

Question: What are the drivers for providing grid support functions at the PV or wind inverter?

What functions can be provided? VAR? Storage? Harmonic injection?

What are the critical metrics (how much) for each?

Question: What are the technical and operational challenges for providing grid support functions at the PV or wind inverter?

(oversizing inverters, communications, market incentives)

Question: What are the opportunities for cost reduction for grid-connected >10 MW PV or wind inverter?

(SiC, high-frequency transformers, direct HVDC connection)

Question: What are the fundamental differences relative to spinning reserve or FACTS as actuators for control?

(inertia, dispatchability)

Question: What are the unique opportunities and challenges to provide grid-support functions for other alternative [utility scale] sources of energy?

(Solid oxide fuel cells (SECA), modular nuclear - both are dispatchable)

Question: What are the drivers for providing grid support functions at the point of load (industrial)?

What functions can be provided? VAR? Storage?

Question: What are the unique technical and operational challenges for providing grid support functions at the point of load (industrial)?

Question: Is it possible to realize distributed control of (industrial) demand response? Of PV and wind inverters?

Question: What are the drivers for providing grid support functions at the substation transformer (solid-state transformer)?

What functions can be provided? VAR? Storage?

Question: What are the unique technical and operational challenges for providing grid support functions at the substation transformer?

Question: Are there intrinsic advantages to implementing control at the inverter, load, or transformer relative to traditional FACTS devices?