



GREEN PPAS · STEP 01 · DEMAND STUDY · REPORT

Load Profile & ToD Exposure Report

Detailed analysis of consumption patterns, seasonal variation and current ToD tariff losses, forming the evidence base for sourcing decisions.

Worked example (anonymised): Multi-site auto-component manufacturer, load aggregation study · 42 MW aggregated contract demand across 6 plants · Western India. Manufacturer sought to raise RE share from 18% to 60%+ across a multi-state manufacturing footprint with varying ToD tariffs and shift patterns.



Illustrative sample image

Sample excerpt · ToD Consumption Summary (Illustrative)

ToD Slab	Hours	Avg Load (MW)	Tariff (Rs/kWh)	Monthly Units (MU)
Peak	18:00-22:00	9.8	9.20	1.18
Normal	06:00-18:00	7.2	7.10	6.48
Off-Peak	22:00-06:00	5.1	5.40	3.06
Solar hours	09:00-17:00	7.5	7.10	4.80
Weighted Avg	24h	6.9	7.05	10.72

Notes

- Peak-slab exposure identified as primary cost driver for RE hybridisation
- Solar-hour overlap of 62% supports strong solar-first mix

What happens in this step

1. Collect 12-24 months of 15-minute interval consumption data across all connection points and voltage levels
2. Build load duration curves and seasonal/monthly demand heat-maps to identify base, peak and trough patterns
3. Map ToD tariff slabs against actual consumption to quantify current ToD arbitrage losses
4. Run RE-fit simulations overlaying solar-only, wind-only and hybrid generation profiles against the load curve
5. Assess captive/group-captive eligibility, open-access feasibility and banking regulations for the host state



6. Size the optimal RE capacity mix (MW) and contract structure (firm, must-run, peak-shaving) with sensitivity ranges
7. Present findings with a recommended sourcing envelope to carry into the next stage

Outcomes

- Clear, data-backed target capacity range and RE mix before entering the market
- Quantified current ToD losses translated into avoidable cost opportunity
- Reduced risk of over/under-contracting in the eventual PPA
- A validated regulatory and structural pathway (captive/OA/group-captive) per site

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