Storage As a Transmission Asset (SATA) Operations Education

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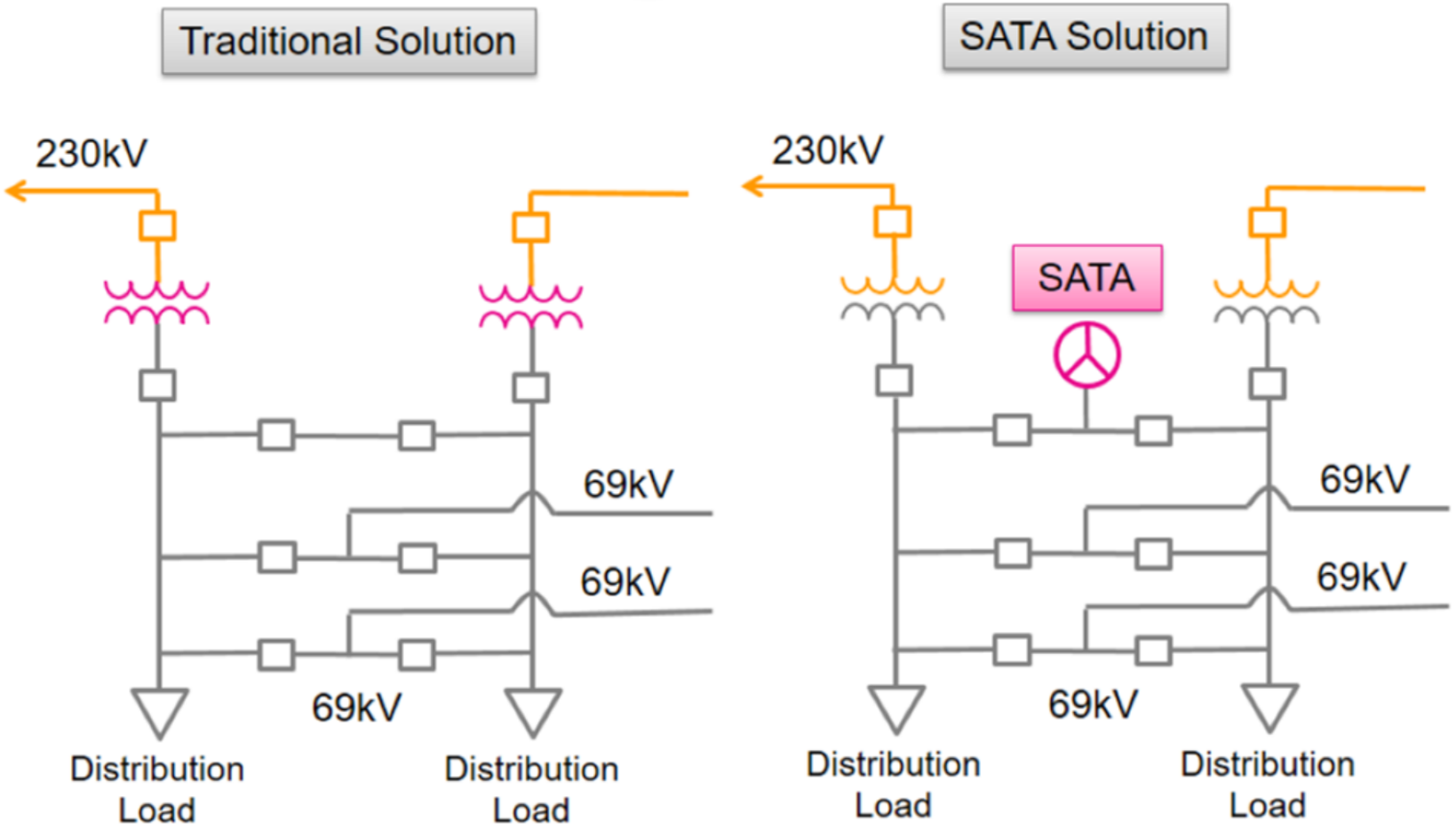
Key Takeaways

1	2	3
• Develop SATA operational details, including considering use cases	• Continue education where applicable	• Refresh industry analysis on operating a SATA

Guiding Principles

- SATA not allowed to participate in PJM Markets (at least not during this phase of work)
- SATA operated as a typical wires solution
- SATA automatically responds to post contingency local system needs

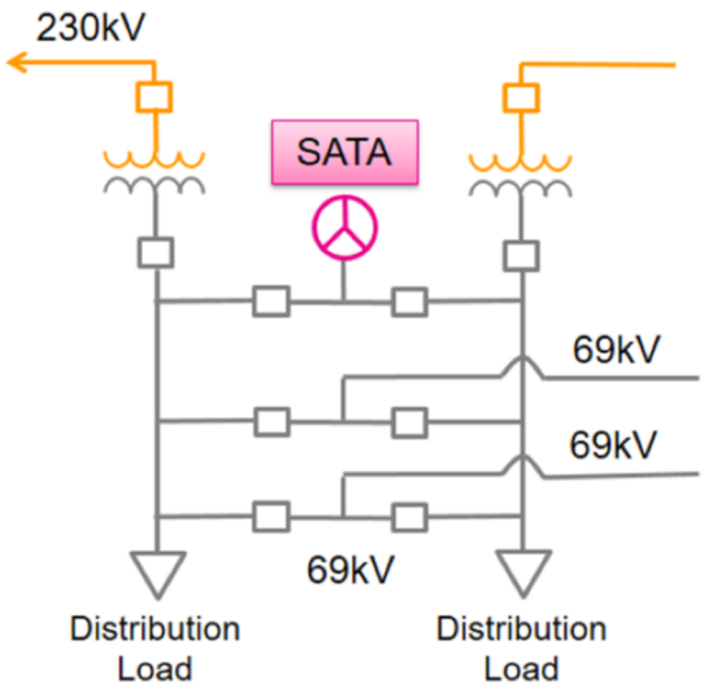
Practical Example



1. Traditional Solution replaces two 230/69kV transformers that may not be at end of life (EOL) with larger transformers

2. SATA Solution installs (interconnects) the storage asset at the 69kV bus for instantaneous post-contingency mitigation

Typical Storage Modeling



Energy Storage Resource – modeled as a generator

Details:

- MW's can go negative (charging)
- MW's can go positive (discharging)
- State of charge telemetered

Remedial Action Schemes(RAS)

- RAS are seen and used as “temporary” transmission system solutions and could be a way to employ SATA
- m03.pdf Section 1.7 Procedure to Review Remedial Action Schemes

Operations Summary

- Continue internal discussions once Issue Charge approved
- Refresh industry analysis on operating a SATA
- Recommend proceeding with this effort to address the operational mechanics of integrating SATA
  - Doing so at this time would allow storage to be planned and integrated as a transmission asset to assist with resolving reliability issues

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