

**CIGRE Study Committee C6, «Distribution Systems and Dispersed Generation»**

<b>WG N° C6.23</b>	<b>Name of Convenor : Stavros Papathanassiou (GR)</b>
<b>Title of the Group: <i>Capacity of Distribution Feeders for Hosting DER</i></b>	
<b>Scope, deliverables and proposed time schedule of the Group</b>	
<b>Background:</b> <p>The demand for the connection of Distributed Energy Resources, mainly renewables, at the Medium Voltage (MV) and Low Voltage (LV) distribution feeders is constantly growing mainly due to the favourable economic policies applied in many parts of the world. In many countries Distribution System Operators (DSOs) are faced with local DER productions exceeding the loads of the line, especially at low load periods causing reverse of flows and power infeeds to the upstream networks. This situation can potentially cause several problems, mainly voltage rise effects and low power factors at the MV substations, etc. Increased number of Harmonics is another serious problem caused by the power electronic interfaces of the DER devices. Due to the above reasons DSOs are reluctant to grant permissions to connect DER unless detailed studies of individual feeders are performed. Such studies cause significant delays to DER integration and numerous complaints by the DER investors.</p> <p><b>Scope:</b> The scope of this WG is to study the limits of Distribution Feeders for hosting DER and the derivation of practical Guidelines for the connection of DERs without the need to resort to detailed analytical studies. The following topics will be elaborated within the WG</p> <ol style="list-style-type: none"><li>1. Problems caused by the connection of DER at the Distribution level.</li><li>2. Review of national experiences, case studies</li><li>3. Review of DER connection standards and guidelines applied in various countries</li><li>4. Derivation of simple guidelines based on existing practices</li><li>5. The effect of DER, DSM, EVs and network control in increasing hosting capability</li><li>6. Identification of limitations and gaps to adopt DER control at the MV, LV levels, technical and commercial.</li></ol>	
<b>Deliverables:</b> Technical brochure with summary in Electra	
<b>Time Schedule:</b> Start May 2011	<b>Final report :</b> December 2012 ?
<b>Comments from Chairmen of SCs concerned :</b>	
<b>Approval by Technical Committee Chairman :</b> Klaus Fröhlich <b>Date :</b> 01/06/2011	