



EPC · STEP 01 · ENGINEER FOR CONSTRUCTABILITY · MEMO

O&M; Access Design Memo

A short memo confirming maintenance zones, aisle widths and access provisions meet 20-year operability needs before construction locks in the layout.

Worked example (anonymised): Standalone BESS constructability review · 400 MW / 800 MWh · Western India. A DISCOM-awarded standalone BESS project moved from vendor reference layout to a site-adapted design after review flagged drainage, crane-access and fire-clearance issues ahead of procurement.

Sample excerpt · O&M; Access & Maintenance Zone Checklist

Zone	Requirement	Design response	Status
Container aisles	3.5 m min for module-swap crane	Aisle width set to 4.0 m	Closed
Transformer bay	Oil containment plus 15 m fire clearance	Bunded pit, spacing per IS 1646	Closed
Switchyard	Vehicle turning radius 12 m	Access loop road resurfaced	Closed
Perimeter	24/7 security patrol route	2.5 m patrol path, lighting at 30 m centres	Open — pending lighting design

Notes

- Signed off jointly by O&M; contractor and EPC before construction start
- Flags items still open at issue date for tracked closure

What happens in this step

1. Cross-check vendor reference layouts against site topo survey, geotechnical data and drainage patterns
2. Validate equipment sizing (PCS, transformers, cabling) against actual ambient conditions and site-specific auxiliary loads
3. Review access roads, crane paths and lay-down areas against real construction logistics, not idealised plot plans
4. Verify clearances, bay spacing and fire safety against applicable IS/CEA codes and state electrical inspectorate requirements
5. Design O&M; walkways, module-swap aisles and maintenance zones for 20-year operability, not just installation-day access
6. Flag constructability risks in a formal register with mitigation options, costed where material
7. Issue a sign-off package that procurement and construction teams work from — not a marketing-grade GA drawing

Outcomes

- Site-specific design issues identified before procurement, avoiding costly rework during construction
- O&M; access and safety clearances built into the layout from day one, reducing lifecycle operating costs
- Equipment sizing validated against actual site conditions, not vendor default assumptions
- Constructability sign-off typically reduces change orders during EPC execution by 15-20%

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