



**UNC823S**

**Amendment to the Allocation of Entry Capacity &  
Flow Quantities to Qualifying CNCCD (Shorthaul)  
Routes**

**NTS Transmission Workgroup  
1 November 2022**

# Further Explanation of Example scenarios

- In the last workgroup meeting, we considered shorthaul eligibility examples that included legacy/existing, secondary and interruptible capacity. The distinctive treatment of each of these different capacity types makes the eligibility calculations look much less straightforward.
- However, the feature of the calculations that this proposal addresses is the fact that currently **flows are apportioned in a different ratio to all capacity types**.
  - **This proposal is to apportion flows and all capacity types in the same ratios.**
- Hence examples illustrating the UNC823 defect do not necessarily need to consider different types of capacities.
- The examples we considered at the last workgroup included the two multi-route examples used in UNC728 (Examples 4 and 5), and the example from the UNC823 pre-mod presentation.
- The following slides show, with diagrams, these previous examples exactly as they were (including different capacity types) to illustrate the exact scenarios considered before
- **None of the examples that were used for UNC728 illustrate the UNC823 defect and the proposer has not yet found any evidence of this effect being intentional**

# Example 4 (Multiple Exit Points) from UNC728B

## Current Arrangements - Entry Capacity and Flow is Split Between Routes based on Exit Capacity and Flow respectively

### Definition of Terms

### Fig 1 - Actual configuration Fig 2 - Current Arrangements

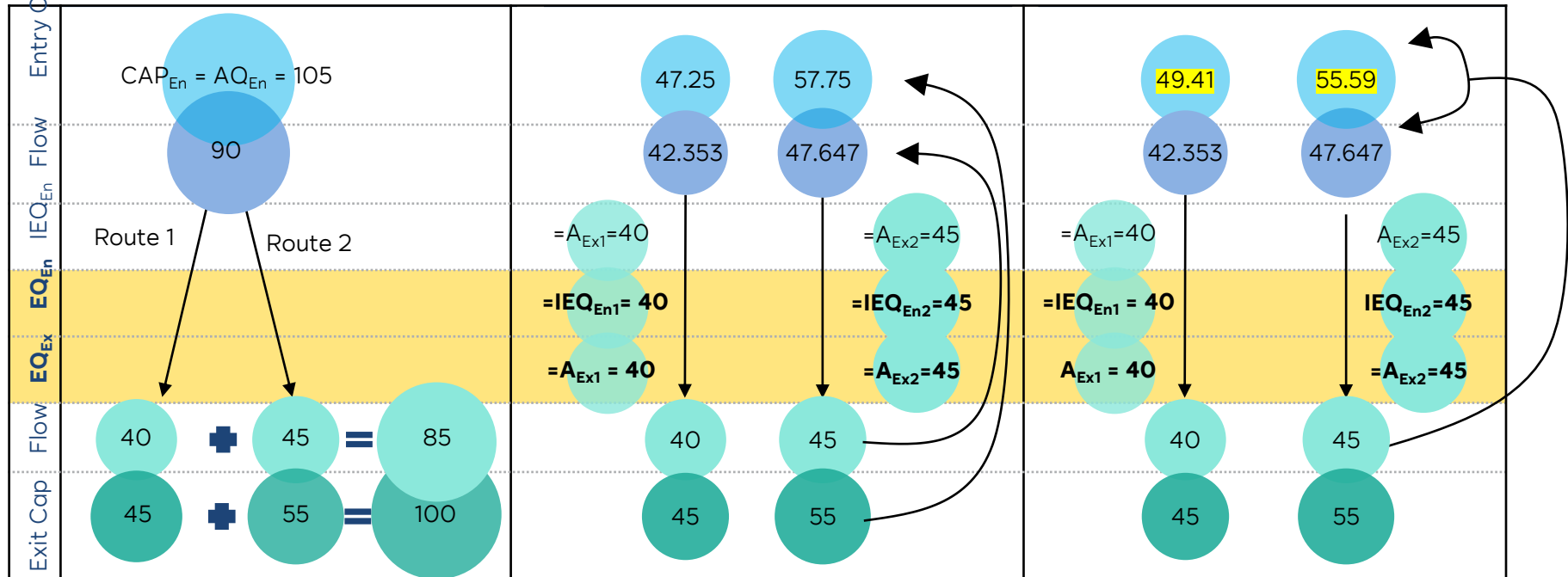
<p>Firm Entry Capacity <math>CAP_{En}</math> of which Firm <u>Primary</u>(non- legacy) = "Allocation" <math>AQ_{En}</math></p>	<p><math>CAP_{En} = AQ_{En} = 105</math></p> <p>90</p> <p>Route 1      Route 2</p>			
<p>Entry Flow <math>A_{En}</math></p>				
<p>Initial Eligible Quantity Entry <math>IEQ_{En}</math></p>				
<p>Eligible Quantity at Entry <math>EQ_{En}</math></p>				
<p><math>EQ_{En} = IEQ_{Ex}</math> at Exit (no 2° capacity)</p>				
<p>Exit Flow <math>A_{Ex}</math></p>	<p>40 + 45 = 85</p>			
<p>Total Exit Capacity <math>CAP_{En}</math></p>	<p>45 + 55 = 100</p>			

# Example 4 (Multiple Exit Points) from UNC728B

## Current and Proposed Arrangements

There is no effect from the proposed arrangements on the outcome in this example because there is the same amount of spare capacity at entry & exit and exit flows set the eligibility as the minimum quantity along both routes

**Fig 1 - Actual configuration Arrangements** **Fig 3 - Proposed Arrangements**

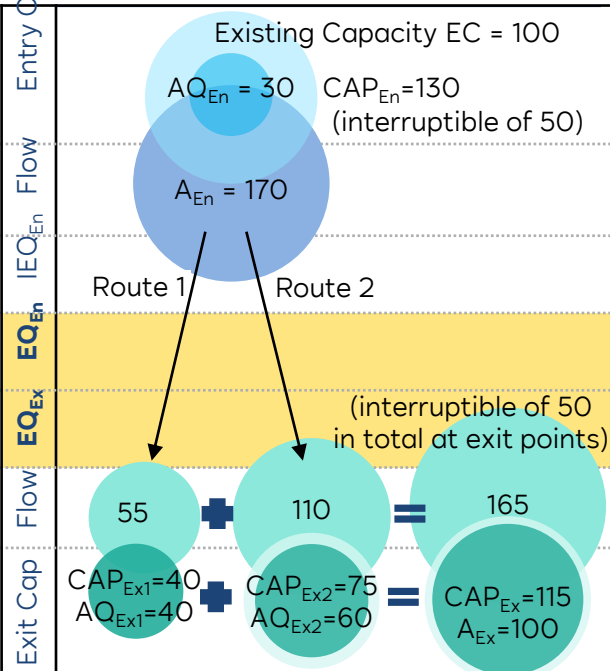


# Example 5 (Complex) from UNC728B

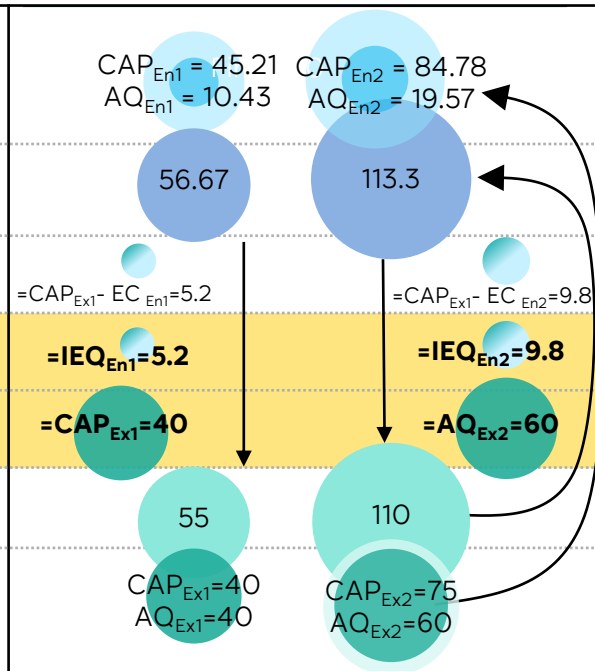
## Current and Proposed Arrangements

There is no effect on the outcome in this example either - exit capacity holdings are lower than entry so they determine Eligible Quantities

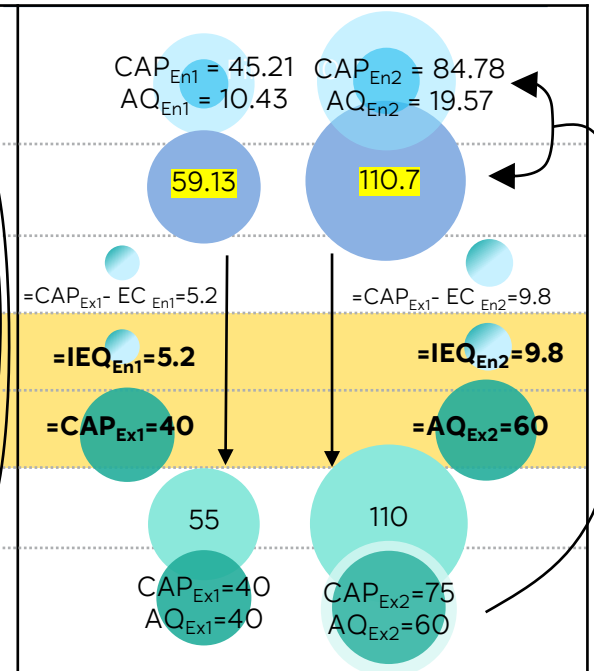
### Actual configuration



### Current Arrangements



### Proposed UNC823 Arrangements



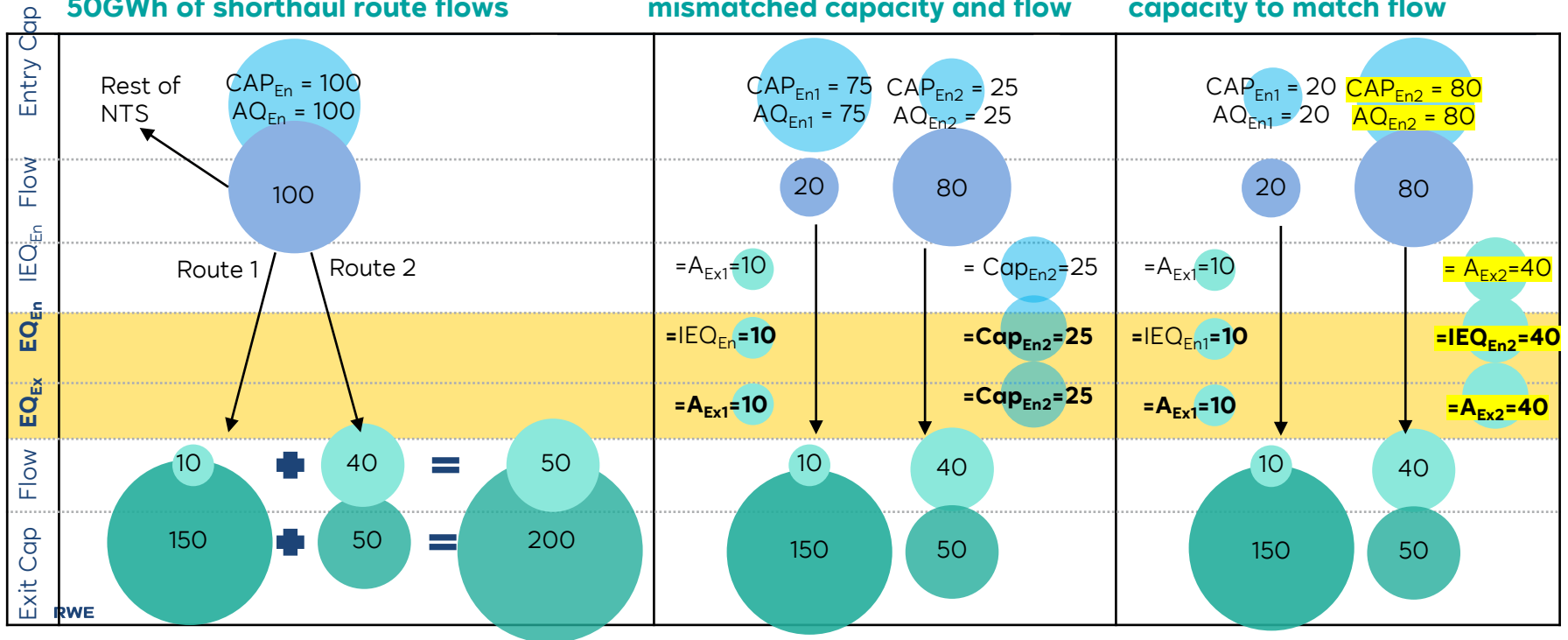
# Example from UNC823 pre-mod discussion

This example illustrates that even if capacity holdings are sufficient to accommodate entry and exit flows, insufficient capacity could be allocated to a route if exit capacity and flow proportions differ significantly

Actual configuration has enough Entry and Exit Capacity to accommodate 50GWh of shorthaul route flows

Current arrangements result in Entry apportionments with mismatched capacity and flow

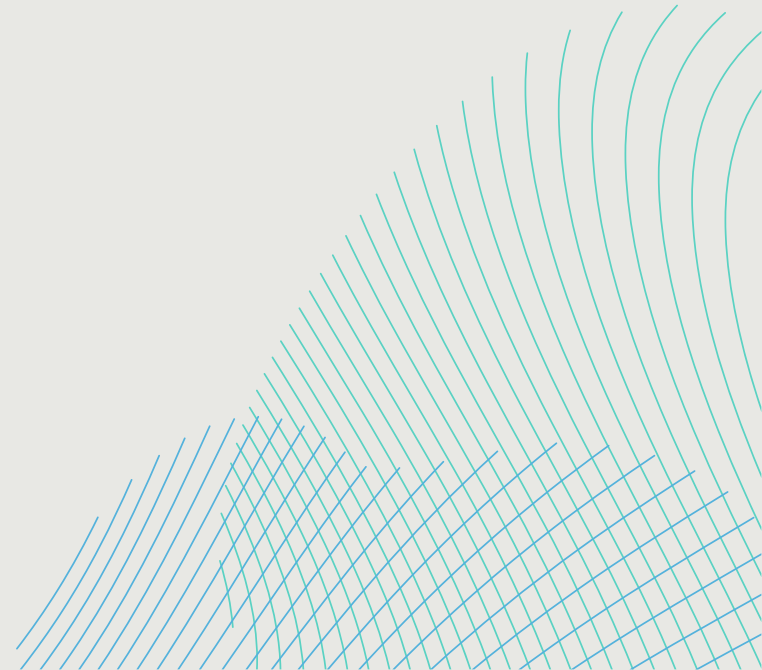
Proposed UNC823 arrangements would apportion capacity to match flow



# Further observations

- The analysis that was conducted for UNC728 was on a NTS OCC route level basis, not at Shipper level:
  - therefore the failure to qualify for the discount due to this single-Shipper-multi-route effect was probably not taken into account in the analysis.
  - the decision as to the level of the discount versus route distance was set to be at an optimal level, so the proposer believes that due to this effect, the achievable level for multi-route discounts is currently lower than is optimal.
- In the UNC823 example scenario:
  - A single Shipper that nominates and operates both routes would get a lower discount than if two Shippers nominate and operate one route each
  - There is sufficient Entry and Exit Capacity to accommodate the Entry and Exit Flows along both routes, but under the current apportioning arrangements, the Eligible Quantities are restricted to a level that is lower than the total flow
  - The discount the Shipper receives in £ goes down the more excess exit capacity is bought

# Reference





# Shorthaul Eligibility and Different Types of Capacity

In the last workgroup meeting, we considered shorthaul eligibility examples that included legacy/existing, secondary and interruptible capacity. The distinctive treatment of each of these different capacity types makes the eligibility calculation look much less straightforward. In summary:

- Interruptible capacity does not qualify for a discount or feature in the eligibility calculation
- Any Existing Capacity is deemed to be “used first” at Entry. Hence, the Initial Eligible Quantities at Entry and Exit) – an intermediate calculation step - is determined by:
  - first finding the outright minimum of Entry and Exit Capacities and Flows
  - in the case of Entry, any existing capacity holdings are then subtracted from this overall minimum value
- Secondary capacity holdings at entry do not affect eligibility at exit and vice versa. The final actual Eligible Quantity at each Entry and Exit Point is the minimum of:
  - the Initial Eligible Quantity (from above); or
  - the total primary non-legacy firm capacity holding at that point.

# Shorthaul Eligibility Calculations

Initial Eligible Quantity at Entry,  $IEQ_{En} = \text{Max}(0, \text{Min}(CAP_{En}, CAP_{Ex}, A_{En}, A_{Ex}) - EC_{En})$

Initial Eligible Quantity at Exit,  $IEQ_{Ex} = \text{Min}(CAP_{En}, CAP_{Ex}, A_{En}, A_{Ex})$

Apportionment Quantity at Entry (Exit),  $AQ_{En} = \sum CTQ_{En}$ , ( $AQ_{Ex} = \sum CTQ_{Ex}$ )

Entry (Exit) Eligible Quantity,  $EQ_{En} = \text{MIN}(IEQ_{En}, AQ_{En})$  ( $EQ_{Ex} = \text{MIN}(IEQ_{Ex}, AQ_{Ex})$ )

Where:

- $CTQ_{En}$  ( $CTQ_{Ex}$ ) means the quantity of capacity in an Eligible Entry (Exit) Capacity Tranche at Quantity Holder level
  - An Eligible Entry (Exit) Capacity Tranche means an Entry (Exit) Capacity allocation procured or assigned in a single event at a known, uniform price that is not interruptible capacity nor Existing Contract Capacity and is not transacted via Secondary Transactions.
- $CAP_{En}$  ( $CAP_{Ex}$ ) means in respect of Entry (Exit) capacity, the greater of zero (0) and the User's Net Firm Entitlement on the day at the Eligible Entry (Exit) Point;
- $A_{En}$  ( $A_{Ex}$ ) means the User's gas flow entry (exit) allocation on the day at the Eligible Entry (Exit) Point;
- $EC_{En}$  means the quantity of Entry Capacity procured via an Existing Contract.