

Emerging Issue #RAS-6: Potential Operational Risks Associated with Interaction of SPS/RAS

Emerging Issue	Item	Specifics
Horizon	Number of years	On-going and beyond
Status	Emerging or Standing	Emerging
	Technical Group	System Protection and Control Subcommittee (SPCS)
Background	Description	<p>Increasingly, Special Protection Systems (SPS) are being installed in lieu of transmission facilities. While an SPS is a less costly alternative to new transmission facilities, and faster to install, there are instances where an SPS has failed to operate and in other instances where activating an SPS has resulted in additional unforeseen operational issues with negative reliability consequences.</p> <p>The deployment of an SPS often results in adding operational complexity to the grid operators. The lack of a modeling guide for planning SPS may have contributed to incomplete evaluation of the operational impacts of an SPS on the reliability of the power system.</p> <p>The objective of this emerging issue is to:</p> <ol style="list-style-type: none"> 1) Evaluate historical and future trends in SPS deployment, 2) Identify operational risks associated with SPS deployment and proliferation, 3) Propose a framework for assessing consequences associated with SPS deployment, and 4) Propose modeling and assessment needs.
	What changes during the 10-year horizon?	<ul style="list-style-type: none"> • Risks of failure, • Planning and operational complexity
	What is the impact to regional reliability?	Inadequate modeling and analysis of an impact of SPS operations and interactions may result in more optimistic results in both operational and planning time frames.
Assessment Factors	Resource Adequacy Considerations [Yes/No]?	No.
	Transmission Adequacy Considerations [Yes/No]?	Yes.
	Resource Siting Impacts [Yes/No]?	No.

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	Operations Impacts [Yes/No]?	Yes. The complexity of operating with SPSs may increase.
	Remaining Uncertainties	

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