Bundesnetzagentur

Danish Utility Regulator

Regulators' opinion on:

7 March 2022

ENERGINET-TENNET MONITORING REPORT FOR 2020 ON THE OPERATION OF THE JOINT DECLARATION

Bundesnetzagentur ("BNetzA") and the Danish Utility Regulator ("DUR") monitor the implementation and issue an annual opinion on the transmission system operators (TSO's) TenneT's and Energinet's fulfilment of the targets in the Joint Declaration from July 4 2017 to increase electricity trade between Germany and Denmark. The 2020-opinion is the 4th regulators' opinion and it is based on the TSOs' monitoring report for 2020.

BACKGROUND

On 4 July 2017 the Federal Ministry of Economic Affairs and Energy of the Federal Republic of Germany and the Danish Ministry of Energy, Utilities and Climate reached a Joint Declaration (JD) to increase electricity trade between Germany and Denmark. The two national energy regulators, Bundesnetzagentur (BNetzA) and the Danish Utility Regulator (DUR) monitor the implementation of the JD.

The JD[1] aims to increases electricity trade between Germany (DE) and Denmark West (DK1) while ensuring grid security by gradually making the full capacity of interconnectors between DE and DK1 available for trade as soon as the relevant infrastructure development has been completed.

The relevant TSOs, TenneT and Energinet, are responsible for the technical implementation of JD and they are requested to continuously monitor the implementation. The TSOs shall prepare and submit yearly monitoring reports to the NRAs, BNetzA and DUR, which in turn provide an annual opinion, which is this document.

Since JD came into effect, DUR and BNetzA have issued yearly opinions on the TSOs' fulfilment. The latest opinion was issued in January 2021: "*Regulators' opinion on Energinet-TenneT monitoring report for 2019 on the operation of the Joint Declaration*"[2].

BNetzA and DUR received the TSOs' report "*Joint Declaration monitoring report 2020*" on 1 July 2021. Please see Annex to this opinion.

[1] https://www.bmwi.de/Redaktion/EN/Pressemitteilungen/2017/20170614-deutschland-und-daenemark-einigung-auf-stromhandel.html

http://en.efkm.dk/news/news-archive/2017/jun/denmark-and-germany-agree-on-increasing-electricity-trade-between-their-countries/

[2] https://forsyningstilsynet.dk/aktuelt/nyheder/energinet-og-tennet-s-monitoreringsrapport-2019

On 7 December 2018, TenneT reached an agreement with the European Commission on certain commitments[3] regarding capacity on the DK1-DE border. TenneT is obliged to comply with both the JD and TenneT's commitments to DG Comp, although there is no formal link between them. The Commitments run in 9 years, i.e. until 1 January 2027.

Energinet has provided upward or downward regulation on the request of TenneT to meet the targets in the JD about increasing electricity trade between Germany and Denmark from 2017 to 2020.

On 21 December 2021, Energinet submitted a new methodology for the procurement of energy for the use of countertrading for regulatory approval with DUR. The new methodology is currently being assessed by DUR[4].

Energinet states its reasons for submitting the new methodology as being the introduction of the MARI and PICASSO balancing platforms that Denmark will connect to in the future. After the connection to the new balancing platforms it will no longer be possible to perform countertrade by procuring and selling energy as special regulation. Furthermore Energinet states that it has observed sharply rising volumes and costs for the procurement of energy for countertrade and Energinet wants to change the methodology so that more market participants can participate and costs can be kept lower.

PURPOSE OF THIS OPINION

The purpose of this opinion is for regulators to:

- Assess the TSOs' report and provide an opinion on it with the aim to continuously improve efficiency and effectiveness of the implementation.
- Evaluate whether the requirements from the JD have been adhered to by the TSOs

REQUIREMENTS FROM JOINT DECLARATION

The purpose and formal requirements of the JD are:

- Promotion of necessary investment signals
- Facilitation of cost effective means of integration of renewables;
- Improve flexibility within and across electricity systems
- Foster increasing cross-border trade while respecting system security;
- Pursuing a consistent and non-discriminatory approach.

[3] DG Comp antitrust / Cartel cases: 40461 DE/DK Interconnector

[4] https://forsyningstilsynet.dk/lovgivning/hoeringer/hoering-over-energinets-metode-for-indkoeb-af-modhandelsenergi

The minimum capacity is increased stepwise in order to foster cross-border trade and enable the market to determine the appropriate cross-border flow of electricity, according to the JD. This approach shall be regarded as temporary until the required grid enforcements are achieved. The capacity in the day-ahead market in 2020 should be 1100 MW in both directions on the DK1-DE border. See Table 1.

TABLE 1 | **STEPWISE INCREASE OF CAPACITY BETWEEN DK1-DE, 2017-2020**

Year	Minimum available hourly capacity
2017 2nd semester	400 MW
2018	700 MW
1st of January 2019 – 31st of March 2019	900 MW
1st of April 2019 – 31st of December 2019	1000 MW
2020	1100 MW

Source: Joint Declaration

The JD also states that the TSOs should develop countertrade methods or other methods. This was done via TSOs' Impact Assessment of 29 November 2017[5]. The impact assessment showed that all alternatives for countertrading have benefits and drawbacks. It was not possible to choose an alternative completely without drawbacks.

The JD states that the approach shall set an incentive to continuously work on overcoming internal grid congestions, thereby contributing to a well-integrated European electricity market. The approach shall also foster regional cooperation for market integration and security of supply.

The total costs for realising the minimum capacity values in the stepwise approach should not exceed 40 million € p.a. for the German side[6], according to the JD. However, the cost cap does not in practice apply as the minimum capacities in TenneT's commitments to DG COMP exceed the minimum capacities under JD and the commitments are not subject to a cost cap. Nevertheless, it is still a formal requirement under JD that the TSOs report on cost incurred.

The JD states that the regulators shall request the TSOs to continuously monitor the implementation of the JD and prepare and submit monitoring reports to the NRAs.

[5] *https://en.energinet.dk › News › 2017/12/01*

[6] A requester pays principle is used, according to agreement between Energinet and TenneT.

The monitoring reports shall at a minimum include costs incurred, deviations from the JD, reasons for deviations, challenges in implementation and opportunities for improving the implementation of the JD.

The monitoring report shall also include a status on internal grid developments on both sides of the border.

The JD states that the DUR and BNetzA shall assess the monitoring reports and provide an opinion on them with the aim to continuously improve efficiency and effectiveness of the implementation.

REGULATOR REQUESTS FROM LAST YEAR'S OPINION

In the opinion from last year, DUR and BNetzA requested the following additional information from the TSOs (see footnote 2):

- Explain effect of net developments on expected ability to transport physical power on the DK1-DE border in the coming years (trading capacity and not the individual technical capacity of each transmission line).
- Analysis of hourly level of countertrade in order to assess sufficiency of supply for 2020.
- Describe the total level and cost of countertrade for 2020 and estimate the level and cost due to JD-countertrading.

BNetzA and DUR were also of the opinion that there was no reason to initiate a process in which the reasons for reaching the cost cap need to be analysed as the TenneT Commitments to DG Comp introduced higher minimum capacities not subject to a cost cap.

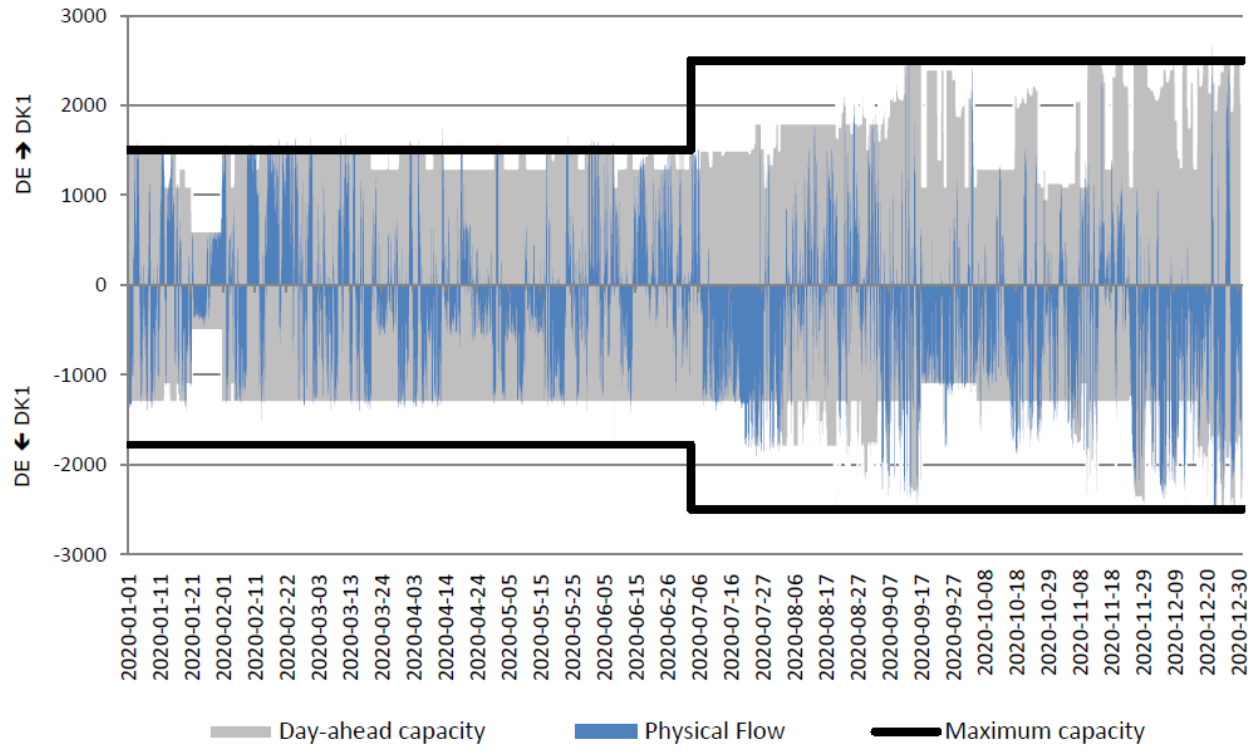
MAIN CONCLUSIONS FROM TSOs' REPORT FOR 2020

CAPACITIES

The TSOs state that the required minimum capacity of 1100 MW has been upheld, except in 226 hours in January and 9 hours in October 2020, cf. Figure 1. This is out of 8784 hours for all of 2020, resulting in 2.7% of all hours with reduced capacities due to maintenance. The TSOs further state that all reductions were caused by construction work on the 400 kV station in Kassø. Q2 and Q3 had no periods with reduced capacity below the minimum capacity according to the TSOs.

The Kassø-Dollern project was completed in 2020 with the commissioning of all sections in July 2020. As a result, the maximum capacity was in July increased to 2.500 MW in both directions

FIGURE 1 | **TSOS' REPORT OF AMOUNT OF CAPACITY AND FLOW**



Source: Joint Declaration Monitoring Report 2020 by Energinet and TenneT (1 July 2021)

AMOUNT OF COUNTERTRADE

The monthly amount of countertrade fluctuated a lot during the year. The TSOs report monthly countertrade between 40,317 MWh/month and 291,982 MWh/month, cf. Table 2. The total amount of countertrade for the JD was 2.2 TWh in 2020 (compared with 1.4 TWh in 2019).

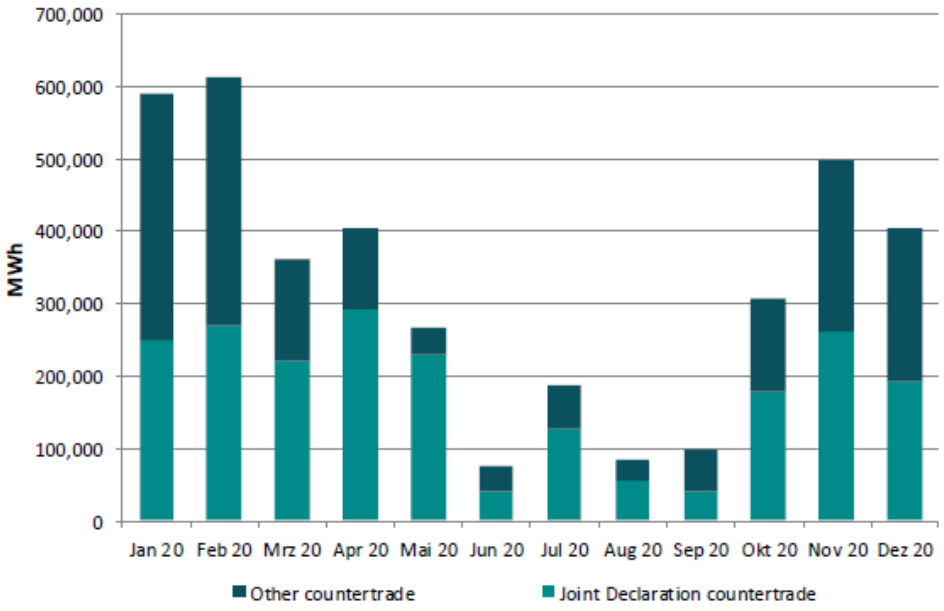
TABLE 2 | **COUNTERTRADE ACCORDING TO THE JD IN 2020**

2020	Hours with countertrade	Countertrade as of total hours per month	Countertrade following Joint Declaration (MWh)
Jan	516	69%	248,274
Feb	374	56%	268,579
Mar	346	47%	220,155
Apr	429	60%	291,982
May	329	44%	228,269
Jun	89	12%	41,153
Jul	219	29%	127,095
Aug	89	12%	55,659
Sep	66	9%	40,317
Oct	379	51%	178,029
Nov	291	40%	259,815
Dec	272	37%	193,426

Source: Joint Declaration Monitoring Report 2020 by Energinet and TenneT (1 July 2021)

Besides countertrade used for the JD, the TSOs conduct countertrade for other reasons which is provided on a voluntary basis between the TSOs if available. The TSOs refer to this as “other countertrade”. It includes imbalance netting and countertrade for other reasons than the JD and amounts to approximately 1.7 TWh. The total level of requested countertrade towards TenneT was 3.9 TWh in 2020, cf. Figure 2.

FIGURE 2 | **TOTAL REQUESTED COUNTERTRADE FOR THE PURPOSE OF JOINT DECLARATION AND OTHER COUNTERTRADE**



Kilde: Joint Declaration Monitoring Report 2020 by Energinet and TenneT (1 July 2021)
Note: Countertrade is handled by either special regulation or netting.

COSTS INCURRED BY COUNTERTRADE DUE TO THE JD

The TSOs report total monthly costs between 1,727,885 and 15,720,203 EUR due to the JD, cf. Table 3. The costs in Table 3 include the expenses on the German intraday market as well as the expenses on the Danish special regulation market.

The costs were highest in the period between late autumn and early spring because the generation from wind power was higher in this period and therefore increases the need for downward regulation. Generation from wind power can cause congestions in the German grid, which causes TenneT to request higher amounts of downward counter-trading in Denmark.

The total costs for countertrade due to the JD in 2020 was 93.5 million EUR. The JD follows a “requester pays” principle, i.e. the TSO that requests the countertrade pays for it.

In 2020, TenneT was the requesting party for all countertrades. This means, that TenneT covered the entire 93.5 million EUR.

TABLE 3 | **COSTS OF THE JD FOR ENERGINET AND TENNET FOR 2020**

2020	Costs in Denmark West (EUR)	Costs in TenneT area (EUR)	Total costs (EUR)
Jan	1,194,973	9,069,319	10,264,292
Feb	4,308,826	7,420,178	11,729,004
Mar	3,404,300	4,924,648	8,328,948
Apr	3,785,347	6,694,201	10,479,549
May	2,629,866	4,607,907	7,237,773
Jun	1,628,939	940,211	2,569,150
Jul	2,739,184	3,437,448	6,176,632
Aug	770,641	1,449,140	2,219,781
Sep	297,652	1,430,232	1,727,885
Oct	-115,623	6,240,651	6,125,028
Nov	6,996,853	8,723,350	15,720,203
Dec	2,338,518	8,629,624	10,968,142

Source: Joint Declaration Monitoring Report 2020 by Energinet and TenneT (1 July 2021)
Note: Negative numbers indicate revenues.

IMPACT OF COUNTERTRADING ON THE GERMAN INTRADAY MARKET

The TSOs have assessed the impact of countertrading on the German intraday market.

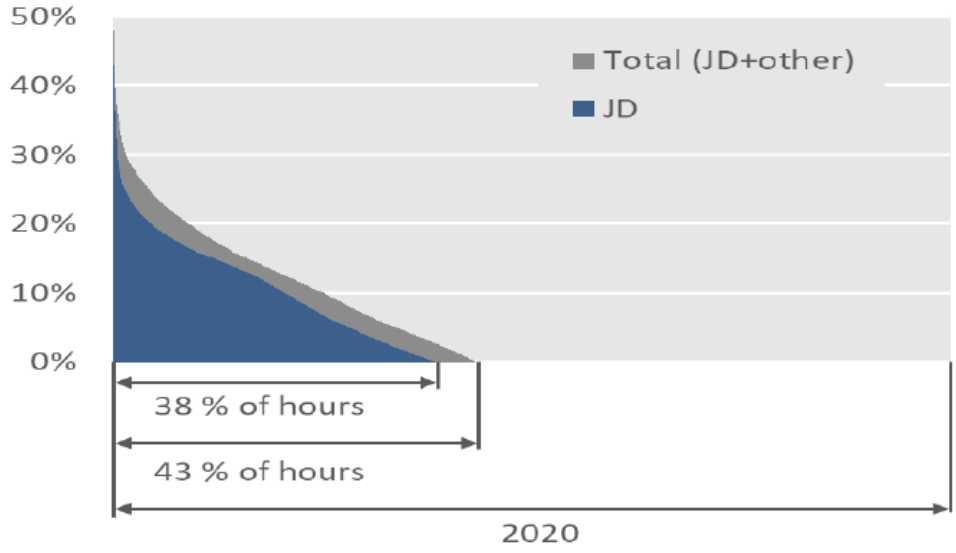
The German intraday market consists of two sub-markets: the opening auction and the subsequent continuous trading session. The opening auction is cleared in a single step while the continuous trading session follows a first come, first served market where trades are executed as soon as two bids are matched.

For JD purposes, TenneT exclusively trades on the continuous market. Therefore, the assessment of the impact on the German intraday market is solely made on the continuous market.

TenneT conducted trades due to the JD in 38% of all hours in 2020, with a maximum share of the total volume of 43%. The average share during hours with TenneT trades for the JD was 11.1%, cf. Figure 3.

Counting total TenneT trades for safeguarding transmission capacity (for the JD and due to other reasons), 43% of all hours were affected with a maximum share of the total volume of 48%. The average share during hours with TenneT trades for the JD and due to other reasons was 12.8%.

FIGURE 3 | **HOURLY SHARE OF TENNET COUNTERTRADING VOLUME BETWEEN DE AND DK1 (SORTED)**



Source: Joint Declaration Monitoring Report 2020 by Energinet and TenneT (1 July 2021)
Note: The share is calculated as the volume of TenneT's trades divided by the total continuous intraday trading volume in the German-Luxembourgian bidding zone.

The TSOs have analysed the impact of TenneT's trades on the market prices by relating the difference between day-ahead and intraday prices to the volume of TenneT's trades.

The analysis shows a positive correlation with a correlation coefficient of 0.10 across all hours with JD countertrading, cf. Table 4. This means that the more countertrading was conducted by TenneT, the higher the intraday price was relative to the day-ahead price for the same delivery hour.

TABLE 4 | **COMPARISON OF FREQUENCY AND VOLUME OF COUNTERTRADING BETWEEN 2018, 2019 AND 2020**

	2018 (JD)	2019 (JD)	2020 (JD)	2020 (JD+other)
Frequency of countertrading for safeguarding transmission capacity [% of hours]	17.5 %	35 %	38 %	43 %
Average share of countertrading in continuous intraday trading volume [% during hours with countertrading]	6.5 %	8.4 %	11.1 %	12.8 %
Correlation coefficient between countertrading volume and DA-ID price difference	0.25	0.12	0.10	0.15

Source: Joint Declaration Monitoring Report 2020 by Energinet and TenneT (1 July 2021)

The correlation coefficient between countertrading volume and the price difference between the day-ahead and intraday prices has decreased, when only taking countertrade due to the JD into account. When taking total countertrade into account (JD+other), it is slightly higher than in 2019, but still lower than in 2018.

Considering stable market conditions, one would expect that a larger volume share of countertrading would yield an increase in the market price differences. However, the observed development is the opposite.

A possible explanation is that the market participants have become better at predicting the TSOs countertrade behaviour and make use of arbitrage between the day-ahead and intraday timeframes. This would even out the price difference between the two markets.

SPECIAL REGULATION IN DK1

The TSOs state that Energinet is not able to split the data into countertrade conducted due to the JD, regular countertrade towards TenneT or use of special regulation towards the Nordics. Therefore, Table 5 shows the total volume of offered and accepted bids in the regulating power market in DK1. Table 5 also shows the requested volumes of up- and downward regulation requested by TenneT.

TABLE 5 | **VOLUME OF OFFERED AND ACTIVATED BIDS IN THE REGULATING MARKET IN DK1**

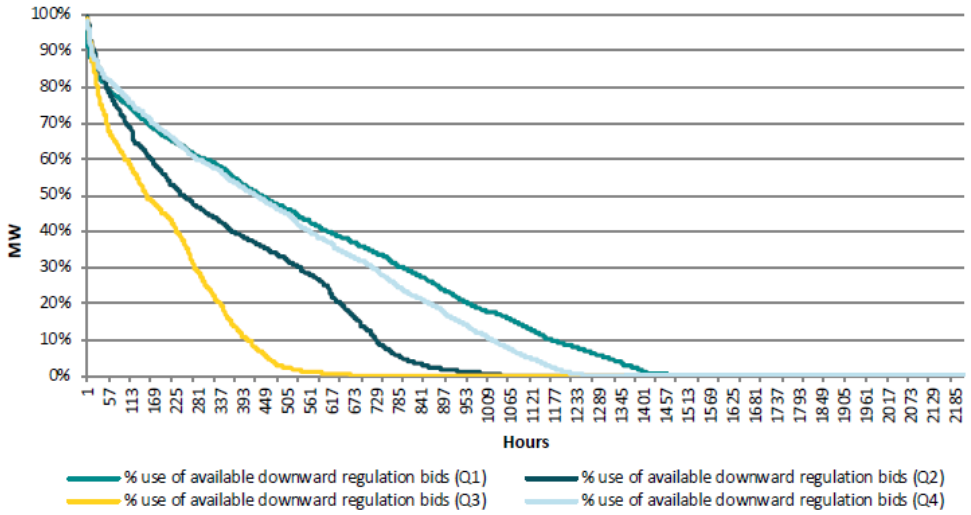
2020	Offered bids of upward regulation (MWh)	Offered bids of downward regulation (MWh)	Activated bids of upward regulation for balancing (MWh)	Activated bids of downward regulation for balancing (MWh)	Requested volumes of down-ward regulation for special regulation towards TenneT (MWh)	Requested volumes for up-ward regulation for special regulation towards TenneT (MWh)
Jan	674,888	1,542,406	2,310	1,006	588,519	0
Feb	650,470	1,403,624	9,333	11,757	612,407	810
Mar	734,688	1,208,148	16,531	13,813	359,844	7,972
Apr	623,192	972,317	11,156	9,030	404,486	23,156
May	613,897	946,263	10,685	3,507	266,325	795
Jun	388,273	550,814	9,325	2,444	75,054	14,289
Jul	449,508	906,365	8,584	6,620	186,148	1,430
Aug	418,496	534,255	4,900	728	82,133	3,802
Sep	411,743	780,693	9,341	1,665	97,114	4,440
Oct	419,616	977,474	7,031	2,172	306,980	0
Nov	550,264	1,132,720	5,970	6,466	496,463	3,867
Dec	547,730	1,264,254	11,316	7,762	404,088	0

Source: Joint Declaration Monitoring Report 2020 by Energinet and TenneT (1 July 2021)
Note: The requested volumes of special regulation towards TenneT include both countertrade due to the JD and other reasons.

The volume of bids for downward regulation is higher from late autumn until spring as the demand for regulating power is higher in this period and more volume is available due to higher heat production. The regulating volume is first and foremost reserved for balancing purposes. The residual volume can be used for special regulation towards TenneT.

Figure 4 and 5 show the liquidity of the regulating power market in DK1 and the percentage use of offered down- and upward regulation. The curves are not split according to the use for special regulation or balancing.

FIGURE 4 | **DURATION CURVE OF PERCENTAGE USE OF OFFERED DOWNWARD REGULATION IN DK1**



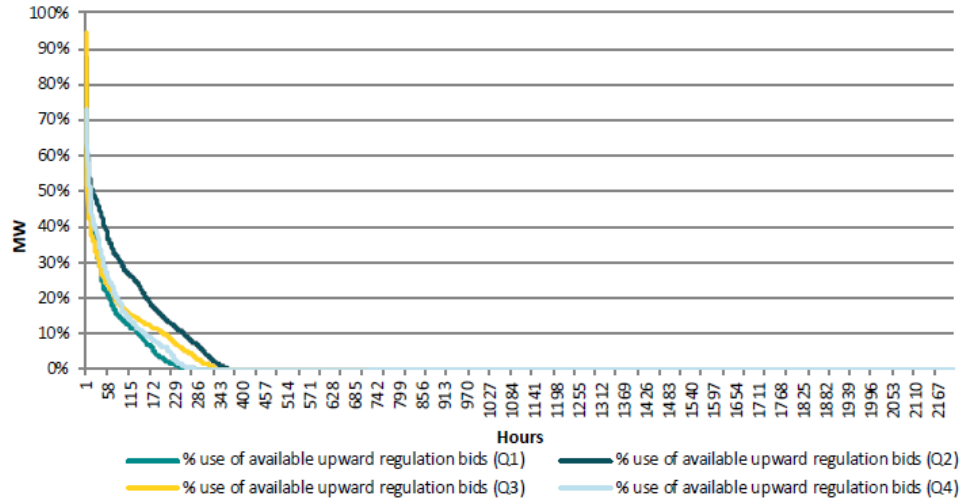
Source: Joint Declaration Monitoring Report 2020 by Energinet and TenneT (1 July 2021)

Energinet activated over 80% of all offered downward regulation in DK1 in 49 hours in Q1, 47 hours in Q2, 25 hours in Q3 and 74 hours Q4 in, cf. Figure 4. The highest use of activated bids was 99.5% in a single hour. None of the offered downward regulation in DK1 was used in almost 700 hours in Q1, more than 1100 hours in Q2, more than 1500 hours in Q3 and almost 1000 hours in Q4.

Upward regulation is used to a lesser degree compared to downward regulation, cf. Table 5. This can be seen when comparing figure 4 and 5. In almost every hour in 2020, less than 60% of the offered volume of upward regulation was activated and the number of hours per quarter where upward regulation was activated were between 200 and 400 hours, cf. figure 5.

The highest use of activated bids in a single hour was approximately 95% which was reached in very few hours.

FIGURE 5 | | **DURATION CURVE OF PERCENTAGE USE OF OFFERED UPWARD REGULATION IN DK1**



Source: Joint Declaration Monitoring Report 2020 by Energinet and TenneT (1 July 2021)

Upward regulation is used to a much lesser degree than downward regulation, cf. Table 6. This is the case, since the reason for countertrade is almost exclusively to reduce the congestion in the northern part of the German grid which can be relieved by using downward regulation in Denmark.

From 3 July 2020 to 31 August 2020, Energinet was unable to assist TenneT with countertrade when upward regulation was needed in DK1. This was caused by planned outages of thermal power plants and HVDC connection outages due to faults. During 2020 none of the downward regulation requests have been rejected.

The activated volumes of down- and upward regulation might differ from the requested amounts by TenneT. This is due to the imbalance netting procedure. Imbalance is a process that avoids simultaneous activation of balancing power. For instance, if DE needs upward regulation and DK1 needs downward regulation, the TSOs can net the difference and secure that only the necessary amount of either down- or upward regulation is activated.

Table 6 shows the activated volumes of special regulation in DK1 and specifies the source of the down- or upward regulation. The sources are wind, consumption and production.

Downward regulation is provided by all three types of sources while upward regulation is almost exclusively provided by production, cf. Table 6.

As in table 5, the volumes in Table 6 are not split according to countertrade due to the JD, regular countertrade towards TenneT or use of special regulation towards the Nordic.

TABLE 6 | **ACTIVATED VOLUMES OF SPECIAL REGULATION SPLIT BY SOURCE**

2020	Activated volumes of downward regulation (MWh)	Delivered by			Activated volumes of upward regulation (MWh)	Delivered by		
		Wind	Consumption	Production		Wind	Consumption	Production
Jan	461,718	26%	21%	53%	1,972	0%	0%	100%
Feb	492,464	44%	20%	36%	2,789	0%	0%	100%
Mar	306,633	44%	18%	38%	3,501	0%	1,1%	98,9%
Apr	288,003	43%	19%	38%	18,143	0,1%	0,2%	99,7%
May	197,519	48%	12%	40%	2,474	1,5%	0%	98,5%
Jun	64,718	71%	7%	22%	14,615	0%	0%	100%
Jul	159,958	75%	10%	15%	1,004	0%	0%	100%
Aug	62,047	77%	13%	10%	7,711	0%	0%	100%
Sep	79,879	74%	10%	16%	1,440	0%	0%	100%
Oct	187,492	45%	18%	37%	1,097	0%	0%	100%
Nov	407,200	62%	11%	27%	4,361	0%	0%	100%
Dec	325,021	38%	20%	42%	1,321	0%	0%	100%

Source: Joint Declaration Monitoring Report 2020 by Energinet and TenneT (1 July 2021)
Note: The activated volumes is due to both the JD and other countertrade.

STATUS ON GRID DEVELOPMENT

The TSOs have provided an overview on the status on the grid development. Grid extensions directly related to the DK1-DE border include the Kassø-Dollern project (on Energinet's side called "East coast Line" and on TenneT's side called "Middle Axis") and the Endrup-Brunsbüttel extension (called "West Coast Line").

The Kassø-Dollern project was completed in 2020 with the commissioning of all sections in July 2020. After a period with trial operation and planned outages the new setup has been in full operation since October 2020.

The status of the Endrup-Brunsbüttel extension is presented in table 7. The project is in the permitting phase in both Germany and Denmark. The commissioning is planned for the end of 2023

TABLE 7 | **STATUS OF THE ENDRUP-BRUNSBÜTTEL EXTENSION**

Section	Responsible TSO	Total route length [km]	Realised route length [km]	Status/Planned commissioning
Brunsbüttel - Süderdonn	TenneT	14	14	In operation
Süderdonn – Heide	TenneT	23	23	In operation
Heide – Husum	TenneT	46	39	2021
Husum – Klixbüll	TenneT	38	7	2022
Klixbüll – DK/GER border	TenneT	16	0	2023
DK/GER border – Endrup	Energinet	75	0	2023

Source: Joint Declaration Monitoring Report 2020 by Energinet and TenneT (1 July 2021)

The TSOs state that with the commissioning of the East Coast Line and prospectively the West Coast Line in the year 2023 the minimum capacity requirements will further increase in accordance to article 16 of regulation (EU) 2019/943 in conjunction with the German Action Plan and TenneT Commitments until they will reach their maximum by the year 2026.

REGULATORS' OPINION ON THE TSOs' ANALYSIS

The required capacity of 1100 MW in 2020 have been met, except for 235 hours due to construction work on the 400 kV station in Kassø. DUR and BNetzA find that this is satisfactory.

The total level of requested countertrade towards TenneT in 2020 was 3.9 TWh where 2.2 TWh was due to the JD. 3.9 TWh corresponds to 14% of the gross production in Denmark in 2020[7]. This is an increase in the total level of countertrade of 229% compared to 2019.

[7] https://forsyningstilsynet.dk/aktuelt/publikationer/elmarkedet/markedsrapport-for-el-2020

The increase in countertrade due to the JD has increased from 0.5 TWh in 2018 to 2.2 TWh in 2020 which is an increase of 440%.

These numbers show that since the beginning of the JD, the amount of special downward regulation requested by TenneT has increased significantly. As a result of the increased demand, the supply of special regulation has increased. The situation is therefore very different today compared to 2017 when the JD was introduced.

The total costs of the JD for the TSOs in 2020 was 93.5 million EUR. Therefore, the costs have exceeded the cap of 40 million EUR in the JD. However, since the implementation of the TenneT Commitments, the cost cap in practice does not apply as the required minimum available capacity according to the TenneT Commitments exceeds the minimum requirements in the JD and has no cost cap.

DUR and BNetzA have found no reason to question whether the supply of special regulation in DK1 and the supply of regulation power in DE in 2020 was not sufficient. This is the case since figure 4 and 5 show that there has been enough supply of special regulation in DK1.

DUR and BNetzA note that on 21 December 2021, Energinet submitted a new new methodology for the procurement of energy for the use of countertrading for regulatory approval of DUR.

The TSOs have provided a satisfactory description of the grid development. With the commissioning of the East Coast Line and the West Coast Line the minimum capacity requirements will increase towards their maximum in 2026.

However, the TSOs have not been specific on how the net developments will affect the ability to transport physical power on the DK1-DE border in the coming years, i.e. the TSOs have not provided numbers for the future available capacity.

The regulators have no objections to the findings in TenneT's and Energinet's monitoring report on the implementation of the JD in 2020.

CONCLUSION

DUR and BNetzA have assessed Energinet's and TenneT's report for the calendar year 2020.

The requirements of the JD are to ensure a minimum available capacity on the DE-DK1 border of 1100 in 2020. Moreover, the monitoring report shall as a minimum include a description of deviations from the JD, reasons for deviations, costs incurred, challenges in implementation and opportunities for improving the implementation of the JD.

BNetzA and DUR finds that Energinet and TenneT have met the requirements in the JD in 2020.

BNetzA and DUR note that the supply and use of special downward regulation has increased significantly since the start of the JD. This is a consequence of the increasing minimum capacities required. The minimum capacities required will continue to increase due to TenneT Commitments and this will result in increased use of special downward regulation in the future. The situation is therefore different today compared to 2017.

DUR and BNetzA believe that the TSOs way to uphold the JD with regard to the 2020-market conditions most likely has been cost effective. The TSO' monitoring report does not suggest otherwise.

BNetzA and DUR are of the opinion that there is no reason to initiate a process in which the reasons for reaching the cost cap are analysed and solutions are developed in order to allow the decided capacity to be available to market participants while keeping the costs within reasonable limits. This is due to the TenneT Commitments being introduced. This is the case, because the requirements in the TenneT Commitments contain no cost cap and the required minimum available capacity exceeds the minimum required capacity in the JD.