

**Clean Technology Fund**  
**Ukraine Renewable Energy Program (IFC/EBRD)**  
**Comments by Edward C. Kern, and IFC/EBRD Responses**

	<b>Comments</b>	<b>Responses</b>
1.	<p>“Given the focus on wind power development in this proposal, it is important for the Program to include consideration of the transmission of electric power from regions with the best wind resource (apparently these are along the Black Sea and Sea of Azov coastlines) to major load and population centers in Ukraine.”</p>	<ul style="list-style-type: none"> <li>• Given IFC's and EBRD's current assessment of the nascent wind market in Ukraine, the most advanced projects under development are appropriately located in areas with high wind resources and a possibility of evacuating power into the grid with additional investments, as required. Where needed, it is expected that CTF support would only be provided to projects in such viable wind sites.</li> </ul>
2.	<p>“Since the focus on this proposal is the reduction of carbon emissions by the electric power sector in Ukraine, knowledge of the dispatch order and carbon emission profiles for the existing fleet of coal- and gas-fired thermal power plants is important to understand the true reduction in carbon emissions.”</p>	<ul style="list-style-type: none"> <li>• Ukraine's power grid comprises of must-run nuclear facilities, baseload thermal power plants and peaking load hydro plants. Hence wind projects would displace power from coal-fired thermal plants given that the power grid has balanced demand-supply on the aggregate.</li> </ul>
3.	<p>“In addition there is a power system operations issue where the proposal could, but does not, anticipate and mitigate a future threat to sustainable wind power deployment in Ukraine: the dispatch of the conventional (existing) power plants given the unpredictable nature of wind energy resources in Ukraine.”</p>	<ul style="list-style-type: none"> <li>• The long-term solution to this issue in Ukraine will consist of a combination of several elements: <ul style="list-style-type: none"> <li>- Interconnection with national and regional grids, in order to profit from the complementarity with other technologies, such as hydropower and nuclear energy;</li> <li>- The electric power system operator's knowledge to optimally accommodate intermittency power;</li> <li>- CTF and IBRD development of a Smart Grid program for the national grid, which will expand and modernize transmission networks in Ukraine and facilitate the integration of growing electricity generation from renewable sources; and</li> <li>- Successful financing and operation of this wind project is critical to provide domestic banks adequate comfort that the intention to treat intermittent sources of power such as wind, solar etc. as not being subject to load dispatch regulations is actually implemented. This in turn will unlock the long tenor financing from the domestic banking system necessary for sustainable development of the wind energy in Ukraine.</li> </ul> </li> </ul>

