

YBG Global – Stage 1 PoC Proposal

Combustion & Heat-Transfer Performance Mapping
(Deterministic, non-Intrusive Diagnostic)

Objective

Quantify the gap between current operation and the unit's own best-demonstrated performance using existing DCS historian data (read-only). Output: audit-grade baseline of recoverable fuel efficiency.

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Scope (Stage 1 Diagnostic)

- FI (kg/MWh) and Heat-Rate vs load
- Best-observed operating envelope (per load band)
- Excess fuel input (t/h; ₹/day)
- Drift / envelope adherence
- Audit-safe diagnostic report (traceable formulas)

Method (Non-Intrusive)

- Read-only DCS historian export (CSV)
- No hardware changes
- No DCS/APC interaction
- No boiler/turbine modifications
- No external benchmarks or AI models

Data Requirement

- 3–5 days minimum (2–4 weeks preferred)
- Signals: MW, coal flow, O₂, steam flow/temp, GCV (if available), FEGT (if logged)

Expected Insight

- Typical heat-rate gap: 2–5%
- Quantified coal saving (t/h; ₹/day)
- Clear combustion/thermal stability visibility
- Evidence-based basis for further internal actions
(Descriptive only — no setpoints or operational changes proposed.)

Value to Plant

- *Zero capex*
- *Uses plant's own operating history*
- *Deterministic, transparent, audit-grade*
- *Supports Performance, Operations, and Engineering review*
- *Provides verified baseline for efficiency recovery*

Next Step

*Share sample dataset → YBG generates diagnostic → Joint review → Confirm further engagement.
Fast evaluation. Minimal process overhead.*