Investorstack Research Report

Azad Engineering Limited

What Azad Engineering Limited does

Azad Engineering Limited, founded in 2008 by Rakesh Chopdar, makes some of the most demanding precision components on the planet. The company manufactures critical rotating parts for gas, steam and nuclear turbines, mission- and life-critical aerospace and defence components, and complex precision assemblies for oil and gas. These are components inside engines that operate at extreme temperatures, pressures and tolerances, where the cost of failure is measured in lives and billions of dollars.

> *"The products we manufacture, critical rotating components for gas, steam and nuclear turbines, mission and life critical aerospace and defence parts, complex precision assemblies for oil and gas are among the most demanding components made anywhere in the world."*
>
> RAKESH CHOPDAR, Q4 FY26 CONCALL (MAY 2026)

Getting qualified to make these parts is not easy. The qualification cycle takes years, sometimes a decade of process validation, metallurgical proof, dimensional verification, first article inspections and serial production audits. Once a supplier earns that qualification, the business is sticky, multiyear and high value. Azad has earned these qualifications with the world's largest OEMs.

The company operates approximately 7 plants in Hyderabad, Telangana. It has over 1,700 qualified parts and 45+ specialised manufacturing processes. As of FY25, it employed approximately 1,453 individuals. Azad serves customers in over 12 countries including the USA, UK, Germany, Japan, Saudi Arabia, and Singapore. Exports accounted for 91.9% of revenue in FY25.

Azad is not a domestic supplier serving Indian requirements under offset obligations. It is a global supplier that competes head-on with established manufacturers from the USA, Europe, China and Japan for the same global OEM platforms.

Business segments

Azad reports two operating segments: Energy & Oil & Gas and Aerospace & Defence.

Energy & Oil & Gas

This segment contributed 81.5% of full year FY26 revenue, or INR481 crores, growing 34% year-on-year. Within this, the company supplies compressor airfoils, specialised machine parts (SMP), critical machine parts (CMP), and critical components for combustion sections. For oil and gas, it supplies drill bits, bonnet frames, slips, and hatch covers. End markets include global gas, steam and nuclear turbines, and oil and gas exploration and midstream systems. In Q4 FY26 alone, the segment generated INR128 crores.

The Energy segment is not monolithic. Azad already serves nuclear turbines through EDF/Arabelle Solutions, supplying nuclear turbine airfoils, and is one of the only qualified partners in India for that application. The company expects the segment to remain the largest contributor but sees its share declining over time as other verticals ramp.

Aerospace & Defence

This segment contributed 17.2% of full year FY26 revenue, or INR102 crores (INR101 crores corrected), growing 25% year-on-year. It was the first time the vertical crossed the INR100 crore milestone. Azad manufactures mission- and life-critical components such as APU/Engine components, unison rings, actuator assemblies, and structural parts. These go onto platforms like the Boeing 737, Airbus A320 and A350 families, and the Gulfstream G550, as well as advanced defence systems. In Q4 FY26 alone, this segment contributed INR28 crores.

The company sees Aerospace & Defence as a key growth engine. Over the next 4-5 years, management targets a more balanced mix where Energy contributes 55-60% and the balance comes from Aerospace & Defence and Oil & Gas. The aerospace segment has grown from near zero in 2018-19 to INR100 crores in FY26.

Oil & Gas, currently a subset within the Energy segment in reporting, is still small. Revenue was under INR10 crores in FY26, primarily qualification work. But with the dedicated facility for Baker Hughes inaugurated in April 2026, FY27 will be the first year of material ramp-up.

Products and business detail

Azad's product portfolio spans across the most demanding applications in power generation, aviation and oilfields.

Compressor airfoils are the company's heritage product. These are critical rotating components for gas, steam and nuclear turbines, supplied to GE Vernova, Mitsubishi Heavy Industries and Siemens Energy under multiyear contracts. Compressor airfoils involve complex 3D geometries and advanced materials, machined to tolerances measured in microns.

Hot section nozzle vanes (combustion components) represent a major step up in complexity. In May 2026, Azad announced an 8-year single-source contract with Mitsubishi Heavy Industries for highly engineered hot section nozzle vanes segments for the combustion of a gas turbine engine. Only three companies globally have cracked the manufacturing of these components at scale. Azad is now the fourth. The combined contract value for Phase 1 and Phase 2 with MHI stands at INR1,387 crores.

> *"Azad has been awarded a prestigious contract by Mitsubishi Heavy Industries Japan as a single-source supplier partner. And we have signed an 8-year long contract and purchase agreement for the supply of highly engineered hot section Nozzle Vanes segments for the combustion of a gas turbine engine."*
>
> RAKESH CHOPDAR, Q4 FY26 CONCALL (MAY 2026)

Engine assemblies and subassemblies for aerospace include APU/Engine components, unison rings, actuator assemblies, and hydraulic systems. These serve the Boeing 737, Airbus A320 and A350 families, and Gulfstream G550, among others. Azad has progressed from component manufacturing to supplying assemblies and subassemblies, increasing its value-add per engine.

Nuclear turbine airfoils are supplied to EDF/Arabelle Solutions, the world's largest nuclear operator. Azad is one of the only qualified partners in India for this application, having cleared years of audits and qualifications.

Oil and gas components include drill bits, bonnet frames, slips, and hatch covers, supplied to Baker Hughes under a strategic supply agreement. A dedicated facility was inaugurated in April 2026.

Indigenous jet engine (GTRE DRDO program) is a nation-pride project. Azad is performing full-scale assembly and integration of an advanced turbo gas generator, India's first 100% indigenous jet engine. As of the May 2026 concall, delivery was "weeks away." This program is not included in the company's revenue projections but opens a massive door for future defence manufacturing.

Azad's manufacturing capabilities are broad. The company has over 1,700 qualified parts and 45+ specialised processes. It recently achieved NADCAP approval for heat treatment, a key certification for aerospace heat treatment. The company is also building a forging plant as part of its Phase-1 expansion at Tunikibollaram, Hyderabad. In total, 8 dedicated lean manufacturing facilities were planned over 12-18 months from Q1 FY26, of which 4 have been commissioned (GE, Siemens, Mitsubishi, and Baker Hughes) as of May 2026. The remaining 4 are on track for FY27.

The company's process engineering expertise is the core of its margin structure. Azad is a build-to-print manufacturer but the technology and process know-how are developed in-house. It is not simply machining parts to customer drawings; it is developing the manufacturing process for components that no one else in India can make.

Customers

Azad's customer base reads like a who's who of global industrial and aerospace OEMs. The company serves 11 major customers across its segments, with long-term contracts providing multiyear visibility.

GE Vernova - Multi-year agreements totaling USD 165.5 million. Azad has a dedicated lean facility for GE. Relationship spans over a decade. GE is one of the three main OEMs controlling roughly two-thirds of the global gas turbine market.

Mitsubishi Heavy Industries - An 8-year single-source contract for hot section nozzle vanes (Phase 1 & 2 combined INR1,387 crores). MHI awarded Azad "Global Partner of the Year 2024." Dedicated facility inaugurated March 2025.

Siemens Energy - Multiple contracts valued at EUR 90.1 million for combustion commodities, cold blades, and critical rotating parts. Dedicated facility inaugurated in FY26.

Rolls-Royce Plc - Long-term engagement for civil aircraft engine components. Qualification underway; first qualification batch expected H2 FY27, production revenue from Q4 FY27 or early FY28.

Honeywell Aerospace - Phase-1 award of USD 16 million for aviation components.

Pratt & Whitney - Contract for highly engineered critical rotating aerospace components. Qualification cycle progressing.

Safran Aircraft Engines - MOU signed for developing critical rotating engine components for strategic defence platforms. Assessment done, contract expected soon.

Baker Hughes - Strategic supply agreement for oilfield equipment. Dedicated facility inaugurated April 2026. Also MOU for potential expansion into Saudi Arabia.

BHEL - Orders for rotating airfoils for supercritical turbines, part of India's indigenization push.

GTRE (DRDO) - Nation-pride program for indigenous jet engine. First delivery imminent.

EDF / Arabelle Solutions - Nuclear turbine airfoils. Azad is one of the only qualified partners in India.

The buying relationship is structured around long qualification cycles. OEMs do not switch suppliers lightly. As management stated in the Nov 2025 concall, "In our business, decision making on mission and life critical parts are not based on cost. It is based on our ability to supply these or manufacture these parts." The switching costs for an OEM are enormous - requalification would take years. This creates high customer stickiness.

Contracts are long-term (5-8 years) and contain standard performance clauses. If Azad fails to perform, cancellation clauses exist. But OEMs like MHI, GE and Siemens have deep relationships with Azad, evidenced by dedicated facilities and single-source awards.

Customer concentration is a risk. The top few customers account for a large portion of revenue. However, management notes that wallet share with each customer is only 1-1.5%, implying massive headroom to grow within existing relationships. The order book of INR6,500 crores provides 11-12x revenue visibility as of May 2026.

Competitive landscape

The competitive landscape for Azad's products is extremely concentrated. Only a handful of companies globally can manufacture components at the required quality, precision and scale. The company competes head-on with:

Howmet Aerospace - A US-based giant with approximately USD 7 billion in revenue, serving aerospace and energy. Howmet is a direct competitor in hot section components and airfoils. Azad's new MHI contract for nozzle vanes puts it in direct competition with Howmet's capabilities.

Precision Castparts Corp (PCC) - A Berkshire Hathaway subsidiary, PCC is a global leader in complex metal components and investment castings. PCC competes in both aerospace and energy segments.

Established suppliers from USA, Europe, China and Japan - This includes companies like MTU Aero Engines (Germany), IHI Corporation (Japan), and others. Azad's primary cost competition comes from China, which is 20-25% cheaper than Azad based on management's commentary. However, Azad benefits from a 25% tariff on Chinese imports to the US and Europe, while being cost-competitive on quality and delivery.

> *"Today, Azad is a global supplier. We compete head on with established suppliers from U.S.A., Europe, China and Japan and on their own benchmarks for the same global OEM platforms."*
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> RAKESH CHOPDAR, Q4 FY26 CONCALL (MAY 2026)

Azad wins because of a combination of cost competitiveness and technical capability. Management has stated that Azad is 20-25% cheaper than Chinese suppliers, 30-35% cheaper than European suppliers, and 40-45% cheaper than Japanese suppliers for comparable components. The company is also the only qualified supplier in India for many of these components, giving global OEMs a diversified sourcing option away from traditional supply bases.

The competitive moat is the lengthy qualification process. Any new entrant would need years of process validation, metallurgical proof, dimensional verification, and serial production audits before being allowed to supply. This makes the supplier base small and sticky. Azad has been building these qualifications since 2008, and each new contract deepens its embeddedness.

Areas where Azad is not yet present include single crystal blades for turbine hot sections. Management has confirmed this in the Nov 2025 concall: "No, not yet." This remains a product gap vs. Howmet and PCC. Azad's current hot section offering is the nozzle vanes contract with MHI, which is a different product category.

The company is also building capabilities in adjacent areas. With the MHI contract, it has entered the hot section component market, which had only three credible global players. Over time, Azad expects to expand its addressable market across all segments. The company's wallet share with each customer is only 1-1.5%, suggesting that the primary competitive battle is not against other suppliers but against its own capacity constraints.

Industry

The industries Azad serves are undergoing structural growth underpinned by multi-decade demand drivers.

Energy - Global electricity demand is projected to double over the next 15 years, driven by electrification, data center growth, and industrialisation. Gas turbines, nuclear turbines and steam turbines are the primary technologies for

baseload and flexible power generation. The three major gas turbine OEMs - GE Vernova, Siemens Energy, Mitsubishi Heavy Industries - control roughly two-thirds of the global market. Their order backlogs are at record levels, with GE Vernova alone having 55 GW of turbines under construction. Data center compute growth is a new and powerful driver, with demand for on-site power generation accelerating.

> *"The demand for electricity over the next about 15 years is going to double with what the world needs today. And the only way you can power the world's demand for electricity is by putting up these gas turbines, nuclear turbines, steam turbines and so on and so forth"*
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> **RAKESH CHOPDAR, Q3 FY26 CONCALL (FEB 2026)**

The global steam turbine market was valued at USD 17-19 billion in 2024, with modest growth expected. Nuclear generation is set to grow nearly 2% annually, with India targeting 22,000 MW by 2050. Azad is already qualified for nuclear turbine airfoils through EDF/Arabelle.

Aerospace - Global aviation passenger traffic is expected to reach 9.9 billion in 2025, surpassing 2019 levels by 104%. The global commercial fleet is projected to grow approximately 32% over the next decade to 38,300 aircraft by 2035E. Narrow-body aircraft (A320 and 737 families) dominate demand, expected to grow ~35% over the next 10 years. Boeing and Airbus hold over 90% market share, with a combined backlog of approximately 15,000 aircraft. This translates directly into demand for engines and engine components, where Azad is qualified.

Defence - India's defence production is projected to nearly triple from INR94,845 crore in FY22 to approximately INR3 lakh crore by FY29E, driven by indigenisation and private sector participation. Azad's work with GTRE on the indigenous jet engine positions it uniquely for this mega-trend. Globally, defence spending is rising across NATO and Asia-Pacific nations.

Oil & Gas - While a smaller segment for Azad currently, the long-cycle nature of oil and gas projects provides stable demand for critical components. Azad's relationship with Baker Hughes is a multi-year strategic supply agreement.

India's place in the global supply chain - India is emerging as a qualified, cost-competitive manufacturing destination for high-precision components. Azad is the only qualified supplier in India for several mission-critical parts. The US-India tariff environment has been largely benign for Azad's products because of their critical nature and long qualification cycles - tariffs do not cause OEMs to switch suppliers easily. The US-India trade deal has provided additional comfort to customers, though Azad was competitive even before.

Regulatory environment - Aerospace components require AS9100 and NADCAP certifications. Energy components require OEM-specific audits and qualifications. Azad holds these certifications.

Entry barriers are extremely high. Management described the qualification cycle as taking "years, sometimes a decade of process validation, metallurgical proof, dimensional verification, first article inspections and serial production audits." Once a supplier earns that qualification, business is sticky, multiyear, and high value. The supplier base capable of meeting the technical threshold is small, and it is not growing quickly. This industry structure works in Azad's favour.

Growth triggers

- Ramp-up of 4 newly inaugurated dedicated lean manufacturing facilities (GE Vernova, Siemens Energy, Mitsubishi Heavy Industries, Baker Hughes) with stable operating levels expected by FY27 and maximum utilization by FY28. (Q3 FY26 concall, Feb 2026)

- Conversion of the Mitsubishi Heavy Industries 8-year single-source contract for hot section Nozzle Vanes, a combustion component with only 3 global players capable of manufacturing it. Revenue contribution expected to ramp from FY27 onwards. (Q4 FY26 concall, May 2026)
- Aerospace engine component qualifications with Rolls-Royce, Pratt & Whitney, and Safran. First qualification batch for Rolls-Royce expected in H2 FY27, with production revenue from Q4 FY27 or early FY28. (Q4 FY26 concall, May 2026)
- Delivery of the first indigenous jet engine (GTRE DRDO program) — India's first 100% indigenous jet engine. Management stated in Feb 2026 it was "a couple of months" away, and by May 2026 said "it has come to weeks." This opens a strategic defence manufacturing pipeline. (Q3 FY26 concall, Feb 2026; Q4 FY26 concall, May 2026)
- Oil & Gas segment ramp-up with Baker Hughes after the dedicated facility inauguration in April 2026. FY27 is expected to be the first material revenue year from this segment. (Q4 FY26 concall, May 2026)
- Normalization of working capital cycle as new plants reach maturity. Target of ~200 days inventory in H1 FY27 and ~160-170 days in H2 FY27, improving cash flow and return ratios. (Q3 FY26 concall, Feb 2026)
- Management confidence in 25%+ top line growth not just for FY27 but on a multiyear basis, underpinned by an order book of ~INR6,500 crores (11-12x FY26 revenue) and firm customer schedules. (Q4 FY26 concall, May 2026)
- Deepening wallet share with existing global OEMs — currently at 1-1.5% of customer spend, implying massive headroom even without new customer additions. (Q2 FY26 concall, Nov 2025)

Key risks

- **Execution risk on simultaneous commissioning**: Management is building 8 dedicated facilities (94,899 sq m total) while running existing operations. Any slippage in construction, equipment installation, or workforce training can delay revenue conversion from the large order book. Bandwidth is stretched — management acknowledged "building this massive facility... making a world-class factory... is not a small thing." (Q3 FY26 concall, Feb 2026)
- **Order book conversion delay**: The INR6,500 crore order book (11-12x revenue) is contingent on production schedules, capacity availability, and qualification status. If customer schedules slip or qualifications take longer than expected, revenue growth could undershoot guidance. Order book is a rolling figure — new contracts added replace delivered volume, so the large multiple does not guarantee near-term revenue if conversion slows.
- **Working capital intensity during ramp-up**: Nearly 96% of inventory is less than 1 year old, built to support new facilities. High WIP cycles (targeting 200+ days in early FY27) strain cash flow. The company is investing ahead of revenue, and if ramp-up takes longer, working capital days could remain elevated, pressuring liquidity despite a strong treasury.
- **Customer concentration / dependency on global OEMs**: The top customers — GE Vernova, Mitsubishi Heavy Industries, Siemens Energy — collectively account for the bulk of the energy segment (81.5% of FY26 revenue). Contracts are long-term but include termination clauses for non-performance. Losing a major contract would have a material revenue impact.
- **Raw material price volatility (superalloys)**: Azad bears up to 5% fluctuation in raw material prices under tri-party pricing agreements. Sustained price spikes or supply disruptions (e.g., nickel, titanium) could compress margins if the 5% absorption limit is exceeded and OEMs do not adjust pricing promptly.

- **Geopolitical tensions impacting Saudi Arabia expansion**: The Baker Hughes MOU for a Saudi facility timeline has been "shifted" due to Middle East tensions and management's focus on domestic plants first. This delays a potentially high-growth oil & gas opportunity and signals that geopolitical factors can disrupt strategic plans.

Walk the talk

Management described FY26 as a "year of consolidation" at the start of the year. By the May 2026 call, they reported that they had "delivered on each of those commitments." Revenue grew ~32%, EBITDA margins held at 36.9% (above the 33-35% guided range), and 4 of 8 planned dedicated facilities were commissioned.

> *"At the start of FY '26, we described it as a year of consolidation, a year in which we would embed newly commissioned capacity, convert the qualifications we have been earning over multiple years and put in place the human capital and the systems that the next phase of growth demands. I'm pleased to report that we have delivered on each of those commitments."*
>
> RAKESH CHOPDAR, Q4 FY26 CONCALL (MAY 2026)

The revenue growth guidance of 25-30% for FY26, reiterated in the Aug 2025 and Nov 2025 calls, was beaten with ~32% growth. EBITDA margin guidance of 33-35% was consistently exceeded — full year FY26 came in at 36.9%.

The plan to create 8 dedicated facilities over 12-18 months (announced Q1 FY26) progressed as promised. By May 2026, 4 were commissioned, with the remaining 4 "on track" for FY27.

> *"As promised on our capex road map, we have successfully inaugurated fourth dedicated lean manufacturing facilities for our marquee global customers since listing, of which 2 were commissioned during FY '26 and the most recent one just last month. In April 2026, we inaugurated a dedicated facility for Baker Hughes"*
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> RAKESH CHOPDAR, Q4 FY26 CONCALL (MAY 2026)

The GTRE indigenous jet engine delivery is the one promise that slipped. In Feb 2026, management said "a couple of months" and expected delivery within FY26. By the May 2026 call, delivery had not happened, though management insisted "it has come to weeks."

> *"We are planning very soon. I mean, a couple of months, I think we should be able to be positioned to deliver the engine."*
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> RAKESH CHOPDAR, Q3 FY26 CONCALL (FEB 2026)

> *"it was years, years got to months, now it has come to weeks. So we are not far away."*
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> RAKESH CHOPDAR, Q4 FY26 CONCALL (MAY 2026)

Working capital normalization was a key focus area. In Feb 2026, management targeted 190-200 days for H1 FY26 and 140-150 days for H2. By May 2026, they acknowledged inventory remained elevated but reiterated targets of ~200 days for H1 FY27 and ~160-170 days for H2 FY27. The timeline shifted by a few quarters, but the direction is maintained.

Overall, Azad delivered on revenue, margin, and capacity promises. The only area where delivery slipped versus earlier timeline was the GTRE engine, which is understandable given the first-of-its-kind nature, but it remains an incomplete promise as of the latest call.

Scenarios

Bull case

The 4 newly commissioned facilities reach stable operating levels faster than expected, and the remaining 4 are completed within FY27 with minimal disruption. Mitsubishi's 8-year single-source contract for hot section nozzle vanes ramps up quickly, contributing high-margin revenue. Aerospace qualifications with Rolls-Royce, Pratt & Whitney, and Safran clear ahead of schedule, and production revenue starts from H2 FY27 itself rather than early FY28. The GTRE engine delivers successfully, opening a substantial defence manufacturing pipeline and establishing Azad as the sole Indian partner for indigenous jet engines. The Baker Hughes oil & gas facility ramps up strongly, adding a meaningful third revenue pillar. Working capital normalizes to ~160 days by H2 FY27, releasing cash and improving returns. Wallet share with existing customers grows from 1-1.5% to 3-4% over 2-3 years, driving revenue growth well above the guided 25% without needing new customers. Margins sustain above 36% as operating leverage kicks in. The company emerges as a globally recognized strategic supplier for mission-critical components, displacing Western and Chinese competitors on quality and cost.

Base case

Revenue grows at ~25-27% in FY27, driven by gradual ramp-up of the 4 commissioned facilities and steady conversion of the order book. The remaining 4 facilities come online during FY27 as planned. Aerospace qualifications proceed on schedule — first qualification batch for Rolls-Royce in H2 FY27, with production revenue early FY28. The GTRE engine delivers within weeks (as promised) but initial volumes remain modest. Baker Hughes oil & gas contributes meaningfully but not materially in FY27. Working capital improves to ~190 days by H1 FY27 and ~160 days by H2 FY27, in line with guidance. EBITDA margins stay in the 35-36% range. Execution is solid but not flawless — there are minor delays in qualification or customer approvals, but the overall trajectory is maintained. The company becomes a INR750+ crore revenue business by FY27, with a diversified mix (energy ~55-60%, aerospace & defence ~20-25%, oil & gas ~5-10%), and continues to invest for the next leg of growth.

Bear case

Simultaneous commissioning of 8 facilities strains management bandwidth and operational discipline. One or more facilities face qualification or certification delays, pushing revenue conversion out. Working capital remains elevated above 200 days for longer than expected, straining cash flow despite the QIP treasury. Aerospace qualifications with Rolls-Royce, Pratt & Whitney, and Safran take longer than guided — first production revenue slips to FY29. The GTRE engine delivery faces further delays, damaging credibility and potentially impacting the strategic relationship with DRDO. Customer concentration remains high; a major OEM (e.g., GE Vernova or Mitsubishi) experiences a downturn or shifts sourcing strategy, reducing order flow. Margins compress to 32-33% as underutilized capacity and qualification costs weigh on profitability. Growth slows to 15-18% in FY27, well below the guided 25%+. The Saudi facility remains on hold indefinitely. Investors lose confidence in the "execution premium" the company commands, and the stock rerates to reflect the reality of a complex, capital-intensive precision engineering business with lumpy revenue conversion.