



Consortium for Electric Reliability Technology Solutions  
Berkeley 2005 Symposium on Microgrids  
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UC Berkeley Faculty Club, Berkeley CA



### Participant Contact Information and Research Activities

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<p>What is your working definition of a microgrid? How is it different from the following working definition?</p> <p>A microgrid is an integrated power delivery system consisting of interconnected loads and DER which, as an integrated system, can operate in parallel with the grid or in an intentional island mode. The integrated DER are capable of providing sufficient and continuous energy to a significant portion of the internal demand, and the microgrid possesses independent controls and can island and reconnect with minimal service disruption.</p> <p><i>In my research on the quantification of the benefits of DG, I see a microgrid as a comprehensive, self-contained, reliable "non-wires" alternative to the expansion of distribution networks to generally remote areas.</i></p>							
<p>Briefly describe your research activities on microgrids.</p> <p><i>Economic benefits of distributed generation, distribution network expansion deferral by DG</i></p>							
<p>Please note which of the following technical issues your research addresses (if any):</p> <table border="0"><tr><td>Intentional islanding and resynchronization</td><td><i>No</i></td></tr><tr><td>Protection within the microgrid</td><td><i>No</i></td></tr><tr><td>Voltage control within the microgrid</td><td><i>No</i></td></tr></table>		Intentional islanding and resynchronization	<i>No</i>	Protection within the microgrid	<i>No</i>	Voltage control within the microgrid	<i>No</i>
Intentional islanding and resynchronization	<i>No</i>						
Protection within the microgrid	<i>No</i>						
Voltage control within the microgrid	<i>No</i>						

Frequency control within the microgrid during islanded operation	<i>No</i>
Fast load sharing among microsources (for load changes faster than the ramping rates of the prime movers)	<i>No</i>
Heat load matching and load prioritization	<i>No</i>
Economic dispatch of assets	<i>Yes</i>
Meeting environmental constraints	<i>Yes</i>
Other	<i>Generalized quantification of the benefits of distributed generation, renewable DG's, small and large scale wind generation and green credits.</i>