

Electricity Network Access Project: Access and Forward- Looking Charges Joint Task Forces

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Task Force Approach

> Stage 1: Initial Options

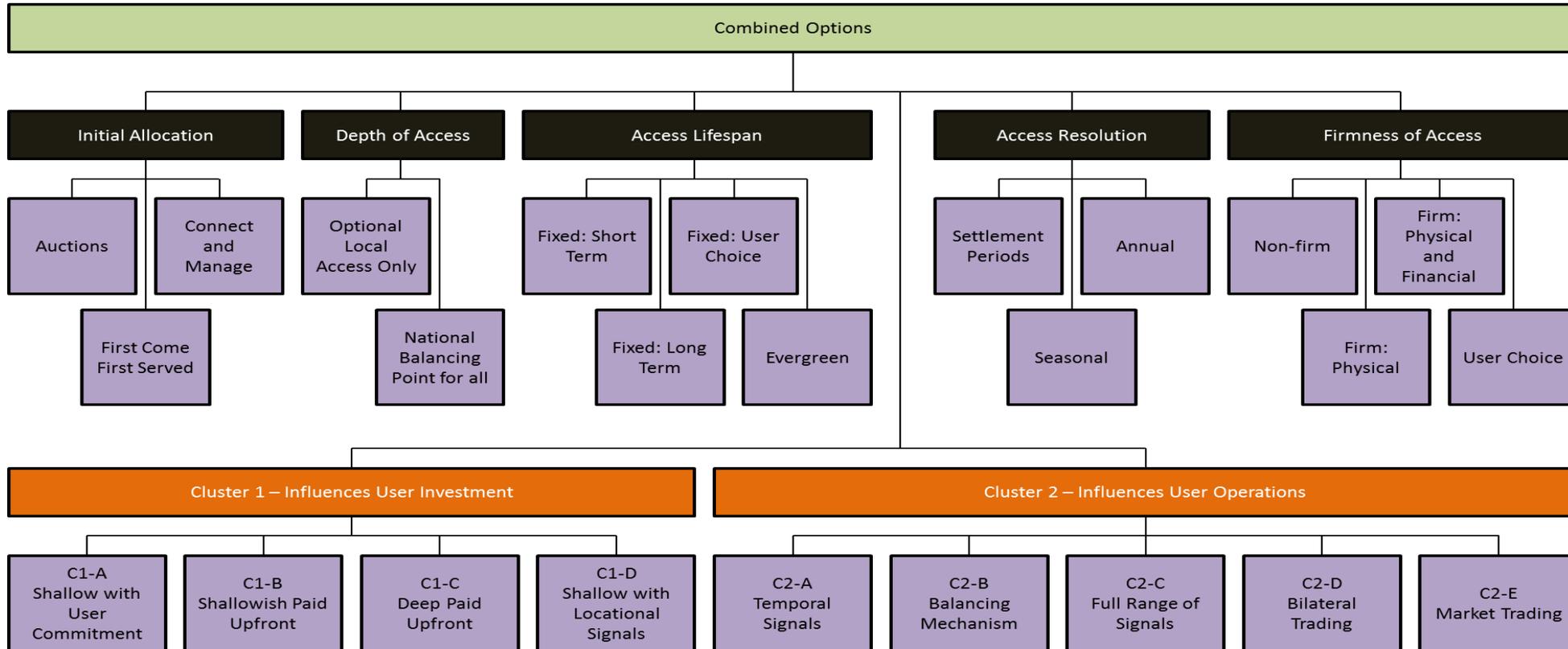
- > Building blocks to determine and define various access arrangements, their initial allocation and reallocation.
- > Building blocks for the calculation and structure of forward looking charges

> Stage 2: Framework Scenarios, Clusters and Assessment Methodology

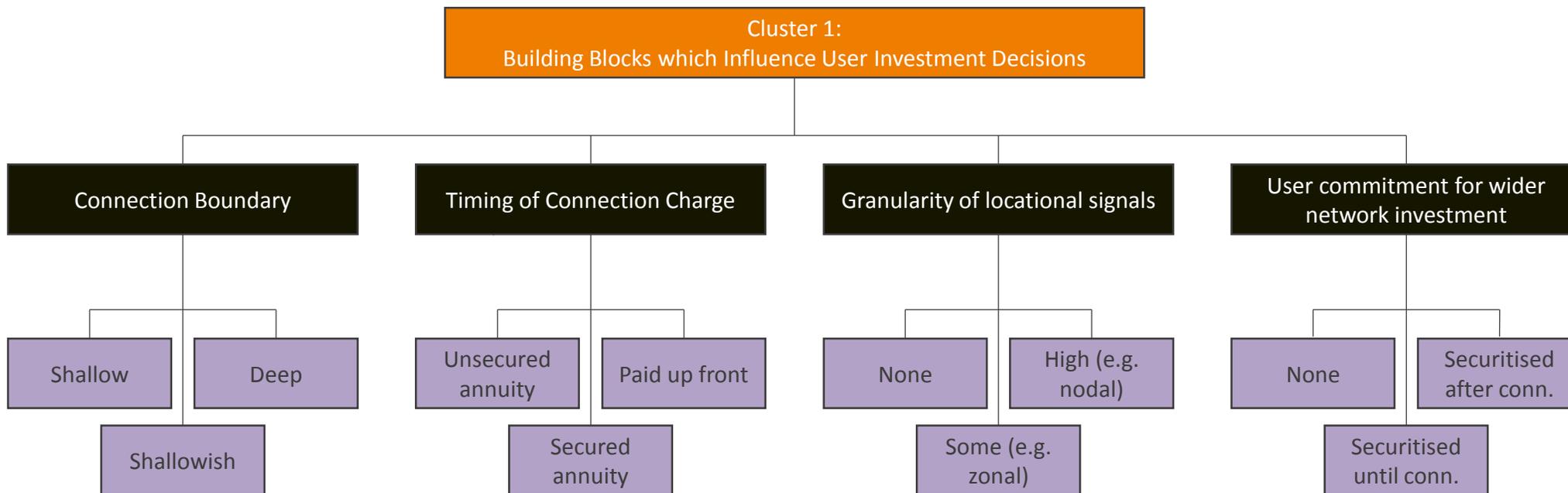
- > Scenarios explore initial allocation and re-allocation
- > Clusters consider influences on user investment or operation
- > Charging methodologies and tariff design considered separately
- > Assessment Criteria confirmed and linked to CUSC and DCUSA principles

> Stage 3: Final report

Entire Assessment



Cluster 1 – Influences User Investment



Cluster 1 – Influences User Investment

Greater alignment of principles between transmission and distribution

Connection charging boundary:

- > Shallow boundary paired with cost-reflective ongoing locational charges favoured by many TF members
- > Locational charging may not be feasible or desirable at HV or LV – risks a ‘postcode lottery’
- > hence, Shallowish boundary may remain appropriate for some users
- > Deep boundary is seen as a barrier to investment

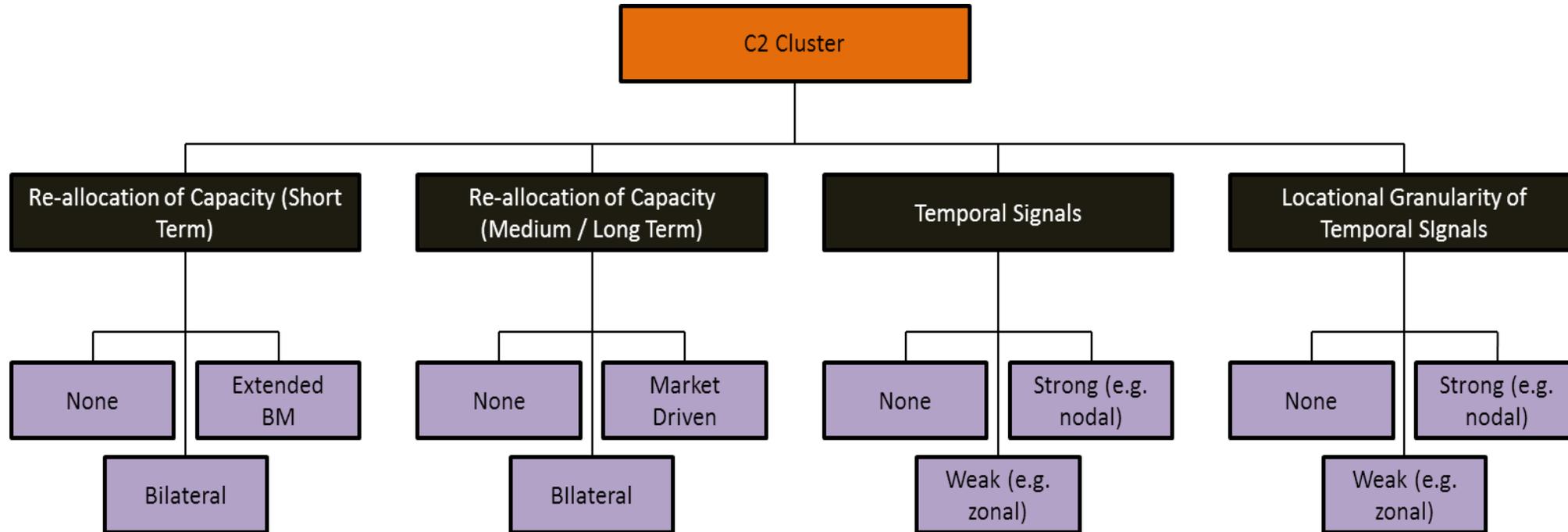
User commitment:

- > User commitment up to, and potentially for a fixed time beyond, the time of connection reduces the risk of costs associated with stranded assets falling on the wider body of users...
- > ...but its implementation could be burdensome to deliver for a large number of users
- > Need to ensure benefits outweigh costs of delivery

Transitional challenges:

- > A move to a shallow connection charging boundary and locational ongoing usage charges could present challenges for existing users (at distribution) who have paid shallowish connection charges

Cluster 2 – Influences User Operations





Cluster 2 – Influences User Investment

Network Companies could fine tuning real-time user operations

- > Extended Balancing Mechanism
- > Approaches close to Active Network Management (as on distribution)

Re-allocation of capacity by market-based or bilateral trading requires

- > Network planning studies to ensure sufficient network capability
- > Exchange rates
- > Potentially a capacity threshold for re-allocation
- > Ways to ensure a level-playing field between larger and smaller users

Time of Use charges - can have an important role but may not alone be sufficient to guarantee security of supply

Locational charges - can have an important role building on existing models at transmission and EHV. Use at HV / LV would require improvements to existing models

Measures to avoid gaming by market participants

Requires users to have an agreed capacity

Different types of operational signal may be better suited for different users

The many options are not necessarily mutually exclusive but must be coordinate



Initial Allocation

First come first served

- > First come first served **with additional queue management**
- > First come first served **with Connect and manage**

Auctions/trading

- > **Universal auctions**
- > **Targeted auctions**



Initial Allocation – Auctions

Universal auctions

- > access is secured by those who value it most
- > Socio-economic consequences of ‘winners and losers’.

Targeted auctions

- > e.g. auctions behind specific constraints.
- > Requires assessment of would impact current and future network users.

Any form of auction presents significant political, regulatory, economic and operation challenges



Initial Allocation - FCFS

First come first served

- > There will always be an element of first come first served whether it relates to the connections process or in relation to the readiness of a user's project to participate in an initial allocation process.
- > Auctions with gate closure may be difficult to align with the timescales of multiple users' construction projects.

Identifying spare capacity for initial allocation

- > The reallocation of 'spare' capacity may lead to efficient use of existing levels
- > Consideration how the term 'spare' is defined e.g. voluntarily surrendered or require a mechanistic approach based on contracted terms.



User Perspectives on Access Rights

- > **Depth:** General preference for full network access, although some users may only want to be part of a local energy market
- > **Lifespan:** Wide range of views from short term (i.e. within a day) to long term (i.e. 40 years plus) and forever...
- > **Time of Use:** Wide range of time of use choices from fixed access to varying at different times (i.e. within day, month or year)
- > **Firmness (Financial and Physical):** Wide range of views whether financially firm, financially non-firm, or have the choice. However all network users want >99.99% reliability
- > **Standardisation of Access:** Mixed response with a leaning towards standardisation



Access Rights

Wide range of views expressed by Task Force members

- > little or no preference for bespoke arrangements
- > responses indicated they value choice across all the other access characteristics (i.e. depth, lifespan time of use, and level of firmness).

Core and non-core access rights for domestic and small commercial users connected at LV should be considered

- > i.e. a basic capacity for essential services with options to buy additional access for things like electric vehicle charging

Transitional arrangements

- > To consider feasibility of offering these arrangements (e.g. the definition of and movement towards financial firmness of DG)
- > To consider the relative ease of implementation (i.e. Time of Use may be easier than or local/financially firmness for DG)
- > To ensure arrangements are charged in a cost reflective manner



Tariff Design and Modelling

Tariff design and economic modelling needs to be appropriate to the choice of C1 and C2.

Tariffs must be visible and predictable

Time of Use

- > If cost-reflective, can create incentives for users to amend their behaviour
- > Seasonal tariffs offer a more targeted price signal which may be more cost-reflective
- > Further work required to understand the customer response to Time of Use signals

Active network management

- > Could profile capacity at distribution, similar to the Balancing Mechanism at transmission.
- > BM signals may be in conflict with Time of Use signals

Number of charging arrangements

- > Natural split between LV / HV and EHV (Distribution) and Transmission networks.
- > The harmonisation, rationalisation, or increase in commonality is seen as beneficial
- > Extending EGV/Transmission models to LV and HV has not been attempted before

The design of future tariffs might need to reflect the use of core and non-core capacity



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Conclusions on further work required

- Assessment of key drivers of costs on transmission and distribution networks
 - Aim to develop a transparent regime where network users can see areas where their decisions will save costs.
- Case study review - how particular options will work in practice, e.g:
 - Targeted auctions for initial allocation and other options for short and long-term trading;
 - Application of core or basic capacity for domestic and small commercial users;
 - New mechanisms for managing unused capacity;
 - Safeguarding newly connecting and existing users from the high costs of rural or space networks; and
 - User's behaviours in response to cost and price signals.
- Assessment of feasibility of:
 - Depth of access;
 - Standardisation of access; and
 - Financial firmness at distribution.
- Mitigation of disadvantages identified by the Task Forces



Conclusions on further work required

- Implementation and transitional arrangements
- Different approaches for different user types
 - Should take into consideration outcomes for flexibility service providers and ensure vulnerable users are treated appropriately
 - Balancing the needs of existing compared with future users
- Impacts and interactions arising from different options
 - Facilitate greater independent participation or require stronger reliance on intermediaries?
 - Relationship between the options considered and design standards (SQSS and P2/6)
 - Interaction of network charging signals with the BM, Capacity Market and wholesale price;
 - Susceptibility of different options to gaming; and
 - Interaction of different options with potential creation of local markets.
 - impact of options on owners/operators of private networks, independent licensed distribution networks and offshore transmission networks.



Conclusions on further work required

- The impact and linkages to other strategic programmes:
 - Baringa - impact assessment of the scale of existing issues
 - the Targeted Charging Review
 - the Energy Networks Association's Open Networks programme
 - RIIO-2
 - ongoing changes to retail competition
- The risk of adverse unintended consequences.
- The recovery of network costs incurred in the provision of flexible (ANM) connections

Electricity Network Access Project: Q&A





Q&A members



Facilitator – Louise Schmitz, NG ESO – Lead Secretariat



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