

Paris Session 2022



Roadmap for M-SSSC integration Models and Tools

SC B4 PS 3-2 Q 3.2

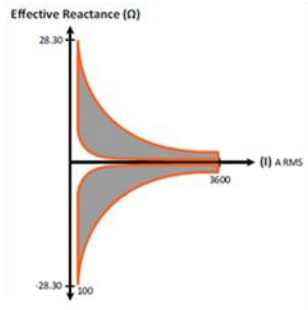
Alejandro Duque, Colombia



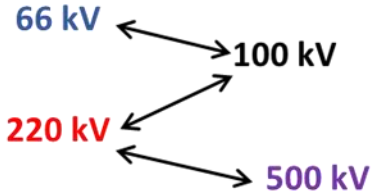
Basic applications and services

- M-SSSC technology is a suitable solution to modern challenges in Power Systems

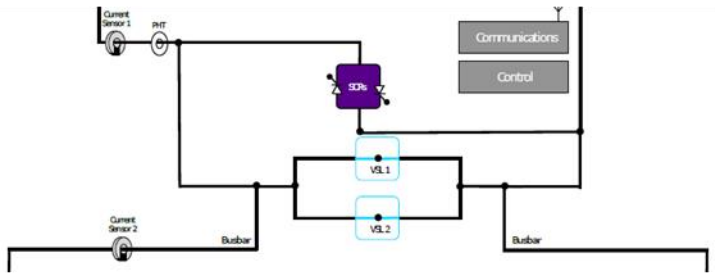
Controllable Variable Reactance



Voltage Agnostic



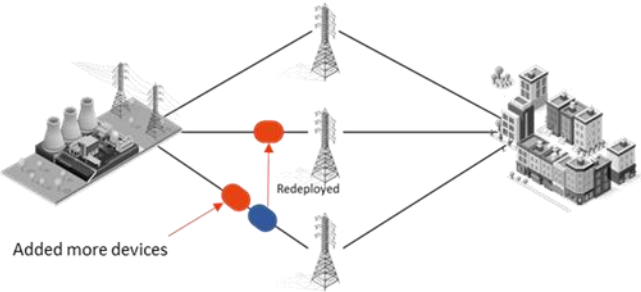
Self Protecting



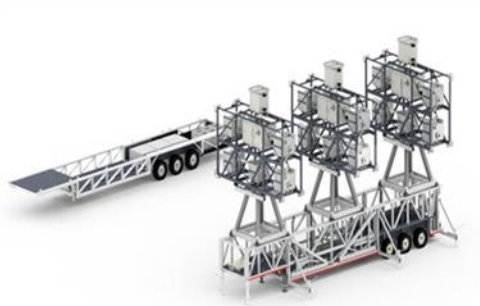
Modular Design



Re-deployable & Scalable

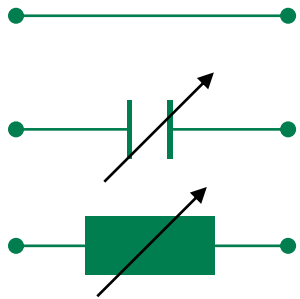


Mobile Installations

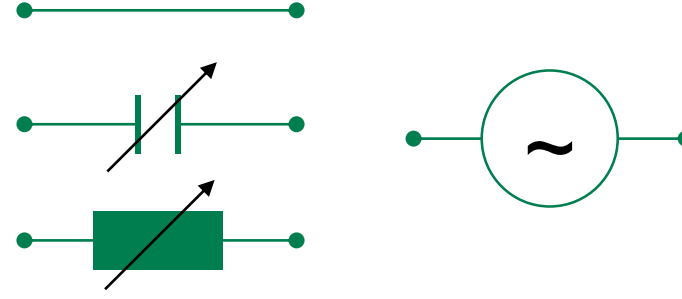


M-SSSC representation and Key Studies

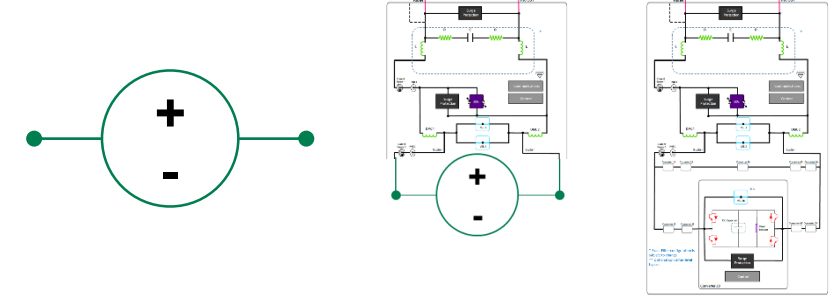
Steady-State



Dynamic



EMT



System Focus

Model Complexity

- **Dynamic Performance**

- Investigate dynamic performance of SSSC and control interactions under various system events

- **Harmonics**

- Examine M-SSSC contribution to harmonic distortion and M-SSSC immunity to background harmonics

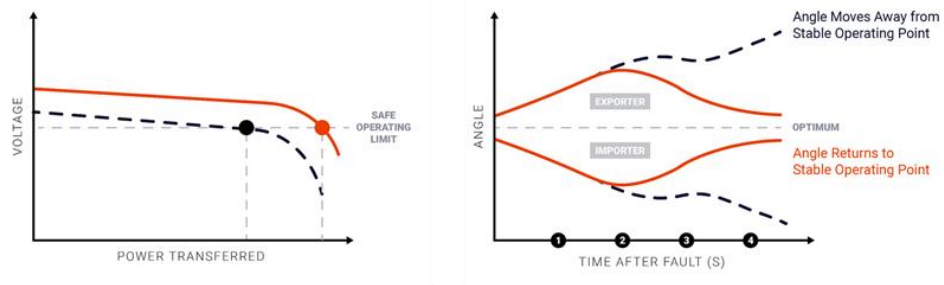
- **Protections**

- Understand M-SSSC compensation impact on distance protection systems

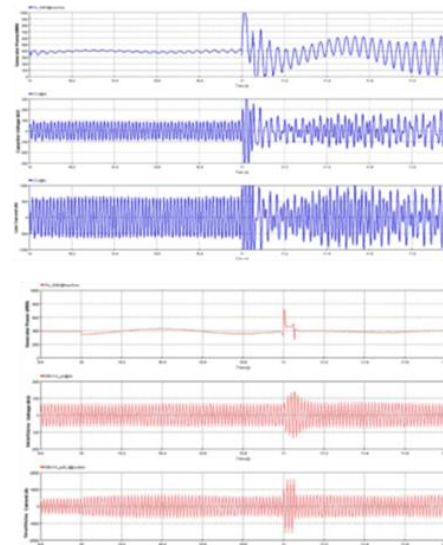
- **Subsynchronous interactions**

- Determine risks of SSR, SSTI, SSCI and other SSO phenomena

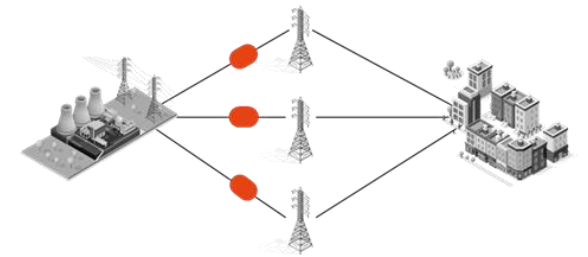
Transient Stability



Oscillation Damping



Smart Grid Applications



- Maximize DLR Capability
- WAMPAC applications to avoid grid problems on a large scale.

Integration with other technologies

