

**TO: All manufacturers of HVDC equipment, manufacturers and project developers of offshore wind, Generators, energy customers, and other parties with an interest in the development of a European Network Code on HVDC**

Dimitrios Chaniotis  
Manager System Development

Tel +32 2 741 09 65  
Fax +32 2 741 09 51  
[dimitrios.chaniotis@entsoe.eu](mailto:dimitrios.chaniotis@entsoe.eu)

**Subject: Invitation for a User Group on a European “Network Code on HVDC Connections and DC connected offshore Power Park Modules”**

ENTSO-E Secretariat  
Avenue Cortenbergh 100  
1000 Brussels  
Belgium

29 January 2013

Dear Madam,  
Dear Sir,

One of the key tools to reach the objectives of Europe’s 3<sup>rd</sup> Energy Package to facilitate the connections of renewables, ensure system security and integrate the internal energy market is the development of Europe wide network codes, enforced as European Regulation. To date ENTSO-E has been working on eight network codes which are all in various stages of completeness. For an up to date overview of all network codes ENTSO-E has been working on using extensive interaction with the wider industry, please visit the ENTSO-E website<sup>1</sup>. The timing of development of all network codes on electricity is triggered by the three-year work program which is jointly developed by the EC, ACER and ENTSO-E and is regularly updated<sup>2</sup>. The most recent version of this work program is given below.

**EC / ACER / ENTSOE 3-year work plan ELECTRICITY  
28 August 2012**

Deliverable	Scoping Phase		ACER FG draft		ENTSO-E code drafting		ACER evaluation	Comitology Start
	Start	End	Start	End	Start	End		
<b>Products/legislation relevant for effective implementation of the IEM</b>								
FG on capacity allocation and congestion management			Q1/11	Q2/11				
NC on capacity allocation and congestion management <sup>1</sup>					Q3/11	Q3/12	Q4/12	Q1/13
NC on forward markets					Q4/12	Q3/13	Q4/13	Q1/14
Regional progress, setup and testing (incl. AESAG process and Regional Initiatives Work Program)								
EC comitology guideline on governance								Q1/13
FG on grid connection			Q2/11	Q2/11				
NC on grid connection					Q3/11	Q2/12	Q3/12	Q4/12
NC on DSO and industrial load connection					Q1/12	Q4/12	Q1/13	Q2/13
NC on HVDC connection					Q1/13	Q4/13	Q1/14	Q2/14
FG on system operation <sup>2</sup>			Q2/11	Q4/11				
NC on operational security					Q1/12	Q1/13	Q2/13	Q3/13
NC on operational planning and scheduling					Q2/12	Q1/13	Q2/13	Q3/13
NC on load-frequency control and reserves					Q3/12	Q2/13	Q3/13	Q4/13
NC on operational training								
NC on requirements and operational procedures in emergency								
FG on balancing	Q3/11	Q4/11	Q1/12	Q3/12				
NC on balancing <sup>3</sup>					Q4/12	Q3/13	Q4/13	Q1/14
EC comitology guideline on transparency								Q3/12
FG on Third Party Access								
NC on third party access								
NC on data exchange and settlement								
Possible Guidelines/FG on incentives to TSOs to increase cross-border	Q3/12	Q4/12						
Possible Guidelines on investment incentives to TSOs	Q3/12	Q4/12						
EC Comitology Guideline on tariffs	Q3/12	Q4/12						

<sup>1</sup> <https://www.entsoe.eu/major-projects/network-code-development/>

<sup>2</sup> [http://ec.europa.eu/energy/gas\\_electricity/codes/codes\\_en.htm](http://ec.europa.eu/energy/gas_electricity/codes/codes_en.htm)

ENTSO-E expects to receive the EC mandate to develop a network code on HVDC connections (NC HVDC) in the coming months. The formal time period within which this network code is to be finalized is expected to be twelve months.

This network code will be developed in line with ACER's framework guidelines on electricity grid connections<sup>3</sup> (published July 2011) and which lay out the main policy directions which all network codes on grid connections are to take. The network code on HVDC connections will be third code developed based on these framework guidelines, following the Network Code on Requirements for Generators<sup>4</sup> and the Demand Connection Code<sup>5</sup>, and building on their essential experience. In order to create a consistent and complete set of connection codes, the NC HVDC is expected to include requirements on HVDC links (between synchronous areas and embedded), as well as for offshore DC connected Power Park Modules.

ENTSO-E intends to use a variety of means to include views of interested parties from industry in the development of this code. As a key forum to discuss the ongoing progress, an HVDC User Group is being initiated. This User Group will meet at regular occasions from the early scoping phase, throughout the drafting and formal consultation phase up to the final delivery of the NC HVDC to ACER. Organizations from industry who can offer their expertise in this process are requested to communicate this to Mr. Edwin Haesen ([edwin.haesen@entsoe.eu](mailto:edwin.haesen@entsoe.eu)) **by 1<sup>st</sup> March 2013**. The basic expectations ENTSO-E has from participating organizations and the criteria based on which ENTSO-E accepts organizations in this User Group are given in the HVDC User Group Terms of Reference, enclosed with this open invitation letter. Participants expressing an interest to join the HVDC User Group are understood to accept these terms. A first meeting of the User Group is scheduled for Tuesday 12 March 2013 in Brussels. Further details will be communicated to the User Group once it is established.

In addition to the continuous consultation with the HVDC User Group, ENTSO-E intends to host several public workshops to reach out to all parties interested in this code. Also ad-hoc bilateral meetings with stakeholder organizations may be organized of which the relevant and agreed outcome will be published. In order to gain a detailed view on the wider industry's view on the basic principles of the network code on HVDC connections, ENTSO-E plans to launch an initial consultation round ("Call for Stakeholder Input") shortly after receiving the EC mandate. Further information on this call, as well details on the timeline of the code development will be made available on the ENTSO-E website in due time.

With best regards



Dimitrios Chaniotis  
Manager System Development

---

<sup>3</sup>[http://www.acer.europa.eu/Electricity/FG\\_and\\_network\\_codes/Electricity%20FG%20%20networ%20codes/110720%20FGC%202011E001%20FG%20Elec%20GrConn%20FINAL.pdf](http://www.acer.europa.eu/Electricity/FG_and_network_codes/Electricity%20FG%20%20networ%20codes/110720%20FGC%202011E001%20FG%20Elec%20GrConn%20FINAL.pdf)

<sup>4</sup> <https://www.entsoe.eu/major-projects/network-code-development/requirements-for-generators/>

<sup>5</sup> <https://www.entsoe.eu/major-projects/network-code-development/demand-connection/>

---

# HVDC User Group

## Terms of Reference

---

### Purpose of the User Group

The HVDC User Group is established in advance of receiving the EC mandate letter to develop a “Network Code for HVDC Connections and DC connected offshore Power Park Modules” (NC HVDC), which is expected end of Q1/2013<sup>1</sup>.

The HVDC User Group’s role in the development of the NC HVDC is to

- provide advice to ENTSO-E on matters solely related to the NC HVDC;
- establish a coordinated forum through which issues related to the NC HVDC are communicated and shared in an efficient and continuous manner; and
- be the umbrella group for stakeholder engagement on issues related to the NC HVDC.

The duration of this User Group will be limited in time until ENTSO-E delivers its final NC HVDC to ACER.

ENTSO-E shall not be legally bound to accept any suggestion provided by any stakeholder. ENTSO-E remains the sole party legally responsible for the development of network codes. Consistent with Article 10(3) of Regulation (EC) 714/2009, ENTSO-E will however indicate how the observations received by stakeholders have been taken into consideration, and will provide reasons where observations have not been taken into account in the development of the network codes.

In parallel to its continuous engagement with the HVDC User Group, ENTSO-E may initiate ad-hoc bilateral meetings in the context of developing the NC HVDC, as well as host public workshops on specific topics. The HVDC User Group will be informed about the plans for and conclusions of these communications.

### Membership

On 30 January 2013 ENTSO-E published an invitation for membership in this User Group on its website. This invitation focuses on European-wide associations, covering stakeholders with a relevant role in the context of the NC HVDC. National associations can be accepted in case of absence of an adequate European platform, based on the relevance on the topic of this code. Final decision for acceptance of membership lies with ENTSO-E. The main criteria employed by ENTSO-E in taking this decision refer to the extent to which the applicant is impacted by the NC HVDC, as well as the effectiveness of the User Group structure (e.g. reasonable number of organizations, minimized overlap in stake).

Participating associations are requested to nominate two representatives for the User Group.

---

<sup>1</sup> See latest update of 3-year work program: [http://ec.europa.eu/energy/gas\\_electricity/codes/codes\\_en.htm](http://ec.europa.eu/energy/gas_electricity/codes/codes_en.htm)

After receiving all expressions of interest, the final list of participants in this user group is the following:

<i>Association</i>	<i>Representative</i>	<i>Affiliation</i>
X	X1	Y1
	X2	Y2

ACER and its NRA Project Group on grid connection codes, as well as the European Commission – DG ENER are invited to attend all HVDC User Group meetings as observers.

## Role of participants

Participants shall commit to:

- consistently attend meetings;
- actively participate in meetings;
- liaise with their members to update on the process of code development and represent their views and concerns; and
- highlight issues and concerns as early as practicable.

It is emphasized that participants are expected to represent in the HVDC User Group the view of their respective organization.

## Role of ENTSO-E

ENTSO-E shall commit to:

- act in an open and transparent manner to inform stakeholders regarding aspects of the network code development;
- provide information to facilitate participant's understanding and advice on aspects of the code; and
- provide agendas or objectives of the meeting at least 2 weeks prior to a meeting date and working documents at least 1 week before.

## Publication of Information

In line with Article 10(2) of Regulation (EC) 714/2009 all information related to the stakeholder group will be made publically available via the ENTSO-E website.

It is recognized that all information shall be treated as work in progress, and does not represent ENTSO-E's final position on the NC HVDC unless explicitly stated so otherwise.

## Records of meetings

To ensure transparency on the outcome of HVDC User Group interactions, all meetings shall be minuted:

- ENTSO-E shall produce draft minutes of each meeting which accurately reflects discussions and reached conclusions.
- Participants shall be provided with a week in which to comment on the minutes.
- Comments received, when justified, shall be incorporated into a final version of the minutes which shall be published shortly thereafter on the ENTSO-E website.
- In the event that no comments are received the minutes shall be deemed to be approved.

## Frequency of meetings

Subject to the timeline of the EC mandate to develop a NC HVDC, the following provisional timing is given with an aim of five User Group meetings:

<b>12 March 2013</b>	1 <sup>st</sup> HVDC User Group meeting on the scope of the NC HVDC
<b>April 2013</b>	NC HVDC “Call for Stakeholder Input”, incl. public workshop
<b>May 2013</b>	2 <sup>nd</sup> HVDC User Group meeting on the analysis of all feedback received in the Call for Stakeholder Input
<b>July 2013</b>	3 <sup>rd</sup> HVDC User Group meeting on the draft NC HVDC
<b>October - November 2013</b>	Formal consultation on draft NC HVDC, incl. public workshop
<b>November 2013</b>	4 <sup>th</sup> HVDC User Group meeting to assess feedback received in the formal consultation
<b>February 2014</b>	5 <sup>th</sup> HVDC User Group meeting to capture views on the final NC HVDC and its argumentation
<b>March 2014</b>	Submission of ENTSO-E’s final NC HVDC to ACER

The aim is to host all HVDC User Group meetings in the ENTSO-E premises in Brussels.