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**Ref. no.: 2020-102975 Request by Svenska kraftnät for a derogation from the minimum level of capacity to be made available for cross- zonal trade for 2021**

28 September 2020  
20/10483

On 26 August 2020, the Swedish Energy Markets Inspectorate (Ei) informed all National Regulatory Authorities (NRAs) that on 7 July 2020, it received a request by Svenska kraftnät (SvK) for extending its derogation from the minimum level of capacity to be made available for cross- zonal trade for 2021. The request for extension has been submitted in accordance with article 16(9) of Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (Regulation 2019/943).

The derogation request in question affects six borders in three different Capacity Calculation Regions (CCRs): CCR Hansa, CCR Baltic, and CCR Nordic, in which Denmark participates. Consequently, the Danish Utility Regulator (DUR) is considered an affected NRA.

Affected NRAs may express a formal disagreement to extending the derogation by 28 September 2020. Therefore, DUR has carried out a legal assessment of the condition for granting the extension supported by an analysis of the available capacity for cross-zonal trade between Denmark and Sweden from January 2020 to September 2020.

On this basis, DUR does not find reasons to express formal disagreement.

Ei is the National Regulatory Authority in Sweden and Ei has in this respect an obligation to ensure that SvK is compliant with EU regulation. In this respect, DUR has concerns to bring to the attention of Ei before Ei adopts its decision on the extension:

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## **CONDITION FOR GRANTING THE DEROGATION**

On 27 November 2019, SvK submitted the first request for derogation, which Ei approved on 19 December 2019, and has been valid throughout 2020. It follows from article 16(9) in Regulation 2019/943 that such derogations shall be granted for no more than one year at a time, or, provided that the extent of the derogation decreases significantly after the first year, up to a maximum of two years.

The derogation shall be granted on foreseeable grounds necessary for maintaining operational security. Article 16(9) further sets out that the extent of such derogations shall be strictly limited to what is necessary to maintain operational security and they shall avoid discrimination between internal and cross-zonal exchanges.

Ei granted the derogation in 2019 based on the fact that congestion in the West Coast Corridor could jeopardize operational security which, in some circumstances, can only be alleviated by reducing cross-border capacity. Ei further based its decision on SvK's obligation to make at least 70 pct. capacity available for market participants, as long as operational security could be maintained.

As NRA affected by the derogation, DUR assessed the request and submitted comments and concerns to Ei in relation to the decision on granting the derogation in 2019. In particular, DUR found it of utmost importance that SvK committed to limiting the use of the derogation as much as possible and to report all deviations along with justification on why the deviation was required to guaranteeing operational security. Furthermore, DUR requested Ei to be informed on a regular basis of the deviations alongside with justifications. In addition, DUR called for transparency in relation to extending the derogation.

In the request for extending the derogation, SvK argues that congestion in the West Coast Corridor in combination with the lack of down-regulation volumes constitutes the foreseeable ground on which the derogation was originally granted and the foreseeable ground that still is valid for extending the derogation throughout 2021. SvK further argues, that reductions in available capacity below 70 pct. due to the West Coast Corridor will only appear when strictly necessary for maintaining operational security.

In its request, SvK further explains that, in situations when the West Coast Corridor is fully utilized, it would require between 1200 MW and 1500 MW of down-regulation after a contingency in order to maintain operational security. Furthermore, such available down-regulation capacity must be present at the south of the West Coast Corridor, i.e. in DK1, DK2 and SE4 altogether, with corresponding up-regulation capacity in bidding zones NO1 – NO5, SE2, SE1 and FI, at the north of the West Coast Corridor.

## **DUR'S CONSIDERATIONS**

DUR finds that congestion in the West Coast Corridor constitutes a foreseeable ground. In 2010, the European Commission addressed the challenges with congestion in the West Coast Corridor. The European Commission found that the only available measure to relieve congestion on the network was to commit SvK to build a new 400kV line near Gothenburg in western Sweden. As the 400kV line is not yet operational, congestion in

the West Coast Corridor is a reason that can be predicted to remain in place during 2021.

Furthermore, DUR finds that in many of the hours with available capacity below 70 pct. due to the West Coast Corridor, there has been insufficient down-regulation volumes for SvK to purchase. DUR has found that in the period from 1 January 2020 to 9 September 2020, there has been insufficient down-regulation volumes available for SvK in case of an N-1 contingency. DUR's analysis shows that in 49 pct. of the time, there has been less than or equal to 1200 MW down-regulation volumes available for SvK to procure in DK1, DK2 and SE4 altogether. At least, SvK cannot plan to countertrade in these hours as it would impose an unacceptable operational security risk to SvK. DUR emphasizes that SvK, in its request for extension has specified that SvK would need at least between 1200 MW to 1500 MW down-regulation volumes. DUR cannot determine, if there has been sufficient down-regulation volumes for SvK to countertrade in the remaining 51 pct. of the time as DUR emphasizes that this is subject to a requirement of being compliant with safety standards of secure network operation. SvK is only required to maximise available capacity by means of countertrading and re-dispatch, as long as it complies with safety standards of secure network operation pursuant to article 16(4) of the Regulation 2019/943. DUR acknowledges that this is the primary responsibility of SvK. If SvK finds that there is a reasonable risk that there will not be enough available volume for countertrading in the case of an N-1 contingency at the same time, it justifies that SvK cannot plan to countertrade.

On this basis, DUR finds that congestion in the West Coast Corridor and the lack of down-regulation constitutes the foreseeable ground on which the extension of the derogation is necessary, in order to maintain operational security during 2021. DUR concludes that SvK's use of the derogation in 2020 has been strictly limited to maintain operational security.

### **CONDITION FOR EXTENDING THE DEROGATION**

When a derogation has been granted for the first year, article 16(9), second paragraph states that a derogation can be extended provided that *the extent of the derogation shows a significant decrease after the first year of granting the derogation.*

The legal basis for *extending* the derogation, therefore, relies on an assessment of whether the extent of the derogation has decreased significantly.

The regulation does not further explain what is meant by "extent of derogation decreases significantly". However, the overall aim of article 16 is to require at least 70 pct. available capacity, taking into account operational security limits.

In DUR's view, Regulation 2019/943 thereby sets a goal of 70 pct. available capacity. However, the regulation acknowledges the fact that there might be temporary obstacles for the TSOs to reach the requirement. Regulation 2019/943 therefore offers multiple shorter-term routes to meet the target. Member States may take transitory measures such as action plans or granting derogations, to gradually reach the minimum cross-zonal capacity available for trade by the end of 2025 at the latest.

An action plan adopted under article 15 of Regulation 2019/943 aims at an annual increase until the minimum capacity of 70 pct. is reached by no later than 31 December 2025. These annual increases shall be achieved by means of a linear trajectory. To this regard, the regulation does not specify in the same way what is expected as “annual increase” (ref: significant decrease) when it comes to a derogation under article 16(9). Under Regulation 2019/943, it is therefore at the NRA’s own discretion to assess what constitutes “a significant decrease”.

DUR emphasizes that the assessment of “a significant decrease”, based on more than one parameter, shows a trajectory towards the 70 pct. available capacity in all hours.

Therefore, DUR finds that the assessment of what constitutes a significant decrease should be characterized by:

- If there has in fact been improvement of the available capacity in relation to the 70 pct. target, taking into consideration that Regulation 2019/943 sets out that the target needs to be reached by no later than 31 December 2025,
- If there have been fewer hours when it has been necessary to reduce available capacity,
- How often does the foreseeable ground cause reductions in available capacity below 70 pct.,

DUR’s assessment of whether the extent of the derogation has decreased significantly is therefore based on considerations of 1) the overall, average export capacity on the Danish – Swedish electricity interconnectors, 2) the *number of hours* under the 70-pct. requirement, and 3) the average *available capacity* during these hours taking into consideration the underlying reasons for reduction.

#### 1. OVERALL AVERAGE EXPORT CAPACITY ON THE DANISH – SWEDISH ELECTRICITY INTERCONNECTORS

When assessing the average available capacity on DK1-SE3, DUR has observed an increase from 63 pct. in 2019 to 89 pct. in 2020. As the analysis is conducted in September 2020, DUR has for the sake of comparability also calculated the average available capacity in 2019 (partial). The average available capacity in the directly comparable period shows an increase of 25 percentage points from 2019 (partial) to 2020 (partial).

Furthermore, DUR observes that the average available capacity of 89 pct. in 2020, therefore, fulfils the requirement of at least 70 pct. available capacity.

The average available capacity on DK2-SE4 has increased from 66 pct. in 2019 to 69 pct. in 2020. Once again, looking at the directly comparable period, DUR observes that the average available capacity has increased by 6 percentage points from 63 pct. in 2019 (partial) to 69 pct. in 2020 (partial).

DUR acknowledges that it can be argued that 6 percentage points does not constitute “a significant decrease of the extent of the derogation”. Nevertheless, DUR emphasizes that the average available capacity on DK2-SE4 has reached 69 pct. in 2020, which includes reductions on the interconnector due to other reasons than the West

Coast Corridor, such as planned outages. Therefore, DUR finds it reasonable to believe that the 70 pct. available capacity can be reached by the end of 2021.

Table 1 below does not take into consideration the underlying reasons for reductions, but shows the overall average of available capacity on the interconnectors regardless of the underlying reason. The average available capacity under 70 pct. in relation to the underlying reasons are included in table 3 below.

The abovementioned observations are summarized in table 1:

**TABLE 1 | AVERAGE AVAILABLE CAPACITIES FOR CROSS-ZONAL TRADE IN THE DANISH – SWEDISH ELECTRICITY INTERCONNECTORS (EXPORT DIRECTION)**

Year	DK1 → SE3	DK2 → SE4	DK → SE
	Capacity (pct.)	Capacity (pct.)	Capacity (pct.)
2020 (partial)	89	69	75
2019 (partial)	64	63	63
2019	63	66	65

Data sources: Nordpool Group Market Data, ENTSO-E

Notes: 1) Capacity is the available capacity given by SvK to the market, relative to the nominal capacity, expressed in percentage terms, during all hours 2) Unlike 2019, which contains all hours in the year, "2020 (partial)" and "2019 (partial)" correspond to the first 6072 hours of each year. These partial periods are presented to ensure comparability.

## 2. NUMBER OF HOURS UNDER THE 70-PCT. REQUIREMENT

Besides the fact, that the overall average available capacity has increased on the Danish – Swedish electricity interconnectors, DUR has also analysed the development of hours under the 70-pct. requirement.

DUR finds that the frequency of hours below the 70-pct. requirement on DK1-SE3 has fallen from 4.989 hours in all of 2019 (approx. 57 pct. of the time) to 1.097 hours in the first 6.072 hours of 2020 (approx. 18 pct. of the time).

On the DK2 – SE4 interconnector, the frequency of hours below the 70-pct. requirement has decreased from 4.656 hours in all of 2019 (approx. 53 pct. of the time) to 2.496 hours in the first 6.072 hours of 2020 (approx. 41 pct. of the time).

The abovementioned observations are summarized in table 2:

TABLE2 | NUMBER OF HOURS UNDER THE 70-PCT. REQUIREMENT IN THE DANISH – SWEDISH ELECTRICITY INTERCONNECTORS (EXPORT DIRECTION)

Year	DK1 → SE3	DK2 → SE4	DK → SE
	No. of hours	No. of hours	No. of hours
2020 (partial)	1097	2496	2482
2019 (partial)	3288	3501	3450
2019	4989	4656	4790

Data sources: Nordpool Group Market Data, ENTSO-E

Notes: 1) No. of hours is the total number of hours under the 70-pct. requirement in the given period. 2) 2020 (partial) and 2019 (partial) correspond to the first 6072 hours of each year. These partial periods are presented to ensure comparability

### 3. FREQUENCY WITH SPECIFICATIONS

DUR has observed an increase in average available capacity and a decrease in the number of hours with available capacity below 70 pct. However, when DUR assesses the average available capacity during the hours with capacity below 70 pct., DUR finds that there has been a decrease in average available capacity on the DK2-SE4 interconnector. As available capacity can be reduced due to interconnector issues, such as planned outages, DUR has also found it important to assess the average capacity taking into consideration the underlying reason for the reduction of capacity, as revealed by the reason and location codes implemented in the Nordic area.

The main insight is that both the *frequency* and impact on *average available capacity* of issues related to the West Coast Corridor have decreased on both interconnectors between 2019 and 2020.

On DK1 – SE3, the frequency of disruptions associated to the West Coast Corridor has decreased from approximately 53 pct. of all hours under the 70-pct. requirement to approximately 13 pct., meaning that when available capacity has been lower than 70 pct., it has only been due to the West Coast Corridor in 13 pct. of the time in 2020, or in 145 hours out of 1.097 hours when capacity has been below 70 pct. The remaining 952 hours with capacity below 70 pct. have been caused by other reasons such as planned outages. In comparison, reductions in available capacity under 70 pct. due to the West Coast Corridor occurred in 53 pct. of the time in 2019, or in 2.637 hours out of 4.989 hours.

Similarly, the average available capacity during the 145 hours, in which there have been issues due to the West Coast Corridor, has increased from 44 pct. to 54 pct. Thus, the development shows that in 2019, the average available capacity was reduced to 44 pct. in 2.637 hours, whereas in 2020, the average available capacity was reduced to 54 pct. in 145 hours. Besides this, reduced capacity was caused by other reasons, such as planned outages.

On DK2 – SE4, the West Coast Corridor went from being the most frequent cause for reductions in 2019 (approx. 61 pct. of the time) to being the least frequent cause in 2020, accounting for only 6 pct. of all hours under 70 pct.. In 2020, the West Coast Corridor only led to reduced capacity below 70 pct. in 161 hours out of 2.496 hours whereas it led to reduced capacity in 2.842 hours in 2019 out of 4.656 hours.

DUR also finds that the most frequent cause for reductions throughout 2020 has been “interconnector issues”, which includes planned outages and network failures on the interconnectors. The issue has, in particular, had considerable impact on the DK2 → SE4 direction, as average capacity has visibly decreased during these periods, which have also been the most frequent cause for capacity being under the 70-pct. requirement. In relation to the 70-pct. target, the overall average capacity would therefore also have been fulfilled already in 2020, if there had not been interconnector issues. Furthermore, DUR emphasizes the development in average capacity on DK2 – SE4 during the hours with capacity below the 70 pct. due to the West Coast Corridor. In these hours, the average capacity has increased from 44 pct. in 2019 to 56 pct. in 2020. Thus, the development shows that in 2019, the average available capacity was reduced to 44 pct. in 2.842 hours, whereas in 2020, the average available capacity was reduced to 56 pct. in 161 hours. Besides this, reduced capacity was caused by other reasons, such as planned outages.

The abovementioned observations are summarized in table 3:

**TABLE 3 | NUMBER OF HOURS UNDER THE 70-PCT. REQUIREMENT, UNDERLYING REASONS AND AVERAGE CAPACITY IN THE DANISH – SWEDISH ELECTRICITY INTERCONNECTORS (EXPORT DIRECTION)**

Reasons	DK1 → SE3				DK2 → SE4			
	2020		2019		2020		2019	
	No. hours	Capacity (pct.)	No. hours	Capacity (pct.)	No. hours	Capacity (pct.)	No. hours	Capacity (pct.)
WC Corridor	145	54	2637	44	161	56	2842	44
Interconnector issues	726	44	1802	30	2031	22	686	34
Other reasons	226	41	550	40	304	47	1128	35
<b>Total hours/ W. Avg.</b>	<b>1097</b>	<b>45</b>	<b>4989</b>	<b>39</b>	<b>2496</b>	<b>27</b>	<b>4656</b>	<b>40</b>

Data sources: Nordpool Group Market Data

Notes: 1) “WC Corridor” refers to hours when there have been technical issues that can be attributed to the West Coast Corridor, i.e. all reason codes ending in “24”, 2) “Interconnector issues” refers to hours when there have been technical issues that can be attributed to each interconnector under consideration. That is to say: all reason codes ending in “25” in the case of Konti-Skan between DK1 and SE3, and all reason codes ending in “26” in the case of Øresund between DK2 and SE4, 3) “Other reasons” refers to all remaining reasons, such as planned outages in the respective bidding zone. 4) There are 6072 hours included in 2020, 5) “W. Avg.” is the average capacity weighted by the number of hours for each reason.

An alternative way of showing how the impact of the West Coast Corridor has decreased on the Danish- Swedish interconnectors is shown in Table 4. The table shows the total amount of reductions (in GWh) relative to the 70-pct. requirement in comparable periods of 2019 and 2020. Two immediate conclusions that can be derived are that: 1) the total reductions, relative to the 70-pct. requirement, are lower in both interconnectors and 2) the impact of capacity reductions due to the West Coast Corridor is lower on both interconnectors

The abovementioned observations are specified in table 4:

**TABLE 4 | TOTAL REDUCTIONS (GWH) RELATIVE TO THE 70-PCT. REQUIREMENT IN THE DANISH – SWEDISH ELECTRICITY INTERCONNECTORS (EXPORT DIRECTION). COMPARABLE PERIODS OF 2019 AND 2020.**

Reductions	DK1 → SE3		DK2 → SE4	
	2020	2019	2020	2019
Under the 70-pct. requirement	200	863	1.948	1.986
Of which: Due to the West Coast Corridor	18	447	37	1.017

Data sources: Nordpool Group Market Data

Notes: 1) Reductions under the 70-pct. requirement correspond to all reductions below 70 pct. of nominal capacity in each interconnector, 2) To ensure comparability, the periods considered in the table are between 01/01 and 25/09 in both 2019 and 2020.

## CONCLUSION

In assessing whether SvK meets the condition for extending the derogation one year, DUR finds that the Regulation 2019/943 leaves it for the NRA's own discretion to determine the parameters for what characterizes "a significant decrease". As Regulation 2019/943 sets the target for 70 pct. to be reached by no later than 31 December 2025, DUR finds that "a significant decrease" is constituted by the development of the following: 1) overall, average export capacity on the Danish – Swedish electricity interconnectors, 2) the *number of hours* under the 70-pct. requirement, and 3) the average *available capacity* during these hours taking into consideration the underlying reasons.

Pursuant to the analysis carried out above, DUR's findings show that the average export capacity on the Danish-Swedish electricity interconnectors has increased while the number of hours with available capacity under 70 pct. has fallen.

DUR emphasizes that the average available capacity on DK1-SE3 in 2020 fulfils the requirement of at least 70 pct. The available capacity on the DK2-SE4 interconnector has, however, only shown an increase of 6 percentage points in 2020. Nevertheless, the average available capacity is just 1 pct. point under the 70-pct. target and is primarily due to other reasons than the west Coast Corridor. In respect of this, DUR emphasizes that the reductions in available capacity due to the West Coast Corridor has decreased significantly from 61 pct. of the time to 6 pct. of the time, or from 2.691 hours in 2019 to 161 hours in 2020.

Furthermore, DUR finds that the impact on *average available capacity* of issues related to the West Coast Corridor have decreased on both interconnectors between 2019 and 2020.

Therefore, DUR concludes that SvK meets the requirement for extending the derogation one more year, as *the extent of the derogation has decreased significantly after the first year*.



## **DUR'S CONCERNS**

Nevertheless, it is very important for DUR to emphasize that the lack of sufficient cross-zonal capacity is one of the main barriers to electricity market integration. As the national regulatory authority of Sweden subject to EU legislation, Ei is bound by Regulation 2019/943, which aims to set fair rules for cross-border exchanges in electricity, thus enhancing competition within the internal market for electricity. DUR therefore brings the following concerns to the attention of Ei, which Ei should consider before adopting its decision:

- DUR considers that SvK's efforts to develop counter-trading opportunities south of the West Coast corridor have been insufficient. It is a requirement pursuant to article 16(4) that countertrade and re-dispatch are used to maximise available capacity. The efforts to develop "more comprehensive and targeted communication to the market participants" have been mentioned in both the 2019 and 2020 requests for derogation, but have not materialized in concrete results. Thus, the decision on extending the derogation period should include that SvK is required to actively develop the possibilities for re-dispatch and countertrading.
  
- In Denmark, renewable energy producers are extensively supplying services, such as manual reserves (m-FRR). DUR raised this possibility during the consultation for granting the derogation in 2019, however, DUR does not find that SvK has further developed this possibility in Sweden. DUR is concerned by the lack of initiatives that SvK has shown during the first year with a derogation. DUR finds it reasonable to question, if SvK will take initiative during the second year with the derogation, if this is not directly required by Ei in its decision to extend the derogation.

DUR will be at your disposal for further explanation of the abovementioned comments and concerns.

Best regards,

Carsten Smidt  
Director-General