



European Union Agency for the Cooperation
of Energy Regulators

Agency Report

Analysis of the Consultation Document on the Gas Transmission Tariff Structure for Denmark

NRA: Forsyningstilsynet
TSO: Energinet

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1. ACER conclusion

- (1) The Danish transmission system operator ('TSO') Energinet proposes a postage stamp reference price methodology ('RPM'), no ex-ante entry-exit split and a 100% discount at entry points to and exit points from storage facilities. The resulting ex-post entry-exit split is 52%-48%. No commodity-based transmission tariffs are proposed, and a non-transmission service for emergency supply to protected and non-protected consumers is included in the consultation. A merger between the Danish entry-exit zone and a segment of an upstream pipeline in the North Sea is part of the consultation¹. The tariff-related repercussions of the merger are analysed both as part of the analysis of the RPM and under a separate chapter (Chapter 6). The costs of the upstream pipeline are proposed to be allocated as a flat non-transmission tariff to all points across the proposed entry-exit zone.
- (2) The Agency welcomes the proposal to discontinue the commodity charges that had been set to 30% of the transmission revenue in the national regulatory agency ('NRA') motivated decision following the 2019 tariff consultation.
- (3) In addition, Energinet proposes to apply a discount² to capacity booked on a long term basis (from five to fifteen years). The discount ranges between 2-6% depending on the length of the contracted capacity, and would be applicable to all users. Chapter 6 of this Report provides an analysis of this proposal. The Agency notes that such discount is not compliant with the Network Code on Harmonised Transmission Tariff Structures for Gas ('NC TAR') pursuant to Article 6(4) of the NC TAR.
- (4) The NC TAR foresees a comparison of the proposed RPM with the capacity-weighted distance ('CWD') methodology. The CWD methodology results in 78% of the transmission revenue being allocated to the points associated with the Baltic pipeline (EPII and Faxø), while these points account for 70% of the total capacity. In comparison, the proposed postage stamp results in 70% of the transmission revenue being allocated to these same points. This implies that the postage stamp methodology allocates more accurately the transmission revenue associated with the Baltic pipeline.
- (5) The NC TAR also foresees a cost allocation assessment ('CAA'³) to identify potential cross-subsidisation resulting from the proposed tariff structure. Energinet compared the various methodologies and through 20 distinct CAA calculations. In bilateral exchanges, Energinet provide 100+ additional calculations considering various different scenarios. The Agency considers this as

¹ Close to the publication deadline of this Report, the Agency was informed of a consultation carried out by the NRA on the proposed merger of the upstream pipeline that had been launched on 21 December 2021 remaining open until 10 January 2022. The Agency could not assess these documents as they were received late in the process and as a translation in English was not available. The Agency notes that some of the conclusions in this Report are considered in that consultation. For the NRA consultation, see: [Høring over udkast til afgørelse vedr. Energinets anmeldelse af metode for etablering af en fælles markedszone \(forsyningstilsynet.dk\)](#)

² While the TSO refers to this adjustment both as a 'multiplier' and a 'discount', the Agency notes that, in the context of the NC TAR, multipliers apply only to short term capacity products. For this reason, the Agency refers to the proposed adjustment as a discount, and not as a multiplier.

³ Throughout this document, 'CAA' is used to refer to the capacity cost allocation comparison index described in Article 5(3)(c) of the NC TAR.

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a good practice to better understand the proposed methodology. The outcomes of the CAA show that the proposed postage stamp methodology is above the 10% threshold specified in Article 5(6) of the NC TAR. This is also the case for three additional methodologies compared in the TSO analysis. For selected scenarios (considering the merger of the upstream pipeline and 100% discounts at entry points to and exit points from storage facilities), the results for the postage stamp vary between 17% and 22%. The CAA for the CWD reference methodology, as calculated by Energinet, falls within the 3%-6% range. The Agency notes that this CWD calculation does not follow the steps laid out in Article 8 of the NC TAR; when calculated accordingly, it results in a CAA that varies between 11% and 15%. These results are only for selected scenarios applicable for the year 2023. The scenarios cannot be summarised in a single figure and require a dedicated analysis, which is part of Chapter 3 of this Report. The Agency remarks that the CAA results for the different methodologies cannot be easily compared, as they might imply different degrees of cross-subsidisation for the same results (e.g. as a result of the different cost drivers used in each RPM).

- (6) The large variations in the CAA results, and its ranges above 10%, make it difficult to compare the proposed postage stamp with the CWD methodology. This comparison requires a broader assessment taking into account the changing factors in the different scenarios which include:
- The upstream merger, including the regulatory conditions and revenue control regimes for the upstream pipeline.
 - The allocation of the costs of the upstream pipeline using non-transmission charges.
 - The justification of the CAA results above the 10% threshold.
- (7) The Agency concludes, after having completed the analysis of the consultation document pursuant to Article 27(2) of the NC TAR, that:
- The consultation document contains most of the required information listed in Article 26(1) with the exception of various minor elements which are listed in Table 6.
 - The TSO does not sufficiently demonstrate the compliance of the proposed RPM with the requirements on cost reflectivity, cross-subsidisation and cross-border trade. At the same time, the RPM is compliant with the requirement on transparency, volume risk and non-discrimination.
 - The criteria for setting commodity charges are not applicable.
 - The TSO does not demonstrate the compliance of the proposed non-transmission service of emergency supply with the requirements laid out under Article 4(4) of the NC TAR.
- (8) The Agency recommends that the NRA take into account the following points when taking its motivated decision:
- First, assess the factors leading to the high CAA results and quantify the potential cross-subsidisation effect.
 - Second, should the NRA determine that the proposed postage stamp results in undue cross-subsidisation, it should consider an alternative methodology that proves to be more cost reflective.
 - Third, the NRA should consider the CWD methodology as an alternative option should the postage stamp methodology prove not to be sufficiently cost reflective. For this purpose, the NRA should analyse the different calculations steps of the CWD as laid out in the NC TAR. The Report refers to this calculation in paragraph (28).

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- Fourth, the NRA should monitor the future evolution of cross-system flows with a view to ensuring future compliance with the requirement on volume risk.
- (9) Regarding the proposed non-transmission service, the Agency recommends that the NRA assess the compliance against the requirements laid out under Article 4(4) of the NC TAR. In addition, the NRA should ensure that the rules for the TSO to act as an emergency supplier are clearly laid out to prevent any market distortion resulting from the potential intervention of the TSO.
- (10) On the proposed merger, the Agency notes that the allocation of upstream costs to users of the transmission network is not compliant with Article 41(6)(a) of Directive 2009/73/EC⁴, Article 13 of Regulation (EC) No 715/2009⁵ and Article 3(11) of the NC TAR. This regulation distinguishes between transmission and upstream networks and sets forward the requirement for the revenue of the transmission networks to be regulated. As communicated to the Agency by the TSO, the upstream pipeline is not subject to such revenue regulation. Notwithstanding this conclusion, the Agency provides in this Report various conditions that should be applied to the upstream pipeline should its costs be allocated to users of the Danish transmission network. Given the limited visibility that the Agency had of the current legislation applicable to the pipeline and of the proposed merger, the following list is not exhaustive.
- (11) First, the Agency recommends, as the preferred option, to extend to the upstream pipeline the regulation applicable to the transmission network. Should the NRA decide to apply the merger, the Agency recommends that the NRA:
- Ensure that the process is based on consultations that follow a logical order. For example, a consultation on the merger should precede the consultation on transmission tariffs. Equally, the setting of revenue regulation for the upstream assets should precede the consultation on tariffs.
 - Apply revenue regulation to the upstream pipeline in compliance with both Article 41(6)(a) of Directive 2009/73/EC and Article 13 of Regulation (EC) No 715/2009.
 - Assess the impact of the allocation of upstream costs on users of the transmission network on competition, cross-subsidisation and on the efficiency of the allocated costs following the analysis provided in the 2020 ACER Report *The internal gas market in Europe: The role of transmission tariffs*⁶.
 - Clarify how the upstream costs are split following the application of negotiated and regulated third party access to different parts of the network.
 - Clarify the reconciliation mechanism applicable for the costs of the upstream pipeline.
 - Clarify the treatment of the upstream assets should these cease to be used in the future. In particular, the NRA should clarify whether Energinet should continue to recover the revenue related to assets that may become stranded.

⁴ Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC

⁵ Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005.

⁶ See Chapter 6:

https://documents.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/The%20internal%20gas%20market%20in%20Europe_The%20role%20of%20transmission%20tariffs.pdf

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- Apply separate accounts for the revenue to be allocated using transmission and non-transmission tariffs. This is a condition pursuant to Article 4(1) of the NC TAR, as explained in paragraph (118).
- (12) Second, regarding the proposed allocation of the costs of the upstream pipeline using non-transmission tariffs, Energinet has not provided sufficient analysis identifying the beneficiaries of the merger. This is a prerequisite for allocating the costs of the upstream pipeline, which in this case are allocated to all users of the network. In addition, the Agency recommends that the NRA:
- Apply all the requirements applicable to the RPM to the proposed non-transmission tariffs, as the latter are proposed to be set at all points of the network. This includes the requirements to avoid undue cross-subsidisation, non-distortion of cross-border trade and volume risk.
 - The analysis on cross-subsidisation should be performed using the CAA in a joint assessment together with the RPM. This is already done in the current consultation, but further analysis should be performed due to the high CAA results. The proposed non-transmission charges should be kept as part of this analysis.
 - The impact of the merger should be assessed separately for intra-system and cross-system users to reflect how the benefits are distributed between different groups of network users.
 - Assess the potential cross-subsidisation resulting from the proposed non-transmission tariff between users of short-term capacity products and of yearly capacity. Contrary to transmission tariffs, non-transmission tariffs cannot be adapted to shorter term capacity products.
- (13) The Agency thanks Energinet for its availability to discuss the details of the consultation document and for the additional information provided to the Agency. Energinet produced extensive analyses upon the request of the Agency that have facilitated understanding the compliance of the proposed RPM. Overall, Energinet has set an excellent example of cooperation with the Agency when carrying out the final consultation.

2. Introduction

- (14) Commission Regulation (EU) 2017/460 of 16 March 2017 establishes a network code on harmonised transmission tariff structures for gas.
- (15) Article 27 of the NC TAR requires the Agency to analyse the consultation documents on the reference price methodologies for all entry-exit systems.⁷ This Report presents the analysis of the Agency for the transmission system of Denmark.
- (16) On 5 November 2021, Energinet, forwarded the consultation documents to the Agency. The consultation was launched on 14 October 2021 and remained open until 14 December 2021. On 21 December 2021, the consultation responses and their summary were published. The Agency has taken these into consideration for this analysis. Within five months following the end of the final consultation, and pursuant to Article 27(4) of the NC TAR, the Danish NRA, Forsyningstilsynet, shall take and publish a motivated decision on all the items set out in Article 26(1).

Reading guide

- (17) In Chapter 3, this document first presents the proposed tariff methodology. Chapter 4 provides an analysis on the completeness, namely if all the information in Article 26(1) has been published. Chapter 5 focusses on the compliance, namely if the RPM complies with the requirements set out in Article 7 of the code, if the criteria for setting commodity-based transmission tariffs as set out in Article 4(3) are met and if the criteria for setting non-transmission tariffs as set out in Article 4(4) are met. Chapter 6 includes other comments. The document contains two annexes, respectively the legal framework and a list of abbreviations.

3. Assessment of the reference price methodology

- (18) The following section provides an assessment of the proposed RPM.

3.1 Description of the network

- (19) The transmission system network in Denmark can be considered a relatively simple network as represented in Figure 1 and Figure 2 below. There are three entry points: one for production from the Danish North Sea (which is subject to the discussion of the upstream merger), one for imported gas from Germany (Ellund entry) and one for locally produced renewable gasses such as biogas (RES entry). There are three exit points: One to Germany (Ellund exit), one to the Baltic pipeline (Faxe exit) and one for all offtake points to consumers and distribution networks in Denmark and Sweden (the former Dragør Exit). The latter points are clustered into a single point called Joint Exit Zone (JEZ). The network additionally has entry points to and exit points from storage facilities.

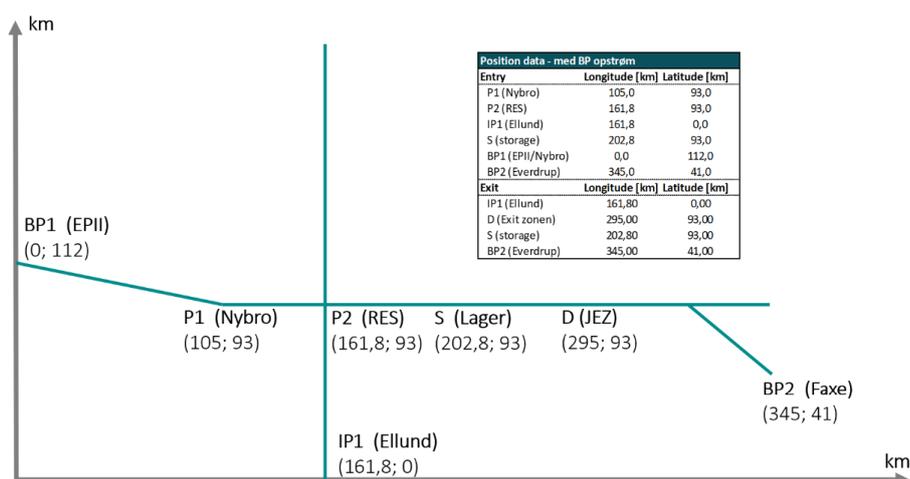
⁷ With the exception of Article 10(2)(b), when different RPMs may be applied by the TSOs within an entry-exit zone.

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Figure 1 Representation of the Danish transmission network



Figure 2 Representation of the Danish transmission network showing point locations and distances.



- (20) The network is supplied mostly from the EPII entry point (North Sea), and to a lesser extent, from the Ellund entry point (Germany). Gas volumes supply domestic consumers, including the Swedish market, or cross the system towards Poland via the Baltic pipeline. These capacities are represented in Table 1 below. EPII is the dominant entry point, placed in the North Sea, resulting in a linear transport of gas toward end users and toward the Faxe exit to the Baltic pipeline. This configuration makes the distance cost driver particularly relevant for the allocation of transmission costs.

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Table 1: Expected capacity bookings 2023-27. Source: Energinet consultation document.

Capacity in kWh/h/year	2023	2024	2025	2026	2027
Exit JEZ	3,836,027	3,618,013	3,533,477	3,301,070	3,109,737
Exit Ellund	88,787	88,787	88,787	88,787	88,787
Exit Faxe	10,641,483	10,641,483	10,641,483	10,641,483	10,641,483
Exit capacity	14,566,297	14,348,283	14,263,747	14,031,340	13,840,007
Storage Exit	3,100,000	3,100,000	3,100,000	3,100,000	3,100,000
Entry Nybro	1,038,038	3,285,560	3,054,552	3,141,939	3,624,300
Entry Ellund	3,089,739	1,188,926	1,299,550	857,815	95,613
Entry RES	981,262	1,098,079	1,129,231	1,238,260	1,316,138
Entry EPII	10,553,608	10,553,608	10,553,608	10,553,608	10,553,608
Entry Faxe	0	0	0	0	0
Entry capacity	15,662,647	16,126,173	16,036,941	15,791,622	15,589,659
Storage Entry	5,350,000	5,350,000	5,350,000	5,350,000	5,350,000

- (21) Three projects influence the choice of the RPM:
- The expansion of the IP with Germany that took place in 2013 and 2014.
 - The Baltic pipeline connecting the Danish network with Poland via an offshore pipeline.
 - The merger of the Danish network with a segment of the upstream pipeline in the North Sea that would move the entry point to the Danish network further upstream.
- (22) Following these investments and the planned zone merger, costs can be allocated differently to users based on the choice of the RPM and of the cost drivers. Energinet discusses extensively whether these costs should be allocated to the beneficiaries or to all users of the network.

3.2 Description of the proposed RPM

- (23) The Danish TSO Energinet proposes a postage stamp methodology, no ex-ante entry-exit split and a 100% discount at entry points to and exit points from storage facilities. No commodity-based transmission tariffs are proposed.
- (24) Energinet proposes a postage stamp methodology on the basis of the following arguments:
- Transparency: The methodology results in a transparent tariff calculation. The postage stamp methodology is easier to calculate than the CWD methodology.
 - Cost-reflectivity: Energinet finds that most of the investments in the transmission network took place in the 1980s and that the written down book value of these fixed assets can largely be regarded as sunk costs. It would, therefore, not be reasonable to allocate historically based costs to the current individual points/users. In addition, the way the system is used today is also significantly different from the assumptions underlying the original investment decisions.
 - A postage stamp methodology does not create congestion. The general absence of congestion and the use of an auction-based allocation mechanism reduce the need for differentiated reference prices.
 - The cross-subsidisation effect is low compared to other methodologies, except for the CWD reference RPM.
 - The postage stamp methodology is able to handle sudden, temporary, and lasting changes in system utilisation, in other words the methodology is more robust to changes in volumes and flow patterns.
 - It efficiently supports the promotion of gas trading and competition, because it results in low transaction costs and equal access costs for shippers at different geographical locations.

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- It reduces the risk of distortion losses associated with artificial price differences between the entry-exit points.
- (25) The Agency notes that all three responses to the consultation (from Ørsted, Dansk Energi and PGNiG) support the application of the proposed postage stamp methodology and value the stability and predictability it creates regarding the points of the network and the evolution of tariffs across tariff periods.
- (26) In 2019, in its Report on the Danish final tariff consultation, the Agency validated the use of the proposed postage stamp methodology. The Agency notes that the CAA calculation for the postage stamp methodology have dramatically changed. This is analysed in a dedicated section below. The Agency therefore focusses its analysis on the impact of the proposed RPM on cross-subsidisation.

3.3 Comparison with alternative methodologies

- (27) The consultation document provides a comparison between the proposed postage stamp methodology and three additional methodologies, namely the CWD, the so-called differentiated tariff methodology and the so-called marginal tariff principle methodology. In the following section, these methodologies are described. The Agency already remarks that the information provided in the consultation on the two latter methodologies is not sufficient to assess their compliance with the NC TAR. For this reason, they receive a limited review in this Report.

3.3.1 Capacity weighted distance methodology

- (28) The Agency has assessed two different CWD methodologies, which are based on a different calculation for the weighted average distance parameter ('WAD'). This is one of the calculation steps of the CWD methodology as laid out in Article 8(2)(a)(i) of the NC TAR. The Agency refers to two different formulas to carry out this calculation which were presented in its recent Report on the Polish final consultation for the SGT Pipeline⁸. As explained in the Polish Report, the NC TAR is clear about the rule that is applicable for the calculation of the WAD.
- (29) In the consultation document, Energinet provides a CWD calculation that is not in line with the NC TAR rules referred to above. Based on this calculation, 78% of the transmission revenue is allocated to the points associated with the Baltic pipeline (EPII and Faxe), while these points account for 70% of the total capacity.
- (30) Following the request of the Agency, Energinet provided a second calculation of the CWD based on the NC TAR steps.
- (31) Energinet argues that the CWD methodology is unnecessarily complicated when compared to the relatively simple and small Danish transmission network. In addition, Energinet argues that the calculation of the CWD makes tariffs more volatile and less robust to market changes (see paragraph (24) above).

⁸ https://extranet.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/Agency%20report%20-%20analysis%20of%20the%20consultation%20document%20for%20Poland_SGT%20pipeline.pdf

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3.3.2 Differentiated tariff methodology

- (32) The differentiated tariff methodology was used by Energinet between 2013 and 2019. It was applied at the time of the pipeline expansion towards Germany by looping the pipeline between Ellund (IP with Germany) and Egtved (domestic exit point within the Danish network) and the compressor station. As it became clear that the expansion benefited only a few shippers, the approved tariff methodology was differentiated at each point to distribute the relevant costs among the points/users of the system who benefited from the investment. This approach was discontinued in 2019 after the Open Season for the Baltic pipeline took place. In the consultation document, Energinet argues that the market arrived to a common understanding that the Baltic pipeline investment would benefit all the users of the Danish transmission system. The differentiated tariff methodology is based on the following components:
- Uniform tariff set at all points to allocate the costs of the transmission system excluding upstream section.
 - Additional uniform tariff component set to the EPII Entry (North Sea) based on the costs of the upstream pipeline and the capacities at that point.
- (33) The methodology leads to similar results as the CWD methodology proposed by Energinet, with 77% of the transmission revenue allocated to the points associated with the Baltic pipeline (EPII and Faxe).
- (34) The Agency notes that this methodology is not described in detail in the consultation document. As a result, the Agency cannot complete a compliance analysis. The Agency, therefore, does not assess further the methodology. At the same time, the Agency notes that the rationale of the methodology is relevant as it proposes to allocate the costs of the upstream pipeline to users of the associated point in the Nord Sea. This implies a different understanding of the beneficiaries of the merger compared to Energinet's proposal of allocating the costs of the upstream pipeline to all users of the Danish transmission network. The Agency recommends that the NRA consider this approach when reviewing the proposed postage stamp methodology and the proposed non-transmission tariff for the allocation of the costs of the upstream pipeline.

3.3.3 Marginal tariff principle methodology

- (35) The marginal tariff principle methodology is included in the consultation to address the concerns of stakeholders requesting that the costs associated with the Baltic pipeline expansion are borne by the users benefiting from the project, as it happened for the IP with Germany (Ellund-Egtved expansion).
- (36) Energinet argues in the consultation that the Baltic pipeline project cannot be compared with the Ellund-Egtved expansion, and that setting such methodology would change the expectations of users of the Baltic pipeline who agreed to contract capacity at the Open Season on the assumption that network costs would be allocated using a postage stamp methodology.
- (37) The marginal tariff principle methodology is based on the following components:
- Uniform tariff set at all points to allocate the transmission costs of the system excluding those related to the Baltic pipeline

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- Additional uniform tariff component allocated to the points benefiting from the Baltic pipeline (EPII Entry, Faxe Exit and Faxe Entry) allocating the costs of this infrastructure.
- (38) The methodology allocates 58% of the transmission costs to the points associated with the Baltic pipeline (EPII and Faxe).
- (39) The Agency notes that this methodology is not described in detail in the consultation document. As a result, the Agency cannot complete a compliance analysis. The Agency, therefore, does not assess further the methodology. At the same time, the Agency notes that the methodology seems to split the transmission revenue to allocate it to different points of the network. This approach could be non-compliant with the requirement under Article 6(3) of the NC TAR to apply the same RPM to all points of the network.

3.3.4 Comparison between methodologies

- (40) The Agency focusses its review on the methodologies that it could fully assess based on the information provided in the consultation document. .
- (41) The CWD methodology is a standard methodology based on capacity and distance as cost drivers. This methodology does not allow the specific allocation of investments to the beneficiaries, yet it allocates revenue based on cost drivers that can achieve a high degree of cost reflectivity.
- (42) In contrast, the postage stamp methodology is transparent and robust due to its simplicity, yet it is based on a socialisation that reduces the level of cost reflectivity.
- (43) Both transparency and cost reflectivity are key requirements based on the NC TAR and each of the methodologies achieve these objectives to different degrees. The next section looks at the CAA results of both RPMs.

3.4 Cost allocation assessment

- (44) The consultation document provides 20 results for the CAA based on the following scenarios:
- Four different methodologies.
 - Five tariff years between 2023 to 2027.
 - Scenario considering the merger with the upstream pipeline.
- (45) Energinet provided to the Agency additional 100+ CAA calculations which allowed the Agency further understanding the effects of the proposed postage stamp methodology.
- (46) All CAA calculations are based on the cost drivers of capacity and distance. The Agency finds this approach a good practice as it increases the accuracy of the calculation compared to just using capacity as a cost driver.
- (47) In addition, the Agency requested a number of additional CAA calculations for the following scenarios:
- Sensitivity analysis varying the discounts at entry points to and exit points from storage discounts by 100%, 90%, 75%, 50% and 0%. This analysis was instrumental to understand

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whether the high CAA results are caused by the application of discounts to entry points to and exit points from storage facilities or by the application of the RPM itself. This calculation was only provided for the CWD and postage stamp methodologies.

- CAA for the two calculations of the CWD that are referred to in paragraph (28) above.

(48) In addition, Energinet provided the Agency a number of other CAA calculations on its own initiative. These analyses have facilitated the assessment of the Agency.

(49) The main results of the CAA calculations are summarised in the tables below:

Table 2 CAA results for CWD, postage stamp, differentiated tariff and marginal tariff principle methodologies. Scenarios show sensitivity analysis to storage discounts and to the inclusion of non-transmission tariffs resulting from the merger of the upstream pipeline. Source: Energinet final tariff consultation and Energinet input to the Agency.

Discount to points from/to storage	CWD (not following NC TAR)										CWD (following NC TAR)	
	With upstream pipeline					Without upstream pipeline					With upstream p.	Without upstream p.
	100%	90%	75%	50%	0%	100%	90%	75%	50%	0%	100%	100%
2023	3%	5%	9%	14%	23%	17%	19%	21%	25%	32%	11%	25%
2024	5%	8%	11%	16%	25%	20%	22%	24%	28%	35%	13%	29%
2025	5%	8%	11%	16%	25%	20%	22%	24%	28%	35%	13%	29%
2026	5%	8%	11%	17%	26%	21%	23%	26%	29%	36%	14%	31%
2027	6%	9%	12%	18%	27%	23%	25%	27%	31%	38%	15%	33%

Discount to points from/to storage	Postage stamp									
	With upstream pipeline					Without upstream pipeline				
	100%	90%	75%	50%	0%	100%	90%	75%	50%	0%
2023	17%	21%	25%	32%	43%	34%	37%	42%	49%	59%
2024	22%	25%	30%	36%	48%	40%	43%	47%	54%	65%
2025	21%	25%	29%	36%	48%	39%	43%	47%	54%	65%
2026	21%	25%	30%	37%	49%	40%	44%	49%	56%	67%
2027	22%	26%	31%	39%	50%	42%	46%	51%	58%	69%

Discount to points from/to storage	Differentiated tariff methodology	
	With upstream p.	Without upstream p.
	100%	100%
2023	28%	34%
2024	33%	40%
2025	33%	39%
2026	33%	40%
2027	34%	42%

Discount to points from/to storage	Marginal tariff principle methodology	
	With upstream p.	Without upstream p.
	100%	100%
2023	97%	120%
2024	101%	123%
2025	104%	125%
2026	107%	128%
2027	111%	131%

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- (50) The Agency makes the following remarks based on the results provide by Energinet:
- First, none of the methodologies have a CAA under 10%, with the exception of the CWD version that is not calculated following the NC TAR rules.
 - Second, in all methodologies, the CAA results imply that a higher proportion of revenues for a unit of cost driver is allocated to intra-system users.
 - Third, the high CAA scores result from the application of the proposed methodologies. The application of 100% discounts at entry points to and exit points from storage facilities improves the CAA results.
 - Fourth, the scenarios show that the merging of the upstream pipeline with the Danish entry-exit zone improves the CAA results.

3.4.1 Comparison between the CAA results of the 2018 and 2021 tariff consultations

- (51) Energinet provided a comparison of the results provided in the current consultation with the results provided in the 2018 consultation. The results provided then for the CWD and the postage stamp methodologies were within the 10% threshold, whereas now they are above this threshold. There is no CAA calculation for the years 2019-2022, as the Baltic pipeline was not yet operational. The years 2023 to 2025 were calculated assuming that the merger with the upstream pipeline is realised.

Table 3 CAA results provided in the 2018 tariff consultation carried out by Energinet.

	CWD	Postage stamp
	<i>With upstream pipeline</i>	
2019/2020	Baltic pipeline not in operation	
2020/2021		
2021/2022		
2022/2023	(-)3.03%	(+)7.06%
2023/2024	(-)1.60%	(+)6.22%
2024/2025	(-)1.51%	(+)5.40%

- (52) Energinet explained that a number of parameters have changed compared to 2018, and that these can be responsible for the change in the CAA results:
- First, the distances between the points have changed as a result of the change in the final position of the entry point to the Baltic pipeline. The position of this point was estimated in 2018, while in 2021 the actual coordinates of the point were used. This change reduces the total distance cost driver as the exit point to the Baltic pipeline is closer to the Danish network.
 - The capacities of the network points have also changed. Exit capacity for intra-use points decreased by ~14%. This decrease would have been larger in the absence of Sweden's inclusion in JEZ, which computes the capacity of the point as intra-use. Exit capacity of cross use points has decreased by ~11%

3.4.2 Impact of the cost drivers of capacity and distance taken separately

- (53) Energinet provides additional CAA calculations using only capacity as a cost driver to better understand the contribution of the cost drivers to the CAA results. Both in the case of the postage stamp and in the case of the CWD, the results of the CAA increase, meaning the methodology becomes less cost-reflective.

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Table 4 Postage stamp and CWD CAAs

	Postage stamp		CWD	
	With upstream p.	Without upstream p.	With upstream p.	Without upstream p.
Discount to storage points	100%	100%	100%	100%
2023	27%	27%	40%	43%
2024	27%	27%	42%	46%
2025	27%	27%	43%	46%
2026	28%	28%	44%	47%
2027	29%	29%	45%	48%

3.4.3 Conclusion of the CAA analysis

- (54) The Agency observes that the number of parameters influencing the CAA calculation is high, and isolating the factors responsible for the high CAA results is complex and partially beyond the scope of this Report. The main parameters that affect the CAA results are:
- Different entry-exit zone configurations (with and without a merger with the upstream pipeline).
 - Application of discounts to entry points to and exit points from storage facilities.
 - Technical parameters of the network (e.g. forecasted contracted capacity, cross-system or intra-system nature of the point with Sweden).
 - The calculation details of the CAA (e.g. cost drivers of the CAA calculation).
 - Different capacity and distance input when comparing the 2018 and 2021 CAA results (e.g. changing distance between the points).
- (55) In this context, the Agency remarks that neither the CAA calculation for the postage stamp nor the CWD methodology are within a 10% threshold. The following table summarises the relevant CAA ranges provided by Energinet:

Table 5 Ranges for the CAA calculation applicable for the postage stamp and the CWD methodologies for the years 2023-2027. Source: Energinet final tariff consultation and Energinet input to the Agency.

		Postage stamp	CWD (not following TAR NC rules)	CWD (following TAR NC rules)
100 storage discount	With upstream merger	17%-22%	3%-6%	11%-15%
	Without upstream merger	34%-42%	17%-23%	25%-33%
0% storage discount	With upstream merger	43%-50%	23%-27%	Not available
	Without upstream merger	59%-69%	32%-38%	Not available

- (56) The Agency remarks that the CAA results for the different methodologies cannot be easily compared, as they might imply different degrees of cross-subsidisation for a same score (e.g. as a result of the different cost drivers used in each RPM). With the information reviewed, the Agency cannot point at the methodology that better fulfils the requirements under Article 7 of the NC TAR. This requires extensive analyses and consultation with stakeholders. In the understanding of the Agency, the latter have taken place in the recent years. At the same time, the Agency points out that a result higher than 10% threshold requires justification, in particular identifying the reasons triggering these scores. This is missing in the current consultation document. The outcome of the CAA suggests that there is a cross-subsidisation effect where a greater share of the revenue is allocated to intra-system users compared to cross-system users. This holds even when looking at

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the CAA results in the absence of discounts to entry points to and exit points from storage facilities or of the upstream merger. The CAA results in these cases suggest that the postage stamp and the CWD methodologies, applied in the absence of any adjustments, are not fully adequate for the non-merged Danish entry-exit system

- (57) Following the reasoning provided in this section, the Agency concludes, based on the information made available, that the TSO does not sufficiently demonstrate the compliance of the proposed RPM with the requirements on cost reflectivity, cross-subsidisation and cross-border trade. These three requirements are ultimately linked and relate to how revenue is allocated to points of the network reflecting the underlying cost drivers. The requirement on cross-subsidisation captures how a potential deviation from cost-reflectivity affects different user groups within an entry-exit zone. The requirement on cross-border trade captures how a potential deviation from cost-reflectivity affects flows with neighbouring entry-exit zones.
- (58) The Agency therefore recommends that the NRA take into account the following points when taking the motivated decision:
- First, assess the factors leading to high CAA results. This assessment should distinguish factors related to the network parameters (such as the distribution of capacities and distance across the network, the use of storage, and the way the exit capacity and revenue to Sweden is considered), and factors related to the RPM⁹. In addition, the NRA should analyse the CAA calculation to better understand the extent to which the calculation reflects an underlying cross-subsidisation effect. The aim of this assessment is to determine whether the proposed postage stamp methodology leads to undue cross-subsidisation between intra-system and cross-system use and to quantify this effect.
 - Second, should the NRA determine that the proposed postage stamp effectively results in undue cross-subsidisation, the NRA should apply a methodology that improves cost reflectivity.
 - Third, the Agency notes that the CAA results for the CWD methodology somewhat improve those of the proposed postage stamp methodology. The Agency recommends that the NRA consider the CWD methodology as an alternative option should the postage stamp methodology prove not to be sufficiently cost reflective. Should the CWD finally be implemented, the Agency recommends that the NRA assess the two possible calculations of the WAD as discussed in the ACER Report for the Polish SGT pipeline under Section 4.4¹⁰.
- (59) Finally, regarding the tariffs resulting from the upstream merger, the Agency provides a number of recommendations under Chapter 6 of this Report that relate to the application of revenue regulation and of the natural gas Network Codes.

⁹ It is possible that specific factors such as differences in the forecasted entry and exit capacity, the entry-exit split, the way capacity is forecasted, can have a large impact on the CAA results. These factors might not be necessarily related to the appropriateness of the proposed RPM for the Danish entry exit system.

¹⁰ https://extranet.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/Agency%20report%20-%20analysis%20of%20the%20consultation%20document%20for%20Poland_SGT%20pipeline.pdf

4. Completeness

4.1 Has all the information referred to in Article 26(1) been published?

- (60) Article 27(2)(a) of the NC TAR requires the Agency to analyse whether all the information referred to in Article 26(1) of the NC TAR has been published.
- (61) Article 26(1) of the NC TAR requires that the consultation document should be published in the English language, to the extent possible. The Agency remarks that the consultation document has been published in English.
- (62) Overall, the information in Article 26(1) of the NC TAR has been published with the exception of various items as listed in the table below.

Table 6 Checklist information Article 26(1)

Article	Information	Published: Y/N/NA
26(1)(a)	the description of the proposed reference price methodology	Yes
26(1)(a)(i) 26(1)(a)(i)(1) 26(1)(a)(i)(2)	the indicative information set out in Article 30(1)(a), including: <ul style="list-style-type: none"> the justification of the parameters used that are related to the technical characteristics of the system the corresponding information on the respective values of such parameters and the assumptions applied 	Yes
26(1)(a)(ii)	the value of the proposed adjustments for capacity-based transmission tariffs pursuant to Article 9	Yes
26(1)(a)(iii)	the indicative reference prices subject to consultation	Yes
26(1)(a)(iv)	the results, the components and the details of these components for the cost allocation assessments set out in Article 5	Yes. At the same time, the TSO does not provide a justification for the CAA results.
26(1)(a)(v)	the assessment of the proposed reference price methodology in accordance with Article 7	Partially. The assessment does not cover the compliance with the requirement on volume risk.
26(1)(a)(vi)	where the proposed reference price methodology is other than the capacity weighted distance reference price methodology detailed in Article 8, its comparison against the latter accompanied by the information set out in point (iii)	Yes. However the proposed CWD calculation does not follow the NC TAR steps
26(1)(b)	the indicative information set out in Article 30(1)(b)(i), (iv), (v)	Yes.
26(1)(c)(i) 26(1)(c)(i)(1) 26(1)(c)(i)(2) 26(1)(c)(i)(3)	where commodity-based transmission tariffs referred to in Article 4(3) are proposed <ul style="list-style-type: none"> the manner in which they are set the share of the allowed or target revenue forecasted to be recovered from such tariffs the indicative commodity-based transmission tariffs 	Not applicable

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<p>26(1)(c)(ii) 26(1)(c)(ii)(1) 26(1)(c)(ii)(2) 26(1)(c)(ii)(3) 26(1)(c)(ii)(4)</p>	<p>where non-transmission services provided to network users are proposed:</p> <ul style="list-style-type: none"> • the non-transmission service tariff methodology therefor • the share of the allowed or target revenue forecasted to be recovered from such tariffs • the manner in which the associated non-transmission services revenue is reconciled as referred to in Article 17(3) • the indicative non-transmission tariffs for non-transmission services provided to network users 	<p>No. The TSO does not provide the cost details of the service, the methodology used to set the tariffs, the manner in which the services is reconciled and the indicative non-transmission tariffs.</p>
<p>26(1)(d)</p>	<p>the indicative information set out in Article 30(2);</p>	<p>Yes.</p>
<p>26(1)(e) 26(1)(e)(i) 26(1)(e)(ii) 26(1)(e)(iii) 26(1)(e)(iv)</p>	<p>where the fixed payable price approach referred to in Article 24(b) is considered to be offered under a price cap regime for existing capacity:</p> <ul style="list-style-type: none"> • the proposed index; • the proposed calculation and how the revenue derived from the risk premium is used • at which interconnection point(s) and for which tariff period(s) such approach is proposed • the process of offering capacity at an interconnection point where both fixed and floating payable price approaches referred to in Article 24 are proposed 	<p>Not applicable</p>

5. Compliance

5.1 Does the RPM comply with the requirements set out in Article 7?

- (63) Article 27(2)(b)(1) of the NC TAR requires the Agency to analyse whether the proposed reference price methodology complies with the requirements set out in Article 7 of the NC TAR. This article refers to Article 13 of Regulation (EC) 715/2009 and lists a number of requirements to take into account when setting the RPM. As these overlap, in the remainder of this chapter, the Agency will take a closer look at the five elements listed in Article 7 of the NC TAR.
- (64) As the concepts of transparency, cost reflectivity, non-discrimination, cross-subsidisation and cross border trade are closely related the Agency concludes with an overall assessment. Special attention is paid to the allocation of revenues between domestic and transit routes.

5.1.1 Transparency

- (65) **Article 7(a)** of the NC TAR requires that the RPM aims at ensuring that network users can reproduce the calculation of reference prices and their accurate forecast. The Agency finds the simplified tariff model, as required by Article 30(2)(b) of the NC TAR, useful. The Agency considers that network users would be able to reproduce the calculation of reference prices. The Agency further considers that network users would be able to forecast the reference prices.

5.1.2 Cost-reflectivity

- (66) **Article 7(b)** of the NC TAR requires the RPM to take into account the actual costs incurred for the provision of transmission services, considering the level of complexity of the transmission network.

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- (67) Following the reasoning provided under Chapter 3, the Agency concludes that the TSO does not sufficiently demonstrate the compliance of the proposed postage stamp with the requirement of cost reflectivity.

5.1.3 Cross-subsidisation

- (68) **Article 7(c)** of the NC TAR requires the RPM to ensure non-discrimination and prevent undue cross-subsidisation.
- (69) The proposed RPM is compliant with the requirement on non-discrimination. This is because the RPM is used to set tariffs at all points of the network.
- (70) Following the conclusion on cost-reflectivity, the Agency concludes that the TSO does not sufficiently demonstrate the compliance of the proposed postage stamp with the requirement of preventing undue cross-subsidisation.

5.1.4 Volume risk

- (71) **Article 7(d)** of the NC TAR requires that the RPM ensures that significant volume risk related particularly to transports across an entry-exit system is not assigned to final customers within that entry-exit system. In Denmark, as a result of the entry into operation of the Baltic pipeline, there is significantly more gas that is transported across the system than used for consumption. For 2023, approximately 70% of the gas is forecasted to enter and cross the network via the Baltic pipeline.
- (72) The Agency notes that, while the share of gas transported across the network is high, Energinet does not expect any decrease in these volumes for the upcoming regulatory period. Based on this information the Agency does not identify a volume risk potentially leading to transmission costs related to the cross-system use of the system being assigned to final customers within the Danish entry-exit system in the coming regulatory period.
- (73) The Agency concludes that the proposed RPM is compliant with the requirement of volume risk. At the same time, the Agency recommends that the NRA monitor the future evolution of cross-system flows with a view to ensuring future compliance with the requirement on volume risk.

5.1.5 Cross-border trade

- (74) **Article 7(e)** of the NC TAR requires that the RPM ensures that the resulting reference prices do not distort cross-border trade.
- (75) Following the conclusion on cost-reflectivity, the Agency concludes that the TSO does not sufficiently demonstrate the compliance of the proposed postage stamp with the requirement of not distorting cross-border trade. In view of the Agency, both deviations above and below cost reflective levels can potentially distort cross-border trade.

5.2 Are the criteria for setting commodity-based transmission tariffs as set out in Article 4(3) met?

- (76) Article 27(2)(b)(2) of the NC TAR requires the Agency to analyse whether the criteria for setting commodity-based transmission tariffs as set out in Article 4(3) are met.
- (77) The TSO proposes not to apply commodity-based transmission tariffs.

5.3 Are the criteria for setting non-transmission tariffs as set out in Article 4(4) met?

- (78) Article 27(2)(b)(3) of the NC TAR requires the Agency to analyse whether the criteria for setting non-transmission tariffs as set out in Article 4(4) are met.
- (79) Energinet proposes a non-transmission service for emergency supply. The service is collected directly from domestic electricity consumers via distribution companies and it is differentiated for protected and non-protected consumers. Non-protected customers pay less than protected customers, as they can be disconnected in the event of an emergency.
- (80) Energinet points out that the NRA is responsible for setting these tariffs which are calculated to cover the costs of purchasing emergency supply mechanisms. Energinet manages a 'supporting volume' of gas in the storage facilities, which is based on the estimated need during an emergency event. Both the purchase and sale of emergency gas take place in the gas market via an auction, and separate accounts are kept. Changes in the value of the emergency gas are also adjusted between accounting periods.
- (81) According to Article 4(4) of the NC TAR, non-transmission tariffs shall be cost-reflective, non-discriminatory, objective and transparent and shall be charged to the beneficiaries of the non-transmission service.
- (82) Regarding the requirement on transparency, the Agency notes that Energinet only provides the emergency supply costs for 2015/2016 (DKK 47 million). There is no further indication of the costs of the service that will be applicable from 2023 onwards.
- (83) Regarding the requirements on cost-reflectivity, non-discrimination and objectiveness, Energinet does not provide the methodology used to derive the tariff. In the absence of this information and of the total costs to be allocated, the Agency cannot assess the compliance of the proposed tariff.
- (84) The Agency notes that Energinet does not demonstrate the compliance of the proposed emergency supply service with the requirements under Article 4(4) of the NC TAR. The Agency recommends that the NRA provide:
- The details of the costs associated with the provision of the service. According to Articles 3(11)-(13) of the NC TAR, non-transmission services should be fully regulated.
 - The methodology used to calculate the tariffs for different users of the transmission network.
 - The manner in which the associated non-transmission services revenue is reconciled as referred to in Article 17(3) of the NC TAR.
 - The indicative non-transmission tariffs for non-transmission services provided to network users.

- The criteria applicable to identify the beneficiaries of the services. This includes a motivation to allocate the costs of the service to electricity domestic consumers and the criteria to identify protected and non-protected consumers,
- (85) Finally, the Agency recommends that the rules for the TSO to act as an emergency supplier are clearly laid out in the NRA motivated decision to prevent any market distortion resulting from the potential intervention of the TSO.

6. Chapter 6: Other comments

6.1 Discounts to long-term capacity bookings

- (86) Energinet proposes to apply a discount to capacity booked on a long term basis (from five to fifteen years). The discount would range between 2-6% depending on the length of the contracted capacity, and would be applicable to all users, including the allocated capacity in connection with the 2017 Open Season on the Baltic pipeline. The discount would be deducted from the reference price for the annual capacity product for 15 years. While the TSO refers to this adjustment both as a 'multiplier' and a 'discount', the Agency notes that, in the context of the NC TAR, multipliers apply only to short term capacity products. For this reason, the Agency refers to the proposed adjustment as a discount, and not as a multiplier.
- (87) Energinet proposes the discount to compensate shippers for their willingness to undertake the risk associated with long term capacity bookings. In addition, Energinet argues that long term contracts provide certainty to the TSO over a longer period of time.
- (88) While the Agency recognises the reasoning used by Energinet, it notes that such discount is not compliant with the NC TAR. According to Article 6(4) of the NC TAR, the adjustments to the application of the RPM to all entry and exit points may only be made in accordance to Article 9 of the NC TAR or to benchmarking, equalisation and rescaling. Article 9 of the NC TAR refers to the discounts to entry points from and exit point to storage facilities, entry points from LNG facilities and to infrastructure ending isolation. The Agency remarks that neither of these options cover the proposed discount to long term capacity bookings.

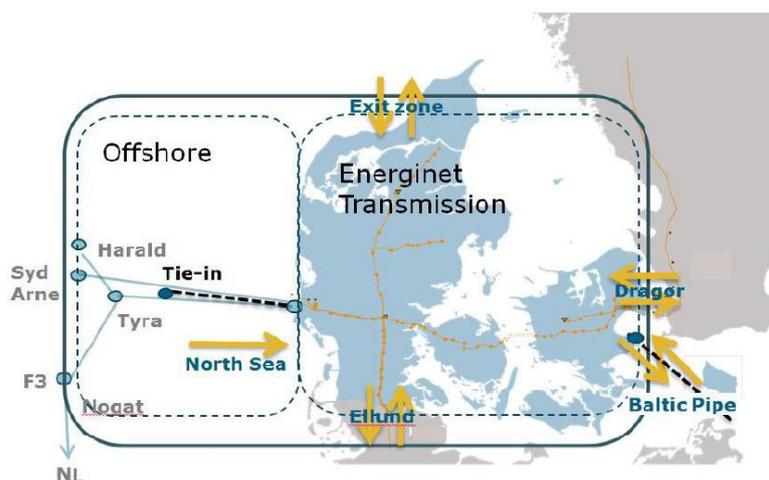
6.2 Considerations regarding the joint market model merging the Danish transmission network with an upstream pipeline

- (89) In the consultation document, Energinet refers to the merger of an upstream pipeline with the Danish transmission network. Figure 3 below represents the Danish transmission network including the segment of the upstream pipeline that is proposed to be merged with the Danish transmission network. The Agency notes that the merger is not described in detail in the consultation document.
- (90) Under Energinet's merger proposal, the costs of the upstream pipeline are allocated as non-transmission charges set uniformly at all points of the Danish transmission network. The proposed charge is based on the same socialisation logic as the postage stamp methodology. In the consultation document, Energinet refers to the resulting non-transmission charges, but does not

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assess other aspects of the merger such as the application of Network Codes, the third party access regime applicable or the revenue regulation of the upstream infrastructure.

Figure 3: Danish transmission network and upstream pipeline.



- (91) The final tariff consultation document refers to a pre-consultation on the proposed tariffs¹¹ and includes stakeholder responses received to this previous consultation. The stakeholder responses refer to the merger. For example the PNiG Group refers to the need that the final consultation 'should clearly explain which infrastructure will be included in the Joint Market Model and which will be excluded. It should also clarify which services will be affected by non-transmission services'. The Agency agrees with this remark, which is not fully addressed in the final consultation.
- (92) The pre-consultation document mentioned above also refers to an older consultation from 2016 covering the tariff principles and market design in the Baltic Pipe Open Season¹². The Agency found this document relevant as it provides a detailed description of the proposed merger including its benefits, the proposed system design, and the implications for tariffs. The document refers to the harmonisation of specific market design features including capacity products, balancing terms and tariff structures. At the same time, the consultation highlights that a number of other features remain differentiated, including specific regulation related to upstream and transmission networks and regulatory accounting books for the two parts of the merged area (e.g. OPEX and CAPEX depreciation). The document additionally refers to the benefits of the merger, which include cost-minimizing synergies for Energinet (hence lower tariffs for customers), on gas quality blending, reduced IT investments and a joint operation of balancing. The Agency refers to the consultation of 2016, in the absence of an updated description in the current or the pre-consultation document. The Agency observes that these elements might have been modified and adapted to the current context.

¹¹ <https://en.energinet.dk/Gas/Gas-news/2021/09/10/Pre-consultation-gas-tariffs>

¹² <https://en.energinet.dk/-/media/AC8B710D25E542DAA33A6E5269432CD6.pdf?la=en&hash=B03F526174CBC9E90F948BD4993C84B4E883E4E6>

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- (93) Close to the publication deadline of this Report, the Agency was informed of a consultation carried out by the NRA on the proposed merger of the upstream pipeline that had been launched on 21 December 2021 remaining open until 10 January 2022¹³. The Agency could not assess these documents as they were received late in the process and as a translation in English was not available. The Agency notes that some of the conclusions in this Chapter are considered in this consultation.
- (94) The Agency notes that the information made available in the public final tariff consultation, in addition to the information provided bilaterally to the Agency is not sufficient to conclude on the appropriateness of the merger. In view of the Agency, there are multiple issues that should be scrutinised prior to accepting the merger proposal. These include, for example, the balancing regime (e.g. regarding how the upstream linepack will be used) and the CAM regime (e.g. regarding how and to whom capacity will be allocated for the upstream section). In the sections below, the Agency provides its view on regulatory considerations that are relevant from a tariff perspective. These relate to the distinction between transmission and upstream networks, and to the cost regulation that is applicable to the assets to be allocated to transmission users.
- (95) In addition, to considering these issues when assessing the merger of the upstream pipeline, the Agency recommends that the NRA ensure that the process be based on consultations that follow a logical order. For example, a consultation on the merger should precede the consultation on transmission tariffs. Equally, the setting of revenue regulation for the upstream assets should precede the consultation on transmission tariffs.

6.2.1 Regulatory aspects related to cost control of the upstream pipeline

- (96) During bilateral exchanges with Energinet, the TSO explained to the Agency that the extension of existing regulation for the Danish entry-exit system is not expected to be extended to the upstream pipeline as this infrastructure is currently subject to the Danish upstream regulation¹⁴. In the view of the Agency, the preferred option to proceed forward with the proposed merger is to extend the regulation applicable to the transmission network to the upstream pipeline. This would ensure that the objectives for which transmission regulation are designed are met.
- (97) Independently of the choice of the NRA to extend to the upstream pipeline the regulation applicable to the transmission network, the Agency provides various remarks in this section on the regulation that should be applicable to costs that are allocated to users of a transmission network. This list is not-exhaustive and looks at the definitions that enable the separation of upstream and transmission networks and at the application of revenue regulation to the former.

¹³ [Høring over udkast til afgørelse vedr. Energinets anmeldelse af metode for etablering af en fælles markedszone \(forsyningstilsynet.dk\)](https://forsyningstilsynet.dk)

¹⁴ See section 37 d -37 f, cf. § 3 in Act no. 2211 of 29 December 2020. <https://www.retsinformation.dk/eli/ta/2020/2211>

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6.2.1.1 Definitions of transmission and upstream networks

- (98) In relation to the legal definitions of transmission and upstream networks, the Agency notes that the NC TAR does not foresee the allocation of costs of upstream networks to points of the transmission network.
- (99) The Directive 2009/73/EC provides definitions of both ‘transmission’ and of ‘upstream pipeline network’. Article 2(3) of Directive 2009/73/EC defines transmission as ‘*the transport of natural gas through a network, which mainly contains high-pressure pipelines, other than an upstream pipeline network (...)*’. Article 2(2) of Directive 2009/73/EC defines ‘upstream pipeline network’ as ‘*any pipeline or network of pipelines operated and/or constructed as part of an oil or gas production project, or used to convey natural gas from one or more such projects to a processing plant or terminal or final coastal landing terminal*’.
- (100) Based on these definitions, the NC TAR sets rules for the allocation of revenue associated with transmission¹⁵ and non-transmission¹⁶ services that are provided by the TSO. In both cases, these are regulated services that have to be provided by the TSO. Importantly, Article 3(11) of the NC TAR defines allowed revenue as ‘*the sum of transmission services revenue and non-transmission service revenue for the provision of services by the TSO for a specific time period within a given regulatory period which such TSO is entitled to obtain under a non-price cap regime and which is set in accordance to Article 41(6)(a) of Directive 2009/73/EC*’. This implies that both transmission and non-transmission services should be part of the allowed revenue of the TSO. According the information shared by Energinet with the Agency, the upstream pipeline is not subject to such regulation.
- (101) The obligation of NRAs to regulate revenue of the TSO, including transmission and non-transmission, is set under Article 41(6)(a) of Directive 2009/73/EC: ‘*The regulatory authorities shall be responsible for fixing or approving sufficiently in advance of their entry into force at least the methodologies used to calculate or establish the terms and conditions for: connection and access to national networks, including transmission and distribution tariffs (...)*’
- (102) Furthermore, Article 41(6)(a) of Directive 2009/73/EC and Article 13 of Regulation (EC) No 715/2009¹⁷ set the terms that should apply to this specific revenue regulation. The purpose of this Report is not to discuss these principles, but rather point to the legal differentiation between transmission and upstream networks in terms of revenue regulation. The regulation applicable to the upstream pipeline does not meet the requirement of revenue regulation, which is a precondition to allocate costs to users of the transmission network. According with the information shared by Energinet with the Agency, the assets of the upstream pipeline, which is owned by Energinet, are not subject to revenue regulation and are not part of any regulatory asset base (‘RAB’). As a result

¹⁵ Article 3(12) of the NC TAR defines transmission services as ‘*the regulated services that are provided by the TSO within the entry-exit system for the purpose of transmission*’

¹⁶ Article 3(15) of the NC TAR defines non-transmission services as ‘*the regulated services other than transmission services and other than services regulated by Regulation No 312/2014 that are provided by the TSO*’.

¹⁷ REGULATION (EC) No 715/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005.

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they do not meet a basic requirement for its cost to be allocated to users of the Danish transmission network.

6.2.1.2 Revenue regulation of upstream assets

- (103) Following the previous conclusion, the Agency provides various considerations for the NRA to take into account should it allocate the costs of the upstream pipeline to the users of the Danish transmission network.
- (104) First the NRA should apply revenue regulation to the upstream pipeline.
- (105) During bilateral exchanges, both Energinet and Forsyningstilsynet referred to a review of the allowed revenue regime applicable to the Danish transmission network which is currently on-going. This regulatory framework could be applied to the upstream pipeline once it is finalised. However, it is not clear whether this process can be finalised in time to calculate the new tariffs that will enter into force in 2023. According to Article 32(a) of the NC TAR, the tariffs applicable for 2023 should be published 30 days before the annual yearly capacity auction, that is, by 4 June 2022.
- (106) Given that Forsyningstilsynet might not set a regulatory framework in time, Energinet explained to the Agency that the current Danish regulatory framework is already adequate to set the costs of the upstream pipeline during a transitory period. This is because Forsyningstilsynet is in charge of the monitoring Energinet's costs and can order their modification¹⁸. According to the Section 12 in the Act on Energinet¹⁹, Energinet and its fully owned subsidiaries must keep separate accounts in their internal accounting for each of their electricity and gas related activities, including the operation of gas transmission and gas upstream activities. This requirements aims at avoiding discrimination, cross-subsidization and distortion of competition. In view of the Agency, the separation of accounts is key to ensure regulatory oversight.
- (107) The Agency could assess neither of the two regulatory frameworks. At the same time, the Agency remarks, as laid out above, that revenue regulation applicable to cost allocated to users of the transmission network should be compliant with both Article 41(6)(a) of Directive 2009/73/EC and Article 13 of Regulation (EC) No 715/2009.
- (108) Second, when allocating these costs, the Agency recommends that the NRA assess the impact of the proposed mechanism on competition, cross-subsidisation and on the efficiency of the allocated costs. In the 2020 ACER Report *The internal gas market in Europe: The role of transmission tariffs*²⁰ the Agency analysed how a number of MSs allocate specific costs not related to the activity of the TSO as part of, or together with, transmission network tariffs. These costs related, for example to regional networks, storage, LNG terminals and biogas connection and production. The Agency recommends that Forsyningstilsynet take this analysis into account should it allocate the costs of the upstream pipeline to users of the transmission network.

¹⁸ See Executive Order no. 1410 of 16 December 2019: <https://www.retsinfor-mation.dk/eli/lta/2019/1410>

¹⁹ cf. Consolidation Act no. 118 of 6 February 2020. See link: <https://www.retsinformation.dk/eli/lta/2020/118>

²⁰ See Chapter 6:

https://documents.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/The%20internal%20gas%20market%20in%20Europe_The%20role%20of%20transmission%20tariffs.pdf

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6.2.1.3 Split of revenue according to the dual regulated and negotiated third party access

- (109) When setting the regulated revenue for the upstream pipeline, the NRA should take into account the access regime considered for the upstream pipeline. As explained by Energinet, the upstream pipeline will be primarily used under regulated third party access ('rTPA') conditions, with the possibility of booking under negotiated TPA ('nTPA') conditions. Energinet explained to the Agency that no shipper has expressed any interested in using the nTPA regime.
- (110) The Agency notes that the application of the NC TAR was not designed for, and may not be compatible with, an nTPA regime. Consequentially, the NC TAR foresees the calculation of tariffs based on regulated network costs and cost drivers. These factors are not subject to a negotiation which is allowed under an nTPA regime.
- (111) In the view of the Agency, the application of a dual TPA regime would require a mechanism set in advanced for the splitting of revenue related the use of the pipeline under the nTPA and rTPA regimes. This would allow identifying the costs of the upstream pipeline associated with the use of nTPA that are eligible to be recovered using network charges.
- (112) The Agency notes that the consultation document does not include any information on the calculation of this split of revenue. The Agency notes that neither Energinet nor Forsyningstilsynet provided a methodology for this purpose during bilateral exchanges. This information should have been made available to stakeholders as part of the revenue regulation applicable to the upstream pipeline.

6.2.1.4 Revenue reconciliation and risk of stranded assets

- (113) Following the application of revenue regulation, in a second step, the NRA should consider additional rules for the reconciliation of the recovered revenue to manage the potential revenue under- and over- recoveries. In the event of the upstream pipeline costs being recovered by network tariffs, the conditions applicable for the reconciliation of revenue should be laid out in advance.
- (114) The NC TAR provides rules for the reconciliation of both transmission and non-transmission revenue under Chapter IV (Articles 17 to 20). The proposed non-transmission charges by Energinet to allocate the costs of the upstream pipeline can be reconciled separately from the tariffs applicable to transmission. This point is explained in the 2020 ACER Report *The internal gas market in Europe: The role of transmission tariffs*²¹.
- (115) Finally, related to the reconciliation of under- and over- recoveries is the treatment of potential stranded assets. The NRA should clarify the treatment of the upstream assets should these cease to be used. In particular, the regulation should clarify whether the Energinet should continue to recover the revenue related to assets that are no longer used.

²¹ See Chapter 7.6 on revenue reconciliation.

https://documents.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/The%20internal%20gas%20market%20in%20Europe_The%20role%20of%20transmission%20tariffs.pdf

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6.2.2 Proposed tariff methodology using non-transmission services

- (116) The following section discusses the proposed allocation of the costs of the upstream pipeline using non-transmission charges. The Agency notes that this analysis should be consistent with the regulated status of the costs as discussed in the previous section.

6.2.2.1 Separate accounts as a pre-condition for the application of non-transmission charges

- (117) In its public consultation document, Energinet proposes to allocate all services provided with the upstream pipeline using non-transmission tariffs pursuant to Article 4(4) of the NC TAR. The Agency notes that this proposal should be based on the use of separate accounts for the revenue to be allocated using transmission and non-transmission tariffs.
- (118) Article 4(1)(a)-(b) of the NC TAR requires that transmission costs comply with the conditions of *i)* being caused by capacity and distance and *ii)* being part of the RAB for the provision of transmission services. The Agency understands that the costs of the upstream pipeline are caused by both capacity and distance. Therefore, in order to meet the criteria to allocate these costs as non-transmission, they should be kept in an account separate to the transmission RAB. Under such condition, Article 4(1) of the NC TAR clarifies that the costs of such service can be “*attributed to either transmission or non-transmission services subject to the findings of the periodic consultation by the TSO or the NRA*”.

6.2.2.2 Allocation of non-transmission charges to all network points

- (119) The NC TAR sets further requirements applicable when setting non-transmission charges in Article 4(4) of the NC TAR. In particular non transmission charges shall be:
- a) *cost-reflective, non-discriminatory, objective and transparent;*
 - b) *charged to the beneficiaries of a given non-transmission service with the aim of minimising cross-subsidisation between network users within or outside a Member State, or both.*
- Where according to the national regulatory authority a given non-transmission service benefits all network users, the costs for such service shall be recovered from all network users.”*
- (120) In its consultation document, Energinet considers that the joint market zone will benefit all users, and proposes to allocate upstream costs uniformly to all users. These costs are therefore allocated to all users in the same way as the transmission revenue, using a postage stamp RPM.
- (121) The Agency remarks that the analysis provided by Energinet in the consultation document is not exhaustive.
- The requirements on *cost-reflectivity, objectivity and transparency* regarding the revenue regulation for the upstream pipeline are not met. The NC TAR and Directive 2009/73/EC foresee an NRA decision on allowed revenue which has not been published, as discussed in the previous sections of this Chapter.
 - The requirement on *non-discrimination* foreseen by NC TAR is met by the proposed charge as it is set at all network points.
 - Regarding the setting of the non-transmission charge to all points of the network, the Agency remarks that Energinet does not conduct an analysis of the beneficiaries of the upstream pipeline. For example, Energinet does not assess whether users of the IP point with Germany

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benefit from the merger and should therefore bear the relevant costs. Such analysis should precede the allocation of the charge to all points of the network.

(122) Given that Energinet proposes to socialise to all users the costs of the upstream pipeline, the Agency considers that the same requirements that apply to the RPM should also apply to the proposed non-transmission charges. These requirements are laid out in Article 7 of NC TAR and include, in addition to the requirements in the previous paragraph, avoiding undue cross-subsidisation, non-distortion of cross-border trade and avoiding volume risk. The Agency recommends that:

- The analysis on cross-subsidisation be performed using the CAA in a joint assessment with the RPM. This is already done in the current consultation, but further analysis should be completed following the high CAA results. The proposed non-transmission charges should be kept as part of this analysis. In addition, the NRA should assess the potential cross-subsidisation resulting from the proposed non-transmission tariff between users of short-term capacity products and of yearly capacity. Contrary to transmission tariffs, non-transmission tariffs cannot be adapted to shorter term capacity products. As a result, the proposed non-transmission tariff might not be borne by users of short term capacity.
- The impact of the merger should be assessed separately for intra-system and cross-system users to reflect how the benefits are distributed across network users.

Annex 1: Legal framework

(124) Article 27 of the NC TAR reads:

1. *Upon launching the final consultation pursuant to Article 26 prior to the decision referred to in Article 27(4), the national regulatory authority or the transmission system operator(s), as decided by the national regulatory authority, shall forward the consultation documents to the Agency.*

2. *The Agency shall analyse the following aspects of the consultation document:*

(a) whether all the information referred to in Article 26(1) has been published;

(b) whether the elements consulted on in accordance with Article 26 comply with the following requirements:

(1) whether the proposed reference price methodology complies with the requirements set out in Article 7;

(2) whether the criteria for setting commodity-based transmission tariffs as set out in Article 4(3) are met;

(3) whether the criteria for setting non-transmission tariffs as set out in Article 4(4) are met.

3. *Within two months following the end of the consultation referred to in paragraph 1, the Agency shall publish and send to the national regulatory authority or transmission system operator, depending on which entity published the consultation document, and the Commission the conclusion of its analysis in accordance with paragraph 2 in English.*

The Agency shall preserve the confidentiality of any commercially sensitive information.

4. *Within five months following the end of the final consultation, the national regulatory authority, acting in accordance with Article 41(6)(a) of Directive 2009/73/EC, shall take and publish a motivated decision on all items set out in Article 26(1). Upon publication, the national regulatory authority shall send to the Agency and the Commission its decision.*

5. *The procedure consisting of the final consultation on the reference price methodology in accordance with Article 26, the decision by the national regulatory authority in accordance with paragraph 4, the calculation of tariffs on the basis of this decision, and the publication of the tariffs in accordance with Chapter VIII may be initiated as from the entry into force of this Regulation and shall be concluded no later than 31 May 2019. The requirements set out in Chapters II, III and IV shall be taken into account in this procedure. The tariffs applicable for the prevailing tariff period at 31 May 2019 will be applicable until the end thereof. This procedure shall be repeated at least every five years starting from 31 May 2019.*

(125) Article 26(1) of the NC TAR reads:

1. *One or more consultations shall be carried out by the national regulatory authority or the transmission system operator(s), as decided by the national regulatory authority. To the extent possible and in order to render more effective the consultation process, the consultation document should be published in the English language. The final consultation prior to the decision referred to in Article 27(4) shall comply with the requirements set out in this Article and Article 27, and shall include the following information:*

(a) the description of the proposed reference price methodology as well as the following items:

(i) the indicative information set out in Article 30(1)(a), including:

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- (1) the justification of the parameters used that are related to the technical characteristics of the system;
 - (2) the corresponding information on the respective values of such parameters and the assumptions applied.
- (ii) the value of the proposed adjustments for capacity-based transmission tariffs pursuant to Article 9;
- (iii) the indicative reference prices subject to consultation;
- (iv) the results, the components and the details of these components for the cost allocation assessments set out in Article 5;
- (v) the assessment of the proposed reference price methodology in accordance with Article 7;
- (vi) where the proposed reference price methodology is other than the capacity weighted distance reference price methodology detailed in Article 8, its comparison against the latter accompanied by the information set out in point (iii);
- (b) the indicative information set out in Article 30(1)(b)(i), (iv), (v);
- (c) the following information on transmission and non-transmission tariffs:
 - (i) where commodity-based transmission tariffs referred to in Article 4(3) are proposed:
 - (1) the manner in which they are set;
 - (2) the share of the allowed or target revenue forecasted to be recovered from such tariffs;
 - (3) the indicative commodity-based transmission tariffs;
 - (ii) where non-transmission services provided to network users are proposed:
 - (1) the non-transmission service tariff methodology therefor;
 - (2) the share of the allowed or target revenue forecasted to be recovered from such tariffs;
 - (3) the manner in which the associated non-transmission services revenue is reconciled as referred to in Article 17(3);
 - (4) the indicative non-transmission tariffs for non-transmission services provided to network users;
- (d) the indicative information set out in Article 30(2);
- (e) where the fixed payable price approach referred to in Article 24(b) is considered to be offered under a price cap regime for existing capacity:
 - (i) the proposed index;
 - (ii) the proposed calculation and how the revenue derived from the risk premium is used;
 - (iii) at which interconnection point(s) and for which tariff period(s) such approach is proposed;
 - (iv) the process of offering capacity at an interconnection point where both fixed and floating payable price approaches referred to in Article 24 are proposed.

(126) Article 7 of the NC TAR reads:

The reference price methodology shall comply with Article 13 of Regulation (EC) No 715/2009 and with the following requirements. It shall aim at:

- a) *enabling network users to reproduce the calculation of reference prices and their accurate forecast;*
- b) *taking into account the actual costs incurred for the provision of transmission services considering the level of complexity of the transmission network;*
- c) *ensuring non-discrimination and prevent undue cross-subsidisation including by taking into account the cost allocation assessments set out in Article 5;*

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(d) ensuring that significant volume risk related particularly to transports across an entry-exit system is not assigned to final customers within that entry-exit system;

(e) ensuring that the resulting reference prices do not distort cross-border trade.

(127) Article 13 of Regulation (EC) No 715/2009 reads:

1. Tariffs, or the methodologies used to calculate them, applied by the transmission system operators and approved by the regulatory authorities pursuant to Article 41(6) of Directive 2009/73/EC, as well as tariffs published pursuant to Article 32(1) of that Directive, shall be transparent, take into account the need for system integrity and its improvement and reflect the actual costs incurred, insofar as such costs correspond to those of an efficient and structurally comparable network operator and are transparent, whilst including an appropriate return on investments, and, where appropriate, taking account of the benchmarking of tariffs by the regulatory authorities. Tariffs, or the methodologies used to calculate them, shall be applied in a nondiscriminatory manner.

Member States may decide that tariffs may also be determined through market-based arrangements, such as auctions, provided that such arrangements and the revenues arising therefrom are approved by the regulatory authority.

Tariffs, or the methodologies used to calculate them, shall facilitate efficient gas trade and competition, while at the same time avoiding cross-subsidies between network users and providing incentives for investment and maintaining or creating interoperability for transmission networks.

Tariffs for network users shall be non-discriminatory and set separately for every entry point into or exit point out of the transmission system. Cost-allocation mechanisms and rate setting methodology regarding entry points and exit points shall be approved by the national regulatory authorities. By 3 September 2011, the Member States shall ensure that, after a transitional period, network charges shall not be calculated on the basis of contract paths.

2. Tariffs for network access shall neither restrict market liquidity nor distort trade across borders of different transmission systems. Where differences in tariff structures or balancing mechanisms would hamper trade across transmission systems, and notwithstanding Article 41(6) of Directive 2009/73/EC, transmission system operators shall, in close cooperation with the relevant national authorities, actively pursue convergence of tariff structures and charging principles, including in relation to balancing.

(128) Article 4(3) of the NC TAR reads:

3. The transmission services revenue shall be recovered by capacity-based transmission tariffs. As an exception, subject to the approval of the national regulatory authority, a part of the transmission services revenue may be recovered only by the following commodity-based transmission tariffs which are set separately from each other:

(a) a flow-based charge, which shall comply with all of the following criteria:

- (i) levied for the purpose of covering the costs mainly driven by the quantity of the gas flow;*
- (ii) calculated on the basis of forecasted or historical flows, or both, and set in such a way that it is the same at all entry points and the same at all exit points;*
- (iii) expressed in monetary terms or in kind.*

(b) a complementary revenue recovery charge, which shall comply with all of the following criteria:

- (i) levied for the purpose of managing revenue under- and over-recovery;*
- (ii) calculated on the basis of forecasted or historical capacity allocations and flows, or both;*

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(iii) applied at points other than interconnection points;

(iv) applied after the national regulatory authority has made an assessment of its cost-reflectivity and its impact on cross-subsidisation between interconnection points and points other than interconnection points.

(129) Article 4(4) of the NC TAR reads:

4. The non-transmission services revenue shall be recovered by non-transmission tariffs applicable for a given nontransmission service. Such tariffs shall be as follows:

(a) cost-reflective, non-discriminatory, objective and transparent;

(b) charged to the beneficiaries of a given non-transmission service with the aim of minimising cross-subsidisation between network users within or outside a Member State, or both.

Where according to the national regulatory authority a given non-transmission service benefits all network users, the costs for such service shall be recovered from all network users.

Annex 2: List of abbreviations

Acronym	Definition
ACER	Agency for the Cooperation of Energy Regulators
ENTSOG	European Network of Transmission System Operators for Gas
NRA	National Regulatory Authority
TSO	Transmission System Operator
EC	European Commission
EU	European Union
MS	Member State
NC TAR	Network code on harmonised transmission tariff structures for gas
IP	Interconnection Point
VIP	Virtual Interconnection Point
RPM	Reference Price Methodology
CWD	Capacity Weighted Distance
CAA	Cost Allocation Assessment
RAB	Regulated Asset Base
OPEX	Operational Expenditures
CAPEX	Capital Expenditures