Title & Hook

Industrial Energy Optimisation SaaS

Optimise industrial energy use against renewables — cut costs, cut carbon, and unlock dispatchable flexibility for steel plants and captive power units.

One-liner: Constraint-aware scheduling + real-time optimisation for heavy industry to reduce energy cost and monetise flexibility.

The Problem

- Steel mills and industrial plants face: intermittent renewable supply, high peak charges, and limited visibility into process-level flexibility.
- Result: higher energy bills, underutilised renewables, and missed revenue from flexibility/ancillary markets.

Market Opportunity

- Target customers: steel mills, captive power plants, heavy industries, and industrial clusters.
- Large TAM in India (thousands of plants) and global expansion possible.
- Adjacent markets: ancillary services, corporate buyers seeking low-carbon steel, and green certificate markets.

Our Solution

- SaaS platform that ingests SCADA/meters + RE forecasts + market prices.
- Delivers: real-time dashboard, baseline analytics, constraint-aware scheduling, demand-response orchestration, and KPI reporting.
- Human-in-the-loop controls for operations safety and adoption.

Market size (how big this can get)

Top-line numbers (conservative → optimistic ranges)

- **Global Energy Management Systems (EMS) market (2024–2025)** — estimates vary by source and scope: **~USD 36B → USD 51B (2024/25)** depending on whether reports include hardware, services and full EMS suite. ([Fortune Business Insights](#))
- **Industrial EMS (IEMS) — serviceable addressable market (SAM)** — industry-focused EMS is ~**71%** of EMS in many reports. Applying that: **SAM ≈ USD 25.5B (conservative) → USD 36.3B (optimistic)**. (0.71 × EMS range). ([Precedence Research](#))
- **Steel-specific IEMS opportunity (serviceable niche)** — steel is one of the largest energy/CO_2 contributors inside industry (≈**29%** of industrial emissions). Using that share as a proxy for steel's share of industrial EMS spend gives a first-order steel IEMS market of ≈ **USD 7.4B → USD 10.5B**. (0.29 × SAM range). ([industrialenergyaccelerator.org](#))
- **India opportunity (steel slice)** — India is **~8%** of world crude steel production (~149.6 Mt / ~1,881 Mt). Applying that share to the global steel IEMS figure gives **India steel IEMS TAM ≈ USD 0.6B → USD 0.84B**. (useful for go-to-market planning). ([Wikipedia](#))

Quick takeaway: even the conservative steel-specific addressable market is **several billion USD**; capturing a 1–5% market share of that within 5–7 years would be a meaningful business (tens-to-hundreds of millions USD ARR).

Growth trajectory & why the market expands

- **High CAGR for EMS/IEMS**: market reports show double-digit CAGRs (roughly **13–16%** to 2030+), driven by digitalisation, renewables, and regulatory pressure. (source ranges). ([Polaris](#))
- **Industrial electrification & decarbonization**: industry accounted for ~37% of global final energy use in 2022, and electricity's share in industry is rising — more electrification (= higher need for electricity optimization). This increases demand for IEMS. ([IEA](#))
- **Renewable penetration & variability**: clean energy met ~40% of global electricity in 2024; rapid growth of solar/wind increases variability that industry must manage — creating demand for scheduling/optimisation software. ([The Guardian](#))
- **Policy & ESG pressure on steel**: steel is "hard-to-abate" and a major share of industrial emissions — decarbonization mandates, corporate procurement of low-carbon steel, and carbon pricing/regulation all drive buyers toward solutions that reduce energy cost and carbon. ([industrialenergyaccelerator.org](#))

Key assumptions & caveats (be clear in investor conversations)

1. I used **% of industrial emissions** as a proxy for steel's share of industrial EMS spend — reasonable as a first-order method, but should be validated by procurement & spend data (industry energy cost per tonne varies by region/process). (industrialenergyaccelerator.org)
2. EMS market definitions differ: some reports include hardware/services/integrators and large OT vendors (widening the tally), others focus on software/SaaS only — that's why you see the USD 36B → 51B range. Use *one* source consistently in a single investor deck and show a sensitivity band. (Fortune Business Insights)

Slide/infographic suggestions (ready to paste)

1. **Single-page infographic (top)**
   o Left: large bubble "Global EMS market 2024" with range **$36–51B** (label sources). (Fortune Business Insights)
   o Middle: slice-out showing **Industrial EMS (71%) → $25.5–36.3B**. (Precedence Research)
   o Right: steel slice (29% of industrial) → **$7.4–10.5B** (label assumption: steel share = 29% industrial emissions). (industrialenergyaccelerator.org)
   o Footer: India steel slice bubble: **$0.6–0.84B** (8% of steel TAM). (Wikipedia)
2. **Bar chart: CAGR & timeline**
   o X axis: 2024 → 2030; two series: EMS market growth (low/high scenario), annotate CAGR range **13–16%**. (Polaris)
3. **Drivers + adoption funnel (icons)**
   o Drivers: Renewables variability, carbon regulation, electrification, cost volatility, DR/VPP revenue. Use short bullets and one-line evidence (IEA, Ember). (IEA)
4. **Bottom callout:** "Novobiotech's short-term SAM capture target" — e.g., **target 1%–3% of steel IEMS in 5 years → $75M–$315M ARR** (use this as an illustrative investor goal; show math on the slide).

One-line numbers you can place in your pitch

- "Industrial EMS (our core SAM) is **~$25–36B today**, growing at **~13–16% CAGR** — steel represents a **$7–11B** addressable opportunity, and India alone is **~$0.6–0.85B** of that." (Polaris)

Sources (for slide footnotes/appendix)

- Fortune Business Insights — Energy Management System Market (CAGR, market value baseline). ([Fortune Business Insights](#))
- Polaris Market Research / Industry reports — EMS market sizing & segmentation. ([Polaris](#))
- Precedence Research — IEMS share and market breakdown. ([Precedence Research](#))
- IEA — Industrial energy share & electrification trends. ([IEA](#))
- Industrial Energy Accelerator / IEA references — steel share of industrial emissions (used as proxy for steel energy spend). ([industrialenergyaccelerator.org](#))
- World steel production (used to estimate India's share): World Steel / public statistics. ([Wikipedia](#))
- Ember/energy reporting — renewables penetration and implications for variability. ([The Guardian](#))

Product / MVP

- Data ingestion: Modbus/OPC/CSV/APIs via secure gateway
- Dashboard: real-time energy, generation, and savings metrics
- Forecasting: short-term RE and price forecasts
- Optimisation engine: peak-shaving, scheduling, and advisory automation
- Reporting: kWh, ₹ savings, CO_2 avoided, exportable reports

Prototype Overview

Working Prototype: Industrial Energy Management & Optimisation SaaS

- **Live data ingestion demo:** reads real plant data streams (sample SCADA tags + meter feeds) via a lightweight gateway.
- **Interactive dashboard mock:** real-time visualisation of load curves, renewable forecasts, heat maps for process flexibility.
- **Optimisation preview:** simulated run showing cost savings from peak-shaving and renewable shifting.
- **Alerting engine:** triggers notifications for upcoming peaks, deviation from optimal schedule, and forecast uncertainty.
- **Export-ready reports:** autogenerated energy & savings summaries for plant managers and sustainability teams.
- Data ingestion: Modbus/OPC/CSV/APIs via secure gateway
- Dashboard: real-time energy, generation, and savings metrics
- Forecasting: short-term RE and price forecasts
- Optimisation engine: peak-shaving, scheduling, and advisory automation
- Reporting: kWh, ₹ savings, CO_2 avoided, exportable reports

Visuals Brief (UI Mockups Description)

Dashboard — Command Centre

- Clean, high-contrast layout with three main panes: *Real-time Energy Flow*, *Renewable Forecast*, and *Cost Savings Tracker*.
- Left panel: Live load curve graph with hover tooltips showing kW, cost, and timestamp.
- Right panel: Solar/wind forecast bars overlaid with confidence shading.
- Bottom strip: KPI tiles (Today's Savings, CO_2 Avoided, Peak Alerts, Flexibility Score).

Process Flexibility Map

- Heat-map style visualisation showing each energy-intensive process line as horizontal bars.
- Colour gradients (green–amber–red) indicate flexibility levels and safe rescheduling windows.
- Clicking a bar expands a side modal: process constraints, optimal shift suggestions, and estimated impact.

Optimization Simulator

- Two stacked charts: *Baseline vs. Optimised Load* and *Baseline vs. Optimised Cost*.
- Toggle switches: "Peak-Shaving", "Renewable Maximisation", "Market Price Optimisation".
- Scenario playback animation to demonstrate savings over the next 24 hours.

Alerts & Notifications Panel

- Right-side collapsible panel.
- Cards for each alert: Peak warning, schedule conflict, forecast deviation.
- Each card includes CTA buttons: *Accept Suggestion*, *Snooze*, *Override*.

Reporting Interface

- Exportable PDF summary preview.
- Sections include: Energy usage trends, RE utilisation %, cost-saving breakdown, pilot KPIs.
- Company branding + Novobiotech colour palette (deep blue, lime green accents, clean white background).

Competitive Landscape

1) Quick summary — who you're competing with

Competitors fall into 4 practical categories:

- **Enterprise OT/EMS incumbents (system integrators & automation vendors):** Schneider Electric, ABB, Siemens, Honeywell, GE Digital — broad digital/OT stacks and deep PLC/DCS integrations; strong at plant-level control and long sales cycles. ([Wall Street Journal](#))
- **Energy services / VPP / DR aggregators & orchestration platforms:** Enel X, AutoGrid, GridBeyond, Voltus — focus on market participation, VPPs, demand response and monetisation. They bring trading expertise and scale but are sometimes weaker at fine-grained process constraints inside heavy plants. ([Enel X](#))
- **Process-level optimisation & industrial AI players:** AVEVA/SimSci (ROMeo), AspenTech, Cognite, Primetals (process automation for steel) — excel at thermo/mechanical process modelling, digital twins, and deep process optimisation; often sold to process engineering teams, not energy teams. ([Wikipedia](#))
- **Local systems integrators/specialist startups (regional):** Indian energy-optimisation consultancies, IIoT players and SCADA integrators — they vary widely in capability; they often deliver quick wins but lack scalable SaaS products.

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2) Competitor matrix (concise)

Competitor	Category	Strengths (why customers buy)	Weaknesses (gaps you can exploit)
Schneider Electric (EcoStruxure)	Global EMS + OT stack	Massive installed base, end-to-end OT→IT integration, strong brand & services. Ideal for large enterprise digitalisation projects. ([Wall Street Journal](#))	Large, expensive, long procurement cycles; not always nimble for bespoke steel process scheduling or outcome-based pilots.
ABB / Siemens / Honeywell / GE Digital	OT + process control + energy management	Deep plant automation, process control, and global service teams (often co-dev with steelmakers). ABB partnered with Tata Steel on carbon reduction work. ([The Economic Times](#))	Heavy customisation, long delivery times, energy-market participation features (VPP/DR) may be outside the core focus.
Enel X (EnerNOC)	Demand response / VPP / market aggregator	Market access to capacity programs and monetisation channels; proven aggregator playbooks and scale. Useful for monetising flexibility. ([Enel X](#))	Not built around shop-floor process constraints — may propose load curtailments that break steel process constraints unless co-engineered.
GridBeyond / AutoGrid / Voltus	AI-driven VPP & orchestration	Strong ML for short-term dispatch, battery + site orchestration, investor	Focused on asset orchestration & trading; custom steel-process

Competitor	Category	Strengths (why customers buy)	Weaknesses (gaps you can exploit)
		interest and expansion. GridBeyond is getting growth funding and global expansion. ([Wall Street Journal](#))	awareness or operator UX may be limited.
AVEVA / SimSci / AspenTech / Primetals	Process modelling & optimisation (steel)	Rigorous process models, digital twins, direct adoption in steel process optimisation; Primetals supplies process automation to JSW. ([Wikipedia](#))	Excellent at process physics, but they may not combine energy market signals, human approvals, and quick pilot commercial models out of the box.
Local SI / Startups (India)	IIoT, energy audit & retrofitting	Local relationships, low-cost pilots, fast deployment. Examples: specialist integrators and smaller energy-optimisation firms. ([Energy Desk](#))	Often bespoke consulting work—hard to scale into repeatable SaaS without productisation.

Key takeaway: incumbents own OT/DCS and have the trust & installed base; VPP/aggregators own market access; process optimisation players own domain modelling. The **white space** is the intersection: *steel-aware, safety-first scheduling that links process constraints → plant optimisation → market monetisation* delivered as a quick, low-friction SaaS pilot with operator UX and outcome-based pricing.

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3) Where most competitors fall short for steel & captive power customers

(Why a lean SaaS like Novobiotech can win)

1. **Process safety & thermal inertia ignorance.** Many DR/VPP platforms assume load is fungible — not true for rolling mills, annealing furnaces, blast furnaces. Vendors that lack steel process models can propose infeasible curtailments.
2. **Operator trust/adoption gap.** Big automation vendors or aggregators struggle to provide simple human-in-the-loop flows that plant operators will accept.
3. **Slow, capex-heavy pilots.** Large vendors push multi-month digitalisation programs; startups that do pilots often deliver only audits or small retrofits.
4. **No combined value stack (energy cost + carbon attribution + market revenue).** Few solutions present an integrated, auditable ledger showing ₹ savings *and* CO_2 avoided, tied to operator-approved actions.
5. **Weak local/regulatory market knowledge.** Aggregators have market access but not deep plant process understanding; process vendors lack access to energy market monetisation channels.

(Each of the above gaps is a place to position Novobiotech.)

4) How Novobiotech can be distinct — product & GTM playbook

A. Product / technical differentiation (build these early)

1. **Steel-specific process model library (out of the box)**
   - Prebuilt constraint templates for common steel processes (rolling, reheating, annealing, compressors, furnaces) so the scheduler already understands minimum run times, thermal inertia, and quality constraints.
   - Benefit: immediate, feasible recommendations; dramatically reduces engineering time during pilots.
2. **Human-in-the-loop safety layer**
   - Show "suggestion → operator decision → audit trail". Make approval one-click with easy rollback & explanatory rationale (why this hour, expected thermal recovery).
   - Benefit: faster ops buy-in and lower fear of automation.
3. **Co-optimization engine: Process + Energy markets + On-site assets**
   - Simultaneously optimise dispatch to minimise energy cost and maximise revenue from DR/ancillary markets (where available), while preserving product quality.
   - Integrate short-term RE and price forecasts as inputs.
4. **Outcome-based pilot mode & transparent accounting**
   - Built for pilots: sandboxed pilot tenant, easy CSV/OPC ingestors, fast ROI dashboards and downloadable audit reports. Capture baseline in first 1–2 weeks, then show delta.
   - Exportable pilot report with kWh, ₹ and CO_2 attribution for procurement/sustainability teams.
5. **Lightweight, pre-certified OT connectors**
   - Pre-built adapters for common PLC/DCS vendors and for SCADA historians (PI/other). Offer a local gateway for customers with strict OT policies.
   - Benefit: lowers integration friction and security concerns vs big SI projects.
6. **Local market & regulatory intelligence module**
   - Country/region-specific market participation rules, tariff schedules, and DR program connectors so you can monetise flexibility (or at least show the opportunity).
   - Benefit: bridges the gap between VPP vendors (market access) and plant ops.
7. **Data-driven defensibility**
   - Build a library of steel-process telemetry patterns + ML models that predict optimal shift windows and recovery times. Over time, a model bank becomes a repeatable asset and moat.

B. Commercial / GTM differentiation

1. **Pilot-first, low-risk commercial model**

o   Small setup fee + short paid pilot (60–90 days) + optional success fee (share of measured savings). This is more palatable to ops teams and accelerates reference creation.
2. **Co-selling / channel with EPCs and local SIs**
   o   Instead of competing with incumbents on large digital transformation deals, partner with EPCs, Primetals/Primetals-style system integrators, and local SIs to embed your optimisation layer. (Primetals/ABB/Siemens still win process automation deals.) ([Tube & Pipe India](#))
3. **Operator-first UX & training package**
   o   Offer short operator training and a "safe mode" that starts with advisory suggestions before moving to automation. This reduces resistance.
4. **Regulatory & carbon reporting bundle**
   o   Provide standard templates for CDP/ESG reporting and compliance evidence — attractive to sustainability teams.
5. **Local presence/language & service SLAs**
   o   For India, local engineering & 24/7 support improves acceptance vs foreign VPP vendors.

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5) Tactical roadmap — first 6–12 months (practical steps)

1. **Build 3 ready templates** (Rolling mill, Annealing furnace, Compressors) — validated with a process consultant.
2. **Ship the "Pilot Playbook"**: 60–90 day pilot checklist, baseline phase (2 weeks), advisory phase (4 weeks), performance phase (rest). Use your Excel ROI tool live.
3. **Develop 3 OT connectors** for the most common DCS/PLC and historian (CSV/OPC/PI). Provide a secure gateway appliance.
4. **1–2 anchor partnerships**: pitch to Primetals/large SIs or an IPP aggregator to run a joint pilot (you provide optimisation; they provide integration & commercial access). ([Tube & Pipe India](#))
5. **Offer a clear pricing template**: Setup ₹X, Pilot ₹Y/month (paid), Success fee 10–15% of verified savings, SaaS ₹Z/month post-pilot. Emphasise alignment.
6. **Collect a curated dataset** during pilots to build the initial ML model bank — this becomes your IP and reference library.

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6) Long-term moats & defensibility (how to make it hard for rivals to copy)

- **Process telemetry + labels**: a growing, proprietary dataset of steel-process behavior and validated performance outcomes is sticky.
- **Regulatory connectors & contracts**: local market access & aggregator partnerships (if you monetize DR) give recurring revenue channels.

- **Operator-trusted UX**: human-in-the-loop flows and audit trails produce adoption; this is hard for pure VPPs to replicate alone.
- **Integration templates**: pre-certified OT connectors and security accreditation reduce friction and procurement time.
- **Business model alignment**: performance fees tied to verified savings produce compelling economics and customer lock-in.

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7) Risks & mitigation

- **Risk:** Incumbent bundling (Schneider/ABB) wins enterprise deals.
  Mitigation: Focus on short pilots and integrations that sit above DCS; partner with SIs rather than trying to displace them.
- **Risk:** Aggregators try to undercut by offering higher payouts for DR.
  Mitigation: Your edge is *feasibility* — you only propose shifts that respect steel process constraints, avoiding penalties or quality hits.
- **Risk:** Data sensitivity / OT security concerns.
  Mitigation: Provide an air-gapped gateway, no-cloud pilot option, and SOC-grade data handling documentation.

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8) One-paragraph positioning you can use in pitch decks

"Novobiotech is a steel-aware Industrial Energy Optimization SaaS that combines plant-level process models, renewable & price forecasts and a human-in-the-loop scheduler to deliver verified ₹ and CO_2 savings. Unlike DR aggregators or heavy OT vendors, we deliver *fast, low-risk pilots* that respect process constraints, enable monetization via market connectors, and convert to recurring SaaS + performance revenue."

Sources for the major market signals

- Schneider Electric — recent strong performance and energy-management leadership. (Wall Street Journal)
- Enel X — market leader and aggregator scaling DR/VPP programs. (Enel X)
- GridBeyond — energy AI / VPP player with recent growth financing and expansion. (Wall Street Journal)
- ABB & Tata Steel collaboration on carbon reduction & energy tech for steel. (The Economic Times)
- Primetals Technologies — recent process automation contracts with JSW Steel (example of incumbents selling process automation into steel). (Tube & Pipe India)

Barrier to Entry

Key barriers to entry (ranked by severity)

1. Installed base & incumbent relationships (very high)

Large OT/automation vendors (Schneider, ABB, Siemens, Honeywell) already own PLC/DCS/SCADA relationships and long-term service contracts — procurement favours them for safety-critical plant changes.

Mitigation

- Position as *complementary* (non-invasive overlay) and partner with SIs/EPCs rather than trying to displace them.
- Ship lightweight, pre-certified OT connectors and a local gateway that conforms to customers' security standards to reduce procurement friction.

2. OT / security & access to plant data (very high)

Accessing live telemetry, historian data, or PLC tags requires OT approvals, security audits, and sometimes on-site appliances — many plants are conservative about network access.

Mitigation

- Provide an air-gapped/local gateway option (no inbound cloud connections), SOC-grade security documentation, and prebuilt OPC/PI connectors.
- Offer short, well-documented security audits and a small on-prem validation kit to expedite approvals.

3. Safety, process constraints & operator trust (very high)

Steel processes have thermal inertia, minimum run times and quality constraints. Suggestions that ignore these risks to product quality or safety and will be rejected by operators.

Mitigation

- Build a steel-process template library (rolling, annealing, furnace, compressors) that encodes common constraints.
- Human-in-the-loop UI: "suggest → explain → operator approve" with rollback and audit trail to earn trust.

4. Regulatory & market complexity (high)

Tariffs, time-of-day pricing, DR programs and market participation rules differ by region — monetisation depends on local rules.

Mitigation

- Ship region-specific tariff & DR rule modules and partner with local aggregators/IPPs for market access.
- Start in well-understood/regulatory-stable geographies (pilot hubs) before expanding.

5. Deep domain expertise & data (medium-high)

Credible optimisation requires process know-how + labelled datasets. Startups without steel domain knowledge risk infeasible recommendations.

Mitigation

- Hire/contract process engineers early and capture labelled telemetry during pilots to build a library (a defensible data moat).
- Publish validated case studies and third-party measurement protocols.

6. Capital & sales cycle length (medium)

Pilots with large industrial customers still require budget approvals, site audits, and engineering time — can mean long sales cycles and working-capital needs.

Mitigation

- Offer low-cost, short paid pilots (60–90 days) + success fees to reduce procurement hurdles.
- Use channel partners for introductions and cost-sharing (EPCs, EPC contractors, IPPs).

7. Integration complexity & fragmentation (medium)

Heterogeneous PLCs, historians, and ad-hoc instrumentation across plants complicate scaling integration work.

Mitigation

- Create modular adapters and a fast integration playbook (checklist, sample configs, 1–2 week delivery target).
- Build a "connector SDK" so SIs can self-serve integrations.

8. Competitive price pressure/commoditization (medium)

Aggregators or local integrators may offer low-price audits or one-off retrofits; incumbents can bundle optimisation into larger projects.

Mitigation

- Differentiate on outcomes (verified ₹ & CO_2 savings) and operator UX; offer performance-tied fees to align incentives.
- Protect margin via SaaS + managed services mix.

9. Talent scarcity (medium)

High-quality ML/optimisation + process engineering talent is scarce and expensive.

Mitigation

- Hire a small core of domain experts and augment with contractors for pilots; document knowledge into templates to scale expertise.

10. Legal / liability & warranty concerns (low-medium)

Customers may fear liabilities from automated scheduling, causing quality defects or equipment strain.

Mitigation

- Start with advisory mode (no closed-loop control), provide explicit constraints, insurance for pilots, and clear SLA/indemnity clauses. Move to automation only after operator sign-off.

11. Intellectual property/reproducibility (low)

If your algorithms are easily copied, differentiation can erode.

Mitigation

- Invest in two-layer defensibility: (A) proprietary dataset of validated process outcomes; (B) integration & UX that ties recommendations to auditable performance.

12. Network effects & customer lock-in (opportunity vs. barrier)

VPP/aggregator players can exploit market access network effects; conversely, data from many plants creates a moat for you over time.

Mitigation

- Early partnerships with aggregators/IPPs for market access; simultaneously focus on accruing plant-level data to build predictive models that become harder to replicate.

Fast go-to-market moves that reduce these barriers (practical)

- **Pilot-first commercial model:** short paid pilot with low setup and a performance fee. Convert contracts to SaaS + perf fee.
- **"Pilot Playbook"**: standardised 60–90 day playbook (security checklist, data baseline weeks, KPI measurement protocol) to speed approvals and reduce perceived risk.
- **Channel partnerships:** co-sell with EPCs, local SIs, and IPPs — they handle OT access and procurement while you provide optimisation logic.

- **Operator adoption package:** training + advisory mode + explainable recommendations to get buy-in.
- **Local/regional focus:** win a cluster or geography, publish case studies, then expand.
- **Audit & evidence:** measurement & verification (M&V) reports and third-party validation to back performance claims.

What to highlight to investors/partners about this barrier strategy

- "We're not replacing PLCs — we're a non-invasive optimisation overlay with pre-certified connectors and a pilot playbook that shrinks procurement timelines from months to weeks."
- "Our early moat: steel-process templates + labelled outcomes — pilots produce proprietary data that improves results and increases switching costs."
- "Commercial alignment: low upfront cost, fast payback and a performance fee ensure customers share risk and we earn scalable, recurring revenue."

Quick investor-ready one-liner (use in decks)

"Novobiotech overcomes incumbent, OT and operator-trust barriers with a non-invasive, steel-aware optimisation overlay, pre-certified connectors and a pilot-first commercial model that delivers verified ₹ and CO_2 savings in 60–90 days."

Business Model

- One-time integration & setup fee (₹2–5L)
- SaaS subscription per plant (₹1.5–3L/month)
- Performance fee: 10–20% of realised energy cost savings
- Upsells: multi-line optimisation, marketplace for green attributes

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Go-to-Market & Partnerships

- Pilot-first: secure 3 pilots via BD and cluster associations
- Channel partners: EPCs, renewable IPPs, power electronics vendors
- Funding levers: government industrial decarbonization grants to reduce pilot costs
- Sales motion: case-study driven enterprise sales into industrial clusters

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Traction Plan (18 months)

- 0–6 months: 1 paid pilot → demonstrate ≥8% energy cost reduction
- 6–12 months: 3 paid pilots, first enterprise contract, MRR ₹4–8L
- 12–18 months: scale to multiple clusters, platformize marketplace & API partners

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Financials & Ask

Seed ask: ₹2.5 crore (18 months runway) **Allocation:** Product (30%), Pilots (25%), Sales/Partnerships (15%), Team (20%), Ops/Contingency (10%) **KPIs:** 3 paid pilots, MRR ₹4–8L, unit economics validated, repeatable sales playbook

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Team, Impact & Exit

Core team: CTO (energy/cloud), ML/Optimization lead, Full-stack engineer, Industrial BD lead, part-time process consultant

Impact: measurable CO_2 reduction per pilot, improved renewable utilization, lower grid stress

Exit: acquisition targets include EPCs, utilities, renewable IPPs, or industrial conglomerates.

Contact: Reply here to request PDF export, speaker notes, or a tailored investor email intro.

Project Status & Offerings (Brief)

Current status (snapshot)

- **MVP / Prototype:** Self-contained prototype dashboard (HTML) implemented — simulates live load, renewable forecast, optimiser, process flexibility map, alerts, accept-flow and JSON report export.
- **Demo assets:** Production-ready demo storyboard (60–75s short cut) and a simplified 45s walkthrough sequence with static slides and SRT for VO.
- **Commercial tools:** Live Excel Pilot ROI Calculator (with formulas) and scenario sheet created for on-the-fly sensitivity during pitches.
- **Next technical steps pending:** CSV/SCADA import in the prototype, lightweight Flask server for live updates.

What we can offer to investors (value propositions)

- **Pilot-first exposure:** Priority access to first pilot slots and demo walk-throughs with selected industrial customers.

- **Preferential commercial terms:** Founder/early-investor discounts on pilot fees or preferential revenue share on early conversions.
- **Equity & governance:** Seed investment opportunity (ask: ₹2.5 crore) with clear allocation to product, pilots, GTM and team; option for advisory or observer seat on request.
- **Early data access:** Aggregated, anonymised dataset and pilot performance reports to inform follow-on investment decisions and de-risk technical assumptions.
- **Continuous reporting:** Monthly pilot dashboards, measured M&V reports and quarterly investor updates (financial & technical KPIs).

What we can offer to customers (commercial offer & delivery)

- **60–90 day paid pilot package** (low setup + short paid engagement) that includes gateway integration, baseline capture, optimiser runs, operator training and an exportable pilot report with verified kWh/₹/CO_2 outcomes.
- **Flexible commercial model:** small one-time integration fee + monthly SaaS or a performance-based option (e.g., 10–20% share of verified energy cost savings) to align incentives.
- **Non-invasive deployment:** pre-certified local gateway and OPC/CSV connectors; advisory-only mode first (human-in-the-loop) to build ops trust before automation.
- **Clear ROI evidence:** audited pilot reports, M&V protocols and Excel ROI sheets to show payback and first-year impact during the pilot.
- **Operator enablement & support:** short training, 30/60/90-day check-ins, and SLA-backed support for pilot customers.

Quick closing line (for pitches)

"We're offering investors priority pilot access, transparent M&V, and a performance-aligned commercial model — and to customers a low-risk, fast-payback pilot that converts to predictable SaaS + performance revenue."