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**Consultation Paper No.** 24/2018-19



## **Airports Economic Regulatory Authority of India**

**In the matter of determination of aeronautical tariffs in respect of  
Biju Patnaik International Airport (BBI), Bhubaneswar for the first  
Control Period (01.04.2018 to 21.03.2023)**

**16<sup>th</sup> November, 2018**

AERA Building  
Administrative Complex  
Safdarjung Airport  
New Delhi - 110003

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## 1. Introduction

- 1.1 Biju Patnaik International Airport (BBI Airport), located in the city of Bhubaneswar is the 15<sup>th</sup> busiest airport in India. The airport was accorded international status in October, 2013 after which international operations were commenced at the airport.
- 1.2 The traffic handled by BBI Airport during the past years is given in the table below:

Table 1: Passenger and aircraft traffic

Year	Domestic passengers	International passengers	Domestic ATM	International ATM
2007-08	7,02,201	2	12,272	2
2008-09	6,71,861	0	9,962	0
2009-10	8,25,958	0	10,708	0
2010-11	10,44,860	0	11,788	0
2011-12	12,53,263	0	14,672	2
2012-13	13,89,552	0	13,883	0
2013-14	13,35,832	0	11,752	0
2014-15	14,93,342	17	12,506	6
2015-16	18,78,559	16,173	14,032	4
2016-17	23,03,623	28,810	17,071	7
2017-18	31,58,916	91,719	22,532	623
<b>Past 10 years CAGR</b>	<b>16.2%</b>	<b>NA</b>	<b>6.3%</b>	<b>NA</b>
<b>Past 5 years CAGR</b>	<b>17.9%</b>	<b>NA</b>	<b>10.2%</b>	<b>NA</b>

- 1.3 Details of the terminal building and other key assets of BBI Airport are provided in the table below:

Table 2: Technical details and terminal building details

<b>Details of BBI Airport</b>	
<b>Particulars</b>	<b>Details</b>
Total airport area	836 acres
Runway orientation and length	05/23: 1,380m 14/32: 2,743 m
No. of taxi tracks	4
No. of apron bays	13
Operational hours	24 hours
<b>Terminal building details (domestic plus international)</b>	
<b>Particulars</b>	<b>Details</b>
Terminal building area	32,244 sq. meters
Immigration counters	-
Customs counters	-

Departure conveyors	2
Arrival conveyors	5
Peak hour passenger capacity	550
No. of check-in counters	18 domestic and 4 international
Total area of car parking	13,035 sq. meters

- 1.4 In the financial year ending March 31, 2016, BBI Airport crossed annual passenger throughput of 1.5 million to become a Major Airport, as defined in Section 2(i) of Airports Economic Regulatory Authority of India (AERA, the Authority) Act. Accordingly, starting from financial year 2016-17, tariff determination of aeronautical services at the airport is to be undertaken by the Authority.
- 1.5 AAI has accordingly submitted its Multi-Year Tariff Proposal dated 10/08/2018 to the Authority for determination of aeronautical tariffs for the 1<sup>st</sup> control period.

## 2. Methodology for tariff determination

- 2.1 The Authority, vide its Order No. 13/2010-11 dated 12/01/2011 ("Airport Order") and Direction No. 5/2010-11 dated 28/02/2011 ("Airport Guidelines"), had issued guidelines to determine tariffs at major airports based on Single Till mechanism. Subsequently, the Authority has amended guidelines vide its Order No. 14, 2016-17 dated 12/01/2017 to determine the future tariffs using Hybrid Till.
- 2.2 The Authority has decided the 1<sup>st</sup> control period for the airport to be the five year period from FY 2018-19 till FY 2022-23. However considering that the airport came under the definition of a major airport by FY 2016-17, the Authority decided to include FY 2016-17 and FY 2017-18 under its regulatory ambit and accordingly consider the shortfall/surplus of these two financial years towards determination of aeronautical tariff for the 1<sup>st</sup> control period. The tariff determination process consists of determination of regulatory building blocks for the 1<sup>st</sup> control period under Hybrid Till.
- 2.3 The Aggregate Revenue Requirement (ARR) under the regulatory framework of the Authority is calculated as under:

$$ARR = \sum_{t=1}^5 ARR_t$$

$$ARR_t = (FRoR \times RAB_t) + D_t + O_t + T_t - \alpha \times NAR_t$$

Where,

- 2.3.1 t is the tariff year in the control period, ranging from 1 to 5
- 2.3.2  $ARR_t$  is the Aggregate Revenue Requirement for tariff year t
- 2.3.3 FRoR is the Fair Rate of Return for the control period
- 2.3.4  $RAB_t$  is the Aeronautical Regulatory Asset Base for tariff year t
- 2.3.5  $D_t$  is the Depreciation corresponding to the Regulatory Asset Base for tariff year t
- 2.3.6  $O_t$  is the Aeronautical Operation and Maintenance expenditure for the tariff year t
- 2.3.7  $T_t$  is the aeronautical taxation expense for the tariff year t
- 2.3.8  $\alpha$  is the cross subsidy factor for revenue from services other than aeronautical services. Under the Hybrid Till methodology followed by the Authority,  $\alpha = 30\%$ .
- 2.3.9  $NAR_t$  is the Non-Aeronautical Revenue in tariff year t.
- 2.4 Based on ARR, Yield per passenger (Y) is calculated as per the formula given below:

$$\text{Yield per passenger (Y)} = \frac{\sum_{t=1}^5 PV(ARR_t)}{\sum_{t=1}^5 VEt}$$

Where,

2.4.1  $PV(ARR_t)$  is the Present Value of ARR for all the tariff years

2.4.2  $VE_t$  is the passenger traffic in year  $t$

2.5 Further, shortfall/surplus of FY 2016-17 and FY 2017-18 is adjusted for time value of money and added to the ARR as computed above. For this purpose, ARR for FY 2016-17 and FY 2017-18 is computed in a manner similar to para 2.4. This ARR is compared with actual aeronautical revenues of the airport for these two financial years. The future value of this shortfall/surplus is added to the ARR computed for the control period.

### **3. Multi-Year Tariff Proposal of BBI**

3.1 AAI made submissions dated 10/08/2018 to the Authority for determination of tariffs for the 1<sup>st</sup> control period (01/04/2018 to 31/03/2023) on the basis of Hybrid Till.

3.2 AAI provides Air Navigation Services (ANS) in addition to landing, parking and other aeronautical services at BBI. AAI has submitted that the tariff proposal does not consider revenues, expenditure and assets on account of ANS. This consultation paper discusses the determination of tariffs for aeronautical services at the airport excluding ANS.

3.3 AAI has further submitted that all cargo operations have been transferred to AAI Cargo Logistics and Allied Services (AAICLAS), its wholly owned subsidiary and the tariff proposal does not consider revenues, expenditure and assets on account of cargo operations. This consultation paper discusses the determination of tariffs for aeronautical services at the airport excluding cargo operations.

3.4 AAI has informed that accounts of AAI are audited by C&AG of India as mandated by the AAI Act. The C&AG's resident audit party audits the financial records and statements of AAI airports, regional and field offices. However, the C&AG issues the final audit certificate for the AAI as a whole and only trial balance is available for BBI. The Authority has considered the trial balance for BBI Airport as submitted by AAI while determining tariffs for BBI Airport.

## 4. Traffic forecast

4.1 The traffic growth rates as submitted by AAI for the 1<sup>st</sup> control period are as follows:

Table 3: Traffic projections proposed by AAI

Year	Passenger			ATM		
	Domestic	International	Combined	Domestic	International	Combined
<b>Growth rates</b>						
2018-19	16%	35%	16.54%	15%	35%	15.54%
2019-20	16%	35%	16.62%	15%	35%	15.63%
2020-21	16%	35%	16.72%	15%	35%	15.73%
2021-22	16%	35%	16.83%	15%	35%	15.86%
2022-23	10%	20%	10.51%	9%	18%	9.45%
<b>Traffic</b>						
2018-19	3,664,343	123,821	3,788,163	25,912	841	26,753
2019-20	4,250,637	167,158	4,417,795	29,799	1,135	30,934
2020-21	4,930,739	225,663	5,156,402	34,268	1,533	35,801
2021-22	5,719,658	304,645	6,024,303	39,409	2,069	41,478
2022-23	6,291,623	365,574	6,657,198	42,955	2,442	45,397

4.2 AAI submitted that the passenger traffic and aircraft movement projections are based on past trends, econometric and regression analysis, and various economic factors including policy framework.

### **Authority's Examination:**

4.3 The Authority has duly examined the submissions from AAI. As part of its examination of AAI's forecast of traffic at BBI Airport, the Authority calculated Compounded Annual Growth Rate, or CAGR, for passenger traffic and ATM from FY 2007-08 to FY 2017-18 (10 year CAGR) and FY 2012-13 to FY 2017-18 (5 year CAGR). Because the international operations at BBI Airport began in FY 2014-15, there is no adequate historical data to determine patterns and hence the Authority did not compute CAGR for international passenger traffic and ATM. The details have been provided in the table below:

Table 4: Comparison of traffic growth rates as per AAI's submission and actual CAGR

Particulars	Growth rates as per AAI	10 year CAGR	5 year CAGR
<b>Passengers:</b>			
Domestic	16% (reduced to 10% in year 5)	16.2%	17.9%
International	35% (reduced to 20% in year 5)	<b>NA</b>	<b>NA</b>



<b>Particulars</b>	<b>Growth rates as per AAI</b>	<b>10 year CAGR</b>	<b>5 year CAGR</b>
<b>ATM:</b>			
Domestic	15% (reduced to 9% in year 5)	6.3%	10.2%
International	35% (reduced to 18% in year 5)	<b>NA</b>	<b>NA</b>

4.4 The Authority has noted the spurt in traffic in the recent past, which causes CAGR for 5 year period to be higher than that for 10 year period. The Authority also notes that existing traffic at BBI Airport (3.25 million for FY 2017-18) exceeds its terminal capacity (at 2.5 million) and to that extent, the future growth may not follow the high growth trend of recent past till capacity expansion is undertaken by BBI Airport. Having considered 5 and 10 year CAGRs of passenger traffic and likely capacity constraint, the Authority is of the view that 10 year CAGR provides more realistic traffic growth rates for future projections of domestic passenger traffic. The Authority has noted that domestic passenger traffic growth rate proposed by AAI is closer to 10 year CAGR, and hence the Authority does not propose a change in the same, except the last year's projection, which the Authority proposes to change from 10% to 16%.

4.5 The Authority notes that AAI has projected ATMs to grow at a much higher rate (15% per annum except for FY 2022-23 where it is 9%) than historically observed at BBI Airport (10 year CAGR at 6%). For domestic ATM, AAI submitted that it has considered trends in passengers to aircraft movement ratios combined with the load factors. The Authority has noted that BBI Airport is experiencing high load factors and there will need to be more aircraft movements to address likely increase in passenger traffic. Data for the past 6 months of current Financial Year 2018-19 indicates that aircraft movements at BBI Airport have exceeded passenger traffic movements. On account of these patterns, the Authority is of the view to not follow 10 year CAGR in case of ATMs. The Authority is of the view to accept ATM projections made by AAI, except the last year's projection, which the Authority proposes to change from 9% to 15%.

4.6 The Authority has noted that the international operations at BBI Airport began in FY 2014-15 and international traffic has increased in multiples over the last 3-4 years. However the international traffic base for FY 2016-17 at 91,719 is still low and the airport is likely to experience similar growth pattern in the recent future. The Authority notes AAI proposal to consider traffic projection for international segment at 35% per annum except at 20% for the 5<sup>th</sup> year of the Control Period. Given the volatility in international traffic since then, the Authority proposes to consider the growth rates as submitted by AAI for international passenger and ATM traffic, except for the reduction proposed by AAI in 5<sup>th</sup> year of the control period, FY 2022-23.

- 4.7 The traffic growth rates and the corresponding traffic for passengers and ATM as considered by the Authority for the 1<sup>st</sup> control period have been given in the table below.

*Table 5: Traffic forecast as considered by the Authority*

Year	Passenger			ATM		
	Domestic	International	Combined	Domestic	International	Combined
<b>Growth rates</b>						
2018-19	16%	35%	16.54%	15%	35%	15.54%
2019-20	16%	35%	16.62%	15%	35%	15.63%
2020-21	16%	35%	16.72%	15%	35%	15.73%
2021-22	16%	35%	16.83%	15%	35%	15.86%
2022-23	16%	35%	16.96%	15%	35%	16.00%
<b>Traffic</b>						
2018-19	36,64,343	1,23,821	37,88,163	25,912	841	26,753
2019-20	42,50,637	1,67,158	44,17,795	29,799	1,135	30,934
2020-21	49,30,739	2,25,663	51,56,402	34,268	1,533	35,801
2021-22	57,19,658	3,04,645	60,24,303	39,409	2,069	41,478
2022-23	66,34,803	4,11,271	70,46,074	45,320	2,794	48,113

- 4.8 The Authority proposes to true-up the traffic as per actual growth achieved during the 1<sup>st</sup> control period at the time of determination of tariff for the 2<sup>nd</sup> control period.

### **Proposal No. 1: Regarding traffic forecast**

- 1.a. The Authority proposes to consider the ATM and passenger traffic as per Table 5.
- 1.b. The Authority proposes to true-up the traffic volume (ATM and passengers) on the basis of actual traffic in 1<sup>st</sup> control period while determining tariffs for the 2<sup>nd</sup> control period.

## 5. Allocation of Initial Regulatory Asset Base between aeronautical and non-aeronautical

- 5.1 Under Hybrid Till, only aeronautical assets are included as part of the Regulatory Asset Base (RAB). Therefore, all airport assets need to be segregated between aeronautical and non-aeronautical. Further, projections of capitalizations during the control period with regard to only aeronautical assets need to be considered as part of RAB.
- 5.2 For the purposes of this segregation, AAI has divided its assets into three components – aeronautical, non-aeronautical and common. Common components have been further segregated into aeronautical and non-aeronautical assets by applying one of the following ratios:
- a) **Terminal Area Ratio:** This is a ratio of aeronautical area to non-aeronautical area and is applied for all terminal related common assets.
  - b) **Employee Ratio:** This is a ratio of staff providing non-aeronautical services (i.e. commercial and land management) to total staff employed at the airport excluding ANS and cargo.
  - c) **Quarter ratio:** This is a ratio based on number of non-aeronautical staff to aeronautical staff residing at the residential quarters at the airport. It is applied to assets pertaining to such residential quarters.
  - d) **Integrated office building ratio:** This is a ratio based on area reserved for non-aeronautical services (commercial and land management) to total area in the separate administrative building at the airport.
- 5.3 The table below provides the details of these ratios used for allocation.

*Table 6: Ratios used for allocation of assets into aeronautical and non-aeronautical*

Particulars	Ratio	
	FY 2016-17	FY 2017-18
Terminal Area Ratio	7.53%	7.55%
Employee Ratio	7:98	6:100
Quarter ratio	5:55	5:55
Integrated office building ratio	10:72	10:72

- 5.4 The allocation of gross block of assets as on 01/04/2016 between aeronautical and non-aeronautical services as submitted by AAI is given in the table below:

Table 7: Allocation of gross block of assets between aeronautical and non-aeronautical

S. No.	Asset category	Total assets (INR Crores)	Aero assets (INR Crores)	% Aero	Remarks
1.	Freehold Land	3.42	-	0%	
2.	Runways, Aprons and Taxiways	42.05	42.05	100%	
3.	Road, Bridges & Culverts	42.49	33.49	79%	Refer Table 9
4.	Building – Terminal	74.45	70.01	94%	Refer Table 9
5.	Building – Residential	6.21	6.00	97%	Refer Table 9
6.	Boundary Wall – Operational	3.46	3.46	100%	
7.	Boundary Wall – Residential	3.47	3.47	100%	
8.	Computer - End user	0.75	0.75	100%	
9.	Computer - Servers and networks	0.59	0.59	100%	
10.	Intangible Assets – Software	0.38	0.38	100%	
11.	Plant & Machinery	17.56	17.53	100%	Refer Table 9
12.	Tools & Equipment	0.93	0.92	99%	
13.	Furniture & Fixtures: Other Than Trolley	3.01	2.95	98%	Refer Table 9
14.	Furniture & Fixtures: Trolley	0.54	0.54	100%	
15.	Vehicles	0.75	0.75	100%	
16.	Electrical Installations	51.68	50.93	99%	Refer Table 9
17.	Other Office Equipment	0.81	0.78	97%	
18.	X Ray Baggage System	1.85	1.85	100%	
19.	CFT/Fire Fighting Equipment	12.79	12.79	100%	
	<b>Total</b>	<b>267.19</b>	<b>249.24</b>	<b>93%</b>	

### **Authority's examination**

5.5 AAI submitted the workings for the calculation of the terminal area ratio, i.e., ratio of non-aeronautical portion to the aeronautical portion of the terminal building. This has been presented in the table below.

Table 8: Terminal area ratio

S. No.	Category	Area (Sq. meters)
1	Commercial entities - domestic	1,483
2	Commercial entities - international	271
3	Airlines - domestic	226
4	Airlines - international	122
5	Regulatory & allied agencies - domestic	25
6	Regulatory & allied agencies - international	262
7	Ground handling	39

S. No.	Category	Area (Sq. meters)
	<b>Total non-aeronautical area (1)</b>	<b>2,429</b>
	<b>Total area of terminal (2)</b>	<b>32,244</b>
	<b>Terminal area ratio (1/2)</b>	<b>7.53%</b>

- 5.6 The Authority verified the above working, with details of exact area given to various entities – commercial, airlines, and regulatory and allied agencies. The Authority observed that the proportion of non-aeronautical area is on similar lines as those of other AAI airports of similar nature. In view of this, the Authority accepts the terminal area ratio as proposed by AAI.
- 5.7 The Authority verified the workings provided by AAI for other three ratios, i.e., employee ratio, quarter ratio, and the integrated office building ratio. On the basis of its verification, the Authority accepts these ratios as proposed by AAI.
- 5.8 The Authority observed the use of various ratios for segregation of common assets into aeronautical and non-aeronautical. These are explained in the table below.

*Table 9: Allocation of common assets and its justification*

S. No.	Asset category	Common assets (INR cr.)	Ratio used for allocation of common assets	Remarks
1.	Freehold Land	-	-	-
2.	Runways, Aprons and Taxiways	-	-	-
3.	Road, Bridges & Culverts	0.36	86% - Quarter ratio 14% - Terminal area ratio	There are assets worth INR 8.97 crores that pertain to the car parking area. These have been considered as exclusively non-aeronautical.  Out of total common assets of INR 36 lacs, INR 31 lacs (i.e. 86%) pertains to strengthening of colony road at employee quarters, thereby requiring a quarter ratio based allocation. Remaining assets (worth INR 5 lacs) have been

S. No.	Asset category	Common assets (INR cr.)	Ratio used for allocation of common assets	Remarks
				allocated as per terminal area ratio.
4.	Building – Terminal	55.95	90.5% - Terminal area ratio 9.0% - Integrated office building ratio 0.3% - Quarter ratio 0.3% - Employee ratio	Majority of these assets (INR 51 lacs out of INR 56 lacs) have been allocated as per terminal area ratio.
5.	Building – Residential	2.57	100% - Quarter ratio	Residential building pertains to employee quarters, which is allocated on the basis of quarter ratio.
6.	Boundary Wall – Operational	0.02	100% - Employee ratio	-
7.	Boundary Wall – Residential	-	-	-
8.	Computer - End user	-	-	-
9.	Computer - Servers and networks	-	-	-
10.	Intangible Assets – Software	-	-	-
11.	Plant & Machinery	0.48	99% - Terminal area ratio 1% - Employee ratio	Allocation of plant and machinery, which is majorly located inside the terminal building, is on the basis of terminal area ratio.
12.	Tools & Equipment	0.09	73% - Employee ratio 27% - Integrated office ratio	-
13.	Furniture & Fixtures: Other Than Trolley	0.50	99% - Integrated office building ratio 1% - Quarter ratio	Almost all office furniture is located in the administrative building, and hence allocated on the basis of integrated office building ratio.
14.	Furniture & Fixtures: Trolley	-	-	-
15.	Vehicles	-	-	-

S. No.	Asset category	Common assets (INR cr.)	Ratio used for allocation of common assets	Remarks
16.	Electrical Installations	8.19	61.8% - Terminal area ratio 35.9% - Integrated office ratio 2.4% - Quarter ratio	Allocation of electrical installations has been done on the basis of the location of specific assets - either terminal building or integrated office building. Some assets have been installed in employee quarters, requiring an allocation on the basis of quarter ratio.
17.	Other Office Equipment	0.28	98% - Employee ratio 2% - Terminal area ratio	-
18.	X Ray Baggage System	-	-	-
19.	CFT/Fire Fighting Equipment	-	-	-

5.9 On the basis of its observations, the Authority proposes the allocation of gross block of assets in accordance with the table below.

*Table 10: Allocation of assets proposed by the Authority (gross block)*

S. No.	Asset category	Total assets (INR Crores)	Aero assets (INR Crores)	% Aero
1.	Freehold Land	3.42	-	0%
2.	Runways, Aprons and Taxiways	42.05	42.05	100%
3.	Road, Bridges & Culverts	42.49	33.49	79%
4.	Building – Terminal	74.45	70.01	94%
5.	Building – Residential	6.21	6.00	97%
6.	Boundary Wall – Operational	3.46	3.46	100%
7.	Boundary Wall – Residential	3.47	3.47	100%
8.	Computer - End user	0.75	0.75	100%
9.	Computer - Servers and networks	0.59	0.59	100%
10.	Intangible Assets – Software	0.38	0.38	100%
11.	Plant & Machinery	17.56	17.53	100%
12.	Tools & Equipment	0.93	0.92	99%
13.	Furniture & Fixtures: Other Than Trolley	3.01	2.95	98%

<b>S. No.</b>	<b>Asset category</b>	<b>Total assets (INR Crores)</b>	<b>Aero assets (INR Crores)</b>	<b>% Aero</b>
14.	Furniture & Fixtures: Trolley	0.54	0.54	100%
15.	Vehicles	0.75	0.75	100%
16.	Electrical Installations	51.68	50.93	99%
17.	Other Office Equipment	0.81	0.78	97%
18.	X Ray Baggage System	1.85	1.85	100%
19.	CFT/Fire Fighting Equipment	12.79	12.79	100%
	<b>Total</b>	<b>267.19</b>	<b>249.24</b>	<b>93%</b>

**Proposal No. 2: Regarding allocation of assets between aeronautical and non-aeronautical**

- 2.a. The Authority proposes the allocation of gross block of assets as on 1st April 2016 between aeronautical and non-aeronautical assets as detailed in Table 10.



## 6. Initial Regulatory Asset Base

6.1 As per AAI's submission, the Initial RAB as on 31/03/16 amounted to INR 96.45 crores. AAI submitted the following working for the computation of initial RAB.

*Table 11: Initial RAB as per AAI's submission (figures in INR crores)*

<b>Asset category</b>	<b>Opening gross block</b>	<b>Accumulated depreciation</b>	<b>Opening net block</b>
Freehold Land	-	-	-
Runways, Aprons and Taxiways	42.05	39.33	2.72
Road, Bridges & Culverts	33.49	21.36	12.13
Building – Terminal	70.01	29.09	40.92
Building – Residential	6.00	2.46	3.54
Boundary Wall – Operational	3.46	2.62	0.84
Boundary Wall – Residential	3.47	0.77	2.70
Computer - End user	0.75	0.50	0.26
Computer - Servers and networks	0.59	0.54	0.05
Intangible Assets – Software	0.38	0.37	0.01
Plant & Machinery	17.53	13.81	3.71
Tools & Equipment	0.92	0.65	0.27
Furniture & Fixtures: Other Than Trolley	2.95	2.30	0.65
Furniture & Fixtures: Trolley	0.54	0.43	0.11
Vehicles	0.75	0.55	0.20
Electrical Installations	50.93	25.20	25.73
Other Office Equipment	0.78	0.49	0.30
X Ray Baggage System	1.85	1.78	0.07
CFT/Fire Fighting Equipment	12.79	10.53	2.26
<b>Total</b>	<b>249.24</b>	<b>152.79</b>	<b>96.45</b>

### ***Authority's examination:***

6.2 The Authority is undertaking a separate study to analyze the appropriate treatment of the cost of land. Meanwhile, the Authority proposes to exclude the cost of land in initial RAB, as has been done by AAI in its proposal. On the basis of the outcome of the study, the Authority proposes to true-up the RAB during the 2<sup>nd</sup> control period.

6.3 The Authority verified the depreciation rates used by AAI for the Initial RAB. The observations by the Authority on these depreciation rates has been discussed in detail in Chapter 8 of this consultation paper.

6.4 The Authority considered the allocation of Initial RAB between aeronautical and non-aeronautical assets. The Authority's observations

in this regard have been discussed in Chapter 5 of this consultation paper.

- 6.5 The Authority accepts AAI's submission for Initial RAB, and therefore, does not propose a change in the same.

**Proposal No. 3: Regarding Initial Regulatory Asset Base**

- 3.a. The Authority proposes to consider the initial regulatory asset base for the first control period as INR 96.45 crores in accordance with Table 11.

## 7. Capital Expenditure for the 1<sup>st</sup> control period

7.1 AAI has in its submission proposed aeronautical capital expenditure of INR 1,002.78 crores for the 1<sup>st</sup> control period. This has been shown in the table below.

Table 12: Capital expenditures proposed by AAI

Asset category	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Building – Terminal	0.50	-	87.21	935.39	-	<b>1023.1</b>
Runways, Aprons and Taxiways	-	-	65.65	-	81.43	<b>147.08</b>
Electrical Installations	5.62	43.01	-	-	-	<b>48.63</b>
Other Buildings	31.99	-	-	-	-	<b>31.99</b>
Plant & Machinery	25.70	-	-	-	-	<b>25.70</b>
Road, Bridges & Culverts	5.43	-	-	-	-	<b>5.43</b>
CFT/Fire Fighting Equipment	-	4.03	-	-	-	<b>4.03</b>
Vehicles	1.21	-	-	-	-	<b>1.21</b>
Furniture & Fixtures: Trolley	0.61	-	-	-	-	<b>0.61</b>
Other Office Equipment	0.14	-	-	-	-	<b>0.14</b>
Tools & Equipment	0.14	-	-	-	-	<b>0.14</b>
Office Furniture	0.10	-	-	-	-	<b>0.10</b>
<b>Total</b>	<b>71.45</b>	<b>47.04</b>	<b>152.86</b>	<b>935.39</b>	<b>81.43</b>	<b>1288.17</b>

7.2 In respect of these proposed capital expenditures, AAI submitted supporting documents like administrative approvals, letters of award (if available), and minutes of AUCC consultations.

### **Authority's Examination:**

7.3 The Authority observed the following in respect of the some key proposed capital expenditures.

#### **7.3.1 New terminal building (T3) – INR 935.39 crores:**

The current capacity of the airport stands at 2.5 million passengers per annum. However, in FY 2017-18, the airport served 3.25 million passengers, exceeding its capacity by 30%. In order to cater to further raise in demand, AAI has proposed a new terminal building (T3), spanning across 78,800 square meters with a capacity of 4.25 million passengers per annum. The combined capacity of the airport would become almost 7 million passengers per annum, which would be sufficient to serve the demand for the next few years.

The Authority examined the submissions made by AAI in this regard. It was observed that the project is in initial stages, with only preliminary approvals in place. Some initial necessary processes like construction

schedule, investment planning and phasing, etc. have not been carried out. Due to these reasons, the Authority is of the view that it may not be possible to operationalize the new terminal building by FY 2021-22, as has been proposed by AAI. Therefore, the Authority proposes to defer its capitalization by one year, i.e., FY 2022-23.

The Authority observed that AAI proposed to consider the full expense as aeronautical, which was not found to be appropriate. The Authority understands that AAI endeavors to enhance its share of revenue from non-aeronautical sources and the Authority intends to encourage the same. Accordingly, it proposes to consider a terminal area ratio of 10% for allocation to non-aeronautical RAB.

On examination of the amount of investment required, AAI originally submitted an estimate of INR 650 crores for the building. However, no technical basis for this estimate were provided. On Authority's request, AAI submitted revised investment estimates for the new terminal building. As per the revised estimates, the new terminal building would cost INR 935.39 crores. The Authority considered a normative cost of INR 100,000 per sq. mt. at FY 2018 prices. The area of the proposed building was observed to be planned at 78,800 sq. mt. The normative cost was indexed to 5% inflation. The resultant amount is observed as INR 919.30 crores. The Authority proposes to seek a detailed final estimate of unit area cost with proposed date of completion for assessment of cost for inclusion in the RAB for final determination of tariff. AAI should go through the consultation protocol and present its plans for additions to RAB to the users and airlines as required in the Authority's Guidelines.

Further, it was observed that AAI considered the full asset as part of the asset category 'Terminal Building'. However, the Authority proposes that only 65% of the investment be allocated to 'Terminal Building', and the remaining 35% be allocated to 'Electrical Installations'.

### **7.3.2 Parallel taxi track, rapid exit taxiway, and apron for parking of 8 Code C aircraft – INR 147 crores:**

Due to operational constraints of landing, take-off and taxing at the runway, AAI has planned a parallel taxi track, a rapid exit taxiway, and a new apron for parking of 8 numbers of Code C aircraft at the airport. The Authority examined the rationale behind the proposed capital expenditure, along with its status. AAI submitted that in order to ensure smooth operations, this project is being undertaken in two phases, with phase 1 already awarded, and expected to be completed by FY 2020-21. The second phase would be completed by FY 2022-23. The Authority found the proposed amounts and the expected timelines to be appropriate.

### **7.3.3 New link building between T1 and T2 – INR 87.21 crores:**

Currently, there are two terminals at the airport. T2, the newer terminal operationalized in FY 2013-14, is used for domestic and international operations, whereas T1 is used as a support to T2. AAI submitted that there have been operational issues with these two segregated terminals. To address these operational issues, AAI proposed to construct a new building to link these two terminals, along with two additional passenger boarding bridges. The Authority examined the rationale, along with the estimated investment amount and the project's status. The Authority proposes to consider the expenditure as submitted by AAI.

The Authority observed that AAI proposed to consider the full expense as aeronautical, which was not found to be appropriate. The Authority proposes to consider a terminal area ratio of 90:10 for allocation to aeronautical and non-aeronautical assets.

Further, it was observed that AAI considered the full asset as part of the asset category 'Terminal Building'. However, the Authority proposes that only 65% of the investment be allocated to 'Terminal Building', and the remaining 35% be allocated to 'Electrical Installations'.

### **7.3.4 Solar power plant – INR 41.24 crores:**

The generation of renewable power is a national agenda. GoI has set a target of 175 GW of renewable power installed capacity by end of 2022. In line with this larger initiative as well as to benefit from potential savings on electricity bills, AAI submitted that it has undertaken construction of solar power plants in seven airports, with Bhubaneswar being one of them. This power plant will have an installed capacity of 4 MW. To assess the appropriateness of investment proposed, the Authority observed various Indian airports where solar power plant projects have been undertaken, considering the effects of inflation. These include Kolkata, Cochin, Delhi, Hyderabad, among others. The Authority is of the view that the investment proposed by AAI is appropriate, and therefore, the Authority does not propose a change in this regard.

### **7.3.5 Others:**

Other than the above mentioned assets, AAI has proposed 37 other assets of smaller nature amounting to a total of INR 77.25 crores. The prominent ones among these include the following. For these assets, the Authority verified the administrative approvals and award letters, and discussed the rationale with AAI for proposing them.

- a) Construction of a fire station (category IX) and emergency medical center amounting to INR 17 crores in tariff year 1.
- b) Construction of an Electrical & Mechanical workshop amounting to INR 14.65 crores in tariff year 1.
- c) Establishment of an inline baggage system of INR 12.50 crores in tariff year 1.
- d) Two new passenger boarding bridges amounting to INR 8.26 crores in tariff year 1.

7.4 The Authority observed that a capital expenditure of INR 1.82 crores pertaining to 'Rotunda building & fixed finger for two passenger boarding bridges' was not included in the proposed capital expenditure. The Authority found this to be on account of a calculation error. The Authority observed the documents submitted by AAI in this regard, and considered the same to be appropriate. Therefore, the Authority proposes to include this capital expenditure in RAB additions in tariff year 1, i.e., FY 2018-19.

7.5 In accordance with above, the Authority revised the capital expenditures during the 1<sup>st</sup> control period as per the table below.

*Table 13: Capital Expenditures proposed by Authority*

<b>Asset category</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Total</b>
Building – Terminal	0.50	-	51.02	-	547.20	<b>598.72</b>
Runways, Aprons and Taxiways	-	-	65.65	-	81.43	<b>147.08</b>
Electrical Installations	5.62	43.01	27.47	-	294.65	<b>370.75</b>
Other Buildings	31.99	-	-	-	-	<b>31.99</b>
Plant & Machinery	25.72	-	-	-	-	<b>25.72</b>
Road, Bridges & Culverts	5.43	-	-	-	-	<b>5.43</b>
CFT/Fire Fighting Equipment	-	4.03	-	-	-	<b>4.03</b>
Vehicles	1.21	-	-	-	-	<b>1.21</b>
Furniture & Fixtures: Trolley	0.61	-	-	-	-	<b>0.61</b>
Other Office Equipment	0.14	-	-	-	-	<b>0.14</b>
Tools & Equipment	0.14	-	-	-	-	<b>0.14</b>
Office Furniture	0.10	-	-	-	-	<b>0.10</b>
<b>Total</b>	<b>71.47</b>	<b>47.04</b>	<b>144.14</b>	<b>-</b>	<b>923.28</b>	<b>1185.93</b>

#### **Proposal No. 4: Regarding capital expenditure**

- 4.a. The Authority proposes to adopt the capital expenditures in accordance with Table 13. However, for all the capital expenditures mentioned above in this chapter, the Authority proposes to seek from AAI a detailed action plan, current status and proposed date of completion for their inclusion in the RAB for final determination of tariff.

## 8. Depreciation

- 8.1 AAI follows its own set of rates of depreciation for different asset classes, which are approved by its Board. While submitting the Multi-Year Tariff proposal for the first control period, AAI has taken cognizance of the rates of depreciation approved by the Authority in previous tariff orders. Accordingly, AAI has proposed three different sets of rates. These are based on three different periods – up to FY 2015-16, from 01/04/16 to 31/03/18, and beyond 01/04/18.
- 8.2 In the first period, i.e., up to FY 2015-16, the airport was not under the definition of a Major Airport as per Section 2(i) of Airports Economic Regulatory Authority of India Act. Therefore, the depreciation rates for this period has been proposed by AAI to be as per AAI's accounting policy. For the second period, i.e., from 01/04/16 to 31/03/18, the airport was covered under the definition of the Major Airport. Therefore, the depreciation rates for this period has been proposed by AAI to be as per the Authority's examination. For the 3<sup>rd</sup> period, i.e., beyond 01/04/18, the depreciation rates has been proposed by AAI to be as per the Authority's order No. 35/2017-18 titled "In the matter of Determination of Useful life of Airport Assets", which defines the normative useful lives for various airport assets.
- 8.3 Further, depreciation has been computed separately on opening block of assets and on proposed additions.
- 8.4 The depreciation rates considered by AAI have been summarized in the table below.

Table 14: Depreciation rates proposed by AAI

Asset category	Up to FY 2016	Between FY 2016 and FY 2018		Beyond FY 2018
		For opening block of assets	For proposed additions	
Freehold Land	0.00%	0.00%	0.00%	0.00%
Runways, Aprons and Taxiways	13.00%	3.33%	3.33%	3.33%
Road, Bridges & Culverts	13.00%	3.33%	3.33%	10.00%
Building – Terminal	8.00%	3.33%	3.33%	3.33%
Building – Residential	5.00%	3.33%	3.33%	3.33%
Boundary Wall – Operational	8.00%	3.33%	3.33%	10.00%
Boundary Wall – Residential	5.00%	3.33%	3.33%	10.00%
Other Buildings	8.00%	3.33%	3.33%	3.33%
Computer - End user	20.00%	16.67%	16.67%	33.33%
Computer - Servers and networks	20.00%	16.67%	16.67%	16.67%
Intangible Assets – Software	20.00%	20.00%	20.00%	20.00%

Plant & Machinery	11.00%	6.67%	6.67%	6.67%
Tools & Equipment	20.00%	6.67%	6.67%	6.67%
Office Furniture	20.00%	10.00%	10.00%	14.29%
Furniture & Fixtures: Other Than Trolley	20.00%	10.00%	10.00%	14.29%
Furniture & Fixtures: Trolley	20.00%	6.67%	10.00%	33.33%
Vehicles	14.00%	12.50%	12.50%	12.50%
Electrical Installations	11.00%	6.67%	10.00%	10.00%
Other Office Equipment	18.00%	20.00%	20.00%	20.00%
X Ray Baggage System	11.00%	6.67%	6.67%	6.67%
CFT/Fire Fighting Equipment	13.00%	6.67%	6.67%	6.67%

8.5 The depreciation proposed by AAI for the 1<sup>st</sup> control period has been presented in the table below.

*Table 15: Depreciation proposed by AAI*

Particulars	Pre control regulatory period		Control period				
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Depreciation	8.12	8.63	13.91	17.54	21.92	39.94	54.60

**Authority's Examination:**

8.6 The Authority has noted the submission of three different rates of depreciation by AAI for different periods under consideration and has duly examined these for consideration towards determination of aeronautical tariff.

8.7 For period up to FY 2016, the BBI Airport did not come under the regulatory ambit of the Authority. Therefore, the Authority has determined that the depreciation rates used by AAI according to its internal accounting policies are allowed to be followed in order to compute the net block of opening RAB. The Authority observed that the depreciation rates used by AAI up to FY 2016 were in line with its accounting policies, and hence the Authority does not propose any change in these.

8.8 As far as the period between 01/04/2016 and 31/03/2018 is considered, the Authority has had reference to its previous Tariff Orders for various AAI airports (Order No. 23/2017-18 dated 27/11/2017 for Kolkata airport, Order No. 10/2017-18 dated 04/08/2017 for Jaipur airport, and Order No. 03/2017-18 dated 02/06/2017 for Trivandrum Airport). In these Tariff Orders, the Authority considered the depreciation rates as prescribed in the Companies Act, 2013 for the purposes of tariff determination. Continuing with this approach, the Authority proposes to consider



these rates of depreciation for the period between 01/04/2016 and 31/03/2018 for the purposes of tariff determination of BBI Airport as well.

- 8.9 Upon examination of rates of depreciation proposed by AAI for this period, the Authority observed that except in case of two asset categories, the rates proposed by AAI are in line with the above mentioned previous tariff orders. These two asset categories, and the rates used for them are presented in the table below.

*Table 16: Differences in appropriate depreciation rates*

<b>Asset category</b>	<b>Rate as per Authority's previous orders for AAI airports</b>	<b>Rate used by AAI</b>
Furniture and fixtures – trolley	10%	6.67%
Electrical installations	10%	6.67%

- 8.10 Therefore, the Authority proposes to change the depreciation rates in these two asset categories, from 6.67% to 10%.

- 8.11 For the period from 01/04/2018 onwards, the Authority has had reference to its study, which was commissioned to determine appropriate depreciation rates for regulation of airports in line with the provisions of the Companies Act, 2013.

- 8.12 As a result of this study, the Authority, vide its Order No. 35/2017-18 titled "In the matter of Determination of Useful life of Airport Assets", spelled out the normative depreciation rates which need to be used for computation of Aggregate Revenue Requirement.

- 8.13 These normative depreciation rates of airport assets as per the above mentioned Order, relevant to Bhubaneswar Airport, have been presented in the table below.

*Table 17: Depreciation rates as per Authority's Order No. 35 / 2017-18*

<b>Asset category</b>	<b>Beyond FY 2018</b>
Freehold Land	0.00%
Runways, Aprons and Taxiways	3.33%
Road, Bridges & Culverts	10.00%
Building – Terminal	3.33%
Building – Residential	3.33%
Boundary Wall – Operational	10.00%
Boundary Wall – Residential	10.00%
Other Buildings	3.33%
Computer - End user	33.33%
Computer - Servers and networks	16.67%
Intangible Assets – Software	20.00%

Plant & Machinery	6.67%
Tools & Equipment	6.67%
Office Furniture	14.29%
Furniture & Fixtures: Other Than Trolley	14.29%
Furniture & Fixtures: Trolley	33.33%
Vehicles	12.50%
Electrical Installations	10.00%
Other Office Equipment	20.00%
X Ray Baggage System	6.67%
CFT/Fire Fighting Equipment	6.67%

8.14 The Authority observed that the depreciation rates used by AAI for the period beyond 01/04/2018 are in line with the rates as per the above mentioned Order. Therefore, the Authority does not propose any change in these.

8.15 Combining its observations across the three periods, the Authority proposes the depreciation rates to be considered for tariff determination in respect of BBI Airport as per the following table.

*Table 18: Depreciation rates proposed by the Authority*

<b>Asset category</b>	<b>Up to FY 2016</b>	<b>Between FY 2016 and FY 2018</b>	<b>Beyond FY 2018</b>
Freehold Land	0.00%	0.00%	0.00%
Runways, Aprons and Taxiways	13.00%	3.33%	3.33%
Road, Bridges & Culverts	13.00%	3.33%	10.00%
Building – Terminal	8.00%	3.33%	3.33%
Building – Residential	5.00%	3.33%	3.33%
Boundary Wall – Operational	8.00%	3.33%	10.00%
Boundary Wall – Residential	5.00%	3.33%	10.00%
Other Buildings	8.00%	3.33%	3.33%
Computer - End user	20.00%	16.67%	33.33%
Computer - Servers and networks	20.00%	16.67%	16.67%
Intangible Assets – Software	20.00%	20.00%	20.00%
Plant & Machinery	11.00%	6.67%	6.67%
Tools & Equipment	20.00%	6.67%	6.67%
Office Furniture	20.00%	10.00%	14.29%
Furniture & Fixtures: Other Than Trolley	20.00%	10.00%	14.29%
Furniture & Fixtures: Trolley	20.00%	10.00%	33.33%
Vehicles	14.00%	12.50%	12.50%
Electrical Installations	11.00%	10.00%	10.00%
Other Office Equipment	18.00%	20.00%	20.00%
X Ray Baggage System	11.00%	6.67%	6.67%
CFT/Fire Fighting Equipment	13.00%	6.67%	6.67%

8.16 The Authority further observed that in case of two asset categories, the depreciation computed by AAI for FY 2022 and FY 2023 exceeded the opening net block plus additions. The Authority proposes to correct this error.

8.17 On account of changes in depreciation rates, and the changes in proposed capital expenditure, the Authority proposes the following depreciation to be considered for tariff determination in respect of BBI Airport during the 1<sup>st</sup> control period.

*Table 19: Depreciation proposed by the Authority*

Particulars	Pre control regulatory period		Control period				
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Depreciation	9.49	9.87	13.85	17.47	22.67	25.26	48.49

**Proposal No. 5: Regarding depreciation**

- 5.a. The Authority proposes to adopt depreciation rates as per Table 18 for the 1<sup>st</sup> control period.
- 5.b. The Authority proposes depreciation amounts as per Table 19 for the 1<sup>st</sup> control period.

## 9. Regulatory Asset Base for the 1<sup>st</sup> control period

9.1 For determination of aeronautical tariff for the 1<sup>st</sup> control period for BBI Airport, AAI has submitted RAB as follows:

Table 20: RAB for the 1<sup>st</sup> control period as per AAI's submission

S. No	Particulars	Pre-control regulatory period		Control period				
		FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
A	Opening RAB	96.5	101.3	103.0	160.5	190.0	320.9	1216.4
B	Capitalizations	13.0	10.3	71.4	47.0	152.9	935.4	81.4
C	Disposals	-	-	-	-	-	-	-
D	Depreciation	8.1	8.6	13.9	17.5	21.9	39.9	54.6
E	Closing RAB	101.3	103.0	160.5	190.0	320.9	1216.4	1243.2
<b>F</b>	<b>Average RAB</b>	<b>98.9</b>	<b>102.1</b>	<b>131.7</b>	<b>175.3</b>	<b>255.5</b>	<b>768.7</b>	<b>1229.8</b>

### **Authority's Examination:**

9.2 The Authority has duly examined each element of RAB in the previous sections. It proposes to adopt the opening RAB as per Table 11, the capital expenditures as per Table 13, and the depreciation expense as per Table 19.

9.3 Combining all its propositions, RAB to be considered by the Authority for determination of aeronautical tariff for the 1<sup>st</sup> Control Period in respect of BBI Airport is as follows:

Table 21: RAB for the 1<sup>st</sup> control period after Authority's examination

S. No	Particulars	Pre-control regulatory period		Control period				
		FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
A	Opening RAB	96.5	99.9	100.3	158.0	187.5	309.0	283.7
B	Capitalizations	13.0	10.3	71.5	47.0	144.1	0.0	923.3
C	Disposals	0.0	0.0	0.0	0.0	0.0	0.0	0.0
D	Depreciation	9.5	9.9	13.8	17.5	22.7	25.3	48.5
E	Closing RAB	99.9	100.3	158.0	187.5	309.0	283.7	1158.5
<b>F</b>	<b>Average RAB</b>	<b>98.2</b>	<b>100.1</b>	<b>129.1</b>	<b>172.7</b>	<b>248.3</b>	<b>296.4</b>	<b>721.1</b>

### **Proposal No. 6: Regarding average Regulatory Asset Base**

6.a. The Authority proposes to consider average RAB for the 1<sup>st</sup> control period in respect of BBI Airport as per Table 21.

## **10. Fair Rate of Return (FRoR)**

- 10.1 AAI has considered Fair Rate of Return (FRoR) as 14% in line with the decision taken by the Authority for other AAI airports, including Kolkata, Jaipur and Trivandrum, among others.
- 10.2 AAI has submitted that all financing activities are undertaken centrally at the corporate office of AAI. The funds are apportioned among airports by the corporate office.

### ***Authority's Examination:***

- 10.3 The Authority has recognized that AAI's capital structure may not be regarded as an efficient one in that it doesn't optimize the cost of funds from a regulatory perspective. The Authority desires that the FRoR allowed to AAI should come down over a period of time by optimizing capital gearing. The Authority may also consider a normative capital structure to determine the FRoR at a later date. It may not be reasonable to expect AAI to contract large amounts of debt over a short period of time.
- 10.4 The Authority notes that as per a study conducted in respect of the 'Fair Rate of Return Estimation for AAI' in July 2011, it estimated a figure of 14.96% as Fair Rate of Return for AAI. The Authority notes that it has considered FRoR at 14% for other AAI airports considering the recommendations of another study done by NIPFP.
- 10.5 Based on the above, the Authority proposes to consider FRoR at the rate of 14% for BBI for the 1<sup>st</sup> control period as submitted by AAI.

### **Proposal No. 7: Regarding Fair Rate of Return**

- 7.a. The Authority proposes to consider FRoR at 14% for BBI for the 1<sup>st</sup> control period.

## 11. Non-aeronautical revenue

11.1 AAI has forecasted revenue from services other than aeronautical services as below.

Table 22: Non-aeronautical revenue projections as per AAI (figures in INR crores)

Particulars	Pre control regulatory period		Control period				
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
<b>1. Trading concessions</b>							
Restaurant / snack bars	0.88	1.10	1.03	1.13	1.25	1.37	1.65
T.R. stall	2.08	2.84	6.68	7.35	8.08	8.89	10.67
Hoarding & display	2.46	5.38	5.91	6.50	7.15	7.87	9.44
<b>2. Rent and services</b>							
Land leases	4.74	5.17	5.56	5.98	6.43	6.91	7.43
Building (residential)	0.02	0.03	0.04	0.04	0.04	0.04	0.04
Building (non-residential)	1.25	0.65	0.72	0.79	0.87	0.96	1.15
<b>3. Miscellaneous</b>							
Car rentals	0.36	0.65	1.21	1.52	1.67	1.84	2.20
Car parking	1.81	2.39	2.63	2.89	3.18	3.50	4.20
Admission tickets	0.61	0.79	0.87	0.95	1.05	1.15	1.39
Other income	1.33	1.03	0.10	0.11	0.12	0.13	0.15
<b>Total</b>	<b>15.54</b>	<b>20.03</b>	<b>24.75</b>	<b>27.27</b>	<b>29.84</b>	<b>32.66</b>	<b>38.31</b>

11.2 The growth rates assumed by AAI have been presented in the table below.

Table 23: Growth rates assumed by AAI for non-aeronautical revenue

Particulars	Pre control regulatory period		Control period				
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
<b>1. Trading concessions</b>							
Restaurant / snack bars			Bottom up	10%	10%	10%	20%
T.R. stall			Bottom up	10%	10%	10%	20%
Hoarding & display			10%	10%	10%	10%	20%
<b>2. Rent and services</b>							
Land leases			7.5%	7.5%	7.5%	7.5%	7.5%
Building (residential)			5%	5%	5%	5%	5%

Building (non-residential)			10%	10%	10%	10%	20%
<b>3. Miscellaneous</b>							
Car rentals			Bottom up	10%	10%	10%	20%
Car parking			10%	10%	10%	10%	20%
Admission tickets			10%	10%	10%	10%	20%
Other income			-90%	10%	10%	10%	10%
<b>Total</b>			<b>24%</b>	<b>10%</b>	<b>9%</b>	<b>9%</b>	<b>17%</b>

### ***Authority's Examination:***

- 11.3 The Authority examined the non-aeronautical revenues for FY 2017 and FY 2018 from the trial balances of the respective years submitted by AAI. The Authority found these to be in line with the trial balances.
- 11.4 The Authority observed that for restaurant and snack bars, AAI has awarded new master concession to a vendor. The commercial terms as examined by the Authority indicate that AAI will receive a minimum of INR 1.03 crore per month from the vendor. However, AAI has considered INR 1.03 crores as an annual figure. On further discussions with AAI, it was observed that INR 1.03 crores is indeed a monthly amount and hence the Authority proposes to consider it accordingly.
- 11.5 The Authority observed that for lease rentals, AAI has assumed a growth rate of 7.5%. However, on further discussions with AAI, it was observed that AAI will not be increasing the land lease rates in BBI Airport up to FY 2022. Therefore, the Authority proposes to change the growth rates assumed for land lease revenue – from 7.5% to 0% for period up to FY 2022.
- 11.6 The Authority observed that AAI had proposed a growth rate of 20% in last year for most of the non-aeronautical revenue sources. AAI submitted that this was done on account of new terminal building being operationalized. However, because the Authority has proposed to shift the capitalization of this new building by one year, the Authority proposes that the growth rate for non-aeronautical revenues in last year be the same as that for the previous years.
- 11.7 The Authority observed that AAI has awarded a new master concession agreement with respect to retail stores at the airport. The Authority verified the agreement and found the projections to be in line with the same.
- 11.8 The Authority observed that AAI has awarded a new concession agreement with respect to car rentals at the airport. The Authority verified the agreement and found the projections to be in line with the same.

11.9 The Authority requested AAI to provide a basis for assuming a -90% growth in other income. In the absence of a valid basis, the Authority proposes to flat-line this income source.

11.10 The revised growth rates as per Authority's examination have been presented in the table below.

Table 24: Growth rates in non-aeronautical revenue considered by the Authority

Particulars	Pre control regulatory period		Control period				
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
<b>1. Trading concessions</b>							
Restaurant / snack bars			Bottom up	10%	10%	10%	10%
T.R. stall			Bottom up	10%	10%	10%	10%
Hoarding & display			10%	10%	10%	10%	10%
<b>2. Rent and services</b>							
Land leases			0%	0%	0%	0%	7.5%
Building (residential)			5%	5%	5%	5%	5%
Building (non-residential)			10%	10%	10%	10%	10%
<b>3. Miscellaneous</b>							
Car rentals			Bottom up	10%	10%	10%	10%
Car parking			10%	10%	10%	10%	10%
Admission tickets			10%	10%	10%	10%	10%
Other income			0%	0%	0%	0%	0%
<b>Total</b>			<b>82%</b>	<b>9%</b>	<b>8%</b>	<b>9%</b>	<b>9%</b>

11.11 The revised non-aeronautical revenues as per Authority's examination have been presented in the table below.

Table 25: Non-aeronautical revenues proposed by the Authority

Particulars	Pre control regulatory period		Control period				
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
<b>1. Trading concessions</b>							
Restaurant / snack bars	0.88	1.10	12.22	13.44	14.78	16.26	17.89
T.R. stall	2.08	2.84	6.68	7.35	8.08	8.89	9.78
Hoarding & display	2.46	5.38	5.91	6.50	7.15	7.87	8.66



<b>2. Rent and services</b>							
Land leases	4.74	5.17	5.17	5.17	5.17	5.17	5.56
Building (residential)	0.02	0.03	0.04	0.04	0.04	0.04	0.04
Building (non-residential)	1.25	0.65	0.72	0.79	0.87	0.96	1.05
<b>3. Miscellaneous</b>							
Car rentals	0.36	0.65	1.21	1.52	1.67	1.84	2.02
Car parking	1.81	2.39	2.63	2.89	3.18	3.50	3.85
Admission tickets	0.61	0.79	0.87	0.95	1.05	1.15	1.27
Other income	1.33	1.03	1.03	1.03	1.03	1.03	1.03
<b>Total</b>	<b>15.54</b>	<b>20.03</b>	<b>36.48</b>	<b>39.69</b>	<b>43.04</b>	<b>46.72</b>	<b>51.16</b>

### **Proposal No. 8: Regarding non-aeronautical revenue**

- 8.a. The Authority proposes to consider non-aeronautical revenues for the 1<sup>st</sup> control period in accordance with Table 25.

## 12. Operation and maintenance expenditure

12.1 Operation and Maintenance (O&M) expenditure submitted by AAI is segregated into the following:

- a) Payroll expenses,
- b) Admin and general expenditure,
- c) Repair and maintenance expenditure,
- d) Utilities and outsourcing expenditure, and
- e) Other outflows

12.2 The expenses related to Cargo, AAICLAS and ANS have not been considered by AAI.

12.3 AAI has segregated the expenses into aeronautical expenses, non-aeronautical expenses, and common expenses. The common expenses have been further segregated into aeronautical and non-aeronautical on the basis of relevant ratios.

12.4 AAI submitted that the allocation of CHQ/RHQ expenses among individual airports has been done on the basis of revenue.

12.5 The summary of aeronautical expenses proposed by AAI for the 1<sup>st</sup> control period has been presented in the table below:

*Table 26: Operation and Maintenance (O&M) expenditure as per AAI*

Particulars	Pre control regulatory period		Control period				
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Payroll expenses - non CHQ/RHQ	11.78	15.24	17.79	18.71	19.64	20.62	21.65
Payroll expenses - CHQ/RHQ	2.74	2.88	3.27	3.43	3.61	3.79	3.98
Administration and General expenses - non CHQ/RHQ	2.19	4.23	4.50	4.79	5.11	5.47	5.86
Administration and General expenses - CHQ/RHQ	25.64	26.92	28.26	29.68	31.16	32.72	34.35
Repairs and maintenance	5.88	8.51	9.36	10.29	11.32	12.45	14.95
Utilities and outsourcing expenses	4.75	4.87	4.79	4.84	4.90	4.96	5.88
Other outflows - Collection Charges on PSF	0.11	0.31	0.36	0.41	0.48	0.55	0.60
<b>Total</b>	<b>53.08</b>	<b>62.95</b>	<b>68.33</b>	<b>72.15</b>	<b>76.22</b>	<b>80.56</b>	<b>87.27</b>

12.6 The summary of growth rates assumed by AAI for the operation and maintenance expenses have been presented in the table below:

Table 27: Growth rates in O&M as per AAI

Particulars	Pre control regulatory period		Control period				
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Payroll expenses - non CHQ/RHQ			17%	5%	5%	5%	5%
Payroll expenses - CHQ/RHQ			14%	5%	5%	5%	5%
Administration and General expenses - non CHQ/RHQ			6%	7%	7%	7%	7%
Administration and General expenses - CHQ/RHQ			5%	5%	5%	5%	5%
Repairs and maintenance			10%	10%	10%	10%	20%
Utilities and outsourcing expenses			-2%	1%	1%	1%	19%
Other outflows - Collection Charges on PSF			16%	16%	16%	16%	9%
<b>Total</b>			<b>9%</b>	<b>6%</b>	<b>6%</b>	<b>6%</b>	<b>8%</b>

12.7 Further, summary of allocation of expenses between aeronautical and non-aeronautical as proposed by AAI has been presented in the table below:

Table 28: Allocation of O&M expenses as per AAI

Particulars	Aeronautical	Non-aeronautical
Payroll expenses - non CHQ/RHQ	94.25%	5.75%
Payroll expenses - CHQ/RHQ	100%	0%
Administration and General expenses - non CHQ/RHQ	96.2%	3.8%
Administration and General expenses - CHQ/RHQ	95%	5%
Repairs and maintenance	97.5%	2.5%
Utilities and outsourcing expenses	100%	0%
Other outflows - Collection Charges on PSF	100%	0%

**Authority's Examination:**

12.6 The Authority examined the trial balances for FY 2017 and FY 2018 to ensure that the actuals considered by AAI are accurate. In all instances except one, the numbers were found to be consistent with the trial

balances. In case of utilities and outsourcing expenses, the expense pertaining to consumption of stores and spares amounting to INR 29 lacs was left out from the trial balance for FY 2018. Therefore, the Authority proposes to include the same.

12.7 The Authority observed the employee ratio considered by AAI for allocation of payroll expenses between aeronautical and non-aeronautical. For FY 2017, AAI used a ratio of 7/98. However, it was examined that the correct ratio to use would be 7:98, i.e. 7/105. The Authority proposes to use 7/105 instead of 7/98. This would change the allocation of payroll expenses to aeronautical and non-aeronautical for FY 2017. The Authority found the ratio used for FY 2017-18 to be correct.

12.8 The Authority observed that for two categories of employees, i.e. HR and Finance, which serve both the aeronautical and non-aeronautical services at the airport, AAI did not reduce the expenses pertaining to non-aeronautical portion of these common staff. The Authority considered to reduce these from the payroll expenses.

12.9 The Authority further observed that the ratio used to compute the non-aeronautical portion of the common staff expenses was not consistent throughout the control period. The ratio used by AAI for this purpose and the ratio proposed by the Authority on the basis of consistent formula have been presented in the table below.

*Table 29: Difference in ratio of non-aero portion of common staff expenses*

<b>Particulars</b>	<b>For FY 2017</b>	<b>For FY 2018</b>	<b>For FY 2019 and beyond</b>
Ratio used by AAI	1.35%	1.26%	1.03%
Ratio considered by the Authority	1.26%	1.19%	0.97%

12.10 The Authority examined the allocation of expenses between aeronautical and non-aeronautical. The Authority compared the allocation proposed by AAI to its recent orders for other AAI airports. A summary of these has been presented in the table below.

*Table 30: Comparison of allocation of O&M expenses with other AAI airports*

<b>Expense category</b>	<b>BBI</b>	<b>Kolkata</b>	<b>Jaipur</b>	<b>Trivandrum</b>
Payroll expenses - non CHQ/RHQ	94%	88%	94%	95%
Payroll expenses - CHQ/RHQ	100%	88%	95%	95%
Administration and General expenses - non CHQ/RHQ	96%	96%	88%	94%
Administration and General expenses - CHQ/RHQ	95%	85%	90%	90%
Repairs and maintenance	98%	89%	93%	97%
Utilities and outsourcing expenses	100%	91%	93%	98%
Other outflows - Collection Charges on PSF	100%	93%	100%	100%

12.11 On comparison with the other AAI airports, the Authority observed that the payroll expenses – CHQ/RHQ were not allocated between aeronautical and non-aeronautical. The Authority desired to have an ideal allocation based on actual deployment of staff at CHQ/RHQ for non-aeronautical purposes. In absence of actual numbers, the Authority proposes to consider 5% of payroll expenses – CHQ/RHQ as non-aeronautical portion..

12.12 The Authority noted 100% allocation of the utilities and outsourcing expenses as aeronautical by AAI. The Authority desired to have an ideal allocation based on actual consumption by the non-aeronautical avenues like stalls, kiosks etc at the airport. In absence of data pertaining to actual consumption by such avenues, the Authority proposes to consider 1% of power charges as non-aeronautical.

12.13 The Authority proposes the following allocation of O&M expenses into aeronautical and non-aeronautical.

*Table 31: Allocation of O&M expenses as per the Authority*

<b>Particulars</b>	<b>Aeronautical</b>	<b>Non-aeronautical</b>
Payroll expenses - non CHQ/RHQ	94.25%	5.75%
Payroll expenses - CHQ/RHQ	95%	5%
Administration and General expenses - non CHQ/RHQ	96.2%	3.8%
Administration and General expenses - CHQ/RHQ	95%	5%
Repairs and maintenance	97.5%	2.5%
Utilities and outsourcing expenses	99%	1%
Other outflows - Collection Charges on PSF	100%	0%

12.14 The Authority examined the growth rates assumed by AAI. For payroll expenses, AAI has assumed an overall growth rate of approximately 17% for FY 2019. The revised pay commission was implemented in FY 2018 for executive grade employees. The implementation for non-executive grade employees is proposed to be done in FY 2019. Therefore, the Authority proposed that it should be assumed that the growth in overall payout of non-executive grade employees should be similar to the actual growth in payout of executive grade of employees in FY 2018 based on revised pay commission. The Authority found this to be 37.16% increment. Based on the proportion of employees in the two grades, the Authority found the overall growth of 17% in FY 2018-19 to be reasonable.

12.15 AAI assumed a growth rate of 5% in payroll expenses beyond FY 2019. The Authority found this to be reasonable.

12.16 The Authority examined actual growth trend of other expenses for the past few years at the airport. Further, the Authority examined a few contractual agreements with vendors on a sample basis to understand the escalation dynamics. On the basis of these checks, the other growth rates were found to be reasonable.

12.17 The Authority observed that AAI considered a growth rate of 20% in FY 2023 for repairs and maintenance expenses and power charges. This was twice the growth rate assumed up to FY 2022. AAI submitted that a new terminal building (T3) has been planned and is expected to be in operation by FY 2023. Therefore, to accommodate for increased expenses, AAI assumed a growth rate of 20% for FY 2023. The Authority however noted the provisions of Defect Liability Period to be applicable for the initial period since the commencement of operations of T3. Further as the Authority proposes to shift the capitalization of this new building by one year, the corresponding growth rates in expenses are also proposed to grow as per the previous years.

12.18 For other outflows, i.e., collection charges on PSF, AAI considered the growth rate assumed for ATM traffic. The Authority found the same to be a reasonable driver of expense. Therefore, the Authority proposes to change the same in accordance with its proposal of ATM growth rate.

12.19 Based on above considerations, the Authority proposes the following growth rates in operation and maintenance expenses.

*Table 32: Growth rates in O&M expenses considered by the Authority*

Particulars	Pre control regulatory period		Control period				
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Payroll expenses - non CHQ/RHQ			17%	5%	5%	5%	5%
Payroll expenses - CHQ/RHQ			14%	5%	5%	5%	5%
Administration and General expenses - non CHQ/RHQ			6%	6%	7%	7%	7%
Administration and General expenses - CHQ/RHQ			5%	5%	5%	5%	5%
Repairs and maintenance			10%	10%	10%	10%	10%
Utilities and outsourcing expenses			0%	2%	2%	2%	2%
Other outflows - Collection Charges on PSF			16%	16%	16%	16%	16%
<b>Total</b>			<b>9%</b>	<b>6%</b>	<b>6%</b>	<b>6%</b>	<b>6%</b>

12.20 After incorporating the above observations by the Authority, the revised O&M expenses have been presented in the table below.

*Table 33: Operation and maintenance (O&M) expenses as revised by the Authority*

Particulars	Pre control regulatory period		Control period				
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Payroll expenses - non CHQ/RHQ	11.65	15.02	17.59	18.49	19.41	20.38	21.40
Payroll expenses - CHQ/RHQ	2.60	2.73	3.11	3.26	3.43	3.60	3.78
Administration and General expenses - non CHQ/RHQ	2.19	4.21	4.47	4.76	5.08	5.43	5.82
Administration and General expenses - CHQ/RHQ	25.64	26.92	28.26	29.68	31.16	32.72	34.35
Repairs and maintenance	5.88	8.51	9.36	10.29	11.32	12.45	13.70
Utilities and outsourcing expenses	4.71	5.12	5.11	5.20	5.29	5.39	5.50
Other outflows - Collection Charges on PSF	0.11	0.31	0.36	0.41	0.48	0.55	0.64
<b>Total</b>	<b>52.77</b>	<b>62.81</b>	<b>68.25</b>	<b>72.09</b>	<b>76.16</b>	<b>80.52</b>	<b>85.19</b>

### **Proposal No. 9: Regarding Operating and Maintenance expenses**

9.a. The Authority proposes to consider O&M expenses as per Table 33.

### 13. Taxation

13.1 To compute depreciation for tax purposes, AAI considered the depreciation rates in accordance with the following table:

*Table 34: Depreciation rates for tax purposes as per AAI*

<b>Asset category</b>	<b>IT Depreciation rate - up to FY 18</b>	<b>IT Depreciation rate - from FY 19</b>
Freehold Land	0%	0%
Runways, Aprons and Taxiways	15%	15%
Road, Bridges & Culverts	10%	10%
Building – Terminal	10%	10%
Building – Residential	5%	5%
Boundary Wall – Operational	15%	10%
Boundary Wall – Residential	5%	5%
Other Buildings	10%	10%
Computer - End user	60%	40%
Computer - Servers and networks	60%	40%
Intangible Assets – Software	60%	40%
Plant & Machinery	15%	15%
Tools & Equipment	15%	15%
Office Furniture	10%	10%
Furniture & Fixtures: Other Than Trolley	10%	10%
Furniture & Fixtures: Trolley	10%	10%
Vehicles	15%	15%
Electrical Installations	10%	10%
Other Office Equipment	10%	10%
X Ray Baggage System	15%	15%
CFT/Fire Fighting Equipment	15%	15%

13.2 The tax calculation as submitted by AAI has been presented in the table below:

*Table 35: Taxation as per AAI*

<b>Particulars</b>	<b>Pre control regulatory period</b>		<b>Control period</b>				
	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
Aero revenue with revised rates	27.17	36.83	72.10	119.31	140.42	165.51	184.49
O&M expenses	-53.08	-62.95	-68.33	-72.15	-76.22	-80.56	-87.27
Depreciation	-10.80	-11.07	-14.64	-19.64	-29.10	-81.71	-125.72
Profit before tax	-36.71	-37.20	-10.86	27.53	35.11	3.24	-28.51
Tax rate (%)	34.068	34.068	34.944	34.944	34.944	34.944	34.944
<b>Taxes</b>	-	-	-	<b>9.62</b>	<b>12.27</b>	<b>1.13</b>	-



### **Authority's Examination:**

- 13.3 The Authority observed that AAI had proposed 01/10/2018 as the implementation date of the new tariffs. The Authority proposes to revise the same to 01/01/2019. This had an impact on the projected aeronautical revenues, leading to difference in tax computation.
- 13.4 The Authority examined the depreciation rates considered by AAI and compared them with the rates prescribed in the Income Tax Act, 1961. The Authority observed that in case of two categories of assets, the depreciation rates proposed by AAI were not in line with the Income Tax Act. These have been presented in the table below.

*Table 36: Difference in depreciation rates for tax purposes*

<b>Asset category</b>	<b>Up to FY 2018</b>		<b>Beyond FY 2018</b>	
	<b>Rate used by AAI</b>	<b>Rate as per Income Tax Act</b>	<b>Rate used by AAI</b>	<b>Rate as per Income Tax Act</b>
Runways, aprons and taxiways	15%	10%	15%	10%
Boundary wall-operational	15%	10%	10%	10%

- 13.5 The Authority observed that the tax treatment of losses by AAI is not appropriate. AAI did not consider carry-forward of losses and their set-off in subsequent years of profit. In the period between FY 2016-17 and FY 2017-18, existing airport charges were levied. Further, in the first year of the control period, i.e. FY 2018-19, existing charges are being levied until the implementation of revised charges. The Authority observed that the existing charges led to aeronautical losses in these years. In its computation of tax expenses, AAI did not consider the benefit of these losses on taxable aeronautical profits of subsequent years, leading to increase in overall projected tax expenses. The Authority proposes to consider the carry forward and set-off of these losses. Refer Table 37 for application of carry forward and set-off of losses.
- 13.6 The Authority observed that the tax rate considered by AAI for FY 2017 and FY 2018 was not correct. AAI used 34.068%. However, the correct tax rate would be 34.608% (30% plus 12% surcharge plus 3% cess). The Authority found the tax rate for FY 2019 and beyond to be correct. (30% plus 12% surcharge plus 4% cess).

- 13.7 The Authority observed that for FY 2017, the aeronautical revenues considered for computation of taxes did not include income from extension of watch hours. These amounted to INR 4.22 lacs. The Authority proposes to consider the same.
- 13.8 The Authority proposes to consider the O&M expenses in accordance with Table 33 for computation of tax expense.
- 13.9 The Authority proposes to consider the capital expenditures for computation of depreciation in accordance with Table 13.
- 13.10 The projected aeronautical revenues for the control period are based on the charges proposed by AAI as part of its initial submission of Multi-Year Tariff Proposal.
- 13.11 After considering the above, the Authority proposes the following tax expense during the 1<sup>st</sup> control period.

*Table 37: Tax expense as per Authority*

Particulars	Pre control regulatory period		Control period				
	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Aero revenue with revised rates	27.21	36.83	57.74	119.47	140.61	165.74	195.71
O&M expenses	-52.77	-62.81	-68.25	-72.09	-76.16	-80.52	-85.19
Depreciation	-10.50	-10.59	-14.26	-19.37	-26.83	-31.13	-73.99
<b>Profit before tax</b>	<b>-36.06</b>	<b>-36.57</b>	<b>-24.77</b>	<b>28.02</b>	<b>37.61</b>	<b>54.09</b>	<b>36.53</b>
Set-off of loss	-	-	-	28.02	37.61	31.77	-
<b>Profit before tax after set-off of loss</b>	<b>-36.06</b>	<b>-36.57</b>	<b>-24.77</b>	<b>-</b>	<b>-</b>	<b>22.32</b>	<b>36.53</b>
Tax rate (%)	34.61%	34.61%	34.94%	34.94%	34.94%	34.94%	34.94%
<b>Taxes</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>7.80</b>	<b>12.77</b>

### **Proposal No. 10: Regarding taxation expense**

- 10.a. The Authority proposes to consider the tax expense as per Table 37.

## 14. True up

14.1 As explained in Chapter 2 of this Consultation Paper, the Authority considered the Aggregate Revenue Requirement, or ARR, for the first two years, i.e. FY 2016-17 and FY 2017-18. This ARR would be compared with the actual aeronautical revenues earned by AAI. Any shortfall (or surplus) would be added (true-up) to the ARR for the five-year control period.

14.2 AAI submitted a computation of true-up based on actual figures of FY 2016-17 and FY 2017-18. This has been presented in the table below.

*Table 38: True up calculation as per AAI*

<b>Particulars</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>
ARR	70.37	79.87	
Actual aero revenues	27.21	36.83	
<b>Shortfall</b>	<b>43.16</b>	<b>43.04</b>	
<b>Future value of shortfall at 14%</b>			<b>105.16</b>

### **Authority's examination:**

14.3 The Authority proposes to revise the above computation on the basis of its proposals of various regulatory building blocks discussed in this paper. Accordingly, the Authority's computation of true-up is presented in the table below.

*Table 39: True up calculation as per the Authority*

<b>Particulars</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>
ARR	71.35	80.69	
Actual aero revenues	27.21	36.83	
<b>Shortfall</b>	<b>44.14</b>	<b>43.87</b>	
<b>Future value of shortfall at 14%</b>			<b>107.37</b>

### **Proposal No. 11: Regarding true-up**

11.a. The Authority proposes to consider the true up calculations as per Table 39.

## 15. Aggregate Revenue Requirement for the 1<sup>st</sup> control period

15.1 AAI has submitted Aggregate Revenue Requirement (ARR) and yield per passenger (Y) for the 1<sup>st</sup> control period as per the regulatory building blocks discussed.

15.2 The summary of ARR and Yield has been presented in the table below.

Table 40: ARR and Yield as per AAI

Particulars	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Average RAB (INR crores)	131.73	175.25	255.48	768.68	1229.89
Fair Rate of Return	14%	14%	14%	14%	14%
Return on average RAB (INR crores)	18.44	24.54	35.77	107.61	172.19
O&M expenses (INR crores)	68.33	72.15	76.22	80.56	87.27
Depreciation (INR crores)	13.91	17.54	21.92	39.94	54.60
Tax expense (INR crores)	-	9.62	12.27	1.13	0.00
Less: 30% NAR (INR crores)	-7.42	-8.18	-8.95	-9.80	-11.49
<b>ARR per year (INR crores)</b>	<b>93.25</b>	<b>115.66</b>	<b>137.22</b>	<b>219.45</b>	<b>302.56</b>
Add: True up	105.16				
PV of ARR based @14% (INR crores)	198.41	101.46	105.58	148.12	179.14
Total present value of ARR (INR cr.)	732.72				
Total traffic	26,043,862				
<b>Yield per passenger (Y) (INR)</b>	<b>281.34</b>				

### Authority's Examination:

15.3 The Authority proposes to consider the average RAB in accordance with Table 21.

15.4 The Authority proposes to consider the FRoR at 14%.

15.5 The Authority proposes to consider the O&M expenses as per Table 33.

15.6 The Authority proposes to consider the depreciation as per Table 19.

15.7 The Authority proposes to consider the tax expense as per Table 37.

15.8 The Authority proposes to consider the non-aeronautical revenue as per Table 25.

15.9 The Authority proposes to consider the total traffic in accordance with Table 5.

15.10 After considering the above, the Authority proposes the following ARR and Yield, as presented in the table below.

*Table 41: ARR and Yield as per Authority*

<b>Particulars</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
Average RAB (INR crores)	129.15	172.74	248.26	296.37	721.14
Fair Rate of Return	14%	14%	14%	14%	14%
Return on average RAB (INR crores)	18.08	24.18	34.76	41.49	100.96
O&M expenses (INR crores)	68.25	72.09	76.16	80.52	85.19
Depreciation (INR crores)	13.85	17.47	22.67	25.26	48.49
Tax expense (INR crores)	-	-	-	7.80	12.77
Less: 30% NAR (INR crores)	-10.94	-11.91	-12.91	-14.02	-15.35
<b>ARR per year (INR crores)</b>	<b>89.24</b>	<b>101.83</b>	<b>120.68</b>	<b>141.05</b>	<b>232.06</b>
Add: True up	107.37				
PV of ARR based @14% (INR crores)	196.61	89.33	92.86	95.21	137.40
Total present value of ARR (INR cr.)	611.40				
Total traffic	26,432,738				
<b>Yield per passenger (Y) (INR)</b>	<b>231.30</b>				

### **Proposal No. 12: Regarding Aggregate Revenue Requirement**

13.a. The Authority proposes to consider the ARR and Yield for the 1<sup>st</sup> control period in accordance with Table 41.

## 16. Annual Tariff Proposal

16.1 As part of the Multi-year Tariff proposal, AAI submitted a tariff card for all five years of the first control period. This tariff card has been reproduced in this chapter. The Authority examined AAI's Multi-year Tariff Proposal, along with all regulatory building blocks. The Authority's examination has been discussed in this consultation paper in the previous chapters. AAI has not revised the tariff card after Authority's examination.

16.2 AAI has proposed the implementation date of new tariffs from 01.10.2018. The Authority has proposed to revise the implementation date to 01.01.2019.

16.3 The tariff card submitted by AAI as part of the Multi-year Tariff Proposal has been reproduced here.

<b>(i) Landing Charges - International flights</b>	
<b>Weight of the Aircraft</b>	<b>Proposed Rate Per Landing (In INR)</b>
Up to 25 MT	240 Per MT
Above 25 MT up to 50 MT	6,000+450 per MT in excess of 25 MT
Above 50 MT up to 100	17,250+520 per MT in excess of 50 MT
Above 100 MT to 200 MT	43,250+600 per MT in excess of 100 MT
Above 200 MT	1,03,250+720 per MT in excess of 200 MT

<b>(ii) Landing Charges – Domestic Flights</b>	
<b>Weight of the Aircraft</b>	<b>Proposed Rate Per Landing (In INR)</b>
Up to 25 MT	160 Per MT
Above 25 MT up to 50 MT	4,000+280 per MT in excess of 25 MT
Above 50 MT up to 100	11,000+320 per MT in excess of 50 MT
Above 100 MT to 200 MT	27,000+390 per MT in excess of 100 MT
Above 200 MT	66,000+440 per MT in excess of 200 MT

16.3.1 No landing charges shall be payable in respect of a) aircraft with a maximum certified capacity of less than 80 seats, being operated by domestic schedule operators at airport, b) helicopters of all types, and c) DGCA approved Flying school/flying training institute aircrafts.

16.3.2 All domestic legs of international routes flown by Indian operators will be treated as domestic flights as far as landing charges is concerned, irrespective of flight number assigned to such flights.

16.3.3 Charges shall be calculated on the basis of nearest MT (i.e. 1000 kg).

16.3.4 Flights operating under Regional connectivity scheme will be completely exempted from Landing charges from the date of the scheme is operationalized by GOI.

## **II) PARKING AND HOUSING CHARGES**

<b>Weight of the Aircraft</b>	<b>Parking Charges Rates per Hour (in INR)</b>	<b>Housing Charges Rates per Hour (in INR)</b>
Up to 25 MT	3.00 Per Hour Per MT	6.00 Per Hour Per MT
Above 25 MT up to 50 MT	75.00+4.00 per Hour per MT in excess of 25 MT	150.00+8.00 per MT per Hour in excess of 25 MT
Above 50 MT up to 100	175.00+8.00 per MT per Hour in excess of 50 MT	350.00+16.00 per MT per Hour in excess of 50 MT
Above 100 MT to 200 MT	575.00+10.00 per MT per Hours in excess of 100 MT	1150.00+20.00 per MT per Hours in excess of 100 MT
Above 200 MT	1575.00+11.00 per MT per Hours in excess of 200 MT	3150.00+22.00 per MT per Hours in excess of 200 MT

16.3.5 No parking charges shall be levied for the first two hours. While calculating free parking period, standard time of 15 minutes shall be added on account of time taken between touch down time and actual parking time on the parking stand. Another standard time of 15 minutes shall be added on account of taxing time of aircraft from parking stand to take off point. These periods shall be applicable for each aircraft irrespective of actual time taken in the movement of aircraft after landing and before take-off.

16.3.6 For calculating chargeable parking time, part of an hour shall be rounded off to the nearest hour.

16.3.7 Charges shall be calculated on the basis of nearest MT.

16.3.8 Charges for each period parking shall be rounded off to nearest rupee.

16.3.9 At the in-contact stands and open stands, after free parking, for the next two hours normal parking charges shall be levied. After this period, the charges shall be double the normal parking charges.

16.3.10 It is proposed to waive off the night parking charges in principle for all domestic scheduled operators at Bhubaneswar Airport if the State Government has brought the rate of tax (VAT) on ATF  $\leq$  5%. The above waiver of night parking charges (between 2200 hrs. to 0600 hrs.) will be

made applicable from the date of implementation of  $\leq 5\%$  tax on ATF by the State Govt. In the event of upward revision in the tax rate of ATF by the State Govt., the relief of free night parking charges will also be deemed to be withdrawn for all the airports within the jurisdiction of the said State.

- 16.3.11 Flight operating under Regional Connectivity Scheme will be completely governed by AIC issued on this subject by DGCA.

### **III) THROUGHPUT CHARGES**

<b>Proposed Rate Per KL (IN INR)</b>
322.52

### **IV) PASSENGER SERVICE FEE (PSF) – FACILITATION/USER DEVELOPMENT FEES (UDF)**

<b>Passenger</b>	<b>Proposed rate in INR (per embarking passenger)</b>	<b>Proposed rate in US \$ (per embarking passenger) 1\$=Rs.67</b>
Domestic	350	\$ 5.22
International Passenger	400	\$ 5.97

- 16.3.12 Collection charges: If the payment is made within 15 days of receipt of bills, then collection charges at Rs.5 per departing passenger is payable by AAI to Airline operators. No collection charges shall be payable if the operator fails to pay the PSF/UDF to AAI within the credit period and in case of part payment. Airlines to make full payment of PSF/UDF collection to AAI and raise a separate invoice for the collection charges on PSF/UDF to AAI. To be eligible to claim this collection charges, the airlines should have no overdue on any account with AAI.
- 16.3.13 No collection charges are payable to casual operator/non-scheduled operators.
- 16.3.14 For conversion of US\$ into INR the rate as on the 1st day of the month for 1st fortnightly billing period and rate as on 16th of the month for the 2nd fortnightly billing period shall be adopted.
- 16.3.15 Revised UDF charges will be applicable on tickets issued on or after 01/01/2019.
- 16.3.16 No UDF/PSF (Facilitation) will be levied for Transit Passengers.



**V) PASSENGER SERVICE FEE (PSF) – SECURITY : Existing Rate will continue**

- 16.3.17 INR 130/- per embarking International/ Domestic passenger.
- 16.3.18 US \$ 3.25 (US \$ Three and twenty-five cents only) per passenger in respect of the tickets issued against Dollar Tariff.
- 16.3.19 Collection charges: If the payment is made within 15 days of receipt of invoice, then collection charges at INR 2.50% of PSF per passenger shall be paid by AAI. No collection charges shall be paid in case the airline fails to pay the PSF to AAI within the credit period of 15 days.
- 16.3.20 No PSF (Security) will be levied for Transit Passengers.
- 16.3.21 For conversion of US \$ into INR the rate as on 1<sup>st</sup> day of the month for 1<sup>st</sup> fortnightly billing period and rate as on 16<sup>th</sup> of the month for the 2<sup>nd</sup> fortnightly billing period shall be adopted. If the payment is made within 15 days of receipt of bills, then collection at 2.5% of PSF per passenger is payable.

**VI) Exemption from levy and collection from UDF/PSF at the Airports**

The Ministry of Civil Aviation, Govt. of India vide order no. AV.16011/002/2008-AAI dated 30.11.2011 has directed AAI to exempt the following categories of persons from levy and collection of UDF/PSF.

- 16.3.22 Children (under age of 2 years)
- 16.3.23 Holders of Diplomatic Passport,
- 16.3.24 Airlines crew on duty including sky marshals & airline crew on board for the particular flight only (this would not include Dead Head Crew, or ground personnel)
- 16.3.25 Persons travelling on official duty on aircraft operated by Indian Armed Forces
- 16.3.26 Persons traveling on official duty for United Nations Peace Keeping Missions
- 16.3.27 Transit/transfer passengers (this exemption may be granted to all the passengers transiting up to 24 hrs. "A passenger is treated in transit only if onward travel journey is within 24 hrs. from arrival into airport and is part of the same ticket, in case 2 separate tickets are issued it would not be treated as transit passenger").
- 16.3.28 Passengers departing from the Indian airports due to involuntary re-routing i.e. technical problems or weather conditions.

## **VII) GENERAL CONDITION:**

All the above Charges are excluding GST. GST at the applicable rates are payable in addition to above charges.

### **Aeronautical revenue under the proposed tariff card:**

16.3.29 The Authority observed that with the proposed tariff card, AAI will incur a shortfall of INR 112.92 crores. This has been further detailed below. The Authority proposes that any shortfall or surplus in revenues for the 1<sup>st</sup> control period based on proposed tariffs by AAI to be considered while determining aeronautical tariffs for the 2<sup>nd</sup> control period.

Table 42: Computation of shortfall or surplus from proposed aeronautical charges (in INR crores)

<b>Particulars</b>	<b>FY 2019 - up to 31.12.18</b>	<b>FY 2019 - from 01.01.2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>
<b>Total PV of ARR including true up</b>	611.40					
<b>Landing charges:</b>						
Domestic	14.16	6.18	29.57	35.37	42.30	50.59
International	0.75	0.32	1.78	2.50	3.50	4.92
<b>Parking and housing charges:</b>						
Domestic	0.09	0.06	0.31	0.37	0.44	0.52
International	0.00	0.00	0.01	0.02	0.02	0.03
Fuel Throughput charges	2.12	0.78	3.59	4.15	4.81	5.58
Ground handling charges	0.74	0.25	1.14	1.32	1.53	1.78
Land lease - Oil companies	1.07	0.36	1.54	1.66	1.78	1.91
Land lease - Ground Handling	0.08	0.03	0.11	0.12	0.13	0.14
CUTE charges	2.37	0.79	3.69	4.31	5.03	5.89
<b>Total - before USD/PSF charges</b>	<b>21.39</b>	<b>8.76</b>	<b>41.74</b>	<b>49.81</b>	<b>59.56</b>	<b>71.37</b>
PV factor	1.00	1.00	0.88	0.77	0.67	0.59
PV of above	21.39	8.76	36.62	38.33	40.20	42.26
<b>Σ PV of above</b>	<b>187.55</b>					
<b>Shortfall before UDF/PSF charges</b>	<b>423.85</b>					
<b>UDF/PSF charges:</b>						
Domestic	10.58	16.03	74.39	86.29	100.09	116.11
International	0.36	0.62	3.34	4.51	6.09	8.23
PV of UDF/PSF charges	10.94	16.65	68.18	69.87	71.67	73.62
<b>Σ PV of UDF/PSF charges</b>	<b>310.93</b>					
<b>Shortfall</b>	<b>112.92</b>					

**Authority's examination:**

16.4 The Authority notes that AAI has projected the revenue from CUTE charges without providing details of rates to be levied. The Authority, therefore, proposes to seek from AAI or the relevant Independent Service Provider, to furnish details of these rates.

**Proposal No. 13: Regarding tariff rate card**

To accept Annual Tariff Proposals as given in Section 16.3 for determination of tariff during 1<sup>st</sup> control period as the present value of proposed revenues by AAI is lower than the present value of ARR as per Authority. The Authority proposes that any shortfall or surplus in revenues for the 1<sup>st</sup> control period based on proposed tariffs by AAI will be considered while determining aeronautical tariffs for the 2<sup>nd</sup> control period.

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## **18. Stakeholders' Consultation Timeline**

- 18.1 In accordance with the provision of Section 13(4) of the AERA Act, 2008, the proposals contained in the Section – Summary of proposals (Chapter 17 above) read with the relevant discussion in the other sections of the paper is hereby put forth for Stakeholders' Consultation.
- 18.2 For removal of doubts, it is clarified that the contents of this consultation paper may not be construed as any Order or Direction by the Authority. The Authority shall pass an order, in the matter, only after considering the submissions of the stakeholders' in response hereto and by making such decisions fully documented and explained in terms of the provisions of the Act.
- 18.3 The Authority welcomes written evidence based feedback, comments and suggestions from stakeholders on the proposal made in Chapter 17 above, latest by 14.12.2018 at the following address.

**Secretary,  
Airports Economic Regulatory Authority of India  
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