भारतीय विमानपत्तन प्राधिकरण
AIRPORTS AUTHORITY OF INDIA

No.AAI/JVC/Chennai Tariff/2021 **6th October, 2021**

The Secretary,
AERA,
AERA Building, Administrative Complex,
Safdarjung Airport,
New Delhi – 110 003.

Subject: **Response to AERA's Consultation Paper No.16/2020-21 for determination of aeronautical tariff for Chennai airport, Chennai for the 3rd Control period (01.04.2021 – 31.03.2026)**

Sir,

This has reference to the AERA's Consultation Paper No.16/2020-21 for determination of aeronautical tariff for Chennai airport, Chennai for the 3rd Control period (01.04.2021 – 31.03.2026).

The AAI's submission on AERA's Consultation paper along with CHQ/RHQ allocation working file for FY 2018-19 & 2019-20 and the report of cost of equity by M/s KPMG submitted during the 1st Control period is enclosed.

Thanking you,

Yours faithfully,

[V Vidya]
Executive Director (JVC/PPP)-I

Encl: As above.

CHENNAI INTERNATIONAL AIRPORT

Response to Airports Economic Regulatory Authority (AERA)'s Consultation Paper No. 16/2021-22 dated 7th September 2021 Determination Of Aeronautical Tariff for Chennai International Airport, Chennai (MAA) for the Third Control Period (01.04.2021 - 31.03.2026).

Contents

1 Introduction

Airports Economic Regulatory Authority of India ('AERA') has released Consultation Paper No. 16/2021-22 on Aeronautical services in respect of Chennai International Airport ('MAA' or 'CIA') for Third Control Period (01.04.2021 to 31.03.2026), ('Consultation Paper' or 'CP') on 7th September 2021.

We hereby present our observations, suggestions, and request in respect of determination of Aeronautical Tariffs for CIA for the Tariff Determination for the Third Control Period – from 1st April 2021 to 31st March 2026 and True Up of Second Control Period from 1st April 2016 to 31st March 2021.

2 True Up for the Second Control Period

2.1 Regulatory Asset Base (RAB)

2.1.1 Disallowance of VANDERLAND (INLINE XBIS transferred from Srinagar) from RAB of SCP – Rs 7.50 crores

AERA's Contentions

AAI had submitted that the scanning machine had been transferred from Srinagar to Chennai since Srinagar Airport required more advance machines, due to the hypersensitive nature of the airport. Due to lack of sufficient information, both in the MYTP as well as upon site visit by AERA's consultant, AERA proposes to disallow the same. (Sl No. 1 in Table 15 of CP)

AAI's Submission

The Vanderland Inline XBIS machine was received by CIA from Srinagar airport in FY 16-17. It was in use till FY 19-20 and then subsequently transferred to Tirupati airport in FY 19-20. Thus, this machine was not physically available in Chennai at the time of site visit.

It may be noted that this transfer was considered as a deletion in the MYTP submission in FY 2019-20. We request AERA to refer to row 27 of sheet "deletions" in the financial model submitted along with the MYTP for the same.

Thus, disallowance of this asset by AERA without giving similar reversal in deletions has led to double deduction i.e while addition to asset was removed, the deletion of the asset continued to be considered.

It may also be noted that these facts were provided to the AERA in the replies to their queries during consultation.

AAI's Request

Considering the above facts, AAI requests AERA to remove the disallowance of Rs 7.50 crores made in FY 2016-17. It has already been considered as a deletion during the year of transfer of the asset in MYTP submission in FY 2019-20.

2.1.2 Disallowance of Financing Allowance

AERA's Contentions

(Para numbers as per CP)

3.3.6. AERA notes that the opening RAB reported by AAI is higher than the approved RAB as computed in the Second Control Period Order. Upon examination, AERA noted a discrepancy amounting to Rs. 87.17 Cr. between the approved and submitted RAB. Pertaining to this, AERA has noted that AAI has included financing allowance amounting to Rs. 87.17 Cr. attributed to the First Control Period (FCP) in the opening RAB of FY 2016-17, thereby leading to a higher opening RAB. AERA proposes that this be deducted from AAI's Opening RAB for the Second Control Period since the provision for financing allowance was not proposed by AAI in the First Control Period and, as a result, not approved by AERA.

3.3.7. AERA has also noted that a separate provision for financing allowance for the First Control Period amounting to Rs. 89.54 Cr. is included in the true up calculation for the Second Control Period as submitted by AAI. AERA believes that this expense is misattributed in the MYTP submission of the Third Control Period. Thus, AERA proposes to exclude the same.

3.3.23. AERA considers that giving an assured return on the equity investment even on the work-in-progress assets would result in reducing the risks associated with equity investment in capital projects. Further, the airport operator is given a fair rate of return on equity when the capital assets are capitalised.

3.3.24. Further, AERA notes that in case of greenfield developments, the airport operator would have to wait for a considerable length of time before getting the return on the large capital outlay incurred by it as these projects take longer durations to commission and operationalise. It was with this consideration that AERA had earlier provided financing allowance in initial stages to such airports. AERA notes that Chennai International Airport is a brownfield airport and has lower construction and traffic risk for new construction at the airport. It may also be noted that financing allowance has never been provided in the case of other airports such as DIAL, MIAL and KIAL. Thus, the locked-up equity in the CWIP assets henceforth cannot be given the assured return of cost of debt.

AAI's Submission

- Direction 5 of AERA (which entails the methodology of aeronautical tariff determination) allows Airport operators to be eligible for Financing Allowance as a return on the value invested in construction phase of an asset including the Equity portion, before the Asset is put to use.

- The concept of Financing Allowance, its computation and how the Work in Progress Asset includes the Financing Allowance is provided in Paragraph 5.2.7 of the Direction No.05-2010-11. Extract of the same is provided below:

  "5.2.7. Work In Progress assets (a) Work in Progress Assets (WIPA) are such assets as have not been commissioned during a Tariff Year or Control period, as the case may be. Work in Progress assets shall be accounted for as:
  WIPAt = WIPAt-1 + Capital expenditure + Financing allowance – Capital receipts of the nature of contributions from stakeholders (SC) - Commissioned Assets (CA)
  Where:
  WIPAt = Work in progress Assets at the end of Tariff Year t

WIPAt-1 = Work in progress Assets at the end of the Tariff Year t-1
Capital Expenditure= Expenditure on capital projects and capital items made during Tariff Year t.

The Financing allowance shall be calculated as follows:

$$\text{Financing Allowance} = R_d \times \left(WIPA_{t-1} + \frac{\text{Capex} - SC - CA}{2}\right)$$

Where
Rd is the cost of debt determined by AERA according to Clause 5.1.4.
SC are capital receipts of the nature of contribution from stakeholders (including capital grants and subsidies) pertaining to the capital expenditure incurred in Tariff year t.
CA are Commissioned Assets which pertain to the accumulated value of the WIPA attributable to all assets that have been put into effective operation during Tariff Year t.

- AERA has further provided an Illustration on Page 28 detailing the working. The extract of the illustration is as under:

Illustration 7: The following example illustrates this approach for calculation of Work in progress assets, financing allowance and commissioned assets. The numbers in the illustration have been rounded to the nearest integers.

Forecast Work in Progress Assets

		2010-11	Tariff Year 1	Tariff Year 2	Tariff Year 3	Tariff Year 4	Tariff Year 5
Opening WIP: $WIPA_{t-1}$	OW	-	-	-	558	638	-
Capital Expenditure	CE	-	833	521	-	-	-
Financing Allowance	$FA = R_d \times (OW + (CE - CA - SC)/2)$	-	-	37	80	43	
Capital Receipts	SC	-	200	-	-	-	-
Commissioned Assets	CA	-	633	-	-	681	-
Closing WIP: $WIPA_t$	$CW = OW + CE + FA - SC - CA$	-	-	558	638	-	-

- *The cost of debt, R_d, used for calculation of financing allowance, is the cost of debt determined by the Authority under Clause 5.1.4.*
- *The example illustrates that those assets, which have been acquired or commissioned within the same Tariff Year (i.e. Tariff Year 1), have been included both in Capital Expenditure and Commissioned Assets.*
- *The value of commissioned assets, as calculated, shall be used for forecasting RAB for the Control Period.*

- Further, Para 5.2.5 of Direction No. 05 details the forecasting of RAB wherein the commissioned assets (including the Financing Allowance on the assets, when it was in Work in Progress stage) has been added to RAB and forms part of the closing and average RAB workings. The Illustration 4 in Page 23 is given below:

Forecast RAB

		2010-11	Tariff Year 1	Tariff Year 2	Tariff Year 3	Tariff Year 4	Tariff Year 5
Opening RAB_{t-1}	OR	22,750	20,500	18,826	16,462	13,998	12,277
Commissioned Assets	CA	-	633	-	-	681	-
Depreciation	DR	2,250	2,307	2,364	2,364	2,402	731
Disposals	Di	-	-	-	100	-	-
Incentive Adjustments	IA	-	-	-	-	-	-
Closing RAB_t	CR=OR+CA-DR-Di+IA	20,500	18,826	16,462	13,998	12,277	11,547
RAB for calculating ARR	RA=(OR+CR)/2		19,663	17,644	15,230	13,138	11,912

- The Clause (d) of Para 5.2.6 defines Commissioned Assets as below:

  "Commissioned Assets: Represents investments brought into use during Tariff Year t, consistent with Clause 5.2.7 herein below."

- Thus, from the above clauses it is clear that the Financing Allowance is computed on the Work in Progress balance based on Capital Expenditure incurred which is funded by Equity/Internal accruals and is capitalized as part of Commissioned assets for RAB Computation. In the case of AAI, financing allowance is computed on the equity portion and IDC is computed on the debt portion of the capital spend.

- Thus, Direction 5 provides an explicit, detailed elaboration of Financing allowance. Manner and formulae of computation and addition of the "commissioned assets" into RAB including the Financing allowance are elucidated in detail with examples.

The regulatory principles laid down by AERA and based on which the tariff orders are determined provide a fundamental foundation of the regulatory clarity to the stakeholders on the manner in which different components of costs and revenues are treated. Following are the examples and extracts of inclusion of financing allowance in RAB by AERA

- **CIAL TCP Order:** Vide para 4.4.52 of CIAL order for third control period, for true up of SCP, AERA noted that, in the tariff order for the SCP, it was decided that FA would be trued up based on the final capex. In its MYTP submission, CIAL had proposed an addition of Rs. 11.9 crores in FY 2021 only as Financing Allowance for true up of SCP. Accordingly, AERA recomputed FA based on actual WIP capitalized and allowed for inclusion in the Order.

- **BIAL TCP Order:** Vide para 3.3.78 of BIAL Order for the third control period, AERA has agreed to allow the financing allowance for the second control period.

- Financing allowance was approved and given by AERA in the First and Second Control period for BIAL and in second control period order of CIAL.

- **MIAL and DIAL:** It is further to be noted that MIAL and DIAL are governed by tariff determination principles set forth in SSA and OMDA. SSA and OMDA do not contain the

concept of financing allowance. Hence, AAI submits that these 2 airports are not comparable with AAI airports.

- Further, AERA has stated in para 3.3.7 of CP as follows – *"The Authority has also noted that a separate provision for financing allowance for the First Control Period amounting to Rs. 89.54 Cr. is included in the true up calculation for the Second Control Period as submitted by AAI. The Authority believes that this expense is misattributed in the MYTP submission of the Third Control Period. Thus, the Authority proposes to exclude the same".* However, AAI submits that this amount of Rs. 89.54 crores represents the present value of cumulative depreciation and return on RAB impact of financing allowance for FCP. Computation of the same was provided in sheet name – FA FCP in the MYTP model

AAI's Request

- The AERA Act requires AERA to consider *"timely investment in improvement of airport facilities";* and *"economic and viable operation of major airports".* The statement of objects and reasons of the AERA Act requires Authority to encourage investment in airport facilities, create a level playing field and foster healthy competition.

- Financing allowance computation is fully in compliance with Direction 5, affirmed by Authority in its various Orders in the past.

- Based on the above submissions, AAI submits that non-consideration of Financing allowance is not in line with AERA's own guidelines .Further, allowing Financing allowance for private airports and not for AAI airports vitiates the principle of laying a level playing field for all airports – public or private in India and AAI airports would unjustly be denied of revenues that they are entitled to.

- AAI therefore requests AERA to consider the financing allowance of Rs. 87.17 crores computed for FCP additions, Rs. 89.54 crores which represents the present value of cumulative depreciation and return on RAB impact of financing allowance for FCP and Rs. 3.37 crores computed for SCP. Further, AAI requests AERA to also consider these additions by way of financing allowance for depreciation computation and return on RAB accordingly.

2.1.3 Additions for Second Control Period

AERA's Contentions

AERA allowed the following capital additions for the second control period:

Table 18: Aeronautical capital addition proposed to be considered for true up of the Second Control Period by the Authority

FY Ending March 31 (in Rs. Cr.)	2017	2018	2019	2020	2021	Total
Runways, Taxiways, Aprons	12.69	0.01	-	4.11	-	16.81
Roads, Bridges & culvert	0.41	0.58	1.66	-	-	2.65
Terminal/Other Buildings	13.26	8.41	51.05	19.86	-	92.58
Building - Residential	1.71	1.07	-	-	-	2.78
Security Fencing	-	2.58	0.50	0.73	-	3.81
Computer, IT Hardware & Access.	0.73	0.65	0.84	2.01	1.10	5.32
Computer Software	0.01	-	0.10	0.27	-	0.39
Plant and Machinery	3.93	6.96	37.09	27.69	13.57	89.24
Tools & Equipment	7.01	2.79	19.10	18.64	-	47.53
Office Furniture & Fixtures	3.60	5.17	4.68	10.71	0.11	24.28
Other Vehicles	0.90	1.35	1.03	0.88	-	4.17
Electrical Installations	15.86	10.49	59.36	31.45	-	117.16
Office Equipment	0.37	0.09	0.37	1.13	0.12	2.08
X-Ray Baggage	1.42	4.71	0.40	65.74	-	72.28
CFT	-	12.56	-	-	-	12.56
Total	61.92	57.41	176.20	183.22	14.89	493.64

AAI's Submission

It was noted that for security fencing, AAI had submitted the following additions for second control period:

Rs in crores

Particulars	2016-17	2017-18	2018-19	2019-20	2020-21	Total
Security Fencing	-	2.58	0.50	0.77	-	3.85
Plant and Machinery	3.93	9.71	40.00	27.69	13.57	94.90

AAI notes that the decrease in the plant and machinery addition for FY 17-18 was on account of disallowance of cold storage asset which is pertaining to cargo operations. However, it was observed that in the CP, though AERA had not mentioned about change in the ratio/disallowances in the above heads, there was a change in the amounts in the head of security fencing for FY 2019-20 and in plant and machinery for FY 2018-19. Reasons for the same is not available in the CP.

AAI's Request

AAI requests AERA to consider the figures as given in MYTP for the above heads as there are no changes proposed by AERA.

2.2 Return on Land

2.2.1 Return on land not provided

AERA's Contentions

AERA notes that AAI has submitted Rs. 3.68 Cr. for return on land for the First Control Period and Rs. 6.72 Cr. for return on land for the Second Control Period. AERA sought additional information from AAI regarding this land. AAI has not provided the required information and responded that land had been acquired free of cost. Moreover, since return on land should be sought prospectively and not retrospectively, AERA is of the opinion that return on land will not be included in the true up calculation. (Para 3.6.6 of CP)

AAI's Submission

AAI submits that the while majority of land was provided free of cost, following compensation was paid for various parcels of land. Details are provided below for consideration by AERA:

Asset Description	Operational area (Acres)	Non-Op area (Acres)	Capitalized on	Amount (Rs)
Transfer of 21 acres of defence land at pallavaram cantonment	1.76	19.24	24-Jan-11	3,37,20,579
Pallavaram & Meenabakkam village 1991 – 1992	1018.28	124.590	31-Mar-92	2,42,40,474
Land measuring 23.89 Acres - Meenabakkam village	23.89		31-Mar-04	1,05,06,764
Landowners, Advocate - Pozhichalur village - 1008 + 20 sqm	0.25		31-Mar-93	1,84,970
2.28 Acres Cowl bazar for parallel taxi track	2.28		25-Jan-18	50,001
Acquisition of Defence Land Vr.No.1451,16.09.97-De	0.48		31-Mar-98	9,750
Land received Free 126.56 acres - Kolapakkam Manapakkam	126.56		31-Mar-09	1
				6,87,12,539

AAI's Request

Since majority of the compensation was paid for land acquired for operational purposes, AAI requests AERA to consider the above details in their computation on return on land. AAI further requests AERA to consider this return in the ARR from the first control period.

2.3 Opex

2.3.1 Considering Admin CHQ/RHQ expenses as per SCP Order

AERA's Contentions

Reference is invited to para 3.7.15 of the CP which stated as follows. *"AERA also notes that AAI has provisioned towards an apportionment of Admin. Expenses to CHQ/RHQ amounting to Rs. 288.75 Cr. Authority believes that this amount is on a higher side as compared to Rs. 119.8 Cr. as approved in the Second Control Period. AERA proposes to consider the approved expenditure as per the Second Control Period tariff order for the true-up calculation."*

Further AERA vide para 3.4 of Annexure VI, Page No 139 of CP has stated that *"Apportionment expenses to CHQ/RHQ requires further analysis of AAI's methodology/formula. In the absence of data on the methodology/formula used by AAI to compute, apportionment expenses, AERA may choose to consider the lower of actual/approved apportionment expenses as per the Second Control Period Order."*

AAI's Submission

In this regard it is submitted that AAI is an entity established under an Act of the Parliament and its accounts, after audit by the C&AG is tabled before the Parliament.

AAI has been consistently following the below given approach methodology/formula for the purpose of allocation of CHQ & RHQ Expenses to all the Profit Centers. It has adopted the same approach while finalising and submitting the tariff proposals for AERA in the past.

i. CHQ Expenses (Net off of Revenue) are allocated to all the profit Centers of AAI on the basis of Revenue earned.
ii. RHQ Expenses (Net off of Revenue) are allocated to all the profit Centers under the respective region on the basis of Revenue earned.
iii. Final allocation of CHQ & RHQ Expenses to the profit Centers

AERA has in the past considered the above approach in its determination of tariffs for Amritsar, Raipur, Trichy and Varanasi Airport. However, a change in the approach in the case of determination of tariffs for Chennai Airport is proposed now as "……*AERA may choose to consider the lower of actual/approved apportionment expenses as per the Second Control Period Order."*

As the policy is uniform for AAI as a whole the change in approach / methodology between airports during the Control period would necessarily mean that the CHQ/RHQ apportioned expenses remain under recovered at Chennai Airport.

It was also stated in para 3.4 of Annexure VI, Page No 139 of CP, "*In the absence of data on the methodology/formula used by AAI to compute, apportionment expenses, AERA may choose to consider the lower of actual/approved apportionment expenses as per the Second Control Period Order."* AAI submits that AERA, during the consultation process, had elicited responses for the methodology of allocation of CHQ/RHQ expenses. This was duly submitted to AERA through email. AAI submits that there were no further queries/data requirements provided by AERA in this regard. Hence, AAI submits that "absence of data on methodology/formula" to validate the CHQ/RHQ expenses cannot be the basis for considering the expenses as per SCP order.

AAI's Request

In view of above, it is requested to go through the attached workings of CHQ/RHQ allocation and same may be considered in the true up exercise of 2nd control period. In addition to the above computations, AAI also submits a document which entails the allocation methodology. AAI submits that based on the above computation, the expenses for TCP may also be considered by AERA as per MYTP.

Please refer to **Annexure 1** for details.

2.3.2 Miscellaneous expenses considered as per Order

AERA's Contention

AERA has stated in para 3.7.21 of CP as follows - *"Additionally, the Authority proposes to consider miscellaneous expenses as approved by the Authority in the Second Control Period Order."*

AAI's Submission

AAI submits that reasoning for considering miscellaneous expenses as per the SCP Order has not been detailed in the CP. This has led to decrease in the opex by almost Rs 30 crores. AAI states that the entire financial accounts have been audited already for FY 16-17 to FY 19-20 and has also been audited by C&AG. Hence, AAI re-iterates that all expenses accounted in the trial balance of respective airports are to be considerd.

AAI's Request

AAI requests the Authority to consider the actual miscellaneous expenditure as per the trial balance submitted for SCP.

2.3.3 Interest on bond (financing charges) – Rs 26.09 crores

AERA's Contentions

As per para 14.16 of the Second Control Period Order, AERA had proposed to not include financing charges worth Rs. 26.90 Cr. in admin. and general expenses. Since the same has been included in the MYTP submission, AERA decided to exclude these expenses from O&M expenses for the Second Control Period. (Para 3.7.13 of CP)

AAI's Submission

AAI submits to that AERA to consider interest on bonds after date of capitalization in SCP as these are actual outflow of funds.

AAI's Request

AAI requests AERA to consider interest on bonds in operating costs after date of capitalization in SCP.

2.3.4 Working Capital Interest – bifurcation into aero/non-aero

AERA's Contentions

AERA proposes to consider interest on working capital loan as an operating expense. AAI submission considered working capital loan interest as an aeronautical expense. AERA proposes to use the share of aeronautical revenue at Chennai International Airport to bifurcate working capital loan interest into aeronautical and non-aeronautical expenses. (Para 3.7.22 of CP)

AAI's Submission

AAI firstly submits that it is not in receipt of the financial model after making changes as proposed by AERA in the CP. AAI further notes that the working capital interest has been re-computed after effecting the changes proposed by AERA in various building blocks.

Following observation is based on the method of computation of working capital interest provided in the Model submitted as part of MYTP by AAI.

AAI submits that the computation provided in "WC(MAA)" sheet in the MYTP model considers the aeronautical portion of the operating costs only. Since the working capital is purely determined on the basis of aeronautical cashflows, AAI submits that there is no necessity to further allocate the working capital interest so determined into aeronautical and non-aeronautical expenses.

AAI's Request

AAI requests AERA to re-instate and consider the observations and submissions of AAI submitted in this document in various building blocks for second and third control period and to recompute the revised working capital interest without considering any further allocation ratios.

2.3.5 Computation of EQTR ratio

AERA's Contentions

3.3.26. Thus, AERA proposes to use the approved TBLR and Employee Quarter Ratio (EQTR) allocation ratios to segregate the value of common assets. (Para 3.3.26 of CP)

Table 16: Comparison of Allocation ratios as approved by the Authority and as submitted by AAI

S No.	Allocation Ratio	Approved by Authority in SCP Order (excl. Cargo)	As per AAI (in %)				
			2017	2018	2019	2020	2021
1	TBLR	92.50	92.47	92.59	94.47	94.34	94.35
2	EHCR	97.87	98.18	98.18	98.18	98.18	97.77
3	EQTR	88.14	99.73	99.73	99.73	99.73	99.55
4	VEHR	98.19	97.30	97.30	97.30	97.30	97.30

AAI's Submission

In the SCP order, AERA had computed the above EQTR ratio of 88.14% based on the following para:

7.2.4. Quarter ratio for residential building – Based on employees allotted quarters (10.8%, 8.9% and 80.3% for cargo, non-aero and aeronautical components respectively)

However, it is to be noted that the computation in SCP Order was on an estimated basis as well as consideration of cargo operations. Since cargo operations were hived off to AAICLAS in FY 17-18, AAI has now recomputed the EQTR for the second control period based on the actual occupancy of the

employee quarters. This was submitted to AERA as part of MYTP as well as reproduced above in para 2.3.4 under AERA's analysis.

AAI's Request

AAI requests AERA to consider the EQTR as submitted in MYTP for the second control period i.e by excluding cargo related employees in the computation.

2.4 FRoR

2.4.1 Cost of Equity considered as 14%

AERA's Contentions

AERA notes that there is a change in the debt-equity composition of Chennai International Airport in FY 2020-21. As per AAI's submission, the cost of debt considered at Chennai International Airport is 6.21%, based on the term loan facility of Rs. 2100 Cr. that AAI had taken from M/s. Axis Bank. Thus, after considering a cost of equity of 14%, AERA recalculates the FRoR for the Second Control Period to be 13.92%. (Para 3.5.4 of CP)

AAI's Submissions

AAI submits that as per the Second Control Period Order – decision no. 9.b, AERA had decided to carry out an independent study of the FRoR for major AAI airports. However, it was noted that the results of such study was not mentioned in the CP.

It was also noted by AAI that AERA had referred to the workings carried out in the Orders of MIAL and DIAL and had recomputed the Cost of Equity for Chennai airport. However, it is submitted that the comparable airport set used for MIAL and DIAL along with the proximity score computations may not hold good for AAI airports. Proximity scores were computed based on three criteria - Revenue till, Ownership structure and Operations. The scores assigned for each of the airports in the comparable set would be very different if re-applied and re-computed for AAI airports. Extract of the proximity score computation is provided below:

The proximity scores of these airports with CSMIA are as follows:

Airport	Revenue till	Ownership structure	Operations	Proximity scores
Mumbai	0.00	0.00	0.00	0.0000
Sydney	1.00	1.00	0.41	1.4726
Melbourne	1.00	1.00	1.09	1.7851
Gatwick	2.00	1.00	0.99	2.4474
Auckland	1.00	1.00	2.05	2.4935
Amsterdam	1.00	1.00	-2.28	2.6796
Johannesburg	2.00	1.00	1.50	2.6920
Changi	0.00	2.00	-2.14	2.9319
Dublin	2.00	2.00	1.56	3.2295
Heathrow	2.00	1.00	-2.47	3.3295
MAHB	2.00	1.00	-3.40	4.0670
Incheon	2.00	2.00	-2.93	4.0721
AoT	1.00	1.00	-4.15	4.3822

Scoring mechanism for proximity scores:

Revenue till structure:

- *1 – 'single till' or where information is not available*
- *2 – 'dual till'*
- *3 – Hybrid Till*

Ownership structure:

- *1 – if 100% Government Owned/Funded*
- *2 – if Government / private owned/funded, not being Public Private Partnership*
- *3 – if Public Private Partnership Funded*

Operations Scale (OpS):

- *For each comparable airport, k, we computed the ratios of passenger, cargo and aircraft movement of these airports to that of MIAL in each of the years from 2015 to 2017.*

MIAL and DIAL are PPP airports and the level of traffic handled by it and the scale of operation is very different from that of AAI airports. Hence, it is submitted once again that the asset beta worked out for MIAL and DIAL based on its comparative data set cannot be applied straightaway to AAI airports.

AAI had appointed M/s KPMG to carry out a study on Cost of Equity during 2011 the results of which are given below:

Table 3: Beta of comparable airports

Airport / Group	Country	Equity Beta	Tax Rate	Debt (in Billion local currency)	Mkt Cap (in Billion local currency)	Debt /Mcap	Asset Beta
Airports of Thailand PCL	Thailand	1.14	30%	56.2	54.3	1.03	0.66
Beijing Capital International Airport	China	1.03	25%	18.5	14.8	1.25	0.53
Guangzhou Baiyun International Airport	China	0.91	25%	0.0	8.3	0.00	0.91
Shanghai International Airport	China	1.04	25%	2.5	22.0	0.11	0.96
Xiamen International Airport	China	0.95	25%	0.0	4.1	0.00	0.95
Grupo Aeroportuario del Sureste SAB de CV (Group of 9 airports in Mexico)	Mexico	0.94	30%	0.6	21.0	0.03	0.92
Grupo Aeroportuario del Pacifico SAB de CV	Mexico	0.84	30%	1.0	27.2	0.04	0.82
Grupo Aeroportuario Centro Norte, S.A. de C.V.	Mexico	0.99	30%	1.0	9.2	0.10	0.92

The median value of asset beta for the above comparable set is 0.92 which is being used as the asset beta for airport operations business of AAI. This needs to be re-levered as per the expected gearing of AAI in the control period to estimate the equity beta for AAI.

Table 4: Equity Beta for AAI

Estimated asset beta for AAI	0.92
Gearing for AAI	8.84%
Tax rate for AAI	32.45%
Equity beta for AAI	0.98

Equity beta for AAI works out to 0.98.

Please refer to **Annexure 2** for full report as annexed in the FCP CP - Consultation Paper No. 16/2012-13.

Based on the above report, AAI submitted during SCP consultation that the CoE was 16%. AERA in the SCP order had also considered CoE of 16% and since there was low debt, the FRoR was determined to be 14%. AAI submits that the debt was taken only during the end of FY 21 and hence, requests AERA to consider FRoR of 14% for SCP.

AAI's Request

AAI submits that the FRoR may be considered at 14% for SCP in accordance with the decision no. 9a in SCP order no 3/2018-19.

3 Regulatory Asset Base for Third Control Period

3.1 Shifting of Part 2 of Phase 2 of Proposed Terminal Building

AERA's Contentions

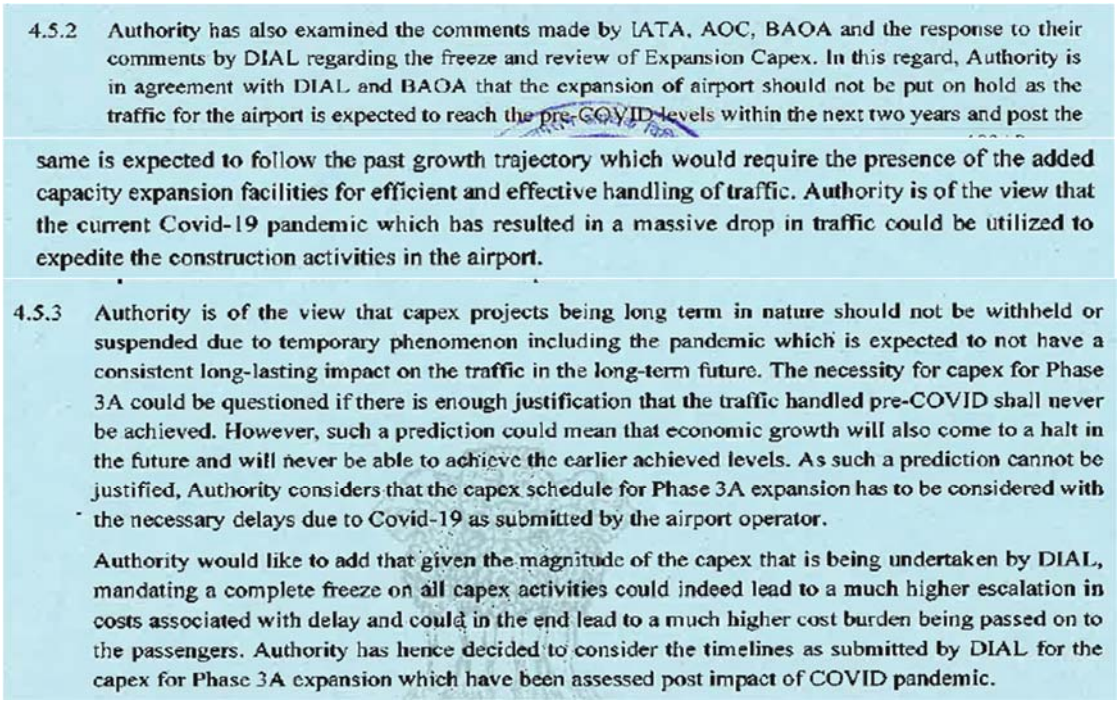
AAI submitted that the construction of modernization of Chennai International Airport, Phase II (NITB Part – 2) will be started after commissioning modernization of Chennai International Airport, Phase II (NITB Part – 1). Given that commissioning of modernization of Chennai International Airport, Phase II (NITB Part – 1) is to be postponed to FY 2022-23, AERA envisages the construction of modernization of Chennai International Airport, Phase II (NITB Part – 2) of the project to commence towards the middle of FY 2022-23. AAI also submitted that a part of the existing terminal T3 is still operational and is therefore not demolished completely. This was verified during the site visit by AERA's consultant as well. Considering that the demolition of the existing T3 is yet to be done, AERA estimates that the construction of modernization of Chennai International Airport, Phase II (NITB Part – 2) would be completed towards the end of FY 2025-26. Further, AERA is of the opinion that modernization of Chennai International Airport, Phase II (NITB Part – 2) would take at least 6 more months to be made operational. Thus, AERA proposes to shift the capitalisation of modernization of Chennai International Airport, Phase II (NITB Part – 2) to the first year of the Fourth Control Period (i.e., FY 2026-27). (Para 5.2.25 of CP)

AAI's Submission

AAI submits the following reasons for considering NITB part 2 in third control period i.e in FY 23-24 itself:

- The NITB was not planned to function separately as part-1 and part-2. It is a single Integrated building catering to both International and Domestic passengers (as per DPR submitted by PMC and approved by AAI, CCEA, PIB and MOCA). Only due to site constraints, and to have unhindered airport operations, the construction was planned in two parts.
- The contracts awarded to the agencies like L&T (Main work), Godrej (Interior works) and Pteris Global (Baggage Handling System) are consolidated contracts for both the parts of the terminal. Mobilizing material, Machinery, and labor after a break in construction is not feasible.
- There may be huge monetary escalations on material and labor costs.
- The Construction of a Terminal of this magnitude requires Specialized fabrications and skilled manpower. Bringing all the specialized agencies currently on board after a break may lead to coordination issues.

- There shall be contractual obligations, if the work is halted for more than the specified timelines in the contract. As it is already mentioned that the work awarded was for the entire project and not for parts.
- It is further submitted that AERA, in the Order No. 57/2020-21 for DIAL has analysed as follows:



4.5.2 Authority has also examined the comments made by IATA, AOC, BAOA and the response to their comments by DIAL regarding the freeze and review of Expansion Capex. In this regard, Authority is in agreement with DIAL and BAOA that the expansion of airport should not be put on hold as the traffic for the airport is expected to reach the pre-COVID levels within the next two years and post the same is expected to follow the past growth trajectory which would require the presence of the added capacity expansion facilities for efficient and effective handling of traffic. Authority is of the view that the current Covid-19 pandemic which has resulted in a massive drop in traffic could be utilized to expedite the construction activities in the airport.

4.5.3 Authority is of the view that capex projects being long term in nature should not be withheld or suspended due to temporary phenomenon including the pandemic which is expected to not have a consistent long-lasting impact on the traffic in the long-term future. The necessity for capex for Phase 3A could be questioned if there is enough justification that the traffic handled pre-COVID shall never be achieved. However, such a prediction could mean that economic growth will also come to a halt in the future and will never be able to achieve the earlier achieved levels. As such a prediction cannot be justified, Authority considers that the capex schedule for Phase 3A expansion has to be considered with the necessary delays due to Covid-19 as submitted by the airport operator.

Authority would like to add that given the magnitude of the capex that is being undertaken by DIAL, mandating a complete freeze on all capex activities could indeed lead to a much higher escalation in costs associated with delay and could in the end lead to a much higher cost burden being passed on to the passengers. Authority has hence decided to consider the timelines as submitted by DIAL for the capex for Phase 3A expansion which have been assessed post impact of COVID pandemic.

- Similar to the situation in DIAL, AAI submits that the current capacity of Chennai International Airport is only 17 MPPA though it was operating at 22.5 MPPA in pre-covid period. This is expected to grow to about 35 MPPA in the next 10 years. AAI submits that the current dip in traffic is only a temporary phenomenon, and this should not affect the development of infrastructure to cater to anticipated growth for the future. AAI re-iterates that all infrastructure projects should aim at future proofing and should not be hindered by short term situations.

AAI's Request

Considering the above facts, AAI requests AERA to allow Part 2 of the NITB in third control period itself i.e in FY 2023-24 itself.

Further, AAI requests AERA to re-instate all operating costs (R&M, other operating costs, employee costs, utilities *(power cost may be considered as 40% as submitted in MYTP instead of 33% as proposed by AERA due to shifting of Part 2 of Phase 2)*, etc. which have been proposed to be disallowed by AAI due to shifting of part 2 to fourth control period) in third control period itself as proposed by AAI in its MYTP.

3.2 Re-adjustment of 1% in ARR in case of non-completion of the project

AERA's Contentions

AERA noted that AAI has had a trend of proposing capex in the respective control period and postponing it to the next control period. While AAI proposed capitalisation worth Rs. 2,862.71 Cr. in the First Control Period, it executed only Rs. 2,235.90 Cr. Similarly, in the Second Control Period, AAI had

proposed capital additions worth Rs. 1,434.2 Cr., it capitalised only Rs. 243.73 Cr. Although AERA acknowledges the effect of the pandemic in the Second Control Period, it is of the opinion that the passenger must not bear the burden in case of a delay in capitalisation due to the airport operator.

Thus, AERA proposes to reduce 1% of the total project cost from ARR/Target Revenue as readjustment in case any particular capital project is not completed as per the approved capitalization schedule. This will be examined during the true up of the Third Control Period, at the time of determination of tariff for the Fourth Control Period. (Para 5.2.2 and 5.2.3 of CP)

AAI's Submission

AAI submits that the shifting of the phase 1 of the terminal from second control period to third control period was because of the pandemic. Due to the severe impact of Covid-19 which resulted in lockdowns in Tamil Nadu, construction activities at site were severely impacted and there was steady migration of labor back to their native places, resulting in delays in completion of Terminal. Hence, AAI submits that the shifting of terminal work to third control period cannot be construed as a benchmark as it was due to a delay which was beyond the control of AAI.

AAI's Request

While AAI strives to stick to the committed deadlines, we request AERA to not levy any penalty in case any projects are not completed due to circumstances that may be beyond the control of the Airport.

3.3 Disallowance of Financing Allowance

AERA's Contentions

AERA noted that financing allowance and the methodology for computation of the same was detailed in the airport guidelines and the same would need to be provided to the Airport Operator. However, the Airport Operator has computed financing allowance on the entire WIP amount being capitalised, whereas AERA is of the view that such an allowance is essentially the IDC for a project and should be provided only on the debt portion of the project funds. Accordingly, AERA has considered IDC to be provided based on revisions in the proposed capital expenditure discussed for the Third Control Period and the notional gearing considered for the Third Control Period. (Para 5.2.1)

AAI's Submission and Request

We request AERA to refer to the detailed explanations provided in comments to the Second Control Period True up.

3.4 Resurfacing of Main Runway 0725:

AERA's Contentions

(G.1) Resurfacing of Main Runway 07-25: Since the nature of the work is to maintain the existing quality of the runway (and not modify it), AERA proposes to shift this to O&M expenses. (Para 5.2.30 of CP)

*AERA proposes to consider capital expenditure submitted by AAI on resurfacing of main runway worth Rs. 30.00 Cr. as R&M expenditure. (*Para 8.2.10 of CP)

AAI's Submission

The current PCN value determined for Main Runway is 105/F/C/W/T. The last resurfacing of the Main Runway was carried out in FY 2016. Hence, there is a requirement for carrying out resurfacing once again.

AAI submits that with the resurfacing, PCN value shall increase. Hence it is considered under Capital Expenditure. The regular maintenance works such as rubber removal, etc., are considered under O&M expenses. This being major expenditure and as there will be increase in PCN value, this shall be considered under Capital Expenditure.

AAI's Request

Since there is an expected increase in PCN value, AAI requests AERA to consider this spend as a capital expenditure.

3.5 Normative Cost applied in respect of Construction of Balance portion of 02 RET

AERA's Contentions

AERA noted that the cost per Sq.m. for construction of balance portion of two Rapid Exit Taxiways (RET) for the main runway 07/25 merging with B-Taxi track (beyond critical portion of runway) and resurfacing between taxiway-D and taxiway-M, is Rs. 7,499 per Sq.m. This is more than the inflation adjusted normative benchmark of Rs. 5,947.00 per Sq.m. for FY 2021-22. AERA proposes to consider a cost per Sq.m. of Rs. 5,947.00 for the above capex work. This led to reduction in the additions to RAB by Rs. 2.23 crores. (Para 5.2.31 of CP)

AAI's Submission

AAI submits the following justification for difference in the actual cost vs normative cost for this project is as under:

- The operational area works in Chennai Airport are being done in one of the busiest Airports in India. It is imperative to ensure unhindered operations while the works are in progress. This requires adopting to quicker methods of construction by using improved pavement designs.
- In Chennai Airport, it is required to connect the new taxiway being constructed to the existing operational runways as well as taxiways at 16 places.
- At all these 16 locations, a special pavement design was adopted to quickly complete the work on day-to-day basis to minimize runway/taxiway closure.
- It is required to construct 12 of the culverts across the newly built taxiways to ensure proper drainage.
- The soil condition is also poor at most of the places. The pavement section was improvised to accommodate the poor soil conditions.

AAI's Request

AAI requests AERA to consider the cost as submitted for this project as the deviation from the normative cost has been justified above.

4 Aeronautical Ratios for Third Control Period

4.1 Terminal Building Ratio for TCP calculated as 90:10

AERA's Contentions

AERA notes that the non-aeronautical component of TBLR ratio is in the range of 5-8%. As mentioned earlier, this is in contrast to the 8-12% that the IATA and IMG norms recommend. Therefore, AERA proposes to consider a TBLR of 90:10 for the Third Control Period. AERA seeks stakeholder comments in this regard. (Para 5.2.47 of CP)

AAI's Submission

- As per the design, the new integrated terminal has commercial space of about 8.70%.
- The actual commercial area utilization in T1 and T4 is also lesser than 7.50%. AAI further submits that the commercial area cannot be increased due to space constraints inside the Terminal Building.
- Hence, if one considers the utilization in T1 to T4, the average % of commercial area will be lesser than 7.50% i.e average of T2 and T3's commercial space of 8.70% and the T1 and T4's commercial space of less than 7.50% will result in an overall average of less than 7.50% of commercial space.
- Since AERA has already considered 7.5% in SCP for the proposed terminal building, we request the same may be continued in TCP for the same proposed terminal building.
- AAI further submits that AERA has mentioned in Para 5.2.47 of the CP that 8-12% is the recommended range of commercial space by IATA and IMG norms. However, the basis for considering 10% as the commercial area is adhoc and without any basis.

AAI's Request

- AAI thus requests AERA to consider 7.50% as the terminal building ratio for the proposed additions in the third control period.
- True up of the ratio may be carried out in the next control period based on a study to determine the actual commercial space and re-determine the Terminal building ratio accordingly.

4.2 Allocation Ratios

AERA's Contentions

As per Table 81 of CP, AERA has applied aeronautical ratio for assets which are purely aeronautical in nature:

Reference	Project / Group	No.	Particulars	Submitted by AAI	Proposed by Authority	Difference
				(1)	(2)	(3) = (2) – (1)
Capital Additions Deferred from the Second Control Period to the Third Control Period						
A	New Integrated Terminal Building (Part– 1)	A.1	Modernization of Chennai International Airport, Phase II (NITB Part – 1) Incl. AS, IT MEP & Civil (Excl. Interior), Furnitures	601.67	574.74	(26.93)
		A.2	Electrical Part 1	187.79	152.14	(35.65)
		A.3	Baggage Handling System Part 1	197.47	177.72	(19.75)
		A.4	Passenger Boarding Bridge & Visual Docking Guidance System Part 1	44.31	36.38	(7.93)
		A.5	Interior works (Civil) Part 1	47.25	42.52	(4.73)
		A.6	Others	155.1	139.59	(15.51)
		A	**Sub-total (NITB Part 1)**	**1,233.58**	**1,123.09***	(110.49)

AAI's Submission

AAI submits that as per the above table, Baggage Handling systems, Airport Systems, Signages, STP, Airport Systems packages (i.e., XBIS-HB, DFMD, ETD & HHMD), Passenger boarding bridges and visual docking guidance system are purely aeronautical in nature. This has been provided by AERA in the independent study reports on asset allocation for MIAL and DIAL also. However, aeronautical ratio has been applied even on the above assets resulting in a reduction in the additions to RAB by about Rs 27 crores.

AAI also submits that the ratio adopted for electricals portion is around 20% (Rs 35.65/187.79 crores). Reasons for such application of such high ratio is not provided nor justified in the CP. AAI submits that the same terminal building ratio as applicable for other heads ought to be applied on this head also.

AAI's Request

AAI requests AERA to consider the above assets which are purely aeronautical in nature and add back the disallowances from RAB as well as depreciation accordingly.

5 Operating Expenses for Third Control Period

5.1 Power Cost Recovery considered as 25%

AERA's Contentions

AERA notes that the recovery of power charges is 10.6% of the total power charges in the Third Control Period. The power recovery percentage is significantly lower than that for comparable airports. AERA also notes that the recovery percentage is even lower than that in the Second Control Period. AERA proposes to consider power recoveries at a notional rate of 25% in the tariff order of the Third Control Period if the airport operator is unable to provide sufficient justification for the low recovery. AERA invites stakeholder comments on the same and proposes to analyze this further in the Third Control Period Order. (Para 8.2.9 in CP)

AAI's Submission

As a general business principle, the infrastructure and utilities at an Airport are being provided by the Airport Operator and the cost of providing such utilities have been charged to the concessionaire to the extent the area occupied by the concessionaire. Accordingly, the cost of utilities which are recovered from the concessionaire (i.e., non-aeronautical portion) gets reduced from the overall utility cost of the Airport Operator and hence the net utility cost left with the airport operator is fully aeronautical in nature.

It is further to be noted that the airport also recovers the power cost from Air Navigation Services, Southern Region as well as Cargo operations from the respective cost centers. Such recovery is netted off with the power cost ledger itself. Hence, AAI submits the following revised computation for computing the power charges recovery for kind consideration by AERA:

Expenses (Rs in crores)		**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**
OAAI/726001000Electricity Expenses		73.95	75.82	68.51	63.99
Cargo		-	-	4.03	8.87
Southern Region		0.82	0.79	0.80	0.83
ANS		3.09	3.31	3.33	3.85
Gross Expenses	**A**	**77.86**	**79.91**	**76.67**	**77.54**

Recovery (Rs in crores)		**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**
OAAI/940017000EWChgs(Oth)		-6.49	-8.24	-6.28	-7.16
OAAI/980012000EWC(Staff)		-0.21	-0.24	-0.27	-0.27
Cargo		-	-	-4.03	-8.87
Southern Region		-0.82	-0.79	-0.80	-0.83
ANS		-3.09	-3.31	-3.33	-3.85
Gross Recoveries	**B**	**-10.61**	**-12.57**	**-14.71**	**-20.98**

Recovery %	**C=B/A**	**14%**	**16%**	**19%**	**27%**

AAI's Request

AAI requests AERA to consider the above computations and would like to re-iterate that the total recovery from concessionaires plus ATC, cargo etc. has been consistently growing over the years and has reached even up to 27% in FY 2019.

5.2 R&M Costs – Increases allowed by AERA

AERA's Contentions

8.2.11. In line with the efficiency study, AERA proposes to use a growth rate of 4.9% (benchmarked to inflation as proposed by AERA for the Third Control Period) for R&M expenses and to true-up the same based on the actual R&M expenses incurred during the tariff determination exercise of the Fourth Control Period (Para 8.2.11 of CP)

AAI's Submission

AAI draws attention to Table 57 of SCP Order where the Repairs and Maintenance expenditure for SCP was approved as follows:

Repair and Maintenance (Aero) (Rs in crores)	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total
Approved by AERA (Table 57 of SCP Order)	87.90	82.40	89.70	97.00	105.30	462.30
Growth rate		-6.26%	8.86%	8.14%	8.56%	

As against this amount of Rs 462.30 crores approved for SCP, AAI had spent about Rs. 421.59 crores for the five-year period. AAI submits that the actuals was not very different from the approved amounts. But for the pandemic situation, the actual expenditure would have been closer to the approved amounts. With further ageing of the assets, the R&M expenditure is only bound to increase. An analysis of the operating expenditure to the gross block over the SCP and TCP is as follows:

Rs in crores

Particulars	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21
Opening Gross Block	2,817.75	2,886.01	2,945.20	3,114.65	3,295.51
Additions	69.71	60.31	179.19	186.31	14.89
Deletions	-1.45	-1.13	-9.74	-5.46	-
Closing Gross Block	2,886.01	2,945.20	3,114.65	3,295.51	3,310.40
Aero Repairs and Maintenance Expenses	92.81	101.10	73.14	73.54	81.00
% R&M to Closing Gross Block	3.22%	3.43%	2.35%	2.23%	2.45%

Particulars	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25	FY 2025-26
Opening Gross Block	3,310.40	4,948.04	5,054.24	6,598.17	6,947.32
Additions	1,637.64	106.20	1,543.94	349.14	492.79
Deletions	-	-	-	-	-
Closing Gross Block	4,948.04	5,054.24	6,598.17	6,947.32	7,440.11
Aero Repairs and Maintenance Expenses	90.60	104.46	114.63	136.59	153.66
% R&M to Closing Gross Block	1.83%	2.07%	1.74%	1.97%	2.07%

As per the above table, the total R&M expenditure is less than 2% of the gross block over SCP and TCP. This amount is the bare minimum spend projected by AAI for airport operations and for maintenance of all equipment.

AAI's Request

Hence, AAI requests AERA to consider the amount which has been submitted in MYTP as the R&M expenditure.

5.3 Estimation of Other Outflows

AERA's Contentions

AERA proposes to consider the actual FY 2020-21 passenger traffic to compute the collections from UDF charges. Additionally, AERA proposes to consider miscellaneous expenses as approved by AERA in the Second Control Period Order. AERA proposes to consider Rs. 10.80 Cr. for other outflows for FY 2020-21 as opposed to Rs. 18.23 Cr. submitted by AAI. Accordingly, AERA proposes to consider the following other outflows for the Second Control Period: (Para 3.7.21 of CP)

8.2.15 For other expenses under other outflows, AERA proposed to consider a growth rate of 7.5% instead of 10% as submitted by AAI. (Para 8.2.15 of CP)

AAI's Submission

AAI draws attention to Table 57 of SCP Order where the Other Outflows expenditure for SCP was approved as follows:

Other Outflows(Aero)	FY 2016-17	FY 2017-18	FY 2018-19	FY 2019-20	FY 2020-21	Total
Approved by AERA (Table 57 of SCP Order)	13.60	12.20	12.80	13.40	14.10	66.10
Actuals incurred	21.17	18.34	21.50	19.74	18.23	98.98

As against this amount of Rs 66.10 crores approved for SCP, AAI had spent about Rs. 98.98 crores for the five-year period. AAI submits that the actuals spent was much more than the approved amounts. This is due to increase in the passengers which led to increase in the collection charges for UDF as well as other components in the other outflows by much more than the traffic increase.

Though collection charges on UDF is the main component of other outflows, it may be noted that the increase now given for this head for the third control period which is 7.5% only does not compensate the increase in traffic also which is provided below:

FY ending March 31	2020 (actuals)	2021	2022	2023	2024	2025	2026
% growth over previous year		-90%	127%	225%	33%	8%	7%
% of FY20 traffic		10%	23%	75%	100%	108%	116%
Total	22.27	5.50	12.54	21.65	23.92	26.03	29.79
% growth over previous year		-75%	128%	73%	10%	9%	14%
% of FY20 traffic		25%	56%	97%	107%	117%	134%
Air Traffic Movement (in 000's)							

AAI's Request

AAI requests AERA to consider the other outflows be split into UDF collection charges and other charges. UDF collection charges may be increased in line with the increase in traffic and other charges may be increased by 10% year on year itself as submitted by AAI in its MYTP. AAI also requests AERA to consider the actual spend for other outflows while truing up for the second control period instead of considering the amount as approved in the SCP Order.

5.4 Interest on term loan not considered as opex

AERA's Contentions

AAI has proposed to charge off the interest on loans availed by AAI under administrative and general expenses – non CHQ/RHQ. AERA proposes not to consider these financing charges as O&M expenses. (Para 8.2.14 of CP)

AAI's Submission

AAI submits to that AERA to consider interest on term loans after date of capitalization in TCP as these are actual outflow of funds.

AAI's Request

AAI requests AERA to consider interest on term loans in operating costs after date of capitalization in TCP.

6 Return on Land for Third Control Period

6.1 Return on land not provided

AERA's Contentions

AERA notes that AAI has submitted Rs. 2.25 Cr. for return on land for the Third Control Period. AERA sought additional information from AAI regarding this land. AAI has not provided the required information and responded that land had been acquired free of cost. Thus, AERA is of the opinion that return on land may not be provided to Chennai International Airport for the Third Control Period. (Para 7.2.4 of CP)

AAI's Submission

AAI submits that the while majority of land was provided free of cost, following compensation was paid for various parcels of land. Details are provided below for consideration by AERA:

Asset Description	Operational area (Acres)	Non-Op area (Acres)	Capitalized on	Amount (Rs)
Transfer of 21 acres of defence land at pallavaram cantonment	1.76	19.24	24-Jan-11	3,37,20,579
Pallavaram & Meenabakkam village 1991 – 1992	1018.28	124.590	31-Mar-92	2,42,40,474
Land measuring 23.89 Acres - Meenabakkam village	23.89		31-Mar-04	1,05,06,764
Landowners, Advocate - Pozhichalur village - 1008 + 20 sqm	0.25		31-Mar-93	1,84,970
2.28 Acres Cowl bazar for parallel taxi track	2.28		25-Jan-18	50,001

Asset Description	Operational area (Acres)	Non-Op area (Acres)	Capitalized on	Amount (Rs)
Acquisition of Defence Land Vr.No.1451,16.09.97-De	0.48		31-Mar-98	9,750
Land recd. Free 126.56 acres - Kolapakkam Manapakkam	126.56		31-Mar-09	1
				6,87,12,539

AAI's Request

Since majority of the compensation was paid for land acquired for operational purposes, AAI requests AERA to consider the above details in their computation on return on land. AAI further requests to AERA to consider this return in the ARR from the first control period.

7 Non-Aeronautical Revenues

AERA's Contention

The Authority has noted that AAI estimated revenue for FY 2021-22 by assuming that the non-aeronautical revenue for the Third Control Period will be in proportion to the projected passenger traffic. As a result, AAI has projected revenues by applying the ratio between passenger traffic between each tariff year and FY 2019-20. In addition to this, AAI has assumed that non-aeronautical revenues would change on account of change in consumption behaviour of passengers for non-aeronautical services. The Authority notes that AAI has made the following assumptions regarding consumption of passengers:

(Para 9.2.6 of CP)

AAI's Submission

AAI submits that the computation of NAR which is based on passenger traffic has been computed for the first 2 years of TCP as follows:

- For FY 22, based on internal AAI Circular 24 read with Circular 26 (copies of which have been shared during consultation), support schemes were introduced in the airport in view of supporting the concessionaires during the pandemic period. Hence, concession on the fees paid in whatsoever form by the concessionaires was provided to the extent of 40% till Jun 21 and to the extent of 20% after this period. The revenue computation also took into consideration increase in the number of passengers.
- For FY 23, the discount of 20% was proposed to be continued. The revenue computation also took into consideration increase in the number of passengers.
- After FY 23, the passenger traffic plus inflationary increases were given effect to in the computation.

AAI's Request

AAI requests the Authority to consider the above concession schemes together with the revised traffic submitted by AAI in this document while deciding on the final non-aeronautical revenues.

8 Traffic for Third Control Period

AERA's Contentions

To consider passenger traffic and ATM projections as given in Para 4.2.5 (Table 61) for the determination of tariff for the Third Control Period. (Para 4.3.1 of CP)

AAI's Submission

For determination of tariff for the third control period for Chennai airport, the traffic projections proposed by AERA appears to be highly optimistic.

The submissions of AAI are as furnished below:

1. The traffic for the year 2021-22 has been estimated based on the previous year traffic trend and the traffic handled in the recent months (up to August 2021). The traffic handled for 2021-22 up to August 2021 is given in the table below:

PASSENGER TRAFFIC (in numbers)			
MONTH	INTERNATIONAL	DOMESTIC	TOTAL
APRIL	89380	576348	665728
MAY	38406	186079	224485
JUNE	33328	246995	280323
JULY	53291	446697	499988
AUGUST (Provisional)	83232	621095	704327
TOTAL (UPTO AUGUST)	297637	2077214	2374851
ESTIMATED TRAFFIC 2021-22	916935	8091824	9008759

2. As per AAI forecast, the estimated traffic for 2021-22 is 0.92 million for international and 8.09 millions for domestic passengers while AERA has forecasted the same to be 1.34 millions for international and 11.20 millions for domestic passengers.
3. As per the traffic forecast, domestic and international pre covid level of traffic will be achieved by the year 2024-25 and 2025-26 respectively.
4. The traffic started recovering after 1st Covid wave and reached 45% of pre covid level for the month of February 2021 as compared to February 2020. However, during the 2nd Covid wave, traffic recovery was hit badly and traffic declined by 66% during May 2021 as compared to April 2021.
5. As total uncertainty is still continuing regarding regular international flight operations, it is assumed that international flights are likely to continue under Vande Bharat Mission and Air Bubble Agreement for the year 2021-22 and regular international flight operations may resume in a phased manner w.e.f. April 2022 but the same will be dependent on the bilateral agreement between the countries.
6. As per health experts, the third wave of COVID may also hit this year. The forecast is prepared considering the impact of 3rd wave of COVID on Indian Aviation Sector.

AAI's Request

AAI thus requests AERA to consider the following traffic for the third control period:

TRAFFIC FORECAST - CHENNAI AIRPORT						
YEAR	AIRCRAFT MOVEMENTS (in Nos.)			PASSENGERS (in Nos.)		
	International	Domestic	Total	International	Domestic	Total
2019-20 (Actual)	37768	130214	167982	5799387	16467335	22266722
2020-21 (Actual)	11817	52773	64590	591571	4904136	5495707
GROWTH RATE	20.0%	60.0%	52.7%	55.0%	65.0%	63.9%
2021-22	14180	84437	98617	916935	8091824	9008759
GROWTH RATE	30.0%	20.0%	21.4%	80.0%	35.0%	39.6%
2022-23	18435	101324	119759	1650483	10923963	12574446
GROWTH RATE	28.0%	20.0%	21.2%	70.0%	35.0%	39.6%
2023-24	23596	121589	145185	2805821	14747350	17553171
GROWTH RATE	26.0%	10.0%	12.6%	50.0%	15.0%	20.6%
2024-25	29731	133748	163479	4208732	16959452	21168184
GROWTH RATE	25.0%	10.0%	12.7%	40.0%	15.0%	20.0%
2025-26	37164	147123	184287	5892225	19503370	25395595
GROWTH RATE	14.0%	10.0%	10.8%	15.0%	15.0%	15.0%
2026-27	42367	161835	204202	6776058	22428876	29204934
GROWTH RATE	9.0%	7.0%	7.4%	10.0%	8.0%	8.5%
2027-28	46180	173163	219343	7453664	24223186	31676850
2028-29	50336	185285	235621	8199031	26161041	34360071
2029-30	54866	198255	253121	9018934	28253924	37272858

9 FRoR for Third Control Period

AERA's Contentions

6.3.1. To consider the cost of equity at 14.00% as per Table 90.

6.3.2. To consider the cost of debt at 6.21% as per Table 89.

6.3.3. To consider an FRoR of 11.95% for the Third Control Period as calculated in Para 6.2.8 (Table 91)

AAI's Submission

AAI submits that as per the Second Control Period Order – decision no. 9.b, AERA had decided to carry out an independent study of the FRoR for major AAI airports. However, it was noted that the results of such study was not mentioned in the CP.

It was also noted by AAI that AERA had referred to the workings carried out in the Orders of MIAL and DIAL and had recomputed the Cost of Equity for Chennai airport. However, it is submitted that the

comparable airport set used for MIAL and DIAL along with the proximity score computations may not hold good for AAI airports. Proximity scores were computed based on three criteria - Revenue till, Ownership structure and Operations. The scores assigned for each of the airports in the comparable set would be very different if re-applied and re-computed for AAI airports. Extract of the proximity score computation is provided below:

The proximity scores of these airports with CSMIA are as follows:

Airport	Revenue till	Ownership structure	Operations	Proximity scores
Mumbai	0.00	0.00	0.00	0.0000
Sydney	1.00	1.00	0.41	1.4726
Melbourne	1.00	1.00	1.09	1.7851
Gatwick	2.00	1.00	0.99	2.4474
Auckland	1.00	1.00	2.05	2.4935
Amsterdam	1.00	1.00	-2.28	2.6796
Johannesburg	2.00	1.00	1.50	2.6920
Changi	0.00	2.00	-2.14	2.9319
Dublin	2.00	2.00	1.56	3.2295
Heathrow	2.00	1.00	-2.47	3.3295
MAHB	2.00	1.00	-3.40	4.0670
Incheon	2.00	2.00	-2.93	4.0721
AoT	1.00	1.00	-4.15	4.3822

Scoring mechanism for proximity scores:

Revenue till structure:

- *1 – 'single till' or where information is not available*
- *2 – 'dual till'*
- *3 – Hybrid Till*

Ownership structure:

- *1 – if 100% Government Owned/Funded*
- *2 – if Government / private owned/funded, not being Public Private Partnership*
- *3 – if Public Private Partnership Funded*

Operations Scale (OpS):

- *For each comparable airport, k, we computed the ratios of passenger, cargo and aircraft movement of these airports to that of MIAL in each of the years from 2015 to 2017.*

MIAL and DIAL are PPP airports and the level of traffic handled by it and the scale of operation is very different from that of AAI airports. Hence, it is submitted once again that the asset beta worked out for MIAL and DIAL based on its comparative data set cannot be applied straightaway to AAI airports.

AAI had appointed M/s KPMG to carry out a study during 2011 the results of which is given below:

Table 3: Beta of comparable airports

Airport / Group	Country	Equity Beta	Tax Rate	Debt (in Billion local currency)	Mkt Cap (in Billion local currency)	Debt /Mcap	Asset Beta
Airports of Thailand PCL	Thailand	1.14	30%	56.2	54.3	1.03	0.66
Beijing Capital International Airport	China	1.03	25%	18.5	14.8	1.25	0.53
Guangzhou Baiyun International Airport	China	0.91	25%	0.0	8.3	0.00	0.91
Shanghai International Airport	China	1.04	25%	2.5	22.0	0.11	0.96
Xiamen International Airport	China	0.95	25%	0.0	4.1	0.00	0.95
Grupo Aeroportuario del Sureste SAB de CV (Group of 9 airports in Mexico)	Mexico	0.94	30%	0.6	21.0	0.03	0.92
Grupo Aeroportuario del Pacifico SAB de CV	Mexico	0.84	30%	1.0	27.2	0.04	0.82
Grupo Aeroportuario Centro Norte, S.A. de C.V.	Mexico	0.99	30%	1.0	9.2	0.10	0.92

The median value of asset beta for the above comparable set is 0.92 which is being used as the asset beta for airport operations business of AAI. This needs to be re-levered as per the expected gearing of AAI in the control period to estimate the equity beta for AAI.

Table 4: Equity Beta for AAI

Estimated asset beta for AAI	0.92
Gearing for AAI	8.84%
Tax rate for AAI	32.45%
Equity beta for AAI	0.98

Equity beta for AAI works out to 0.98.

Please refer to **Annexure 2** for full report as annexed in the FCP CP - Consultation Paper No. 16/2012-13.

Applying the above beta for arriving at the current cost of equity, following are the results:

Airport	MAA as per AAI based on KPMG
Third Control Period	
Gearing Type	Actual
Rf	7.56%
Asset Beta	0.9200
D/D+E	26%
D/E	0.3561
Equity Beta	1.1493
Rm-Rf	8.06%
Cost of Equity	16.82%
Cost of Debt	6.21%
FRoR	14.04%
Debt Equity ratio	34.54%:65.46%
Weighted Avg Gearing%	26.26%

It is further submitted that the debt rate of AAI would also increase in the third control period as the cost of debt would be reset based on the financial health and other factors of AAI.

AAI's Request

AAI thus requests AERA to consider CoE of 16.82%, CoD of 6.21%, actual gearing and FRoR of 14.04% for TCP.

10 ARR for Third Control Period

AERA's Contentions

- AERA has proposed shortfall of Rs 372 crores to be carried forward to the next control period
- Revised Tariff commencement date is set to be 1st April 2022

AAI's Submission and Request

- After considering all the above changes, the AERA is requested to consider full recovery of ARR as our rates are in line with that charged by comparable airports of BIAL and HIAL.
- AAI in its MYTP submission proposed to increase the rate from 1st April 2021
- AERA in its CP proposed to increase the rate from 1st April 2022.
- However, AAI requests AERA to consider increase in rate as submitted from 1st January 2022.
- AAI submits to AERA to kindly recompute the IDC, expenses capitalization, interest on working capital, non-aeronautical revenues and other all other building blocks in which there would be consequential changes/impact based on the revised considerations/points submitted in this document.

11 Landing Charge for less than 80 seaters – M/s Spice Jet

AERA's Contentions

- "14.2.8 Ministry of Civil Aviation vide letter dated 09th February 2004 decided to exempt, "aircraft with a maximum certified capacity of less than 80 seats, being operated by domestic scheduled operators and helicopters of all types", from paying landing charges at AAI airports.
- 14.2.9. AERA while issuing the aeronautical tariff order for Chennai airport for 1st control period (01.04.2011 to 31.03.2016) did not mention this clause in its Order No.38/2012-13 dated 01.02.2013
- 14.2.10 M/s Spicejet vide letter dated 19.02.2021 has submitted that AAI had not exempted the landing charges for aircraft with a maximum certified capacity of less than 80 seats, being operated by domestic scheduled operators during the currency of 1st control period order of AERA. M/s Spicejet stated that AAI has billed Rs.29.50 Cr. on Spicejet for operating aircraft at Chennai with a maximum certified capacity of less than 80 seats. Now M/s Spicejet has requested AAI to accord necessary credit for excess billing during 1st control period.
- 14.2.11. In this regard, Airports Authority of India vide letter dated 18.08.2021 submitted that it will consider the request of M/s Spicejet and accord credit if AERA allows exemption from landing charge in respect of aircraft with a maximum certified capacity of less than 80 seats in 1st control period and suitably compensate AAI for amount of credit to be accorded. The Authority proposes to elicit the views of stakeholders before taking final decision on this matter"

AAI's Submission and Request

AAI's comments on the above are as under:

a) It needs to be placed on record that order for exemption from landing charges in respect of aircrafts with maximum certified seating capacity of less than 80 seats was issued by MOCA on 08/02/2004 (applicable from 00.00 hours of 12.02.2004). This was neither included in the consultation paper nor raised by any stakeholder during public hearings. The tariff order for the first CP laid down the landing charges of all aircrafts including aircrafts with maximum certified seating capacity of less than 80 seats, and the same were recovered by AAI from all airlines.
b) It would be pertinent to point out that this is not a case of excess billing during first control period as claimed by M/s Spice Jet. AAI has rightfully recovered the landing charges as per the tariff order then in force. In case, AERA decided that exemption prevailing prior to 1/04/2011 should have continued and directs AAI to pay back the landing charges collected during the first CP with interest, then AAI must be compensated for the full amount including interest.
c) It is because that amount so refunded will be treated as revenue gap for the particular period. Any revenue gap of preceding period is compensated/covered in future tariff period with carrying cost. Hence carrying cost on this amount which would be required to be refunded or adjusted to Spice Jet is required to be given, It is even more so as M/s Spice Jet would be asking for interest on this amount.
d) It is not known to AAI whether any other airlines have also sought or will seek similar benefits, AAI would request AERA to give time to all airlines that may like to seek similar relief so that AAI does not suffer any loss on account of similar payment it will have to make.
e) The amount to be paid back, if any, should be without taxes only.

12 Abbreviations

Abbreviations	Expansion
AAI	Airports Authority of India
AERA	Airports Economic Regulatory Authority of India
ARR	Aggregate Revenue Requirement
C&AG	Comptroller and Auditor General of India
CA	Commissioned Assets
CCEA	The Cabinet Committee of Economic Affairs
CHQ	Corporate Head Quarter
CIA	Chennai International Airport
CIAL	Cochin International Airport Limited
CP	Consultation Paper
CWIP	Capital Work In Progress
DFMD	Door Frame Metal Detector
DIAL	Delhi International Airport Limited
DPR	Detailed Project Report
EQTR	Employee Quarter Ratio
ETD	Estimated Time of Travel
FRoR	Fair Rate of Return
FY	Financial Year

Abbreviations	Expansion
HHMD	Handheld Metal Detectors
IATA	International Air Transport Association
IDC	Interest During Construction
IMG	Inter-Ministerial Group
INR	Indian Rupee
KIAL	Kannur International Airport Limited
MIAL	Mumbai International Airport Limited
MOCA	Ministry of Civil Aviation
MYTO	Multi Year Tariff Order
MYTP	Multi Year Tariff Proposal
NCAP	National Civil Aviation Policy
NITB	New Integrated Terminal Building
OMDA	Operations, Management and Development and Agreement
PCN	Pavement Classification Number
PIB	Pre-flight Information Bulletin
PMC	Project Management Contract
PPP	Public Private Partnership
RAB	Regulatory Asset Base
RET	Rapid Exit Taxiways
RHQ	Regional Head Quarters
SSA	State Support Agreement
STP	Sewage Treatment Plant
TBLR	Terminal Building Ratio
UDF	User Development Fee
WIPA	Work in Progress Assets
XBIS	X-ray Baggage Inspection System

Airports Authority of India

Position Paper on Regulatory Matters - Fair Rate of Return Estimation for AAI

Draft Report No. 2

KPMG Advisory Services Private Limited
July 2011

KPMG

Statement of Confidentiality

1. This report has been prepared by KPMG Advisory Services Pvt Ltd ('KPMG'), an Indian private limited company and a member firm of the KPMG network of independent member firms affiliated with KPMG International, a Swiss cooperative.
2. This report is provided to Airports Authority of India ('AAI') pursuant to the Award Letter (AAI/CHQ/REV/AERA/Consultant/2011, dated 16 June 2011) issued by AAI. It is subject in all respects to the terms and conditions of the said letter and of the proposal submitted by KPMG to AAI, including restrictions on disclosure of this presentation to third parties.
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Disclaimer

- This document is being submitted to Airports Authority of India (AAI) as the partial Draft Report (Draft Report No. 2) for our engagement of assisting AAI in Developing a Position Paper on Regulatory Matters(AAI letter ref. AAI/CHQ/REV/AERA/Consultant/2011, dated 16 June 2011).

- This Draft Report (Draft Report No. 2) pertains to the scope of work on assisting AAI in estimation of Fair Rate of Return (FRoR). A separate Draft Report has been submitted for the remaining scope of work on assisting AAI in developing the position on appropriate regulatory till for AAI. This report (or part thereof) is a draft version only and may be revised, updated or reworked and should not be understood as the final report.

- The report contains KPMG's analysis of secondary sources of published information and incorporates the inputs gathered through meetings with industry sources, which for reasons of confidentiality, cannot be quoted in this document. While information obtained from the public domain has not be verified for authenticity, we have obtained information, as far as possible, from sources generally considered to be reliable.

- Our analysis is based on the prevailing market conditions and regulatory environment and any change may impact the outcome of our review

- Wherever our report makes reference to 'KPMG Analysis', it indicates that we have (where specified) undertaken certain analytical activities on the underlying data to arrive at the information presented; we do not accept responsibility for the underlying data. Wherever information was not available in the public domain, suitable assumptions were made to extrapolate values for the same.
- We must emphasize that the realization of the prospective financial information set out within our report (based on secondary sources, as well as our internal analysis), is dependent on the continuing validity of the assumptions on which it is based. The assumptions will need to be reviewed and revised to reflect such changes in business trends, cost structures or the direction of the business as further clarity emerges. We accept no responsibility for the realization of the prospective financial information. Our inferences therefore will not and cannot be directed to provide any assurance about the achievability of the projections. Since the projections relate to the future, actual results are likely to be different from those shown in the prospective financial information because events and circumstances frequently do not occur as expected, and differences may be material. Any advice, opinion and/ or recommendation indicated in this document shall not amount to any form of guarantee that KPMG has determined and/ or predicted future events or circumstances.

CHAPTER – II

Estimation of Fair Rate of Return

1 Executive Summary

1.1 Fair Rate of Return (FRoR) for AAI's airport operations business has been computed for the control period of next five years as per AERA Guidelines.

1.2 Assuming the future capital funding to be met in similar Debt-Equity proportion as the current levels, the expected gearing is projected to be 8.84%.

1.3 The weighted average cost of existing debt of AAI is 8.03%. It is assumed that AAI will be able to raise the incremental debt requirement in the next control period on similar terms.

1.4 Cost of equity has been computed using the Capital Asset Pricing Model (CAPM) as per AERA guidelines. The expected cost of equity for AAI's airport operations business is projected to be 15.64%.

1.5 On applying the above mentioned values of various parameters to the FRoR methodology prescribed by AERA, the Fair Rate of Return for AAI's airports operations business works out to 14.96%.

2 FRoR estimation

2.1 As per Clause 5.1 in the AERA Guidelines on Terms and Conditions for Determination of Tariff for Airport Operators, 2011 issued on 28 February 2011 (henceforth referred to as "Guidelines"), Fair Rate of Return (FRoR) is to be estimated for a control period of five years as:

$FRoR = (g^* R_d) + ((1-g)^*R_e)$

where:

g is gearing (i.e. debt / debt + equity)

R_d is the pre-tax cost of debt

R_e is the post-tax cost of equity

The objective of this study is to estimate FRoR for the airport operations business of AAI. Currently AAI operates as a single organization, operating 127 airports and offering multiple services at each airport. Besides performing the role of airport operator and of ANS service provider at its airports, AAI also provides ground handling and cargo handling services in certain airports.

Historically, AAI's financials have been prepared and maintained at a consolidated level across all the airports operated by it. Currently it is very difficult to apportion funds and prepare the financial statements for each individual airport. We have worked with the assumption that the gearing ratio and cost of debt for the airport operations business at each airport of AAI is the same as that for AAI as a whole.

2.2 Gearing (g)

For the purpose of determination of FRoR, 'g' refers to the weighted average gearing based on projected quantum of debt in a control period of five years. Since a detailed investment and funding plan is yet to be worked out by AAI, it is assumed that the capital requirements for the control period of next five years would be met through similar debt-equity ratio as that of the current FY2011 level. Debt in the estimation of gearing includes only the long term funding (excluding all short term debt[1]). The summary of present sources of funds for AAI is as below[2] –

Table 1: Sources of Funding (INR cr)

Sources of Funding	*2010*	*2011E*
I. Long term debt		
a. Secured Loan	300.00	600.00
b. Unsecured Loan		
- Provided by Central govt	49.57	32.28

[1] Of maturity less than 12 months
[2] Source: AAI's Provisional Financial Statements for FY 2011

- Other loans	4.00	4.00
c. Foreign Institutions	40.57	38.96
Total	*394.14*	*675.24*
II. Equity		
a. Capital Account	623.34	656.61
b. Capital Reserve	17.34	15.10
c. General Reserve	4677.85	4478.22
d. Fixed Asset replacement Reserve	1059.21	1059.21
e. Obsolescence Reserve	379.41	379.41
f. Contingency Reserve	379.41	379.41
Total	*7136.54*	*6966.96*
Total Funding	**7530.69**	**7642.20**
Gearing	**5.23%**	**8.84%**

As stated above, we assume the gearing (g) in the next five years to be at 8.84%.

2.3 Cost of Debt (R_d)

The current debt structure and cost of each debt instrument of AAI has been analyzed. As shown in the Table below, the weighted (as per the existing debt shown above) average cost of existing debt is 8.03%[3]-

Table 2: Cost of existing Debt

Cost of Existing Debt	*2009*	*2010*	*2011E*
I. Long term debt			
a1. Secured Loan 1		7.40%	7.40%
a2. Secured Loan 2			9.20%
b. Unsecured Loan			
- Provided by Central government	12.50%	12.50%	12.50%
- Other loans			
c. Foreign Institutions			0.07%
Net cost of debt	4.31%	7.20%	8.03%

It is being assumed that AAI will be able to raise the incremental debt requirement in the next control period with similar debt terms. Hence, the cost of debt taken for the FROR estimation for the next control period is 8.03%.

2.4 Cost of Equity (R_e)

As per AERA Guidelines, Capital Asset Pricing Model (CAPM) is to be used for

[3] *AAI's Financial statements*

estimation of Cost of Equity. Hence, we estimate R_e as below –

$R_e = R_f + \beta*(R_m-R_f)$, where:

R_f is the Risk-free rate of return

β (beta) is the systematic risk of an asset relative to the market

R_m-R_f is the average equity risk premium above the risk-free rate that a "market" portfolio of assets is earning

2.4.1 Risk-free rate of return (R_f)

The risk-free rate is derived based on the long-term bond yields. We consider 10-year bond yield (due to high trade volumes and a stronger resilience to inflation than a 30-year bond) at the valuation date for the purpose of calculation R_f.

The average yield for a 10-year bond as on 31 March 2011[4] of 7.99% is being used as the risk-free rate of return.

2.4.2 Equity Risk premium (R_m-R_f)

Equity Risk Premium (R_m-R_f) is the difference between the expected rate of return on the market portfolio and the risk-free rate. The market rate of return or R_m has been calculated based on 10 year annualized return on 90 days moving average of market return. Using BSE Sensex as the market return indicator, the value of R_m as on 31 March 2011 is computed to be 15.83%. As discussed above, R_f as on 31 March 2011 is 7.99%. The 10 year average for Equity Risk Premium (R_m-R_f) therefore turns out to be 7.84% as on 31 March 2011[5].

2.4.3 Beta

Beta is a measure of systematic risk. Systematic risks capture the business risks of the company vis-à-vis other securities listed on the stock exchange. Currently AAI is not listed and hence measure of its Beta is not readily available. In order to estimate Beta for AAI, we looked at the Beta of comparable companies in airport operations business in Indian market. There are no listed pure airport operators currently in India. Hence, Betas of listed airport operators in the emerging markets have been considered as a proxy for the systematic risk of AAI.

We have taken a filtered approach while indentifying comparable airports, like – country of operations - Emerging markets, Business model, Regulatory environment and Liquidity of the stock. The following table provides the list of airports shortlisted after applying the above filter. The equity betas for these shortlisted airport companies were found and subsequently the asset betas for each of them were calculated by adjusting their respective financial leverage.

[4] Source: Bloomberg and KPMG Analysis
[5] Source: Bloomberg, www.bseindia.com and KPMG Analysis

Table 3: Beta of comparable airports

Airport / Group	Country	Equity Beta	Tax Rate	Debt (in Billion local currency)	Mkt Cap (in Billion local currency)	Debt /Mcap	Asset Beta
Airports of Thailand PCL	Thailand	1.14	30%	56.2	54.3	1.03	0.66
Beijing Capital International Airport	China	1.03	25%	18.5	14.8	1.25	0.53
Guangzhou Baiyun International Airport	China	0.91	25%	0.0	8.3	0.00	0.91
Shanghai International Airport	China	1.04	25%	2.5	22.0	0.11	0.96
Xiamen International Airport	China	0.95	25%	0.0	4.1	0.00	0.95
Grupo Aeroportuario del Sureste SAB de CV (Group of 9 airports in Mexico)	Mexico	0.94	30%	0.6	21.0	0.03	0.92
Grupo Aeroportuario del Pacifico SAB de CV	Mexico	0.84	30%	1.0	27.2	0.04	0.82
Grupo Aeroportuario Centro Norte, S.A. de C.V.	Mexico	0.99	30%	1.0	9.2	0.10	0.92

The median value of asset beta for the above comparable set is 0.92 which is being used as the asset beta for airport operations business of AAI. This needs to be re-levered as per the expected gearing of AAI in the control period to estimate the equity beta for AAI.

Table 4: Equity Beta for AAI

Estimated asset beta for AAI	0.92
Gearing for AAI	8.84%
Tax rate for AAI	32.45%
Equity beta for AAI	0.98

Equity beta for AAI works out to 0.98.

2.4.4 Cost of Equity (R_e)

Using the above estimated values of various parameters of the CAPM model, the Cost of Equity (R_e) for AAI for the control period of next five years is estimated as 15.64%.

Table 5: Cost of Equity for AAI

Risk-free rate	7.99%
Beta	0.98
Equity risk premium (R_m-R_f)	7.84%
Cost of Equity (R_e)	15.64%

2.5 Fair Rate of Return (FRoR)

Using the gearing ratio, cost of debt and cost of equity estimated above, the FRoR for AAI for the control period of next five years is estimated to be **14.96%** as shown below:

$$FROR = (g \times Rd) + \big((1 - g) \times Re\big)$$

$$= (8.84\% \times 8.03\%) + \big((1 - 8.84\%) \times 15.64\%\big)$$

$$= 14.96\%$$

3 Key assumptions

3.1 The gearing ratio, cost of debt, risk profile and hence the cost of equity for the airport operations business at all the major airports of AAI is the same as that for AAI as a whole.

3.2 The funding requirements for the control period of next five years would be met through similar debt-equity ratio as it exists currently.

3.3 AAI will be able to raise the incremental debt and equity requirement in the next control period on similar terms as it exists currently.

3.4 Systematic risk (Beta) of airport business of AAI is comparable to the systematic risk of the selected international airports.

***