

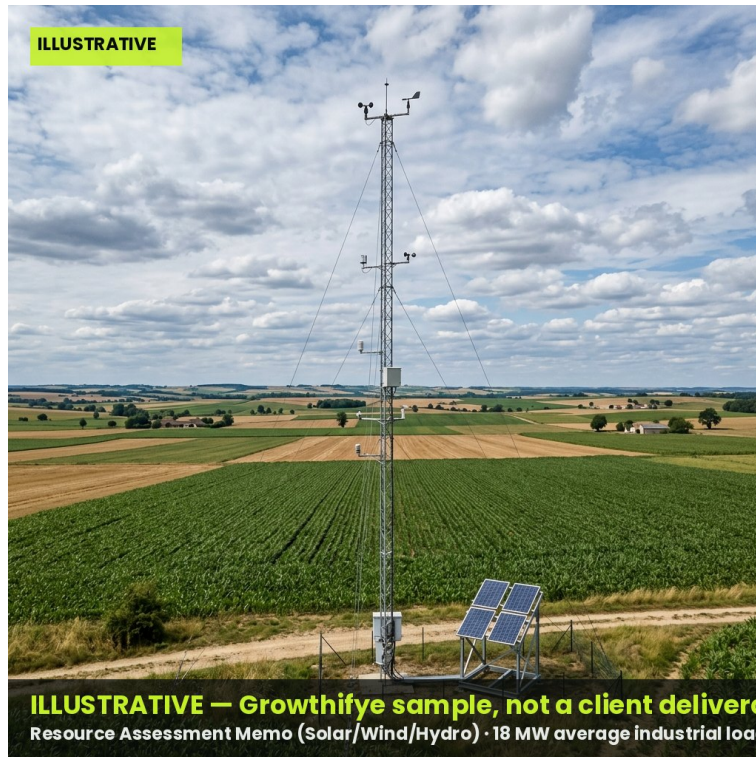


RE & STORAGE ADVISORY · STEP 01 · RESOURCE & LOAD ANALYTICS · MEMO

Resource Assessment Memo (Solar/Wind/Hydro)

P50/P90 yield estimates derived from satellite irradiance data, wind mast records or flow-duration curves, benchmarked against nearby reference stations.

Worked example (anonymised): Illustrative Study: Industrial Load + Hybrid RE Feasibility · 18 MW average industrial load; solar-wind-storage hybrid under evaluation · Western India. A process manufacturing facility sought to understand whether a hybrid solar-wind-BESS system could offset ToD peak charges and reduce grid dependency, before committing to detailed design.



Illustrative sample image

Sample excerpt · Resource Yield Estimate Summary

Resource Type	P50 Yield	P90 Yield	Data Source
Solar (GHI-based)	1,650 kWh/kWp/yr	1,520 kWh/kWp/yr	Satellite + 1 ground station
Wind (80m hub height)	26% CUF	21% CUF	12-month mast data
Small-hydro (run-of-river)	42% CUF	35% CUF	10-yr flow duration curve

Notes

- P90 used for conservative financial modelling in next stage
- Wind data subject to mast height correction and shear analysis

What happens in this step

1. Collect 12-24 months of 15-minute interval load/generation data from SCADA, smart meters or DISCOM records
2. Clean, validate and profile load data to identify peak/off-peak patterns, seasonality and load factor trends
3. Overlay ToD/ToU tariff structures and demand charges to map real cost-of-energy by time block
4. Assess solar irradiance (satellite + ground pyranometer where available), wind resource (mast data/reanalysis) or small-hydro flow duration as applicable
5. Model P50/P90 generation yield estimates and correlate with load profile for self-consumption/export potential



6. Quantify the addressable opportunity: arbitrage spread, peak-shaving MW, curtailment risk, and contract-structure fit (RTC/FDRE/merchant)
7. Present findings in a data pack with clear go/no-go indicators for the next design stage

Outcomes

- Clear, data-backed view of the actual (not assumed) RE/storage opportunity size
- Quantified ToD arbitrage and peak-shaving potential in rupee terms
- Validated resource yield estimates (P50/P90) ready for bankable sizing
- A defensible go/no-go basis before committing to detailed concept design and CAPEX planning

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.

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