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NOTAT

Dato:
24. februar 2021

Forfatter:
SGL/MKD

HØRINGSNOTAT - TEKNISK FORSKRIFT 3.4.2 MANUEL AFLASTNING AF TRANSMISSIONSTILSLUTTEDE FORBRUGSANLÆG

Indhold

1. Indledning

Energinet har udfærdiget Teknisk forskrift 3.4.2 Manuel aflastning af transmissionstilsluttede forbrugsanlæg.

Forskriften er udfærdiget, idet transmissionstilsluttede forbrugsanlæg ikke er omfattet af manuel aflastning i henhold til Kommissionens forordning (EU) 2017/2196 af 24. november 2017 om fastsættelse af en netregel for nødsituationer og systemgenoprettelse (herefter NC ER), artikel 22. Med fremtidens udvikling af transmissionssystemet med flere tilsluttede forbrugsanlæg, kan der komme situationer, hvor Energinets kontrolcenter El ikke vil være i stand til at håndtere en anstrengt situation ved kun at aflaste distributionssystemerne, som er muligheden i dag, jf. Teknisk forskrift 2.1.2 Automatisk og manuel forbrugsaflastning.

Formålet med forskriften er at sikre, at Energinet vil være i stand til at sikre den overordnede forsyningssikkerhed inden for det sammenhængende transmissionssystem.

Forskriften fastlægger kravene til manuel aflastning af transmissionstilsluttede forbrugsanlæg i følgende tilfælde:

- Overhængende risiko for effektmangel og/eller
- Forebyggelse eller afhjælpning af kritiske overbelastninger og/eller
- Underspændinger i nettet.

Hensigten er, at Energinet manuelt kan iværksætte forbrugsaflastning på en hensigtsmæssig måde for at forhindre, at en anstrengt forsyningssituation udvikler sig til et sammenbrud i transmissionssystemet.

Forskriften træder i kraft den 1. marts 2021.

1.1 Høring

Teknisk forskrift 3.4.2 Manuel aflastning af transmissionstilsluttede forbrugsanlæg har været sendt i høring fra den 27. november 2020 til den 10. januar 2021.

Der er modtaget 3 høringssvar.

Følgende har afgivet høringssvar: Ørsted, Plesner, Gorrissen Federspiel

Følgende af har oplyst, at de ikke har bemærkninger: Ingen.

Høringssvarene har givet anledning til en række ændringer. Ændringer som følge af indkomne høringssvar er anført nedenfor i afsnit 2.

2. Bemærkninger til de indkomne høringssvar

Afsnit	Ørsteds bemærkninger	Energinets bemærkninger
1, kapitel 4	Kommentar: Energinet skriver i kapitel 4 linje 118, at Nettelegrafen skal benyttes som kommunikationsmedie. Det fremgår af formålsbeskrivelsen for Nettelegrafen TF 5.3.4.1, at denne skal anvendes mellem Energinet og netselskaberne. Hverken de balanceansvarlige eller anlægsejerne har del i denne beskrivelse. Forslag til ændringer: Ørsted vil i stedet opfordre Energinet til, at anvende Produktionstelegrafen, der netop har formålet at kommunikere mellem Energinet og anlægsejer eller balanceansvarlig. TF 5.3.4.2 der omhandler Produktionstelegrafen skal alligevel redigeres og vil enkelt kunne inkludere forbrugsanlæg.	Energinet ønsker at bibeholde en skarp opdeling af, hvilke telegrafer der bliver brugt til produktion og forbrug. Produktionstelegrafen er for produktionsanlæg og nettelegrafen er for forbrugsanlæg, og dette ønskes ikke blandet. Ydermere vurderes det, at der ikke er stor teknisk forskel på at "lytte" efter nettelegrafen og produktionstelegrafen. Dette bevirker, at Ørsteds forslag til at bruge produktionstelegrafen ikke kan komme i betragtning, og den oprindelige formulering bibeholdes.
Afsnit	**Plesners bemærkninger**	**Energinets bemærkninger**
2, kapitel 2 & 3	Kommentar: 1 MANUAL DISCONNECTION - STEPS AND FULL DISCONNECTION Pursuant to section 2 of the Technical Regulation, the manual disconnection shall take place either in steps as follows: "transmission connected demand facilities connected in synchronous area CE must have 10 manual disconnection steps of 8% transmission connected demand facilities connected in synchronous area N must have 16 manual disconnection steps of 5%;" or as a full disconnection as follows: "Manual disconnection as a full disconnection of the transmission connected demand facility." With respect to the full disconnection, it is unclear what a full disconnection of the "facility" shall mean. This could either be understood as a full disconnection of the whole site and thus potentially a disconnection of a very large load of potentially XXX MW or understood as a disconnection of part of a site e.g. a facility in the form of a building, which would represent XX MW load. If the full disconnection of the "facility" shall be understood as only a disconnection of the full site, this could potentially cause a very large disruption to the grid, which is neither in the interest of Google nor Energinet. Consequently, a disconnection of a facility in the form of part of a site, i.e. a building, is preferred. Reference is in this respect made to previous discussions between Energinet and Google on LFDD.	Ved manuel aflastning ved fuld afbrydelse menes, at hele anlægget skal aflaste som én samlet enhed. Ved at dele anlægget op i f. eks bygninger eller blokke, vil Energinets KontrolCenter El ikke vide, hvor meget effekt der aflastes fra hver blok eller bygning. Det vurderes derfor ikke at være

	Forslag til ændringer: On the basis of the above, we request Energinet to update section 2 of the Technical Regulation to the effect that it is clear that the full disconnection of the facility does not solely refer to a disconnection of the full site, but also to a disconnection of part of the site in the form of a building. Such update would be in compliance with the approach taken by Energinet for the LFDD. The above also applies to the manual reconnection, which pursuant to section 3 shall take place in the same manner as a disconnection under section 2.	operationelt fordelagtigt at dele anlæg, som ikke ønsker en trinbaseret løsning, op i flere blokke eller bygninger. Der er dog tilføjet at: *For forbrugsanlæg med en trækningsret på 500 MW eller over, som ønsker manuel aflastning ved fuld afbrydelse, skal Energinet dog konsulteres om dette er muligt.*
3	Kommentar 2 THE DISCONNECTING PARTY In the guidelines to the Technical Regulation, the following is stated in section 2.1 and 2.2: "Energinet - notifies the operations responsible party if activation of manual disconnection is required. [...] Party responsible for the operation of the transmission connected demand facility - is responsible for disconnection according to the method chosen within the required period of time." Pursuant to the Technical Regulation, it is therefore the transmission connected demand facility that must manually disconnect the facility and not Energinet, as is the case in the LFDD scheme. As stated in the guidelines to the Technical Regulation, a manual disconnection will only take place in the event of imminent risk of electricity shortage; prevention or resolution of critical overload; and/or network under-voltage. Furthermore, manual disconnection will be the final tool available to Energinet's control center in the above-mentioned situations, where all measures have been activated in the individual markets but are inadequate for resolving the strained supply situation. A manual disconnection will therefore only take place in extreme circumstances, which are very unlikely to occur but nonetheless would necessitate hiring multiple additional highly skilled and qualified staff, making them available on a 24x7 shift system, just in case, to perform this manual disconnection. This is not proportionate to the necessity of having the transmission connected demand facility perform the manual disconnection. The disconnection could instead be performed by Energinet, as is already the case with the LFDD. Forslag til ændringer: Consequently, Google suggest that the Technical Regulation is amended to the effect that it is possible that Energinet can conduct the disconnection rather than the transmission connected demand facility.	Punkt 2.3.2 i vejledning til forskriften er ændret, så den nu beskriver, at det er en mulighed at udstyret, som skal foretage den manuelle aflastning, kan sidde på Energinets side af tilslutningspunktet for det transmissionstilsluttede forbrugsanlæg, hvis man har valgt manuel aflastning med fuld afbrydelse. Dette bevirker, at når Energinets KontrolCenter El aktiverer manuel aflastning ved fuld afbrydelse, vil afbrydelsen af det transmissionstilsluttede forbrugsanlæg ske hurtigst muligt og uden forudgående varsel.

4	Kommentar: 3 DECISION ON WHICH TRANSMISSION CONNECTED CONSUMERS ARE TO BE DISCONNECTED According to the guidelines to the Technical Regulation, Energinet is entitled to decide on which transmission connected consumers are to be disconnected. Section 2.9 states the following: "Based on the given situation, Energinet's Control Center El decides whether all or only some transmission connected consumers are to be disconnected. If the situation permits it, Energinet's Control Center El must seek to achieve an evenly distributed disconnection between the transmission connected consumers under Regulation 3.4.2 and the distribution companies' manual disconnection solution, see Regulation 2.1.2, which is comparable to this Regulation." Forslag til ændringer: In this respect, Google requests Energinet to answer how they will prioritize, which transmission connected demand facilities shall be disconnected and which shall not, including which criteria are to be applied by Energinet in this regard. Are there any written decision making or prioritization guidelines available, which set out the criteria for which facilities are to be disconnected and which are not?	Energinet vil i situationer, hvor der er behov for manuel aflastning, forsøge at aflaste ligeligt mellem alle, som er omfattet af manuel aflastning. Det er den individuelle situation, som afgør hvem og hvor meget, der skal aflastes. Da hvert tænkt scenarie er unikt, kan der ikke laves en prioriteringsliste for, hvem der skal aflastes i hvilken rækkefølge. Der vil ikke blive lavet forskelsbehandling og det vil derfor være den specifikke problemstilling, som afgør hvem operatøren i Energinets Kontrol-Center El vælger at afbryde manuelt.
5	Kommentar: 4 COMMUNICATION According to the guidelines to the Technical Regulation, communication between Energinet and the transmission connected demand facility shall take place as follows: "Energinet - is responsible for sending the signals which activate the manual disconnection via the network telegraph - is responsible for sending the signals which activate manual reconnection after manual disconnection via the network telegraph [...] Party responsible for the operation of the transmission connected demand facility - is responsible for receiving signals from Energinet via the network telegraph for activation of manual disconnection or reconnection. Communication between Energinet's Control Center El and the operations responsible party must take place by secure communication, see Energinet's Regulation 5.3.4.1 Network telegraph." In the Technical Regulation, reference is made to the existing technical regulation no. 5.3.4.1 on the network telegraph. This technical regulation does, however, not apply to transmission	

	connected demand facilities, but only to net/distribution companies. Transmission connected demand facilities have therefore not implemented nor planned to implement the systems necessary to apply the communication system set out in the Technical Regulation. The implementation of the Technical Regulation, i.e. the implementation of the net telegraph system, will therefore put further costs on the transmission connected demand facility. Furthermore, as the technical regulation no. 5.3.4.1 on the network telegraph does not apply to transmission connected demand facilities, the implementation of the systems will only be necessary as a consequence of the Technical Regulation. The costs connected to the implementation of the net telegraph system are therefore not proportionate to the necessity of such system, as other means of communication can be applied, see below. Lack of proportionality also follows from the fact that a manual disconnection will only take place in extreme circumstances, which are very unlikely to occur, see further above under section 2. In Google's opinion, a relevant means of communication would be telecommunication, whereby Energinet contacts the control room operator by telephone in case a manual disconnection is necessary. Such communication can take place quickly and within the time limits set out in the Technical Regulation. To Google's knowledge, there are only few transmission connected demand facilities, which will be subject to the Technical Regulation, i.e. which will be connected to the transmission grid after the date of commencement of the Regulation (to be expected on 1 February 2021). From a practical point of view, it would therefore not or only to a limited extent be more cumbersome for Energinet to use telecommunication as the mean of communication rather than the network telegraph. Forslag til ændringer: Consequently, Energinet is requested to change the means of communication to the effect that the customer control room may be contacted via telephone and not the network telegraph.	Manuel aflastning vil ikke kun blive aktiveret på transmissionsnettet, men vil samtidig blive aktiveret i distributionsnettet og Nettelegrafen giver Energinet mulighed for via ét værktøj at kommunikere sikkert til alle berørte parter i en eventuel aflastnings situation. Yderligere kan det ikke sikres, at alle mobilmaster vil fungere, da manuel aflastning kun vil foregå i situationer, hvor der potentielt eller allerede er problemer med transmissionsnettet og derfor kan telekommunikation ikke bruges. Som nævnt i kommentar 3 kan det vælges, at den manuelle aflastningsløsning placeres på Energinets side af tilslutningspunktet, hvilket bevirker at nettelegrafen ikke behøver at blive implementeret, hvis dette ikke ønskes.
Afsnit	Gorrisen Federspiels bemærkninger	Energinets bemærkninger
6	Kommentar: Sections 1(2)-(3) of TR 3.4.2 provide that TR 3.4.2 is applicable for transmission-connected demand facilities connected after date of the entry into force of TR 3.4.2. According to section 1(4) of TR 3.4.2, existing transmission-connected demand facilities - as defined in point 1, cf. point 5, of appendix 1 of TR 3.4.2 - are not subject to the requirements of TR 3.4.2, cf., except where: a) an existing transmission-connected demand facility has been modified to such an extent that its connection agreement must	

	be substantially revised (reproduces article 4(1)(a) of EU regulation 2016/1388 of 17. august 2016 (hereinafter "DCC regulation")); and b) the regulatory authority takes the decision that the entire transmission-connected demand facility - both the existing transmission-connected demand facility and the expansion of the said demand facility - is subject to the DCC Regulation, partly or wholly, and as a consequence will be within the scope of TR 3.4.2 (reproduces article 4(1)(b) of the DCC regulation). Taking the above into account, it is our understanding that transmission-connected demand facilities connected before the date of the entry into force of the TR 3.4.2 (existing transmissionconnected demand facilities) falls outside the scope TR 3.4.2, unless the exemptions in section 1(4) are applicable. However, e.g. the first sentence of section 2.8 of the Guidelines - with the heading "Decision on which transmission-connected demand facilities being disconnected" - provides that: *"Energinet's Kontrolcenter chooses, based on the given situation, whether it is most appropriate to disconnect all or only some of the transmission-connected consumers."* As a result, no distinction is made (i) between demand facilities connected before and after date of the entry into force of the TR 3.4.2, cf. section 1(3) of TR 3.4.2, (ii) whether the connection agreement has been substantially revised, cf. section 1(4)(a) of TR 3.4.2, or (iii) whether the regulatory authority has taken a decision, cf. section 1(4)(b) of TR 3.4.2. The same comment applies for the first sentence of section 3.7 of the Guidelines (governing reconnection). The second sentence of section 2.8 of the Guidelines, cf. the wording below, seems to be more in line with the regulation stipulated by TR 3.4.2. The same comment applies for the second sentence of section 3.7 of the Guidelines (governing reconnection). *"If the situation allows it, Energinets Kontrolcenter must try to disconnect equally between both the transmission-connected demand facilities under technical regulation 3.4.2, and the distribution companies under technical regulation 2.1.2, which is comparable to this regulation."* This above comment must inter alia be seen in the context of the definition of a "transmissionconnected demand facility" (in Danish: transmissionstilsluttede forbrugsanlæg). A "transmission-	

	connected demand facility" is defined as "a demand facility having a connection point to the transmission grid", cf. point 5 of appendix 1 of TR 3.4.2. Throughout TR 3.4.2 and the Guidelines the term 'transmission-connected demand facilities' is used, however, this term does not take the above distinctions, cf. sections 1(2)-(4) of TR 3.4.2, into account. Forslag til ændringer: To sum-up, the scope of TR 3.4.2 seems to be unclear. In order to avoid any confusion it is appropriate to specify that transmission-connected demand facilities refers to a demand facility failing within the scope of TR 3.4.2.	Energinet er enig i, at dette bør specificeres. Derfor er punkt 2.8 i vejledningen blevet ændret således, at sætningen nu er: *Energinets Kontrolcenter El vælger ud fra den givne situation, om det er mest hensigtsmæssigt at aflaste alle eller kun nogle af de transmissionstilsluttede forbrugere som er omfattet af manuel aflastning.* Ligeledes er der rettet i vejledningens punkt 3.7 for at specificere den samme problemstilling.

3. Høringsliste

Ørsted
Lerba Consult
Google
Facebook
DTU
N1
Energistyrelsen
Vestforbrændingen
Radius
BaneDanmark
Plesner
Gorrissen Federspiel
Atkins
Invest in Denmark
Dansk Energi
Forsyningstilsynet

Materialet har desuden været offentliggjort på Energinets hjemmeside: www. Energinet.dk under El → Høringer af forskrifter, metoder og nationale gennemførselsforanstaltninger → høringer.