



RE & STORAGE ADVISORY · STEP 03 · DETAILED ENGINEERING · SCHEDULE

Procurement Specification & BoQ Package

Technical specifications, bill of quantities and evaluation criteria for PCS, batteries, transformers, switchgear and civil works, ready for EPC tendering.

Worked example (anonymised): Example: Standalone BESS Detailed Engineering · 150 MW / 300 MWh, LFP-based, 33 kV collection · Western India. Illustrative intra-state open-access BESS project requiring 132 kV interconnection studies, protection philosophy and procurement-ready EPC tender documents.

Sample excerpt · BoQ Summary (Extract)

Package	Item	Unit	Quantity	Spec Reference
Electrical	PCS, 3.5 MVA	Nos	30	Spec Sec. 4.2
Electrical	Battery Container, 3.72 MWh	Nos	84	Spec Sec. 4.5
Electrical	132/33 kV Transformer, 21 MVA	Nos	5	Spec Sec. 5.1
Civil	RCC Foundation, container pad	Cum	1,850	Spec Sec. 7.3
Civil	Internal Roads & Drainage	Sqm	12,400	Spec Sec. 7.6

Notes

- Issued as a single procurement dossier for EPC bid invitation
- Cross-referenced with SLDs and layout drawings for bidder consistency checks

What happens in this step

1. Develop electrical SLDs for AC/DC architecture, PCS/inverter blocks, MV collection, and interconnection switchyard
2. Prepare general arrangement and cable/trench layouts for BESS containers, PCS skids, transformers and control room
3. Define protection philosophy: relay coordination, arc-flash study, differential/distance protection settings
4. Run grid studies — load flow, short-circuit, transient stability, harmonic and voltage-ride-through per CEA/STU requirements
5. Draft technical specifications and BoQ for PCS, batteries/modules, transformers, switchgear, SCADA and civil works
6. Coordinate with STU/CTU and DISCOM for connectivity/LTA approval and interconnection agreement inputs
7. Compile a bid-ready procurement dossier with drawings, specs and evaluation criteria for EPC tendering

Outcomes

- A procurement-ready engineering package accepted by EPC bidders and lenders without major clarification rounds
- Grid-connection studies aligned with STU/CTU requirements, reducing connectivity approval delays
- Protection and safety philosophy validated ahead of equipment ordering, minimising rework risk
- Clear BoQ and specifications enabling like-for-like EPC bid comparison and faster contract award

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.