

Transmission Charging Methodologies Forum & CUSC Issues Steering Group



9th May 2018

Welcome

Jon Wisdom, National Grid

Actions

TCMF Mon	Request	Agenda Item	Action	Owner	Notes	Target Date	Status
Dec-17	PB	AOB	Make enquiries re missing website content specifically in relation to previous mods (TCMF members asked to advise when they come across any additional missing content)	RT	We are planning to get get all archived modifications available on the website, however this will take some time due to the volume of material. Proposal forms, Workgroup reports, FMRs and decision letters will be uploaded. In the meantime any specific requests can be sent to the usc.team@nationalgrid.com .	Oct-18	On-going
Apr-18	GG	CUSC Modification Update	Check that TAR Modifications are available on NG's website.	JH		Jun-18	On-going
Apr-18	PM	Updating the Statement of Works Process	Query was raised around a guidance document on small embedded generation, that is currently available on NG's website. NG was asked to look into the content.	RT	We will update the guidance doucment following modification process to reflect any changes to the CUSC.	End of CMP298 Mod Process	On-going

Today's TCMF

CUSC Modifications Update

**Charging Arrangements for Scottish Islands
– Clarification of the methodology**

**DCUSA Proposal: Removal of residual
charging for embedded gen. in the CDCM**

**Ofgem's views following decision to reject
CMP261**

Today's CISG

Charging Futures Quick Update



AOB

CUSC Modifications Update

Joseph Henry, Code Admin

New Modifications

Mod Ref	Mod area	Customer impacted	Proposal raised by	Process stage	Key activities since last update	next steps
CMP293	National Grid Legal Separation changes to CUSC sections, Exhibits & Schedules (non charging)	National Grid, Generators, Suppliers	NGET	Code Admin Consultation	Presented to Panel on 27 April 2018. Panel agreed that this modification should go to CAC	Modification to be progressed in line with Prioritisation Stack agreed with CUSC Panel. Modification will progress straight to Code Administrator Consultation with Authority decision.
CMP294	National Grid Legal Separation changes to CUSC Section 14					
CMP295	Contractual Arrangements for Virtual Lead Parties (Project TERRE)	Participants intending to be VLPs, National Grid	NGET	Progress to Workgroup	Presented to Panel on 27 April 2018. Panel . Agreed should be progressed with WG same days as CMP291 due to synergies.	Code Administrator to write to industry to source WG participants
CMP296	Aligning the CUSC to the BSC post-P344 (Project TERRE) to exempt Virtual Lead Parties from BSUoS	Participants intending to be VLPs, National Grid	NGET	Code Admin Consultation	Presented to Panel on 27 April 2018. Panel agreed that this modification should go to CAC	Modification to be progressed in line with Prioritisation Stack agreed with CUSC Panel. Modification will progress straight to Code Administrator Consultation with Authority decision.

New Modifications

Mod Ref	Mod area	Customer impacted	Proposal raised by	Process stage	Key activities since last update	next steps
CMP297	Aligning CUSC and BSC post-TERRE (Section 11) – consequential modification to introduce definition of Virtual Lead Party’.	BSUoS Chargeable Parties	NGET	Progress to Code Admin Consultation	Presented to Panel on 27 April 2018. Panel agreed that this modification should go to CAC	Modification to be progressed in line with Prioritisation Stack agreed with CUSC Panel. Modification will progress straight to Code Administrator Consultation with Authority decision.
CMP298	Updating the Statement of Works process to facilitate aggregated assessment of relevant and collectively relevant embedded generation.	DNO’s, TO’s, embedded generators and the System Operator	NGET	Workgroup	Presented to Panel on 27 April 2018. Panel agreed that this modification should go to Workgroup with decision by Authority	Code Administrator to write to industry to source WG participants
CMP299	Consequential changes to the CUSC to facilitate the 2018-2021 ESO Incentive Scheme’.	NG ESO, all payers of BSUoS, other CUSC parties may be impacted.	NGET	Progress to Code Admin Consultation	Presented to Panel on 27 April 2018. Panel agreed that this modification should go to CAC	Modification to be progressed in line with Prioritisation Stack agreed with CUSC Panel. Modification will progress straight to Code Administrator Consultation with Authority decision. This modification will reflect changes to NGET’s Licence that have already been made.

Ofgem decisions

- **Ofgem decisions and pending decisions since last TCMF:**
 - There have been no decisions made this month

Ongoing modification proposals

Mod Ref	Mod area	Customer impacted	Proposal raised by	Process stage	Key activities since last update	next steps
CMP271	Improving the cost reflectivity of demand transmission charges	Generators, Suppliers, Embedded Generators	RWE	Workgroup meetings ~ suspended	WG received update on impact of SCR on CMP271	<p>Ofgem published further clarity to the industry on the scope of the SCR/TCR on 6 November 2017 and Code Admin discussed impact with the Proposers and the WG.</p> <p>The CUSC Panel at its November 2017 meeting agreed to a further extension to the point that Ofgem issues its minded-to position or another event means that the WG should be re-convened.</p>
CMP274	Winter TNUoS Time of Use Tariff (TToUT) for Demand TNUoS	Generators, Suppliers, Embedded Generation, Transmission Network Operators, HH Demand Customers	UK Power Reserve		WG received update on impact of SCR on CMP274	
CMP276	Socialising TO costs associated with 'green polices' (reduction in the demand residual element of the TNUoS £/kW ("Triad") charge by creating two new charge lines for all demand offtakes	Parties that manage demand during Triad periods, i.e. embedded generators and those half hourly metered consumers who respond to Triad	Alkane Energy		WG received update on impact of SCR on CMP276	

Ongoing modification proposals

Mod Ref	Mod area	Customer impacted	Proposal raised by	Process stage	Key activities since last update	next steps
CMP275	Preventing BM units from accessing multiple sources of duplicate and overlapping revenue from ancillary services on the same asset	Generators, Transmission Company and Ancillary Service Providers	UK Power Reserve	Code Admin Consultation	WG voted on proposal and new WACM against baseline. WG decided that Baseline currently working better	Code Admin Consultation to be published 8 May 2018

Ongoing modification proposals

Mod Ref	Mod area	Customer impacted	Proposal raised by	Process stage	Key activities since last update	next steps
CMP280	TNUoS: remove liability from Generators for the Demand Residual element of the TNUoS tariff.	Suppliers, Generators and NGET	Scottish Power	WG to continue developing the Proposal	WG number 6 arranged for 10 May 2018	Consolidate d comments and legal text to be reviewed during arranged WG WG Consultation issued June 2018 if WG is successful
CMP281	BSUoS: remove liability from Generators BSUoS charges on imports					

Ongoing modification proposals

Mod Ref	Mod area	Customer impacted	Proposal raised by	Process stage	Key activities since last update	next steps
CMP285	CUSC Governance Reform – Levelling the Playing Field	All CUSC Signatories	UKPR	WG to continue developing the Proposal	NG legal reviewing draft legal text	Legal text currently being reviewed. Note WG Consultation due to be issued May 2018

Ongoing modification proposals

Mod Ref	Mod area	Customer impacted	Proposal raised by	Process stage	Key activities since last update	next steps
CMP286	Improve the predictability of TNUoS demand charges by bringing forward the date at which the target revenue used in TNUoS tariff setting is fixed to allow customer prices to more accurately reflect final TNUoS rates.	Suppliers, Generators, embedded generators and National Grid	Npower	WG to continue developing the Proposal	WG arranged for 18 May 2018. CUSC panel have granted a 3 month extension	WG to meet and progress to WG consultation.
CMP287	Improve the predictability of TNUoS demand charges by bringing forward the date at which certain parameters used in TNUoS tariff setting (such as demand forecasts) are fixed to allow customer prices to more accurately reflect final TNUoS rates					

Ongoing modification proposals

Mod Ref	Mod area	Customer impacted	Proposal raised by	Process stage	Key activities since last update	next steps
CMP288	Introduce explicit charging arrangements to recover additional costs incurred by Transmission Owners and TNUoS liable parties as a result of transmission works undertaken early due to a User initiated delay to the Completion Date of the works, or to facilitate a backfeed.	Electricity Transmission Owners; Developers requiring new generation, interconnector or demand connections and Parties that pay TNUoS	NGET	Workgroup to meet 16 May 2018. WG to continue to develop modification	1 st WG arranged	Continue WG modification development
CMP289	Consequential change to support the introduction of explicit charging arrangements for customer delays and backfeeds via CMP288.					

Ongoing modification proposals

Mod Ref	Mod area	Customer impacted	Proposal raised by	Process stage	Key activities since last update	next steps
CMP291	Set out within the CUSC the obligations in the EU Connection Network Codes and System Operation Guideline as they relate to the harmonised rules for connection and system operation in GB.	Transmission Owners (including OFTOs and Interconnectors), Distribution Network Operators, Transmission System Users, System Operator, Generators, Demand customers and providers of services	SSE	Workgroup	Requisite number of WG members sources	1 st WG to be arranged in June
CMP292	Ensure that the charging methodologies (all Charging Methodologies as defined in the CUSC) are fixed in advance of the relevant Charging Year to allow The Company – as Electricity System Operator - to appropriately set and forecast charges. Introducing a cut-off date for changes to the methodologies will help to reduce the risk of charges out-turning differently to the forecasts produced by the Company and created by Users	CUSC Parties, National Grid	NGET	Workgroup	n/a	1 st WG to be arranged

CUSC Modifications

Plan on a Page and other CUSC Panel related material can be accessed using the following link:
<https://www.nationalgrid.com/uk/electricity/codes/connection-and-use-system-code/meeting-docs>

With Authority, awaiting decision – please refer to the following link for further information;
https://www.ofgem.gov.uk/system/files/docs/2017/04/indicative_decision_dates_for_modification_with_ofgem.pdf

CMP251 - Remove error margin cap on TNUoS compliance with EU (British Gas)

WG - Workgroup
 ConS – Consultation
 WG ConC – Workgroup Conclusion
 CA – Code Administrator Consultation
 DFMR – Draft Final Modification Report
 FMR – Final Modification Report
** Timetable at risk/to be confirmed by Panel*

	May	June	July	August	September	October	November	
Modifications								
CMP250 - Stabilising BSUoS with 12 month notice period (Drax Power)	With Authority							
* CMP271 - Improving the cost reflectivity of demand tx charges (RWE) and CMP274 - Winter TNUoS Time of Use Tariff for Demand TNUoS (UK Power Reserve) and CMP276 – Socialising T costs associated with “green policies” (Alkane)	WG Mod Dev on hold pending outcome from SCR/TCR							
* CMP275 - Transmission generator benefits in the provision of ancillary and balancing services – levelling the playing field.*	◆	CA ConS	DFMR	◆	With Authority			
CMP280 - New Generator TNUoS Demand Tariff which Removes Liability for TNUoS Demand Residual Charges from Gen and Storage Users' and CMP281 - Removal of BSUoS Charges From Energy Taken From the National Grid System by Storage Facilities (Scottish Power)	WG	WG ConS	WG ConC		◆	CA ConS		
CMP285 - CUSC Governance Reform – Levelling the Playing Field' (UKPR)	WG	WG ConS	WG ConC		◆	CA ConS		
* CMP286 - Improving TNUoS Predictability Through Increased Notice of the Target Revenue used in the TNUoS Tariff Setting Process. (npower) and CMP287 - Improving TNUoS Predictability Through Increased Notice of Inputs Used in the TNUoS Tariff Setting Process. (npower)	WG Mod Dev			◆	CA ConS			



CUSC Modifications

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Modifications							
CMP288 - Introduce explicit charging arrangements to recover additional costs incurred by Transmission Owners and TNUoS liable parties as a result of transmission works undertaken early due to a User initiated delay to the Completion Date of the works, or to facilitate a backfeed (NGRID) and CMP289 - Consequential change to support the introduction of explicit charging arrangements for customer delays and backfeeds via CMP288.	WG Mod Dev						
CMP291 - Set out within the CUSC the obligations in the EU Connection Network Codes and System Operation Guideline as they relate to the harmonised rules for connection and system operation in GB (SSE)	WG Mod Dev						
CMP292 - Ensure that the charging methodologies are fixed in advance of the relevant Charging Year to allow The Company to appropriately set and forecast charges. (NGRID)	WG Mod Dev						



Code Governance Team – who to contact

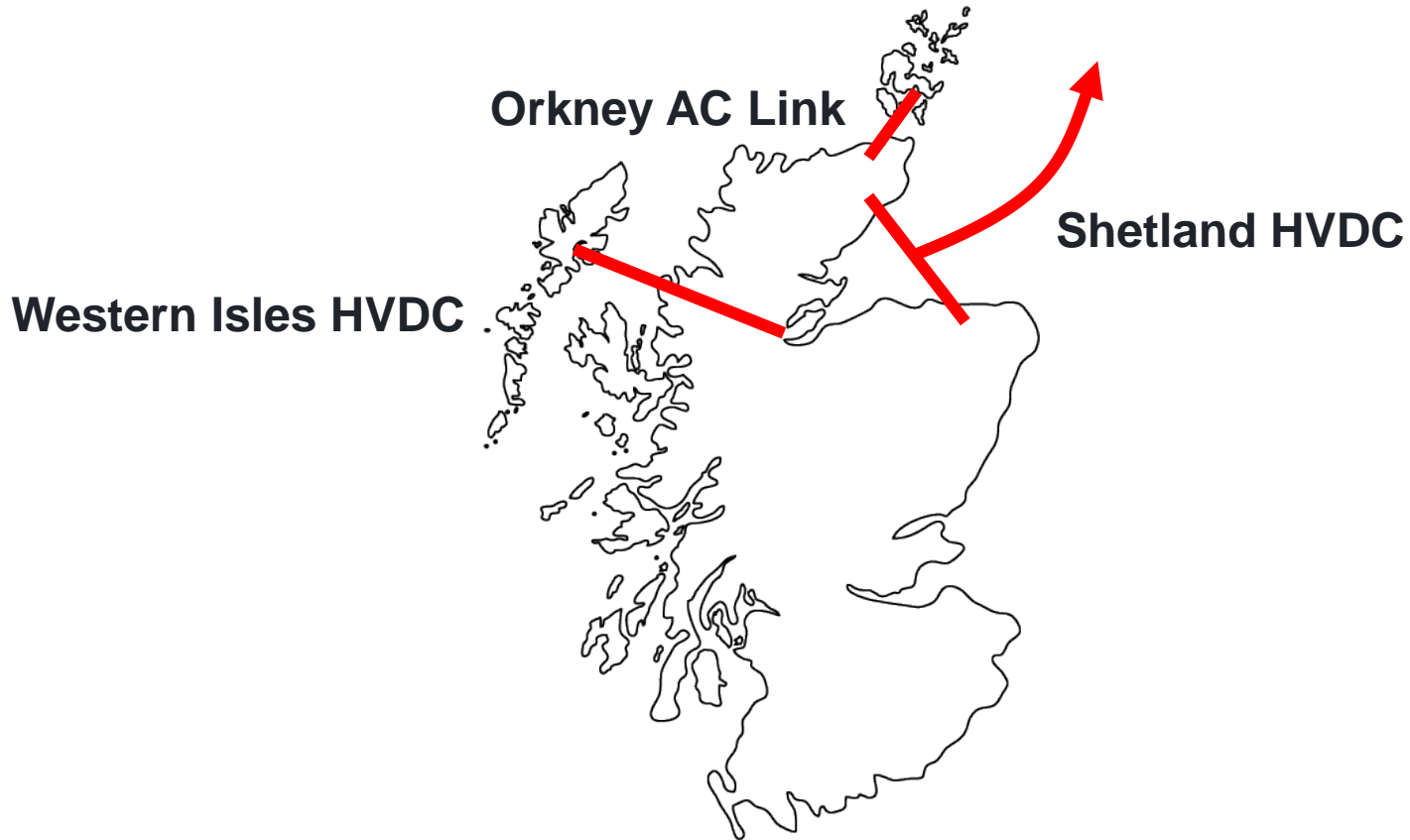
- For **CUSC** related matters Email: cusc.team@nationalgrid.com
- For **Grid Code** related matters Email: Grid.Code@nationalgrid.com
- For **STC** related matters Email: STCTeam@nationalgrid.com
- For **SQSS** related matters contact Email: box.SQSS@nationalgrid.com
- For **JESG** related matters Email: box.europeancodes.electricity@nationalgrid.com

Connections to the Scottish Islands

Clarification of CUSC for calculation of circuit specific expansion factors for HVDC and subsea

Paul Wakeley, National Grid

Scottish Island Connections



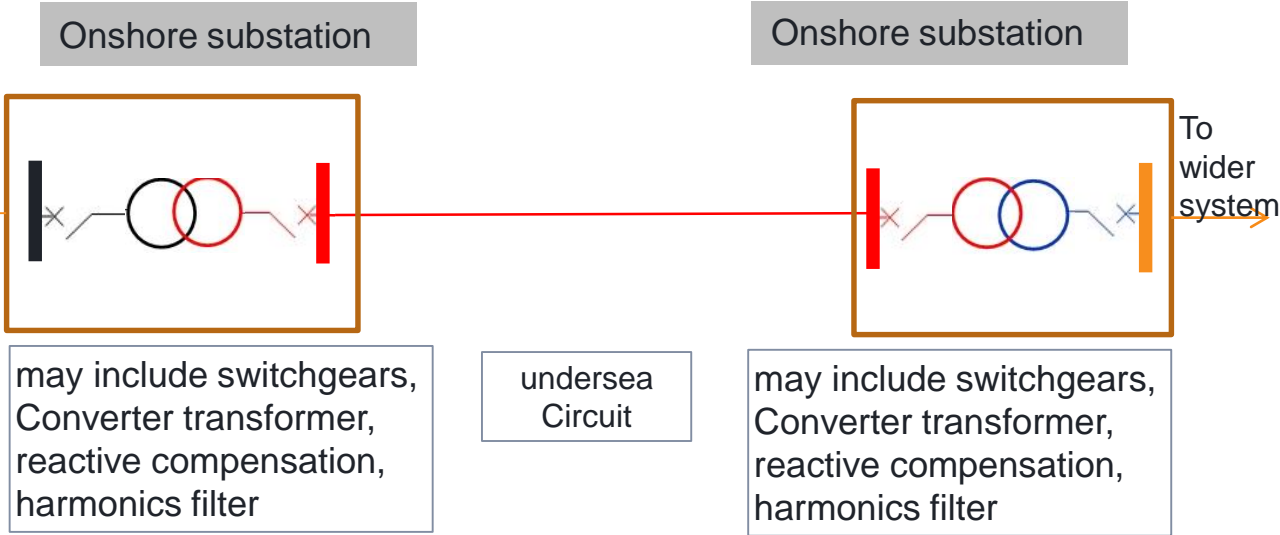
Background

- Circuits are modelled in the transport model, to set the locational TNUoS tariffs.
- Circuits are “stretched” by the ‘expansion factor’ to account for different types and costs of circuits.
- Onshore circuits use a table of standard expansion factors defined each price control.
- **HVDC circuits and AC Subsea circuits have significantly different costs**
- Therefore, a specific expansion factor was introduced by CMP213 for these circuits.

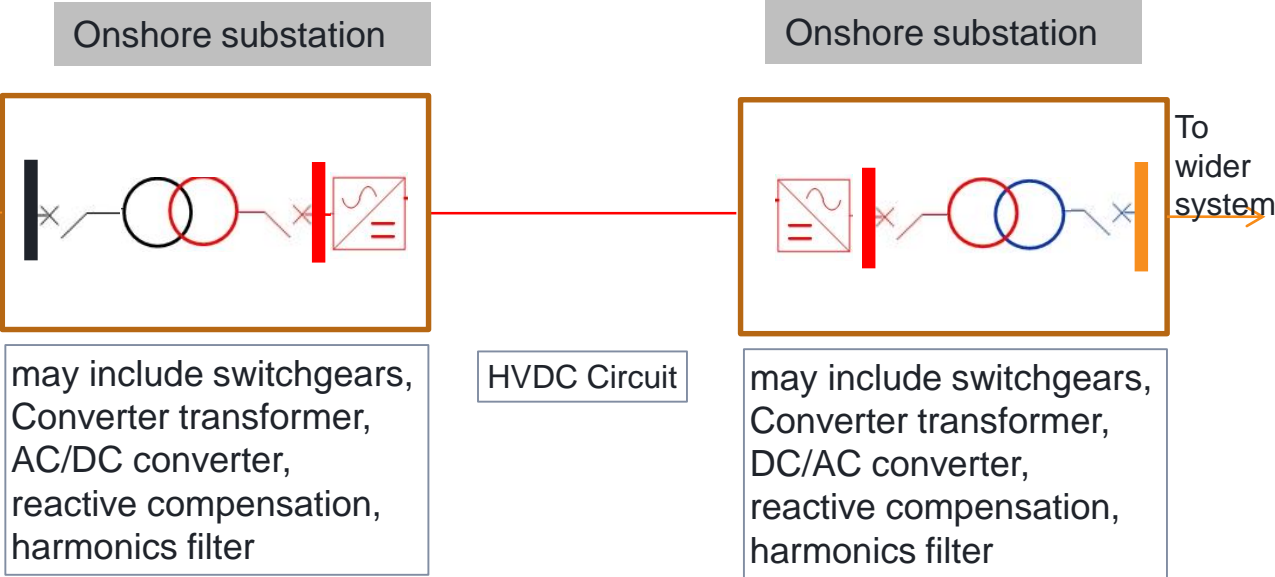
The Issues

- There is potential for different interpretations of the CUSC wording introduced under CMP213 for this issue.
- **Today, we are seeking to provide clarification.**
Clarification on how we will treat project costs associated with HVDC and subsea circuits, to ensure consistency with onshore circuits.

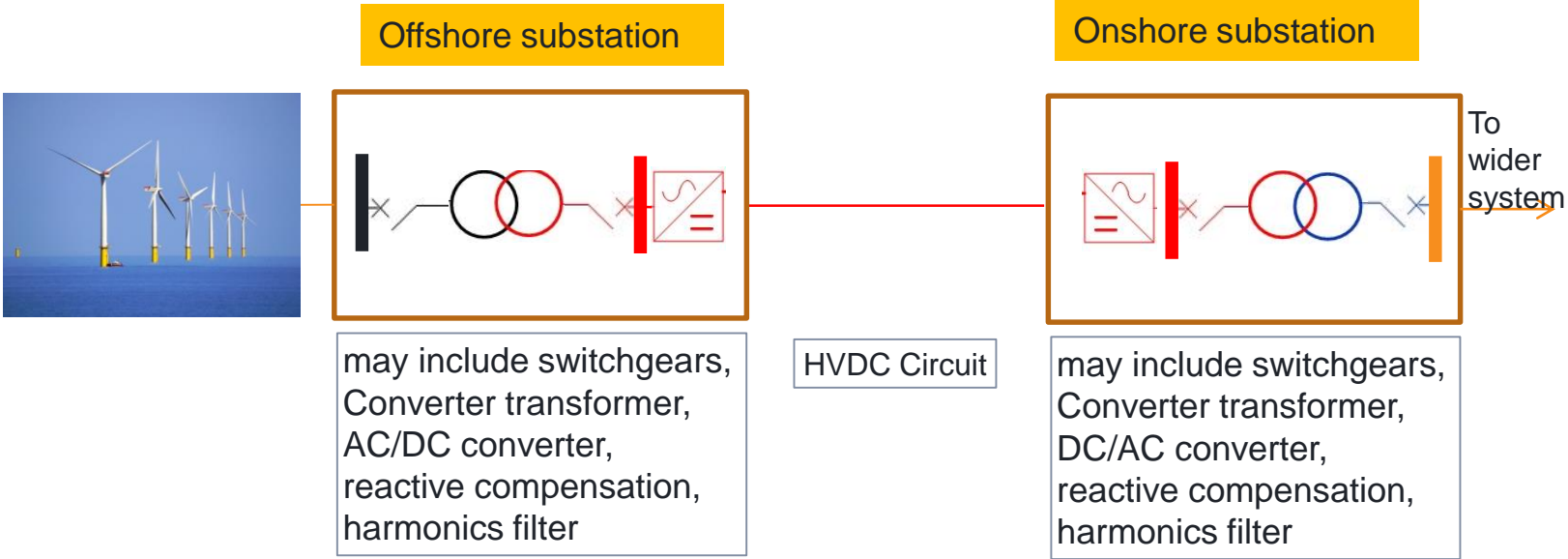
AC Subsea cable for Onshore Generators



HVDC for Onshore Generators



HVDC for Offshore Generators



- Same picture for AC offshore generators, except no converters

What does the CUSC say....

- 14.15.14 The circuit expansion factors for HVDC circuits and AC subsea cables are determined on a case by case basis using the **costs which are specific to individual projects** containing HVDC or AC subsea circuits.
- 14.15.75 AC sub-sea cable and HVDC circuit expansion factors are calculated on a **case by case basis using actual project costs** (Specific Circuit Expansion Factors).
- 14.15.76 For HVDC circuit expansion factors both the cost of the converters and the cost of the cable are included in the calculation.

Compare this of Offshore

- 14.15.80 Offshore expansion factors (£/MWkm) are derived from information provided by Offshore Transmission Owners for each offshore circuit. Offshore expansion factors are Offshore Transmission Owner and circuit specific. Each Offshore Transmission Owner will periodically provide, via the STC, information to derive an annual circuit revenue requirement. **The offshore circuit revenue shall include revenues associated with the Offshore Transmission Owner's reactive compensation equipment, harmonic filtering equipment, asset spares and HVDC converter stations.**

Proposal

- 14.15.76 For HVDC circuit expansion factors both the cost of the converters and the cost of the cable are included in the calculation.
- Proposed to treat 14.15.76 as a complete list, and apply the same principle to subsea circuits
- Therefore for HVDC/Subsea Circuit Specific Expansion Factors, costs:

Include:	Do not include:
<ul style="list-style-type: none">• Cables• converters (for HVDC)• Pro-rata % of the total other project costs	<ul style="list-style-type: none">• Switchgear• Transformers• Reaction compensation• Harmonic filtering

Proposal

- We'll apply the same '% of capital cost' principle as offshore for project costs (see example)
- The result, is **the HVDC/subsea** circuit expansion factors are calculated consistently with **onshore**, (i.e. don't include AC substation assets)
- We recognize that it is different to **offshore**. But note that the differences between onshore and offshore exist today.

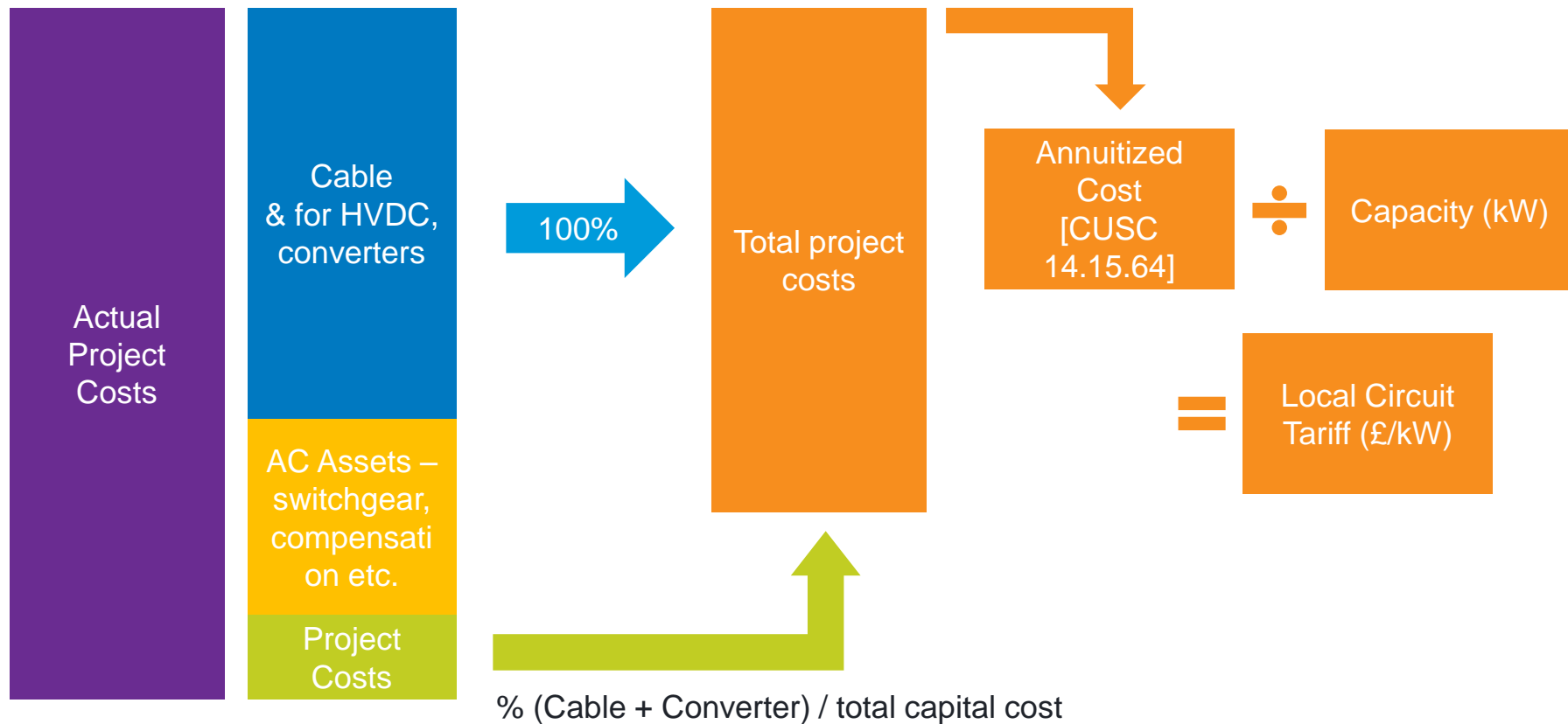
Summary

Comparison	Onshore AC	AC Subsea	HVDC	Offshore
Cable	Yes	Yes	Yes	Yes
Convertor	N/A	N/A	Yes	Yes
Project Costs	Yes	Yes	Yes	Yes
Switchgear	No	No	No	No
Transformers	No	No	No	No
Reactive Compensation	No	No	No	Yes
Harmonic Filtering	No	No	No	Yes



Consistent treatment of all onshore circuits

Illustrative Calculation



Illustrative Calculation

Cost			
Cable	400	Cable & Converter = 82.7% of capital cost	400
converters	200		200
AC Switchgear	100		0
Compensation	25		0
CAPITAL COST 725			
Project Overhead	40		33
TOTAL COSTS 765			
ACTUAL PROJECT COST FOR EXPANSION FACTOR			633

Actual Project Cost for local circuit calculation = £633m

All numbers are illustrative and bear no relation to any real project costs or tariffs

Conclusion / Summary

- Are you content with this clarification?
- Do you feel that clarification needs to be written in the CUSC?



DCUSA Change to Remove Residual Charging for Generators

Andrew Enzor

Northern Powergrid



- Ofgem indicated in its March 2017 consultation on the Targeted Charging Review (TCR) that it considered charging arrangements for embedded generation and storage have the potential to create distortions
- Ofgem then indicated in its launch of the TCR via a Significant Code Review (SCR), in August 2017, that charging arrangements for storage were not in scope and that it expected industry to progress modifications to address the issues
- CMP280 'Creation of a New Generator TNUoS Demand Tariff which Removes Liability for TNUoS Demand Residual Charges from Generation and Storage Users' and CMP281 'Removal of BSUoS Charges From Energy Taken From the National Grid System by Storage Facilities' have been raised to address issues with transmission charging
- The Distribution Charging Methodologies Development Group (DCMDG) has developed a similar change proposal to address issues with distribution charging which will shortly be formally submitted into the Distribution Connection and Use of System Agreement (DCUSA) change process

Status Quo Recap

- EHV:
 - Embedded generators connected at Extra High Voltage (EHV, i.e. over 22kV) have demand and generation charges calculated for the site
 - The demand charges include an element of residual charging
 - The generation charges do not include any element of residual charging
- HV and LV
 - Embedded generators connected at HV or LV receive credits calculated on an average basis (i.e. all generators connected to a given DNO network at a given voltage see the same charges regardless of location)
 - Each generator will have an associated import, which is charged on an average basis
 - The calculation of credits for generators do not include any element of residual charging but charges for the associated import do

The Change Proposal

- The DCUSA change focusses on HV and LV connected customers at this stage, with a further change to follow for EHV connected customers
- Ofgem has been clear that it believes storage paying residual charges for import is a distortion...
- ...but it is difficult to see how a storage operator not paying residual charges whilst a neighbouring generator does pay residual charges for its import is not also a distortion
- So the change follows a similar approach to the CUSC changes in progress, namely to amend residual charging for all generators rather than just storage sites

Complications

- There is a complication with embedded generation being unlicensed
 - For example, if the change were to 'exempt' all sites with an export capability from residual charging, an industrial site with on site generation would no longer be liable for residual charges
 - This would create a distortion and a gaming boundary – it would be strongly in the interest of such an industrial site (beyond the economic benefit derived) to develop generation capability in order to avoid residual charging for its import
 - This is an open problem for a Working Group to consider

Ofgem's views following decision to reject CMP261

Harriet Harmon, National Grid

CUSC Issues Steering Group (CISG)



Charging Futures Quick update

9 May 2018 TCMF



Charging Futures 2017-18 timeline

Q3 2017

Q4 2017

Q1 2018

Q2 2018

Targeted Charging Review

Recovery mechanism

Implementation methods

Quantitative impact analysis

Policy options

Autumn 2018 consultation

Access rights Task Force

Identify initial options for assessment

Assessment of options

Report to Ofgem with conclusions

Summer 2018 consultation

Forward looking charges Task Force

Upcoming milestones charging & access reform

- **18 May** – Task Force recommendations report on Access and Forward Looking Charges work (fed into Ofgem view)
- **23 May** – Charging Futures Forum – contribute to TCR Frontier analysis and feed in views on Task Force recommendations
- **Summer** – Access and Forward Looking Charges consultation (tbc)
 - Charging Futures webinars, podcasts, summary notes during consultation
- **Autumn** – Targeted Charging Review consultation (tbc)

AOB

Jon Wisdom, National Grid

Next meetings

June

13

Wednesday

July

11

Wednesday

Will be an 10:30am start unless otherwise notified.

We value your feedback and comments

If you have any **questions** or would like to give us **feedback** or share **ideas**, please email us at:

cusc.team@nationalgrid.com

Also, from time to time, we may ask you to participate in surveys to help us to improve our forum – *please look out for these requests*

Close
