

# REVENUE MODELS IN THE POWER-BY-THE-HOUR ERA

## THE SHIFT FROM ASSET OWNERSHIP (CAPEX) TO SERVICE-BASED AND AVAILABILITY-BASED MODELS (OPEX)

### Abstract

India's commercial aviation sector is at an inflection point. With Indian carriers collectively holding orders for over 1,000 aircraft and the domestic MRO market projected to grow from USD 3.77 billion in 2024 to USD 6.87 billion by 2033, the economics of aircraft maintenance are undergoing a structural transformation. Power-by-the-Hour (PBH) and availability-based contracting models are shifting airline expenditure from capital ownership to predictable, usage-linked operational costs. The transition from CAPEX oriented asset ownership to OPEX based service and availability models presents significant challenges in operational mechanics, Ind AS 115 revenue recognition and strategic cost management. Drawing on data from IndiGo, Air India and recent GST reforms, it argues that mastering the OPEX paradigm is not merely a financial discipline. It is India's strategic gateway to becoming a leading Asian MRO hub.

### Introduction: India's Aviation Boom and the Maintenance Imperative

India is the third-largest domestic aviation market in the world as of 2025, having surpassed the United Kingdom in passenger volumes. IndiGo operates over 350 aircraft with an orderbook approaching 1,000 Airbus A320-family jets. Air India, under Tata Group ownership



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following its 2022 privatisation, has ordered over 500 aircraft spanning widebody and narrowbody variants. Together with Akasa Air and regional operators, Indian carriers are adding capacity at a pace unprecedented in any emerging market.

This fleet expansion carries a critical counterpart, which is the maintenance, repair, and overhaul (MRO) obligation that every aircraft accumulates throughout its working life. The manner in which Indian airlines finance and manage this obligation is now among the most consequential financial decisions in Indian aviation.

Historically, the answer was problematic. An estimated 90 percent of India's MRO requirements were sent offshore to Singapore, Malaysia and the UAE due to an unfavourable GST structure and inadequate domestic infrastructure, resulting in a structural outflow of approximately USD 2 billion per year from the Indian economy. That paradigm is now changing and at its heart lies the global shift from CAPEX-based asset ownership to OPEX-based service contracting, most powerfully expressed in the Power-by-the-Hour model.

### The PBH Model and Its Indian Relevance

Under a rate-per-flight-hour (RPFH) or PBH agreement, an airline pays a fixed monetary rate per hour of engine or component operation. The OEM or service provider in return assumes full responsibility for maintenance execution, spare parts provisioning, logistics and shop visit management. Unpredictable, capital-intensive maintenance events are converted into a smooth, recurring operating cost.

This model is particularly well suited to Indian aviation. India's market is dominated by low-cost carriers, with IndiGo alone commanding over 60 percent of domestic seat capacity on thin operating margins. PBH contracts convert sudden overhaul liabilities into predictable costs, which is an operational necessity rather than a luxury for carriers operating at the margins that define the Indian LCC segment.

IndiGo's CFM LEAP-1A engines on incoming A320neo and A321neo aircraft are enrolled in CFM International's True Choice agreements, linking maintenance expenditure directly to flight hours flown. As IndiGo shifts its capacity mix towards international routes, rising utilisation will directly drive PBH expenditure, making RPFH rate negotiation a board-level financial decision rather than a procurement matter.

Air India illustrates a more complex case. Its mixed fleet involves multiple OEM service relationships, with Rolls-Royce Total Care covering Trent-powered widebodies and Pratt and Whitney GTF support covering A320neo variants. Air India Engineering Services Limited (AIESL) provides in-house support for GTF engines alongside these OEM contracts. In February 2024, Air India and Tata Advanced Systems signed an MoU to build a 35-acre MRO complex at Kempe Gowda International Airport in Bengaluru, expected to be operational by early 2026.

### The GST Revolution and Its Financial Significance

No discussion of Indian aviation revenue models is complete without addressing GST reform. For years, India's MRO sector was commercially crippled by a fragmented tax structure where parts attracted rates as high as 28 percent, making domestic maintenance economically irrational compared to Singapore or Dubai.

The breakthrough came in April 2020 when the GST Council reduced the rate on domestic MRO services

from 18 percent to 5 percent. The government also permitted 100 percent Foreign Direct Investment through the automatic route for MRO, relaxed duty-free component restrictions from one year to three years and changed the place of supply of MRO services to the recipient's location to ensure a level playing field for domestic providers. The September 2025 rationalisation extended this further, introducing a simplified structure that retained domestic MRO services at 5 percent with full input credit, materially boosting competitiveness against overseas alternatives.

For CMAs, these reforms are not merely tax policy updates. They fundamentally alter the build-versus-buy calculus for MRO investment and change the financial viability of long-term service contracts with Indian domestic providers. A CMA who does not factor this evolving policy environment into long-term contract modelling is working with an outdated financial map.

### Financial Reporting Under Ind AS 115

Ind AS 115 requires entities to identify distinct performance obligations, allocate transaction prices to those obligations and recognise revenue as each obligation is satisfied. For Indian MRO providers and OEM service subsidiaries operating long-term PBH contracts, this framework introduces material complexity across three dimensions.

First, variable consideration is inherent in PBH contracts because total value depends on actual flight hours, which are volatile in the Indian context. The COVID-19 pandemic collapsed IndiGo's utilisation to near-zero for extended periods, while the 2022 to 2024 recovery saw above-normal utilisation as suppressed demand released. Long-term actuarial models must embed robust scenario assumptions for utilisation volatility, including monsoon seasonality and Indian festival travel peaks that create cyclical demand patterns with no equivalent in Western aviation markets.

Second, bundled PBH arrangements may combine engine health monitoring, line maintenance support, shop visit management and aircraft-on-ground emergency response. Each element may constitute a distinct performance obligation under Ind AS 115 requiring separate revenue allocation and where services are only sold as bundles in the Indian market, standalone prices must be estimated rather than observed, making contract accounting significantly

more judgement intensive.

Third, from the airline perspective, the CAPEX-to-OPEX shift transforms balance sheet presentation. Under Ind AS 116, Indian airlines recognise right-of-use assets for operating leases, which is highly significant in a market where over 85 percent of the commercial fleet is leased rather than owned. When heavy maintenance obligations are transferred to OEM PBH contracts, the airline avoids carrying large maintenance provisions on its balance sheet while satisfying its contractual obligations to lessors. This interaction between Ind AS 116 lease accounting and Ind AS 115 service contract accounting demands integrated financial systems and technically sophisticated CMAs who understand both the commercial logic and the accounting mechanics simultaneously.

### Strategic Cost Management: The Indian Agenda

**Addressing Offshore Leakage.** India's most urgent strategic cost challenge is the continued outflow of MRO value. When OEM PBH contracts route shop visit work to Singapore or European facilities, skilled employment, tax revenue and supply chain value flow out of India. CMAs must model the true total cost of domestic versus offshore execution, incorporating aircraft ground time, logistics, DGCA compliance costs and the long-term strategic value of domestic capability development alongside direct cost comparisons. In March 2025, Thales inaugurated an avionics MRO facility in Gurugram and in September 2024 Dassault Aviation established its DAMROI operation in Noida, signalling growing OEM confidence in India's MRO proposition.

India is on track to become the third-largest buyer of commercial passenger aircraft globally by orderbook value. At this scale, Indian airlines possess structural leverage in RPFH rate negotiations that has historically been underutilised because maintenance contracts were treated as afterthoughts to aircraft purchase agreements. A sophisticated approach treats PBH contract economics as a fully integrated element of fleet acquisition analysis, recognising that the net present value of a 15-year PBH commitment on a 500-aircraft fleet frequently exceeds the capitalised value of the aircraft themselves.

### Digital Maintenance as a Cost Asset

India's deep IT services industry and engineering talent pool position it well to develop predictive maintenance platforms. Approximately 25 percent

of MRO providers globally are moving towards digital twin technologies that reduce turnaround times and cost materially. CMAs must classify investment in predictive analytics as a maintenance cost-reduction asset rather than a discretionary IT expenditure, ensuring the return on data investment is visible and defensible to boards.

### Currency Risk Management

PBH contracts in India are typically denominated in US dollars while airline revenues are predominantly in Indian Rupees. Rupee depreciation directly increases the INR-equivalent cost of PBH commitments across contract durations of 10 to 15 years. CMAs must model RPFH obligations under multiple exchange rate scenarios and evaluate appropriate hedging strategies as a standard element of contract financial analysis.

### Conclusion: India's OPEX Imperative

The Power-by-the-Hour era is a strategic opportunity that India is uniquely placed to capture. The combination of the world's fastest-growing aviation market, reformed tax conditions, a cost-competitive engineering workforce and government commitment to Atmanirbhar Bharat creates the conditions for India to transition from a net exporter of MRO value to a regional hub.

For CMAs, the PBH era demands a fundamental elevation of ambition. Long-term service contracts must be understood as financial instruments. Ind AS 115 compliance must be driven by deep contractual understanding. Fleet-level cost modelling must integrate utilisation forecasting, currency risk, GST optimisation and domestic capability investment into a unified analytical framework. India's aviation horizon is vast and the CMAs who help navigate it must be equipped accordingly. **MA**

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