

Discussion

- Applications Requirements: Control, Integration and control of renewables and storage. Microgrids , congestion relief, supply and demand response. Distribution Automation.
- Stakeholders: Power producers, ISOs, grid operators, utilities, power electronic equipment manufacturers, energy and power generation/storage manufacturers. (related stakeholders also include regulators, safety/standards bodies, rate payers, investors) & Government.
- System Performance Issues: Cost, efficiency, reliability, overload, fault behavior. Advantages and possibilities
- Technical barriers/issues: Controls, communications, anti-islanding, lvr, optimization (device, site, system,...), EPC, Simulation,
- Hardware Issues – What are the gaps in terms of devices, systems, integration, **Progress made to date**
- Technology Demonstration Issues (Modeling, Demo) **Potential**
- Technologies, scale, number **Plans-Maps-Gaps**
Risk Aversion – Adoption
Rugged, Square SOA

Applications Requirements:

Control of voltage, power-factor and faults through solid-state devices.

Integration and control of renewables and storage.

Seamless isolation from grid outages and disturbances through microgrids.

Ability to relieve congestion.

Achieve improved demand and supply response.

- speed?
- strengths and weaknesses?
- needs?
- differences from E/M
- devices, solid state, other

Stakeholders:

- Power producers, ISOs, grid operators, utilities, power electronic equipment manufacturers, energy and power generation/storage manufacturers. (related stakeholders also include regulators, safety/standards bodies, rate payers, investors)

-do we have a full discussion?
-can we leverage other issues?

System Performance Issues:

- a. Cost, efficiency, reliability, Temperature rating, RBSOA, overload, fault behavior
- b. Advantages and possibilities

-5% or 15%?

-"core" cost at high power is ~30%

-Sunshot goals? (10c/W)

Technical barriers/issues:

- a. Controls, communications, anti-islanding, lvrt, optimization (device, site, system,...)
- b. EPC
- c. Simulation

Hardware Issues:

-What are the gaps in terms of devices, systems, integration?

Technology Demonstration Issues:

Technologies, scale, number:

Commercial Penetration: