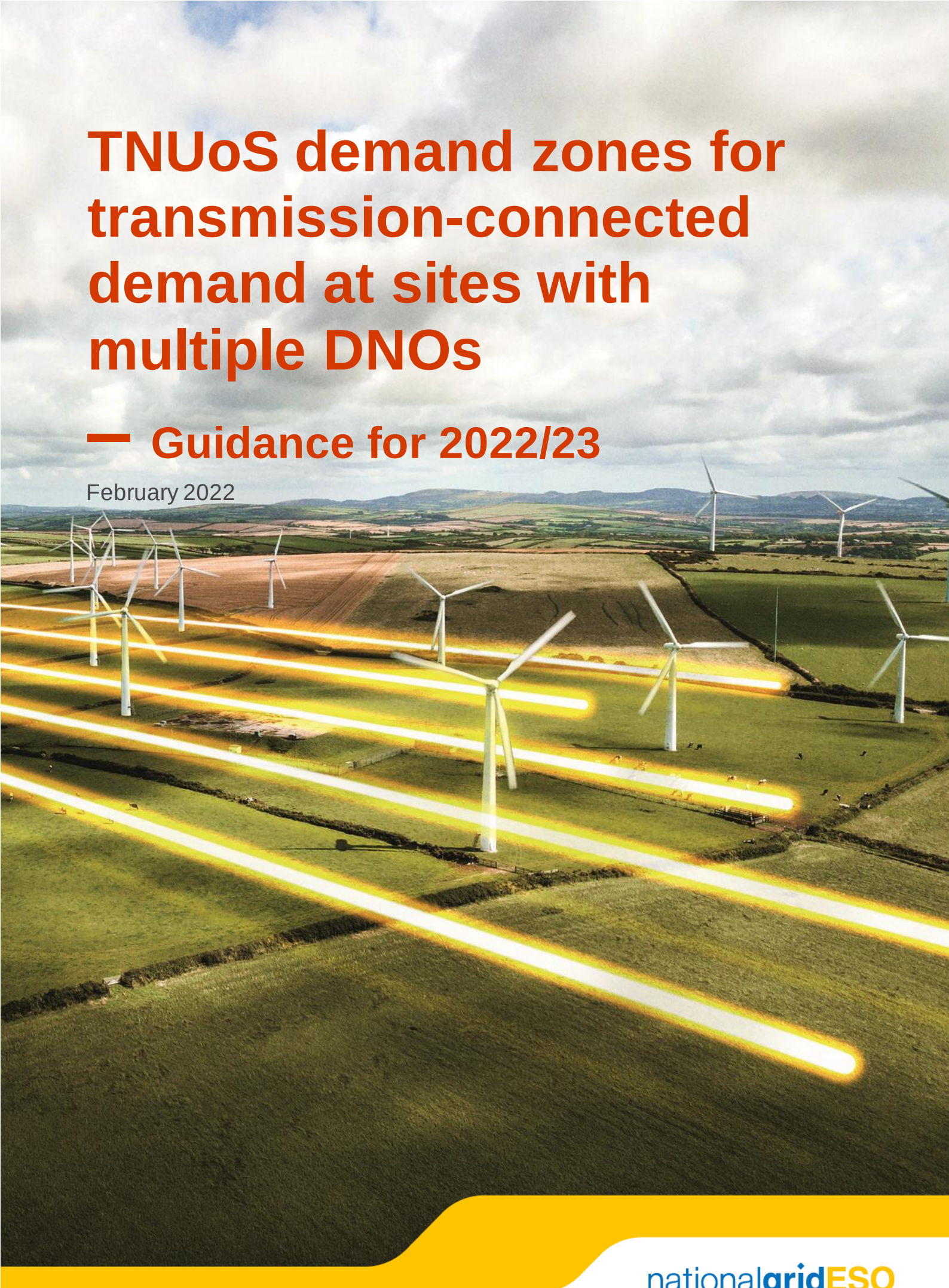
TNUoS demand zones for transmission-connected demand at sites with multiple DNOs

— Guidance for 2022/23

February 2022



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Disclaimer

In the event of any inconsistencies between this guidance note and the CUSC, then the latest CUSC will take precedence.

The latest CUSC can be downloaded from the National Grid Electricity System Operator (NGESO) website (https://www.nationalgrideso.com/industry-information/codes/connection-and-use-system-code-cusc/code-documents).

Introduction

The purpose of this guidance note is to provide clarity on our minded-to treatment of TNUoS (Transmission Network Use of System) demand tariffs for certain demand users. These users are transmission-connected demand users, and are connected at sites where multiple Distribution Network Operators (DNOs) exist. Although there are currently no such users connected to the transmission system, it is expected that a small number may be connected during 2022/23, and ahead of the conclusion of CMP379[1].

TNUoS demand tariffs and demand zones

All licenced suppliers are liable for TNUoS charges, for their demand that are either half-hour (HH) metered, or non-half-hour metered (NHH). The TNUoS demand tariffs, in £/kW (for HH users) or p/kWh (for NHH users), vary with the locations of the demand sites, and all demand users within the same demand zone have the same demand tariffs.

There are 14 TNUoS demand zones, which are aligned with the 14 DNO zones. A map of the 14 demand zones is shown in Figure 1. Please note that the boundaries on the map are indicative only, and may evolve when DNOs connect / disconnect at various transmission sites.

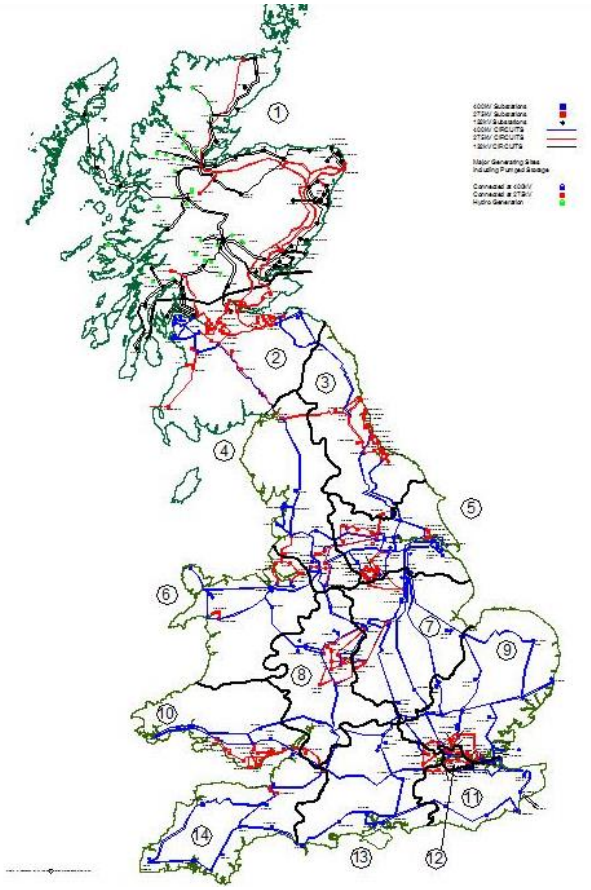

Figure 1 TNUoS demand zones

A demand user connecting at the distribution network will be allocated a TNUoS demand zone, which corresponds to its DNO zone, and its TNUoS demand tariff is dependent on the DNO zone it connects to.

[1] https://www.nationalgrideso.com/industry-information/codes/connection-and-use-system-code-cusc-old/modifications/cmp379-determining

A transmission-connected demand user and its TNUoS demand zone

A transmission-connected demand user has a BCA (Bilateral Connection Agreement) with the Electricity System Operator (ESO), and therefore is directly connected to a transmission site (a transmission site is owned and maintained by the relevant Transmission Owner).

If the transmission site falls within a DNO's geographic area, the demand user that is transmission-connected at the site, will be assigned to the demand zone corresponding to the DNO zone (see Figure 2).

Figure 2 Assigning demand zone for a transmission-connected user

CMP379

In September 2021, NGESO raised a CUSC modification proposal CMP379 (Determining TNUoS demand zones for transmission - connected demand at sites with multiple Distribution Network Operators (DNOs)). In this proposal, a defect regarding clarity within the CUSC was noted. This defect relates to how demand zones are determined for transmission-connected demand users at the "boundaries" of multiple DNOs' areas. An illustrative example is given in Figure 3.

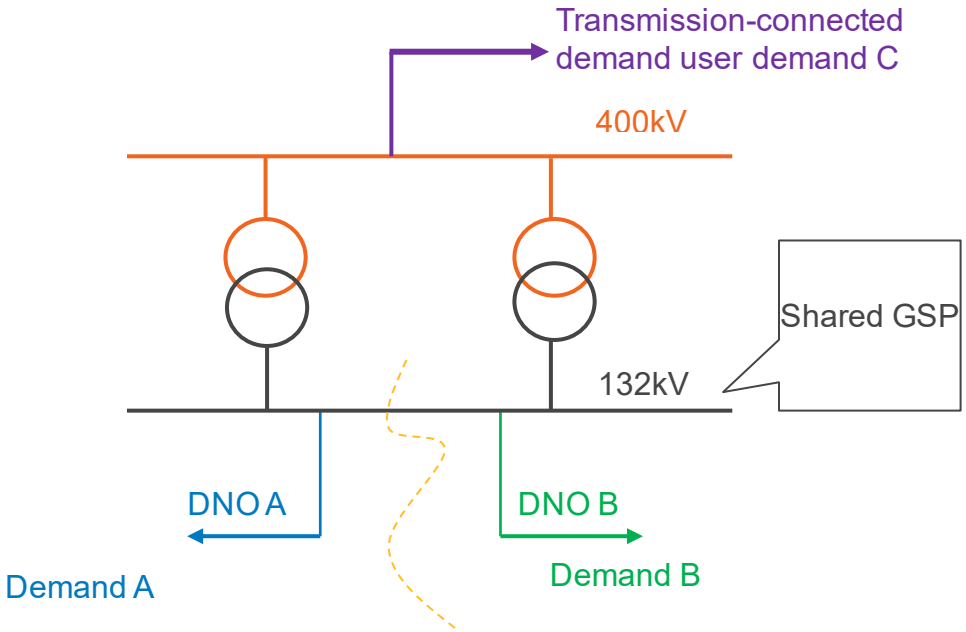

Figure 3 An illustrative example of "boundary" sites with multiple DNOs

It is expected that during 2022/23, a small number of transmission-connected users (primarily energy storage systems) will be connect to the National Electricity Transmission System (NETS) sites, which are located at boundary points between multiple DNO areas. At present the CUSC charging methodologies do not clearly set out how the TNUoS demand zone for these users will be determined. CMP379 seeks a solution, however, it is not expected to be concluded ahead of connection of these users. Therefore, in this guidance note, we

set out our interim approach to assigning demand zones for these users, until the implementation of the final CMP379 solution.

TNUoS treatment for year 2022/23

Where a transmission site has a local Grid Supply Point (GSP) which connects to and feeds multiple DNO networks (see Figure 3), the DNO with the highest local net demand MW value at that site (determined by the DNO 'week 24' demand forecast data used within our TNUoS transport model) will be classed as the "predominant DNO". Subsequently, if a transmission-connected demand user is connected to this transmission site, the user will be assigned the demand TNUoS zone associated with the "predominant DNO" at the site.
It should be noted that this demand zone may change on an annual basis, given that the "predominant DNO" is determined by local demand forecast data, which may change between charging years.

A worked example

In Figure 3, both DNO A and DNO B have submitted their demand forecast for charging year 2022/23, under the annual "week 24" process, as detailed in the Grid Code.

DNO A forecasts its demand at the site (net off contribution from embedded small and medium generators within the same GSP) will be 10MW for year 2022/23, and DNO B forecasts its demand (also net demand) at the site will be 8MW for year 2022/23.

During 2022/23, a new demand user is connected at the transmission site, and holds a BCA with the ESO. The new demand user will be assigned to TNUoS demand zone A, which is associated with DNO A (the predominant DNO at the site).

In the following year (2023/24), under the refreshed demand forecast by DNO A and B, the predominant DNO at the site will be DNO B instead (for example, DNO A forecasts its demand at 9MW for year 2023/24, and DNO B forecasts its demand to be 11MW for year 2023/24). Therefore for 2023/24 TNUoS tariff calculation, the transmission-connected demand will be assigned to TNUoS demand zone B instead, due to DNO B now having the higher MW forecast value.

Contact us

For more information, please contact the TNUoS team at TNUoS.Queries@nationalgrideso.com