequence, for Streams 1 and 3, if no error is detected by the CREG or could not be detected due to an IT failure or the programmes carrying out the checks, a score of '1' for that day is calculated in favour of Elia.

3. WORK ON THE INCENTIVE PRIOR TO ITS IMPLEMENTATION

63. After definitively defining the incentive, the CREG had numerous meetings with Elia in the course of 2019 to refine the practical implementation of the incentive. The following paragraphs summarize the various themes that were discussed.

Primary data owner versus third party data provider

64. According to the incentive, "the CREG may accept that, in certain circumstances, a dataset may not fall within the scope of this incentive. This may be the case in particular if a mix of data from multiple primary data owners is randomly/simultaneously published by ENTSO-E. Elia will have to provide adequate justification and sufficient evidence to this effect". In other words, the data are only removed from the incentive if Elia provides the CREG with a justification.

65. Elia outlined the situation of three types of data that could be taken out of the incentive:

- Data provided by JAO:

The historical data of JAO is incomplete. Bilateral meetings have been held between Elia and JAO to complete missing data from 2015 to the present, but correcting this takes time and resources.

Flow based data in the new JAO format cannot be integrated into ENTSO-E.

- Data on cross-border flows (French and Dutch borders):

Discussions between Elia, the French TSO (RTE) and the Dutch TSO (Tennet) were held to determine the method of calculating flows at the borders between Belgium and France and Belgium and the Netherlands. The definition is not the same between countries and a check of the consistency of the data is therefore not feasible. In certain cases, the data are calculated by Elia and in others by the distribution operator on the other side of the border. In the latter case, there is no consistency between the ENTSO-E data and the Elia data.

- The data provided by EEX:

Certain historical data are not available until 5 January 2015. Elia has asked EEX to publish these data, but no response has yet been provided to this request. In the event that the problems with EEX are not resolved, a notification must be made to the CREG containing the e-mails that have been sent, even if this is before the official start of the incentive.

The implementation of the incentive has enabled Elia to approach third parties to raise awareness of data quality.

Databases to take into consideration for the incentive and time of download

66. Elia remarked that the updating of sources differs from one data source to another, which can lead to misalignment of data during the tests:

- for the alignment of data between ENTSO-E and Elia SFTP, the data must be downloaded between 4:00 am and 7:00 am. As regards historical data (Stream 3 test), there is no republishing. The data are therefore aligned. The SFTP should preferably be used as the source;
- for the data of JAO, the data must be downloaded between 4:00 am and 7:00 am. As regards historical data (Stream 3 test), there is no republishing. The data are therefore aligned. The API should preferably be used as the source;
- for EEX, Stream 1 can only be tested up to D-1.

67. The CREG confirmed that ENTSO-E SFTP corresponds for Stream 1 to the API and for Stream 2 and 3 corresponds to ENTSO-E SFTP. The time of download of the data was also agreed between Elia and the CREG, to ensure the best time for downloading the data.

Format, rounding and deviation rules

68. Elia asked for a clarification of the definition of "correct format", despite the fact that the definition is stated in the incentive. The CREG therefore reiterated that "correct format" means:

- the data representing dates are in date format,
- the strings are put in the form of a character
- the numbers are in number format.

- 69. Elia discussed the problem of rounding rules and the tolerated differences between sources:
 - for Stream 1, the API is rounded up in MW for volumes and to two digits for price data, while at Elia level, the rounding is to two digits after aggregation. The tolerated difference of 15 kW seems appropriate;
 - for Streams 2 and 3, the CREG reports are rounded off to three decimal places for volumes and two decimal places for price data. For ENTSO-E SFTP, the rounding is to two decimal places. Regarding the tolerance of 15 kW, this does not seem appropriate. In fact, the more the data is transformed, the more it is rounded up, thereby increasing the deviation. Elia therefore proposed that the rounding be specified per item.

The CREG believed that it would be complicated to apply a variable rounding rule depending on data sourcing and the deviation taken into account in its consistency tests is 15 kW unless Elia can prove that this level is not adequate.

IT Maintenance

70. According to Elia, an indicative schedule can be provided to the CREG 30 days in advance, but the date and time can only be notified 48 hours in advance. The CREG requested Elia to carry out maintenance outside the test periods as much as possible. Elia knows when the CREG tests are carried out and can therefore adapt its maintenance schedules. Currently, the tests take place before noon and so Elia has all afternoon for maintenance.

71. Elia also highlighted the fact that the maintenance for ENTSO-E takes place between 12.00 pm and 14.00 pm. With regard to JAO and EEX data, in the event of maintenance, the CREG can be notified ex-post with supporting evidence.

Scope of the incentive

72. According to the incentive "The Cartography and Test Reports may change during the incentive period as the market evolves. The changes will be developed by the CREG and communicated to Elia with a deadline for implementation of the changes of 2 calendar months."

73. The CREG therefore explains that the validity tests may evolve and establishes the following procedure for doing so: "Following a working meeting between the Elia and CREG teams, during which the new validity test(s) is/are presented, a letter (possibly electronic) will be sent to Elia to confirm the validity test(s) to be implemented. This/these test(s) is/are applied to the data of the 3 Streams concerned by the said test(s) two calendar months after receipt of the mail". If a new test is applied, it comes into force 2 months after the letter informing of its existence.

Dispute resolution procedure or consultation procedure

- 74. Elia outlined the main elements of this procedure below:
 - if the results are not contested within a defined period of time (by the CREG or Elia), they are validated and can no longer be changed;
 - if a dispute is accepted by the CREG, the complete time window concerned by this dispute is re-tested (this includes the entire time required to reach agreement on the dispute and the implementation of the new test by the CREG);
 - once a test is contested, the same test does not need to be contested again during the resolution period;
 - all test results (before and after a dispute) must be kept, but only the result recalculated after the dispute is used to calculate the incentive;

- the exact time of the dispute is identified by the electronic communication in which it is communicated. All supporting documents will be shared through a SFTP.

Documents relating to the incentive

75. The following three documents will accompany the incentive and have been the subject of various bilateral discussions to ensure they are complete:

- 1) the cartography includes all the tests on the transparency data;
- 2) the CREG Reports that describe all the tests carried out on the data contained in the CREG Reports, including inter- and intra-file tests;
- 3) the overlap document that describes all the tests implemented on the data present in both the CREG Reports and ENTSO-E. It is referred to as cartography in decision (B)658E/55. For the data published by Elia, consistency must be established between the data from the CREG reports, the ENTSO-E SFTP and the Elia SFTP. For third party data, the consistency of the CREG reports is measured against the ENTSO-E SFTP.

4. RESULTS OF THE INCENTIVE PER STREAM, UP UNTIL 30 JUNE 2020

76. The data quality incentive has been operational since January 2020 for Stream 1, which pertains to near real-time data, and Stream 3, which concerns historical data. Stream 2, which pertains to validated data, started in April 2020.

Table	2:	Time	window	of	the	diffe	rent	Streams	of	the	incentive
			Stream 1		Stream 2			Stream 3			
	ntion time he validity	e window y tests	From D Day until M+1+15D or M+2+15D		month M+1 nonth M+2+3		mon	n 05JAN2015 to th M+2+15D or M+3+15D			

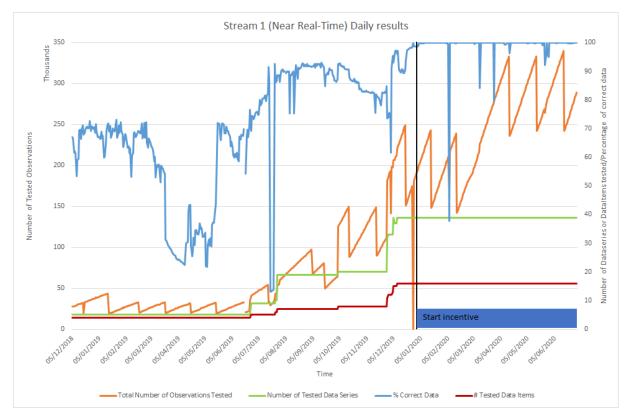
77. As shown in the table above, the time window for the tests of the various Streams is as follows, if day "D" is the day following the last day of the last month of validated data transmitted by Elia to the CREG:

- 1) Stream 1: from day "D" to day M1+15 Days or to day M2+15 Days;
- 2) Stream 2: last month of validated data transmitted by Elia;
- 3) Stream 3: a random month between January 2015 and the month preceding the last month of validated data transmitted by Elia to the CREG in Stream 2.

4.1. **STREAM 1**

78. As a reminder, the data checked in Stream 1 pertain to the non-validated data that Elia has not yet transmitted to the CREG. The CREG checks the available data on the Elia SFTP¹⁷ and the ENTSO-E SFTP identified by Articles 6 to 17 of Regulation 543/2013 (hereinafter referred to as the Cartography).

79. The following graph shows the results obtained by Stream 1 since December 2018. The period between December 2018 and January 2020 was a test period.



Graph 1: the results obtained by Stream 1 between December 2018 and June 2020.

80. The graph above shows a clear increase in the percentage of correct data from the end of the test period, i.e. before the start of the incentive. Since the start of the incentive, apart from a few days that were missing, correct data (within the meaning of the definition of the incentive, i.e. identical data) have been published on the SFTP platforms of Elia and ENTSO-E. Elia has only engaged since end of September 2019, further intensified in December 2019, in an intensive interaction with CREG to verify test results. During these exchanges, many errors and improvements were discovered, with a significant impact on the obtained percentages. The following table summarises, by percentage of incentive amount, the percentages obtained by Elia over the period under review. The vast majority of the scores obtained entitle a proportion of the amount of the incentive (179/182 = 98.35 %), and in 94.51 % of cases (172/182) a score of 100 % was awarded. This is all the more remarkable as the number of tests (and therefore of data tested) increased: around 40 tests are carried out each day, and between 150,000 and 350,000 data are checked each day. Most of data issues detected on Stream 1 are due to IT issues coming from ENTSO-E platform and not from Elia publication

¹⁷ Elia SFTP: Data from the Elia Transparency Platform (Elia SFTP, JAO SFTP, EEX SFTP)

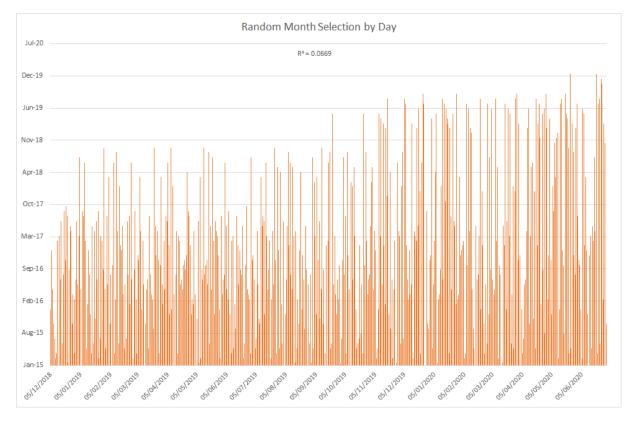
Table 3: the number of days Elia receives a percentage of the incentive amount

Percentage of incentive	Number of days
100 %	172
90 %	2
70 %	2
60 %	2
30 %	1
0 %	3

4.2. STREAM 3

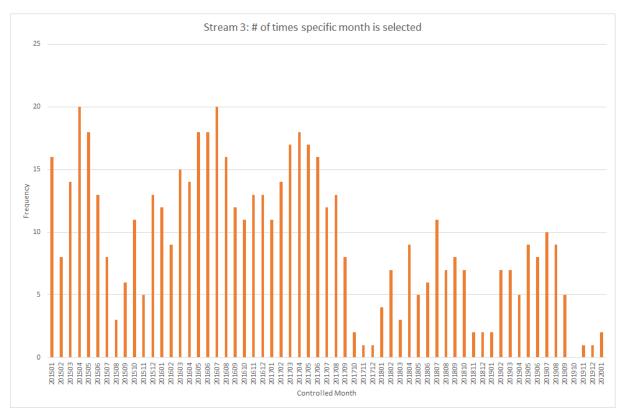
81. The historical data are checked in Stream 3, from 5 January 2015 and the month preceding the last month of the validated data sent by Elia to the CREG, checked in Stream 2. The CREG checks that the data published on Elia, ENTSO-E and the data available in the CREG Data Warehouse are identical or that they positively match the logical tests developed by the CREG and Elia. A randomly selected month from the possible months, with the exception of the months tested in the last 15 days, is selected for a check.

82. The graph below shows the months selected each day by random selection. As expected, the relationship between the days and months selected is very slightly positive, indicating that the months that are phased into Stream 3 are selected by the algorithm.



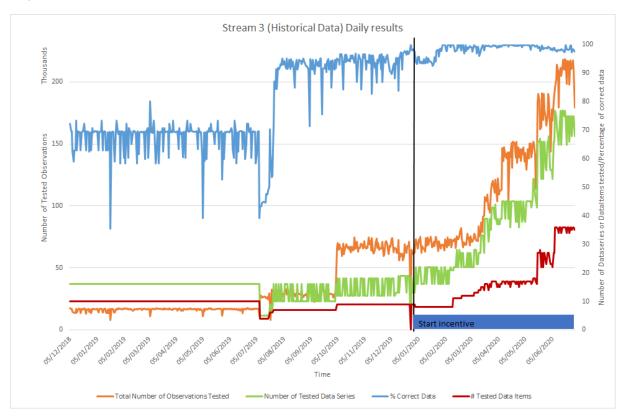
Graph 2: the months selected at random each day for the check of Stream 3

83. The following graph shows the number of times each month has been randomly selected since the incentive was implemented.



Graph 3: the number of times each month has been randomly selected since the incentive was implemented.

Graph 4: Result of Stream 3 of the incentive between December 2018 and June 2020



84. The graph above shows that the data published by Elia on its website or on its SFTP platform before the start of the data quality incentive were of a lower quality than the data published after the start of the incentive. Elia has only engaged since end of September 2019, further intensified in December 2019, in an intensive interaction with CREG to verify test results. During these exchanges, many errors and improvements were discovered, with a significant impact on the obtained percentages.

85. In addition, since the beginning of the tests, we observe an increase in the data and dataset tested (and therefore in the number of observations tested). As of 30 June 2020, 5 days with no error at all have resulted in a score of 1 for the incentive and the score for the rest of the tested days is 0. Beyond the incentive score, the percentage of correct data compared to the number of data tested is 98.42 % in average.

86. Since June 2019, Elia has sent the following data to the CREG, so that the Stream 3 score can be improved:

Date	Data	Month transmitted again			
24/07/2019	R3 activated and cross-border nominations 19 and 32 Cross-Border Nominations Intraday of the monitoring	2019/05			
02/08/2019	Monthly auctions (North & South)	2019/07			
09/08/2019	UnavailabilityStatusProd.UnitD-1 (CIPU Generation & Nominations) (V4)	2019/03- 2019/04			
23/09/2019	Congestion Compensation (CIPU Nominations IN- OUT)	2019/04			
20/12/2019	2019_OCT_17 Tertiary Reserve Reserved V2 201910_F001_ClearingPriceDayAhead V2 2019_OCT_35_nomination R1 controlled V2 (=directory	2019/10			
20/01/2020	2019_NOV_17 Tertiary Reserve Reserved.	2019/11			
20/01/2020	File 42 monitoring balancing	2019/10			
29/01/2020	UnavailabilityStatusProdUnitD1	2019/01-2019/08			
30/01/2020	secondaryMarketData North	2019/11			
06/02/2020	Imbalance ARP quarterly files for 2019 (Q1, Q2 and Q3) (V3)	2019/01-2019/09			
06/02/2020	F50 (CIPU Generation) & M001 (Production Park Overview)	2019/01-2019/12			
20/02/2020	F50 (CIPU Generation) & M001 (Production Park Overview)	2017/01-2018/12			
07/04/2020	File 33 IGCC - monitoring balancing	2012/10-2013/06			
17/04/2020	F50 (CIPU Generation) & M001 (Production Park Overview)	2015/01-2016/12			
21/04/2020	F001_ClearingPriceDayAhead	2015/01-2019/07			
21/04/2020	F006_CrossBorderNominations	2015/01-2019/09			
23/04/2020	M001 (Production Park Overview)	2018/07; 2018/09; 2019/10			
07/05/2020	F011 Elia Grid Load	2015/01-2019/12			
29/05/2020	File 8 (ID Bids activated)	2015/01-2019/12			
05/06/2020	M001 (Production Park Overview)	2015/01-2017/02			
18/06/2020	F032 Cross-Border Nominations Intraday Per ARP	2015/01-2020/01			

Table 4: Data retransmitted by Elia

87. On reading this table, we immediately note that some data have been sent multiple times to the CREG (with a maximum of 5 sendings for certain data relating to the electricity production of the Belgian power stations..

4.3. **STREAM 2**

88. The validated data have been checked in Stream 2 from 15 April 2020 on data of January 2020. The CREG checks that the data published on Elia, ENTSO-E and the data available in the CREG Data Warehouse are identical.

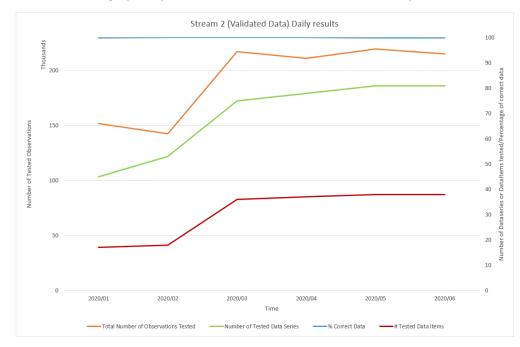
89. Errors were detected for five of the first six months of the year 2020 (January, March, April, May and June 2020). The CREG has not detected any errors in the tests available at this time in the data for the month of February 2020. Beyond the incentive score, the percentage of correct data compared to the number of data tested is close to 100 %, but some items remained erroneous (like the volumes and prices of aFRR and mFFR), which can have a high impact for a market participant. The graph below shows the results of the overlap tests between the Elia-ENTSO-E and CREG data (these are therefore, with unchanged files, the results that Elia would receive for a test on these data in Stream 3).

90. The following table summarises the number of errors detected by the CREG on files received in Stream 2, excluding overlap tests between Elia-ENTSO-E and CREG data, as well as the percentage of errors and the number of errors on the overlap tests.

Month	Percentage of correct data and [number of errors found / number of data tested] on overlap tests		
January 2020	99.86% [213/152,012]	0	
February 2020	100% [0/142,382]	0	
March 2020	100% [0/217,367]	8	
April 2020	99.99% [11/211,380]	1	
May 2020	99.97% [65/219,649]	0	
June 2020	99.96% [81/215,099]	5	

Table 5: Stream 2 results per category of data

91. The next graph depicts the results of stream 2 on the overlap tests.



5. PROSPECTS FOLLOWING THE INCENTIVE

92. Since 2017, Elia has been reviewing its data management strategy to become a data-centric company. In 2018, it defined 3 pillars which need to be worked on in order to achieve this: the people pillars (having the right people at the right place with adequate competences, awareness of the importance of quality data), the process pillars and the technological pillars (enabling integration and access to a transversal information flow). The intensive work on the data over the last couple of years confirms that working with data requires an iterative improvement process, which has been put in place at Elia. It is through this iterative process that Elia defines the most critical and relevant data use cases to tackle.. The incentive has a very positive effect on the roadmap that Elia had put in place to become a data-centric company.

93. The data quality incentive has allowed Elia to review all of the data it publishes to the market and to understand the definition of each of them and their interactions. This work also made it possible to make contact with various parties that have an impact on data quality: ENTSO-E, data providers (JAO, EEX), neighbouring TSOs (RTE and TENNET), etc.

94. The incentive has a very positive effect and is a real boost to help Elia to achieve this goal for Transparency data. In line with this and with the obligations incumbent on the Belgian market in the context of REMIT, Elia will provide the Belgian market participants with a platform for publishing inside information.

95. The incentive is limited to the Belgian market and can therefore only improve the Belgian market data. Nevertheless, the Belgian market is not isolated from other markets and it therefore seems inevitable that the quality of data from other countries in the CWE region in which Belgium is embedded should also be improved. To do this, it is important to make regulators, TSOs and market participants aware that high quality data is important for everyone. If we want to have a transparent market with a correct and efficient transparency platform, we must act together. The Transparency Regulation requires TSOs in Europe to provide their information to the ENTSO-E platform but, at present, the European statistics via this platform are not usable.

96. Since the beginning of the incentive, the CREG has been alongside Elia in the ETUG group of ENTSO-E. This working group includes TSOs, market participants, information platforms (Bloomberg), regulators and ACER. The CREG has understood that during the discussions ENTSO-E is content to be a mailbox. In fact, ENTSO-E receives the data and publishes them, but the quality of the data, the consistency between the data is not currently taken into account. For ENTSO-E, the data owner must ensure the quality of the data. Currently, the fault is discovered and shows that if nothing is done ENTSO-E will not improve.

6. CONCLUSION

In 2017, the CREG conducted study (F)1637 on the application of Belgian and European legislation relative to the transparency of the Belgian wholesale natural gas and electricity markets. Following meetings with market participants and transmission system operators, this study highlighted shortcomings on the part of ENTSO-E with regard to the service required by the transparency regulations, as well as concerns about the quality of the data for the electricity market via the data published on both the ENTSO-E platform and the Elia platform.

In March 2018, the European Commission published a study on the quality of the electricity market data of the transmission system operators, electricity supply disruptions and their impact on the European electricity markets. The European Commission study calls on ENTSO-E to improve the completeness, accuracy and timeliness of the data. With regard to completeness, it calls for 100 % completeness of the time series of load, price and generation data. Inconsistencies in the data with other sources must be resolved or explained. UMM data must be displayed in chronological order and the different versions must be kept. Recommendations on improving the use of the platform are also proposed:

- 1) improving information and navigation;
- 2) introduction of a data quality log;
- 3) introduction of automatic quality reports; and
- 4) publication of machine-readable metadata.

In this context, the CREG introduced an incentive relating to the quality of the data made available to the market in the incentives aimed at improving the performance of the transmission system operator for electricity during the regulatory period 2020-2023. Implementing the definition of this incentive required various meetings between Elia and the CREG.

The objective of the incentive is to obtain high quality data on the Belgian market via consistency in the publication of data between the data made available by Elia and those of the ENTSO-E transparency platform, but also with the data that are transmitted by Elia to the CREG in the context of the reporting defined by the Electricity Act.

To achieve this objective, three "Streams" of data have been defined:

- The first group of data (Stream 1) concerns the non-validated data, i.e. data available on the Elia SFTP and the ENTSO-E SFTP, but which Elia has not yet sent to the CREG. The scope of the data which is part of Stream 1 concerns the data from the reports identified by Articles 6 to 17 of Regulation 543/2013 (hereinafter referred to as the Cartography).
- The second group of data (Stream 2) concerns validated data, i.e. data transmitted by Elia to the CREG (CREG Reports) and transparency data (Elia SFTP and ENTSO-E SFTP) relating to the month for which the CREG receives the data validated by Elia. The scope of the data transmitted monthly to the CREG is exhaustively described in the Test Reports, while the scope of the transparency data is included in the Cartography.
- The last group of data (Stream 3) concerns historical data, i.e. transparency data (Elia SFTP and the ENTSO-E SFTP) and data from CREG Reports prior to the last month of reporting data transmitted by Elia to the CREG until 5 January 2015, or if the data/report does not exist on 5 January 2015, until the creation of the data/report. The scope of the data which is part of Stream 3 is exhaustively described in the Cartography. Nevertheless, the part of the Elia reporting data sent to the CREG, which concerns transparency data, will also be tested in Stream 3.

Validity tests are carried out on each Stream. All the validity tests are shown in the schematic form below:

Table 6: Summary of all validity tests

	Stream 1	Stream 2	Stream 3
Application time window of the validity tests	From D Day until M+1+15D or M+2+15D	From month M+1+15D to month M+2+15D	From 05JAN2015 to month M+2+15D or M+3+15D
Period tested	All data of the controlled period.	All data of the controlled period.	One month at random, on the whole studied period, excluding the months studied the last 15 days.
Test frequency	Daily	Monthly	Daily
Test of the data on Elia's SFTP ?	Yes	Yes	Yes
Test of the data on EntsoE's SFTP ?	Yes	Yes	Yes
Include a subset (=transparency data) of validated data from Elia received by CREG?	No	Yes	Yes
Include all validated data from Elia received by CREG?	No	Yes	No

For Stream 1, the score obtained depends on the number of correct data divided by the number of data tested. If this percentage is higher or equal to 99 %, the score obtained is 1. If this percentage is below 90 %, the score obtained is 0. For Streams 2 and 3, a point is awarded when all the data in all the Streams data series for the month concerned are correct and, conversely, a score of zero is awarded if at least one incorrect data item for the Stream is identified by the CREG. For streams 1&3, if no error could be detected due to a CREG IT failure or the programmes carrying out the checks, a score of 1 is obtained by Elia.

Since the start of the data quality incentive until end of June 2020, Elia has achieved for Stream 1 a data accuracy rate (= identical data published on the SFTPs of Elia and ENTSO-E) of 99 % or more for 172 days out of 182 (94.51 %), which means that 100 % of the financial amount of the incentive was obtained for the vast majority of days for Stream 1. Most of data issues detected on Stream 1 are due to IT issues coming from ENTSO-E platform and not from Elia publication. It should be noted that for Stream 1, 40 tests are carried out every day and between 150,000 and 350,000 data are checked daily. As for Stream 3, as of 30 June 2020, 5 days with no error at all resulted in a score of 1 for the incentive while the other days tested showed a score of 0. Beyond the incentive score, the percentage of correct data compared to the number of data tested is 98.42 % in average. Stream 2 allowed Elia to obtain a score of 1/6 over the first six months of the year (one month out of the 6 months tested presented no error at all). Beyond the incentive score, the percentage of correct data tested is close to 100 % but some items remained erroneous (like the volumes and prices of aFRR and mFFR), which can have a high impact for a market participant .

The data quality incentive has allowed Elia to review all of the data it publishes to the market and to understand the definition of each of them and their interactions. This work also made it possible to make contact with various parties that have an impact on data quality: ENTSO-E, data providers (JAO, EEX), neighbouring TSOs (RTE and TENNET), etc.

Since 2017, Elia has been reviewing its data management strategy to become a data-centric company. The incentive has a very positive effect and is a real boost to help Elia to achieve this goal for Transparency data. In line with this and with the obligations incumbent on the Belgian market in the context of REMIT, Elia will provide the Belgian market participants with a platform for publishing inside information.

The incentive is limited to the Belgian market and can therefore only improve the Belgian market data. Nevertheless, the Belgian market is not isolated from other markets and it therefore seems inevitable that the quality of data from other countries in the CWE region in which Belgium is embedded should also be improved. To do this, it is important to make regulators, TSOs and market participants aware that high quality data is important for everyone. If we want to have a transparent market with a correct and efficient transparency platform, we must act together. The Transparency Regulation requires TSOs in Europe to provide their information to the ENTSO-E platform but, at present, the European statistics via this platform are not usable.

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