

Appendix - IV

*Study of Operations and Maintenance
Expenses*

of

Netaji Subhash Chandra Bose
International Airport, Kolkata
(Second Control Period: 2016-21)

December 2021



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1. OBJECTIVE OF THIS STUDY

1.1. Introduction

Netaji Subhash Chandra Bose International Airport (NSCBIA), Kolkata is owned and operated by the Airports Authority of India (AAI), a *Miniratna* Category-1 Public Sector Enterprise. AAI was constituted by an Act of Parliament and was established in 1995 through the merger of erstwhile National Airports Authority and International Airports Authority of India. The merged entity—AAI was entrusted with the responsibility of creating, upgrading, maintaining and managing civil aviation infrastructure in India, both on ground and in air space.

NSCBIA, Kolkata is one of the ‘major airports’ notified by Airports Economic Regulatory Authority of India under the provisions of the AERA Act 2008. Pursuant to the AERA Act 2008, AERA issued guidelines for the purpose of determination of aeronautical tariffs for major airports. NSCBIA, Kolkata had submitted Multi Year Tariff Proposal (MYTP) for the Second Control Period from FY 2016-17 to FY 2020-21. AERA issued the order for the Second Control Period on 27 November 2017.

AERA has adopted the hybrid till approach for determination of tariff of NSCBIA, Kolkata. As per the hybrid till approach, 30% of the non-aeronautical revenues are to be used to cross-subsidize the aeronautical revenues, i.e., the Aggregate Revenue Requirement. Tariffs for aeronautical services under the hybrid till approach are based on the various building blocks, i.e. aeronautical Regulatory Asset Base (RAB), aeronautical depreciation, aeronautical operational expenses and aeronautical tax.

Establishing efficient Operation and Maintenance (O&M) expenses is important for the effective execution of tariff determination for aeronautical services. Across airports in India, the O&M expenditure has consistently been increasing, driven by investments in expansion and modernisation of the airports.

The objective of the study is to understand and analyse the O&M expenses of NSCBIA, Kolkata. The detailed analysis of O&M expenses is expected to help in establishing whether the existing expense levels are over or under the efficient expense levels. This will help in assisting the Authority in determining the efficient costs for O&M for the purpose of tariff determination at NSCBIA, Kolkata.

Accordingly, AERA decided to conduct a study on efficient O&M expenses for true-up of the Second Control Period. The analysis of various components of O&M expenses from FY 2016-17 to FY 2019-20 has been done based on the trial balances. For FY 2020-21, the projections submitted by AAI were examined.

As part of this study, the following have been examined/ referred:

- i. The AERA Act, 2008 with its amendment in 2019
- ii. Airports Economic Regulatory Authority of India (Terms and Conditions for Determination of Tariff for Airport Operators) Guidelines, 2011 dated 28 February 2011
- iii. AERA Order No. 23 / 2017-18 dated 27 November 2017 [In the matter of

determination of aeronautical tariffs in respect of Netaji Subhash Chandra Bose International Airport (NSCBIA), Kolkata, for the Second Control Period (01.04.2016 to 31.03.2021)]

- iv. Previous tariff orders of other airports
- v. Trial Balances, clarifications, and details received from NSCBIA, Kolkata

2. WORK PERFORMED

2.1. Terms of Reference

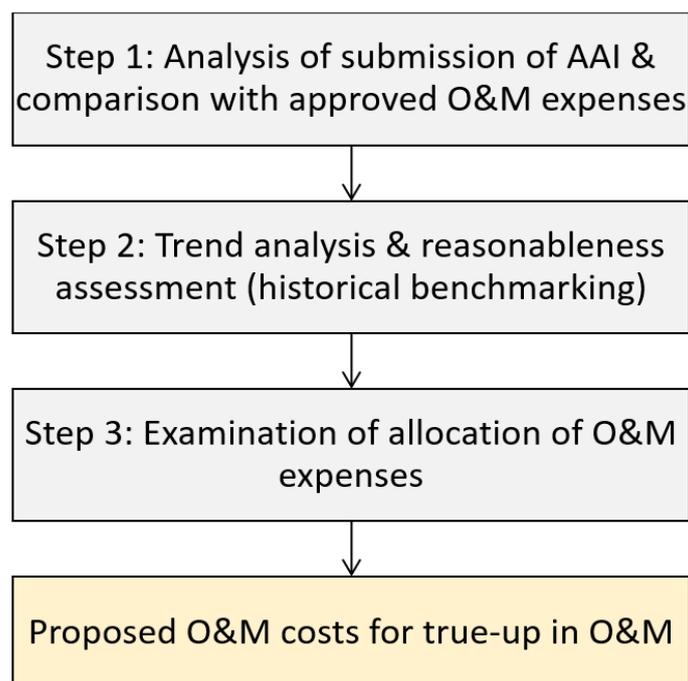
AERA has outlined the scope of work for a study on efficient O&M expenses and segregation of O&M expenses between aeronautical and non-aeronautical in clauses 3.1 (v) and 3.1 (vi) of Schedule 1 of its RFP No. 02/2020-21 for engagement of consultants to assist AERA in determination of tariffs for aeronautical services at NSCBIA, Kolkata, which state:

- “3.1 (v) – Asset / OPEX segregation between Aero and Non-Aero”
- “3.1 (vi) – Examine and recommend efficient costs for O&M as part of tariff determination process.”

2.2. Methodology

The steps elaborated below have been followed for determining the efficient O&M expenses at NSCBIA, Kolkata in this study.

Figure 1: Approach for this study



Step 1: Analysis of submission of NSCBIA, Kolkata

As a first step, assessment of the O&M expenses has been done based on the inputs shared by AAI. The trial balances of NSCBIA, Kolkata from FY 2016-17 to FY 2019-20 were examined to verify the expenses incurred during the Second Control Period. The expenses for FY 2020-21

are as per the projections submitted by the AAI. The reasonableness of the operational expense projections for FY 2020-21 has been assessed based on these projections itself. The operator has submitted O&M expenses under the following heads:

- **Payroll costs:** Includes the following expenses:
 - Salaries and wages (basic pay, dearness allowance, and house rent allowance)
 - Overtime expenses
 - Other staff benefits (employee perks, EL encashment etc.)
 - Medical expenditure
 - Provident fund contributions
 - Apportionment of CHQ expenses
- **Administrative and general expenses:** Includes the following expenses:
 - Rent, rates, and taxes (rent on office building, import license, and taxes on vehicles)
 - Insurance (vehicle, and plant & machinery insurance)
 - Advertising and publicity
 - Office expenses
 - Telephone charges
 - Printing and stationery
 - Legal expenses
 - Travelling expenses
 - Watch and ward expenses
 - Municipal tax
 - Hiring of manpower
 - Financing charges (apportionment of interest on loan taken at CHQ level)
 - Collection charges on UDF
 - Consultancy charges
 - Apportionment of admin (non-employee related overhead expenses) for CHQ
- **Repair and maintenance (R&M) expenses:** Includes the following expenses:
 - R&M for civil works
 - R&M for electrical works
 - R&M for vehicles
 - R&M for furniture and fixtures
 - R&M for computers, IT, and hardware
 - Annual maintenance contract (AMC) charges
- **Utilities and outsourcing expenses:** Include the following expenses:
 - Power charges (net of recovery)
 - Horticulture expenses
 - Upkeep expenses
 - Hire charges (cars, jeeps, etc.)
- **Other outflows:** Includes the following expenses:
 - Consumption of stores and spares
 - POL expenses

Step 2: Trend analysis & reasonableness assessment (historical benchmarking)

In order to understand the change / variation of the various elements of the O&M expenses, a trend analysis has been done for the First Control Period as well as the Second Control Period for the aeronautical portion of O&M expenses, as per AAI's submission.

The objective of the same is to understand the long term growth rates in these expenses and also the correlation between the year-on-year change in these expenses vis-à-vis the passenger traffic data. The study attempts to analyse the reasons for variance in the level and growth of O&M expenses as submitted by AAI for the Second Control Period in its MYTP vis-a-vis what was approved in the previous tariff orders for NSCBIA, Kolkata. The study attempts to understand whether AAI has been prudent in managing these expenses in line with the increase in passenger and ATM traffic. The major expenses submitted by AAI were studied in detail to assess the reasonableness of the same.

Step 3: Examination of allocation of O&M expenses

As the final step for establishment of the efficient O&M expenses for NSCBIA, Kolkata, the allocation of common expenses across aeronautical and non-aeronautical components by AAI has been analysed. Subsequently, wherever necessary, an alternate allocation principle has been suggested.

3. OPERATION AND MAINTENANCE EXPENSES PROPOSED BY NSCBIA, KOLKATA FOR THE SECOND CONTROL PERIOD

3.1. Analysis of approved O&M expenses and O&M expenses submitted by AAI

3.1.1. The Authority had approved O&M expenses of Rs. 1,706.7 Cr for the Second Control Period as shown in the table below:

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

FY ending March 31 (Rs. Cr)	2017	2018	2019	2020	2021	Total
Payroll costs – CHQ	23.0	26.5	28.4	30.3	32.5	140.7
Payroll costs – non CHQ	127.9	147.5	157.1	167.4	178.3	778.2
Pay roll costs (A)	150.6	172.5	183.9	196.1	209.0	912.1
Repair & maintenance (B)	87.9	82.4	89.7	97.0	105.3	462.3
Utilities & outsourcing expenses (C)	74.5	63.8	62.0	63.6	65.2	329.1
Admin and general expenses - CHQ	18.8	18.5	19.5	20.4	21.4	98.6
Admin and general expenses - non CHQ	10.4	11.0	12.1	13.2	14.5	61.2
Admin. & other expenses (D)	29.2	29.5	31.5	33.6	35.9	159.7
Other outflows (E)	1.1	1.1	1.2	1.3	1.5	6.2
Total operating expenditure (A to E)	333.7	318.1	330.0	351.1	373.8	1,706.7

3.1.2. NSCBIA, Kolkata submitted O&M expenses of Rs. 2,110.47 Cr for the Second Control Period as shown in the table below:

Table 2: O&M expenses submitted by AAI in the Second Control Period

FY ending March 31 (Rs. Cr)	2017	2018	2019	2020	2021	Total
Payroll costs – CHQ	4.49	20.57	42.76	29.84	31.93	129.60
Payroll costs – non CHQ	120.75	128.33	143.13	160.18	171.39	723.76
Pay roll costs (A)	125.24	148.90	185.89	190.01	203.32	853.36
Repair & maintenance (B)	96.18	62.20	70.28	74.26	84.07	386.99
Utilities & outsourcing expenses (C)	68.33	64.56	62.15	64.62	68.21	327.86
Admin and general expenses –CHQ	57.10	53.59	32.78	93.15	97.80	334.43
Admin and general expenses – non CHQ	71.21	46.68	20.98	29.90	30.27	199.04
Admin. & other expenses (D)	128.31	100.27	53.76	123.04	128.07	533.47
Other outflows (E)	1.04	1.13	1.99	2.21	2.43	8.79
Total operating expenditure (A to E)	419.10	377.06	374.07	454.14	486.09	2,110.47

3.2. Analysis

- 3.2.1. A comparison of actual O&M expenses in Table 2 and approved O&M expenses in Table 1 shows that actual expenses are Rs. 403.77 Cr more than what was approved. Further analysis of the difference between approved and actual O&M expenses is detailed in the following chapters.
- 3.2.2. Further review of expense sub-heads shows that AAI's submission for pay roll costs, R&M expenses, utilities and outsourcing expenses was lower than what was approved by the Authority. AAI's submission on administrative and general expenses and other outflows is higher than what was approved by the Authority in the Second Control Period.
- 3.2.3. The biggest difference between approved and actual expenses can be attributed to administrative and general expenses – CHQ. While Rs. 98.60 Cr was approved by the Authority in the Second Control Period Order, AAI submitted actuals of Rs. 334.43 Cr for the Second Control Period.
- 3.2.4. Further, it is noted that while number of PAX and ATM fell significantly during FY 2020-21, O&M expenses submitted by AAI are higher in FY 2020-21 compared to FY 2019-20. The projections for FY2020-21 are discussed separately.

4. HISTORICAL BENCHMARKING AND TREND ANALYSIS

4.1. Trend Analysis of O&M Expenses of First and Second Control Period

4.1.1. In order to understand the change in various O&M expense heads over a longer period of time, the trend of O&M expenses has been analysed over the First and Second Control Period up to FY 2019-20 (as FY 2020-21 was impacted by the Covid-19 pandemics) against the change in traffic.

4.1.2. The following table provides a detailed summary comparing the trends between the First Control Period and Second Control Period in O&M expenses and in air traffic:

Table 3: Comparison between CAGR of First and Second Control Period

	First Control Period						Second Control Period					
FY ending March 31	2012	2013	2014	2015	2016	CAGR	2017	2018	2019	2020	CAGR (FY16 to FY20)	2021
PAX traffic (MPPA)	10.30	10.20	10.10	10.90	12.40	4.75%	15.82	19.89	21.88	22.02	15.44%	7.73
ATM (000's)	99.84	93.33	92.87	97.13	102.49	0.66%	124.15	148.80	162.03	165.76	12.77%	72.17
Operation and Maintenance Expenses (Rs. Cr)												
Payroll costs - non CHQ	91.30	100.00	116.10	123.30	125.90	8.36%	120.75	128.33	143.13	160.18	6.21%	171.39
Payroll costs - CHQ	17.70	39.30	20.50	35.30	22.50	6.18%	4.49	20.57	42.76	29.84	7.31%	31.93
Payroll costs (A)	109.00	139.30	136.60	158.60	148.40	8.02%	125.24	148.90	185.89	190.02	6.38%	203.32
Admin and general expenses - non CHQ	6.30	5.50	3.90	7.20	9.60	11.10%	71.21	46.68	20.98	29.90	32.85%	30.27
Admin and general expenses - CHQ	15.20	14.00	13.10	17.80	19.80	6.83%	57.10	53.59	32.78	93.15	47.28%	97.80
Admin and general expenses (B)	21.50	19.50	17.00	25.00	29.40	8.14%	128.31	100.27	53.76	123.05	43.03%	128.07
R&M expenses (C)	29.40	24.10	25.70	41.00	43.30	10.16%	96.18	62.20	70.28	74.26	14.44%	84.07
Utilities and outsourcing expenses (D)	15.60	30.70	49.30	61.80	74.30	47.73%	68.33	64.56	62.15	64.62	-3.43%	68.21
Other outflows (E)	0.80	1.00	0.80	0.80	1.00	5.74%	1.04	1.13	1.99	2.21	21.93%	2.43
Total O&M expenses (A to E)	176.30	214.60	229.40	287.20	296.40	13.87%	419.10	377.06	374.07	454.16	11.26%	486.10

4.2. Summary

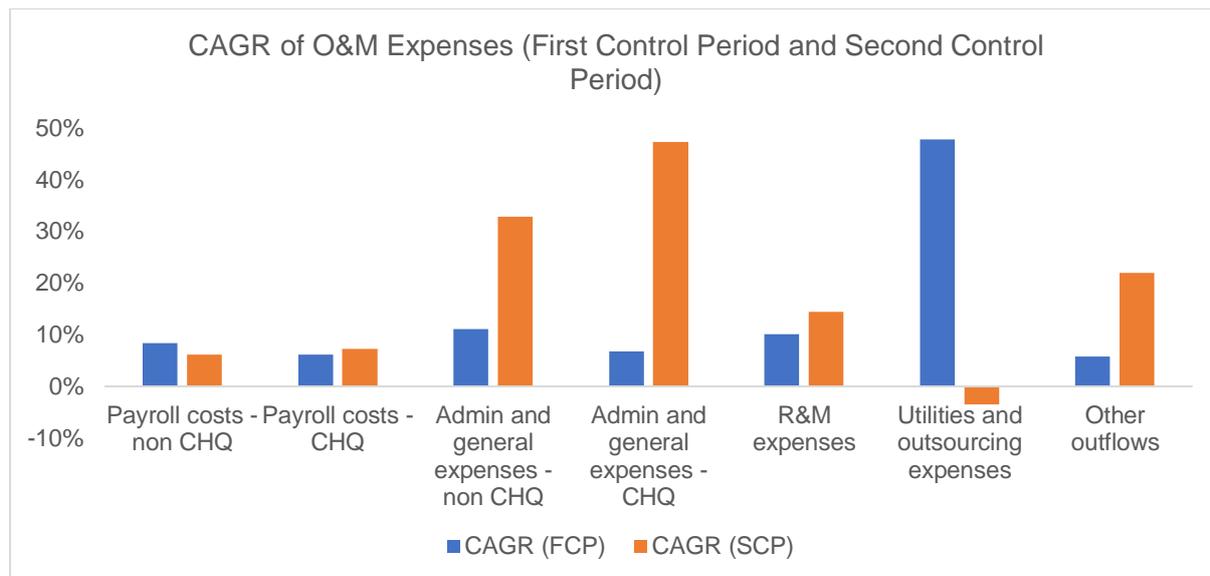
4.2.1. The CAGR of total operating expenses in the First Control Period and the Second Control Period is 13.87% and 11.26% respectively. Thus, there was a deceleration in O&M expenses growth in the Second Control Period. It may be noted that there is a steep increase in admin and general expenses – non CHQ from Rs. 9.60 Cr. in FY 2015-16 to Rs. 71.21 Cr. in FY 2016-17. The difference is attributable to the inclusion of financing charges of Rs. 49.51 Cr. (interest on bond) as part of the admin and general expenses – non-CHQ in FY 2016-17 by AAI. Moreover, Admin. & General Expenses of CHQ has increased in the Second Control Period as compared to First Control Period. This is because AAI allocates CHQ expenses across its airports based on revenue earned at

different airports. Since revenue of NSCBIA, Kolkata is high, allocation of the CHQ expenses has also been high.

4.2.2. In the First Control Period, CAGR of total O&M expenses has been higher than the CAGR in passenger and ATM traffic. However, in the Second Control Period, the O&M expense CAGR has been lower than CAGR of PAX and ATM traffic.

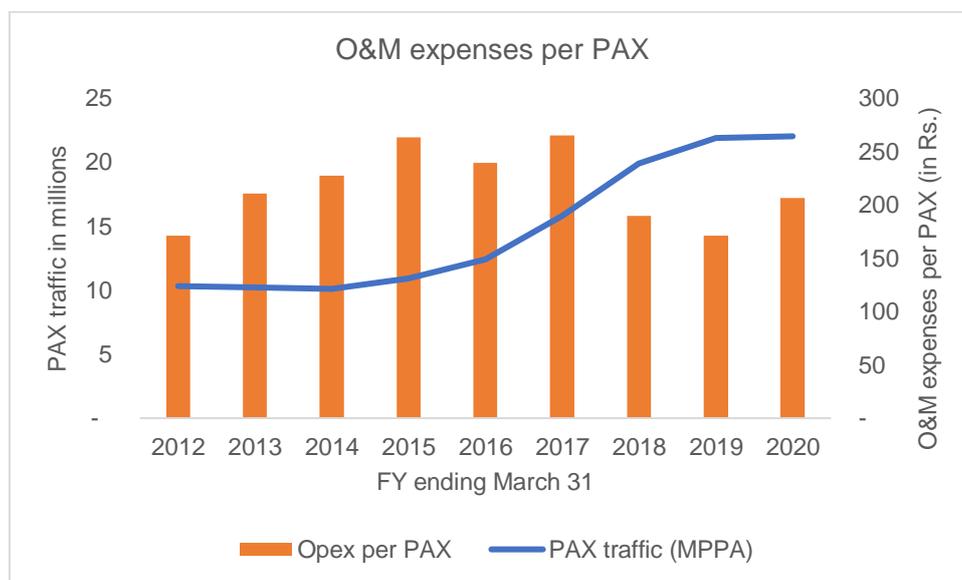
4.2.3. The following graph illustrates the difference between the CAGR during both these periods across various expense heads:

Figure 2: CAGR of O&M expenses (FCP and SCP)



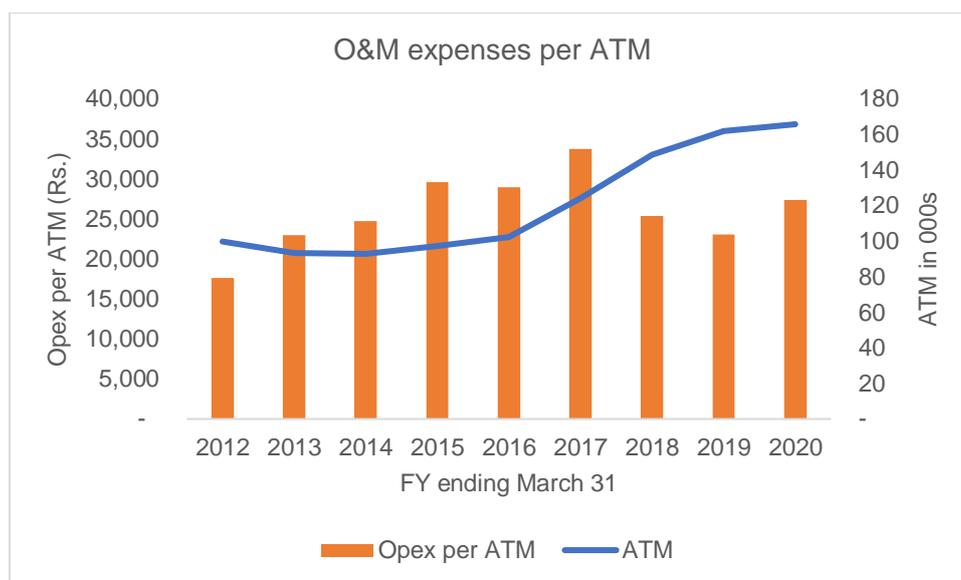
4.2.4. The following graph compares the O&M expenses per PAX in the First Control Period and the Second Control Period with the passenger traffic:

Figure 3: O&M expenses per PAX



- 4.2.5. It can be seen from the figure that the O&M per PAX is consistently decreasing in the Second Control Period, except in FY 2019-20, when it marginally increased due to the fall in PAX numbers due to the Covid-19 impact towards the end of the year.
- 4.2.6. The following graph compares the O&M expenses per ATM in the First Control Period and Second Control Period with the passenger traffic:

Figure 4: O&M expenses per ATM



- 4.2.7. It can be seen from the figure that the O&M expenses per ATM is decreasing in the Second Control Period, except in FY 2019-20 where the O&M expenses per ATM increased due to a fall in ATM traffic.

4.3. Analysis of O&M expenses in the Second Control Period

- 4.3.1. All O&M expenses other than utility and outsourcing expenses have seen a positive growth in the Second Control Period. Administrative and general expenses – CHQ and administrative and general expenses – non CHQ saw CAGR growth of 47.28% and 32.85% respectively

- 4.3.2. The following table compares the per PAX and per ATM O&M expenses in FY 2016-17 to those in FY 2019-20. Both the O&M expenses per PAX and O&M expenses per ATM have reduced between FY 2016-17 and FY 2019-20.

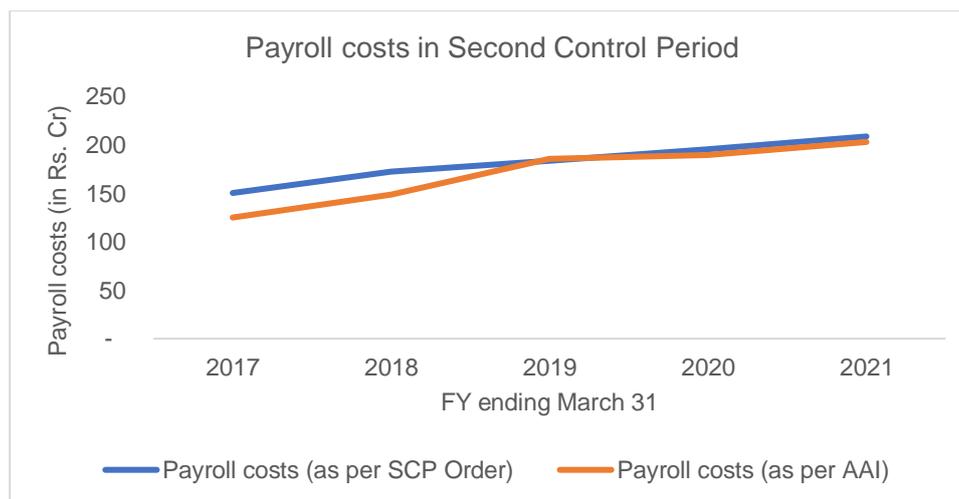
Table 4: Comparison of O&M per PAX and per ATM between FY 2016-17 and FY 2019-20

Parameter	2016-17	2019-20	Increase %
O&M expenses (Rs. Cr)	419.10	454.16	8.37%
PAX traffic MPPA	15.82	22.02	39.19%
O&M expenses per PAX (Rs/PAX)	264.92	206.25	(22.15%)
ATM ('000s)	124.15	165.76	33.52%
O&M expenses per ATM (Rs/ATM)	33,757.55	27,398.65	(18.84%)

Payroll Costs

4.3.3. The following figure compares the approved payroll costs as per the Second Control Period Order and the payroll costs submitted by AAI. The payroll costs submitted by AAI are lower than that approved by the Authority in the Second Control Period Order, for all years other than FY 2018-19.

Figure 5: Payroll costs in the Second Control Period



4.3.4. Payroll costs consist of the following sub-expenses:

- Salaries and wages (basic pay, dearness allowance, and house rent allowance)
- Overtime expenses
- Other staff benefits (employee perks, EL encashment etc.)
- Medical expenditure
- Provident fund contributions
- Apportionment of CHQ expenses

4.3.5. The following table examines the break-up of payroll costs approved by the Authority, and those submitted by AAI:

Table 5: Comparison between payroll costs approved by the Authority and submitted by AAI

FY ending March 31	Approved in SCP Order						Submission by AAI					
	2017	2018	2019	2020	2021	Total	2017	2018	2019	2020	2021	Total
Salaries and wages	77.81	89.72	96.00	102.72	109.91	476.15	72.42	68.25	82.38	87.11	93.21	403.37
Overtime expenses	6.34	7.31	7.67	8.06	8.46	37.83	5.55	4.30	4.02	8.90	9.52	32.29
Other staff benefits	23.32	26.88	28.23	29.64	31.12	139.18	22.69	35.20	35.41	39.53	42.29	175.12
Medical expenditure	12.49	14.40	15.41	16.49	17.64	76.42	12.35	13.19	13.37	15.38	16.46	70.75
Provident fund contributions	7.94	9.16	9.80	10.49	11.22	48.61	7.88	7.55	8.22	9.56	10.23	43.44
Less: Common expenses for Cargo and	(0.23)	(1.45)	(1.54)	(1.65)	(1.75)	(6.62)	(0.14)	(0.16)	(0.28)	(0.30)	(0.32)	(1.20)

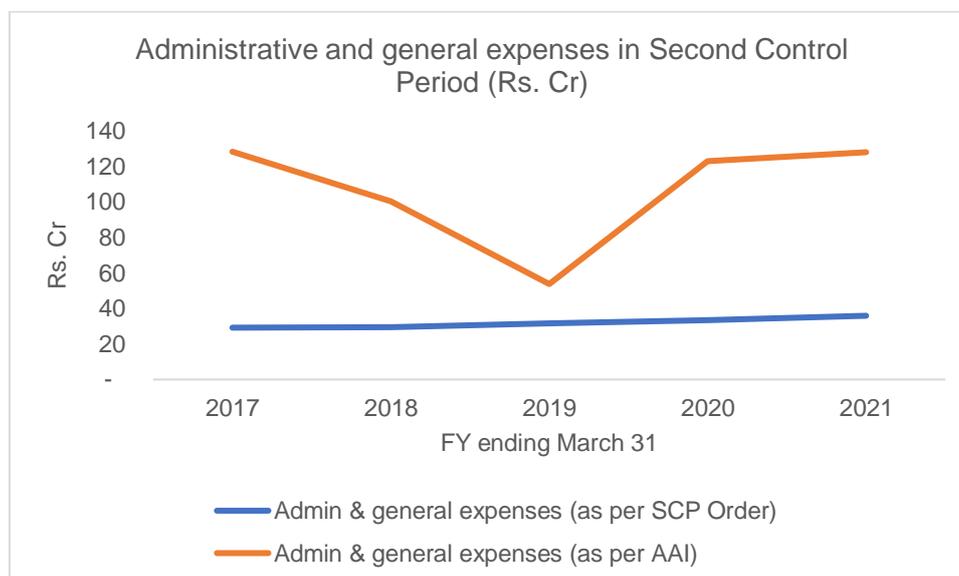
FY ending March 31	Approved in SCP Order						Submission by AAI					
	2017	2018	2019	2020	2021	Total	2017	2018	2019	2020	2021	Total
ANS employees												
Payroll costs - non CHQ	127.67	146.02	155.56	165.74	176.59	771.57	120.75	128.33	143.13	160.18	171.39	723.76
Payroll costs - CHQ	22.98	26.50	28.35	30.34	32.46	140.62	4.49	20.57	42.76	29.84	31.93	129.60
Total payroll costs	150.65	172.51	183.91	196.07	209.05	912.19	125.24	148.90	185.89	190.01	203.32	853.36

4.3.6. AAI’s submission of payroll costs – non-CHQ and payroll costs – CHQ are lower than what was approved by the Authority. This is primarily because of the difference between approved salaries and wages and that submitted by AAI. Payroll costs – CHQ has been discussed later in the study.

Administrative and General Expenses

4.3.7. Figure 2 compares the approved administrative and general expenses as per the Second Control Period Order and that submitted by AAI. The expenses submitted by AAI are higher than the approved amounts for all tariff years. It may be noted that the actual expenses submitted by AAI reduced year by year till FY 2018-19, after which they increased. The difference between actuals and approved can largely be attributed to admin and general expenses – CHQ/RHQ, which is discussed later.

Figure 6: Administrative and general expenses in the Second Control Period



- 4.3.8. Administrative and general expenses comprise the following sub-expenses:
- Rent, rates, and taxes (rent on office building, import license, and taxes on vehicles)
 - Insurance (vehicle, and plant & machinery insurance)
 - Advertising and publicity
 - Office expenses
 - Telephone charges
 - Printing and stationery
 - Legal expenses
 - Travelling expenses
 - Watch and ward expenses

- Municipal tax
- Hiring of manpower
- Financing charges (apportionment of interest on loan taken at CHQ level)
- Collection charges on UDF
- Consultancy charges
- Apportionment of admin (non-employee related overhead expenses) for CHQ

4.3.9. The following table examines the break-up of administrative and general expenses approved by the Authority, and those submitted by AAI:

Table 6: Comparison between administrative and general expenses approved by the Authority and submitted by AAI

FY ending March 31	Approved in SCP Order						Submission by AAI					
	2017	2018	2019	2020	2021	Total	2017	2018	2019	2020	2021	Total
Rent and taxes	0.02	0.02	0.03	0.03	0.03	0.13	2.46	0.01	0.00	4.10	4.51	11.07
Insurance	0.03	0.02	0.02	0.02	0.03	0.13	0.11	0.06	0.07	0.08	0.09	0.41
Advertising and publicity	1.00	1.04	1.15	1.26	1.39	5.85	0.64	0.37	0.16	0.09	0.10	1.35
Office expenses	1.53	1.56	1.72	1.89	2.08	8.78	11.75	13.47	10.59	13.44	14.78	64.02
Telephone charges	0.43	0.44	0.48	0.53	0.58	2.46	0.48	0.25	0.38	0.30	0.33	1.75
Printing and stationery	0.25	0.26	0.28	0.31	0.34	1.44	0.19	0.16	0.19	0.51	0.56	1.62
Legal expenses	0.10	0.11	0.12	0.13	0.14	0.59	0.15	0.13	0.18	0.34	0.37	1.17
Travelling expenses	1.76	1.90	2.09	2.29	2.52	10.57	1.33	1.44	1.62	2.76	3.03	10.18
Watch and ward expenses	1.06	1.17	1.29	1.42	1.56	6.49	1.17	2.50	2.57	3.10	3.41	12.76
Municipal tax	0.57	0.57	0.57	0.57	0.57	2.85	1.35	0.74	0.98	0.98	1.08	5.13
Hiring of manpower	0.32	0.36	0.39	0.43	0.47	1.98	-	-	1.11	0.68	0.75	2.55
Financing charges	-	-	-	-	-	-	49.51	23.47	-	-	-	72.98
Collection charges on UDF	3.14	3.45	3.79	4.17	4.59	19.14	1.98	3.99	2.96	3.44	1.16	13.53
Consultancy charges	0.13	0.13	0.14	0.15	0.16	0.70	0.09	0.10	0.18	0.08	0.09	0.54
Administrative and general expenses – non CHQ	10.36	11.02	12.06	13.21	14.46	61.11	71.21	46.68	20.98	29.90	30.27	199.04
Administrative and general expenses – CHQ	18.82	18.53	19.45	20.43	21.45	98.67	57.10	53.59	32.78	93.15	97.80	334.43
Total Administrative and general expenses	29.18	29.55	31.51	33.63	35.91	159.78	128.31	100.27	53.76	123.04	128.07	533.47

4.3.10. While AAI's submission of administrative and general expenses – non CHQ are higher than what was approved by the Authority, the key differences are on account of inclusion of financing charges and increase in rent and taxes. Financing charges comprise of interest on loans that AAI has taken, which has been discussed in the next paragraph. The largest difference between and approved rents and taxes, and those submitted by AAI are in FY 2019-20 and FY 2020-21. This is due to an increase in administration fees for

enhancement and finance at the ATC. Since AAI has estimated FY 2020-21 expenses by applying a 10% growth over the FY 2019-20 expenses, this is reflected in FY 2020-21 as well. Administrative and general expenses – CHQ/RHQ has been discussed later in the study.

4.3.11. Para 14.13 of the Second Control Period tariff order proposed not to include financing charges in administration and general expenses as the expense consists of interest payments on long term debt. Therefore, the Authority may decide to exclude these expenses from O&M expenses for the Second Control Period.

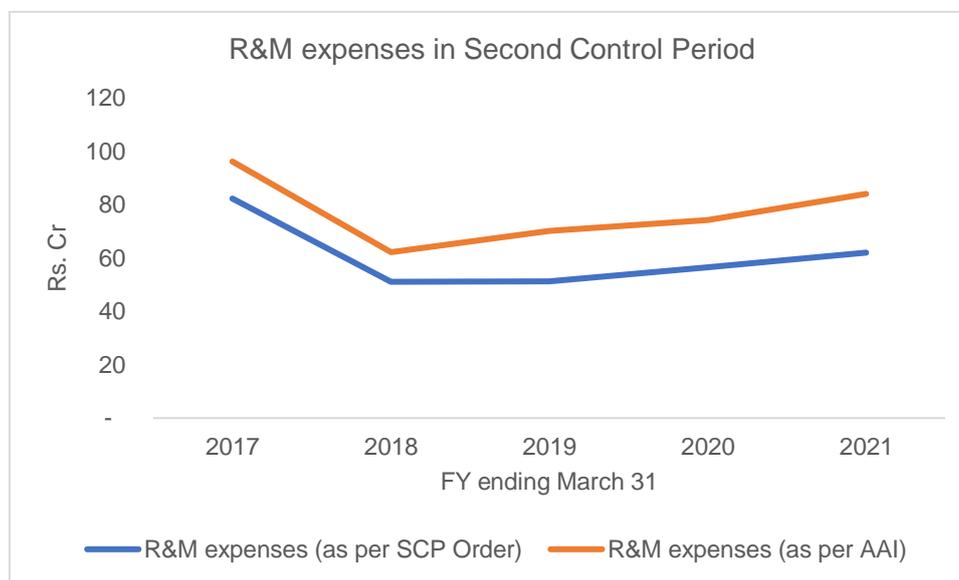
Repair and maintenance expenses

4.3.12. Repair and maintenance expenses consists of the following sub-expenses:

- R&M for civil works
- R&M for electrical works
- R&M for vehicles
- R&M for furniture and fixtures
- R&M for computers, IT, and hardware
- Annual maintenance contract (AMC) charges

4.3.13. The following figure compares the approved R&M expenses as per the Second Control Period Order and the R&M expenses submitted by AAI. The figure shows that the actual expenses submitted by AAI are higher than the approved amounts in the Second Control Period.

Figure 7: R&M expenses in the Second Control Period



4.3.14. The following table examines the break-up of R&M expenses approved by the Authority and those submitted by AAI:

Table 7: Comparison between repair and maintenance expenses approved by the Authority and submitted by AAI

FY ending March 31	Approved in SCP Order						Submission by AAI					
	2017	2018	2019	2020	2021	Total	2017	2018	2019	2020	2021	Total

FY ending March 31	Approved in SCP Order						Submission by AAI					
	2017	2018	2019	2020	2021	Total	2017	2018	2019	2020	2021	Total
Civil works	50.09	19.56	16.69	18.35	20.19	124.88	56.68	19.11	15.10	21.65	23.81	136.34
Plant and Machinery / Vehicle	1.02	1.00	1.10	1.21	1.33	5.65	1.13	1.74	1.20	1.62	1.79	7.47
Electrical Installations	27.12	27.04	29.74	32.72	35.99	152.61	29.12	32.12	45.14	40.62	44.68	191.68
Furniture, fittings, and electronics	4.09	3.47	3.81	4.2	4.62	20.21	9.26	9.24	8.84	6.72	7.40	41.45
AMC expenses	-	-	-	-	-	-	-	-	-	3.65	6.39	10.04
Total R&M Expenses	82.33	51.07	51.34	56.48	62.13	303.34	96.18	62.20	70.28	74.26	84.07	386.99

4.3.15. AAI's submission is higher than that approved amounts across all sub-expenses within R&M expenses. The difference is highest in R&M expenses for electrical installations and R&M expenses for furniture, fittings, and electronics.

4.3.16. The overall level of R&M expenses was analysed vis-à-vis the closing gross block of NSCBIA, Kolkata. The following table summarises R&M expenses as a percentage of the opening gross block in the Second Control Period:

Table 8: R&M analysis vis-à-vis opening gross block

Parameter (Rs. Cr)	2016-17	2017-18	2018-19	2019-20	2020-21
R&M expenses	96.18	62.20	70.28	74.26	84.07
Closing gross block	3,145.48	3,358.38	3,502.01	3,627.72	3,748.55
R&AM expenses (% of closing gross block)	3.06%	1.85%	2.01%	2.05%	2.24%

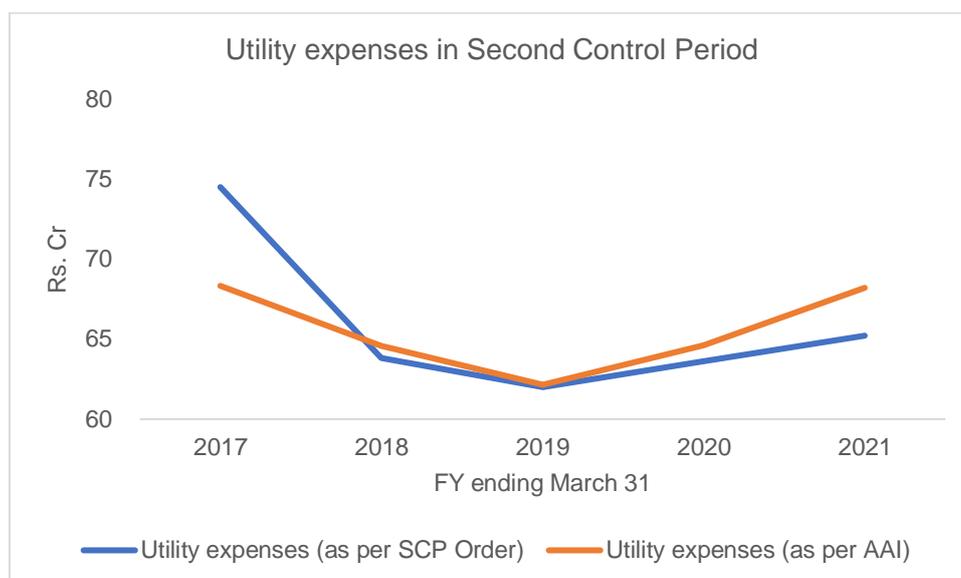
4.3.17. R&M expenses of NSCBIA, Kolkata range from 1.85% to 3.06% of the closing gross block. This is broadly in line with other major airports and seems to be reasonable.

Utility and Outsourcing Expenses:

4.3.18. Repair and maintenance expenses consists of the following sub-expenses:

- Power charges (net of recovery)
- Horticulture expenses
- Upkeep expenses
- Hire charges (cars, jeeps, etc.)

4.3.19. The following figure compares the approved utility expenses as per the Second Control Period Order and the utility expenses submitted by AAI. The actual expenses submitted by AAI are higher than the approved amounts for all tariff years of the Second Control Period other than FY 2016-17.

Figure 8: Utility expenses in the Second Control Period

4.3.20. The following table examines the break-up of utilities and outsourcing expenses approved by the Authority, and those submitted by AAI:

Table 9: Comparison between utilities and outsourcing expenses approved by the Authority and submitted by AAI

FY ending March 31	Approved in SCP Order						Submission by AAI					
	2017	2018	2019	2020	2021	Total	2017	2018	2019	2020	2021	Total
Power charges	61.74	49.93	46.73	46.73	46.73	251.86	53.33	47.50	40.43	40.99	42.22	224.48
Horticulture expenses	0.32	0.27	0.29	0.32	0.36	1.56	0.36	0.30	0.53	1.08	1.18	3.46
Upkeep expenses	10.31	11.34	12.48	13.73	15.10	62.95	13.37	16.29	20.85	22.31	24.54	97.35
Hire charges	2.14	2.30	2.53	2.79	3.07	12.83	1.27	0.46	0.33	0.25	0.27	2.58
Total Utilities and Outsourcing	74.51	63.84	62.03	63.56	65.25	329.20	68.33	64.56	62.15	64.62	68.21	327.86

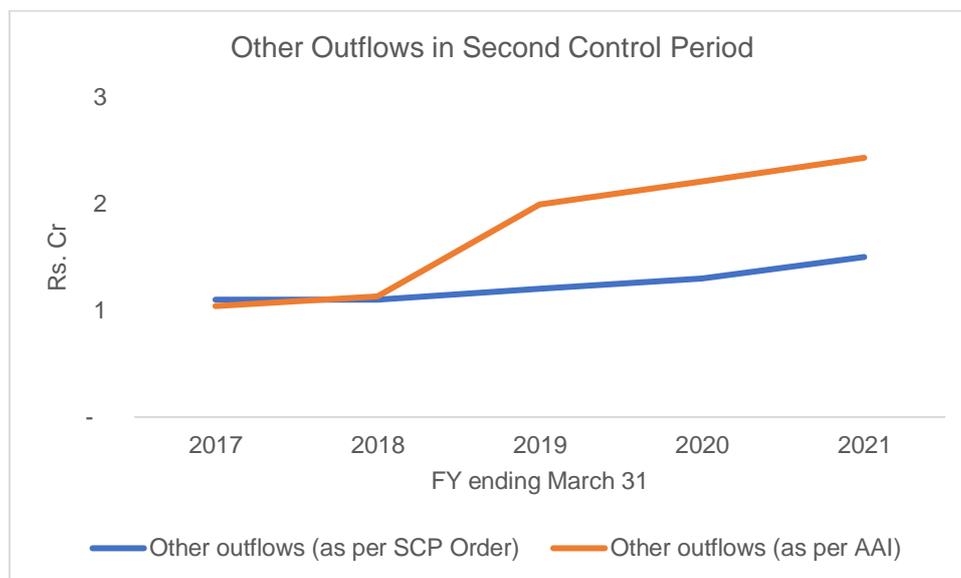
4.3.21. Within utilities and outsourcing expenses, there are significant differences between the approved and actuals for upkeep expenses. Upon analysis, it was found that the upkeep expenses increased because of the Environmental Support Services (ESS) and Mechanised Environmental Support Services (MESS) at NSCBIA, Kolkata.

Other Outflows:

4.3.22. Other outflows have further been examined. The expense consists of the following sub-expenses:

- Consumption of stores and spares
- POL expenses

4.3.23. The following figure compares the approved other outflows as per the Second Control Period Order and the other outflows submitted by AAI. The figure shows that the actual expenses submitted by AAI are higher than the approved amounts for all tariff years of the Second Control Period other than FY 2016-17.

Figure 9: Other Outflows in the Second Control Period

4.3.24. The following table examines the break-up of utilities and outsourcing expenses approved by the Authority, and those submitted by AAI:

Table 10: Comparison between other outflows approved by the Authority and submitted by AAI

FY ending March 31	Approved in SCP Order						Submission by AAI					
	2017	2018	2019	2020	2021	Total	2017	2018	2019	2020	2021	Total
POL	0.47	0.56	0.51	0.56	0.62	0.68	0.55	0.53	0.85	0.88	0.97	3.78
Consumption of stores and spares	0.60	0.56	0.71	0.78	0.86	5.55	0.48	0.60	1.15	1.32	1.46	5.01
Total other outflows	1.07	1.11	1.22	1.34	1.48	6.23	1.04	1.13	1.99	2.21	2.43	8.79

4.3.25. The primary difference between the approved outflows and outflows submitted by AAI is in POL expenses.

4.4. AAI's estimation of O&M expenses for FY 2020-21

4.4.1. AAI has estimated FY 2020-21 expenses by applying a growth rate over the FY 2019-20 expenses. In the case of payroll costs, AAI applied a growth rate of 7% over FY 2019-20 levels to estimate FY 2020-21 payroll costs. For other O&M expenses, AAI applied a growth rate of 10% on FY 2019-20 levels to estimate FY 2020-21 expenses.

4.4.2. FY 2020-21 was severely impacted by Covid-19 pandemic. The PAX numbers declined by 65% in FY 2020-21, from 22.02 million PAX in FY2019-20 to 7.73 million PAX in FY 2020-21. The ATM numbers declined by 56.46% in that year, from 1,65,760 in FY 2019-20 to 72,170 in FY 2020-21. This would imply that for a major part of this year, the airport facilities would have been shut or have remained under-utilized. While it is understood that fixed overheads, like manpower costs, would not have been impacted, there would be savings in other overheads like power costs, water charges, overtime,

repairs & maintenance.

- 4.4.3. Further, it is also noted that the overall O&M expenses growth in the Second Control Period (up to FY2019-20) is at a CAGR of 11.26%. However, considering the impact of the Covid-19 pandemic on the O&M expenses of airport operators, the growth rate used by AAI to estimate FY 2020-21 expenses may be reconsidered by the Authority.

4.5. Summary of conclusions

- 4.5.1. The overall O&M expenses submitted by AAI are higher than those approved by Authority in the Second Control Period order. The key reasons for these are (a) growth rates applied by AAI in projecting O&M expenses for FY2020-21 (b) apportionment of CHQ expenses of AAI to NSCBIA, Kolkata. Further, it can also be observed that the O&M expenses per PAX has shown a consistently downward trend from FY 2016-17 to FY 2018-19. The increase in O&M expenses per PAX in FY 2019-20 may be attributed to lower passenger traffic in February and March 2020 due to the Covid-19 pandemic.
- 4.5.2. R&M expenses of NSCBIA, Kolkata range from 1.85% to 3.06% of the closing gross block. This is broadly in line with other airports and seems to be reasonable.
- 4.5.3. Estimating O&M expenses for FY2020-21 by taking a 7% growth rate for payroll costs and a 10% growth rate for other O&M expenses over the actuals of FY 2019-20 is not appropriate, considering that traffic in FY 2020-21 was significantly lower due to the Covid 19 pandemic. The Authority may consider a 0% growth over FY 2019-20 expenses to estimate expenses of FY 2020-21.

5. ANALYSIS OF AAI'S CHQ EXPENSES TO NSCBIA, KOLKATA

5.1. Trend Analysis of CHQ Expenses in the Second Control Period

5.1.1. AAI manages 137 airports, of which 24 are international airports, 10 are Custom airport, and 103 are domestic airports.¹ AAI apportions its CHQ expenses to the various airports managed by it. The Authority sought additional details on CHQ expenses of AAI and its apportionment across AAI profit centres from AAI. Subsequently AAI submitted details regarding the same vide e-mail dated 17.11.2021 ("Revised CHQ & RHQ Allocation for the F.Y 16-17 to 19-20").

5.1.2. The following table compares the approved payroll costs – CHQ for NSCBIA, Kolkata with the submitted amounts:

Table 11: Analysis of payroll costs - CHQ

FY ending March 31 (Rs. Cr)	2017	2018	2019	2020	2021	Total
Payroll costs - CHQ submitted by AAI	4.49	20.57	42.76	29.84	31.93	129.60
Payroll costs - CHQ approved in SCP	22.98	26.50	28.35	30.34	32.46	140.62
Payroll costs – CHQ submitted by AAI (as % of approved)	20%	78%	151%	98%	98%	92%

Table 12: Analysis of admin and general expenses - CHQ

FY ending March 31 (Rs. Cr)	2017	2018	2019	2020	2021	Total
Admin and general costs - CHQ submitted by AAI	57.10	53.59	32.78	93.15	97.80	334.43
Admin and general - CHQ approved in SCP	18.82	18.53	19.45	20.43	21.45	98.67
Admin and general – CHQ submitted by AAI (as % of approved)	303%	289%	169%	456%	456%	339%

5.1.3. While payroll costs – CHQ submitted by AAI are 92% of what was approved in the Second Control Period, admin and general expenses – CHQ submitted by AAI are 339% of what was approved in the Second Control Period, with a significant year on year variation.

5.1.4. AAI has allocated payroll costs – CHQ, and admin and general expenses – CHQ between aeronautical and non-aeronautical costs using an allocation ratio of 95%:5%. However, it may be noted that as per para 14.8. of the Second Control Period Order, the Authority has decided to use an allocation ratio of 90%:10% for admin and general expenses – CHQ. It is recommended that the Authority adopts a methodology to allocate CHQ expenses into expenses that are related to airports and non-airport activities, and then allocate the CHQ expenses related to airports across AAI's profit centres on the basis of their respective revenues. The same is discussed in the subsequent sections.

¹ As per AAI website, accessed on 31 August 2021

5.2. Analysis of Admin and General Expenses - CHQ submitted by AAI

5.2.1. AAI submitted that the CHQ expenses after netting off revenue is apportioned across all AAI major airports based on their respective revenues. The following table analyses the Admin and General Expenses – CHQ submitted by AAI:

Table 13: Break-up of CHQ expenses submitted by AAI

FY ending March 31 (Rs. Cr)	2017	2018	2019	2020	Total
Staff Cost (CHQ employees) [A]	501.86	535.38	475.15	542.09	2,054.47
Admin and Gen Expenses [B]	45.63	52.23	80.77	61.19	239.82
Repair and Maintenance [C]	14.60	21.00	21.77	28.77	86.15
Utilities and Outsourcing [D]	35.66	23.98	31.29	35.23	126.17
Others [E]	47.09	23.89	11.03	27.64	109.65
Total Expenses [F = A to E]	644.84	656.48	620.01	694.93	2,616.26
Total Revenue [G]	353.48	411.63	484.22	304.20	1,553.53
Net Off (as taken tariff determination) [H = F – G]	291.36	244.85	135.79	390.73	1,062.73

5.2.2. From the above table it may be observed that staff costs comprise approximately 80% of the total CHQ expenses. The highest growth within CHQ expenses can be seen in repairs and maintenance expenses.

Staff Costs (CHQ)

5.2.3. The following table provides summarises the staff costs at CHQ submitted by AAI:

Table 14: Break-up of staff costs at CHQ submitted by AAI

FY ending March 31 (Rs. Cr)	2017	2018	2019	2020	Total
Salary and wages	135.80	147.08	171.10	185.15	639.13
Overtime	0.99	0.82	0.84	1.32	3.97
Other staff benefits	312.57	302.94	173.23	248.61	1,037.34
Medical expenditure	23.39	22.02	22.80	27.95	96.15
Retirement benefit & PF contribution	29.11	62.52	107.18	79.06	277.88
Total	501.86	535.38	475.15	542.09	2,054.47

5.2.4. With respect to the apportionment of pay and allowance costs incurred at the CHQ, the Authority has the following observations:

- AAI has considered pay and allowance costs of commercial department at CHQ as airport expenses, despite such expenses being non-airport related in nature.
- AAI has excluded pay and allowance costs of employees involved in ATM, CNS & Cargo department at CHQ while working out the allocation to AAI profit centres. However, AAI has not bifurcated the pay and allowance costs of common support service departments such as HR, finance, civil, terminal management (housekeeping), etc. between airport and non-airport related activities.
- AAI has considered 5% of the CHQ expenses (after netting off revenue) as non-airport related expenses. The Authority may consider a percentage share of expenses and apply it on total outflow of pay and allowances.
- Manpower of CHQ is also providing services to non-airport related activities such as ATC, CNS services at airports.

Considering the above facts and analysis, the Authority may take a view to exclude 20% of the payroll costs at CHQ as expenses related to support services such as ANS, and cargo, and expenses related to the Directorate of Commercial. The Authority may consider 80% of the payroll costs as aeronautical expenses.

Admin and General Expenses (CHQ)

5.2.5. The following table provides summarises the admin and general expenses at CHQ submitted by AAI:

Table 15: Break-up of admin and general expenses at CHQ submitted by AAI

FY ending March 31 (Rs. Cr)	2017	2018	2019	2020	Total
Insurance	3.15	5.33	4.76	16.45	29.68
Advt. and publicity	3.51	3.18	4.88	3.34	14.91
Office exp.	0.00	-	0.89	11.50	12.40
Telephone charges	0.30	0.33	0.31	0.20	1.14
Printing and stationary	0.66	1.05	1.13	0.96	3.82
Legal exp.	1.68	8.72	11.74	3.79	25.94
Travelling exp.	9.23	11.76	10.76	13.05	44.79
Upkeep exp.	0.50	0.63	0.20	0.13	1.46
Municipal exp, rent rate and taxes	0.32	0.36	0.33	0.34	1.36
Watch & ward exp.	0.40	0.93	1.09	1.45	3.87
Hiring of manpower	1.47	1.56	2.04	2.29	7.36
ATC admin fee and airport license fees	-	-	1.40	6.36	7.76
Import license, etc	1.25	2.42	0.09	0.03	3.79
Admission fee	-	-2.24	4.62	-	2.38
Interest & borrowing cost	15.78	9.11	4.35	-3.41	25.83
AOCC exp.	-	-	-0.00	0.00	0.00
Prior period exp.	-2.17	-0.09	-	-	-2.26
Other exp.	9.55	9.18	32.17	4.69	55.59
Total	45.63	52.23	80.77	61.19	239.82

5.2.6. With respect to the apportionment of admin and general expenses incurred at the CHQ, the Authority has the following observations:

- AAI's legal & arbitration expenses at CHQ level may need to be analysed and distributed to stations on a case-to-case basis. Since such details have not been provided by AAI, the Authority may consider excluding the same from the amount allocated to stations.
- The Authority may consider disallowing interest/penalties to Government of India at CHQ level, as stakeholders should not be burdened with interest/penalties paid to the Government of India, due to various lapses/delays on part of the airport operator.

Repair and Maintenance (CHQ)

5.2.7. The following table provides summarises the repair and maintenance expenses at CHQ submitted by AAI:

Table 16: Break-up of repair and maintenance expenses at CHQ submitted by AAI

FY ending March 31 (Rs. Cr)	2017	2018	2019	2020	Total
Civil	2.68	3.89	4.29	6.16	17.02
Electrical	1.54	1.90	2.75	2.83	9.02
Vehicles	0.49	0.19	0.65	0.36	1.69
Furniture & fixtures	0.20	0.62	0.01	0.02	0.84
Electronics	9.69	14.40	14.08	19.40	57.58
Total	14.60	21.00	21.77	28.77	86.15

Utilities and Outsourcing Expenses (CHQ)

5.2.8. The following table provides summarises the utilities and outsourcing expenses at CHQ submitted by AAI:

Table 17: Break-up of utilities and outsourcing expenses at CHQ submitted by AAI

FY ending March 31 (Rs. Cr)	2017	2018	2019	2020	Total
Electricity expenses	2.51	2.73	3.23	3.16	11.63
Consumption of stores and spares	0.36	0.38	2.55	2.34	5.63
POL	0.63	0.58	-	0.67	1.87
Fees paid to outsiders/consultancy charges	30.34	18.72	23.58	28.84	101.49
Hire charges car/jeep & others	1.82	1.57	1.92	0.24	5.55
Total	35.66	23.98	31.29	35.23	126.17

Other Expenses (CHQ)

5.2.9. The following table provides summarises other expenses at CHQ submitted by AAI:

Table 18: Break-up of other expenses at CHQ submitted by AAI

FY ending March 31 (Rs. Cr)	2017	2018	2019	2020	Total
Depreciation	7.77	9.61	11.01	14.01	42.40
CSR	32.91	14.28	0.02	13.62	60.83
Research & Development	6.42	-	-	-	6.42
Total	47.1	23.89	11.03	27.63	109.65

CHQ Expenses for FY 2020-21

5.2.10. AAI has stated that the actual CHQ expenses for FY 2020-21 are not available, and that the CHQ expenses for FY 2020-21 have been estimated by taking a 10% growth rate over that of FY 2019-20. This may not be appropriate considering that airports were not fully operating due to the Covid-19 pandemic in FY 2020-21. Due to the absence of actual CHQ expenses in FY 2020-21, the Authority may consider the FY 2020-21 CHQ expenses to be 95% of the actual CHQ expenses of FY 2019-20.

5.3. Summary of conclusions

5.3.1. Following are the conclusions regarding staff costs at CHQ expenses:

- AAI has considered pay and allowance costs of commercial department at CHQ as airport expenses, despite such expenses being non-airport related in nature.
- AAI has excluded pay and allowance costs of employees involved in ATM, CNS & Cargo department at CHQ while working out the allocation to AAI profit centres. However, AAI has not bifurcated the pay and allowance costs of common support service departments such as HR, finance, civil, terminal management (housekeeping), etc. between airport and non-airport related activities.
- AAI has considered 5% of the CHQ expenses (after netting off revenue) as non-airport related expenses. The Authority may consider a percentage share of expenses and apply it on total outflow of pay and allowances.
- Manpower of CHQ is also providing services to non-airport related activities such as ATC, CNS services at airports. The Authority may take a view to exclude 20% of the payroll costs at CHQ as expenses related to support services such as ANS, cargo and expenses related to the Directorate of Commercial. The Authority may consider 80% of the payroll costs as aeronautical expenses.

5.3.2. Following are the conclusions regarding admin and general costs at CHQ expenses:

- AAI's legal & arbitration expenses at CHQ level may need to be analysed and distributed to stations on a case-to-case basis. Since such details have not been provided by AAI, the Authority may consider excluding the same from the amount allocated to stations.
- The Authority may consider disallowing interest/penalties to Government of India at CHQ level, as stakeholders should not be burdened with interest/penalties paid to the Government of India, due to various lapses/delays on part of the airport operator.

5.3.3. AAI has stated that the actual CHQ expenses for FY 2020-21 are not available, and that the CHQ expenses for FY 2020-21 have been estimated by taking a 10% growth rate over the actual CHQ expenses of FY 2019-20. Since airports were not fully operational during the Covid-19 pandemic in FY 2020-21, this may not be appropriate. To estimate the CHQ expenses of FY 2020-21, the Authority may consider the FY 2020-21 CHQ expenses to be 95% of the actual CHQ expenses of FY 2019-20.

6. ALLOCATION OF O&M EXPENSES ACROSS AERO AND NON-AERO

6.1. Introduction to segregation of expenses

6.1.1. The following table summarizes the general principles for O&M expense categorization:

Table 19: General principles of O&M expense categorization

Expense Category	Expense Sub-Category / Description	Expense Classification
Manpower expenses	Salary, wages & bonus; Contribution to provident fund; Staff welfare expenses; New employee expenses	Common
A&G Expenses	Flood related expenses; Flood mitigation expenses	Aeronautical
	Rent; Rates and Taxes; Communication Expense; Travelling and Conveyance; Advertisement; Office Maintenance; Printing and Stationary	Common
	Auditor's Fees; Professional Charges	
	Insurance Costs; Bank Charges; Miscellaneous Expenses Scrap of assets; Foreign exchange loss; General charges Directors Sitting Fees; Rights Issue Expenses	
R&M Expenses	R&M costs for buildings, Plant & Machinery and Roads, Runways and culverts	Common
Other Expenses	Safety & Security expenses	Common
	Vehicle Running & Maintenance expenses	
	House Keeping expenses	

6.2. Examination of segregation and allocation by AAI

6.2.1. The classification of O&M expenses by AAI was found to be in line with the general principles discussed above. However, the basis for allocation of certain common costs needs to be analysed. The principles of classification followed by the airport operator are provided in the table below.

Table 20: Principles of classification and allocation used by AAI

Expense Category	Expense Sub-Category / Description	Expense Classification
Payroll costs	<ul style="list-style-type: none"> - Salaries and wages (basic pay, dearness allowance, and house rent allowance) - Overtime expenses - Other staff benefits (employee perks, EL encashment etc.) - Medical expenditure - Provident fund contributions - Staff recoveries - Apportionment of CHQ/RHQ expenses 	Common. Employee head count ratio was used to allocate between aeronautical and non-aeronautical

Expense Category	Expense Sub-Category / Description	Expense Classification
Admin & General Expenses	<ul style="list-style-type: none"> - Rent, rates, and taxes (rent on office building, import license, and taxes on vehicles) - Insurance (vehicle, and plant & machinery insurance) - Advertising and publicity - Office expenses - Telephone charges - Printing and stationery - Travelling expenses - Financing charges (apportionment of interest on loan taken at central level) - Consultancy charges - Apportionment of admin (non-employee related overhead expenses) for CHQ/RHQ 	Common: <ul style="list-style-type: none"> - TBLR was used for advertising - VEHR was used for insurance - EHCR was used for other expenses - 95% of CHQ/RHQ expenses was deemed aeronautical
	<ul style="list-style-type: none"> - Legal expenses 	Aeronautical
R&M Expenses	<ul style="list-style-type: none"> - R&M for civil works - R&M for electrical works - R&M for vehicles - R&M for furniture and fixtures - R&M for computers, IT, and hardware 	Common: <ul style="list-style-type: none"> - TBLR was used for electrical works - VEHR was used for R&M for vehicles - EHCR and EQTR was used for other R&M expenses
Utilities and outsourcing expenses	<ul style="list-style-type: none"> - Power charges - Water charges - Upkeep expenses 	Common: <ul style="list-style-type: none"> - TBLR was used for upkeep expenses - Electricity ratio was used for power and water charges
	<ul style="list-style-type: none"> - Watch and ward expenses 	Aeronautical
Other Outflows	<ul style="list-style-type: none"> - Consumption of stores and spares - POL expenses - Other miscellaneous expenses 	Common: <ul style="list-style-type: none"> - EHCR, and TBLR were used to allocate common expenses
	<ul style="list-style-type: none"> - Collection charges on UDF and PSF - Municipal taxes - Hire charges 	Aeronautical

6.2.2. The segregation of expenses carried out by AAI seems reasonable and is in line with the principles of segregation used by other AAI airports.

6.2.3. It may be noted that AAI has allocated various sub-expenses within O&M expenses based on the following ratios:

Table 21: Allocation ratios of common expenses as submitted by AAI

Particular	Ratios
Payroll Expenses	EHCR, 1EHCR (P&A)
Admin. And General Expenses	EHCR, TBLR, VEHR
Repair and Maintenance	EQTR, TBLR, VEHR, EHCR
Utilities and Outsourcing Expenses	Electricity
Other Outflows	EHCR and TBLR

Where:

- EHCR – Employee Head Count Ratio
- 1EHCR (P&A) – Employee Headcount Ratio excl. the security department
- TBLR – Terminal Building Ratio
- VEHR – Vehicle Ratio
- Electricity - Electricity ratio is based on the no. of units consumed by aero and non-aero departments.

6.2.4. A summary of the allocation ratios considered to be aeronautical based on the aforementioned ratios in AAI’s submission is given below:

Table 22: Summary of allocation ratios submitted by AAI for the Second Control Period

Ratio (in %)	Aeronautical %
TBLR	94.35
EHCR	90.90
EQTR	93.07
VEHR	100

6.2.5. A summary of the allocation ratios considered to be aeronautical based on the aforementioned ratios in AAI’s submission is given below:

Table 23: Allocation ratios approved by the Authority for the Second Control Period

Particulars	% Aeronautical Expense (excl. Cargo)
Apportionment of Admin CHQ expenses	90
Retirement benefits provided at CHQ in respect of employees at NSCBIA, Kolkata	95
TBLR	92.5
EQTR	96.7

6.3. Conclusion

6.3.1. It may be noted that the TBLR as per AAI submission is higher than that approved by the Authority in the Second Control Period Order. Thus, the Authority may consider using the approved allocation ratios to segregate common expenses.

7. OVERALL SUMMARY OF THE STUDY

7.1. Operation and Maintenance Expenses proposed by NSCBIA, Kolkata for the Second Control Period

- 7.1.1. A comparison of actual O&M expenses in Table 2 and approved O&M expenses in Table 1 shows that actual expenses are Rs. 403.77 Cr more than what was approved.
- 7.1.2. Further review of expense sub-heads shows that AAI's submission for pay roll costs, R&M expenses, utilities and outsourcing expenses was lower than what was approved by the Authority. AAI's submission on administrative and general expenses and other outflows is higher than what was approved by the Authority in the Second Control Period.
- 7.1.3. The biggest difference between approved and actual expenses can be attributed to administrative and general expenses – CHQ. While Rs. 98.60 Cr was approved by the Authority in the Second Control Period Order, AAI submitted actuals of Rs. 334.43 Cr for the Second Control Period.
- 7.1.4. Further, it is noted that while number of PAX and ATM fell significantly during FY 2020-21, O&M expenses submitted by AAI are higher in FY 2020-21 compared to FY 2019-20. The projections for FY2020-21 are discussed separately.

7.2. Historical benchmarking and trend analysis

- 7.2.1. The overall O&M expenses submitted by AAI are higher than those approved by Authority in the Second Control Period order. The key reasons for these are (a) growth rates applied by AAI in projecting O&M expenses for FY2020-21 (b) apportionment of CHQ expenses of AAI to NSCBIA, Kolkata. However, O&M expenses per PAX and per ATM are lower in FY2019-20 than in FY2016-17.
- 7.2.2. R&M expenses of NSCBIA, Kolkata range from 1.85% to 3.06% of the closing gross block. This is broadly in line with other airports and seems to be reasonable.
- 7.2.3. Estimating O&M expenses for FY2020-21 by taking a 7% growth rate for payroll costs and a 10% growth rate for other O&M expenses over the actuals of FY 2019-20 is not appropriate, considering that traffic in FY 2020-21 was significantly lower due to the Covid 19 pandemic. The Authority may consider a 0% growth over FY 2019-20 expenses to estimate expenses of FY 2020-21.

7.3. Analysis of Apportionment of AAI's CHQ Expenses to NSCBIA, Kolkata

7.3.1. Following are the conclusions regarding staff costs at CHQ expenses:

- AAI has considered pay and allowance costs of commercial department at CHQ as airport expenses, despite such expenses being non-airport related in nature.
- AAI has excluded pay and allowance costs of employees involved in ATM, CNS & Cargo department at CHQ while working out the allocation to AAI profit centres. However, AAI has not bifurcated the pay and allowance costs of common support service departments such as HR, finance, civil, terminal management (housekeeping), etc. between airport and non-airport related activities.
- AAI has considered 5% of the CHQ expenses (after netting off revenue) as non-airport related expenses. The Authority may consider a percentage share of expenses and apply it on total outflow of pay and allowances.
- Manpower of CHQ is also providing services to non-airport related activities such as ATC, CNS services at airports. Hence, the Authority may consider adjusting the pay and allowances accordingly.

7.3.2. Following are the conclusions regarding admin and general costs at CHQ expenses:

- AAI's legal & arbitration expenses at CHQ level may need to be analysed and distributed to stations on a case-to-case basis. Since such details have not been provided by AAI, the Authority may consider excluding the same from the amount allocated to stations.
- The Authority may consider disallowing interest/penalties to Government of India at CHQ level, as stakeholders should not be burdened with interest/penalties paid to the Government of India, due to various lapses/delays on part of the airport operator.

7.3.3. AAI has stated that the actual CHQ expenses for FY 2020-21 are not available, and that the CHQ expenses for FY 2020-21 have been estimated by taking a 10% growth rate over the actual CHQ expenses of FY 2019-20. Since airports were not fully operational during the Covid-19 pandemic in FY 2020-21, this may not be appropriate. To estimate the CHQ expenses of FY 2020-21, the Authority may consider the FY 2020-21 CHQ expenses to be 95% of the actual CHQ expenses of FY 2019-20.

7.4. Allocation of O&M expenses across aero and non-aero

7.4.1. It may be noted that the TBLR as per AAI submission is higher than that approved by the Authority in the Second Control Period Order. Thus, the Authority may consider using the approved allocation ratios to segregate common expenses.

7.5. Conclusion

7.5.1. After the above adjustments and reallocations discussed in the previous sections, the efficient O&M expenses for the Second Control Period have been considered as per the table below:

Table 24: Efficient O&M expenses for the Second Control Period as per the study

FY ending March 31 (in Rs. Cr.)	2017	2018	2019	2020	2021	Total
Payroll costs – CHQ	4.34	19.89	41.34	28.85	28.85	123.26

FY ending March 31 (in Rs. Cr.)	2017	2018	2019	2020	2021	Total
Payroll costs – non CHQ	112.34	128.33	143.13	160.18	160.18	704.15
Payroll costs (A)	116.68	148.21	184.47	189.02	189.03	827.41
Repair and maintenance (B)	95.20	61.22	69.21	73.18	75.56	374.37
Utilities & outsourcing expenses (C)	67.71	63.84	61.22	63.61	63.61	320.00
Admin and general expenses – non CHQ	21.53	23.21	20.98	29.89	27.58	123.20
Admin and general expenses for CHQ	39.04	29.15	1.66	68.71	65.28	203.84
Admin & Other expenses (D)	60.57	52.36	22.64	98.6	92.86	327.04
Other Outflows (E)	0.97	1.12	1.98	2.17	2.17	8.41
Total O&M Expenses (A to E)	341.13	326.75	339.52	426.58	423.23	1,857.23

7.5.2. AAI had proposed a total O&M expenditure (aeronautical) of Rs. 2,110.47 Cr. for the Second Control Period. Based on this study, the proposed O&M expenditure is Rs. 1,857.23 Cr. for the Second Control Period, thus resulting in a reduction of **Rs. 253.24 Cr.** for the Second Control Period. After making the abovementioned changes to the O&M expenses of the Second Control Period submitted by AAI, it is observed that the 4-year CAGR from FY 2015-16 to FY 2019-20 has reduced from 11.26% to 9.31%. This is primarily on account of:

- Reduction in admin and general expenses - CHQ by Rs. 130.59 Cr.
- Considering O&M expenses (other than admin and general expenses – CHQ) of FY 2020-21 to be the same as O&M expenses of FY 2019-20