

Demand Connection Code



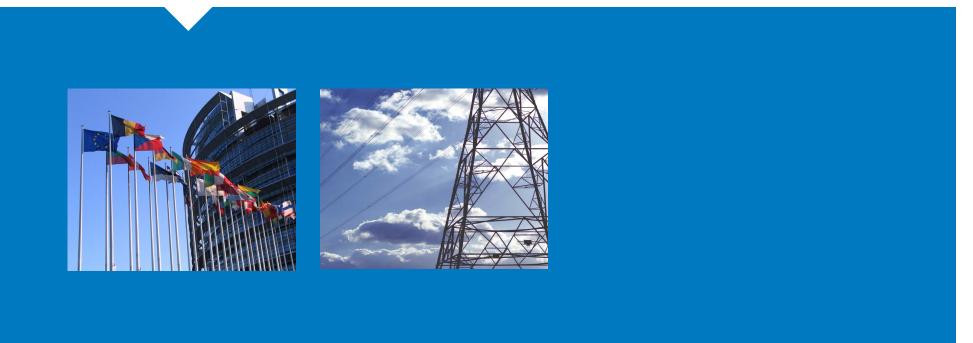
JESG – 16 August 2012

Agenda

- ENTSO-E Consultation
- JESG DCC Workshop (21/22 Aug)
- Feedback from ENTSO-E Workshop (9 Aug)



ENTSO-E Formal Consultation on Draft Network Code



ENTSO-E Consultation

- Formal Consultation on Draft Network Code is ongoing
- The Consultation closes on 11pm, 12 September
- Responses to be submitted via the online system in the format specified
- Consultation Pack includes:
 - Draft Demand Connection Code
 - Explanatory Note
 - Frequently Asked Questions,

JESG Workshop for DCC 21 and 22 August



JESG DCC Workshop

- Tue 21 and Wed 22 August, Saxon Mill, Warwick
- Deadline for Registration Today 5pm!
- Workshop will be supported by:
 - Dwayne Shann, National Grid member of Drafting Team
 - Mark Norton, Drafting Team Convenor (EirGrid)
 - Dimitrios Chaniotis, ENTSO-E Secretariat

JESG DCC Workshop: Proposed Agenda

Day 1:

DCC Overview by ENTSO-E

Presentation form Open Energi

Article-by-Article Review of the Network Code

Articles 7 – 20 (general requirements)

Day 2:

Article-by-Article Review of the Network Code

Articles 21 – 51 (notifications, monitoring and derogations)

Articles 1-6 (General Provision / Preamble)

JESG DCC Workshop

- At the ENTSO-E Workshops presentations were given on:
 - Demand Side Response Active Power Control
 - System Frequency Control for Temperature Controlled Devices
 - Quality and the Transmission/Distribution Interface, and Voltage and Frequency Ranges.

Would JESG members like these presentations included on the Agenda for the JESG Workshop?

Supporting Material

Annotated version of Network Code FOR INFORMATION ONLY

Article 7

GENERAL FREQUENCY REQUIREMENTS

hformation form ENTSO-E Public Workshop

Frequency requirements:

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- Frequency withstand capabilities are mandatory for Distribution Networks and for the Demand Facilities, which offer DSR services
- Frequency ranges are the expectation of system frequency.
- Frequency ranges are identical with the requirements on generators
- Frequencies outside defined range can occur
- User always retains the prerogative to disconnect, at any frequency.
- Frequency withstand capabilities should be coordinated with low frequency demand disconnection ranges

Text from ENTSO-E slides for infomation

1. All Demand Facilities (either connected to the Transmission Network or to the Distribution Network) and

Distribution Networks shall fulfil the following requirement

ENTSO-E Draft Network Code Text

In case of deviation of the Network Frequence

Distribution Networks will be designed with an expectation of system Frequency being typically within the Frequency ranges and time periods specified by table 2.

	Synchronous Area	Frequency Range	Time period for operation				
	Continental Europe	47.5 Hz – 48.5 Hz	To be defined by each TSO, while respecting the provisions of Article 4 (3), but not less than 30 minutes				
		485 Hz – 49.0 Hz	To be defined by each TSO, while respecting the provisions of Article 4 (3), but not less than the period for $47.5~$ Hz $-48.5~$ Hz				
		49.0 Hz - 51.0 Hz	Unlimited				
		51.0 Hz - 51.5 Hz	30 minutes				

Commentary, Description and explanation

These frequencies appear to be consistent with CC.6.1.3 of the Grid Code (Issue 4 Revision 12) reproduced below:

The System Frequency could rise to 52Hz or fall to 47Hz in exceptional circumstances. Design of User's Plant and Apparatus and OTSDUW Plant and Apparatus must enable operation of that Plant and Apparatus within that range in accordance with the following:-

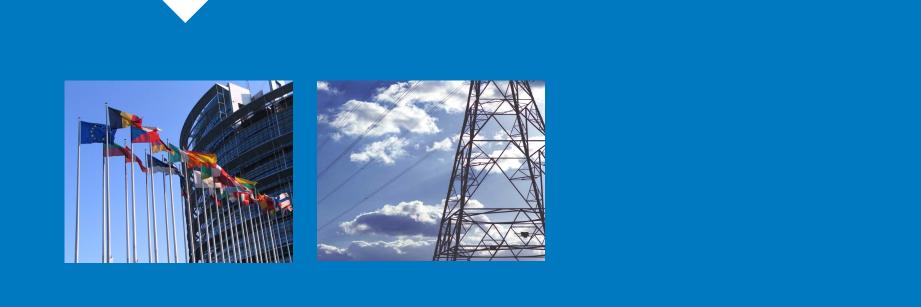
ŝ	Frequency Range	Requirement
	51.5Hz - 52Hz	Operation for a period of at least 15 minutes is required each time the Frequency is above 51.5Hz.
	51Hz - 51.5Hz	Operation for a period of at least 90 minutes is required each time the Frequency is above 51Hz.
	49.0Hz - 51Hz	Continuous operation is required

Supporting Material

Applicability Matrix provided FOR INFORMATION ONLY

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		CC Network Code	the DOO Network Or to design the second second		- la sa shi Ka sa sƙala s	No. of Co. 4								
			the DCC Network Code, derived by reading the st Code. It is likely the intention is for some of thes				wantlu desthad							
					be the same, but thi	IS IS NOT NOW IT IS CU	rrentiy urarteu.							
Disclaimer: Please note that this is based on the interpreation of the ourrent code, is is not guaranteed to be correct.														
General po	General points on applicability													
Article 3 de	Article 3 defines the scope for the Network Code, however, it is not entirley consistent with the rest of text drafted in the remainder of the Code. Diverall the Code shall apply (unless explicity stated otherwise) to: Significant Disturbtion Networks - a Transmission Connected Distrubtion Network or a Closed Distribution Network with DSR (except DSR SFC) Significant Demand Facilities - either a Transmission Connected Demand Facility, or a Demand Facility with DSR (except DSR SFC) Article 3(2) States that "Unless stated otherwise any reference to a Demand Facility in this document will designate it a Significant Demand Facility"													
1														
The extent	The extent of requirements as summarised in Article 3(3) is summarised below.													
1														
Retrosp	Retrospective application: Article 3(4) states that "requirements shall apply to EXisting Demand and Transmission Connected Distribution Network which are significant" It provides a process for determining if there should be retrospective application of the Network Code													
	Article 30 also refers to the process for assessing retrospective application of the Network Code, and references 3(6)													
	Article 48 provides a derogation process for Existing Demand or Existing Distribution Network													
Under Co	onstruction: /	Article 3(6) covers the status of Den	nand Facilities and Transmission Connected Dis	strubtion Netwo	rks not yet under co	Instruction, and whe	ther they are consi	dered new or eXisti	ng					
		Network C	ode Section			Demand Ea	oilition (secume	d to be New upless	s stated, or a CBA det	orminos it is rotros	noctiulu annlied)			
Title	Chapter	Article	ble Section	Paragraph	Demand	Transmission		New Demand		Distribtuon	Distribtuon	Demand	Distrubtion	
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				applicable)		Demand	Facility		above 100k¥	Demand	Demand	DSR at or		
				1		Facilities	-			Facility with	Facility with	above 1k¥		
										DSR at or	DSR at or			
										below 1k¥	above 1k¥			
Title 2	REQUIREME													
	Chapter (SENERAL REQUIREMENTS												
	Article 7 General Frequency Requirements			Х								X		
	Article 8 General Voltage Requirements							X						
	Article 9 Short Circuit Requirements Article 10 Reactive Power Requirements				X									
	-	Article 11 Protection And Cor		1	v	<u>^</u>		+	-		+			
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Article 16 Demand Side Response Active And Reactive Power Control And				X - if offer DSR APC, DSR RPC,								1		
Transmission Constraint Management				APC, DSR RPC,										

Feedback from ENTSO-E Workshop 9 August 2012, Brussels



Feedback from ENTSO-E Workshop

- An ENTSO-E Workshop was held on 9 August
- 52 Attendees, from 13 countries
- No one from outside Western Europe / Scandinavia except for ACER
- Three round tables sessions covering:
 - Demand Side Response Active Power Control
 - System Frequency Control for Temperature Controlled Devices
 - Quality and the Transmission/Distribution Interface, and Voltage and Frequency Ranges.

European Stakeholder Key Issues

- Impact of DCC on the food process industry, with respect to temperature controlled devices.
- Concerns on the duration of operation (on/off) for temperature control device responding to system frequency deviations.
- TSO & end-users will benefit from the capability of temperature controlled devices for system frequency control.

Industry Letter

July 20 Letter to ENTSO-E

- Signed by: CECED, Consumer Focus, ESMIG, eu.bac, Eurelectric, Geode, and the SEDC
- They have: "Serious concerns about the general direction of work now being performed by ENTSO-E with respect to the design of the Demand Connection Code."
- There has been a good dialogue between ENTSO-E and the parties to explain the Network Code and explore misconceptions
- ENTSO-E has now responded in a letter (3 Aug)