

AMSC and the Smart Grid

U.S. Dept. of Energy Smart Grid Characteristics

Accommodates all generation and storage options

Provides Quality Power

Optimizes assets and operate efficiently

Responds to system disturbances

Resilient against attack and disasters

	HTS Cable	D-VAR® System	AMSC SVC
Accommodates all generation and storage options	✓	✓	✓
Provides Quality Power	✓	✓	✓
Optimizes assets and operate efficiently	✓		
Responds to system disturbances	✓	✓	✓
Resilient against attack and disasters	✓	✓	✓

Many conversations about the Smart Grid center on communications and metering technologies. The actual definition of Smart Grid is much broader and encompasses grid infrastructure. The U.S Department of Energy's (DOE) Modern Grid Team has detailed seven key characteristics of the Smart Grid. Five of those are identified above.

Superconductor cables can significantly enhance the flow of power on the transmission system, relieving grid congestion and increasing efficiency. Applied under our city streets they can enable, for instance, widespread adoption of plug-in hybrid vehicles (PHEV). These same cables also can automatically limit fault currents and enable resilient power grids that can survive attacks and disasters.

AMSC provides a host of other Smart Grid technologies that address grid reliability, efficiency and utilization. Our D-VAR® technology and SVCs, for instance, interact with the grid on a real-time basis to regulate voltage, prevent blackouts and relieve congestion on existing transmission lines.

These technologies are all identified by the DOE as Smart Grid Advanced Components.