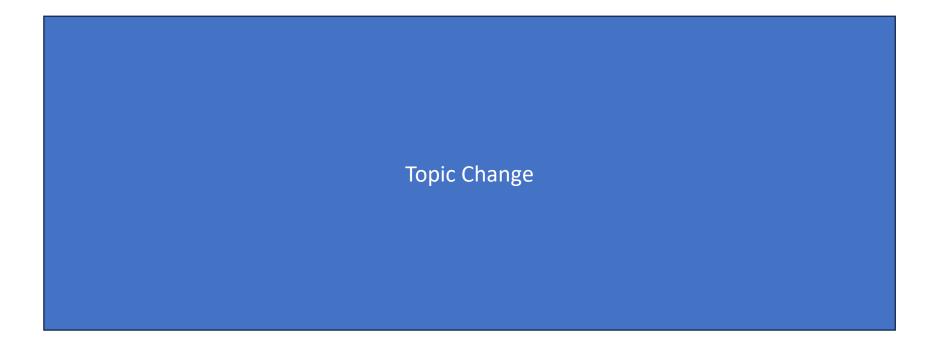
STATCOM Sidebar!







STATCOM and voltage control...

Process for STATCOM procurement:

(source: Functional Performance requirements for GFM STATCOM – 2025 IEEE PES GM)

1. Identify Grid Issue

- Where is the problem? (substation / corridor)
- What symptoms appear? (undervoltage, oscillations)

2. Quantify Gap

- By how much, and for how long, does the system violate the limits?
- Credible scenarios (peak, min-load, high-RES)

3. Define Objective

- Target voltage range (e.g., 0.95 1.05 p.u.)
- Recovery time (e.g., ≤ 250 ms)
- Secondary goals (harmonics, inertia)



Extra Functional STATCOM Requirements:

You decide... do you need:

- 1. Active harmonic cancellation
- 2. Redundancy/Automatic failover
- 3. Power Oscillation damping
- 4. Degraded Modes
- 5. Negative Sequence Cancellation
- 6. Slow reactive power control (dynamic reserve)

- 7. Stability supervision and gain adjustment
- 8. Automatic gain setting based on fault level
- 9. Coordination between multiple STATCOMs
- 10. Manual VAR control
- 11. Flicker control
- 12. Black start / energization support (special ride-through)
- 13. Grid-forming control

(source: Functional Performance requirements for GFM STATCOM – 2025 IEEE PES GM)





Operational points for STATCOM rating

Hello.

(source: Functional Performance requirements for GFM STATCOM – 2025 IEEE PES GM)

