

CMP 460 - Improving Transmission Connection Asset Charging

Examples of Infrastructure Configurations

Baseline (Existing Definitions)

Definition of Asset Classes

14.2.5 In general, connection assets are defined as those assets solely required to connect an individual User to the National Electricity Transmission System, which are not and would not normally be used by any other connected party (i.e. “single user assets”). For the purposes of this Statement, all connection assets at a given location shall together form a connection site.

14.2.6 Connection assets are defined as all those single user assets which:

- a) for Double Busbar type connections, are those single user assets connecting the User’s assets and the first transmission licensee owned substation, up to and including the Double Busbar Bay;
- b) for teed or mesh connections, are those single user assets from the User’s assets up to, but not including, the HV disconnector or the equivalent point of isolation;
- c) for cable and overhead lines at a transmission voltage, are those single user connection circuits connected at a transmission voltage equal to or less than 2km in length that are not potentially shareable.

14.2.7 Shared assets at a banked connection arrangement will not normally be classed as connection assets except where both legs of the banking are single user assets under the same Bilateral Connection Agreement.

14.2.8 Where customer choice influences the application of standard rules to the connection boundary, affected assets will be classed as connection assets. For example, in England & Wales NGET does not normally own busbars below 275kV, where The Company and the customer agree that NGET will own the busbars at a low voltage substation, the assets at that substation will be classed as connection assets and will not automatically be transferred into infrastructure.

Anything else is defined as Infrastructure.

Ownership Boundaries

- All examples assume an Air Insulated Switchgear (AIS) design, except where explicitly stated.
- For Gas Insulated Switchgear the User 'bay' would typically be a connection asset rather than a User asset due to the typical ownership boundary used for GIS substations.

[User connection boundaries | National Grid](#)

Charging Boundaries

- The worked examples do not define which user is responsible for paying for each Connection Asset.
- The User who has triggered the need for the Connection Asset will pay for the full cost of the Connection Asset.

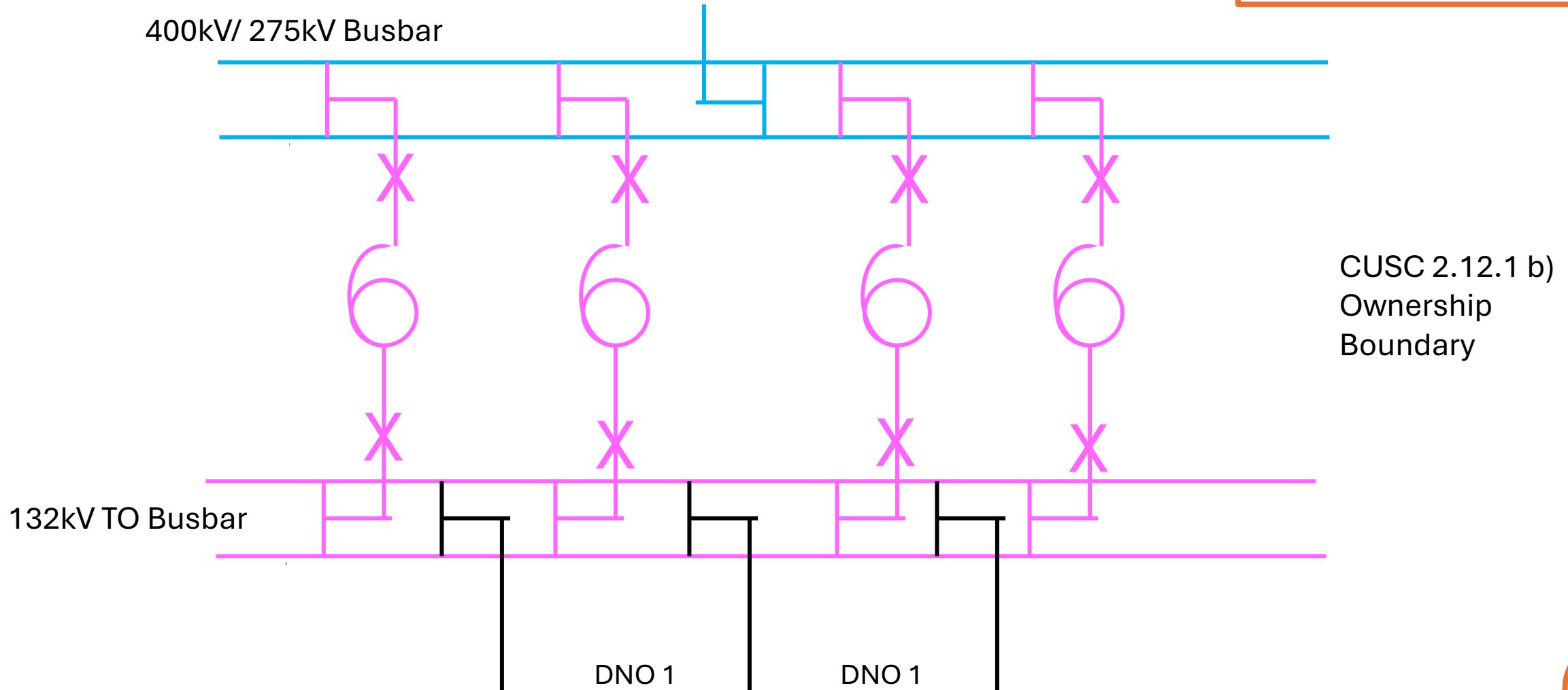
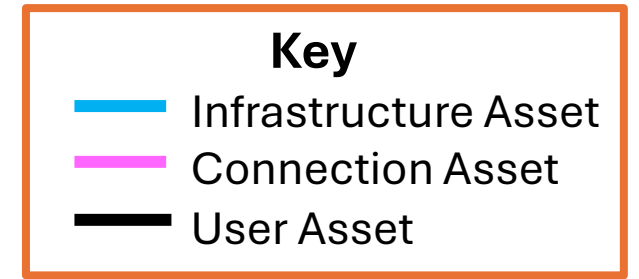
Glossary

Acronym	Definition
TO	Transmission Owner
DNO	Distribution Network Owner
HV	High voltage >132kV
LV	Low Voltage, $\leq 132\text{kV}$
GSP	Grid Supply Point
SGT 6	Super Grid Transformer
GIS	Gas Insulated Switchgear
AIS	Air Insulated Switchgear
User	A person who is a party to the CUSC Agreement, as defined by the table in in clause 1.2.4 of the CUSC . For CMP460 worked examples, each Bilateral Connection Agreement, i.e. Bilateral Connection Agreement, will be treated as a separate User of the Transmission Network.

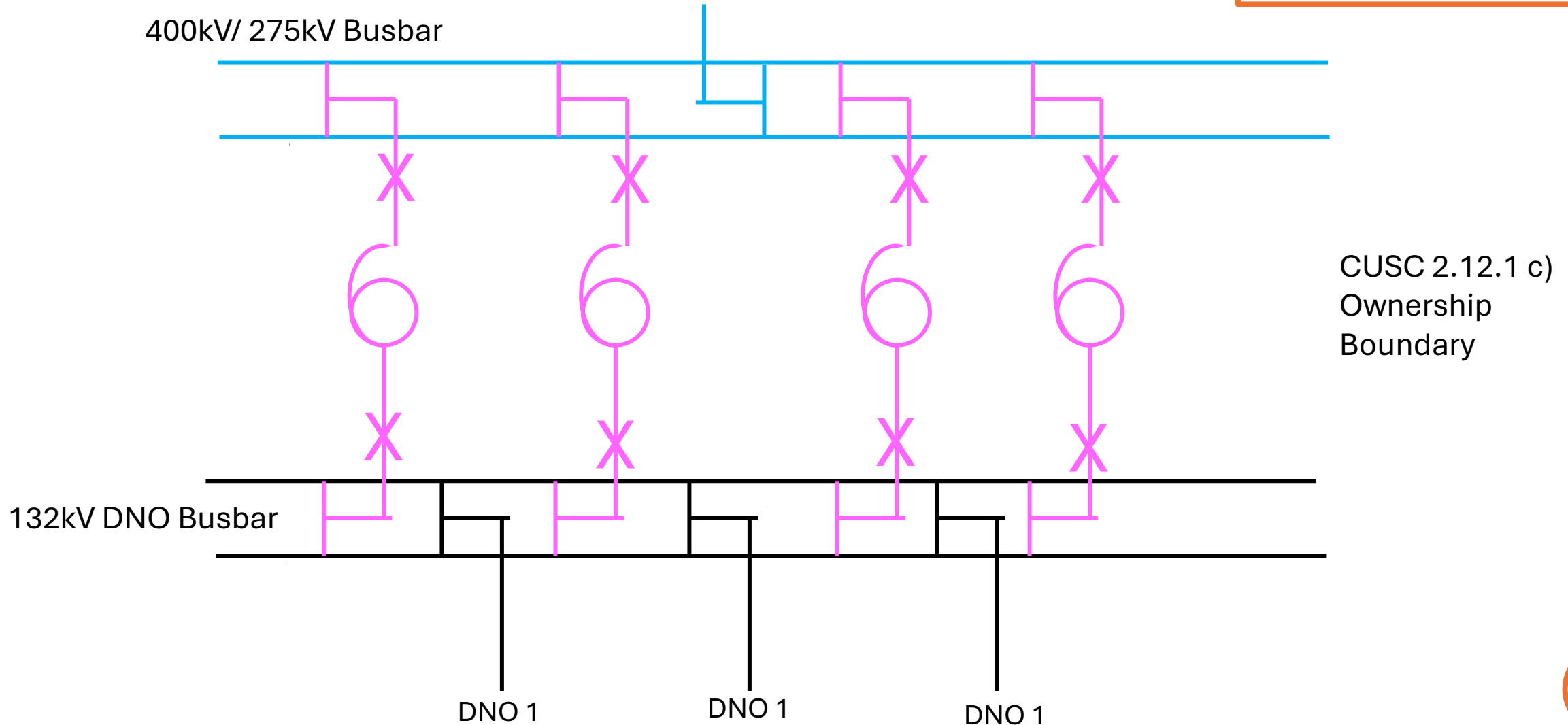
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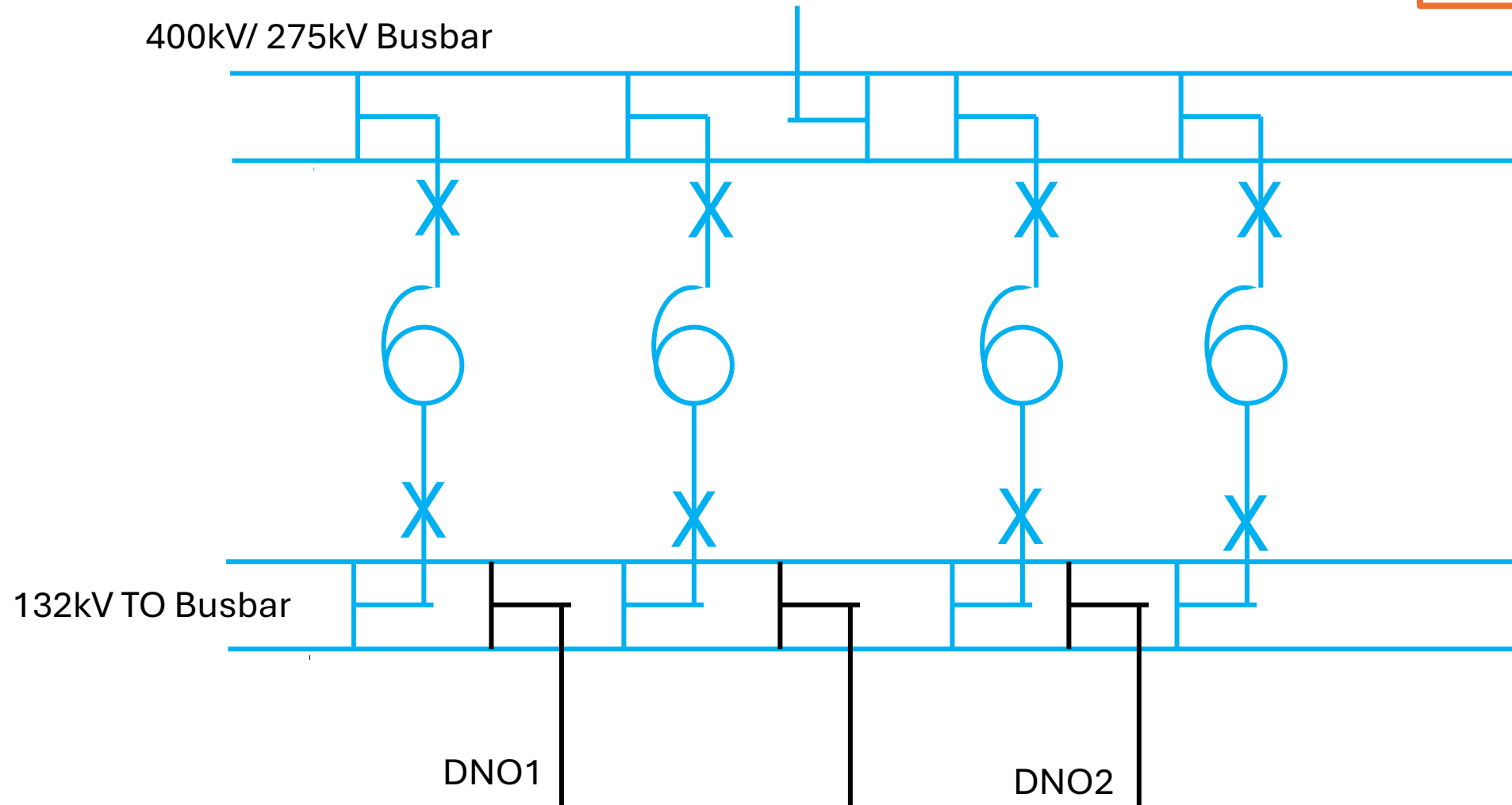
Single DNO Customer at a GSP with TO owned LV busbars



Single DNO Customer at a GSP with DNO Owned LV busbars

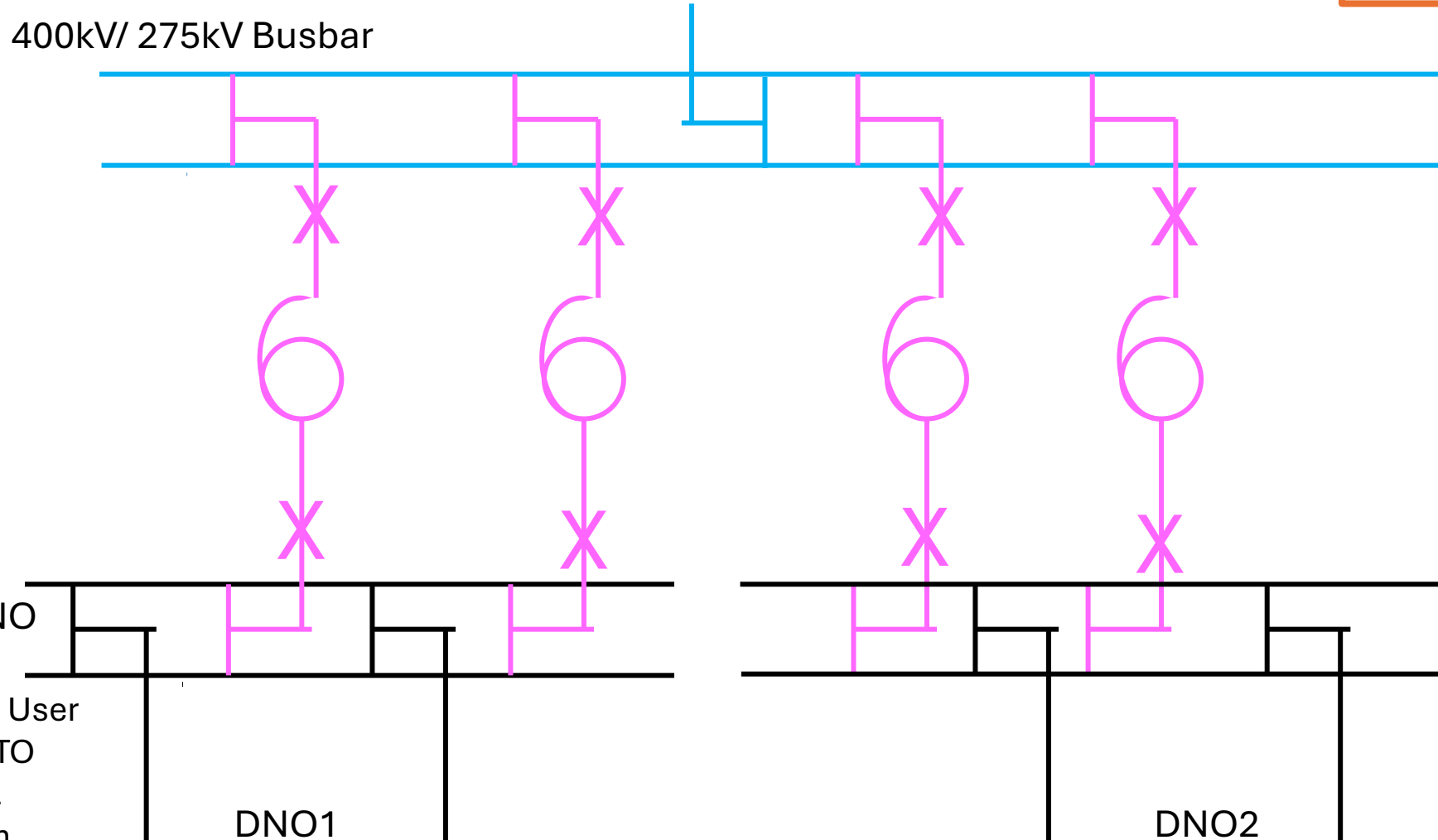
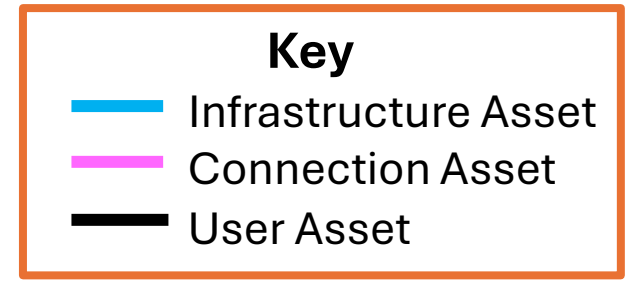


Multiple DNOs with a Shared 132kV Substation

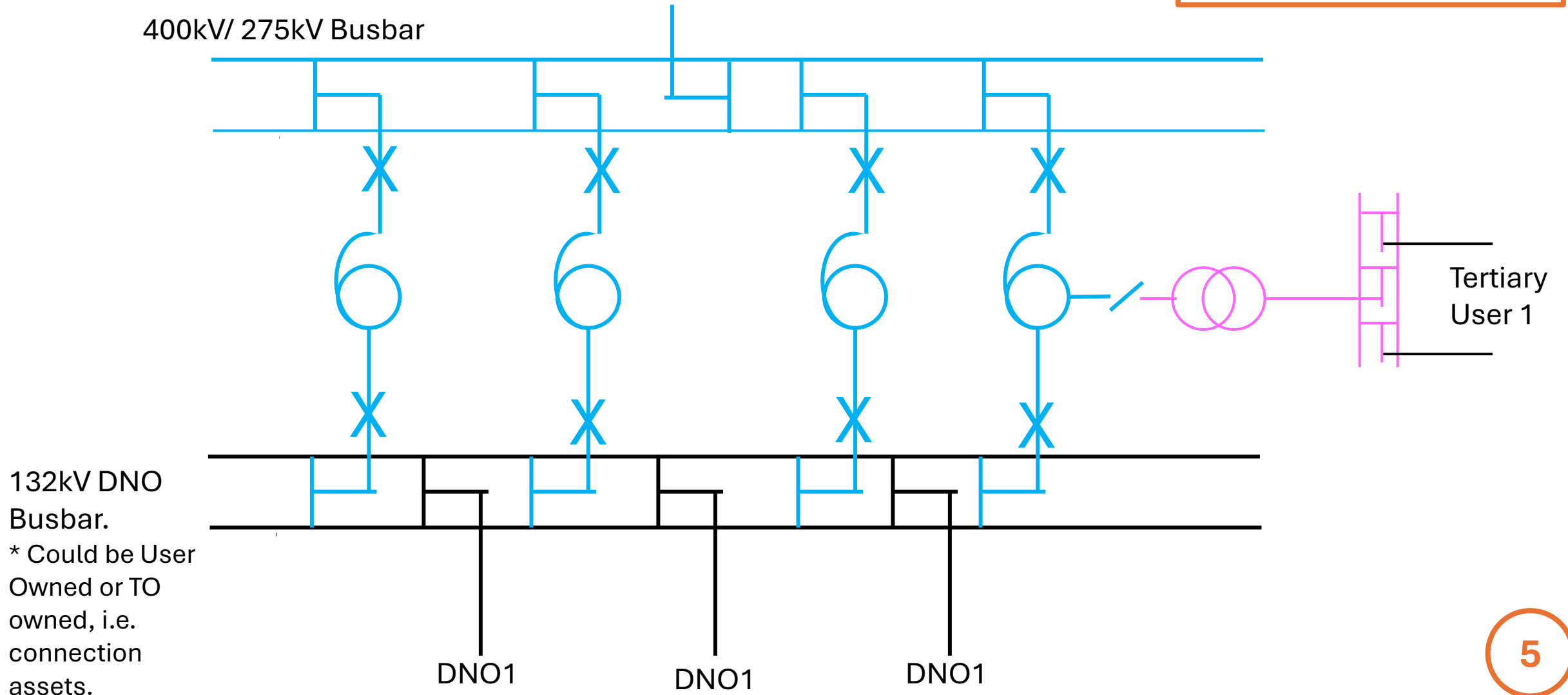


Multiple DNOs, separate 132kV Substations

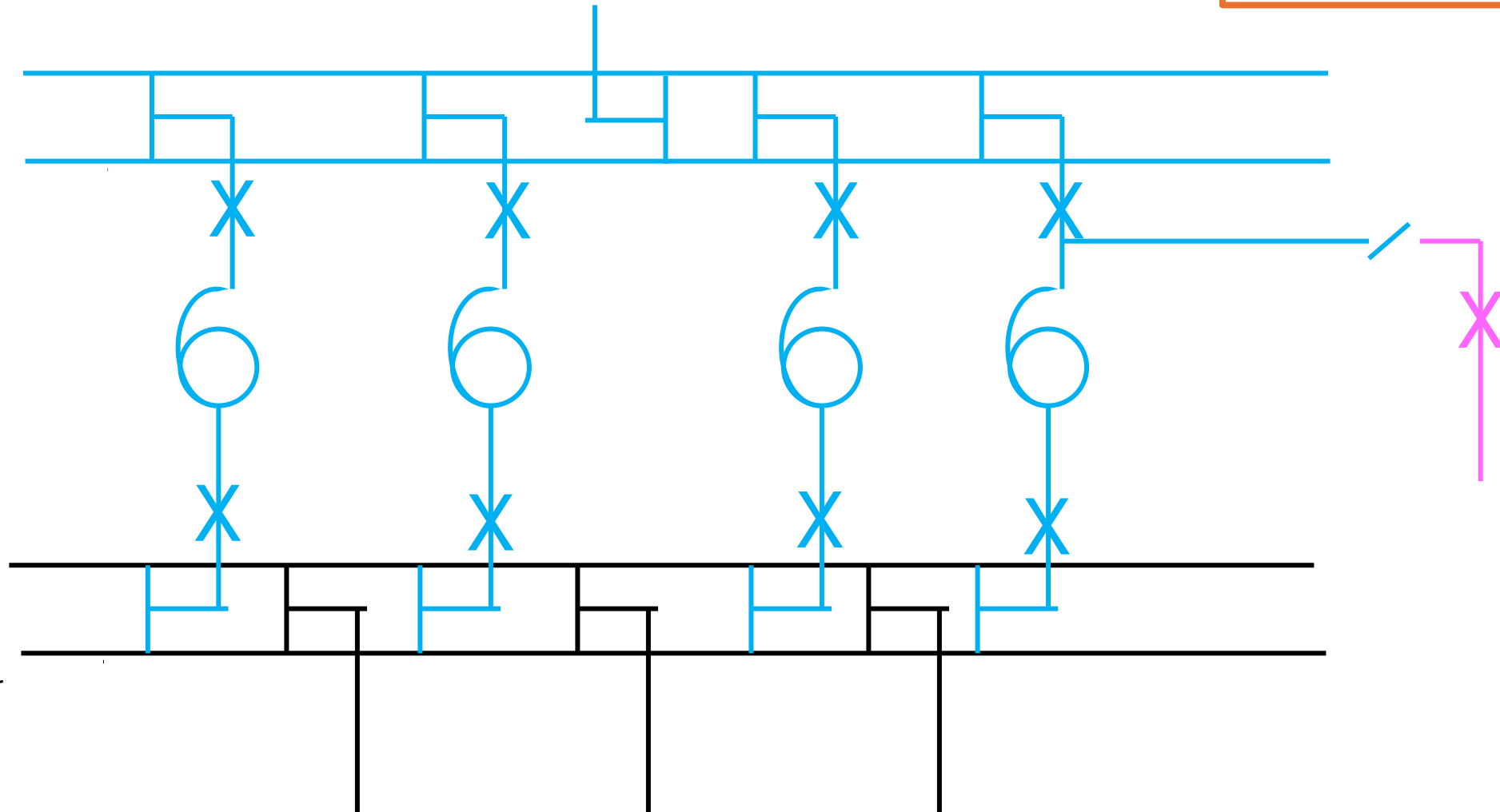
DNO Owned LV busbars



Single DNO and Tertiary Connection



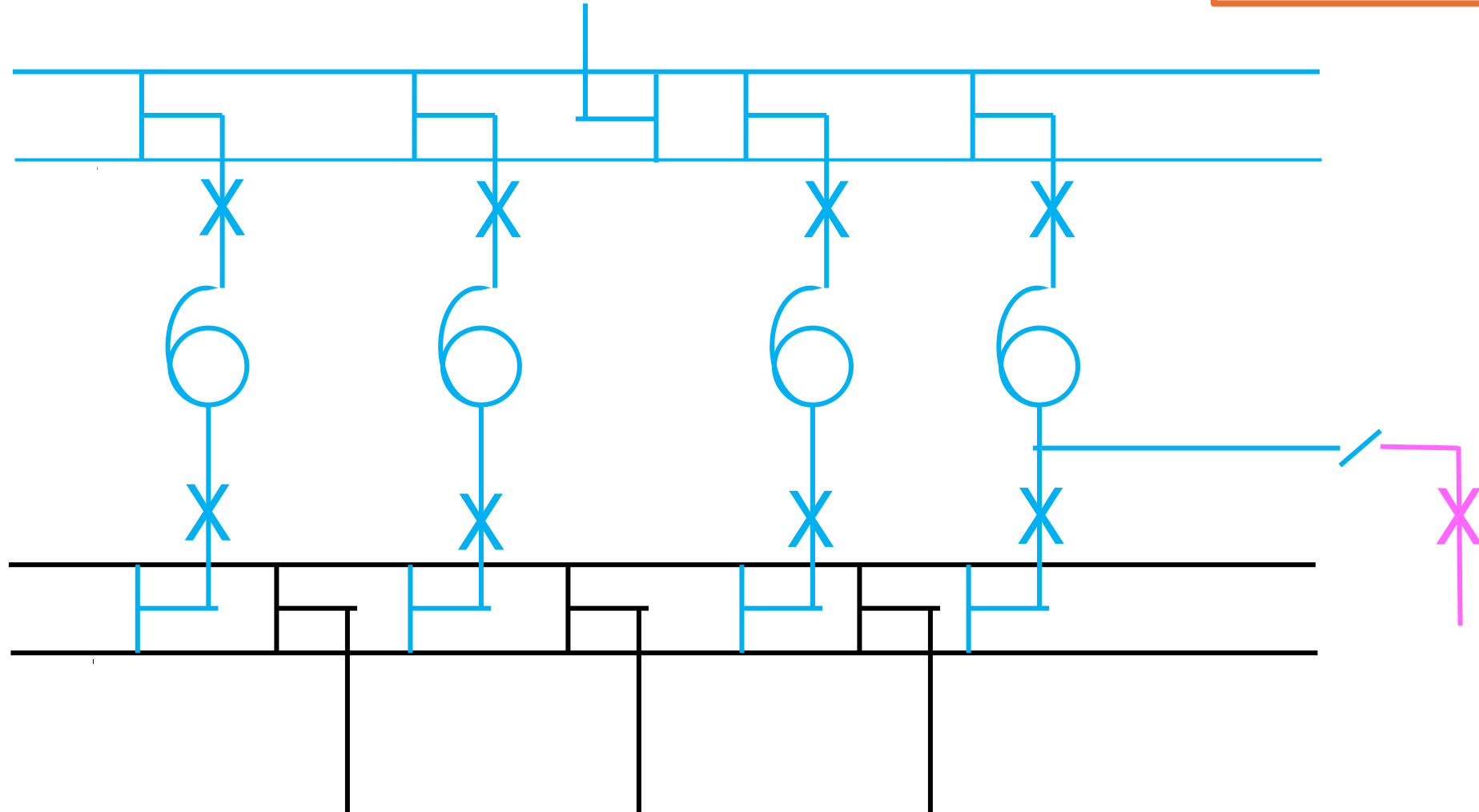
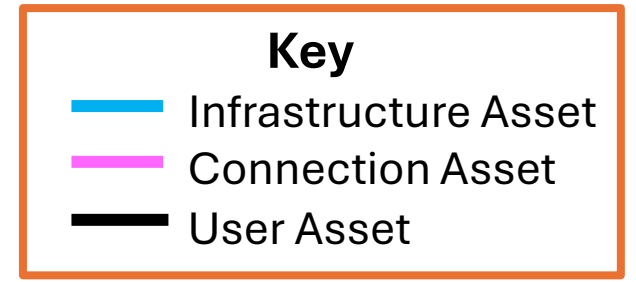
Banked HV (>132kV) Connection, single DNO



132kV DNO
Busbar.

* Could be User
Owned or TO
owned, i.e.
connection
assets.

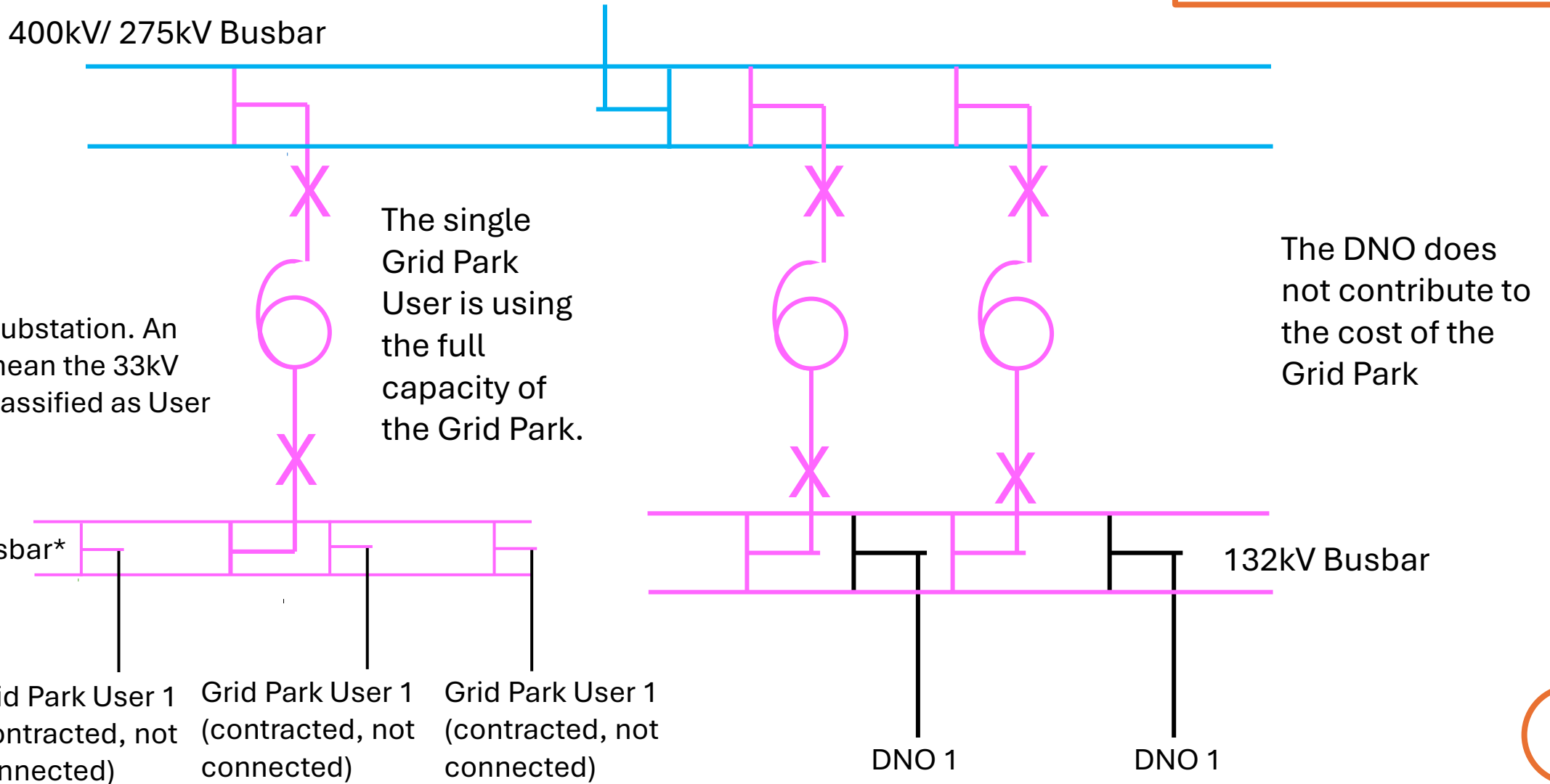
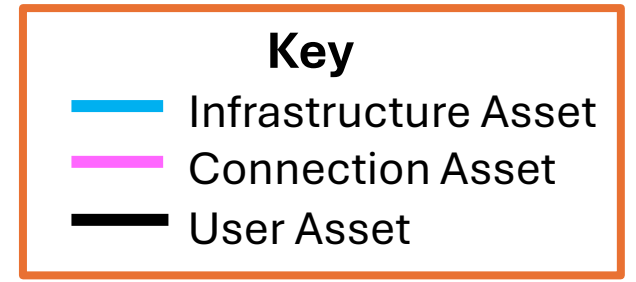
Banked LV Connection, single DNO



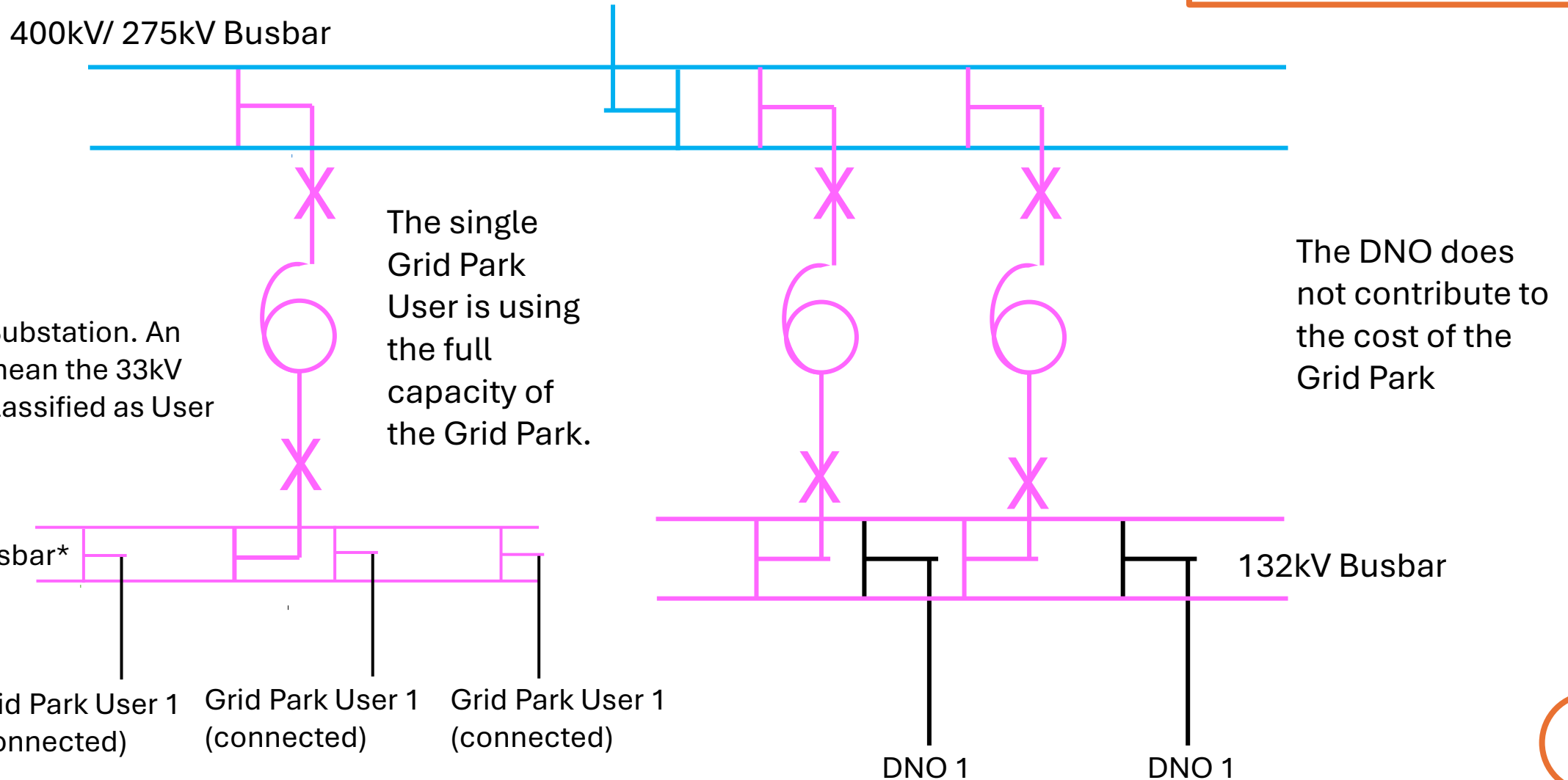
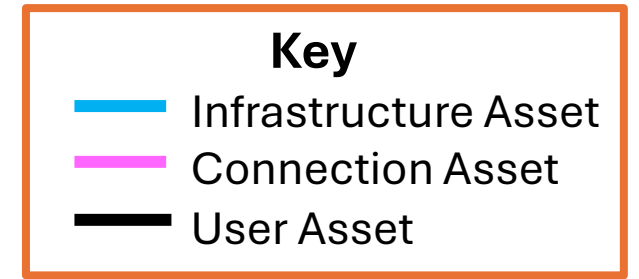
132kV DNO
Busbar.

* Could be User
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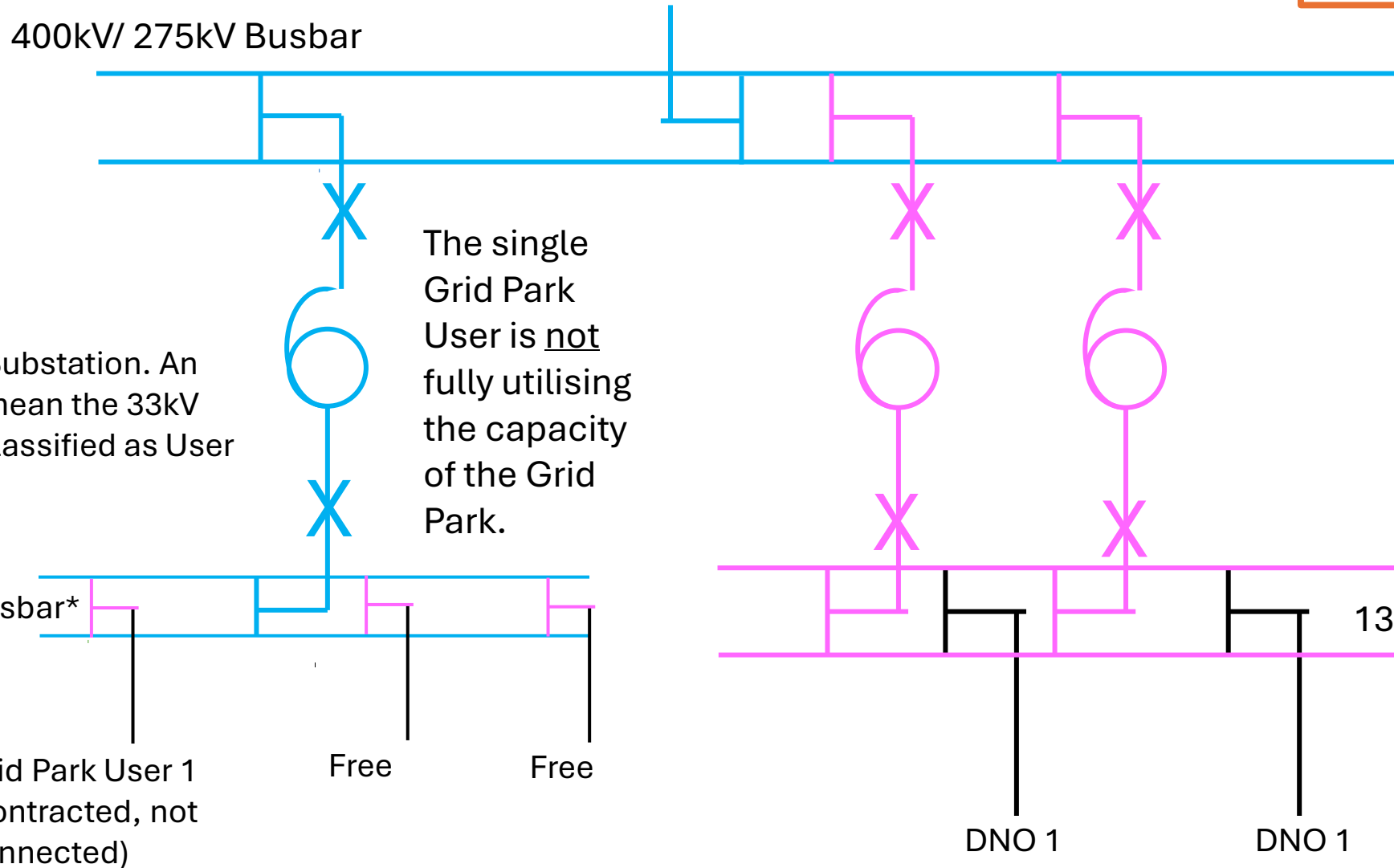
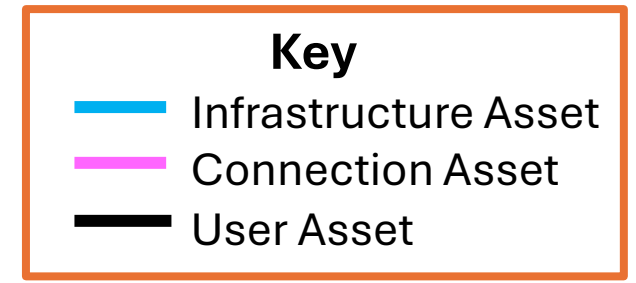
Grid Park Full Capacity – Only One Customer Contracted



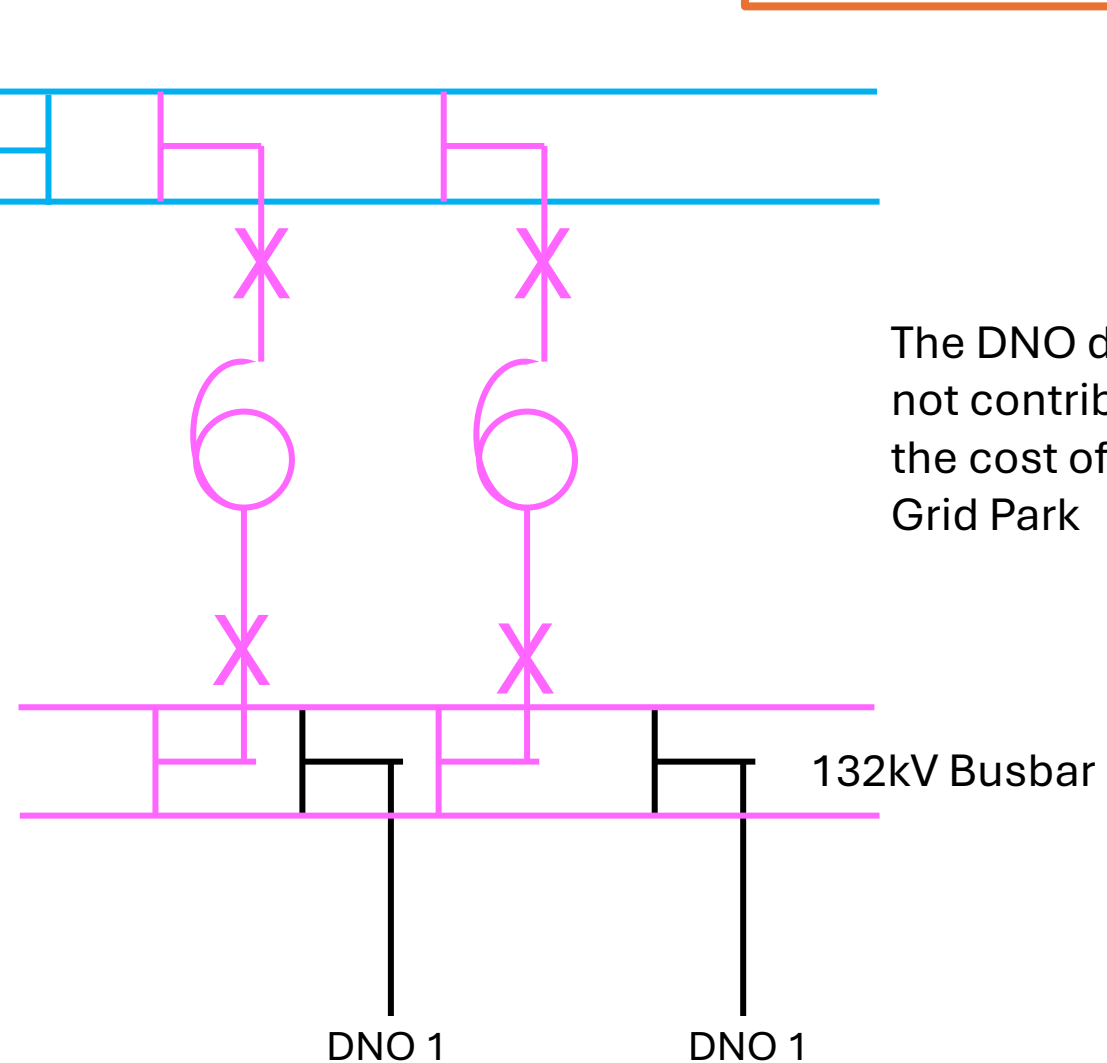
Grid Park Full Capacity – Only One Customer Connected



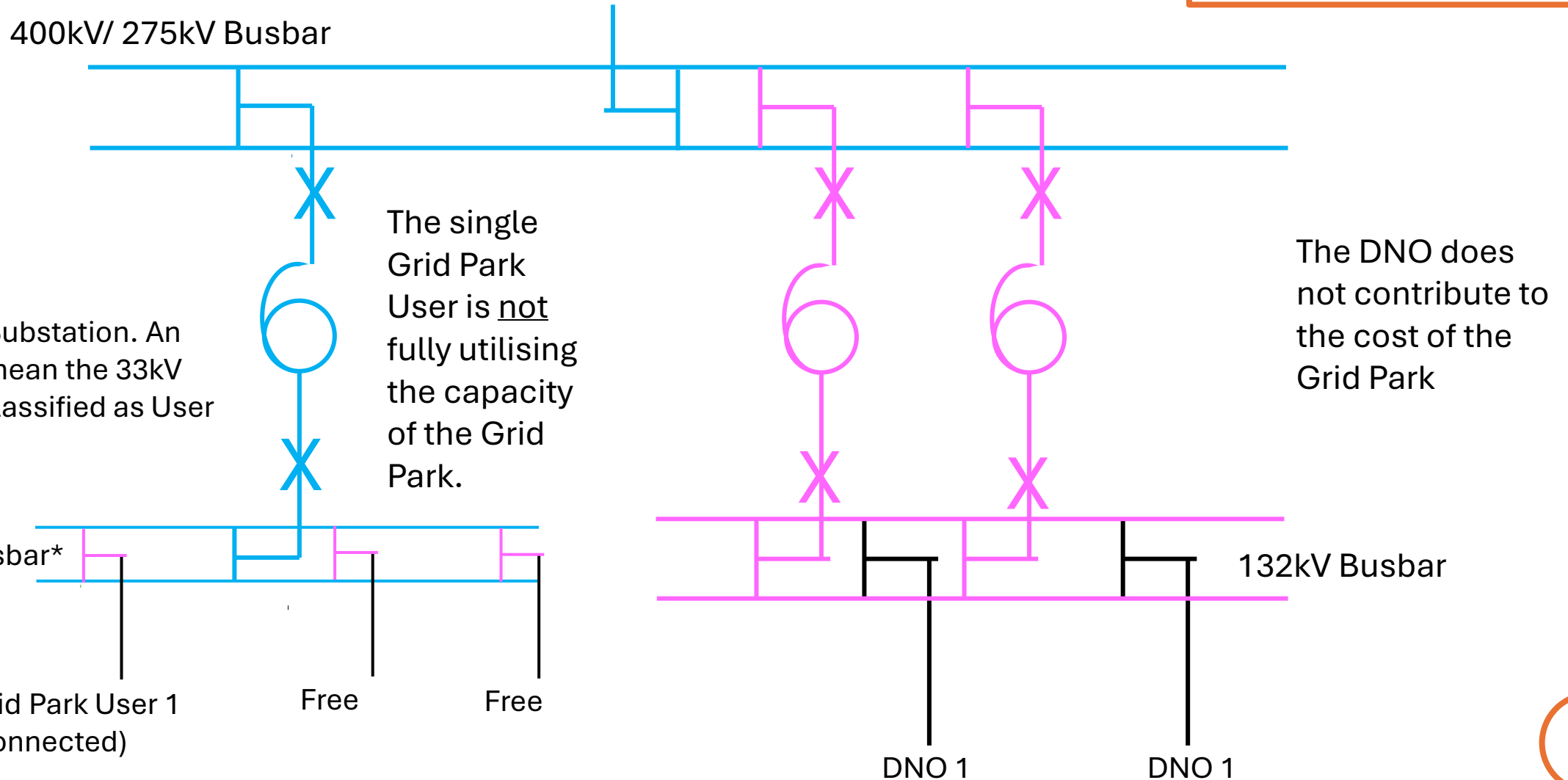
Grid Park Partially Full Capacity– Only One Customer Contracted so Far



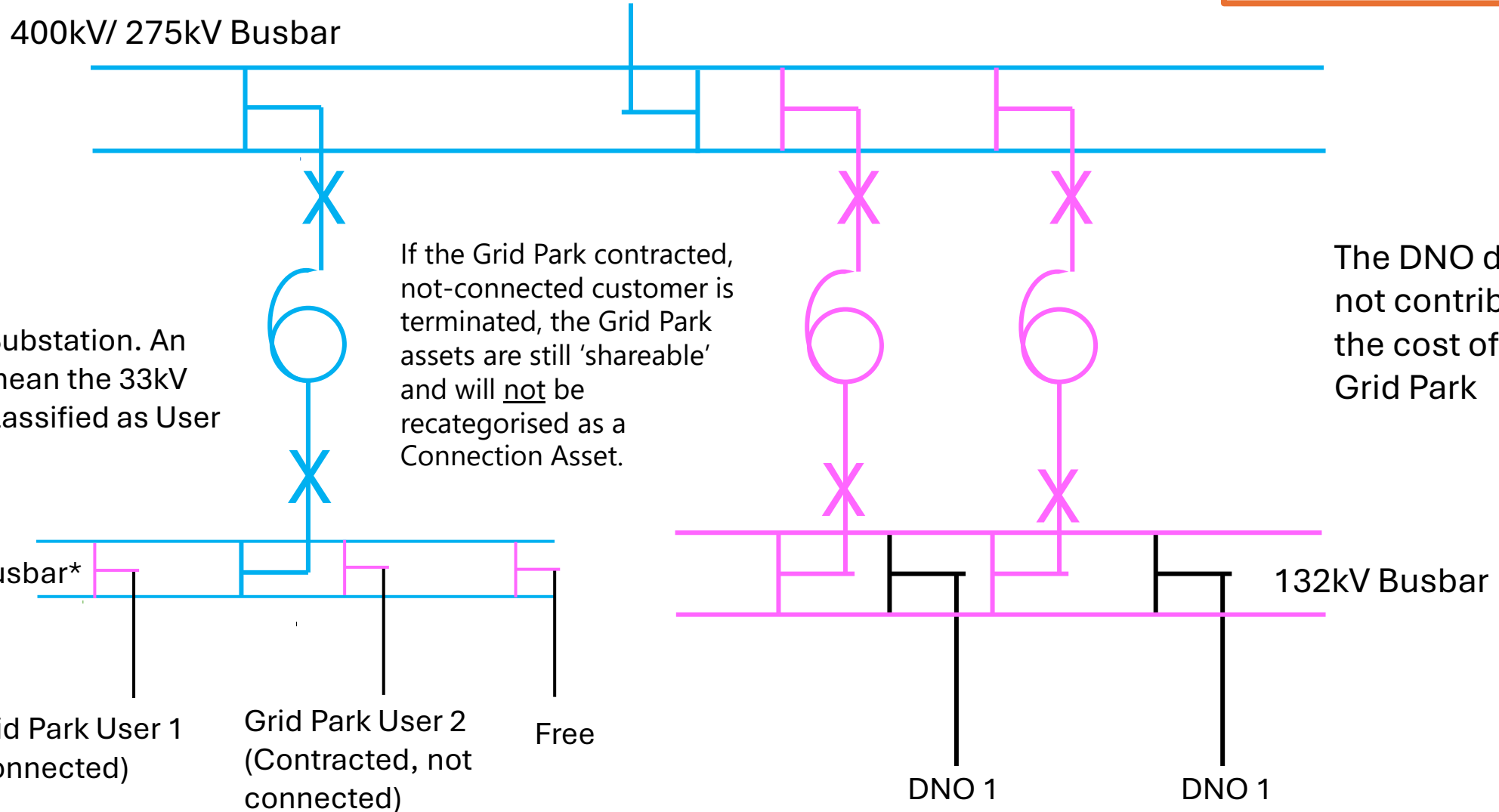
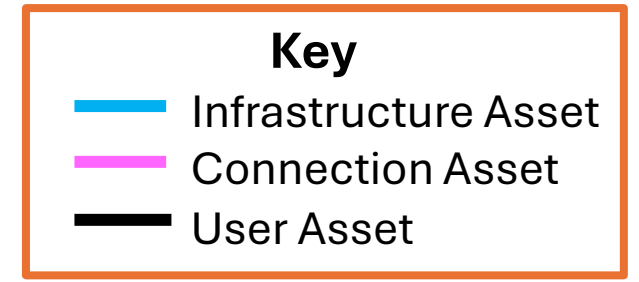
The DNO does not contribute to the cost of the Grid Park



Grid Park Partially Full Capacity – One Customer Connected



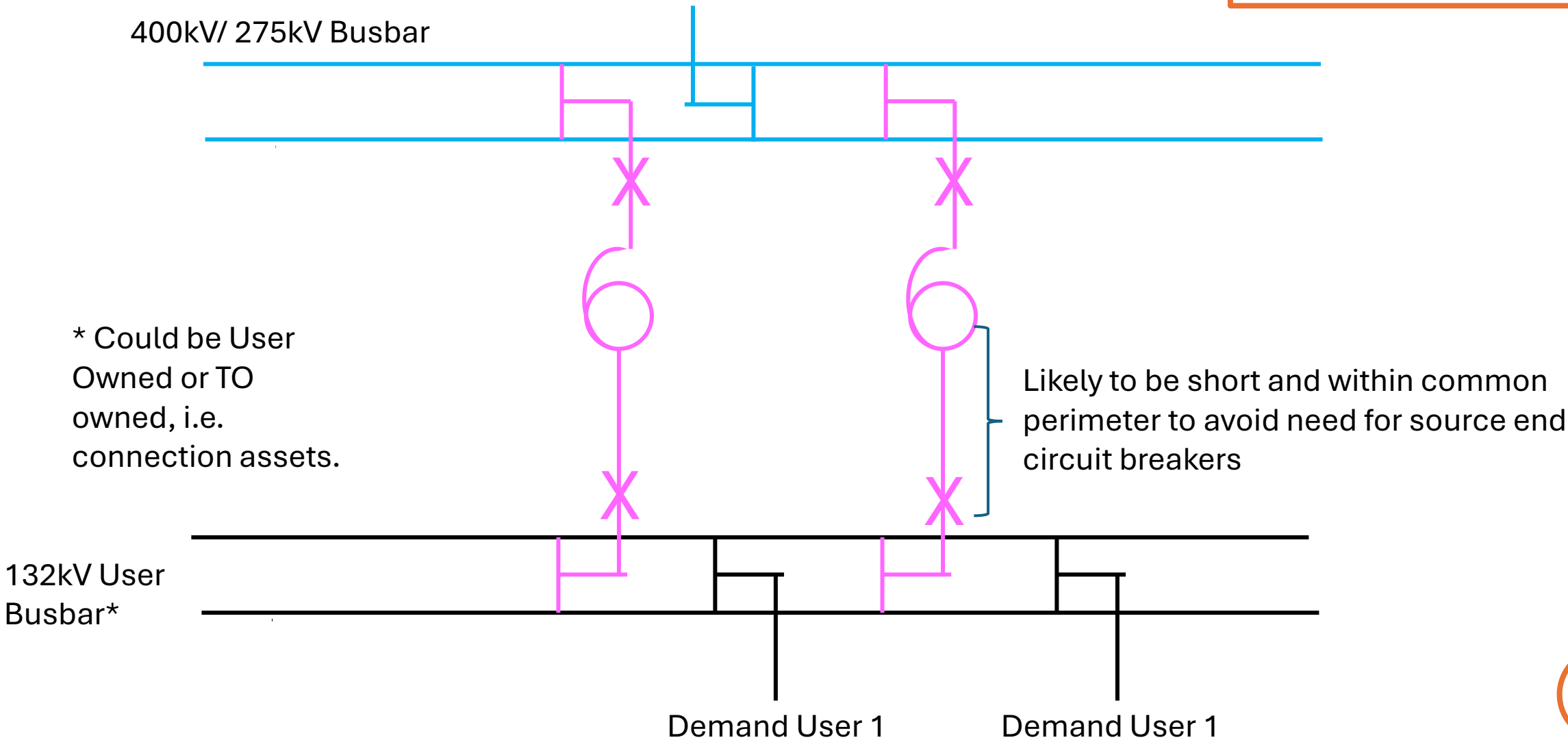
Multiple Grid Park Users



Single Directly Connected Final Demand User Common Location

Key

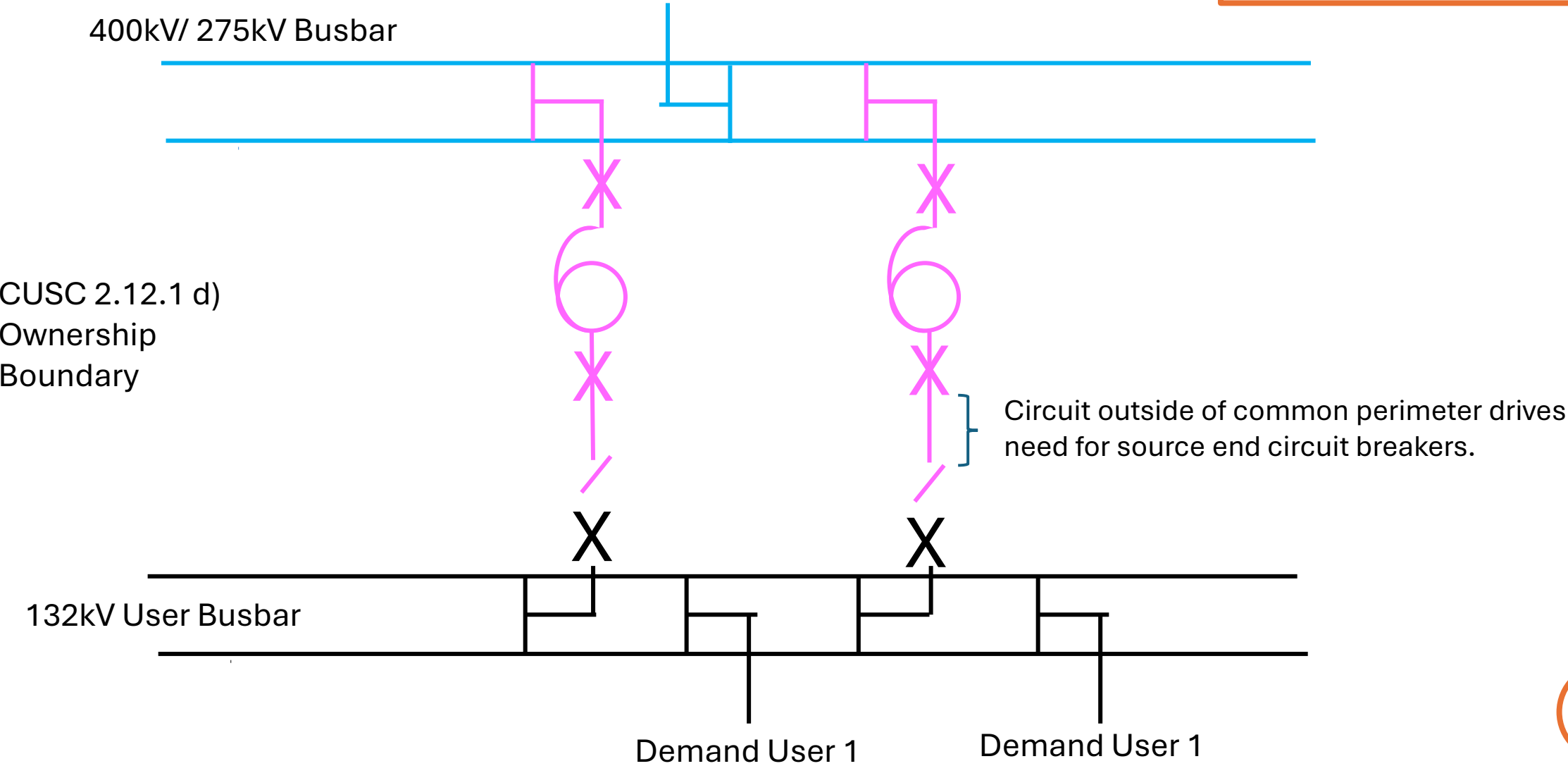
- Infrastructure Asset
- Connection Asset
- User Asset



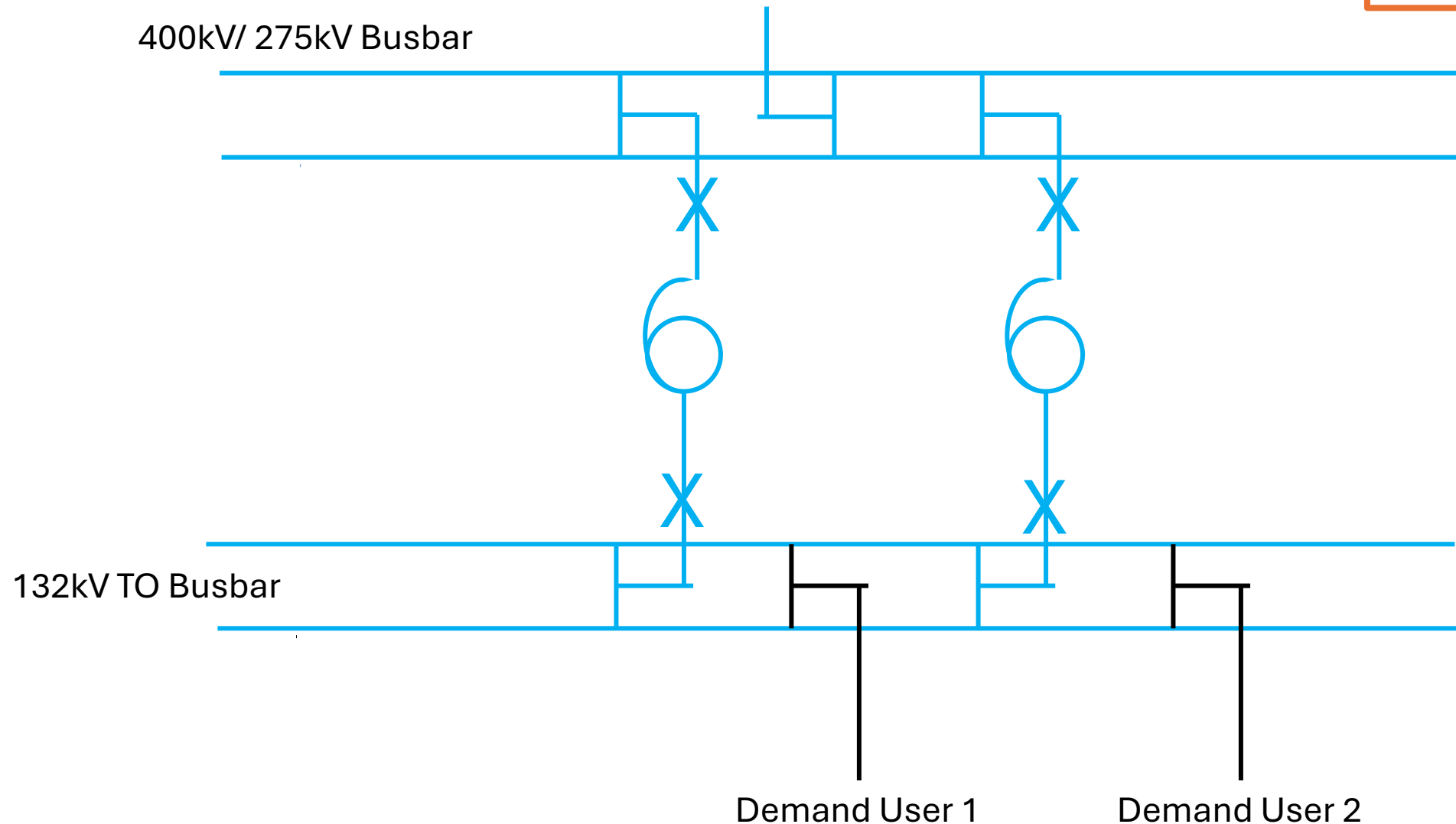
Single Directly Connected Final Demand User Remote Location

Key

- Infrastructure Asset
- Connection Asset
- User Asset



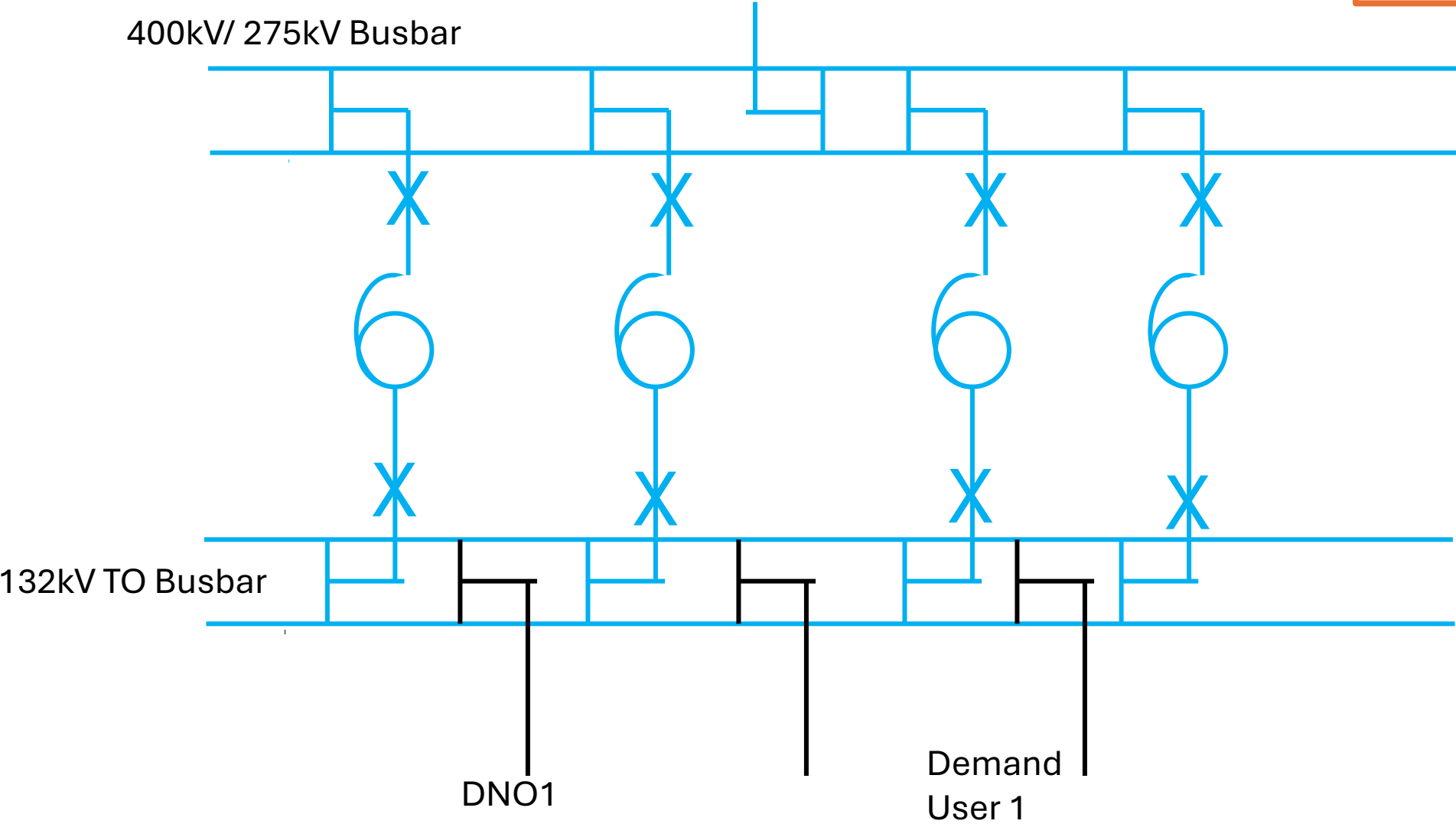
Multiple Directly (Transmission) Connected Final Demand Users Common Location



DNO and Directly (Transmission) Connected Final Demand User with a Shared 132kV Substation

Key

- Infrastructure Asset
- Connection Asset
- User Asset



DNO and Directly (Transmission) Connected Final Demand User with separate 132kV Substations

