

STUDY

ON

**EFFICIENT OPERATION AND
MAINTENANCE EXPENSES**

for

JAIPUR INTERNATIONAL AIRPORT, JAIPUR (JIA)

**(Second Control Period: FY 2016-17 – FY 2020-21
& FY 2021-22)**

Initiated by Airports Economic Regulatory Authority of India (AERA)

January 2024

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1. OBJECTIVE OF THIS STUDY

1.1 Background

The Jaipur International Airport (JIA) is the largest airport in the state of Rajasthan. The capital city is also a major tourism hub given its rich culture, history and heritage. The airport consists of two (02) Passengers terminals and one (01) cargo terminal. The airport has a single runway that is 11,178 feet (3,407 m) long.

Jaipur International Airport (JIA) is the 11th busiest airport in India, in daily scheduled flight operations.¹ JIA is the only international airport in the state of Rajasthan. It was granted the status of international airport on 29 December 2005.

JIA is one of the Major Airport, as per the definition of Major Airport under section 2 (i) of Airports Economic Regulatory Authority of India Act, 2008, read with AERA (Amendment) Act 2019 and 2021. Pursuant to AERA Act 2008, the Authority had issued Guidelines for the purpose of determination of Aeronautical tariff for Major Airports. As per the Guidelines, AERA had issued Tariff Order No. 10/2017-18 dated August 4, 2017, in the matter of determination of Aeronautical tariff for JIA for the Second Control Period i.e 1st April'2016 to 31st Mar'2021.

Pursuant to the AERA Act, 2008 read with AERA (Amendment) Act 2019 and 2021 and AERA Guidelines for the purpose of determination of Aeronautical tariff for Major Airports, Jaipur International Airport Limited (the 'Airport Operator'/'JIAL') had submitted its Multi Year Tariff Proposal (MYTP) for the Third Control Period from FY 2022-23 to FY 2026-27.

In accordance with AERA Order No. 10/2017-18, the Authority has adopted Hybrid till approach for determination of tariff for JIA. As per the Hybrid till approach, 30% of the Non-aeronautical revenues are to be used to cross-subsidise the Aeronautical revenues, i.e., the Aggregate Revenue Requirement (ARR). Tariff for Aeronautical services under the Hybrid till are based on the various building blocks, i.e. Regulatory Asset Base (RAB), Depreciation, Operation and Maintenance expenses, Tax and Non-aeronautical Revenue.

1.2 Purpose of the Study

Establishing efficient Operation and Maintenance (O&M) expenses is fundamental to the effective execution of determination of tariff for Aeronautical services. The O&M expenses of Airports across the Country have been increasing consistently, driven by investments in expanding, modernising and improving the operational efficiency of airports. In addition, there is increased adoption of latest technology for improving the efficiency of operations and services at the airports, which has resulted in various technology related products and services being utilised at the airports through both in-house and third-party involvement.

Assessment of O&M expenses requires examination of financial information submitted by the Airport Operator and independent assessment of baseline operating expense levels, expense reduction, efficiency initiatives and conduct of benchmarking exercise.

The objective of the study is to understand and analyse the historical trends of change in O&M expenses and how JIA has been performing in comparison to select peers in the industry, which in turn is expected to help understand the reasons for current expenses being higher or lower than the efficient expense levels. The outcome of the same would assist the Authority in determining the efficient O&M expenses of JIA.

¹ <https://www.airindia.com/in/en/travel-information/airport-information/jaipur.html>

The study also aims to assess the allocation of O&M expenses as Aeronautical, Non-aeronautical and Common expenses, as per the general principles followed by AERA, so that the passengers and other stakeholders are not over-burdened with resultant fees / charges.

Towards this objective, AERA has decided to conduct an independent study on efficient Operation and Maintenance (O&M) expenses and their allocation as Aeronautical and Non-aeronautical components in respect of O&M expenses appearing in the extract of the audited trial balance of AAI for the period from FY 2016-17 to October 10, 2021 (Pre Commercial Operation Date (COD)) and the audited financial statements of Jaipur International Airport Limited for the period from October 11, 2021 (Post Commercial Operation Date (COD)) to March 31, 2022 and the True up workings as submitted to AERA by AAI up to October 10, 2021 and by the Airport Operator up to March 31, 2022. AERA proposes to use the findings of this Study for the process of determination of Tariff for the Third Control Period.

1.3 Control Period

It is to be noted that as per Order no. 10/2017-18 the second control period starts from 1st April 2016 and ends on 31st March 2021. AERA considering the transition phase had vide public notice no. 05/2022-23 dated 20th June 2022, decided to shift the third control period of Jaipur Airport from 1st April 2021 – 31st March 2026 to 1st April 2022 – 31st March 2027. For the purpose of this O&M study, the true up period considered second control period from FY'16 till COD i.e. 01st April 2016 to 10th October 2021 and also post COD period i.e. 11th October 2021 to 31st March 2022.

1.4 Study References

As part of this Study, following documents have been examined:

- a. AERA Act, 2008 read with AERA (Amendment) Act, 2019 and 2021 (“AERA Act”) and AERA Guidelines issued from time to time.
- b. Finalization of RAB & True up as on Commercial Operation Date (COD) in respect of Jaipur International Airport, submitted by AAI to AERA on 17th May 2023
- c. Concession Agreement dated January 19, 2021, entered into between AAI and Jaipur International Airport Limited, and the Memorandum of Understanding dated August 25, 2021 entered into between the Government of India and Jaipur International Airport Limited.
- d. AERA Order No. 14/2016-2017 dated January 23, 2017 [In the matter of aligning certain aspects of AERA’s Regulatory Approach (Adoption of Regulatory Till) with the provisions of the National Civil Aviation Policy 2016 (NCAP 2016)], approved by the Government of India
- e. AERA Tariff Order No. 10/2017-18 dated August 04, 2017, for Second Control Period with respect to JIA and previous tariff orders for other similar airports.
- f. True up submissions of AAI and Jaipur International Airport Limited.
- g. Annual Reports, clarifications and other details received from AAI and Jaipur International Airport Limited.

2. TERMS OF REFERENCE AND OUR WORK PERFORMED

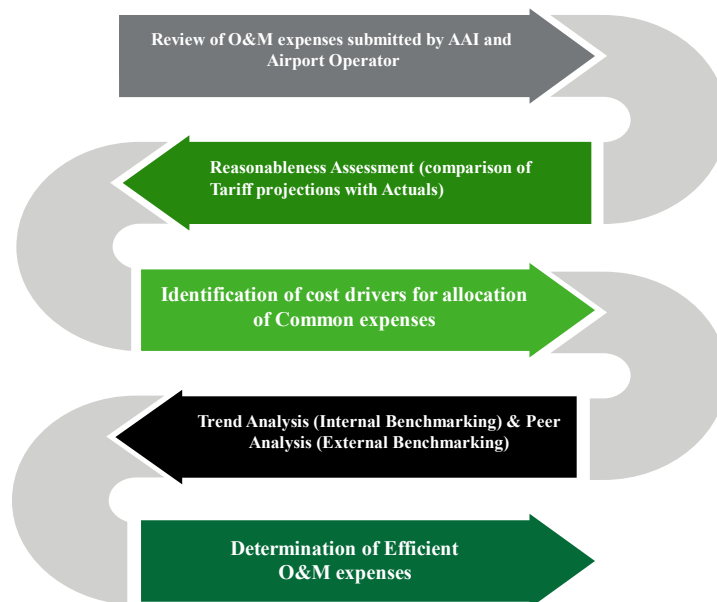
2.1 Terms of Reference

2.1.1 AERA has outlined the scope of work for this Study to include segregation of O&M expenses between Aeronautical and Non-aeronautical activities and determination of efficient O&M expenses, vide clauses 3.1 (d) and 3.1 (f) of Terms of Reference in RFP No. 01 / 2022-2023 dated 30.08.2022 for engagement of consultants to assist AERA in determination of tariff for Aeronautical services at various major airports.

2.2 Scope of this report

2.1.1. The following steps have been followed as part of this Study for determining the efficient O&M expenses for JIA, Jaipur.

Figure 1: Approach for this Study



Step 1: Review of O&M expenses submitted by AAI and Airport Operator

The following components of O&M expenses submitted by AAI and Airport Operator for the period from FY 2016-17 to FY 2021-22 have been analysed as part of the Study report.

Components of O&M expenses as per AAI's submission

- **Employee benefit expenses** such as salaries, wages, bonus, allowances, contribution to provident fund, staff welfare expenses
- **Administrative and Other expenses** such as upkeep expenses, rates and taxes, travel, communication, insurance, allocation of CHQ & RHQ expenses
- **Utility (Operating) expenses** such as power, water, consumption of stores & spares, and other hire charges
- **Repair & Maintenance expenses** for buildings, machinery, runways, amortisation of runway recarpeting expenses
- **Other expenses** such as collection charges on PSF, IATA, and UDF.

Components of O&M expenses as per Airport Operator's submission

- **Manpower expenses** such as salaries, wages, bonus, contribution to provident fund, staff welfare expenses, etc. for employees of Airport Operator as well as Select Employee cost of AAI staff to be reimbursed to AAI
- **Utility expenses** such as electricity, water and fuel
- **IT expenses** such as system licence costs, IT consumables, operating cost of server and website
- **Security expenses** such as X-ray, surveillance vehicles etc
- **Corporate cost allocation** such as allocation of common costs incurred at holding company level.
- **Administration and general expenses** such as business promotion, communication expenses, consultancy, office maintenance, rent, traveling and conveyance
- **Insurance expenses** for project assets, personnel and third-party liability
- **Repairs and maintenance expenses** for buildings, plant and machinery, roads, runways, culverts, equipment, etc.
- **Other operating expenses** such as housekeeping and horticulture expenses.
- **Bank charges** incurred for the Company's operations

Step 2: Reasonableness assessment (Comparison of Tariff Projections vs. Actuals)

Reasonableness Assessment of the total O&M Expenses for the Second Control Period (FY 2016-17 to FY 2020-21) has been performed by comparing the approved O&M expenses as per the Tariff Order for the Second Control Period with the actual expenses incurred for the same period. The actual expenses of both AAI and the Airport Operator have been consolidated and considered in the last Financial Year, i.e., FY 2021-22 for such comparison.

Step 3: Identification of cost drivers for allocation of Common expenses

The basis used by AAI and the Airport Operator for segregation of Common expenses between Aeronautical and Non-aeronautical expenses has been analysed and wherever necessary, an alternate basis of allocation has been proposed, based on principles laid down as under:

- Common expenses pertaining to terminal operations have been segregated between Aeronautical and Non-Aeronautical expenses based on the Terminal Building ratio.
- Common employee related expenses have been segregated between Aeronautical and Non-Aeronautical expenses based on the Employee Head Count ratio.
- Common expenses included in O&M components, such as Repairs & Maintenance expenses, Administrative and other expenses, have been segregated between Aeronautical and Non-Aeronautical expenses based on suitable ratio such as Gross Fixed Assets (GFA) ratio.

Step 4: Part I - Trend analysis (Internal Benchmarking)

Trend analysis of O&M expenses for the period from FY 2011-12 to FY 2019-20 (First Control Period and four pre-COVID years of Second Control Period) have been performed by correlating each component of O&M expenses with the data on Passenger (PAX) traffic and air traffic movement (ATM) for the respective years. FY 2020-21 and FY 2021-22 were excluded from the trend analysis since it was exceptional years

impacted by the COVID-19 pandemic and witnessed a change in management of the Airport from AAI to the Airport Operator.

Based on the trend analysis, the CAGR of O&M expenses vis-à-vis growth in Passenger traffic and ATM for each year has been correlated and in-depth analysis has been performed in respect of growth in O&M expenses that are disproportionate to the growth in Passenger traffic and ATM.

Step 4: Part II - Peer analysis (External Benchmarking)

The benchmarking of O&M expenses with comparable airports has been done to ascertain the reasonableness of the O&M expenses of JIA. Based on parameters such as passenger traffic, terminal building area, regulatory asset base (RAB), and total revenues; the major O&M expenses of JIA have been compared with the expenses of other similar airports including SVPIA (Ahmedabad Airport), CCSIA (Lucknow Airport), Pune International Airport (Pune Airport), and Cochin International Airport (Cochin Airport).

The benchmarking exercise has been performed only in respect of major Aeronautical O&M expenses incurred during the period from FY 2016-17 to FY 2019-20. The periods FY 2020-21 and FY 2021-22 have been excluded from this analysis, since the airport operations and traffic were adversely impacted by COVID-19 pandemic and the change of JIA's management from AAI to the new Airport Operator affected trends in O&M expenses for these financial years.

3. OPERATION AND MAINTENANCE EXPENSES FOR THE SECOND CONTROL PERIOD till COD

3.1.1 O&M expenses and allocation as submitted by AAI for the period from FY 2016-17 till COD

The O&M expenses approved by the Authority as per the Tariff Order for the Second Control Period have been compared with the true up submission made by AAI (pre-COD) and Airport Operator (Post-COD till March 31, 2022) and analysed in terms of reasonableness as shown in the following paragraphs.

3.1.2 In the Tariff Order of the Second Control Period vide Order No.10/2017-18 issued on August 4, 2017, the Authority had approved O&M expenses of ₹ 290.2 Crores, based on the analysis of the submissions made by AAI, as shown in the table below:

Table 1: Aeronautical O&M expenses approved by the Authority for Second Control Period

(₹ in Crores)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total
Employee benefit expenses	23.8	29.8	31.8	34.0	36.4	155.8
Administrative & Other expenses	10.1	10.7	11.4	12.1	12.8	57.1
Repairs & Maintenance expenses	8.6	9.5	10.4	11.5	12.6	52.6
Utility and Outsourcing expenses	4.4	4.4	4.4	4.5	4.5	22.2
Other outflows	0.3	0.4	0.4	0.5	0.5	2.1
TOTAL	47.3	54.8	58.6	62.6	66.9	290.2

3.1.3 The Aeronautical O&M expenses as per AAI's True up submission are provided in the table below:

Table 2: Aeronautical O&M expenses submitted by AAI for period FY 2016-17 up to COD

(₹ in Crores)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total	FY 2021-22*	Total
Employee benefit expenses	18.79	27.87	34.65	34.35	26.57	142.23	16.52	158.76
Administrative and other expenses	32.47	37.58	56.50	67.45	60.96	254.96	61.53	316.49
Repairs & Maintenance	8.35	12.75	13.86	14.74	16.34	66.05	9.27	75.32
Utilities (Operating) and other outsourcing expenses	5.24	8.33	6.24	6.81	6.95	33.57	5.62	39.19
Other Outflows	1.26	1.41	1.28	1.49	0.19	5.63	0.11	5.74
Total	66.12	87.94	112.54	124.84	111.01	502.44	93.05	595.50

*Up to COD (Date- 10th October 2021)

3.2 O&M Expenses and allocation as submitted by Airport Operator

3.2.1 The O&M expenses as per Airport Operator's True up submission for the period from post- COD till March 31, 2022, and their segregation, has been summarised in the table below:

Table 3: Aeronautical O&M expenses as per Airport Operator's True up and their segregation*(₹ in Crores)*

Particulars	Grouping for analysis	Total*
Manpower expenses – AAI employees	Employee expenses	15.19
Manpower expenses – Airport Operator's employees	Employee expenses	4.53
Utility expenses	Utility expenses	2.72
IT expenses	Administrative and other expenses	0.67
Rates and Taxes	Administrative and other expenses	0.06
Security expenses	Administrative and other expenses	2.68
Corporate Cost Allocation	Administrative and other expenses	5.18
Administrative Expenses Collection charges on UDF	Other Outflows	0.23
Administrative Expenses-Others	Administrative and other expenses	2.99
Insurance expenses	Administrative and other expenses	0.58
Repairs & Maintenance expenses	Repairs and maintenance	7.05
Other expenses	Administrative and other expenses	2.96
Independent Engineer Fees	Repairs and maintenance	1.80
Total		46.64

* Values have been reconciled with audited financials

3.3 Analysis of AAI and Airport Operator's submission of O&M expenses as per Study

3.3.1 The total expenses submitted by AAI have been verified with the extract of the audited trial balance of AAI and were observed to be in order.

3.3.2 The following expense heads, appearing in the audited financial statements of the Airport Operator have not been considered as part of O&M expenses for the purposes of the Study:

- Depreciation and Amortization expenses, as these are considered as a separate building block.
- Finance charges (other than bank charges), as these are factored in the computation of Fair Rate of Return (FRoR).
- Concession fees, as in terms of clause 27.1.2 of the Concession Agreement, Concession Fee is not eligible for pass through in tariff.

3.3.3 JIAL was requested to provide reconciliation between MYTP model and audited financials for post COD Period, vide email dated June 14, 2023. JIAL in its response dated June 24, 2023 had provided an OPEX reconciliation of MYTP and audited financials.

3.4 Comparison of O&M expenses approved as per Tariff Order vis-à-vis actual expenses incurred

3.4.1 The Comparison of Aeronautical O&M expenses as per approved tariff order of Second Control Period (SCP) with actual expenses incurred by AAI and Airport Operator (AO) are shown in the table below:

Table 4: O&M expenses of AAI for the Second Control Period - Approved vs. Actuals*(₹ in Crores)*

Particulars	O&M Expenses as per Tariff Order for SCP (A)	Actuals as per true-up submission of AAI up to FY 21 (B)	Variance (D = B - A)	Variance (%) (E = D / A)	Total Actuals as per true-up submission of AAI till COD	Actuals as per true-up submission of AO post COD till Mar'22	Total Actuals as per true-up submission of AAI and AO for SCP till Mar '22
Employee benefit expenses	155.8	142.23	-13.57	-9%	158.76	19.72	178.48
Administrative & Other expenses	57.1	254.96	197.86	347%	316.49	16.92	333.41
Repairs & Maintenance expenses	52.6	66.04	13.44	26%	75.32	7.05	82.37
Utility (Operating) expenses	22.2	33.57	11.37	51%	39.19	2.72	41.91
Other outflows	2.1	5.63	3.53	168%	5.74	0.23	5.97
Total Aeronautical O&M expense for the Second Control Period	290.2	502.43	212.23	73%	595.50	46.64	642.14

3.4.2 To have a reasoned comparison of actuals vs approved expenses as per Tariff Order, expenses for FY22 were not included to compute variance.

3.4.3 The above table also includes the actual expenses for FY 2021-22 incurred by both AAI and Airport Operator. The expenses of Airport Operator have been regrouped, wherever required, for OPEX analysis in the transition year.

3.4.4 Further, it is observed that the actual total expenses incurred by AAI in Second Control Period up to FY21 were 73% higher than the amount approved as per Tariff Order. The reasons for the deviations in major O&M expenses have been analysed in the following paragraphs.

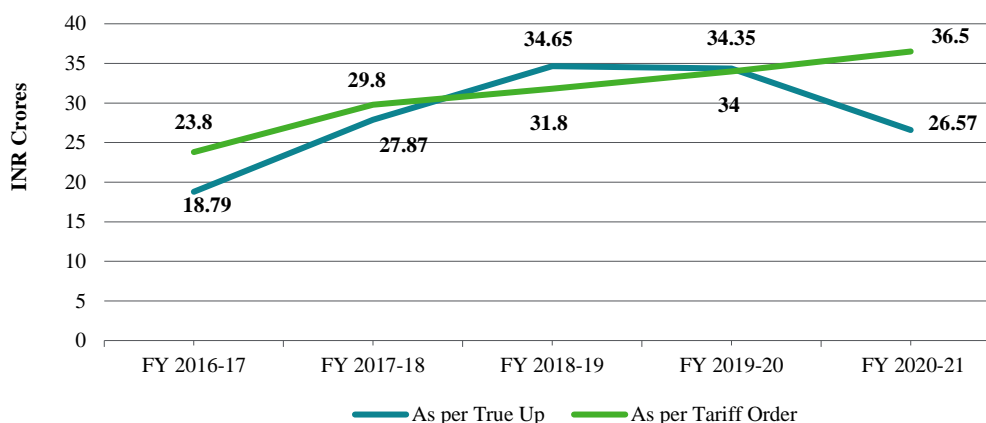
3.4.5 This section assesses the deviations in Employee benefit expenses

Table 5: Comparison of Actuals vs Approved Employee benefit expenses*(₹ in Crores)*

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total
As per True up submission of AAI						
Employee expenses	18.03	23.21	25.18	29.35	25.58	121.35
Retirement benefits at CHQ	0.77	4.65	9.47	5.00	0.99	22.29
Total employee benefit expenses	18.79	27.87	34.65	34.35	26.57	142.24
As per Tariff Order for SCP						

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total
Employee expenses - Non CHQ	21.9	27.4	29.3	31.3	33.5	143.4
Employee expenses – CHQ	3.7	4.6	5	5.3	5.7	24.3
Less: Common expenses related to Cargo, Commercial and Land	(1.8)	(2.2)	(2.4)	(2.6)	(2.7)	(11.7)
Total Employee benefit expenses	23.8	29.8	31.9	34.0	36.5	155.8

Figure 2: Analysis of Employee expenses



3.4.6 From the above table and figure, it can be observed that the total Employee benefit expenses of ₹ 142.24 Crores incurred by AAI is lower than the approved amount of ₹ 155.8 Crores as per the Tariff order for the Second Control period. It is also observed that the expenses were higher than the approved amount in FY 2018-19 and FY 2019-20 of the Second Control Period.

3.4.7 It is noted from the Tariff Order of Second Control Period that an increase of 25% in Employee expenses was allowed during FY 2017-18 towards pay revision followed by Y-o-Y increase of 7% for the next three years i.e., FY 2018-19, FY 2019-20 and FY 2020-21. As against the approved values, AAI had implemented pay revision for ‘Executives’ in FY 2017-18 and for ‘Non-Executives’ in the FY 2018-19 with payment of arrears.

3.4.8 On further examination regarding Employee expenses, it is observed that:

- For FY 2017-18 - there was an increase of 45% as against 25% approved in the tariff order of Second Control Period. AAI in its response dated July 18, 2023, has stated that the major reason for the variance is due to, “Pay revision as per 7th Pay Commission Report had been implemented from Jan 2017 and payment of arrears were paid to Executives in December 2017 (FY2017-18) & to Non-Executives in FY 2018-19.”
- For FY 2018-19 – there was an increase of 24% as against 7% Y-o-Y approved in the tariff order of Second Control Period, which was mainly on account of pay revision with arrears pay-out. Additionally, the employee expense of ₹ 34.65 Crores in absolute number was higher than ₹ 31.80 crores projected in the Tariff Order for the Second Control Period.
- For FY 2019-20 and FY 2020-21 – the employee expenses had decreased from the previous year since there was no arrears pay-out, leading to a decrease in the total employee cost. Hence the employee expenses for the period from FY 2016-17 to FY 2019-20 are considered to be reasonable.

- iv. For FY 2021-22, the employee expenses include ₹ 15.11 Crores incurred by AAI pre- COD and ₹19.72 Crores by Airport Operator post-COD totalling to ₹ 34.83 Crores, resulting in an increase of 31% over the previous year's expense and is higher than the 7% Y-o-Y increase allowed by the Authority in Second Control Period. It is observed that in accordance with the terms of the
- v. Agreement JIAL has to takeover AAI employee i.e. Select Employee for Joint Management Period and Deemed Deputation Period handling various functions at the airport. The total manpower expense of ₹ 19.72 Crore comprises of ₹ 15.19 Crore towards AAI employee cost and ₹ 4.53 Crore towards JIAL employee cost. In view of the Concession provision the manpower expenses have been considered however these have been allocated based on respective employee ratio of AAI and JIAL employees. (Refer Chapter 5).

3.4.9 The employee expenses have been further analysed with respect to two parameters viz, number of passengers per employee and average salary per employee for the five FYs, i.e., FY 2016-17 to FY 2020-21. FY 2021-22 has been excluded for such comparison since there was change in the management of JIA from AAI to JIAL (Airport Operator) during the year.

3.4.10 Based on global benchmarks, the level of staffing for an airport is generally considered to be optimum when the number of passengers per employee is around 15000-17000². The details for AAI are show below:

Table 6: Analysis of employee expenses of AAI

Particulars	UoM	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total
Employee expenses – as per actuals (A)	₹ in Crores	18.79	27.87	34.65	34.35	26.57	142.24
Number of aeronautical employees (Aeronautical) (B)	Nos.	148	158	180	174	153	
Average salary per employee (C = A / B)	₹ in Crores	0.13	0.18	0.19	0.20	0.17	
Number of Pax (D)	Million	3.78	4.75	5.47	5.03	1.85	20.88
Number of passengers per employee (E = D/B)	In '000	25.49	30.12	30.34	28.89	12.07	

3.4.11 From the above table, it is evident that the average salary per employee shows an increasing trend. There has been significant increase in employee expenses in FY 2017-18 and FY 2018-19 on account of revision in pay. Additionally, it is noted from above table that there is on an average one employee per 25,000-30,000 passengers in case of JIA, vis-à-vis international benchmark of 15,000-17,000 passengers per employee. Since JIA staff utilization is better than international benchmarks, the same has been considered in this Study.

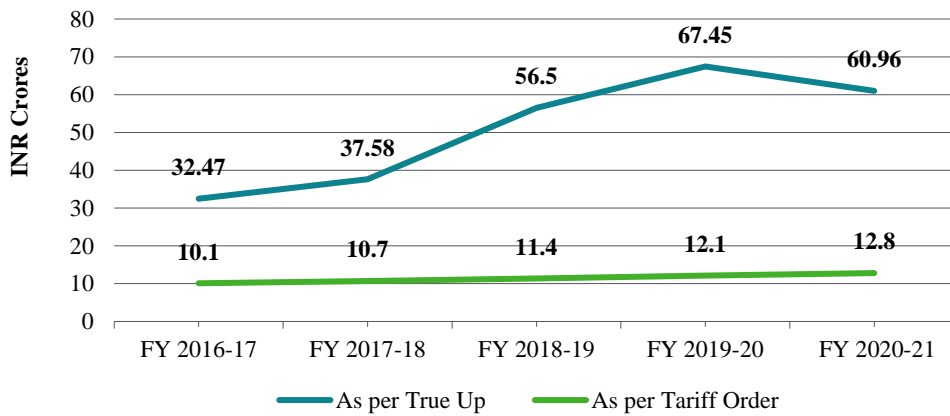
3.4.12 On an overall basis, the actual employee benefit expenses for second control period are well within the range of values approved by AERA in the Tariff Order for the Second Control Period. Therefore, the employee expenses of AAI for the Second Control Period seem to be reasonable as part of this Study. Refer Para 4.6.1 for detailed analysis.

3.4.13 This section assesses the deviations in Administrative & Other Expenses

² Source: ACI Airport Key Performance Indicator 2019

Table 7: Comparison of Actuals vs Approved Administrative & Other Expenses*(₹ in Crores)*

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total
Actual Administrative expenses submitted by AAI	32.47	37.58	56.50	67.45	60.96	254.96
Administrative expenses as per Tariff Order	10.1	10.7	11.4	12.1	12.8	57.1

Figure 3: Analysis of Administrative & Other expenses

3.4.14 It is observed from the above table and figure that, the Administrative & General expenses of ₹ 254.96 Crores submitted by AAI for true up are much higher than ₹ 57.1 Crores approved by the Authority in the Tariff Order for the Second Control Period and is mainly on account of the increase in the CHQ & RHQ expenses.

3.4.15 The amount of CHQ & RHQ expenses as per Tariff Order of Second Control Period was ₹ 39.10 Crores whereas the actual expenses allocated by AAI up to FY21 was ₹ 235.38 Crores (FY22 ₹ 59.29 Crores totalling to ₹ 294.67 Crores) for the same period. This has resulted in a variance of approximately 502% and the year-wise details of the same are as follows:

Table 8: Comparison of Actuals vs Approved CHQ / RHQ expenses*(₹ in Crores)*

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total
CHQ / RHQ expenses – as per actuals	29.36	34.30	52.03	63.22	56.47	235.38
CHQ / RHQ expenses – as per tariff order	7.1	7.4	7.8	8.2	8.6	39.10
Variance						(196.28)
Variance in %						502%

3.4.16 AAI in its submission dated July 18, 2023, has mentioned the following reasons as the cause for major variance:

- *AERA Order 10/2017-18 was based on projections and AAI has considered actual expenses (CHQ and RHQ expenses to be allocated) till FY 2020-21, based on FY 2015-16 with an 5% increase on year-on-year basis.*
- *Major reasons for high increase due to pay revision and inflation.*
- *All increase in Expenses of CHQ/RHQ is to be allocated.*

- Increase in Revenue also has an impact on allocation as allocations are based on revenue (more Revenue of an airport will attract more allocation to airport). Also, C.P Rate levy w.e.f September 2017 and UDF impact in FY 2018-19 had a bearing.

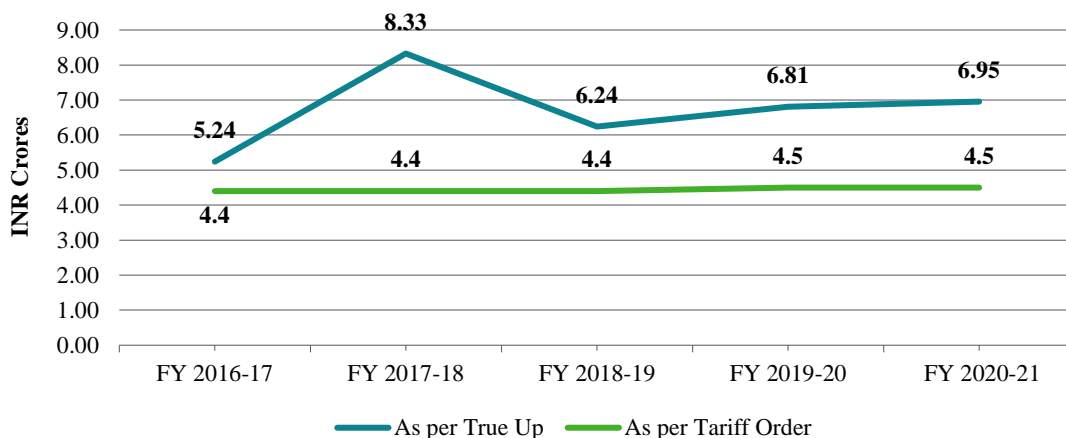
3.4.17 In conclusion, it is evident from the above comparative tables and illustrations that the A&G expenses incurred during the period significantly exceeded the projections of the Tariff Order. This overage has been meticulously examined, and the underlying factors have been thoroughly rationalized in the subsequent sections of this report. Refer Para 4.6.2 for detailed analysis.

3.4.18 This section assesses the deviations in Utilities and Outsourcing expenses which includes expenses towards consumptions of stores and spares.

Table 9: Comparison of Actuals vs Approved Utilities and Outsourcing expenses

Particulars	(₹ in Crores)					Total
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Utility expenses – as per actuals	5.24	8.33	6.24	6.81	6.95	33.57
Utility expenses – as per tariff order	4.40	4.40	4.40	4.50	4.50	22.20

Figure 4: Analysis of Utility and Outsourcing expenses



3.4.19 From the above table and figure, it can be observed that the Utility and Outsourcing expenses of ₹ 33.57 Crores claimed by AAI for True up is substantially higher than the approved expenses of ₹ 22.20 Crores as per the Tariff Order for the Second Control Period and the overall deviation works out to 51 % on the total Utility expenses.

3.4.20 Further it is observed that the deviation is mainly on account of expense ₹ 7.94 Crores, incurred by AAI up to FY21 under head of ‘Other Hire Charges’ as per the true up submissions. There was no provision of such expense approved by authority as per Tariff Order of Second Control Period. AAI has submitted that; *Jaipur airport has limited ownership of vehicles and permanent drivers on its rolls. To meet the operational requirement, vehicles and drivers are being hired from outsourcing agencies on monthly basis. These agencies are being hired as per defined SOPs.* Based on the above

response, and the criticality of the need for vehicles for smooth airport operations, the Study has counted these expenses, as submitted by AAI.

- 3.4.21 It is also observed that the actual electricity expenses of ₹ 23.29 Crores incurred till FY21, is higher than the approved amount of ₹ 20 crores (i.e., an increase of approx. 17%). The year-wise details of the same are shown in the table below:

Table 10: Comparison of Actuals vs Approved Electricity expenses

(₹ in Crores)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total
Electricity expenses – as per actuals	4.46	5.94	4.50	4.23	4.16	23.29
Electricity expenses – as per tariff order	4.00	4.00	4.00	4.00	4.00	20.00
					Variance	(3.29)
					Variance in %	16.5%

- 3.4.22 Though the electricity expense has increased by 16.5%, however compared to first year of the second control period there is no significant variance over the second control period. The actual electricity expense in FY'16 was ₹ 4 Crore which increased to ₹ 4.16 crore in FY'21 representing a CAGR of less than 1%. Also, it is pertinent to note that the electricity expenses are impacted by the power tariff finalised by the Electricity department (i.e., third party utility vendor). Considering the same, the actual expense incurred is proposed to be considered for the purposes of True up as per the Study.
- 3.4.23 The increase in electricity expenses in SCP as per AAI submission, is attributed to the load increase due to extension of arrival & departure area in Terminal-2 and apron with additional 19 bays. Additionally, there were further developments including new sub fire station, control room at ATC, CCR room, and installation of CAT-III lightening system. Hence, the increase in expenditure has been considered for the purpose of this Study.
- 3.4.24 In conclusion, it is evident that the utility expenses have exceeded the projections, primarily due to hiring of vehicles through outsourcing agencies on a need basis by AAI. This is crucial for ensuring the smooth operation of our airports and providing essential services. Additionally, the rise in electricity expenses is, in part, a result of the power tariff determined by third-party utility vendors. Given the criticality of these expenditures to the core operations and the external factors influencing them, the actual utility expenses incurred has been considered reasonable for the purposes of this study. Refer Para 4.6.3 and 4.6.4 for detailed analysis.

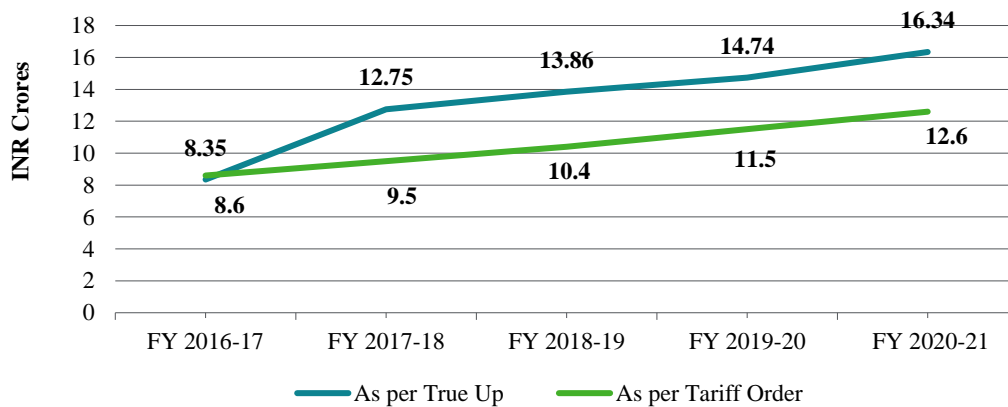
- 3.4.25 This section assesses the deviation in Repairs & Maintenance expense

Table 11: Comparison of Actuals vs Approved Repairs & Maintenance expenses

(₹ in Crores)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total
Repairs & Maintenance expenses – as per actuals	8.35	12.75	13.86	14.74	16.34	66.04
Repairs & Maintenance expenses – as per tariff order	8.60	9.50	10.40	11.50	12.60	52.60

Figure 5: Analysis of Repairs & Maintenance



3.4.26 From the above table and figure, it can be observed that the total Repairs & Maintenance expenses of ₹ 66.04 Crores (including amortisation of runway recarpeting expenses of ₹ 2.65 Crores) claimed by AAI for the Second Control Period (till FY21) is higher than the amount ₹ 52.60 Crores approved in the tariff order for the same period. It is to be noted that as per the tariff order of the Second Control Period, the Authority had not allowed any cost for runway recarpeting expenditure.

3.4.27 AAI in its submission dated July 18, 2023, has provided the following reasons for the deviation:

In addition to the normal R&M, the following Special Repair works were incurred

In FY 17-18

- Expenses on Joint filling & concrete pavement of T/W = Rs. 70 Lacs
- AMC operational area = Rs. 60 Lacs (additional R&M Work)
- Modification of ALCMS Rs. 5Lacs
- PBB Rs. 21 L were incurred. (additional R&M work)

In FY 18-19

- Expenses of BHS Rs. 28.61 Lacs,
- Re-Alignment of r/w light Rs. 114.64 Lacs
- Solar Rs. 4.95 Lacs were incurred.

In FY 19-20

- Expenses of GLF Rs. 51.24 Lacs,
- Re-routing of cables Rs. 62.98 Lacs were incurred

3.4.28 On further examination of the actual Repairs & Maintenance expenses, it is observed that the R&M expenses lie within 6% of Opening RAB (determined in line with the approach of the Authority in other similar airports) for all tariff years and hence the same need not be further rationalised (refer Chapter 4 for the rationalisation of expenses).

3.4.29 In conclusion, while it is observed that the R&M (Repair and Maintenance) expenses exceeded the projections, explanations provided by AAI for the deviations have been considered. Notably, the R&M expenses have consistently remained within 6% of the Opening RAB (Regulatory Asset Base) for all tariff years. This alignment with the RAB demonstrates a reasonable relationship between

expenditures and the assets being maintained. Therefore, for the purpose of this study, these expenses are deemed rational. Refer Para 4.6.5 and 4.7 for detailed analysis.

- 3.4.30 **Other Outflows:** It is observed from the tariff order of the Second Control Period that, the Authority had approved an amount of ₹ 2.10 Crores for other outflows mainly towards collection charges on UDF (refer Table 41 and Para 14.14 of the Tariff Order). The actual expenses incurred were ₹ 5.63 Crores for the same period as submitted by AAI. Out of these total expenses, ₹ 3.50 Crores were incurred for collection charges on PSF(F) (till FY20), and UDF. The remaining ₹ 2.13 Crores were sustained due to “Collection Charges Paid to IATA”

Table 12: Comparison of Actuals vs Approved Other Outflows

Particulars	(₹ in Crores)					Total
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	
Other Outflows – as per actuals	1.26	1.41	1.28	1.49	0.19	5.63
Other Outflows – as per tariff order	0.3	0.4	0.4	0.5	0.5	2.10

- 3.4.31 AAI mentioned that the expense head “Collection Charges Paid to IATA” prior to Second Control Period was included in CHQ/RHQ expense allocation. From Second Control Period onwards, expenses related to IATA collection charges have been allocated as per actuals to AAI. Since these expenses were not included in “Other Outflows” prior to SCP, the same was not envisaged as part of Tariff Order for SCP and thus correspondingly the projections were lower. Thus, basis the aforementioned reasons, the higher expense on account of “Other Outflows” has been considered in this Study.
- 3.4.32 In conclusion, it is deduced that the other outflow expenses have exceeded the initial projections, primarily owing to IATA collection charges, that were not originally accounted for in the tariff order. Therefore, for the purpose of this study, these expenses are deemed reasonable.

3.5 Summary

- 3.5.1 The Aeronautical O&M expenses approved by the Authority in the Tariff Order for Second Control Period amounted to ₹ 290.20 Crores.
- 3.5.2 The actual Aeronautical O&M expenses incurred as per AAI’s True up submission aggregates to ₹ 502.44 Crores for Second Control Period. Aeronautical O&M expenses incurred by AAI in FY22 till COD stood at ₹ 93.05Crores. Thereby, the total Aeronautical O&M Expense incurred by AAI in SCP till COD amounted to ₹ 595.50 Crores.
- 3.5.3 The total Aeronautical O&M expenses as per Airport Operator’s True up submission for the period from post COD October 11. 2021 to March 31, 2022, aggregates to ₹ 46.64 Crores.
- 3.5.4 The total Aeronautical O&M expenses of ₹ 502.43 Crores incurred as per true up submissions for the Second Control Period excluding FY2021-22, is drastically higher than the amount of ₹ 290.20 Crores approved in the Tariff Order, indicating a deviation of 73%.
- 3.5.5 Further, it is noted that the major reason for the overall deviation of 73% in the total Aeronautical O&M expenses for the Second Control period, is the increase in the actual CHQ & RHQ expenses incurred by AAI which is higher by 502% till FY21.
- 3.5.6 On an overall basis, the actual employee benefit expenses for second control period are well within the range of values approved by AERA in the Tariff Order for the Second Control Period. Therefore,

the employee expenses of AAI for the Second Control Period seem to be reasonable as part of this Study.

- 3.5.7 The A&G expenses incurred during the period significantly exceeded the projections of the Tariff Order. This expense has been examined in detail, and the underlying factors have been rationalized in the subsequent sections of this report.
- 3.5.8 The utility expenses have exceeded the projections, primarily due to hiring of vehicles through outsourcing agencies on a need basis by AAI. Additionally, the rise in electricity expenses is, in part, a result of the power tariff determined by third-party utility vendors. Given the criticality of these expenditures to the core operations and the external factors influencing them, the actual utility expenses incurred has been considered reasonable for the purposes of this study.
- 3.5.9 Repairs & Maintenance expenses, excluding the amortisation of runway recarpeting expenses, were higher than that approved as per the Tariff Order for all the FYs of the Second Control Period. Further, it is observed that the expenses were lower than 6% of the Opening RAB (as approved in AERA tariff orders of other airports) for all the FYs of the Second Control Period. This alignment with the RAB demonstrates a reasonable relationship between expenditures and the assets being maintained. Therefore, for the purpose of this study, these expenses are deemed rational.
- 3.5.10 The study analyzed the post-COD period's employee expenses of the Airport Operator, considering the presence of existing AAI employees, referred to as "Select Employees," who are assigned to JIA for handling various departmental functions at the airport. The Employee Ratio for the post-COD period has been revised based on employee headcount of JIAL, and the corresponding employee costs of the Airport Operator has been reallocated as per AERA guidelines.
- 3.5.11 Based on the above points, the Study has determined that there is a need to rationalise and bring more efficiency by optimising the O&M expenses at JIA.
- 3.5.12 A detailed analysis and rationalisation exercise have been undertaken in subsequent Chapters of this report.

4. ALLOCATION OF O&M EXPENSES BETWEEN AERONAUTICAL AND NON-AERONAUTICAL ACTIVITIES (FY 2016-17 TILL COD)

4.1 Segregation of O&M expenses

4.1.1 Principle for allocation of expenses

This Study segregates the O&M expenses of Jaipur International Airport into the following:

- **Aeronautical expenses:** Expenses which are incurred for operation and maintenance of Aeronautical assets have been categorised as Aeronautical expenses.
- **Non-aeronautical expenses:** Expenses which are incurred for operation and maintenance of Non-aeronautical assets have been categorized as Non-aeronautical expenses.
- **Common expenses:** Expenses for which the benefits or use cannot be exclusively linked to either Aeronautical or Non-aeronautical activities have been categorised as Common expenses. Also, the expenses primarily incurred for provision of Aeronautical services but are also used for provision of Non-aeronautical services are categorised as Common Expenses. Expenses which are used for general corporate purposes including legal, administration, and management affairs are treated as Common Expenses.

Common expenses have further been allocated to Aeronautical activities based on an appropriate ratio, considering the nature and purpose of the services for which these expenses are incurred. However, in the absence of any specific information regarding the purpose of expense, a reasonable ratio is determined based on discussions with AAI, Airport Operator and review of other records of the JIA.

4.2 Terms of the Concession Agreement pertaining to O&M expenses

4.2.1 The specific clauses from the Concession Agreement entered into between AAI and the Airport Operator, which are relevant for the purposes of allocation of O&M expenses are reproduced below:

a) Clause 6.5 states that

6.5. *Authority's Employees*

6.5.1 *For the purpose of this Clause 6.5:*

(i) "Select Employees" shall mean those employees of the Authority as set forth in Schedule S (of the rank of assistant general manager and below) who are posted at the Airport by the Authority and shall be deployed at the Airport for the duration of the Joint Management Period and Deemed Deputation Period. The Select Employees shall stand reduced to the extent of employees who retire, are deceased or otherwise separated from Authority's services during the Joint Management Period or Deemed Deputation Period. It is clarified that the Select Employees shall not be reduced to the extent of employees who are transferred by AAI.

(ii) "Joint Management Period" shall mean the period commencing from the COD and ending on the date which is 1 (one) calendar year after the COD.

(iii) "Deemed Deputation Period" shall mean the period commencing from the expiry of the Joint Management Period and ending on the date which is 2 (two) calendar years therefrom.

6.5.4 The Concessionaire shall bear the Select Employee Costs for the Joint Management Period and Deemed Deputation Period.

6.5.10. If, at the expiry of the Deemed Deputation Period, the number of Accepting Employees is less than 60% (sixty) percent of the Select Employees (the "Deficit Employees"), the Concessionaire shall, commencing from the expiry of the Deemed

Deputation Period pay to the Authority, on a monthly basis, such amounts as may be indicated in an invoice to be raised by the Authority on the Concessionaire with regard to the emoluments payable by the Authority in respect of such Deficit Employees (the "Deficit Employee Costs").

(ii) The Deficit Employee Costs shall be considered for pass-through in the determination of the Aeronautical Charges.

b) Clause 18.6.2 states that

In the event that the Concessionaire, upon notice under Clause 18.6.1, fails to rectify or remove any hardship or danger within the period notified by the Authority, the Authority may exercise overriding powers under this Clause 18.6 and take over the performance of any or all the obligations of the Concessionaire to the extent deemed necessary by it for rectifying or removing such hardship or danger, provided that the exercise of such overriding powers by the Authority shall be of no greater scope and of no longer duration than is reasonably required hereunder, provided further that any costs and expenses incurred by the Authority in discharge of its obligations hereunder shall be deemed to be O&M Expenses, and the Authority shall be entitled to recover them from the Concessionaire in accordance with the provisions of this Agreement. The amount so recovered shall not be considered for pass-through in the determination of the Aeronautical Charges.

c) Clause 18.7 states that

Save and except as otherwise expressly provided in this Agreement, in the event that the Airport or any part thereof suffers any loss or damage during the Concession Period from any cause whatsoever, the Concessionaire shall, at its cost and expense, rectify and remedy such loss or damage forthwith so that the Airport conforms to the provisions of this Agreement. If such loss or damage has resulted due to any breach or default in the performance obligations of the Concessionaire under this Agreement, then, the costs undertaken by the Concessionaire on the repair or rectification of such loss or damage, shall not be taken into consideration for the purposes of the determination of the Aeronautical Charges.

d) Clause 18.15.7 states that

All costs and expenses arising out of or relating to Safety Requirements shall be borne by the Concessionaire, and may be considered by the Regulator as a part of the expenses incurred by the Concessionaire for the purposes of the Airport, while determining or revising the Aeronautical Charges, in accordance with this Agreement, Applicable Laws and Applicable Permits.

e) Clause 24.3.1 states that

The remuneration, cost and expenses of the Independent Engineer shall be paid by the Authority, and all such remuneration, cost and expenses shall be reimbursed by the Concessionaire to the Authority within 15 (fifteen) days of receiving a statement of expenditure from the Authority. Any amounts paid to the Independent Engineer shall be considered for a pass-through for the determination of the Aeronautical Charges by the Regulator.

f) Clause 27.1.2 states that

The Monthly Concession Fee paid/ payable by the Concessionaire to the Authority under and pursuant to the terms of this Agreement shall not be included as a part of costs for provision of Aeronautical Services and no pass-through would be available in relation to the same.

g) Clause 28.3.4 states that

Any payments made by the Concessionaire to any Designated Government Agency, excluding security services, for providing Reserved Services such as customs, immigration, plant quarantine, animal quarantine services, meteorological, and health services within the Airport shall be considered as pass-through for the purpose of the determination of the Aeronautical Charges.

h) Clause 28.3.8 states that

It is clarified that costs incurred by the Concessionaire with regard to legal services, shall not be considered by the Regulator for the purpose of determining the Aeronautical Charges.

i) Clause 28.4.3 states that

The Parties agree and acknowledge that the Concessionaire expressly waives its right to seek as pass-through in the Aeronautical Charges such costs and/ or expenses which the Concessionaire is restrained under this Agreement from seeking to be passed-through thereunder.

4.3 Allocation of O&M expenses as per AAI's submission

4.3.1 The classification of O&M expenses as Aeronautical, Non-aeronautical and Common along with the basis of allocation of Common O&M expenses to Aeronautical and Non-aeronautical expenses, as submitted by AAI, has been presented in the table below:

Table 13: Allocation of O&M expenses as per AAI's submission

Expense Category	Expense Sub-Category / Description	Expense classification	Allocation
Payroll Expenses	Salary, Wages & Bonus; Overtime, Medical Expenses; Staff benefits, Provident Fund Expenses	Common	Employee Ratio
	Retirement benefits of Jaipur Employees (Provisions made at CHQ)	Common	96.97:3.03
Administrative and other expenses	Rent, rate & taxes; municipal taxes; advertisement & publicity; watch and ward; legal fee and expenses; travelling expenses; consultancy and advisory expenses; meeting and seminar expenses; conservancy expenses; upkeep expenses, expenditure on Rajya Sabha; and other administrative expenses	Aeronautical	
	Insurance Expenses	Aeronautical and Common	Vehicle Ratio
	Office Expenses, Telephone Charges, Printing & Stationery,	Common	Employee Ratio
	MESS (Mechanized Environmental Support Services (MESS) (Up-Keeping) expenses	Common	Terminal Building ratio
	Administrative expenses allocated from CHQ & RHQ	Common	95:5
Utility Expenses	Electricity related expenses	Aeronautical	Electricity Ratio
	DG Sets	Common	Terminal Building Ratio
Consumption of stores and spares	Petrol for vehicles, Electrical spares, paper glass, m-fold papers, consumables items, ARFF Fire foam	Common	Vehicle Ratio, Terminal Building Ratio, Employee Ratio (as per individual line item)

Expense Category	Expense Sub-Category / Description	Expense classification	Allocation
Repairs & Maintenance	Civil works	Aeronautical & Common	Terminal Building Ratio
	Runway Recarpeting	Aeronautical	
	Electrical Expenses	Aeronautical & Common	Terminal Building Ratio
	Vehicles	Aeronautical and Common	Vehicle Ratio
	Equipment & furniture expense	Aeronautical & Common	Employee Ratio
	AOCC expense	Aeronautical	
	Electronics	Aeronautical & Common	Terminal Building Ratio & Employee Ratio
	X Ray Equipment	Aeronautical	
	In line Bag Manpower	Aeronautical	
Other Hire Charges	Manpower Hiring	Aeronautical	
Other Outflows	Collection Charges on PSF(F)(till FY20)/UDF/IATA	Aeronautical	

4.3.2 The following allocation ratios have been adopted by AAI for allocation of Common expenses to Aeronautical and Non-aeronautical expenses:

Table 14: Allocation ratios of Common O&M expenses as per AAI's submission

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22 till COD
Employee Ratio (Aeronautical : Non-aeronautical)	96.27:3.73	97.08:2.92	97.41:2.59	97.31:2.69	96.95:3.05	97.41:2.59
Year-wise specific allocation ratio for CHQ & RHQ allocation of Admn.. Expenses (Aeronautical : Non-aeronautical)	95:5	95:5	95:5	95:5	95:5	95:5
Year-wise specific allocation ratio for CHQ allocation of Retirement Benefits (Aeronautical : Non-aeronautical)	96.97:3.03	96.97:3.03	96.97:3.03	96.97:3.03	96.97:3.03	96.97:3.03
Terminal Building ratio (Aeronautical : Non-aeronautical)	90.59:9.41	90.43:9.57	90.28:9.72	93.44:6.56	95.02:4.98	95.02:4.98 (T2) 90:10 (T1 & T2)
Electricity ratio (Aeronautical : ANS : Non-aeronautical)	79.25: 19.95: 0.8	79.25: 19.95: 0.8	79.25: 19.95: 0.8	79.25: 19.95: 0.8	79.25: 19.95: 0.8	79.25: 19.95: 0.8
Staff Quarters ratio (Aeronautical : ANS)	82.41:17.59	80.36:19.64	86.32:13.68	89.47:10.53	91.58:8.42	91.58:8.42
Vehicle Ratio	97:3	97:3	97:3	97:3	97:3	97:3

4.4 Allocation of O&M expenses as per Study

- 4.4.1 As part of this Study report, the description, nature and purpose of various expense and expense categories, as well as basis for their segregation into Aeronautical, Non-aeronautical and Common expenses has been reviewed.
- 4.4.2 Further, as part of the Study report, Aeronautical expenses have been directly considered for True up whereas expenses identified as Non-aeronautical are excluded from True up. The expenses classified as Common, are segregated between Aeronautical and Non-aeronautical expenses based on a suitable ratio. This ratio has been determined based on the underlying proportion of their expected utilisation for Aeronautical and Non-aeronautical services and activities at the Airport.
- 4.4.3 Based on the review of submissions made by AAI, the expenses have been analysed on a case-to-case basis and in case of any discrepancies identified in allocation, appropriate reclassification has been made for such expenses.

Table 15: Allocation of O&M expenses as per Study

Expense Category	Expense Sub-Category / Description	Expense classification as per AAI	Allocation as per Study
Payroll Expenses	Salary, Wages & Bonus; Overtime, Medical Expenses; Staff benefits, Provident Fund Expenses	Common (Employee Ratio)	Common (Employee Ratio)
	Retirement benefits of Jaipur Employees (Provisions made at CHQ)	Common (96.97:3.03)	Common (95:5)
Administrative and other expenses	Rent, rate & taxes; advertisement & publicity; watch and ward; conservancy expenses; upkeep expenses, expenditure on Rajya Sabha; and other administrative expenses	Aeronautical	Aeronautical
	Municipal Taxes	Aeronautical	Common (Gross Block Ratio)
	Insurance (Common Vehicles)	Common (Vehicle Ratio)	Common (Vehicle Ratio)
	Legal Expenses	Aeronautical	Common (Gross Block Ratio)
	Travelling Expenses	Aeronautical	Common (Employee Ratio)
	Consultancy and Advisory Expenses	Aeronautical	Common (Gross Block Ratio)
	Meeting and Seminar Expenses	Aeronautical	Common (Employee Ratio)
	Office Expenses, Telephone Charges, Printing & Stationery,	Common (Employee Ratio)	Common (Employee Ratio)
	MESS (Mechanized Environmental Support Services) (Up-Keeping) expenses	Common (Terminal Building ratio)	Common (Terminal Building ratio)
	Administrative expenses allocated from CHQ & RHQ	Common (95:5)	Common (Refer Para 4.2.1.m))
Utility Expenses	Electricity related expenses	Aeronautical	Electricity Ratio
	DG Sets	Common (Terminal Building ratio)	Common (Terminal Building ratio)
	Petrol for common vehicles	Common	Common

Expense Category	Expense Sub-Category / Description	Expense classification as per AAI	Allocation as per Study
Consumption of stores and spares		(Vehicle Ratio)	(Vehicle Ratio)
	Electrical spares	Common (Terminal Building ratio)	Common (Terminal Building ratio)
	Other consumables items such as paper glass, m-fold papers etc.	Aeronautical & Common	Common (Employee Ratio)
Repairs & Maintenance	Airside Civil works, STP & Drainage	Aeronautical	Aeronautical
	Terminal side civil works	Common (Terminal Building ratio)	Common (Terminal Building ratio)
	Runway Recarpeting	Aeronautical	Aeronautical
	Airside & Aeronautical Electrical Expenses	Aeronautical	Aeronautical
	Terminal Electrical Expenses	Common (Terminal Building ratio)	Common (Terminal Building ratio)
	Vehicles for Aeronautical Purpose and Fire Tenders	Aeronautical	Aeronautical
	Vehicles for Common Use	Common (Vehicle Ratio)	Common (Vehicle Ratio)
	Equipment & furniture for Office	Common (Employee Ratio)	Common (Employee Ratio)
	Equipment & furniture for Terminal Building	Aeronautical	Common (Terminal Building ratio)
	AOCC expense	Aeronautical	Aeronautical
	Electronic Equipment for Surveillance, Communication etc.	Aeronautical	Aeronautical
	IT Hardware	Common (Employee Ratio)	Common (Employee Ratio)
	CNS Equipment	Common (Terminal Building ratio)	Common (Terminal Building ratio)
	X Ray Equipment	Aeronautical	Aeronautical
	In line Baggage Manpower	Aeronautical	Aeronautical
Other Hire Charges	Manpower Hiring	Aeronautical	Aeronautical
Other Outflows	Collection Charges on PSF(F)(till FY20)/UDF/IATA	Aeronautical	Aeronautical

4.5 Assessment of allocation ratios for Common expenses

The following ratios have been computed and considered in this Study report for appropriate segregation of Common assets between Aeronautical and Non-aeronautical assets for the period from FY 2016-17 to FY 2021-22 (up to COD).

4.5.1 Terminal Building ratio

- a) It was observed that AAI, in its True up submission for the period up to October 10, 2021 has adopted Terminal Building ratio as per actuals in each tariff year. This ratio has been derived on the following basis:

Table 16: Terminal Building Ratio submitted by AAI

(Area in Sq.m.)

Particulars	Location	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY21-COD
Total Non-aeronautical area	T2	1695	1722	1749	1636	1243	1243
Total Terminal Building Area	T2	18000	18000	18000	24954	24954	24954
% of Non-aeronautical area to total Terminal Building area	T2	9.40%	9.57%	9.72%	6.56%	4.98%	4.98%

Particulars	Location	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY21-COD
% of Aeronautical area to total Terminal Building area	T2	90.60%	90.43%	90.28%	93.44%	95.02%	95.02%

- b) However, it is proposed that the Terminal Building ratio of 90:10 (Aeronautical : Non-aeronautical) be used for the purpose of this Study, which is in line with the Tariff Order of JIA for the Second Control Period.

4.5.2 Gross Fixed Assets ratio

- a) Based on the adjustments required in the Fixed Asset Register of AAI, identified in the *Study on allocation of assets between Aeronautical and Non-aeronautical assets for JIA, (Asset Allocation Study)* and as per Table 23 of Asset Allocation Study, the ratio of gross fixed assets have been considered as follows:

Table 17: Gross Fixed Assets ratio for AAI as identified in the Asset Allocation Study

	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22*
Gross Fixed Assets ratio (Aeronautical: Non-Aeronautical)	96.74:3.26	96.56:3.44	96.75:3.25	96.50:3.50	96.62:3.38	96.78:3.22

*Up to COD (October 10, 2021)

4.5.3 Employee Ratio

- a) The department-wise breakup of employees for the period from FY 2016-17 to COD along with the computation of Employee Ratio as per AAI True Up submission for Second Control Period up to COD is summarised as follows:

Table 18: Employee details and Employee Ratio submitted by AAI

Department	Classification	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22 (till COD)
APD	Aeronautical	1	1	1	1	1	0
Security	Aeronautical	1	1	1	1	1	1
Terminal Management	Aeronautical	6	12	12	11	9	9
MT Workshop	Aeronautical	18	16	18	18	15	14
Fire	Aeronautical	50	49	66	65	63	64
Human Resource	Common	36	38	37	35	31	31
Official Language	Aeronautical	1	1	1	1	1	1
Finance	Common	7	9	10	9	7	10
Cargo	Aeronautical	1	2	2	2	2	2
Commercial	Non-Aeronautical	4	3	3	3	3	3
Engineering (E+C)	Aeronautical	34	37	40	38	29	31
CNS	ANS	45	45	46	42	45	41
Medical	Aeronautical	0	0	0	0	0	0
Land Management	Non-Aeronautical	2	2	2	2	2	2
ATC	ANS	32	43	47	50	52	57
Total		238	259	286	278	261	266
Total Aeronautical Strength		155	166	188	181	159	188
Total Non Aeronautical Strength		6	5	5	5	5	5
Total ANS Strength		77	88	93	92	97	98

Department	Classification	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22 (till COD)
Employee Ratio (Aeronautical: Non-aeronautical)		96.27:3.73	97.08:2.92	97.41:2.59	97.31:2.69	96.59:3.05	97.41:2.59
Employee Ratio (Aeronautical: ANS: Non-aeronautical)		65.13:32.35:2.52	64.09:33.98:1.93	65.73:32.52:1.75	65.11:33.09:1.80	60.92:37.16:1.92	65.73:32.52:1.75

* Up to the date of COD (October 10, 2021)

- b) For calculating the net staff cost (payroll expenses), AAI had computed the expense share of Common Employees for ANS and Non-Aeronautical activities as illustrated in Table 19.

Table 19: Common Employee Share submitted by AAI

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22 (till COD)
Total Airport Strength	184	200	221	213	192	196
Total ANS Strength	77	88	93	92	97	98
Total Non-Aero Strength	6	5	5	5	5	5
Finance & HR (Common) Strength	43	47	47	44	38	41
Proportion of Finance & HR (Common) Strength to ANS	13.91	15.97	15.28	14.56	14.12	15.11
% of ANS for the Common Expenses	7.56	7.98	6.92	6.84	7.36	7.71
Proportion of Finance & HR (Common) to Non Aero	1.40	1.18	1.06	1.03	0.99	1.05
% of Non Aero for Common Staff expenses	0.76	0.59	0.48	0.48	0.52	0.53

- c) The Study assessed the basis for computing the Employee ratio as provided by AAI. It found the classification to be generally suitable and consistent with the Authority's approach at other airports. The Study further noted that while computing the common employee expense, AAI had included redeployed staff of DIAL and MIAL in total airport staff strength.
- d) It was noted that the costs directly pertaining to ANS employees have already been excluded for the purpose of analysis of O&M expenses as part of the Study but the Common expenses of ANS are included. Accordingly, it is proposed to exclude the Common employees allocated to ANS and the corresponding costs, since such costs are not a subject of the Study report. Accordingly, the Employee Ratio for the period FY 2016-17 to COD proposed by the Study is as below:

Table 20: Employee Ratio proposed by the Study for the period FY 2016-17 till COD

Department	Classification	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22 (till COD)
APD	Aeronautical	1	1	1	1	1	0
Security	Aeronautical	1	1	1	1	1	1
Terminal Management	Aeronautical	6	12	12	11	9	9
MT Workshop	Aeronautical	18	16	18	18	15	14
Fire	Aeronautical	50	49	66	65	63	64
Human Resource	Common	36	38	37	35	31	31
Official Language	Aeronautical	1	1	1	1	1	1
Finance	Common	7	9	10	9	7	10
Cargo	Aeronautical	1	2	2	2	2	2
Commercial	Non-Aeronautical	4	3	3	3	3	3
Engineering (E+C)	Aeronautical	34	37	40	38	29	31
CNS	ANS	45	45	46	42	45	41
Medical	Aeronautical	0	0	0	0	0	0
Land Management	Non-Aeronautical	2	2	2	2	2	2

Department	Classification	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22 (till COD)
ATC	ANS	32	43	47	50	52	57
Total		238	259	286	278	261	266
Direct Aeronautical employees		112	119	141	137	121	122
Direct Non-Aeronautical employees		6	5	5	5	5	5
Direct ANS employees		77	88	93	92	97	98
Common employees		43	47	47	44	38	41
Total		238	259	286	278	261	266
Common employee's apportionment							
Aeronautical		25	26	28	26	21	22
Non-Aeronautical		1	1	1	1	1	1
ANS (deemed Non-Aeronautical)		17	20	18	17	17	18
Total		43	47	47	44	38	41
Head Count after apportionment of Common employees							
Total Aeronautical employees (A)		137	145	169	163	142	144
Total Non-Aeronautical employees (B)[#]		24	26	24	23	22	24
Total ANS employees (C)		77	88	93	92	97	98
Total employees (D=A+B+C)		238	259	286	278	261	266
Employee Ratio (Aeronautical (A): Non-aeronautical(B))		84.91:15.09	85.02:14.98	87.42:12.58	87.51:12.49	86.35:13.65	85.85:14.15
Employee Ratio (Aeronautical (A) : Non-aeronautical (B) : ANS (C))		57.44:10.21:32.35	56.13:9.89:33.98	59.00:8.49:32.52	58.55:8.36:33.09	54.26:8.58:37.16	54.22:8.94:36.84

* Up to COD (October 10, 2021)

[#] includes Common employees apportioned for ANS (deemed non-aeronautical)

- e) The Employee ratios thus determined has been utilized for segregation of all OPEX including payroll expenses, allocated under Common head with the basis of Employee Ratio.

4.5.4 Electricity ratio

- a) AAI was requested vide email dated August 17, 2023, to provide Electricity ratio for all tariff years of Second Control period up to COD. AAI in its response dated August 22, 2023, shared that the approximate electricity consumption share of ANS/CNS facilities at airport is 19.95%. AAI also shared a copy of an internal office memo which mentioned a power consumption split of 20:80 for ANS: Aeronautical activities at JIA as well as the electricity rate to be charged from concessionaires/contractors. A ratio of 0.80% only has been allocated to Non-Aeronautical activities since the power costs of areas pertaining to Non-aeronautical activities are recovered from the respective concessionaires and only the costs pertaining to the other common areas in the airport (e.g., Administrative office) would pertain to Non-aeronautical activities. The Study concurs with the Electricity ratio as submitted by AAI and the proportion of Non-aeronautical allocation is deemed appropriate.

Table 21: Electricity ratio as per AAI's submission

Category	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021-22 till COD
Aeronautical	79.25%	79.25%	79.25%	79.25%	79.25%	79.25%
Non-aeronautical	0.80%	0.80%	0.80%	0.80%	0.80%	0.80%
ANS	19.95%	19.95%	19.95%	19.95%	19.95%	19.95%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

4.6 Reallocation and Adjustment of O&M expenses of AAI as per Study

The Study has assessed AAI's allocation along with basis and computation of O&M expenses. The proposed reallocations and re-computations of expenses are discussed in the following paragraphs.

4.6.1 Payroll Costs

- AAI has proposed to allocate the Payroll Expenses into Aeronautical, Non-Aeronautical or Common and reallocate the Common expenses using Employee Ratio. It was noted that the costs pertaining to ANS employees have been accounted separately and have not been included in the Payroll Expenses.
- AAI has allocated the Payroll Expenses based on the Employee Ratio determined by them (refer Table 19). However, as explained in paragraph 4.5.3 d., the Employee Ratio has been revised as per the Study (refer Table 20). All staff related costs have been allocated as per revised Employee ratio.
- For non-aeronautical allocation of 'Retirement benefits of Jaipur Employees (Provisions made at CHQ)', AAI had used the ratio 5/165 (3.03%) for all tariff years. Also, for the year FY2021-22 up to COD, AAI had not segregated non-aeronautical portion and assumed full amount as aeronautical. A clarification in this regard was sought vide email dated July 10, 2023, requesting AAI to provide basis for such considerations. AAI in its response dated July 18, 2023, had provided detailed calculation of the expense for all tariff years, as taken in CHQ Books and in the books of each Airport. However, the basis for non-aeronautical ratio for each tariff year could not be obtained from these data shared by AAI.
- Expense related to 'Retirement Benefit provided at CHQ in r/o Jaipur Employees' has been segregated into Aeronautical: Non-Aeronautical ratio of 95:5, as per clause 14.8 of Order No. 10/2017-18 in respect of JIA for Second Control Period, in this Study. The impact of same is summarised below:

Table 22: Impact on Retirement Benefits as per Study

(₹ in Crores)

Particulars	FY 2016- 17	FY 2017- 18	FY 2018- 19	FY 2019- 20	FY 2020- 21	Total till FY21	FY 2021- 22*	Total till COD
Retirement benefits of Jaipur Employees (Provisions made at CHQ) (A)	0.79	4.80	9.77	5.16	1.02	21.54	1.41	22.95
Non-Aeronautical portion as per AAI (B)	0.02	0.15	0.30	0.16	0.03	0.65	0	0.65
Net Retirement benefits as per AAI C=(A-B)	0.77	4.65	9.47	5.00	0.99	20.89	1.41	22.30
Non-Aeronautical portion as per Study (D)	0.04	0.24	0.49	0.26	0.05	1.08	0.07	1.15
Net Retirement benefits as per Study E=(A-D)	0.75	4.56	9.28	4.90	0.97	20.46	1.34	21.81
Impact	(0.02)	(0.09)	(0.19)	(0.10)	(0.02)	(0.43)	(0.07)	(0.49)

* Up to the date of COD (October 10, 2021)

Thus, the total impact on account of the revision of the Employee ratio, and reallocation of retirement benefits of JIA employees provided at CHQ, on Payroll Costs has been summarised below:

Table 23: Impact on Payroll Costs as per Study

(₹ in Crores)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021- 22*	Total till COD
<u>AAI Submission</u>								
Aeronautical Ratio	96.27	97.08	97.41	97.31	96.95	-	97.41	-

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021- 22*	Total till COD
Staff Cost	18.03	23.21	25.18	29.35	25.58	121.35	15.11	136.46
Retirement benefits of Jaipur Employees (Provisions made at CHQ)	0.77	4.65	9.47	5.00	0.99	20.89	1.41	22.30
Net Staff Cost	18.79	27.87	34.65	34.35	26.57	142.24	16.52	158.76
As per Study								
Aeronautical Ratio	84.91	85.02	87.42	87.51	86.35	-	85.85	-
Staff Cost	17.4	22.6	25.1	28.8	24.8	118.72	14.62	133.34
Retirement benefits of Jaipur Employees (Provisions made at CHQ)	0.75	4.56	9.28	4.90	0.97	20.46	1.34	21.81
Net Staff Cost	18.15	27.17	34.36	33.73	25.78	139.18	15.97	155.15
Total Impact	(0.65)	(0.70)	(0.30)	(0.62)	(0.79)	(3.05)	(0.56)	(3.61)

* Up to the date of COD (October 10, 2021)

4.6.2 Administrative and General expenses

- The submissions by AAI have been analysed and it has been observed that the Administrative and General expenses include certain expenses such as tender, rent and rates and taxes, which directly relate to the Aeronautical activity and certain expenses such as insurance of vehicles, manpower hiring, printing & stationery, conveyance, employee training etc, which are linked to Common expense. Therefore, each component of the Administrative and General expenses is proposed to be allocated as per suitable ratio in this Study.
- In the true up proposal, AAI had considered the entire municipal tax as 100% aeronautical. AAI was requested vide email dated August 17, 2023, to provide building wise breakup of municipal taxes paid in each tariff year of second control period up to COD. AAI in its response vide email dated August 22, 2023 shared a copy of the municipal tax demand received by JIA for FY20-21. The tax invoice did not carry any details on the building wise break-up of municipal tax. The study proposes that these expenses cannot be applied specifically to the aeronautical assets at the airport. The airport assets cater to both aeronautical and commercial activities. Therefore, it would not be fair to consider these costs as entirely aeronautical. In the absence of the details regarding the building wise breakup, the Gross Block ratio would be more appropriate for the allocation of these expenses since these are believed to be incurred for the airport in general. Accordingly, the allocation was revised. The impact of this change is as follows:

Table 24: Impact on Municipal Tax Expense as per Study

(₹ in Crores)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021- 22*	Total till COD
Municipal Tax Expense as per AAI	0.093	0.133	0.133	0.142	0.166	0.67	0.149	0.82
Municipal Tax Expense as per Study	0.090	0.128	0.129	0.137	0.160	0.65	0.144	0.79
Total Impact	(0.003)	(0.005)	(0.004)	(0.005)	(0.006)	(0.02)	(0.005)	(0.03)

* Up to the date of COD (October 10, 2021)

- Under Insurance, expense Account No. 727007000 related to insurance of vehicles, has not been split into Aeronautical and ANS expense in FY16-17. Also, in FY21-22 the Aeronautical and ANS component of the expense for same account, has been incorrectly computed. The impact of the reallocation and correction of the above along with revised ratios as per the study is summarised below.

Table 25: Impact on Insurance Expense as per Study*(₹ in Crores)*

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021-22*	Total till COD
Insurance Expense as per AAI	0.035	0.08	0.02	0.01	0.03	0.175	0.01	0.18
Insurance Expense as per Study	0.034	0.08	0.02	0.01	0.03	0.174	0.02	0.19
Total Impact	(0.001)	0.00	0.00	0.00	0.00	(0.001)	0.01	0.01

* Up to the date of COD (October 10, 2021)

- d) For expenses related to Advertising and Publicity, a computation error was observed in FY21-22. The impact of the correction is summarised below.

Table 26: Impact on Advertising and Publicity Expense as per Study*(₹ in Crores)*

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021- 22*	Total till COD
Advertising and Publicity Expense as per AAI	0.11	0.27	0.20	0.12	0.03	0.738	0.012	0.750
Advertising and Publicity Expense as per Study	0.11	0.27	0.20	0.12	0.03	0.738	0.006	0.744
Total Impact	-	-	-	-	-	-	(0.006)	(0.006)

* Up to the date of COD (October 10, 2021)

- e) In the true up submission of AAI, it was noted that for all tariff years except FY16-17, Office expenses were incorrectly allocated as per Vehicle ratio instead of Employee ratio. Further, in FY21-22, a computation error in total office expense was observed. The impact of the reallocation and correction of the above along with revised employee ratio as per the study is summarised below

Table 27: Impact on Office Expense as per Study*(₹ in Crores)*

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021- 22*	Total till COD
Office Expense as per AAI	0.14	0.14	0.33	0.34	0.33	1.29	0.16	1.45
Office Expense as per Study	0.12	0.13	0.30	0.31	0.30	1.15	0.07	1.22
Total Impact	(0.02)	(0.02)	(0.03)	(0.03)	(0.04)	(0.13)	(0.09)	(0.22)

* Up to the date of COD (October 10, 2021)

- f) It was noted in the true up submission of AAI that for all tariff years except FY16-17, Telephone charges were erroneously allocated as per Vehicle ratio instead of Employee ratio. The impact of the reallocation of the above along with revised employee ratio as per the study is summarised below.

Table 28: Impact on Telephone Charges as per Study*(₹ in Crores)*

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021-22*	Total till COD
Telephone charges as per AAI	0.018	0.028	0.020	0.033	0.014	0.12	0.0019	0.12
Telephone charges as per Study	0.016	0.025	0.018	0.030	0.013	0.10	0.0017	0.10
Total Impact	(0.002)	(0.003)	(0.002)	(0.003)	(0.002)	(0.01)	(0.0002)	(0.01)

* Up to the date of COD (October 10, 2021)

- g) It was observed in the true up submission of AAI that for all tariff years except FY16-17, expenses related to Printing and Stationery were erroneously allocated as per Vehicle ratio instead of Employee

ratio. The impact of the reallocation of the above along with revised employee ratio as per the study is summarised below.

Table 29: Impact on Printing and Stationery Expense as per Study

(₹ in Crores)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021- 22*	Total till COD
Printing and Stationery expense as per AAI	0.056	0.065	0.106	0.077	0.042	0.34	0.019	0.36
Printing and Stationery expense as per Study	0.049	0.057	0.095	0.069	0.038	0.30	0.016	0.32
Total Impact	(0.007)	(0.008)	(0.010)	(0.007)	(0.005)	(0.04)	(0.002)	(0.04)

* Up to the date of COD (October 10, 2021)

- h) AAI in its true up submission has considered Legal Fees and Consultancy/Advisory/Professional Services expenses as 100% Aeronautical. However, these charges are not applicable specifically to the aeronautical activities at the airport. The airport caters to both aeronautical and commercial activities. Therefore, it would not be fair to consider these costs as entirely aeronautical. In the absence of the details regarding the cases or disputes to which these expenses pertain to and the advisory services procured, the Gross Block ratio would be more appropriate for the allocation of these expenses since these are believed to be incurred for the airport in general. Accordingly, the allocation was revised. The impact of this change is as follows:

Table 30: Impact on Legal Fee and Expense as per Study

(₹ in Crores)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021- 22*	Total till COD
Legal fee and expenses as per AAI	0.041	0.133	0.201	0.027	0.018	0.42	0.050	0.47
Legal fee and expenses as per Study	0.040	0.129	0.195	0.026	0.017	0.40	0.048	0.45
Total Impact	(0.001)	(0.004)	(0.006)	(0.001)	(0.001)	(0.02)	(0.002)	(0.02)

* Up to the date of COD (October 10, 2021)

Table 31: Impact on Consultancy/Advisory Fee as per Study

(₹ in Crores)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021- 22*	Total till COD
Consulting/Advisory Fees as per AAI	0.074	0.017	0.045	0.0041	0.0001	0.144	0.016	0.16
Consulting/Advisory Fees as per Study	0.072	0.016	0.044	0.0040	0.0001	0.135	0.015	0.15
Total Impact	(0.002)	(0.001)	(0.001)	(0.001)	(0.000)	(0.009)	(0.001)	(0.01)

* Up to the date of COD (October 10, 2021)

- i) As per the true up submission of AAI, Travelling Expenses and expenses related to Training and Seminars has been considered as 100% Aeronautical. However, expenses related to travelling and conveyance as well as training/seminars are incurred for the airport in general and is not applicable specifically to the aeronautical activities at the airport. The airport employees cater to both aeronautical and non-aeronautical activities. Therefore, it would not be fair to consider this cost as entirely aeronautical. Since these travel and training expenses are incurred by the employees, the Employee ratio would be more appropriate for the allocation of these expenses. Accordingly, the allocation was revised. The impact of this change is as follows.

Table 32: Impact on Travelling Expenses as per Study*(₹ in Crores)*

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021-22*	Total till COD
Travelling expenses as per AAI	1.07	0.78	0.92	0.69	0.41	3.87	0.28	4.15
Travelling expenses as per Study	0.91	0.66	0.80	0.60	0.36	3.33	0.24	3.57
Total Impact	(0.16)	(0.12)	(0.12)	(0.09)	(0.06)	(0.54)	(0.04)	(0.58)

* Up to the date of COD (October 10, 2021)

Table 33: Impact on Training and Seminar Expenses as per Study*(₹ in Crores)*

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021- 22*	Total till COD
Training and Seminar expenses as per AAI	0.0068	0.0015	0.0228	0.0030	0.0138	0.05	0.0115	0.06
Training and Seminar expenses as per Study	0.0057	0.00129	0.0199	0.0026	0.0119	0.04	0.0099	0.05
Total Impact	(0.0010)	(0.0002)	(0.0029)	(0.0004)	(0.0019)	(0.01)	(0.0016)	(0.01)

* Up to the date of COD (October 10, 2021)

- j) It was additionally observed that the CHQ/RHQ overhead expense for FY21-22 was determined through escalation of 5% over the previous year value and the same was considered for full year. AAI was requested vide email dated July 10, 2023, to provide rationale for full year consideration instead of pro-rata consideration till COD. AAI in its response dated July 18, 2023, mentioned that “5% increase given should have been up to COD period whereas AAI had considered for the full year. This is to be corrected at the consultant's end.”

In this Study, the CHQ/RHQ overhead expense for FY21-22 up to COD was recomputed through suitable ratio determined as per the number of actual days.

- k) The basis for allocation of AAI's CHQ & RHQ expenses to JIA and other airports was reviewed and the following was noted:
- All expenses incurred by CHQ & RHQ (such as staff costs, Administrative and other expenses, Repairs & Maintenance, utilities, outsourcing expenses, etc.) is allocated to all AAI airports.
 - All the above-mentioned expenses, including Employee benefit expenses, are allocated in the ratio of revenues earned by each airport.
 - Expenses such as legal costs, interest and penalties are related to specific airports. However, these have also been allocated to the common pool and apportioned to all AAI airports.
- l) Based on analysis of the major components of CHQ & RHQ expenses for the period from FY 2016-17 to FY 2020-21 submitted by AAI, the following expense allocation has been proposed as per Study:
- i. **Pay and Allowances**
- AAI has considered pay and allowances of Commercial department at CHQ & RHQ as Aeronautical expenses, whereas it is proposed to consider such expenses as Non-Aeronautical.
 - AAI has excluded pay and allowances of employees involved in ATM, CNS and Cargo departments at CHQ & RHQ while determining the allocation to the airport. However, costs

of support services departments including HR, Finance, Civil, and Terminal Management (Housekeeping) were not excluded in the determination of such allocation.

- CHQ & RHQ staff also provide services to Non-aeronautical activities, ATC and CNS cadres at respective airports for which appropriate adjustment was not carried out.

In order to give effect to the above re-allocation, it is proposed that 20% of CHQ & RHQ pay and allowances be excluded towards adjustment for:

- Support services to ANS, Cargo and Commercial at CHQ, RHQ and Airports; and
- Officials of Directorate and Commercial

It is proposed that the balance 80% of CHQ & RHQ pay and allowances be allocated to airports.

ii. **Administrative and other expenses**

- AAI has incurred legal costs at CHQ & RHQ, which have been allocated across all AAI airports instead of allocation to specific airports on a case-to-case basis.
- Further, AAI has paid interest and solatium to Government of India at CHQ & RHQ due to various lapses and delays and allocated the same across all AAI airports instead of allocation to specific airports on a case-to-case basis.
- As per Section 13 of the AERA Act, 2008 and ICAO's principle of 'Cost-relatedness', it is determined that CHQ/ RHQ expenses being allocated to JIA on the basis of revenue results in large year-on-year variation in such expenses.

m) Accordingly, the revised allocation of CHQ & RHQ expenses to AAI is ₹ 225.10 Crores as compared to ₹ 310.18 Crores submitted by AAI and the same has been proposed by carrying-out the following rationalisation:

- By excluding 20% of CHQ and RHQ pay and allowances towards adjustment for support services to ANS, Cargo, Commercial at CHQ & RHQ and Officials of Directorate and Commercial
- By excluding the allocated costs of legal and arbitration expenses and interest and penalties paid to Government of India by AAI at CHQ & RHQ and
- By considering the allocation of expenses only up to COD (i.e., for 6 months) as against the entire year considered by AAI for the FY 2020-21

The impact of the above changes discussed are as follows:

Table 34: Impact on CHQ/RHQ Overhead Expenses as per Study

(₹ in Crores)

Particulars	FY 2016- 17	FY 2017- 18	FY 2018- 19	FY 2019- 20	FY 2020- 21	Total till FY21	FY 2021- 22*	Total till COD
As per AAI								
CHQ/RHQ Overhead expenses as per AAI (A)	30.90	36.11	54.77	66.55	59.44	247.77	62.41	310.18
Aeronautical component as per AAI (95%) (B)	29.36	34.30	52.03	63.22	56.47	235.38	59.29	294.67
As per Study								
Total CHQ/RHQ Overhead expenses after rationalisation as per Study (C)	23.77	27.82	42.53	53.91	49.55	197.59	27.51	225.10
Total Impact (D = C – B)	(5.59)	(6.48)	(9.50)	(9.32)	(6.91)	(37.79)	(31.78)	(69.57)

* Up to the date of COD (October 10, 2021)

- n) The following table summarizes the A&G expenses as submitted by AAI vis-à-vis the expenses derived as per this Study basis the adjustments and revised allocation ratios discussed above.

Table 35: Impact on A&G Expenses as per Study

(₹ in Crores)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021- 22*	Total till COD
<u>A&G Expenses as per AAI</u>								
Rent, Rate & Taxes	0.00	0.16	0.00	0.01	0.10	0.27	0.00	0.27
Municipal Taxes	0.09	0.13	0.13	0.14	0.17	0.67	0.15	0.82
Insurance	0.04	0.08	0.02	0.01	0.03	0.17	0.01	0.18
Advertising & Publicity	0.11	0.27	0.20	0.12	0.03	0.74	0.01	0.75
Office Expenses	0.138	0.144	0.331	0.341	0.334	1.29	0.158	1.45
Telephone Charges	0.0185	0.0280	0.02024	0.0335	0.0143	0.11	0.00193	0.12
Printing & Stationery	0.056	0.0654	0.106	0.077	0.0421	0.35	0.019	0.36
Watch and Ward Expenses	0.24	0.14	0.23	0.22	0.24	1.07	0.13	1.20
Legal Expenses	0.041	0.133	0.201	0.027	0.018	0.42	0.050	0.47
Travelling Expenses	1.07	0.78	0.92	0.69	0.41	3.87	0.28	4.15
Fees Paid to Outsiders (Consultancy/ Advisory)	0.074	0.017	0.045	0.0041	0.0001	0.14	0.016	0.16
Expenditure On Seminar & Development Course	0.0068	0.00152	0.0228	0.0030	0.0138	0.05	0.0115	0.06
Conservancy Charges	0.03	0.02	0.02	0.03	0.08	0.17	0.03	0.20
Mess Expenses	0.79	0.88	1.59	1.95	2.53	7.73	1.15	8.88
Up Keep Expenses	0.18	0.16	0.26	0.20	0.04	0.84	0.08	0.92
Hire Charges-Car/Jeep	0.23	0.25	0.35	0.35	0.43	1.61	0.13	1.74
Expenditure On Rajya Sabha	0.01	0.01	0.02	0.02	0.01	0.07	0.01	0.08
Other Exp.	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.02
Apportionment Of Admn. Expenses CHQ/RHQ (Overhead Expenses)	29.36	34.30	52.03	63.22	56.47	235.38	59.29	294.67
Total of A&G Expenses	32.47	37.58	56.50	67.45	60.96	254.96	61.53	316.49
<u>A&G Expenses as per Study</u>								
Rent, Rate & Taxes	0.00	0.16	0.00	0.01	0.10	0.27	0.00	0.27
Municipal Taxes	0.090	0.128	0.129	0.137	0.160	0.64	0.144	0.79
Insurance	0.034	0.08	0.02	0.01	0.03	0.17	0.02	0.19
Advertising & Publicity	0.11	0.27	0.20	0.12	0.03	0.74	0.006	0.74
Office Expenses	0.12	0.13	0.30	0.31	0.30	1.15	0.07	1.22
Telephone Charges	0.016	0.025	0.018	0.030	0.013	0.10	0.0017	0.10
Printing & Stationery	0.049	0.057	0.095	0.069	0.0375	0.31	0.016	0.32
Watch and Ward Expenses	0.24	0.14	0.23	0.22	0.24	1.07	0.13	1.20
Legal Expenses	0.040	0.129	0.195	0.026	0.017	0.41	0.048	0.45
Travelling Expenses	0.91	0.66	0.80	0.60	0.36	3.33	0.24	3.57
Fees Paid to Outsiders (Consultancy/ Advisory)	0.072	0.016	0.044	0.0040	0.0001	0.14	0.015	0.15
Expenditure On Seminar & Development Course	0.0057	0.00129	0.0199	0.0026	0.0119	0.04	0.0099	0.05
Conservancy Charges	0.03	0.02	0.02	0.03	0.08	0.17	0.03	0.20
Mess Expenses	0.78	0.87	1.58	1.87	2.40	7.51	1.15	8.66
Up Keep Expenses	0.18	0.16	0.26	0.20	0.04	0.84	0.08	0.92
Hire Charges-Car/Jeep	0.23	0.25	0.35	0.35	0.43	1.61	0.13	1.74

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021- 22*	Total till COD
Expenditure On Rajya Sabha	0.01	0.01	0.02	0.02	0.01	0.07	0.01	0.08
Other Exp.	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.02
Apportionment Of Admn. Expenses CHQ/RHQ (Overhead Expenses)	23.77	27.82	42.53	53.91	49.55	197.58	27.51	225.10
Total of A&G Expenses	26.69	30.94	46.82	57.92	53.81	216.17	29.62	245.80
Total Impact	(5.79)	(6.64)	(9.68)	(9.52)	(7.15)	(38.79)	(31.91)	(70.70)

* Up to the date of COD (October 10, 2021)

4.6.3 Electricity and Water Charges

- AAI's submission has been analysed for expenses related to electricity and water charges. It was noted that AAI had made recoveries from concessionaires and the same had been netted off from the total expenses.
- In the true up submission of AAI, it was noted that a computation error had occurred while determining expenses for Account No. 726002000 'Diesel/Oil-DG sets' in FY 16-17. The same was corrected in this Study.
- The following table summarizes the Electricity and Water charges as submitted by AAI vis-à-vis the expenses derived as per this Study basis the adjustments and revised allocation ratios discussed above.

Table 36: Impact on Electricity and Water Charges as per Study

(₹ in Crores)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021- 22*	Total till COD
Electricity and Water Charges as per AAI	4.46	5.94	4.497	4.23	4.16	23.29	4.22	27.51
Electricity and Water Charges as per Study	4.37	5.94	4.496	4.22	4.15	23.18	4.22	27.40
Total Impact	(0.09)	(0.0002)	(0.001)	(0.01)	(0.01)	(0.11)	0.00	(0.11)

* Up to the date of COD (October 10, 2021)

4.6.4 Consumption of Stores and Spares

- Expenses under the head of 'Consumption of Stores and Spares' included petrol for vehicles and other usage, tyres, paper glass, m-fold papers, cuss roll papers, fire foam, PPE items, electrical spares, and other consumable items.
- In FY18-19 and FY 19-20, expenses under head 'Consumables-Paper Glass' were allocated as 100% aeronautical. Since, these items get utilised across the terminal building, allocating it as 100% aeronautical signals that they primarily pertain to aeronautical activities, which is not true. Since the paper glasses are primarily used within the terminal building, the Terminal Area Ratio would be more appropriate for the allocation of this expense. Accordingly, the allocation was revised.
- In the true up submission of AAI, it was noted that in FY21-22, the value recorded as expense for 'Consumption of Stores and Spares' was incorrect due to erroneous cell reference in the model. The same was corrected.
- The following table summarizes the 'Consumption of Stores and Spares' expenses as submitted by AAI vis-à-vis the expenses derived as per this Study basis the adjustments and revised allocation ratios discussed above.

Table 37: Impact on Consumption of Stores & Spares Expenses as per Study*(₹ in Crores)*

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021- 22*	Total till COD
Consumption of Stores and Spares Expenses as per AAI	0.37	0.50	0.54	0.70	0.24	2.34	0.05	2.39
Consumption of Stores and Spares Expenses as per Study	0.35	0.47	0.51	0.66	0.22	2.21	0.06	2.27
Total Impact	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)	(0.13)	0.01	(0.12)

* Up to the date of COD (October 10, 2021)

- e) The following table summarizes the Utilities and Outsourcing expenses as submitted by AAI vis-à-vis the expenses derived as per this Study basis the adjustments and revised allocation ratios discussed above.

Table 38: Impact on Utilities and Outsourcing Expenses as per Study*(₹ in Crores)*

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021-22*	Total till COD
<u>Utilities and Outsourcing Expenses as per AAI</u>								
Power Charges	4.46	5.94	4.50	4.23	4.16	23.29	4.22	27.51
Water Charges	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumption of Stores & Spares	0.37	0.502	0.535	0.70	0.244	2.34	0.05	2.39
Other Hire Charges	0.41	1.89	1.21	1.88	2.55	7.94	1.35	9.29
Total of Utilities & Outsourcing Expenses	5.24	8.33	6.24	6.81	6.95	33.57	5.62	39.19
<u>Utilities and Outsourcing Expenses as per Study</u>								
Power Charges	4.37	5.94	4.50	4.22	4.15	23.18	4.22	27.40
Water Charges	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumption of Stores & Spares	0.35	0.47	0.51	0.66	0.22	2.21	0.06	2.27
Other Hire Charges	0.41	1.89	1.21	1.88	2.55	7.94	1.35	9.29
Total of Utilities & Outsourcing Expenses	5.13	8.30	6.22	6.76	6.91	33.32	5.63	38.95
Total Impact	(0.11)	(0.03)	(0.03)	(0.04)	(0.04)	(0.24)	0.01	(0.23)

* Up to the date of COD (October 10, 2021)

4.6.5 Repairs & Maintenance expenses

- AAI's true up submission was analysed, and it was observed that certain Repair & Maintenance expenses such as repair of runway and maintenance of AOCC pertain only to Aeronautical activity, while some such as repair of furniture for terminal building and maintenance of IT hardware are related to the terminal building and airport employees respectively. Hence, a detailed scrutiny of all expenses was undertaken, and as per norms it was proposed to allocate such expenses in the ratio of Gross Fixed Assets/ Terminal Building/ revised Employee ratio depending on the nature of each ledger.
- It was also observed that Repairs & Maintenance expenses included the amortisation of runway recarpeting expenses of ₹ 3.32 Crores starting from FY 2017-18 till COD. It is proposed to allow the same during the Second Control Period. Further, the allocation of 'Amortisation of Runway Recarpeting' expenses as Aeronautical is considered to be appropriate.

- c) Under R&M Electrical expenses in FY21-22, a computation error was observed in expense Account No. 731103000 - R&M-GRND LIGHT. It was noted that the expense incurred on DG set was not appropriately apportioned between Aeronautical and ANS expense. The same was corrected and appropriate adjustments made. The impact of the adjustment due to correction of the above along with revised ratios as per the study is summarised below.

Table 39: Impact on R&M Ground Light Expenses in FY 21-22 as per Study

(₹ in Crores)

Particulars	Accumulated Balance (Total Expense)	ANS	Airport	Aero	Common	Common-Aero	Common-Non-Aero	Total
R&M-Ground Light Expense as per AAI	2.184	0.0073	2.184	2.184	0.029	0.028	0.0002	2.213
R&M-Ground Light Expense as per Study	2.184	0.0073	2.176	2.147	0.029	0.028	0.0002	2.177
Impact								(0.036)

* Up to the date of COD (October 10, 2021)

- d) In the true up submission of AAI, it was noted that for certain tariff years, Equipment and Furniture expenses were not appropriately allocated. In tariff years FY 17-18, FY 19-20, and FY 20-21 expense related to Furniture & Fixtures for Terminal Building was allocated as 100% Aeronautical. Since, these items get utilised across the terminal building, allocating it as 100% aeronautical signals that they primarily pertain to aeronautical activities, which is not true. Since the furniture and fixtures are primarily used within the terminal building, the Terminal Area Ratio would be more appropriate for the allocation of this expense. Accordingly, the allocation was revised. The impact of this change is as follows:

Table 40: Impact on Equipment and Furniture Expenses as per Study

(₹ in Crores)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021-22*	Total till COD
Equipment and Furniture expenses as per AAI	0	0.15	0.001	0.0049	0.035	0.20	0.001	0.20
Equipment and Furniture expenses as per Study	0	0.14	0.001	0.0044	0.032	0.18	0.001	0.18
Total Impact	0	(0.02)	0.00	(0.0005)	(0.004)	(0.02)	(0.0001)	(0.02)

* Up to the date of COD (October 10, 2021)

- e) Further, a few computation errors in Electronics expenses of FY 16-17 and FY17-18 were noted. In tariff year FY16-17 and FY 17-18, total Aeronautical expenses for Account No. 731501000 R&M: COMP., IT H/W, has been derived through erroneous cell reference. Accordingly, the calculation was revised. The impact of this change along with revised ratios as per Study is as follows:

Table 41: Impact on Electronics Expenses as per Study

(₹ in Crores)

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021-22*	Total till COD
Electronics expenses as per AAI	0.31	0.33	0.34	0.65	0.76	2.40	0.36	2.76
Electronics expenses as per Study	0.20	0.21	0.32	0.63	0.74	2.10	0.33	2.43
Total Impact	(0.11)	(0.12)	(0.02)	(0.02)	(0.02)	(0.30)	(0.03)	(0.33)

* Up to the date of COD (October 10, 2021)

- f) The following table summarizes the R&M expenses as submitted by AAI vis-à-vis the expenses derived as per this Study basis the adjustments and revised allocation ratios discussed above.

Table 42: Impact on R&M Expenses as per Study*(₹ in Crores)*

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total till FY21	FY 2021- 22*	Total till COD
R&M Expenses as per AAI								
Civil	2.79	4.33	3.63	1.78	2.08	14.60	0.64	15.24
Runway Recarpeting (5 Inst.)	0.00	0.66	0.66	0.66	0.66	2.65	0.66	3.32
Electrical	3.57	4.58	6.89	8.99	8.89	32.93	5.97	38.90
Vehicles	0.06	0.52	0.29	0.83	0.29	1.99	0.09	2.08
Equipment & Furniture	0.00	0.159	0.001	0.0049	0.035	0.20	0.001	0.20
Electronics	0.31	0.33	0.34	0.65	0.76	2.40	0.36	2.76
R&M Bot XBIS Lease	0.00	0.14	0.44	0.21	0.00	0.79	0.00	0.79
In Line Baggage Manpower	0.00	0.00	0.00	0.00	2.01	2.01	0.78	2.79
AOCC Expenses	1.62	2.02	1.61	1.61	1.61	8.47	0.76	9.24
Total of R&M	8.35	12.75	13.86	14.74	16.34	66.05	9.27	75.32
R&M Expenses as per Study								
Civil	2.79	4.33	3.63	1.75	2.03	14.53	0.61	15.14
Runway Recarpeting (5 Inst.)	0.00	0.66	0.66	0.66	0.66	2.65	0.66	3.32
Electrical	3.56	4.58	6.89	8.90	8.75	32.68	5.87	38.54
Vehicles	0.06	0.52	0.29	0.83	0.29	1.99	0.09	2.08
Equipment & Furniture	0	0.143	0.001	0.0044	0.032	0.18	0.001	0.18
Electronics	0.20	0.21	0.32	0.63	0.74	2.10	0.33	2.43
R&M Bot XBIS Lease	0	0.14	0.44	0.21	0.00	0.79	0.00	0.79
In Line Baggage Manpower	0	0	0	0	2.01	2.01	0.78	2.79
AOCC Expenses	1.62	2.02	1.61	1.61	1.61	8.47	0.76	9.24
Total of R&M	8.23	12.60	13.84	14.60	16.12	65.40	9.11	74.51
Total Impact	(0.12)	(0.15)	(0.03)	(0.14)	(0.21)	(0.65)	(0.16)	(0.81)

4.7 Rationalisation Check for Aeronautical Repairs & Maintenance expenses of AAI

4.7.1 A rationalisation check of the Aeronautical Repairs & Maintenance expense claimed by AAI was undertaken, after excluding the amortisation of runway recarpeting expenses. The intent was to examine whether the Aeronautical R&M expense was lower than 6% of the Opening RAB for each tariff year as determined in the study titled “Study on Allocation of Assets for Jaipur International Airport, (Second Control Period: FY 2016-17 – FY 2020-21 & FY 2021-22)”.

4.7.2 The rationalisation study of R&M expenses is summarised in the following table:

Table 43: Examination of Aeronautical Repairs & Maintenance expenses of AAI*(₹ in Crores)*

Particulars	FY 2016- 17	FY 2017- 18	FY 2018- 19	FY 2019- 20	FY 2020- 21	Total till FY21	FY 2021- 22*	Total till COD
Total Aeronautical Repairs & Maintenance expenses (post reclassification in Chapter 4) including	8.23	12.60	13.84	14.60	16.12	65.40	9.11	74.51

Particulars	FY 2016- 17	FY 2017- 18	FY 2018- 19	FY 2019- 20	FY 2020- 21	Total till FY21	FY 2021- 22*	Total till COD
Amortisation of runway recarpeting expenses - (A)								
Amortisation of Runway recarpeting expenses (B)		0.66	0.66	0.66	0.66	2.65	0.66	3.32
Net Aeronautical Repairs & Maintenance expenses (post reclassification in Chapter 4) <i>excluding</i> Amortisation of runway recarpeting expenses (C)	8.23	11.94	13.18	13.94	15.46	62.75	8.45	71.19
Opening RAB (as per Table 12 of Asset Allocation Report) (D)	141.27	253.29	253.68	259.96	313.32	-	323.58	-
Repairs & Maintenance expenses calculated at 6% on Opening RAB (E)	8.48	15.20	15.22	15.60	18.80	73.30	19.41	92.71
Amount proposed to be allowed as per Study (F = C or E whichever is lower)	8.23	11.94	13.18	13.94	15.46	62.75	8.45	71.19
Amount proposed <i>not</i> to be allowed as per Study (G) = (C – F)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Aeronautical Repairs & Maintenance expenses – post rationalization (H = A – G)	8.23	12.60	13.84	14.60	16.12	65.40	9.11	74.51

* Up to COD (October 10, 2021)

4.8 Impact of reallocation as per Study

4.8.1 The total year-wise adjustment of AAI's Aeronautical O&M expenses as a result of the proposed adjustments and reallocations as discussed in previous sections have been summarised below:

Table 44: Impact of proposed reallocation of AAI's Aeronautical O&M expenses as per Study

(₹ in Crores)

O&M expenses	FY 2016- 17	FY 2017- 18	FY 2018- 19	FY 2019- 20	FY 2020- 21	Total till FY21	FY 2021- 22*	Total till COD
Employee benefit / Payroll	(0.65)	(0.70)	(0.30)	(0.62)	(0.79)	(3.05)	(0.56)	(3.61)
Administrative and General	(5.79)	(6.64)	(9.68)	(9.52)	(7.15)	(38.79)	(31.91)	(70.70)
Repairs & Maintenance	(0.12)	(0.15)	(0.03)	(0.14)	(0.21)	(0.65)	(0.16)	(0.81)
Utilities & Outsourcing	(0.11)	(0.03)	(0.03)	(0.04)	(0.04)	(0.24)	0.01	(0.23)
Other Outflows	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	(6.66)	(7.52)	(10.03)	(10.32)	(8.20)	(42.73)	(32.61)	(75.35)

* Up to COD (October 10, 2021)

4.8.2 Based on the above reclassification and change in allocation ratio, the Study has proposed the revised Aeronautical O&M expenses for the period FY 2016-17 up to COD as summarised in the table below:

Table 45: O&M expenses after reclassification & change in allocation ratio for AAI

(₹ in Crores)

O&M expenses	FY 2016- 17	FY 2017- 18	FY 2018- 19	FY 2019- 20	FY 2020- 21	Total till FY21	FY 2021- 22*	Total till COD
O&M Expenses as per AAI								
Employee benefit / Payroll	18.79	27.87	34.65	34.35	26.57	142.24	16.52	158.76
Administrative and General	32.47	37.58	56.50	67.45	60.96	254.96	61.53	316.49
Repairs & Maintenance	8.35	12.75	13.86	14.74	16.34	66.05	9.27	75.32
Utilities & Outsourcing	5.24	8.33	6.24	6.81	6.95	33.57	5.62	39.19
Other Outflows	1.26	1.41	1.28	1.49	0.19	5.63	0.11	5.74
Total	66.12	87.94	112.54	124.84	111.01	502.44	93.05	595.50
O&M Expenses as per Study								
Employee benefit / Payroll	18.15	27.17	34.36	33.73	25.78	139.18	15.97	155.15
Administrative and General	26.69	30.94	46.82	57.92	53.81	216.17	29.62	245.80
Repairs & Maintenance	8.23	12.60	13.84	14.60	16.12	65.40	9.11	74.51
Utilities & Outsourcing	5.13	8.30	6.22	6.76	6.91	33.32	5.63	38.95
Other Outflows	1.26	1.41	1.28	1.49	0.19	5.63	0.11	5.74
Total	59.46	80.42	102.51	114.51	102.81	459.71	60.44	520.15
Impact	(6.66)	(7.52)	(10.03)	(10.32)	(8.20)	(42.73)	(32.61)	(75.35)

* Up to COD (October 10, 2021)

4.9 Summary

- 4.9.1 The Authority had decided to consider an amount of ₹ 290.20 Crores as the operational and maintenance expenditure in its Tariff Order for SCP of JIA.
- 4.9.2 As per the submission of AAI, the total Aeronautical O&M expenses for the period from FY2016-17 to FY2020-21 was ₹ 502.44 Crores.
- 4.9.3 For the period April 01, 2021 till October 10, 2021 (COD), the total Aeronautical O&M expenses as submitted by AAI is ₹ 93.05 Crores.
- 4.9.4 The total Aeronautical O&M expenses for the period from FY2016-17 till COD was ₹ 595.50 Crores.
- 4.9.5 Based on the reallocation of the O&M expenses, the downward adjustment in the Aeronautical O&M expenses for the period from FY2016-17 to FY2020-21 is ₹ 42.73 Crores, and for the period from April 01, 2021 till October 10, 2021 (COD) is ₹ 32.61 Crores.
- 4.9.6 The total downward adjustment in the Aeronautical O&M expenses for the period from FY2016-17 till COD is ₹ 75.35 Crores and the reallocated Aeronautical O&M expenses for the period FY 2016-17 to October 10, 2021, has been determined as ₹ 520.15 Crores.

5. ALLOCATION OF OPERATION AND MAINTENANCE EXPENSES FROM POST-COD TILL MARCH 31, 2022

- i. The Concession Agreement dated January 19, 2021, was entered into between AAI and Jaipur International Airport Limited (Airport Operator) for the Operation, Development, Maintenance and Management of JIA for a period of 50 years from the Commercial Operation Date (COD). The COD was achieved on October 10, 2021, in accordance with the terms and conditions mentioned in the Concession Agreement.
- ii. Accordingly, the Airport Operator has made the true up submission of O&M expenses for the period from October 11, 2021 till March 31, 2022.
- iii. The submission of the Airport Operator includes O&M expenses of ₹ 46.64 Crores from COD to 31st March 2022. The details of Airport Operator submission can be referred at Table 3 (refer Chapter 3). The segregation logic adopted by the Airport Operator for allocation of O&M expenses and the revision in segregation logic suggested as per the Study have been discussed in the following paragraphs.

5.1 Allocation of O&M expenses as per Airport Operator

- 5.1.1 The segregation of O&M expenses and allocation of Common expenses, as submitted by the Airport Operator, has been presented in the table below:

Table 46: Allocation of O&M expenses as per Airport Operator's submission

Expense Category	Expense Sub-Category / Description	Expense classification
Manpower expenses	Salary, wages & bonus; Contribution to provident fund; Staff welfare expenses	Aeronautical
	Salary related costs for AAI employees deputed at the Airport for three years from COD	Aeronautical
Utility expenses	Electricity, water and fuel (net of recoveries from concessionaires)	Aeronautical
IT expenses	IT consumables, networking, website maintenance etc.	Aeronautical
Rates and taxes	Property tax, etc.	Aeronautical
Security expenses	Baggage screening, counter drone measures etc.	Aeronautical
Corporate Allocation	Cost incurred centrally by the group holding companies	Aeronautical
Collection Charges on UDF	Other Operating Expense- Collection Charges over UDF	Aeronautical
Administrative expenses	Travelling and Conveyance, Professional and consultancy charges, Auditor Fee and Miscellaneous Fee	Aeronautical
Insurance	Insurance for properties, personnel, third party insurance etc.	Aeronautical
Repairs & Maintenance	Repairs & Maintenance of building, plant and machinery, roads, runways, equipment, etc.	Aeronautical
Others	Manpower cost, Housekeeping & Office expenses	Aeronautical
IE Fee	Fee towards Independent Engineer	Aeronautical

- 5.1.2 JIAL as part of their true up submission at point 3.6 of their MYTP has stated that it has considered 100% expenses related to regulated asset and services as aeronautical. JIAL in its letter JIAL/CO/AERA-MYTP/2023/1 dated April 22, 2023, vide section 9.5.1 mentions that since in the Shared-Till model, 30% of Non-Aeronautical Revenues are accounted for cross subsidizing the ARR, therefore, there is no need to apply the allocation ratio whereby, capital and operating expenditure is reduced.
- 5.1.3 JIAL has adopted their own version of tariff determination methodology while undertaking allocation exercise. JIAL has reduced ARR by 30% of Non-Aero Revenue as per Hybrid Till

Methodology but on the flip side also accounted for 100% of OPEX and Assets as pass through in ARR, as per Single Till Methodology. This is contrary to the approach prescribed by AERA as part of order no. 14/2016-17. The revenue, cost and asset are interlinked and should be aligned in accordance with the till methodology adopted for tariff determination. Authority in order to adopt a uniform tariff policy across all major airports had amended its tariff guideline to the extent of adoption of Hybrid Till instead of Single Till prescribed in the guidelines vide order 14/2016-17. The Hybrid Till in principle considers only aeronautical portion of OPEX and CAPEX as pass through in tariff with 30% cross subsidy from Gross Non-Aeronautical Revenue. Thus, as part of asset allocation exercise, we would require identification and allocation of Assets and OPEX into Aero and Non-Aero.

5.2 Allocation of O&M expenses as per Study

5.2.1 As per JIAL submission 100% operating expenditure has been considered as Aeronautical. Since this is against the AERA tariff methodology we have sought various clarification from JIAL which were required to calculate allocation ratio such as terminal area. JIAL has reiterated that as per AERA guidelines Airside assets are considered as Aeronautical and Terminal Building is considered as Aeronautical as per AERA Act.

5.2.2 Considering the continuous refusal of JIAL in adopting allocation methodology as prescribed by AERA Act and guidelines the study followed allocation methodology as prescribed at section 4.1.1 of this Study i.e. Principle for allocation of expenses.

5.2.3 In accordance with the CA, the Airport Operator has to appoint an Independent Engineer. As per Clause 24.3.1, the cost associated with such Independent Engineer shall be considered as pass-through for determination of Aeronautical Charges by the Regulator. Relevant extract of the CA has been reproduced below:

Clause 24.3.1

The remuneration, cost and expenses of the Independent Engineer shall be paid by the Authority, and all such remuneration, cost and expenses shall be reimbursed by the Concessionaire to the Authority within 15 (fifteen) days of receiving a statement of expenditure from the Authority. Any amounts paid to the Independent Engineer shall be considered for a pass-through for the determination of the Aeronautical Charges by the Regulator.

5.2.4 Considering the concession provisions Independent Engineer fee, the same has been allowed as part of as a component of Opex.

5.2.5 Further, the expenses as submitted by JIAL have been evaluated on case-to-case basis and considered as pass through as aeronautical expense based on its relevance as per AERA Act and guidelines.

Table 47: Allocation of O&M expenses of the Airport Operator as per Study

Expense Category	Amount (₹ Crores)	Expense Classification As per JIAL	Expense Classification as per the Study	Allocation Ratio (Aero : Non-Aero)
Manpower expenses - AAI employees	15.19	Aeronautical	Common	Employee Ratio- AAI (99.40:00.60)
Manpower expenses - JIAL employees	4.53	Aeronautical	Common	Employee Ratio- JIAL (90.63:9.37)
Utility expenses	2.72	Aeronautical	Aeronautical	100%
IT expenses	0.67	Aeronautical	Common	Employee Ratio- JIAL (90.63:9.37)

Expense Category	Amount (₹ Crores)	Expense Classification As per JIAL	Expense Classification as per the Study	Allocation Ratio (Aero : Non-Aero)
Rates & taxes	0.06	Aeronautical	Common	Gross Asset Ratio (97.91:2.09)
Security expenses	2.68	Aeronautical	Aeronautical	100%
Corporate Allocation	5.18	Aeronautical	Common	Employee Ratio- JIAL (90.63:9.37)
Administrative Expenses - Collection Charges on UDF	0.23	Aeronautical	Aeronautical	100%
Administrative Expenses - Others	2.99	Aeronautical	Common	Appropriate Ratio as per individual line item
Insurance	0.58	Aeronautical	Common	Gross Asset Ratio (97.91:2.09)
R&M	7.05	Aeronautical	Common	Appropriate Ratio as per individual line item
Others	2.96	Aeronautical	Common	Terminal Ratio (90:10)
Independent Engineer Fees	1.80	Aeronautical	Aeronautical	100%
Total	46.64			

5.3 Assessment of allocation ratios for Common expenses

The following ratios have been computed and considered in this Study report for appropriate segregation of Common OPEX between Aeronautical and Non-aeronautical expenses for the period from FY 2016-17 to FY 2020-21.

5.3.1 Terminal Building ratio

The detail of terminal area has been sought by JIAL however same has not been provided by JIAL. Accordingly, the study considers 90% terminal area as aeronautical as suggested by IMG and as considered by AERA in previous tariff orders for similar airports. A detailed basis of such consideration has been provided as part of section 6.3 of Asset Allocation Report for Second Control Period of Jaipur Airport.

5.3.2 Gross Fixed Assets ratio

- i. Based on the outcome of the *Asset Allocation Study*, the average gross fixed assets ratio for JIAL has been considered as 97.88:2.12. The Aeronautical portion of the Gross Fixed Assets ratio as on March 31, 2022, is higher (97.88%) as compared to AAI (96.78%) on account of the following:
 - a. The Non-aeronautical assets (Net block) of AAI as on COD was only 2.09% (₹ 10.80 Crores) of the total assets (refer Table 24 of *Asset Allocation Study*). Such Net Block value is considered to be the deemed Gross Block for the Airport Operator.
 - b. Further, the Airport Operator has not developed any significant Non-aeronautical asset/facility during the period from COD to March 31, 2022.

5.3.3 Employee Ratio

- i. The department-wise breakup of employees from COD to March 31, 2022, along with the basis of computing the Employee ratio for Jaipur International Airport Limited is summarised in the table below:

Table 48: Employee details submitted by Jaipur International Airport Limited

Department	Classification as per JIAL	Select Employees of AAI	JIAL employees	Total Employee Head Count
Techno Commercial (Procurement department)	Aeronautical	-	2	2
Corporate Communication	Aeronautical	-	1	1
Corporate Affairs	Aeronautical	-	1	1
Cargo operations	Aeronautical	-	1	1
Security (includes Safety employees)		1	3	4
Legal	Aeronautical	-	1	1
Quality	Aeronautical	-	1	1
Information Technology	Aeronautical	1	1	2
Airside Management	Aeronautical	-	-	-
Terminal and Operation	Aeronautical	11	11	22
Non-Aeronautical Commercial		1	-	1
Human Resources and Admin	Aeronautical	35	2	37
Finance	Aeronautical	7	2	9
Engineering & Maintenance	Aeronautical	46	3	49
Commercial	Aeronautical	-	2	2
Aviation Rescue and Fire Fighting (ARFF) *		65	-	65
EHS	Aeronautical	-	1	1
Total		167	32	199

- ii. The cadre wise details of AAI employee have been provided as part of Schedule S of the signed Concession Agreement, further the department wise detail has been provided by JIAL at section 13.2.15 as part of their MYTP submission. The total number of AAI employees are same as 167 in both the documents.
- iii. Further, it is observed that the JIAL has considered the Manpower expenses of “Select Employees” of AAI as 100% Aeronautical.
- iv. There are 32 employees which have been deployed by JIAL during Post COD period. The details of these 32 employees have been submitted by JIAL as part of a clarification sought under the exercise. We have accordingly allocated department wise employee and determined employee allocation ratio for JIAL.
- v. Further, the Study has analysed the optimal number of employees, observing that the employee strength at Terminal and Operations have been doubled by JIAL. There are 11 AAI employee and additionally JIAL has deployed 11 more employees whereas there is no increase in Airport operations compared to pre-Covid traffic handled by AAI. A clarification in this regard has been sought from JIAL to which we have received following response vide email dated 21st August 2023:

AAI Employees are not transferred on the payroll of JIAL. JIAL is reimbursing the cost of AAI Employees to AAI as mandated under the Concession Agreement. AAI Employees are still AAI employees.

Further, as part of concession agreement, there are various additional mandatory compliances which JIAL has to ensure which includes the following:

- *Waiting Time for Check-In*
- *Waiting Time at Security Check*
- *Waiting Time at Immigration*

- *Waiting Time for Baggage Delivery*
- *Availability of FIDS*
- *Availability of Baggage Trolleys*
- *Passenger Assistance for wheel chair*
- *Cleanliness*

Apart from the above mandatory requirements, JIAL aims to provide best passenger experience.

Also, you may please refer that the Terminal Employee numbers for JIAL are less than what is approved by AERA for Lucknow Airport (LIAL) which has similar traffic of 5 MPPA. AERA has approved total employees of 12 for Terminal Operations + Airside Operations + CAO Office for the COD period of 5 months. Kindly refer Table 33 Annexure II - Study on Efficient Operation and Maintenance Expenses for CCSIA, Lucknow page.

From the above we understand that JIAL requires these employees for Terminal Operations and to meet the operational requirement as mandated by the Concession Agreement. JIAL also needs to create its own airport management team as AAI employees are deployed for limited period. Accordingly, in view of JIAL submission we consider that the employee deployment for airport operations is reasonable.

- vi. The department-wise Employee Headcount ratio as per the Study is summarised in the table shown below:

Table 49: Employee Ratio of the Airport Operator as per Study

Department	Classification	Select Employees of AAI	JIAL employees	Total Employee Head Count
Techno Commercial (Procurement department)	Common	-	2	2
Corporate Communication	Common	-	1	1
Corporate Affairs	Common	-	1	1
Cargo operations	Aeronautical	-	1	1
Security (includes Safety employees)	Aeronautical	1	3	4
Legal	Common	-	1	1
Quality	Aeronautical	-	1	1
Information Technology	Common	1	1	2
Airside Management	Aeronautical	-	-	-
Terminal and Operation	Aeronautical	11	11	22
Non-Aeronautical Commercial	Non-Aeronautical	1	-	1
Human Resources and Admin	Common	35	2	37
Finance	Common	7	2	9
Engineering & Maintenance	Aeronautical	46	3	49
Commercial	Non-Aeronautical	-	2	2
Aviation Rescue and Fire Fighting (ARFF)	Aeronautical	65	-	65
EHS	Aeronautical	-	1	1
Total		167	32	199
Direct Aeronautical employees		123	20	143
Direct Non-Aeronautical employees		1	2	3
Common employees		43	10	53
Total		167	32	199
Common employee's allocation				
Allocation ratio		99.19:0.81	90.91:9.09	

Department	Classification	Select Employees of AAI	JIAL employees	Total Employee Head Count
Common Aeronautical employees		42.65	9.09	51.74
Common Non-Aeronautical employees		0.35	0.91	1.26
Total Common employees		43.00	10.00	53.00
Head Count after allocation of Common employees				
Total Aeronautical employees		165.65	29.09	194.74
Total Non-Aeronautical employees		1.35	2.91	4.26
Total employees		167.00	32.00	199.00
Employee Ratio		99.19:0.81	90.91:9.09	97.86:2:14

- vii. Based on the above table it is proposed that:
- AAI Employee Ratio will be 99.19:0.81 (Aeronautical :Non-Aeronautical),
 - JIAL Employee Ratio will be 90.91:9.09 (Aeronautical :Non-Aeronautical) and
 - Overall Employee Ratio is 97.86:2.14.
- viii. Further, the Study proposes to use the AAI Employee Ratio to allocate AAI Manpower Cost, JIAL Employee ratio to allocate JIAL manpower cost. Also, the JIAL Employee Ratio is proposed to be used to allocate certain common expenses such as IT expenses and corporate cost allocation. A similar allocation methodology has also been considered in case of other similar airports.

5.3.4 Electricity ratio

- In past the utility expenses comprised of utility requirement at Airport, Cargo and ANS facility. The utility expense used to be allocated under these heads. In light of this a clarification has been sought by JIAL to provide allocation of utility expense to these heads, if any. Following response has been received by JIAL vide email dated 21st August 2023:

“Please note ANS activity is undertaken by AAI after the COD. These activities are continuing with AAI and are not transferred to JIAL.

Cargo facility earlier operated by AAI is in Carved out area and it is retained by AAI.

Therefore, the cost of electricity for JIAL for period from COD to 31st March 2022 is only for Airport.”

Further to the above response, JIAL vide email dated 9th October, 2023 declared the following:

“We confirm that the Utility Expenses (Electricity Cost) indicated in MYTP and model are net of recoveries from Concessionaires.”

Based on JIAL’s response above, it is understood that the electricity expenses pertain only to airport and is net of recoveries, hence no further allocation of these costs would be required.

5.4 Reallocation and Adjustment of Common O&M expenses of Airport Operator as per Study

5.4.1 Manpower expenses

- The Airport Operator has claimed an amount of ₹ 19.72 Crores towards Aeronautical Manpower expenses which includes ₹15.19 Crores towards cost of deputed employees (i.e., “Select Employees”) of AAI and ₹ 4.53 Crores towards cost of employees of the Airport Operator.
- It is observed that, the cost of “Select Employees” of AAI deputed at JIAL are being reimbursed to AAI by the Airport Operator on monthly basis and therefore included under the Manpower expenses claimed by the Airport Operator. It is pertinent to note here that, as per Clause 6.5 read

with Clause 28.4.3 of the Concession Agreement entered between AAI and Airport Operator, the cost of “Select Employees” (deputed employees) of AAI have been considered to be eligible for pass-through in the determination of Aeronautical charges. Based on the same, the cost of deputed employees of AAI claimed by the Airport Operator is considered to be an allowable expense, as per the Study.

- iii. However, as already mentioned in paragraph 5.3.3 iv above, such costs have been considered as entirely Aeronautical expenses by the Airport Operator which the Study proposes to reallocate in the AAI Employee Ratio (99.19:0.81), thereby resulting in a downward adjustment of ₹ 0.12 Crores.
- iv. Further, it is observed that the total manpower expenses of the employees of JIAL have been considered as 100% Aeronautical. However, it is proposed as per the Study to allocate the revised total manpower expenses of the Airport Operator based on JIAL Employee Ratio of 90.91:9.09 determined as per Table 49. The impact of such difference is downward adjustment of ₹ 0.41 Crores.
- v. The details of the total impact of revision in Aeronautical Manpower expenses amounting to ₹ 0.53 Crores are shown in the table below:

Table 50: Impact of revision in Aeronautical Manpower expenses of JIAL

(₹ in Crores)

Particulars	Manpower expenses – Select Employees of AAI			Manpower expenses – Airport Operator’s employees		Total
	Classification	Allocation %	Manpower Expenses	Allocation %	Manpower Expenses	Manpower Expenses
As per AO (A)	Aeronautical	100.00%	15.19	100.00%	4.53	19.72
Revision as per the Study (B)	Common	99.19%	15.07	90.91%	4.12	19.19
Impact (C = B - A)			(0.12)		(0.41)	(0.53)

5.4.2 Corporate Allocation Cost

- i. It is observed that the Aeronautical Corporate Allocation Cost of ₹ 5.18 Crores has been incurred by the Airport Operator towards Corporate Support Services received from the Holding Companies, namely, Adani Enterprises Limited (AEL) and Adani Airports Holding Limited (AAHL) for the period from Post-COD till March 31, 2022. This cost includes ₹ 3.06 Crores from AAHL and ₹ 2.12 Crore from AEL.
- ii. Further it is observed that, AEL provides various strategic functions/activities like corporate finance, legal, central procurement, green initiative, ESG, Information technology, taxation, management assurance, internal audit, shared service for financial transactions. human resource management, etc., and also includes various leadership functions. AAHL through its corporate structure, provides expertise and specialist domain knowledge in Airports Operation, Airside Management, Master Planning, Designing, Airport Development, Airport Regulatory, Human Resources, Transition Management, Hospitality, Customer management, Finance Management, Legal expertise, Cargo Development and management, Airline Marketing, Retail, Commercial, Space Leasing, Non-Aeronautical etc.
- iii. AAHL had hired independent consultant of repute to undertake allocation study and opined that support services provided at consolidated level have benefit of leveraging best practices, centralised monitoring and control and efficiencies and economies of scale.
- iv. AEL and AAHL incur costs at the corporate level to provide these services and support to various Group Companies (including Airports) and Airport companies. As advised by the

independent consultant these costs (except shareholders services and non-Aeronautical services) are recovered by AEL and AAHL through a pre-determined, appropriate allocation method.

- v. As per the independent study got conducted by AAHL such corporate cost allocation practice is adopted by various large corporates including Aviation companies in India and overseas. We have also observed that the consolidation of key services at corporate level is followed by various corporates and passed on of cost of such services to various group companies. It is followed by other private airport operators' holding entities, such as GMR Infrastructure Limited (GIL) and GMR Airports Limited (GAL), which provide corporate administration services to DIAL, GHIAL and GGIAL, and their costs are allocated based on suitable drivers. The AAI also allocates its Central Head Quarters (CHQ) / Regional Head Quarters (RHQ) costs to various airports based on appropriate drivers.
- vi. In respect of JIAL for the FY 2021-22, being the first year of operations post-COD (i.e., approximately 6 months) the Airport Operator has submitted that the Corporate Cost is allocated based on the ratio of revenue earned by each airport to the total revenues. This practice is in line with the methodology followed by AAI for the allocation of CHQ / RHQ costs for its airports and accordingly this Study considers the same to be appropriate.
- vii. JIAL has considered corporate cost allocation as 100% aeronautical. However, as the services provided by AAHL & AEL are mainly in the nature of provided specialised resources and knowledge and also it benefits whole airport ecosystem, the cost needs to be allocated in the same ratio as the employee cost of JIAL manpower cost has been allocated. Accordingly, JIAL employee ratio has been considered to allocate this cost in this Study. As per Table 49 above the employee ratio of JIAL is 90.91% aeronautical and 9.09% Non-Aeronautical. Further, it is noted that the Corporate Allocation Cost claimed by JIAL includes an amount of ₹ 0.05 Crores allocated towards In-house Legal department, which is in addition to the cost of one (01) employee of Legal department, already considered under the manpower expenses of JIAL (refer Table 49) and is not justified. Hence, the Study proposes to exclude ₹ 0.05 Crores from the Corporate Allocation cost submitted by JIAL. The impact of such difference is a decrease of ₹ 0.47 Crores as shown in the table below:

Table 51: Impact of revision in Corporate Allocation Cost of the Airport Operator

(₹ in Crores)

Particulars	Allocation	Allocation ratio	Aeronautical expenses
As per AO	Aeronautical	100%	5.18
Less: Legal Expenses of AEL & AAHL			(0.05)
Net Corporate Cost			5.13
Corporate Cost	Aeronautical	90.91%	4.66
Corporate Cost	Non-Aeronautical	9.09%	0.47
Adjustment in Aeronautical Cost			(0.47)

5.4.3 Administrative expenses

- i. The Airport Operator has submitted administrative expenses of ₹ 3.00 Crores incurred towards Professional & Consultancy, Travelling & Conveyance, Auditing and Miscellaneous expenses.
- ii. Administrative expense includes ₹ 1.83 Crores towards Professional Consultancy, ₹ 0.74 Crores towards travelling and conveyance, ₹ 0.01 Crores audit fee & ₹ 0.41 Miscellaneous expenses. Professional consultancy expense mainly towards IT outsourcing, Bank Charges for Bank

Guarantee, Internal audit, airport operation, passenger profiling survey, training and recruitment etc. Airport Operator in its submission has considered these expenses as 100% Aeronautical.

- iii. Hence, it is proposed to reallocate the same based on Gross Fixed Asset ratio (97.88:2.12) / revised Employee Head Count Ratio (90.91:9.09) / revised Terminal Building ratio (90:10) depending upon the nature of expenses and also consider AOCC services as Aeronautical, in line with the ratio allocation followed for AAI up to COD. The impact of such reallocation is a decrease of ₹ 0.11 Crores and details of the same are shown in the table below:

Table 52: Impact of revision in Aeronautical Administrative expenses of the Airport Operator

(₹ in Crores)

Particular	Amount	Allocation	Allocation %	Aeronautical Cost
Administrative Expense				
Professional Consultancy				
IT Outsourcing Charges to IBM & Wipro	0.52	Common-TB	90.00%	0.47
Bank Charges for Bank Guarantee	0.18	Common-GB	97.88%	0.17
Audit Charges (Internal Audit, Tax Audit, IFC Audit) and ROC/XBRL Charges	0.12	Common-GB	97.88%	0.12
Consultancy Services for passenger profiling survey	0.08	Common-GB	97.88%	0.08
OLS Survey Charges	0.08	Aeronautical	100.00%	0.08
ACI Membership	0.10	Aeronautical	100.00%	0.10
License for Software (CRM, Microsoft, Avacom etc)	0.08	Common-ER	90.91%	0.07
Consultancy as Operations Head (for interim period)	0.21	Aeronautical	100.00%	0.21
Professional Fees - PwC	0.18	Common-GB	97.88%	0.18
Training Charges	0.07	Common-ER	90.91%	0.07
Charges paid to Recruitment Consultant, Assessment & Background verification of New Employees	0.05	Common-ER	90.91%	0.04
Exp for Novation of contracts (incl. Notary, Printing etc)	0.02	Common-GB	97.88%	0.02
Valuation and Actuarial Expenses	0.01	Common-ER	90.91%	0.01
Monitoring of Sch H parameters and Environment	0.03	Common-TB	90.00%	0.03
Consultancy for HR policy alignment	0.02	Common-ER	90.91%	0.02
Others (includes ISO certification, e-tendering, payroll processing etc)	0.08	Common-TB	90.00%	0.08
Sub-Total	1.84			1.74
Travelling & Conveyance				
Hiring of Drivers for airport (Ram Karan Portorage Contractor)	0.32	Aeronautical	100.00%	0.32
Hiring Charges for Runway Rubber Removal Machine (to AAI)	0.11	Aeronautical	100.00%	0.11
Hiring of vehicles AAI-Legacy (Sriram Associates)	0.05	Aeronautical	100.00%	0.05
AMC for Rosenbauer Panther ACFT-Legacy	0.01	Aeronautical	100.00%	0.01
Veelo Charges (Radio Frequency Charges for walky-talky operations at Airside) to AAI	0.14	Aeronautical	100.00%	0.14
Employee travel expenses	0.10	Common-ER	90.91%	0.09
Sub-Total	0.74			0.73
Audit Fee	0.02	Common-GB	97.88%	0.01
Miscellaneous expenses	0.41	Common-GB	97.88%	0.40
Sub-Total	0.43			0.42
Total	2.99			2.88
Impact				(0.11)

5.4.4 Repairs & Maintenance expenses

- i. The Airport Operator has incurred an amount of ₹ 7.05 Crores towards Repairs & Maintenance which includes maintenance of various assets such as Terminal Building, Baggage Handling System, AGL lighting, CISF, Airside management including bird chaser, electrical, HVAC, elevator & escalator etc. Most of the maintenance service providers during the period under true up have been carried forward from AAI contracts.
- ii. The Airport Operator has considered R&M expense as 100% Aeronautical. However, as per AERA guidelines only expense which are required to provide Aeronautical Service can be allowed as pass through in tariff. Accordingly, the R&M expense is also required to be allocated as per applicable allocation ratio.
- iii. Following are the details of R&M expense submitted by the Airport Operator and the allocation exercise undertaken thereon. The impact of such difference is an adjustment i.e., decrease of 0.36 Crores as shown in the table below:

Table 53: Impact of revision in Aeronautical R&M expenses of the Airport Operator

(₹ in Crores)

Area of Maintenance/ Services	Amount	Allocation	Allocation %	Aeronautical Cost
Terminal Maintenance	1.07	Common-TB	90.00%	0.96
BHS,VDGS&PBB etc	0.74	Aeronautical	100.00%	0.74
AGL	0.72	Aeronautical	100.00%	0.72
Terminal Electrical	0.61	Common-TB	90.00%	0.55
Terminal Electrical	0.50	Common-TB	90.00%	0.45
Ground Lighting	0.44	Aeronautical	100.00%	0.44
Bird Chaser	0.41	Aeronautical	100.00%	0.41
AGL	0.54	Aeronautical	100.00%	0.54
HVAC	0.31	Common-TB	90.00%	0.28
General	0.31	Common-TB	90.00%	0.28
Vehicle hiring	0.20	Common-ER	90.91%	0.18
Misc. Electrical works	0.15	Common-GB	97.91%	0.15
Solar AMC	0.11	Common-TB	90.00%	0.10
Terminal Civil	0.10	Common-TB	90.00%	0.09
Decor	0.08	Common-TB	90.00%	0.07
Airport Equipment's	0.07	Aeronautical	100.00%	0.07
Terminal	0.06	Common-TB	90.00%	0.06
Decor	0.06	Common-TB	90.00%	0.05
Escalator & Elevator	0.05	Aeronautical	100.00%	0.05
PBH	0.05	Common-TB	90.00%	0.04
DG sets	0.05	Common-TB	90.00%	0.04
XBIS	0.04	Aeronautical	100.00%	0.04
Fire Crash Tender	0.04	Aeronautical	100.00%	0.04
UPS General	0.04	Common-TB	90.00%	0.04
Energy Saving	0.03	Aeronautical	100.00%	0.03
Apron	0.03	Aeronautical	100.00%	0.03
Terminal-Counters	0.03	Aeronautical	100.00%	0.03
Decor	0.02	Common-TB	90.00%	0.02
Escalator & Elevator	0.02	Aeronautical	100.00%	0.02
Photometric field test	0.02	Aeronautical	100.00%	0.02
Misc.	0.15	Aeronautical	100.00%	0.15
Total	7.05			6.69
Impact				(0.36)

5.4.5 Other Operating expenses

- i. It is observed that the Other Operating expenses totalling to ₹ 7.42 Crores includes amount incurred towards IT expenses, Rates & Taxes, Security expenses, Collection Charges, Insurance, Outsource manpower, Housekeeping, Bank & Finance Charges.

- ii. The Airport Operator has considered Other Operating expense as 100% Aeronautical. However, as per AERA guidelines only expense which are required to provide Aeronautical Service can be allowed as pass through in tariff. Accordingly, the Other Operating expenses is also required to be allocated as per applicable allocation ratio.
- iii. Following are the detail of R&M expense submitted by the Airport Operator and the allocation exercise undertaken thereon. The impact of such difference is an adjustment i.e., decrease of ₹ 0.37 Crores as shown in the table below:

Table 54: Impact of revision in Aeronautical Other Operating Expenses of Airport Operator

(₹ in Crores)

Particular	Amount	Allocation	Allocation %	Aeronautical Cost
IT expenses	0.67	Common-ER	90.91%	0.61
Rates & taxes	0.06	Common-GB	97.88%	0.06
Security expenses- Screeners, BHS, Airport Security etc.	2.68	Aeronautical	100.00%	2.68
Administrative Expenses - Collection Charges on UDF	0.23	Aeronautical	100.00%	0.23
Insurance	0.58	Common-GB	97.88%	0.57
Others - Housekeeping	2.96	Common-TB	90.00%	2.66
Total	7.18			6.81
Impact				(0.37)

5.5 Rationalisation Check of Aeronautical Repairs & Maintenance expenses of Airport Operator

- 5.5.1 In respect of Repairs & Maintenance expenses, it is observed that the AO has submitted an amount of ₹ 7.05 Crores for the period from COD to March 31, 2022. However, the same has already been adjusted due to reclassification done in above section and post reclassification the revised amount of ₹ 6.69 Crores is compared with 6% of Opening RAB to arrive at the amount proposed to be allowed by the Study.
- 5.5.2 The post reclassification amount of Repairs & Maintenance expenses and its comparison with 6% of Opening RAB is summarised below:

Table 55: Aeronautical R&M expenses and opening RAB of the Airport Operator

(₹ in Crores)

Particulars		COD to March 31, 2022
Aeronautical Repairs & Maintenance expenses submitted by Airport Operator	A	7.05
Aeronautical Repairs & Maintenance expenses post-reclassification as per the Study	B	6.69
Proportionate Repairs & Maintenance expenses for entire year, i.e., 12 months (B *365/172)	C	14.19
Opening RAB as on COD*	D	508.10
Proportionate Repairs & Maintenance as % of RAB (E= (C/D*100)	E	2.79%
Proportionate amount of 6% of Opening RAB for 172 days (D* 6%*(172/365))	F	14.36
Repairs & Maintenance expenses proposed to be allowed for the Airport Operator as per the Study	G	6.69
Amount proposed not to be considered as per the Study (H = B – G)	H	0.00

* As determined in paragraph 4.8.5, of the *Asset Allocation Study report*

- 5.5.3 It is observed that the proportionate Repairs & Maintenance expenses of the Airport Operator as a percentage of RAB is lower than 6% of Opening RAB and hence the same need not be further rationalised as shown in Table 55: above.

5.6 Impact of Reallocation as per Study

5.6.1 The table below provides a summary of submission of Airport operator, revision of OPEX as part of this study and net impact for the period 11th October 2021 to 31st March 2022:

Table 56: Impact of proposed reallocation of Airport Operator's Aeronautical O&M expenses

(₹ in Crores)

Particular	AO Submission			Study		
	Total Expense	Aero %	Aero Expense	Allocation Basis	Aero Expense	Net Impact
Manpower expenses - AAI employees	15.19	100%	15.19	Common (ER-AAI)	15.07	-0.12
Manpower expenses - JIAL employees	4.53	100%	4.53	Common (ER-JIAL)	4.12	-0.41
Utility expenses	2.72	100%	2.72	Aeronautical	2.72	0.00
IT expenses	0.67	100%	0.67	Common (ER-JIAL)	0.61	-0.06
Rates & taxes	0.06	100%	0.06	Common (GB)	0.06	-0.001
Security expenses	2.68	100%	2.68	Aeronautical	2.68	0.00
Corporate Allocation	5.18	100%	5.18	Common (ER-JIAL) Less: Legal Expenses	4.66	-0.52
Administrative Expenses - Collection Charges on UDF	0.23	100%	0.23	Aeronautical	0.23	0.00
Administrative Expenses - Others	2.99	100%	2.99	Common (TB/ER/GB)	2.89	-0.11
Insurance	0.58	100%	0.58	Common (GB)	0.57	-0.01
R&M	7.05	100%	7.05	Common (TB/ER/GB)	6.69	-0.36
Others	2.96	100%	2.96	Common (TB)	2.66	-0.30
Independent Engineer Fees	1.80	100%	1.80	Aeronautical	1.80	0.00
Total	46.64		46.64		44.76	(1.89)

* TB – Terminal Building Ratio

ER – Employee Ratio

GB – Gross Block Ratio

5.7 Summary

5.7.1 As per the submission of the Airport Operator the total Aeronautical O&M expenses for the period from COD to March 31, 2022, was ₹ 46.64 Crores (refer Table 56).

5.7.2 Based on the reallocation of the O&M expenses, the downward adjustment in the Aeronautical O&M expenses for the aforesaid period is ₹ 1.89 Crores (refer Table 56) and the reallocated Aeronautical O&M expenses (prior to rationalisation) for the period from COD to March 31, 2022 has been determined as ₹ 44.76 Crores (refer Table 56).

6. INTERNAL BENCHMARKING

6.1 Background

6.1.1 The Internal Benchmarking of JIA's O&M expenses involves analysis of trends in the Aeronautical O&M expenses:

- For the period from FY 2011-12 to FY 2020-21 (CAGR comparison of Major O&M expenses for the First Control Period with Second Control Period up to FY 2020-21 on AAI's True up submission and correlation of each of the Major O&M expenses with Passenger traffic and ATM during the same period.
- FY 2020-21 has been excluded from this CAGR analysis since the airport operations and passenger traffic and ATM were significantly impacted by COVID-19 pandemic. However, FY 2020-21 data has been included in certain tables and charts in this Chapter for the purpose of complete presentation of information.

6.2 Trend analysis of Major Aeronautical O&M expenses as per Study

6.2.1 The trend analysis of CAGR of Major O&M expenses, namely, Employee benefit expenses, administrative expenses, Operating expenses, and Repairs & Maintenance for the period FY 2011-12 to 2015-16 (i.e., First Control period) as compared with FY 2016-17 to FY 2019-20 (i.e., Second Control period without considering Covid year i.e., FY 2020-21) in correlation with per PAX and per ATM for the same period has been presented in the tables and corresponding charts below:

Table 57: CAGR of Passenger Traffic, ATM and Major O&M expenses of JIA

(₹ in Crores)

Major O&M expenses	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	CAGR (5 years)	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	CAGR (4 years)
Employee/ Payroll	27.20	32.50	27.30	28.80	23.90	-2.55%	18.79	27.87	37.64	34.4	16.28%
Admin. & General	10.1	8.3	7.2	10.2	10.7	1.16%	32.47	37.57	56.49	67.44	20.05%
Utility & Outsourcing	2.6	3	2.9	3.2	4	9.00%	5.24	8.33	6.24	6.81	6.75%
Repairs & Maintenance	5	6.9	4.4	7.9	8.5	11.20%	8.34	12.75	13.86	14.74	15.30%
Total	44.90	50.70	41.80	50.10	47.10	0.96%	64.84	86.52	114.23	123.34	17.44%
Traffic (MPPA)	1828304	1802479	1981951	2197996	2887189	9.57%	3783458	4757178	5471223	5031561	7.39%
ATMs (*000)	18603	18260	19808	19852	24032	5.25%	32340	42289	46185	39484	5.12%
Major O&M expenses per PAX	245	281	210	227	163	-7.86%	171	181	208	245	9.36%
Major O&M expenses per ATM	24135	27765	21102	25236	19598	-4.08%	20050	20458	24732	31237	11.72%

Figure 6: CAGR of Major O&M expenses for the periods (FY12-16 & FY17-20)

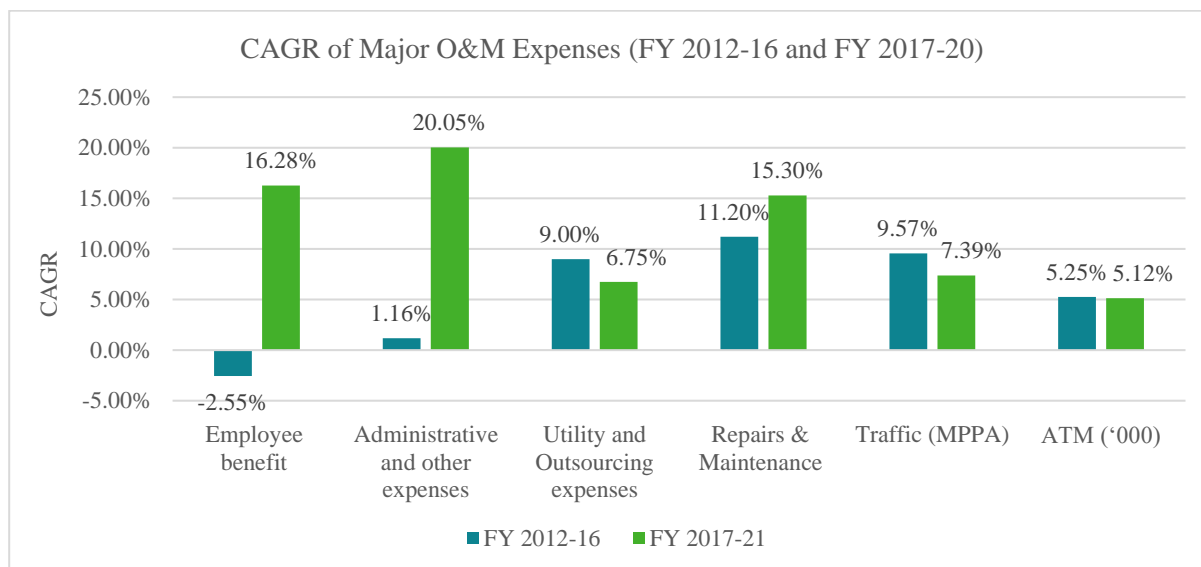


Figure 7: Analysis of Major O&M expenses per ATM (FY12 - FY20)

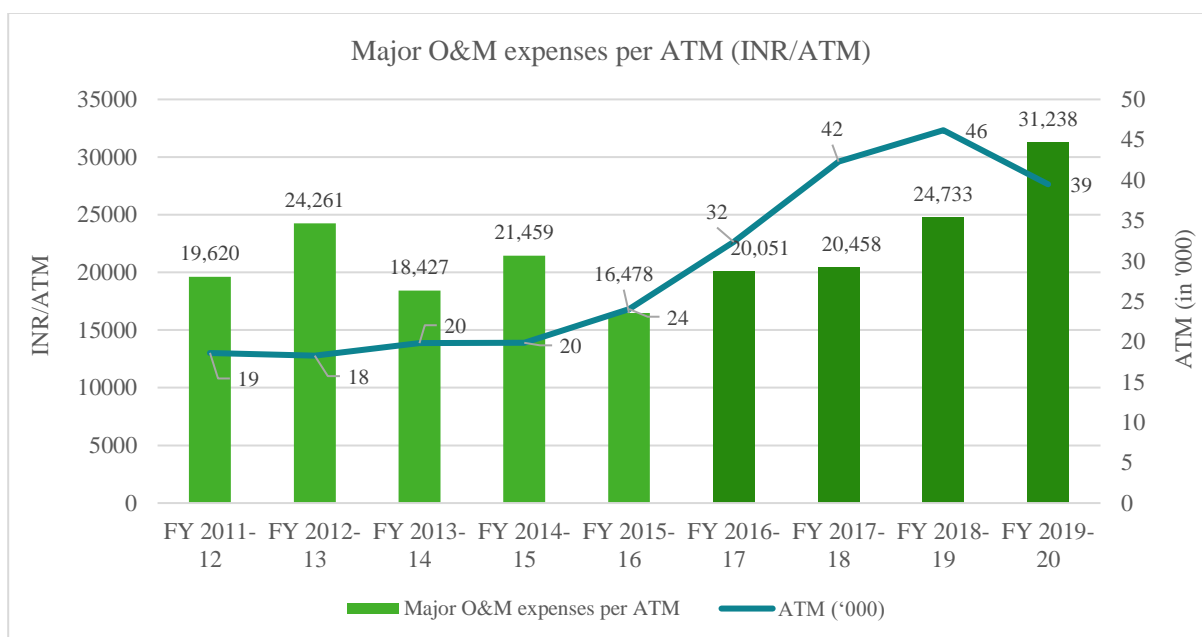
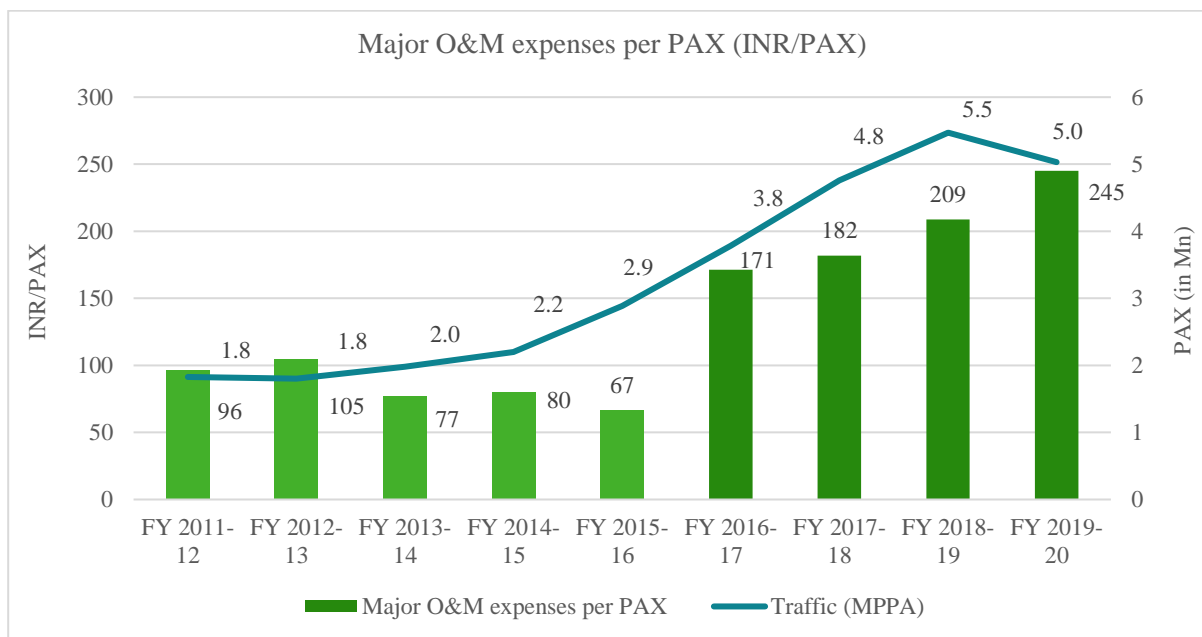


Figure 8: Analysis of Major O&M expenses per PAX (FY12 - FY20)



6.2.2 It can be observed from Table 52, Figure 6, Figure 7, and Figure 8 above that, in general the CAGR of Major O&M expenses grew at a rate higher than the respective growth in Traffic of PAX and ATM, for both the First and Second Control Periods. Further, it is observed that the CAGR of Second Control Period (17.44%) is significantly higher than the CAGR of First Control Period (0.96%).

6.2.3 In respect of the First Control Period, i.e., from FY 2011-12 to FY 2015-16, O&M expenses grew at a lower CAGR of 0.96% in comparison with PAX growth of 9.57% and ATM growth of 5.25% during the same period (refer Table 57).

6.2.4 In respect of the Second Control Period i.e., from FY 2016-17 to FY 2019-20 (excluding COVID year 2020-21), major O&M expenses grew at a higher CAGR of 17.44% in comparison with PAX growth of 7.39% and ATM growth of 5.12% during the same period (refer Table 57).

6.2.5 Further it can be seen that, the CAGR of Utility expenses in the Second Control Period is slightly lower than the CAGR in the First Control Period.

6.3 Inflation-adjusted analysis of Major O&M expenses as per Study

6.3.1 The actual CAGR of the major components of Aeronautical O&M expenses, including on a per PAX and per ATM-basis, for the period from FY 2016-17 to FY 2019-20 (as per Table 57) have also been compared with the Wholesale Price Index (WPI)-based inflation adjusted expenses, which is presented in the table below. While FY 2016-17 has been considered as the base year, the actual expenses for years from FY 2017-18 to FY 2019-20 (as per Table 57) have been adjusted downward by the WPI inflation factor to reflect the real increase in the expenses. Other outflows /expenses have been excluded for this analysis.

Table 58: Analysis of WPI Inflation-adjusted Major O&M expenses of JIA

(₹ in Crores)

Major O&M expenses	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	Total	CAGR
WPI*	100	102.96	107.35	109.14		
Employee benefit expenses	18.793	29.541	38.263	34.353	120.950	16.28%
Administrative and other expenses	32.470	39.825	57.432	67.440	197.167	20.05%
Utility & Outsourcing expenses	5.241	8.828	6.347	6.805	27.221	6.75%

Major O&M expenses	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	Total	CAGR
Repairs & Maintenance	8.340	13.515	14.091	14.740	50.686	15.30%
<u>Per PAX (₹-Crores)</u>						
Employee benefit expenses	0.020	0.016	0.014	0.015	0.065	-7.64%
Administrative and other expenses	0.012	0.012	0.010	0.007	0.041	-10.55%
Utility and Outsourcing expenses	0.072	0.054	0.086	0.074	0.286	0.60%
Repairs & Maintenance	0.045	0.035	0.039	0.034	0.154	-6.86%
<u>Per ATM (₹-Thousands)</u>						
Employee benefit expenses	1,653	1,032	817	1,095	4,598	-9.78%
Administrative and other expenses	996	893	681	639	3,210	-10.49%
Utility and Outsourcing expenses	6,170	4,790	7,276	5,801	24,039	-1.53%
Repairs & Maintenance	3,877	2,632	2,779	2,924	12,214	-6.81%

* Source: Office of The Economic Adviser, Government of India (<https://eaindustry.nic.in>)

6.4 Proportion of Domestic and International Passenger Traffic

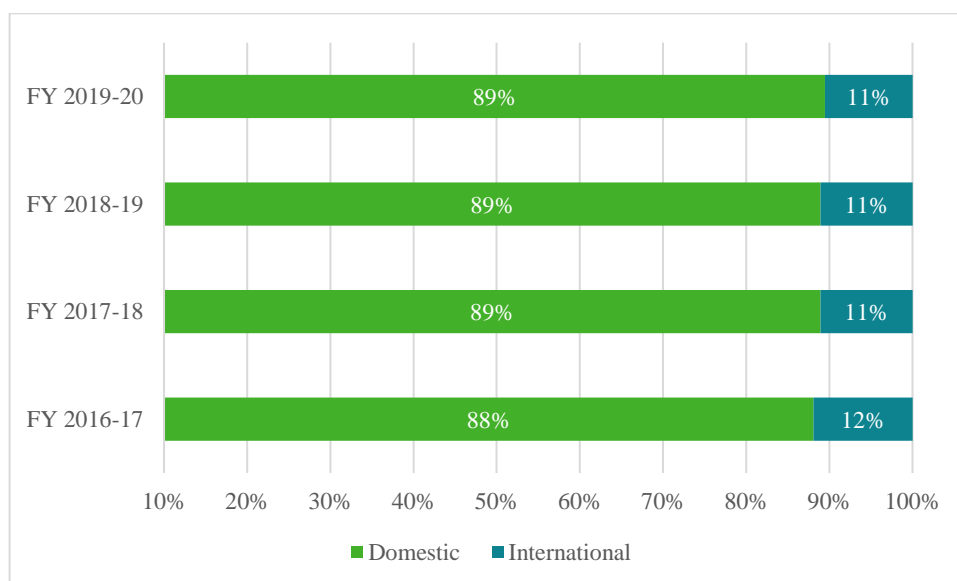
6.4.1 The profile of passenger traffic at JIAL was also analysed as part of Internal Benchmarking as per this Study report. O&M expenses related to Domestic passenger movement such as utilities and maintenance costs, are generally lower, on account of lesser time spent at terminal building and passenger hold area, and higher gate utilisation. Comparatively, the international passenger movement involves relatively higher cost on account of longer time spent in terminal building and passenger hold area and lower gate capacity utilisation. Therefore, it is expected that the proportion of Domestic and International passengers would impact the trend in Operating expenses, which relate to costs of utilities and upkeep of the terminal building.

6.4.2 The proportion of Domestic and International passengers for the period from FY 2016-17 to FY 2020-21, along with the per PAX and per ATM inflation-adjusted Operating expenses are summarised in the table below:

Table 59: Pax Profile and per Pax Utility Expenses of JIA

Passenger profile	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20
Domestic	88%	89%	89%	89%
International	12%	11%	11%	11%
Utility and Outsourcing expenses / PAX (₹, inflation adjusted)	721,870	538,886	862,005	739,346
Utility and Outsourcing expenses / ATM (₹, inflation adjusted)	6,709	5,220	7,658	8,763

Figure 9: Traffic Mix at JIA



6.4.3 It is observed that proportion of Domestic passengers has been on the higher side from FY 2016-17 but has increased only marginally i.e., from 88% in FY 2016-17 to 89% in FY 2019-20. However, the corresponding increase in inflation-adjusted per PAX and per ATM Utility and Outsourcing expenses during the period has only been 0.60% and -1.53%, respectively (refer Table 58).

6.5 Summary of Internal Benchmarking

6.5.1 Out of the four major components of O&M expenses, three major expenses namely, Employee cost, Administrative expenses, and Repairs & Maintenance expenses have grown at a higher CAGR than that of PAX and ATM traffic during the period FY 2016-17 to FY 2019-20.

6.5.2 Further, the CAGR of major O&M expenses during Second Control Period (from FY 2016-17 to FY 2019-20) i.e., 17.44% was significantly higher than CAGR of 0.96% during the First Control Period (FY 2011-12 to FY 2015-16). This is primarily on account of increase in Airport staff salary cost, revision in maintenance contract rates. Further, a significant portion of the rise is attributed to Administrative and General expenses consisting of CHQ & RHQ allocation.

6.5.3 In respect of Second Control Period i.e., for the period FY 2016-17 to 2019-20 (excluding FY 2020-21) the major O&M expenses grew at a higher CAGR of 17.44% in comparison with PAX growth of 7.39% and ATM growth of 5.12%.

6.5.4 As submitted by AAI, the key reason of such higher growth in O&M expenses is mainly due to pay scale revision and arrears disbursement to Jaipur Airport employees as per 7th Pay Commission report and increase in CHQ/RHQ allocation due to pay revision, inflation, and increase in revenues of Jaipur station.

6.5.5 It was observed that, the CAGR of Utility and Outsourcing expenses in the Second Control Period was lower than the CAGR in the First Control Period.

6.5.6 The Study has determined that there is a need to rationalise and bring more efficiency by optimising the O&M expenses at JIAL.

7. EXTERNAL BENCHMARKING

7.1 Background

7.1.1 The benchmarking of O&M expenses with similar airports has been done to ascertain the reasonableness of the O&M expenses of JIA (Jaipur Airport). It must be noted that, in general, benchmarking is a complex exercise on account of the variances in each airport caused by the following factors:

- Passenger traffic
- Passenger profile (i.e., Domestic vs. International; tourist, business and industrial visitors)
- Private sector ownership vs. Airports Authority of India (AAI) operated
- Extent of outsourcing of activities, such as ground, fuel and baggage handling
- Local labour conditions impacting minimum wages
- Age of the airport, and extent of automation and investment in IT systems
- Physical size of the airport, proximate city infrastructure, and availability of surplus land for Non-aeronautical activities
- Air-side infrastructure such as apron design and availability of aerobridges
- Weather conditions that can impact extent of air-conditioning and heating
- Usage of facilities by Defence forces and VIP movements

7.1.2 It has been determined that based on parameters such as passenger traffic, terminal building area, passenger mix, weather patterns and climate-induced operational parameters, Chaudhary Charan Singh International Airport (Lucknow Airport), Sardar Vallabhbhai Patel International Airport (Ahmedabad Airport), Pune International Airport (Pune Airport), and Cochin International Airport (Cochin Airport), are comparable to JIA (Jaipur Airport). Hence, the O&M expenses of JIA have been benchmarked against all the above-mentioned airports.

7.1.3 The benchmarking exercise has been performed only in respect of Major O&M expenses incurred during the period from FY 2016-17 to FY 2019-20. FY 2020-21 and FY 2021-22 have been excluded from this analysis, since the airport operations, and passenger traffic and ATM were significantly impacted by COVID-19 pandemic and the change of JIA's management from AAI to the Airport Operator resulted in transition costs affecting trends in O&M expenses for these financial years.

7.1.4 Also, it would be pertinent to highlight here that the benchmarking has been carried out based on suitable parameters such as passenger traffic, terminal area, assets under management and total revenue.

7.2 Analysis of Major Aeronautical O&M expenses

7.2.1 The following table summarizes the average traffic (in million) from FY17 to FY20, Terminal Area, Closing RAB of FY 2020 and total revenue from FY 17-20 across select airports considered in this study.

Table 60: Parameters for Peer Group Benchmarking

Airport location	Traffic (Mn) (Avg. of FY 17-20)	Terminal Area (lakh sqm)	Closing RAB of FY 2020 (₹ in Crores)	Total Revenue FY 17-20 (₹ in Crores)
Jaipur	4.23	0.25	312.75	636.24
Lucknow	4.92	0.30	207.46	784.94
Ahmedabad	9.80	0.70	328.92	1068.58

Airport location	Traffic (Mn) (Avg. of FY 17-20)	Terminal Area (lakh sqm)	Closing RAB of FY 2020 (₹ in Crores)	Total Revenue FY 17-20 (₹ in Crores)
Pune	6.54	0.22	102.09	681.92
Cochin	9.72	2.21	1517.64	2268.94

- 7.2.2 The comparable airports in terms of passenger traffic, Terminal Area, and Total Revenue are Lucknow and Pune. However, Pune airport is a civil enclave, so its cost structure may not be comparable to that of typical AAI airports. Nevertheless, this airport has been included to have a wider peer group for comparison. In terms of the aeronautical assets managed, Lucknow and Ahmedabad are comparable airports in the peer group.
- 7.2.3 The major expense from FY 17-20 under O&M expenses across the select airports considered above are summarised in the table below:

Table 61: Comparison of Major O&M Expenses among peer Airports

(₹ in Crores)

Airport location	Employee		R&M		Utilities		A&G		CHQ/RHQ		Total
	Value	%	Value	%	Value	%	Value	%	Value	%	Value
Jaipur	110.34	30%	49.28	14%	21.11	6%	14.81	4%	169.50	47%	363.84
Lucknow	149.50	30%	52.40	11%	33.10	7%	78.70	16%	181.01	37%	494.71
Ahmedabad	134.60	19%	136.66	19%	79.56	11%	67.46	10%	280.98	40%	702.09
Pune	122.98	44%	19.72	7%	37.90	14%	13.55	5%	80.67	29%	279.45
Cochin	257.19	39%	79.30	12%	102.37	16%	87.84	13%	-	0%	653.80

From the above table and figures the following observations may be gathered:

- 7.2.4 Among the closest comparable airport in terms of passenger traffic (i.e., Lucknow), JIA has a lower O&M expense in the Second Control Period. Among all the peer airports selected for comparison, the employee expenses of Jaipur is the lowest amongst all. Therefore, the case for detailed analysis of employee expenses does not arise.
- 7.2.5 The A&G expenses of JIA is among the lowest among all the other airports in peer comparison. The closest airport in terms of total O&M expenses is Pune, but the share of A&G expenses as a total of O&M expenses for JIA is the lowest. Hence, further scrutiny on the reasonableness of A&G expenses of JIA is not required.
- 7.2.6 Ahmedabad, which is the closest airport in terms of the aeronautical assets managed, has a much higher R&M expense when compared to JIA (SVPIA's R&M expenses is ~3x of that of Jaipur). From this preliminary analysis, it seems that the R&M expenses for JIA are on the lower side and would not need further analysis.
- 7.2.7 When compared to Lucknow and Pune Airports, the only airports that are comparable in terms of terminal area, the utility expenses of JIA are the lowest. Thus, no further analysis to check the reasonableness of these expenses is required.
- 7.2.8 With respect to CHQ/RHQ expenses, the expenses of JIA are at par with that of Lucknow (closest in terms of total revenue having the same RHQ). (Pune Airport is a civil enclave with different RHQ

and cost structure, and hence ignored in this comparison.) Therefore, the CHQ/RHQ expenses would not require further study.

7.3 Summary of External Benchmarking

- 7.3.1 The Study has determined that there does not lie a need to rationalise and bring more efficiency by optimising the O&M expenses at JIA through the regulation of expenses based on External Benchmarking.
- 7.3.2 It is noted from AERA's previous tariff orders of other Public-private partnership (PPP) airports such as BIAL, MIAL, HIAL, DIAL and CIAL that the Repairs & Maintenance expenses approved for future years are generally in the range of 6% of the asset values. It is proposed that JIA should plan to improve efficiency in Repairs & Maintenance expenses and limit such expenses within the range of 6% of the asset values.

8. OVERALL SUMMARY OF THE STUDY

8.1 Study Period, Operator and Trends

- 8.1.1 The Study is conducted for the second control period i.e., FY'16 to FY'21, Pre COD i.e., 01st April 2021 to 10th October 2021 and also post COD period i.e. 11th October 2021 to 31st March 2022.
- 8.1.2 JIA was operated by AAI up to October 10, 2021. Pursuant to the Concession Agreement entered into by AAI and the Airport Operator, the Airport Operations are handled by Jaipur International Airport Limited (JIAL) from October 11, 2021.
- 8.1.3 The total passenger traffic grew at a CAGR of 7.39% and the CAGR of air traffic movement was 5.12% for the period FY 2016-17 – FY 2019-20.

8.2 Assessment of Reasonableness of O&M expenses (Tariff Order Projections vs Actuals)

- 8.2.1 The total Aeronautical O&M expenses of ₹ 502.43 Crores incurred as per true up submission for the Second Control Period (FY 2016-17 to 2020-21) is significantly higher than the amount approved in the Tariff Order of ₹ 290.20 Crores which resulted in a deviation of 73% from the approved projections.
- 8.2.2 It is noted that the major reason for the overall deviation of 73% in the total Aeronautical O&M expenses for the Second Control period, is the increase in the actual CHQ & RHQ expenses incurred by AAI on account of pay revision.
- 8.2.3 The total Employee benefit expenses incurred by AAI till FY21 is lower than the approved amount as per the Tariff order for the Second Control period. It is also observed that the expenses were higher than the approved amount in FY 2018-19 and FY 2019-20 of the Second Control Period. This is due to pay revision and disbursement of arrears to employees as per the 7th Pay Commission Report.
- 8.2.4 Repairs & Maintenance expenses, excluding the amortisation of runway recarpeting expenses, were higher than that approved as per the Tariff Order for all the FYs of the Second Control Period. Further, it is observed that the expenses were lower than 6% of the Opening RAB (as approved in AERA tariff orders of other airports) for all the FYs of the Second Control Period.
- 8.2.5 It was observed that the actual Utility and Outsourcing expenses incurred were higher than the Tariff Order projections and this was mainly due to hiring of vehicles on need basis done by AAI, which was not envisaged in the Tariff Order. A significant spike is observed in Utility expense of FY18. The increase in electricity cost, as per AAI submission, is attributed to the load increase due to extension of arrival & departure area in Terminal-2 and apron with additional 19 bays. Additionally, there were further developments including new sub fire station, control room at ATC, CCR room, and installation of CAT-III lightning system.
- 8.2.6 The Study has determined that the Employee expenses of the Airport Operator for the post-COD period are on the higher side considering that there are existing employees of AAI i.e., “Select Employees” deputed to JIA for handling various departmental functions at the airport in accordance with the concession terms.
- 8.2.7 The Airport Operator in its submission for Post-COD period has considered all expense as aeronautical which has been re-allocated as per AERA guidelines.

8.3 Segregation of costs

- 8.3.1 As per the submission of AAI the total Aeronautical O&M expenses for the period from FY2016-17 to October 10,2021 was ₹ 595.50 Crores. Based on the reallocation of the O&M expenses, the downward adjustment in the Aeronautical O&M expenses for the aforesaid period is ₹ 75.35 Crores

and the reallocated Aeronautical O&M expenses for the period FY 2016-17 to October 10, 2021 has been determined as ₹ 520.15 Crores.

- 8.3.2 As per the submission of the Airport Operator the total Aeronautical O&M expenses for the period from COD to March 31, 2022 was ₹ 46.64 Crores. Based on the reallocation of the O&M expenses, and other corrections, the downward adjustment in the Aeronautical O&M expenses for the aforesaid period is ₹ 1.89 Crores and the reallocated Aeronautical O&M expenses for the period from COD to March 31, 2022 has been determined as ₹ 44.76 Crores.

8.4 Internal and External Benchmarking

- 8.4.1 Internal Benchmarking is performed by analysing the CAGR trend of four Major Aeronautical O&M expenses in comparison with the growth of PAX and ATM traffic over the period FY 2011-12 to FY 2019-20 (comparison of First Control Period with Second Control period excluding FY 2020-21).
- 8.4.2 The CAGR of major O&M expenses during Second Control Period (from FY 2016-17 to FY 2019-20) i.e., 17.44% was significantly higher than CAGR of 0.96% during the First Control Period (FY 2011-12 to FY 2015-16). However, it was observed that, the CAGR of Utility and Outsourcing expenses in the Second Control Period was lower than the CAGR in the First Control Period.
- 8.4.3 In respect of Second Control Period i.e., for the period FY 2016-17 to 2019-20 (excluding FY 2020-21) the major O&M expenses grew at a higher CAGR of 17.44% in comparison with PAX growth of 7.39% and ATM growth of 5.12%
- 8.4.4 External benchmarking is performed for the period FY 2016-17 to FY 2019-20 (i.e., for the Second Control period excluding FY 2020-21) by comparing the major O&M expenses of JIA with other comparable airports using various parameters (Passenger traffic, ATM, Terminal Building area, Total Revenue, and Closing RAB).
- 8.4.5 It is observed that out of all the comparable airports identified by the Study, Lucknow and Pune Airports are more comparable to JIA, in terms of PAX, Terminal Area and Total Revenue.
- 8.4.6 Further, it is observed that all the four major O&M expenses, except Repairs and Maintenance, of JIA is among the lowest in terms of absolute figures than the O&M expenses of closely comparable airports of Lucknow and Pune during the entire period.
- 8.4.7 Based on the external benchmarking analysis, the O&M expenses were found to be reasonable. Therefore, the Study does not propose any further rationalisation of O&M expenses.
- 8.4.8 However, it is suggested that the Airport Operator should take steps to bring efficiencies in the overall O&M expenses over a period of time.

8.5 Conclusion

- 8.5.1 The year-wise summary of the reclassification and other adjustments to O&M expenses is provided in the table below.

Table 62: Year-wise summary of reclassification and other adjustments to Aero O&M expenses*(₹ in Crores)*

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	FY 2021- 22*	Total till COD	FY 2021- 22 [#]	Total till Mar'22
O&M expenses as per true up submission of AAI and AO (A)	66.12	87.94	112.54	124.84	111.01	93.05	595.50	46.64	642.14
O&M expenses as per Study									
Employee benefit expenses	18.15	27.17	34.36	33.73	25.78	15.97	155.15	19.19	174.35
Administrative and other expenses	26.69	30.94	46.82	57.92	53.81	29.62	245.80	15.92	259.92
Utilities and Outsourcing expenses	5.13	8.30	6.22	6.76	6.91	5.63	38.95	2.72	41.67
Repairs & Maintenance expenses	8.23	12.60	13.84	14.60	16.12	9.11	74.51	6.69	81.19
Other Outflows	1.26	1.41	1.28	1.49	0.19	0.11	5.74	0.23	5.97
Total (B)	59.46	80.42	102.51	114.51	102.81	60.44	520.15	44.76	563.10
Impact (B - A)	(6.66)	(7.52)	(10.03)	(10.33)	(8.20)	(32.61)	(75.35)	(1.89)	(79.04)

* Up to the date of COD (October 10, 2021)

From COD till March 31, 2022

- 8.5.2 The Authority had decided to consider an amount of ₹ 290.20 Crores as the operational and maintenance expenditure in its Tariff Order for SCP of JIA.
- 8.5.3 As per the submission of AAI, the total Aeronautical O&M expenses for the period from FY2016-17 to FY2020-21 was ₹ 502.44 Crores.
- 8.5.4 For the period April 01, 2021 till October 10, 2021 (COD), the total Aeronautical O&M expenses as submitted by AAI is ₹ 93.05 Crores.
- 8.5.5 The total Aeronautical O&M expenses for the period from FY2016-17 till COD as per true-up submission of AAI, was ₹ 595.50 Crores.
- 8.5.6 Based on the reallocation of the O&M expenses, the downward adjustment in the Aeronautical O&M expenses for the period from FY2016-17 to FY2020-21 is ₹ 42.73 Crores, and for the period from April 01, 2021 till October 10, 2021 (COD) is ₹ 32.61 Crores.
- 8.5.7 The total downward adjustment in the Aeronautical O&M expenses for the period from FY2016-17 till COD is ₹ 75.35 Crores and the reallocated Aeronautical O&M expenses for the period FY 2016-

17 to October 10, 2021, has been determined as ₹ 520.15 Crores. The Aeronautical O&M expenses for the period from FY 2016-17 till COD is reduced by 12.65%.

- 8.5.8 As per the submission of the Airport Operator the total Aeronautical O&M expenses for the period from COD to March 31, 2022, was ₹ 46.64 Crores. Based on the reallocation of the O&M expenses, the downward adjustment in the Aeronautical O&M expenses for the aforesaid period is ₹ 1.89 Crores and the reallocated Aeronautical O&M expenses (prior to rationalisation) for the period from COD to March 31, 2022 has been determined as ₹ 44.76 Crores. The Aeronautical O&M expenses for the period from COD up to March 31, 2022 is reduced by 4.05%.

9. GLOSSARY

Abbreviation	Full Form
AAI	Airports Authority of India
AAICLAS	AAI Cargo Logistics and Allied Services Company Ltd.
AAHL	Adani Airport Holding Limited
A&G	Administrative & General
ACI	Airports Council International
AERA	Airports Economic Regulatory Authority
AEL	Adani Enterprises Limited
AO (Airport Operator)	Jaipur International Airport Limited
ANS	Airport Navigation Services
AOCC	Airport Command and Control
Asset Allocation Report	Study on allocation of assets between Aeronautical and Non-aeronautical assets for JIA
ATM	Air Traffic Movement
CAGR	Compounded Annual Growth Rate
CAPEX	Capital Expenditure
CCSIA	Chaudhary Charan Singh International Airport
CHQ	Corporate Head Quarters
CNS	Communications, Navigation & Surveillance
COD	Commercial Operation Date
CUTE	Common User Terminal Equipment
DIAL	Delhi International Airport Limited
EHCR	Employee Head Count Ratio
FIDS	Flight Information Display System
FRoR	Fair Rate of Return
FY	Financial Year
GB	Gross Block
GFA	Gross Fixed Asset
GoI	Government of India
IATA	International Air Transport Association
IMG	Inter-Ministerial Group
INR	Indian Rupee
IT	Information Technology
JIA	Jaipur International Airport
JIAL	Jaipur International Airport Limited
MIAL	Mumbai International Airport Limited
MPPA	Million Passengers Per Annum
MYTP	Multi Year Tariff Proposal
NCAP	National Civil Aviation Policy
O&M	Operation and Maintenance
OPEX	Operational Expenditure
PAX	Passenger
PSF	Passenger Service Fee
R&M	Repairs & Maintenance
RAB	Regulatory Asset Base
RFP	Request for Proposal
RHQ	Regional Head Quarter
Sq.m.	Square metre
SVPIA	Sardar Vallabh Bhai Patel International Airport
TB	Terminal Building
UDF	User Development Fee
VIP	Very Important Person
WPI	Wholesale Price Index
XBIS	X-ray Baggage Inspection Systems

