

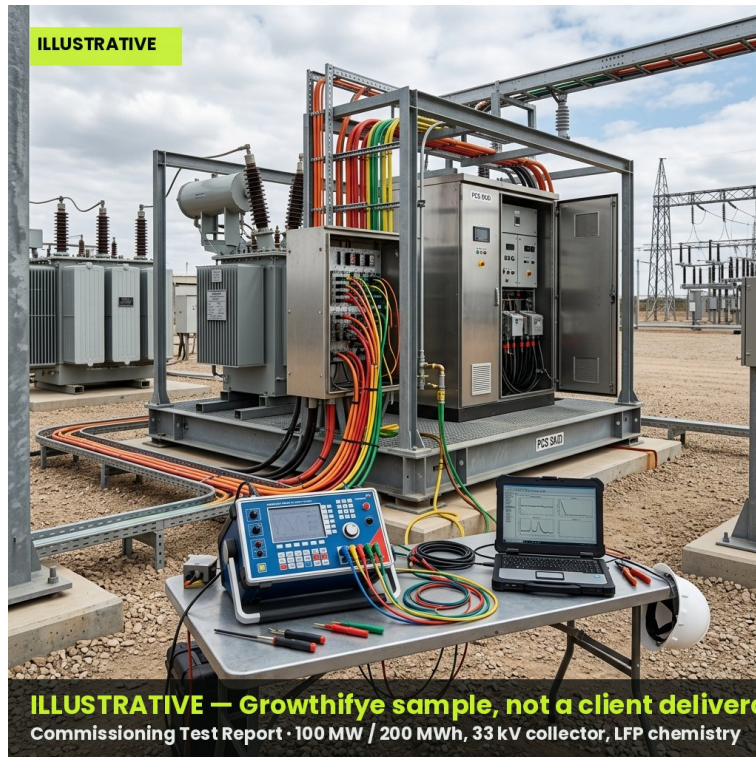


EPC · STEP 04 · COMMISSION & HAND OVER · REPORT

Commissioning Test Report

Consolidated results of LVRT/HVRT, frequency response, THD and reactive capability tests with pass/fail status against CEA grid-code limits.

Worked example (anonymised): Standalone BESS Commissioning Programme · 100 MW / 200 MWh, 33 kV collector, LFP chemistry · Western India. Grid-connected standalone BESS under a state DISCOM tender, requiring CEA grid-code compliance testing and round-trip efficiency verification before COD certification.



Illustrative sample image

Sample excerpt · Grid-Code Test Summary (Illustrative)

Test	Standard/Clause	Target	Measured	Result
LVRT ride-through	CEA Reg. 2019, Cl. 6.5	150 ms at 0% V	160 ms	Pass
HVRT ride-through	CEA Reg. 2019, Cl. 6.6	500 ms at 120% V	480 ms	Pass
Frequency response	IEGC Cl. 5.2	±3% droop band	2.8%	Pass
THD (voltage)	IEEE 519 / CEA	< 3%	1.9%	Pass
Reactive power capability	CEA Reg. Cl. 6.3	0.95 lag-lead at rated MW	0.96 lag-lead	Pass

Notes

- Tests witnessed jointly by DISCOM/STU representative and independent test agency
- Any failed test triggers root-cause memo and retest schedule before provisional COD

What happens in this step

1. Pre-commissioning checklist review: protection relay settings, earthing continuity, cable megger/HiPot results signed off before energisation
2. Sequential energisation of feeders/strings/PCS skids with cold and hot commissioning logs maintained per equipment



3. Grid-code compliance testing: LVRT/HVRT, frequency response, reactive power (Q-V) capability, harmonics (THD) as per CEA/CERC and state DISCOM protocols
4. Performance ratio (solar) or round-trip efficiency and availability (BESS) verification against EPC contract guarantee thresholds using calibrated meters
5. Joint inspection with DISCOM/STU and third-party test agency for provisional and final grid connectivity approval
6. As-built drawing reconciliation, punch-list closure, and O&M; manual compilation with spares/warranty registers
7. Formal handover pack issued to asset owner and O&M; team with training walkthrough

Outcomes

- Grid-code compliance certification enabling provisional/final DISCOM connectivity approval
- Independently verified performance metrics protecting owner against underperformance risk
- Complete, audit-ready documentation reducing insurance, lender and O&M; handover friction
- Clean punch-list closure minimising post-COD warranty disputes with EPC contractor

Want this for your project? Write to info@growthifye.com or use the Contact page — we will scope the real deliverable set for your capacity, state and lender requirements.

ILLUSTRATIVE