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Consultation Paper No. 05/ 2018-19

सत्यमेव जयते

Airports Economic Regulatory Authority of India

In the matter of Determination of tariffs for Aeronautical Services in respect of Kempegowda International Airport, Bengaluru, for the Second Control Period (01.04.2016 to 31.03.2021)

17th May, 2018

AERA Building

Administrative Complex

Safdarjung Airport

New Delhi – 110 003

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1. Brief on Kempegowda International Airport, Bengaluru (BIAL), earlier Tariff Orders and current MYTP submissions

1.1 About Kempegowda International Airport, Bengaluru (BIAL)

1.1.1 The Greenfield airport at Devanahalli near Bengaluru has been implemented on a Build, Own, Operate and Transfer (BOOT) model under Public Private Participation (PPP) basis. Government of Karnataka (GoK) through Karnataka State Industrial and Infrastructure Development Corporation (KSIIDC) and Airports Authority of India (AAI) together hold 26% equity and the strategic joint venture partners hold the balance 74%. The shareholders formed a company named Bangalore International Airport Limited (BIAL) for the future development and management of the airport.

1.1.2 The Concession Agreement (CA) was executed between Government of India (GoI) and BIAL on 5th July 2004. The CA defines the terms and conditions under which BIAL, as a private company, is entitled to build and run the airport. As per the CA, the parties recognize and acknowledge that, in matters of Airport Infrastructure and Civil Aviation, GoI has, and must continue to have a major role and responsibility in determining the framework for the aviation sector. Further, the CA sets out the terms and conditions upon which the project, undertaken through a public/private sector approach, is to be implemented. The term of the concession is for a period of 30 years from the Airport opening date i.e., 24th May 2008, extendable by a further period of 30 years at the option of BIAL. As per the CA, the activities of customs, immigration, quarantine, security and meteorological service will be performed by the relevant Government Agencies at the Airport and the Communication, Navigation & Surveillance (CNS) and Air Traffic Management (ATM) will be performed by AAI. BIAL shall, in consideration for the grant of Concession by GoI, pay to GoI a fee amounting to four per cent (4%) of gross revenue annually. The Concession Agreement also contained a provision for regulation of certain airport charges by an Independent Regulatory Authority (IRA) to be set up by the GoI.

1.1.3 The GoK extended Rs. 350 crores as State support for which a State Support Agreement (SSA) was executed by GoK with BIAL. Further, GoK has also provided 4008 acres of land (approximately having the value of Rs. 175 crores) on concessional rent and a land lease

Agreement (LLA) was also executed in this regard. SSA between GoK and BIAL and LLA between KSIIDC and BIAL were concluded on 20th December 2004.

1.1.4 At the time of financial closure and commencement of construction, the Initial Phase of the Bengaluru International Airport (renamed as KempeGowda International Airport on 17th July 2013) was designed for handling about 4.5 million passengers per annum and the project cost was Rs. 1411.79 crore. However, owing to significant increase in aviation traffic, BIAL redesigned the initial phase midway through the implementation of the project, increasing the capacity of the airport to 11.4 million passengers per annum and the project cost to Rs. 1930.29 crore, so that the airport, at the Airport Opening Date (AOD), had the requisite capacity to handle the aviation traffic at the required/ prescribed service levels. The additional cost was met by increase in debt from lenders. Subsequently, certain project extension works were taken up with a supplemental expenditure budget of Rs. 540 crores (which was funded partly by raising additional equity from the shareholders and partly by further additional debt from lenders) taking the total project cost to Rs. 2470.29 crores.

1.1.5 The airport commenced operations in May 2008. The shareholding in the company changed a few times and the current Shareholding pattern is as follows:-

Table 1: Shareholding Pattern - BIAL - March 2018

Shareholder	Share- holding (%)
Private Promoters:	
Siemens Project Ventures GmbH	26%
Fairfax Group - FIH Mauritius Investments Limited	48%
Sub-Total	74%
State Promoters:	
Airport Authority of India – (GoI)	13%
Karnataka State Industrial Investment & Development Corporation Limited (GoK)	13%
Sub-Total	26%
TOTAL	100%

1.2 Expansion Projects after Airport Commissioning

1.2.1 After the commissioning of the Airport, BIAL had engaged in carrying out expansion of its Terminal Building capacity and carrying out allied works in apron and forecourt areas. These were commissioned in the year 2013-14.

1.2.2 BIAL is currently engaged in the process of carrying out works relating to construction of second runway, second terminal building and allied airside and landside works. These are elaborated in Para 6 below of this Consultation Paper (CP).

1.3 Subsidiary

1.3.1 BIAL has investment in one subsidiary – Bangalore Airport Hotels Limited (BAHL). BIAL had acquired 100% of the shares in BAHL from its existing shareholders on 20th December 2013. BAHL's principal activity is constructing, operating and maintaining of hotel at BIAL. BAHL has entered into a hotel operating agreement with the Indian Hotels Company Limited to operate its five-star hotel under "Taj" brand with effect from 5th December 2014. The Authority notes that the Hotel commenced its operations in the year 2016-17.

1.4 Multi-Year Tariff Order 08/ 2014-15 for the first Control period (MYTO-CP1)

1.4.1 The Authority had issued two Consultation Papers for the first control period (CP 14/ 2013-14 and CP 22/ 2013-14) and later issued Order No. 08/2014-15 for the first control period on 10th June 2014 (MYTO-CP1). The said Order had determined that Single Till was the applicable Till for BIAL but allowed for collection of charges determined under a 40% Shared Revenue Till mechanism to facilitate availability of additional cash flows to fund the expansions and had stated that the difference in Revenue Requirement determined between Single Till and 40% Shared Revenue Till will be clawed back at the time of determination of tariff for the second control period. The Order also had detailed that no pre-control period shortfall or recovery was being assessed, as per the explanations detailed in the said Order.

1.4.2 The tariff provided in MYTO-CP1 was implemented with effect from July 2014.

1.4.3 Subsequent to the Order, BIAL had filed an appeal against the Order with the Hon'ble Airports Economic Regulatory Authority Appellate Tribunal, New Delhi (AERAAT) in 2014.

The said appeal is pending before the appellate authority (Now combined with Telecom Disputes Settlement and Appellate Tribunal (TDSAT)).

1.4.4 Certain key grounds of appeal (not an exhaustive list) are as given below:

1.4.4.1 Till applicable to BIAL

1.4.4.2 Manner of treatment of Cargo, Ground Handling and Fuel Farm Services

1.4.4.3 Manner of treatment of income from Real Estate Development activities

1.4.4.4 Return on Equity considered by the Authority.

1.5 MYTP submissions by BIAL for the second control period

1.5.1 BIAL made its initial MYTP submissions in March 2016 under Single Till and 30% Hybrid Till. BIAL had subsequently responded to certain queries by the Authority during the period November 2016 to January 2017. During January 2017 BIAL had submitted that BIAL was in the process of updating its Business Plan consequent to changes in design space of the proposed second terminal building.

1.5.2 BIAL had submitted the updated Business plan in April 2017. Subsequently, BIAL was requested to submit complete details relating to the proposed Capital Expenditure project, which was submitted by BIAL in June 2017 – July 2017.

1.5.3 As the costs estimated by BIAL were higher than the rates detailed under Order No. 07/ 2016-17 – “Normative Approach to Building Blocks in Economic Regulation of Major Airports – Capital Costs Reg.”, (See Para 2.2.3 below), Authority had appointed a consultant for evaluation of the Capital Expenditure proposals submitted by BIAL in August 2017. The final report of the consultant was received on 25th January 2018. Also, the Authority has received clarifications on Business plan from BIAL in January 2018 – February 2018.

1.5.4 BIAL had submitted additional updates and submissions relating to proposed capital expenditure on 27th February 2018, 13th March 2018 and 21st March 2018. BIAL has also submitted details of accelerated / additional depreciation in April 2018. Key submissions made by BIAL are enclosed as **Annexure-I** and **Annexure-II.**

1.5.5 The time period of MYTP submission and evaluation between 2016 and 2018 is due to changes in Management at BIAL in March 2017, changes made in Business Plan due to changes in Terminal sizing and other assets, further updates provided by BIAL on Capital Expenditure, time taken for review of the Capital Expenditure proposals by Consultant and related items.

1.5.6 The submissions made by BIAL, including updates and clarifications provided by it, are analysed and discussed in the subsequent chapters.

2. Framework for Determination of Tariff for BIAL

2.1 Legislative Policy Guidance and Principles

2.1.1 The Authority had issued Order No.13/2010-11 dated 12th January 2011 – "In the matter of Regulatory Philosophy and Approach in Economic Regulation of Airport Operators" (Airport Order) and "The Airports Economic Regulatory Authority of India (Terms and Conditions for determination of tariffs for Airport Operators) Guidelines, 2011" dated 28th February 2011 (Airport Guidelines). These form the guiding principles of the Authority's tariff determination methodology for Airport Operators.

2.2 Authority's Orders applied in the tariff proposals in this Consultation Paper (CP)

2.2.1 Authority had issued Order No. 14/ 2016-17 on Till applicable for determination of Aeronautical Tariffs. Extract of the Order is as stated below:

"… The Authority will in future determine the tariffs of major airports under "Hybrid Till" wherein 30% of non-aeronautical revenues will be used to cross-subsidize aeronautical charges. Accordingly, to that extent the airport operator guidelines of the Authority shall be amended. The provisions of the Guidelines issued by the Authority, other than regulatory till, shall remain the same…"

2.2.2 Accordingly, the above Order No. 14/ 2016-17 is being applied by the Authority in determination of Aeronautical Tariffs for the Second control period.

2.2.3 The Authority had also issued Order No. 07/ 2016-17 – "Normative Approach to Building Blocks in Economic Regulation of Major Airports – Capital Costs Reg." and has accordingly commissioned an independent evaluation of Capital Cost proposal submitted by BIAL. This is elaborated in detail in Para 6 below.

2.2.4 The Authority has also issued Order No. 35/ 2017-18 together with Amendment No. 01 to Order No. 35/ 2017-18 detailing the useful lives of Airport Assets and this is also considered in this CP. This is elaborated in detail in Para 8 below.

2.3 BIAL as a standalone entity

2.3.1 The Authority has considered BIAL as a stand-alone entity based on the accounts of BIAL without any consolidation with its subsidiary or taking into account the balance sheets and income statements of the subsidiary. Hence the equity of BIAL at Rs. 1289 crore as on 01.04.2016, as a stand-alone entity, is taken into account for further consideration.

2.4 RAB boundary

2.4.1 Under Single Till, the Authority considers capitalized projects for both aeronautical and non-aeronautical services that such stand-alone entity would be providing at the Airport. As an illustrative list, the non-aeronautical services and activities would include duty free shopping, food and beverages, retail outlets, public admission fee for entry into the terminal, hotel, if any provided inside the terminal building, banks, ATMs, airlines offices, commercial lounges, spa, car parking, etc. The Authority is aware that this is not an exhaustive list. In addition to the above, individual airport operator may innovate and add more non-aeronautical services so as to improve the passenger conveniences or enhancing ambience of the airport and terminal building.

2.4.2 The principles for exclusion of assets from RAB Boundary are presented below:

2.4.2.1 The assets that substantially provide amenities/ facilities/ services that are not related to, or not normally provided as part of airport services, may be excluded from the scope of RAB;

2.4.2.2 The assets that in the opinion of the Authority do not derive any material commercial advantage from the airport may be excluded from the scope of RAB;

2.4.2.3 The Authority will not include working capital in the RAB.

2.4.3 In the current scenario where the tariffs are being determined based on 30% shared till, the RAB would have to exclude the portion of assets attributed to the provision of non-aeronautical services. Only a cross-subsidy from non-aeronautical revenues shall be considered for the purpose of tariff determination.

2.5 Recognition of revenue from Cargo, Ground Handling and Fuel Farm (CGF) Operations

2.5.1 As per the provisions of the AERA Act, the Authority considers the services rendered in respect of Cargo, Ground handling and supply of Fuel (CGF) as aeronautical services.

2.5.2 The Authority also notes a letter dated 24th September 2013 issued by the Ministry of Civil Aviation to the Authority in respect of Consultation Paper No. 14/2013-14 issued for tariff determination in the first control period, where the Ministry has informed its views to the Authority as under:

"………

4. Furthermore, in view of the various provision of AERA Act, 2008 with respect to the Aeronautical Services, the Fuel Throughput Charge that is levied by Airport Operator may be considered as Aeronautical revenue in the hands of the Airport Operator. The revenues from cargo, ground handling services and fuel supply which are defined as Aeronautical Services in the AERA Act, 2008 may be reckoned as Aeronautical Revenues and considered accordingly irrespective of the providers of such Aeronautical Services."

2.5.3 The Authority proposes to thus keep its stand and continue treating CGF revenues as aeronautical.

2.5.4 The Authority also proposes to consider any revenue earned by BIAL from Concessionaires providing Aeronautical services as Aeronautical revenues (For ex. space to AAI etc.).

2.6 Treatment of Income from Real Estate Development

2.6.1 The real estate development by an airport operator through commercial exploitation of land leased or granted to it, which is in excess of the airport requirement, would normally be outside the RAB boundary. This also implies that the revenues from commercial exploitation of such lands would, in normal course, not enter into the calculation of revenues required for aeronautical tariff determination. However, there may be such circumstances which the Authority may be required to take into account (like special covenants in the Concession Agreement or Lease Deed, etc.) that may require separate consideration for taking revenues from real estate development into calculation of aeronautical tariffs.

2.6.2 The Authority, in Decision 7(a)(iii) of MYTO-CP1 stated as follows:

To take into account the manner and treatment of considering the receipts from commercial exploitation of land (both Capital and Revenue) to be reckoned towards determination of Aeronautical Tariffs based on appropriate response to be received from GoK and take the same into account for the purposes of truing up the tariff computations for the current control period while determining Aeronautical tariffs in the next control period.

2.6.3 Based on the above context and as per the background detailed in the land Lease agreements and given the scenario of following a 30% shared till (compared to a single till), the Authority proposes to consider property development as a non-aeronautical activity. Accordingly, the income from property development would be used to cross-subsidize airport operations to the extent of 30%. Any expenditure associated with these revenues would not be allowed through RAB or Operating Expenses. This is elaborated in Para 11.2.36 below to 0 below.

Proposal No 1. Regarding Regulatory Till and principles of determination of Tariff

1.a. Based on the material before it and its analysis, the Authority proposes:

i. To compute ARR under 30% Hybrid Till for the second control period.

ii. To consider revenues from Cargo, Ground Handling and Fuel Farm services and Rentals from leasing of space to agencies providing Aeronautical services as Aeronautical revenues.

iii. To consider revenues from Property development activities as Non-Aeronautical activity.

3. Review of Pre-Control period

3.1 Authority's analysis of Pre-Control period as detailed in MYTO-CP1

3.1.1 The Authority had detailed in MYTO-CP1 that as the Authority's jurisdiction begins only from the period September 2009 (when the Authority was formed), the Authority did not propose to consider any period before September 2009 while fixing the tariff.

3.1.2 In MYTO-CP1, the Authority also noted that MoCA has not provided any directive to the Authority to carry out an analysis of the adhoc tariff that had been determined by MOCA. Hence, as elaborated in CP 22/ 2013-14, the Authority decided not to reckon, in the tariff determination for first control period, any period before the Authority's powers were notified effective September 2009.

3.1.3 Accordingly, the Authority had evaluated the losses that may have been incurred by BIAL during the period 1st September 2009 to 31st March 2011. The books of accounts of BIAL indicated that for both the years 2009-10 as well as 2010-11, BIAL did not post any loss in its Profit and Loss statements. The Authority therefore decided that there would be no occasion to reckon any loss to be added to the ARR for the current control period for determining tariffs for Aeronautical services as well as UDF in case of BIAL.

3.1.4 Accordingly, Authority's decision in MYTO-CP1, in Decision 2(a) was as follows:

> *"The Authority notes that from the date the powers of the Authority under Chapter 3 of the Act were notified (this date being 1st September 2009) BIAL has not posted any losses in its Profit and Loss statements for the period 2009-10 and 2010-11. Hence the question of considering any Pre-control period shortfall for the purpose of determination of Aeronautical Tariffs for the current control period does not arise."*

3.2 BIAL's submission relating to Pre-control period loss, in MYTP submissions for second control period

3.2.1 BIAL has, in its MYTP submissions for the second control period submitted as follows, regarding the Pre-control period losses.

"The Airport began operations in May 2008, after completing the construction over a period of 4 years. As in any other business, the Airport also incurred losses (certain expenditure which couldn't be capitalized) during construction as well as during the first year of operations.

BIAL had approached MoCA well in advance for the approval of tariffs so that tariff including UDF could be collected from the day of opening of Airport. As desired by the MoCA, BIAL submitted various submissions for approval charging UDF. UDF @ Rs.1,070/- (incl. of applicable taxes) per international departing passengers with effect from the AOD) was approved by MoCA on an "ad-hoc" basis (ref: F.No.AV.20015/003/2003-AAI dated 3rd April 2008).

Simultaneously, BIAL made several submissions to MoCA in connection with charging UDF from domestic passengers. Based on the justification furnished and detailed discussions, MoCA approved Rs. 260/- (incl. of applicable taxes) as against proposed levy of Rs. 675/- per departing domestic passengers on ad-hoc basis during January 2009. As it can be observed that Airport ran the operations for almost seven months without adequate UDF in place for Domestic passengers. Further, MoCA approved the UDF on ad-hoc basis and informed BIAL the final UDF will be determined either by MoCA / AERA subsequently.

BIAL had a carried forward loss of Rs. 53.28 crore as of pre-AoD. Post approval for levy of UDF on ad-hoc basis from AoD, Operations resulted in a loss of Rs. 97.03 crore during the first year of its operation (i.e., FY:2008-09) and the accumulated loss aggregated to Rs. 150.31 Crore as up to 2008-09 (as per the audited accounts). BIAL had ensured high quality in performance standards and is expanding the infrastructural facilities to meet the increasing demand of both passengers and airlines.

BIAL had made its submission during Control Period 1 filing seeking the reimbursements for the losses incurred during the pre-control period. BIAL expected to recover the losses and shortfall through tariff determination exercise that were to be carried out by AERA.

Given that BIAL had incurred the losses prior to the commencement of Airport operations, these losses should have been recovered during the subsequent years of operation of the Airport. These losses and shortfalls when compounded till the start of Control Period 1 stood at Rs. 760.2 crore and at start of Control Period 2 stands at Rs. 1,609.8 crore. In an effort to maintain the vigour to enhance the services and aiming to build better infrastructure, BIAL requests the Authority to factor the losses incurred prior to the setting up of the authority. The details of computation of pre-control period losses and shortfall are provided below:

Table 2: Pre-control period shortfall as submitted by BIAL (Rs. In Crores)

Particulars	FY 2009	FY 2010	FY2011	Total
Actual Shared Till revenues from Aviation (Rs. crore)	178.70	301.20	343.00	822.80
Eligible as per SRT 30% (Rs. Crore)	476.10	485.40	453.80	
(Under) / Over Recovery (Rs. Crore)	-297.40	-184.20	-110.80	
WACC	16%	16%	16%	
Annual factor	1.20	1.20	1.00	
Years to beginning of Control Period 1	3.00	2.00	1.00	
Compounding factor to beginning of Control Period 1	1.30	1.40	1.00	
(Under) / Over Recovery till beginning of Control Period 1 (Rs. Crore)	-400.10	-249.40	-110.80	-760.20
(Under) / Over Recovery till beginning of Control Period 2 Taking FRoR of 12.57% (Rs. Crore)				-1,375.80
(Under)/ Over Recovery till beginning of FY 2017 (Rs. Crore)				-1,611.00

1. The Authority as per its Decision No.2 of the Order No. 8/2014-15 stated that

'The Authority notes that from the date the powers of the Authority under Chapter 3 of the Act were notified (this date being 1st September 2009) BIAL has not posted any losses in its Profit and Loss statements for the period 2009-10 and 2010-11. Hence the question of considering any Pre-control period shortfall for the purpose of determination of Aeronautical Tariffs for the current control period does not arise.'

As per our understanding, there is no express or implied embargo for consideration of losses occurred prior to the date of notification of Part III of the AERA Act. BIAL operates under a regulated environment with little or no scope of recovering such *losses. The tariff determined by MoCA was on an ad-hoc basis and while approving the above tariffs (on an ad-hoc basis), MoCA clearly communicated that the exercise of final determination of tariff will be taken up by MoCA/AERA subsequently on submission of audited project cost and other pending details from BIAL.*

For the purpose of this submission, BIAL has included an adjustment in Pre-Control Period Shortfall and Losses till Airport Opening Date (AOD) - 24th May 2008 to the ARR. We request the Authority to take into account and consider losses prior to 1st September 2009 in determining tariffs…"

3.2.2 ARR Computation as submitted by BIAL for the above are as follows:

Table 3: Detailed computation of ARR for Pre-control period as submitted by BIAL

Particulars	FY 2009	FY 2010	FY2011
Average RAB for calculating ARR	1,668.17	1,616.00	1,505.58
Fair Rate of Return	15.98%	16.34%	15.94%
Return on Assets	227.92	264.13	240.06
WC Interest etc.	0.00	1.18	0.73
Depreciation	104.73	123.58	123.80
Opex	176.45	137.03	141.39
Estimated IT reimbursement	0.86	0.00	0.00
Total Gross ARR	509.96	525.92	505.97
Less: Deductions for Non-Aero. Revenues	-41.03	-52.57	-65.92
Add: Concession Fee	7.15	12.05	13.72
Net ARR	476.08	485.40	453.77

3.2.3 BIAL has included the claim of Pre-control period shortfall along with carrying cost in the computation of ARR for the second control period.

3.3 Authority's analysis of Pre-control period shortfall

3.3.1 Authority's analysis on Pre-Control period shortfall has been elaborated in MYTO-CP1.

3.3.2 As per the explanation enumerated by the Authority in MYTO-CP1, the Authority proposes to compute Pre-control period shortfall/ over recovery from the period the Authority was formed (September 2009).

3.3.3 Considering that 40% Shared Till is being allowed to the Operator for the first control period, as detailed in Para 4.3.4 below, the Authority proposes to compute Over/ Under Recovery for the Pre-control period also, considering a 40% Shared Till as applicable for the Pre-control period.

3.3.4 The Authority notes that BIAL has considered the following allocation ratios for RAB and Operating Expenses for the period 2008-09 to 2010-11.

Table 4: Asset and Expenses Allocation ratio considered by BIAL for Pre-control period

Particulars	FY 2009	FY 2010	FY2011
Asset Allocation ratio	91%	91%	91%
Expenses Ratio			
Personnel Expenses	90%	90%	90%
O&M Costs - Others	90%	90%	90%
Lease Rent	100%	100%	100%
Utilities	100%	100%	100%
Insurance	91%	91%	91%
Rates & Taxes (other than IT)	100%	100%	100%
Marketing & Advertising			
Collection Costs	100%	100%	100%
Other Costs	85%	85%	85%
Waivers & Bad Debts	100%	100%	100%
CSR	100%	100%	100%
OMSA Fee	100%	100%	100%
General Administration Costs	90%	90%	90%

3.3.5 Authority notes that BIAL has considered the expenses allocation ratio considered by the Authority for the first control period and for the pre-control period also. This has been taken into account by the Authority for computations.

3.3.6 The Authority had, in Para 8.24 of MYTO-CP1, detailed the Asset Allocation Ratio proposed to be considered for determination of Tariff for the First Control period. (88.52% Aero as against 91% proposed by BIAL). The Authority proposes to consider the same for the Pre-control period. (Refer Authority's analysis on Asset allocation ratio in Para 7 below). Tabulation of the Asset allocation ratio as detailed in MYTO-CP1 is given below:

Table 5: Table 15 detailing asset allocation computation as elaborated in MYTO-CP1

Asset Category	Description	Total opening RAB	Aero	Non-Aero
Operational Area Assets	Runway, Taxiway, Apron etc	495.59	495.59	-
Fuel Farm Assets	Assets created for Fuel Farm	3.41	3.41	-
Cargo Village Assets	Assets of the Cargo Warehouse facility created	10.87	-	10.87
ICT Assets in Terminal Building	Information, Communication, Technology assets in Terminal Building	99.07	99.07	-
Other Assets	Assets in Passenger Terminal Building, Other Assets in Landside, Roads, Substation etc	986.76	814.50	172.26
TOTAL		1,595.69	1,412.57	183.12
Overall ratio computed by the Authority			88.52%	11.48%
Asset allocation considered by BIAL		1,595.69	1,447.22	148.47

3.3.7 The Authority also notes that BIAL, in its computations has considered the FRoR incorrectly by considering Gearing ratios between Debt Gearing and Equity Gearing interchangeably. The Authority also notes that the multiple considered for computing value of shortfall/ excess was considered incorrect. The Authority has corrected the same in its computations.

3.3.8 The Authority also notes that Pre-Airport opening day losses have been claimed by BIAL as part of first year Operating Expenditure. This is proposed to be disallowed by the Authority.

3.3.9 Authority also notes that Interest Income has been considered by BIAL excluding the Interest earned from long term hotel deposits. Authority proposes to consider Interest Income, without any exclusions as Non-Aeronautical Income. Detailed analysis on consideration of Income from Land development is given in Para 2.6 above.

3.3.10 Summary of changes proposed to be carried out by the to the ARR computation for the Pre-Control period as detailed below.

Table 6: Changes made by Authority in computation of ARR for Pre-control period

Change made	Detailed in Para/ Section
Return on Equity considered at 16% as against 21.48% considered by BIAL	12.2.4 below
Gearing ratio error and rate multiple corrected	3.3.7 above
Remove Pre-Airport opening losses	3.3.8 above

Change made	Detailed in Para/ Section
Cargo, Ground handling and Fuel Farm considered as Aeronautical Revenues (and consequently tax allocation changed)	11.2.33 below
Utility recovery which was considered by BIAL as Non-Aero Income adjusted with Opex	11.2.26 below
Adjustment made to RAB as per EIL Report	9.2.3 below
Asset allocation ratio changed for Opening RAB	7.2.9 below
Interest income considered fully, without excluding interest from cash received from Hotel as Deposit	3.3.9 above
Rental income considered for Land given on lease to Airport Hotel	0 below
Rental revenues received from Concessionaires rendering Aero Services considered as Aeronautical Income	2.5.4 above
40% hybrid Till considered instead of 30% Hybrid Till	3.3.3 above

3.3.11 After giving effect to the above, the recomputed ARR and under/ Over Recovery is detailed below:

Table 7: Re-computed Pre-control ARR and (Under)/ Over Recovery

Particulars	FY 2009	FY 2010	FY2011	Total
Average RAB for calculating ARR	1,565.26	1,516.85	1,413.96	
Fair Rate of Return	8.33%	9.16%	9.80%	
Return on Assets	111.47	138.91	138.60	
WC Interest etc.	0.00	1.18	0.73	
Depreciation	97.20	116.05	116.27	
Opex	123.08	132.05	136.22	
Estimated IT reimbursement	0.00	3.17	12.08	
Total Gross ARR	331.75	391.35	403.90	
Less: Deductions for Non-Aero. Revenues	-33.33	-38.72	-52.28	
Add: Concession Fee on Regulated charges	9.64	15.54	17.63	
Net ARR	308.06	368.18	369.25	
Actual Revenues	241.04	388.46	440.70	
Over/ (Under Recovery)	-67.03	20.28	71.45	
Over/ (Under Recovery) from September 2009		11.83	71.45	83.28
Over/ (Under Recovery) indexed till 1st April 2016				141.55

3.3.12 The Authority accordingly proposes to consider the Over recovery of Rs. 141.55 Crores for the period 1st September 2009 to 31st March 2010 (Proportionately for 7 months from the yearly results) and the year 2010-11, together with carrying cost till 1st April 2016 in computation of ARR for the current control period.

Proposal No 2. Regarding Pre-Control Period

2.a. Based on the material before it and its analysis, the Authority proposes:

i. To consider the Over recovery for the Pre-control period as detailed in Table 7 Para 3.3.11 above in the computation of ARR for the second control period, considering a 40% Hybrid Till.

4. Review of First Control Period

4.1 Authority's computation of ARR for the first control period

4.1.1 The Authority had, in MYTO-CP1 computed the Aggregate Revenue Requirement for the period 2011-2016 under both Single Till and 40% Shared Revenue Till (Reasons for considering 40% Shared Revenue Till have been elaborated in detail in MYTO-CP1). The Order for first control period had also provided for collections to be made based on 40% Shared Revenue Till while laying down that Single Till was the applicable Till for BIAL for the first control period.

4.1.2 The ARR computations made under Single Till and 40% Shared Revenue Till as detailed in MYTO-CP1 are as follows:

Table 8: ARR under Single Till as detailed in MYTO-CP1

Details	Tariff Year 1	Tariff Year 2	Tariff Year 3	Tariff Year 4	Tariff Year 5
	2011-12	2012-13	2013-14	2014-15	2015-16
Average RAB	1,480.65	1,368.69	2,085.19	2,910.69	2,877.73
Fair Rate of Return	11.71%	11.71%	11.71%	11.71%	11.71%
Return on average RAB	173.44	160.33	244.26	340.95	337.09
Operating Expenditure	199.11	270.46	264.63	347.82	399.36
Working Capital Interest	-	-	7.01	9.04	10.52
Depreciation	130.30	131.56	153.90	230.62	236.56
Corporate Tax	-	4.19	17.83	3.93	21.81
Less: Revenue from services other than Regulated services	-154.32	-158.50	-167.16	-198.67	-221.27
Pre-control period losses					
Aggregate Revenue Requirement	348.53	408.04	520.47	733.69	784.08
Total ARR					2,794.81
No. of passengers (Crore)	1.27	1.20	1.31	1.46	1.63
Discounted ARR a of 01.04.11	348.53	365.25	417.04	526.25	503.42
Present Value					2,160.50
Aeronautical Revenues computed	471.27	459.40	482.90	602.54	714.71
Present Value					2,160.50
Yield per Pax (Rs.)					347.61

Table 9: ARR under 40% Shared Revenue Till as detailed in MYTO-CP1

Details	Tariff Year 1	Tariff Year 2	Tariff Year 3	Tariff Year 4	Tariff Year 5

	2011-12	2012-13	2013-14	2014-15	2015-16
Average RAB	1,308.22	1,207.93	1,841.37	2,576.42	2,551.37
Fair Rate of Return	11.71%	11.71%	11.71%	11.71%	11.71%
Return on average RAB	153.26	141.51	215.71	301.82	298.89
Operating Expenditure	180.09	248.43	238.11	313.44	359.60
Working Capital Interest	-	-	6.31	8.26	9.63
Depreciation	117.46	118.72	138.83	207.12	212.68
Corporate Tax	-	0.10	-	-	11.50
Less: Revenue from services other than Regulated services	-61.73	-63.40	-66.86	-79.47	-88.51
Pre-control period losses	-				
Aggregate Revenue Requirement	389.08	445.36	532.10	751.18	803.79
Total ARR					2,921.51
No. of passengers (Crore)	1.27	1.20	1.31	1.46	1.63
Discounted ARR	389.08	398.66	426.36	538.78	516.06
Present Value					2,268.93
Aeronautical Revenues computed	471.27	459.40	482.90	675.89	801.71
Present Value					2,268.93
Yield per Pax (Rs.)					365.06

4.1.3 Authority had noted in its various decisions in MYTO-CP1 that all items of Regulatory Building Blocks will be trued up and re-evaluated at end of first control period during determination of tariff for the second control period.

4.2 BIAL's submissions relating to truing up of First Control Period

4.2.1 BIAL, in its earlier MYTP submissions made in 2016 has stated as follows, with respect to the Regulatory Till and true up of First Control Period.

"…3.2.2 BIAL being a pioneer project, the approach adopted by MoCA in DIAL and MIAL to be considered for BIAL

BIAL Concession Agreement is a pioneer concession which is one of its kind signed on PPP basis. The concession was discussed over a period of 4 years and finally the agreement was signed on 5th July 2004. Immediately afterwards, the Hyderabad (GHIAL) concession was also awarded wherein the terms of concession were similar to that of BIAL's concession.

The concession of brown field airports – DIAL and MIAL were awarded subsequent to above CA of BIAL & GHIAL. These concessions of brown field airports were discussed and approved by Group of Ministers as formed by Central Government for this specific purpose. The OMDA agreements of DIAL & MIAL have clear provisions of tariff determination under 30% SRT basis, while this clarity was not explicit in the CA of BIAL & GHIAL. However, the approach of the Government while awarding the concessions and the provision of the CA, as explained above, does not envisage any cross subsidization of non-aeronautical revenues while determining tariff for aeronautical services.

Hence, the approach of 30% SRT basis for determining tariff as adopted by Government in the case of DIAL and MIAL can be considered as policy approach and the same can be applied for BIAL as well.

3.2.3 BIAL tariff determination for Control Period 1 - MoCA recommendation

- *BIAL represented to AERA and as well as MoCA that the Airport will face severe constraints on account of tariff determination based on a Single Till methodology;*
- *All of the shareholders of BIAL, including AAI and the Government of Karnataka, expressed their inability to infuse additional equity which would be required as a result of the Single Till approach proposed by AERA;*
- *Considering all of the facts, MoCA wrote a letter dated 24 September 2013, recommending a 40% Shared Revenue Till (SRT) wherein aeronautical charges would be cross-subsidised to the extent of 40% of non-aeronautical revenues.;*
- *BIAL made a submission to AERA that, even though the Concession Agreement does not envisage cross subsidisation, in order to reach a workable solution the operator would agree to a 30% Hybrid Till and accordingly submitted a revised Multi-Year Tariff Proposal;*
- *BIAL also submitted to AERA that even with above approach, special consideration would be required with respect to funding of airport expansion and debt repayment.*

However, the final order passed by AERA considered a 40% Shared Till with certain conditions attached that resulted in a Single Till, thereby not complying with MoCA recommendation.

3.3 Policy Measures of MoCA - Direction provided in the case of GHIAL and other policy measures

3.3.1 Draft Civil Aviation Policy

The Ministry of Civil Aviation (hereinafter referred to as "MoCA" or "the Ministry") has released its Draft National Civil Aviation Policy, 2015 in October 2015. In this Draft Policy, as per Section 14 – (for) Airports developed by State Governments, Private sector or in PPP mode, the MoCA has proposed as follows:

'e) Tariff at all future airports will be calculated on a 'hybrid till' basis. 30% of non-aeronautical revenue will be used to cross-subsidize aeronautical charges. In case the tariff in one particular year comes out to be excessive, the airport operator and regulator will explore ways to keep the tariff reasonable, and spread the excess amount over the future.'

This confirms that the MoCA acknowledges that the Single Till model is not feasible for Airports in India. Further, the MoCA also recognizes that expecting complete cross subsidization of aeronautical charges through non-aeronautical revenues is not desirable. Hence, the Draft policy indicates that Government of India (GoI) through MoCA has suggested that tariff determination of airports whether government owned, private owned or on PPP mode, should be allowed to calculate tariff at 30% hybrid till or 30% SRT.

BIAL has made a representation as a stakeholder to consider the specific direction being given with respect to Hyderabad airport, having identical concession agreement as that of Bangalore airport, bringing it under hybrid till as per Directions under Section42(2) of AERA Act. Hence Bangalore should also be covered and be given the same 30% hybrid till as given to other airports.

The Draft Civil Aviation Policy has been provided in Annexure 4.

3.3.2 SRT in GHIAL Airport and other upcoming airports.

The MoCA, in a letter to AERA dated 11 June 2015 (Ref: F. No. AV. 20036/778/2015-AD), has approved 30% Shared Revenue Till in respect of GHIAL) Airport, with retrospective effect from Control Period 1 starting FY 2011

Both BIAL and GHIAL Airport are similar Greenfield airports having common Concession Agreements signed by the Government of India. Both the projects are identical and started at the same time with Public-Private Partnership (PPP) approach. Further, structuring of the projects in terms of land lease, viability gap funding, etc. from tender stage to awarding of the project is similar in nature. Hence, any policy measure by MoCA given to GHIAL Airport becomes applicable to similarly placed airport of BIAL. The 30% SRT as applicable in the case of GHIAL Airport should be made applicable to BIAL as well.

Additionally, MoCA has allowed shared till of 30% for tariff determination for Navi Mumbai International Airport.

3.4 Existing Business Scenario – traffic growth and capital expansion

The Master Plan envisages the Kempegowda International Airport to have two runways and an ultimate capacity of 55 million passengers. This calls for expansion of facilities from time to time in line with the traffic growth and Master Plan.

BIAL's current passenger traffic (in FY 2016) is 18.34 mn – including 14.97 mn Domestic and 3.37 mn International. As per the forecast by Landrum & Brown (hereinafter "L&B"), which BIAL had used for traffic projection in 2013, the expected traffic in the year 2016-17 was 17.9 mn and in 2017-18 was 19.6 mn. However, these projections have been realized two years prior to the estimation.

Factoring in the historical growth and trends, it is expected that the future growth rate is likely to be based on the long-term projections, as provided in the L&B report. Considering a CAGR of 9.1% in Control Period 2, the Airport is expected to reach a traffic of 20.4 mn by end of 2017, which will increase to 22.4 mn by 2018.

BIAL expects to manage the heavy growth in traffic in Control Period 2 by better utilization and sweating of existing terminal capacity till the second Terminal facility comes into existence. In this regard, BIAL is undertaking a slew of measures, majorly *temporary in nature, of enhancing present terminal capacity. These include reduction in the retail footprint, increasing of check in counters, increasing the processing capacity of security clearance, bringing in additional baggage processing capacity, etc.*

Further, the current infrastructure also needs to be ramped up to handle the future traffic continuously. This presents an urgent need to undertake future expansion projects such as Airfield works, (earthworks, 2nd runway, taxiway etc.), Terminal 2 and related projects. Any further delay in expansion of these projects will lead to inconvenience for the passengers and may result in fall in service quality as well.

Given the expected traffic growth in Control Period 2, it is critical to ensure that the expansion of infrastructure is undertaken. The estimated additions to RAB for Control Period 2 are Rs. 10,295 crore. In view of the capital expansion, BIAL would request the Authority to consider a 30% SRT for BIAL for Control Period 2.

As discussed above, the bidding documents for the Airport and the CA for BIAL clearly segregate aero and non-aero services. The CA envisages no cross subsidization and a Dual Till approach towards tariff determination. The approach of MoCA for initial tariff determination was not in line with the CA, where MoCA acknowledged that the CA does not envisage cross subsidization. This may be verified from documents leading to determination of UDF in the case of the Airport. Subsequently, the approach taken by AERA for tariff determination was considering a SRT of 40%, but with adjustments leading to a single till mechanism.

In cases of airports such as DIAL and MIAL, MoCA's policy approach has been to consider a 30% SRT mechanism. In case of GHIAL also, which is similar in many aspects to BIAL, MoCA has considered tariff determination at 30% SRT. The upcoming Draft Aviation Policy clearly states that for all future airports, a "hybrid till" of 30% will be considered for tariff determination.

BIAL operates in the same regulatory scenarios as other airports. Further, as a growing airport, BIAL needs to undertake large capital expansion projects and would require cash flow to support this expansion.

With reference to this precedence and industry practices, BIAL is requesting AERA to consider 30% SRT in the determination of tariff effective from Control Period 1…"

4.2.2 Accordingly, BIAL has submitted the following computations of Under/ Over Recovery for the First Control Period:

Table 10: ARR for First Control period and (Under)/ Over Recovery as submitted by BIAL

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	Total
RAB	1,392.56	1,286.33	1,904.08	2,505.53	2,356.11	
FRoR	12.60%	12.60%	12.60%	12.60%	12.60%	
FRoR * RAB	175.39	162.01	239.82	315.57	296.75	1,189.56
Depreciation	122.64	126.25	133.65	194.73	187.98	765.25
Opex	166.83	234.28	222.75	265.34	264.85	1,154.04
IT reimbursement/ Working Capital	0.93	0.81	0.59	1.18	3.68	7.18
Less: NAR	-75.60	-76.40	-85.10	-102.82	-130.97	-470.89
Add: Concession Fee 4% or Actuals	15.16	14.75	15.47	23.42	28.39	97.18
ARR computed	405.35	461.70	527.18	697.43	650.68	2,742.33
Less: Revenues	-378.98	-368.73	-386.69	-585.54	-709.68	-2,429.62
Shortfall to be recouped	26.37	92.97	140.48	111.90	-59.01	312.71
With carrying cost						510.66

4.2.3 BIAL has accordingly included Rs. 510.66 crores as addition to the ARR for the second control period relating to the Shortfall of First Control Period in its MYTP submissions.

4.3 Authority's analysis relating to truing up of First control period

4.3.1 Authority has evaluated the actuals for the period till March 2016 and the submissions made by BIAL. The Authority notes that the actuals vary from the estimates mainly due to:

4.3.1.1 Substantially higher growth in actual passenger throughput as compared to the growth rates considered in MYTO-CP1.

4.3.1.2 Reduced Operating Expenditure as compared to Projections considered.

4.3.1.3 Higher Non-Aeronautical Revenues as compared to Projections.

4.3.2 The Authority notes the various submissions and arguments put forth by BIAL for considering 30% Shared Revenue Till as the basis for computing the ARR requirements for the first control period.

4.3.3 The Authority notes that the legal framework and directions that relate to other Airports such as Rajiv Gandhi Hyderabad International Airport (HIAL) cannot be applied exactly in a similar manner to BIAL. Similarly, the Authority also notes that the factors considered in case of BIAL in the MYTO-CP1 are different from those considered for HIAL by the Authority in the first control period.

4.3.4 The Authority also notes the fact that BIAL is undertaking large scale Capital Expenditure (as elaborated in Para 6 below). The Authority notes that even though it is mentioned in MYTO-CP1 that the ARR will be determined under 40% Shared Revenue Till and collections allowed but Single Till will be considered for truing up, considering the expansion needs, the Authority proposes to consider true up of the First Control Period numbers under a 40% Shared Revenue Till.

4.3.5 Changes proposed to be carried out by the Authority in computing the ARR for first control period is as detailed below.

Table 11: Changes made by the Authority in computation of ARR for First Control Period

Change made	Detailed in Para/ Section
Return on Equity considered at 16% as against 21.48% considered by BIAL	12.2.4 below
Cargo, Ground handling and Fuel Farm considered as Aeronautical Revenues (and consequently tax allocation changed)	11.2.33 below
Utility recovery which was considered by BIAL as Non-Aero Income adjusted with Opex	11.2.26 below
Adjustment made to RAB as per EIL Report	9.2.3 below
Asset allocation ratio changed for Opening RAB	7.2.9 below
Operating Expenditure allocation changed for Personnel cost	10.1.12 below
Rental income considered for Land given on lease to Airport Hotel	0 below
Interest income considered fully, without excluding interest from cash received from Hotel as Deposit	3.3.9 above
Rental revenues received from Concessionaires rendering Aero Services considered as Aeronautical Income	2.5.4 above
Considering income on Security deposit collected	11.2.41 below
40% hybrid Till considered instead of 30% Hybrid Till	4.3.4 above

4.3.6 Accordingly, the recomputed ARR and Under/ Over Recovery for the first control period is as below:

Table 12: Recomputed ARR and Over/ Under Recovery by the Authority for the First Control Period

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	Total
Average RAB for calculating ARR	1,308.50	1,209.79	1,835.08	2,444.06	2,302.17	
Fair Rate of Return	10.90%	10.90%	10.90%	10.90%	10.90%	
Return on Assets	142.69	131.93	200.11	266.52	251.05	
Depreciation	115.11	118.72	126.12	187.20	180.45	
Opex	161.27	228.92	210.22	252.53	249.01	
IT reimbursement/ Working Capital	15.56	1.21	8.97	14.17	57.01	
Total Gross ARR	434.63	480.79	545.42	720.43	737.52	
Less: Deductions for Non-Aero. Revenues	-61.92	-63.70	-73.22	-88.89	-112.88	
Add: Concession Fee on Regulated charges	19.45	18.97	19.90	28.64	34.94	
Net ARR	392.17	436.06	492.09	660.18	659.58	
Aero Revenues	486.30	474.28	497.38	715.96	873.45	
(Under)/ Over Recovery	94.13	38.22	5.29	55.78	213.87	407.29
With carrying cost						476.78

Proposal No 3. Regarding truing up of First control period Aggregate Revenue Requirement (ARR)

3.a. Based on the material before it and its analysis, the Authority proposes:

i. To recalculate ARR and Over recovery for the first control period as detailed in Table 12 Para 4.3.6 above and consider the same for computing the ARR for the Second control period, considering a 40% Shared Revenue Till.

5. Traffic Projections

5.1 BIAL's submissions on Passenger Traffic and Authority's analysis

5.1.1 Passenger traffic at BIAL grew at a CAGR of 13.96% and 10.08% for FY 2008-09 to 2016-17 for domestic passengers and International Passengers respectively.

5.1.2 Trend of passenger traffic over the years is as below:

Table 13: Historical Trend in Passenger Traffic (Pax in Mn)

Category	2008-2009 - (312 days)	2008-2009 - (Full)	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	CAGR
Dom	5.80	6.78	7.99	9.36	10.33	9.49	10.23	12.47	15.61	19.28	13.96%
Intl	1.43	1.67	1.94	2.27	2.38	2.50	2.63	2.93	3.37	3.60	10.08%
Growth rate – Dom			17.78%	17.21%	10.38%	-8.14%	7.85%	21.83%	25.15%	23.56%	
Growth rate – Intl			15.99%	17.51%	4.60%	5.26%	5.19%	11.31%	14.78%	6.93%	

5.1.3 Considering the above trend, the projections submitted by BIAL for passenger traffic in the second control period is as follows:

Table 14: Projections of Passenger Traffic as per BIAL (Pax in Mn)

Projected Passenger Traffic as per BIAL	2016-17 (A)	2017-18	2018-19	2019-20	2020-21
Growth rate – Domestic Pax		9.78%	9.20%	8.98%	8.40%
Growth rate – International Pax		9.77%	9.20%	9.00%	8.50%
Domestic PAX	19.28	21.17	23.12	25.19	27.31
International PAX	3.60	3.95	4.31	4.70	5.10
Total PAX	22.88	25.12	27.43	29.90	32.41

5.1.4 BIAL has stated in its MYTP submission that

"The traffic forecast is a critical component for tariff determination. The traffic forecast as prepared by L&B (report dated February 2013) was submitted as part of MYTP submissions for Control Period 1. However, over the last few years, the growth has been higher than was proposed by L&B Report. This was due to strong economic environment and introduction of new airlines. BIAL Management expects that this

growth will stabilize over the long term and the same exponential growth may not be seen in Control Period 2.

Hence for Control Period 2, the traffic is estimated using the same forecast provided in the L&B Report of February 2013, on the base of current realized traffic.

The L&B Report provides annual forecasts of passenger traffic, air cargo tonnage, and aircraft movements for the 20 year period between 2009-10 and 2029-30. BIAL has used the growth rates as determined in the Base Case scenario to prepare its estimates."

5.1.5 The Authority had sought for clarification from BIAL on the actual passenger traffic for the period April 2017 – December 2017 and estimate for 2017-18 full year from BIAL. As per BIAL, the actual passenger for April 2017 – December 2017 is 19.42 Mn and BIAL expects to reach 26.14 Mn for the full year 2017-18, which is marginally higher by even the CAGR estimate.

5.1.6 The Authority notes that BIAL had depended on a survey conducted in the 2010 and updated in the year 2013 for the purpose of projecting the passenger traffic growth rates. These are not relevant any longer now, considering the huge increase in passenger traffic in recent years.

5.1.7 The Authority proposes to consider the CAGR as detailed in Para 5.1.2 above for the purpose of computing the traffic projections for the current control period, on the estimated traffic numbers as provided by BIAL for 2017-18. The Authority is aware that the current Terminal Building has limited capacity and BIAL is working on alternate plans to re-align space within the Terminal Building to facilitate greater passenger throughput. The Authority is of the view that BIAL will be able to find optimum solutions to manage the growing passenger traffic until the new Terminal is ready for use.

5.1.8 Accordingly, the reworked passenger traffic estimates as computed by the Authority are as follows:

Table 15: Recomputed Passenger Traffic Numbers by Authority for Second control period (Million)

Passenger Traffic estimates as per Authority	2016-17	2017-18	2018-19	2019-20	2020-21
	Actuals	Latest Estimates	Projected	Projected	Projected
Growth rate – Domestic Pax			13.96%	13.96%	13.96%
Growth rate – International Pax			10.08%	10.08%	10.08%
Domestic PAX	19.28	22.37	25.49	29.05	33.11
International PAX	3.60	3.77	4.15	4.57	5.03
Total PAX	22.88	26.14	29.64	33.62	38.14

5.2 BIAL's submission on Air Traffic Movements (ATMs) and Authority's analysis

5.2.1 Domestic ATMs at BIAL increased from 87,826 in 2008-09 to 1,54,095 in 2016-17 while International ATMs at the airport increased from 14,355 movements in 2008-09 to 24,022 in 2016-17.

5.2.2 Trend of ATM traffic over the years is as shown below:

Table 16: Actual ATMs during the past years (Nos.)

ATM Trend - Past years	2008-2009 - (312 days)	2008-2009 - (Full)	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	CAGR
Dom Pax	73,032	85,438	87,932	92,223	99,041	84,993	97,428	1,11,504	1,29,393	1,52,035	7.47%
Intl Pax	11,348	13,276	13,056	15,376	15,761	15,660	16,498	17,964	19,490	20,707	5.71%
Dom Cargo	2,041	2,388	2,646	2,746	1,861	1,855	1,839	1,860	1,975	2,060	-1.83%
Intl. Cargo	923	1,080	1,019	1,442	2,370	2,680	2,810	2,881	2,973	3,315	15.05%
Growth rate – Dom Pax			2.92%	4.88%	7.39%	-14.18%	14.63%	14.45%	16.04%	17.50%	
Growth rate – Intl Pax			-1.65%	17.77%	2.50%	-0.64%	5.35%	8.89%	8.49%	6.24%	
Growth rate – Dom Cargo			10.82%	3.78%	-32.23%	-0.32%	-0.86%	1.14%	6.18%	4.30%	
Growth rate – Intl. Cargo			-5.63%	41.51%	64.36%	13.08%	4.85%	2.53%	3.19%	11.50%	
Domestic Pax/ ATM	79.35	79.35	90.81	101.48	104.31	111.66	105.05	111.83	120.60	126.83	
International Pax/ ATM	125.72	125.72	148.28	147.95	150.98	159.94	159.70	163.26	172.71	173.83	

5.2.3 Based on the above trend, the growth rate and projected ATM numbers considered by BIAL is as follows:

Table 17 : Projections of ATM Traffic as per BIAL (Nos.)

Projected ATM Traffic as per BIAL	2016-17 (A)	2017-18	2018-19	2019-20	2020-21
Growth rate – Domestic Pax ATM	17.30%	10.45%	9.47%	9.23%	8.67%
Growth rate – International Pax ATM	6.94%	12.78%	8.40%	8.28%	8.52%
Domestic ATM	1,54,095	1,70,190	1,86,312	2,03,506	2,21,159
International ATM	24,022	27,092	29,367	31,800	34,507

5.2.4 The Authority noted that the CAGR for the period till 2016-17 indicates fluctuations in growth rates across different categories of ATM. The Authority had sought for clarification from BIAL on the actual ATM traffic for the period April 2017 – December 2017 and estimate for 2017-18 full year from BIAL. As per BIAL, the ATM traffic estimate for Domestic Pax was 1,71,602, International Pax was 21,608, Domestic Cargo 1847 and International Cargo 3237 indicating a higher growth in Domestic Pax ATM and a de-growth in Cargo – both Domestic and International.

5.2.5 The Authority also noted the very high growth rate considered by BIAL in Cargo ATMs for the year 2017-18.

5.2.6 Considering the past trend of ATM growth, the Authority proposes to consider the estimated ATM numbers provided by BIAL for 2017-18 and then apply the growth percentages considered by BIAL.

5.2.7 Accordingly, the ATM numbers computed by the Authority are as given below:

Table 18: Projections of ATM Traffic as per Authority (Nos.)

Projected ATM Traffic as per Authority	2016-17 (A)	2017-18	2018-19	2019-20	2020-21
	Actual	Latest Estimate	Projection	Projection	Projection
Domestic ATM	1,54,095	1,73,449	1,91,045	2,08,675	2,26,778
International ATM	24,022	24,845	28,409	30,759	33,373

5.3 BIAL's submission on Cargo traffic and Authority's analysis

5.3.1 Air cargo traffic increased from around 154,856 Metric Tons (MT) in FY 2008-09 to 319,344 MT in FY 2016-17. Details of actual cargo handled over the years are as below:

Table 19: Past Cargo Traffic (MT)

Historic Cargo Traffic	2008-2009 - (312 days)	2008-2009 - (F)	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	CAGR
Dom Cargo	47,626	55,716	69,014	87,519	83,261	82,756	91,925	1,14,066	1,15,159	1,19,878	10.05%
Intl. Cargo	84,744	99,140	1,05,634	1,35,264	1,41,733	1,43,911	1,50,501	1,65,466	1,76,761	1,99,466	9.13%
Growth rate – Dom			23.87%	26.81%	-4.87%	-0.61%	11.08%	24.09%	0.96%	4.10%	
Growth rate – Intl			6.55%	28.05%	4.78%	1.54%	4.58%	9.94%	6.83%	12.85%	

5.3.2 BIAL has projected the following cargo numbers in its MYTP submissions:

Table 20: Cargo Estimates for the second control period as per BIAL (MT)

Cargo Traffic estimates as per BIAL	2016-17	2017-18	2018-19	2019-20	2020-21
Growth rate – Domestic Cargo		9.91%	8.94%	8.28%	8.39%
Growth rate – International Cargo		9.60%	8.66%	8.06%	8.02%

Cargo Traffic estimates as per BIAL	2016-17	2017-18	2018-19	2019-20	2020-21
Domestic Cargo	1,19,878	1,31,761	1,43,538	1,55,421	1,68,460
International Cargo	1,99,466	2,18,616	2,37,558	2,56,708	2,77,306
Total Cargo	3,19,344	3,50,376	3,81,096	4,12,128	4,45,767

5.3.3 The Authority had sought for clarification from BIAL on the actual cargo traffic for the period April 2017 – December 2017 and estimate for 2017-18 full year from BIAL. As per BIAL, the actual cargo for April 2017 – December 2017 is 261,040 MT and BIAL expects to reach 339,806 MT for the full year 2017-18, which is lower than the CAGR growth and lower than the growth rates projected earlier by BIAL.

5.3.4 The Authority hence proposes to consider actuals for 2016-17, BIAL estimates for 2017-18 and future cargo based on the growth rate projected by BIAL.

5.3.5 Accordingly, the projections for second control period computed by the Authority are as given below:

Table 21: Projected Cargo Traffic for second control period as per the Authority (MT)

Cargo Traffic estimates	2016-17	2017-18	2018-19	2019-20	2020-21
	Actuals	Latest Estimate	Projected	Projected	Projected
Growth rate – Domestic Cargo			8.94%	8.28%	8.39%
Growth rate – International Cargo			8.66%	8.06%	8.02%
Domestic Cargo	119,878	125,247	136,442	147,737	160,132
International Cargo	199,466	214,559	233,150	251,944	272,161
Total Cargo	319,344	339,806	369,592	399,682	432,293

5.3.6 To summarise, after analysis, the Authority proposes to consider the traffic estimates as below:

Table 22: Total Traffic Projection for Second Control Period as per Authority

Traffic Projections as per Authority	UOM	2016-17	2017-18	2018-19	2019-20	2020-21
Domestic PAX	Mn	19.28	22.37	25.49	29.05	33.11
International PAX	Mn	3.60	3.77	4.15	4.57	5.03
Total PAX	Mn	22.88	26.14	29.64	33.62	38.14
Domestic ATM	Nos	1,54,095	1,73,449	1,91,045	2,08,675	2,26,778
International ATM	Nos	24,022	24,845	28,409	30,759	33,373
Total ATM	Nos	1,78,117	1,98,294	2,19,453	2,39,434	2,60,151
Domestic cargo	MT	1,19,878	1,25,247	1,36,442	1,47,737	1,60,132
Domestic cargo	MT	1,99,466	2,14,559	2,33,150	2,51,944	2,72,161
Total cargo	MT	3,19,344	3,39,806	3,69,592	3,99,682	4,32,293

5.3.7 The Authority also notes that the actual traffic at BIAL may depend on changes in economic and other conditions and due to the restrictions on space. In view of this, the Authority proposes to true up the traffic projections for the current control period based on actuals at the time of tariff determination for the next control period.

Proposal No 4. Regarding Traffic projections

4.a. Based on the material before it and its analysis, the Authority proposes:

- **i. To consider traffic projections as detailed in Table 22 Para 5.3.6 above for determination of tariff for the second control period.**
- **ii. To true up the traffic of the second control period based on actuals, at the time of determination of tariff for the next control period.**

6. Review of Capital Expenditure

6.1 Capital Expenditure considered for First Control period in MYTO-CP1 and actuals

6.1.1 Additions to Capital Expenditure as considered in MYTO-CP1 and actual Capital Expenditure as submitted by BIAL is as given below:

Table 23: Additions to RAB as considered by Authority in MYTO-CP1 (Rs. Crore)

Project	Date of Capitalisation	Basic Cost and charges	Financing allowance - Projects	Total Cost to be added to RAB
Apron Expansion	01-Feb-14	121.15	23.12	144.27
Terminal 1 Expansion	01-Feb-14	1,342.30	168.63	1,510.94
Other Projects i.e. Miscellaneous	01-Feb-14	16.39		16.39
Terminal 1 Expansion - Additional	01-Mar-15	80.22		80.22
Other Projects	01-Mar-15	98.32		98.32
Expansion Projects Capitalised (A)				1,850.13
Maintenance Capex Projects	31st March 2012	15.43		15.43
	31st March 2013	22.52		22.52
	31st March 2014	0.00		0.00
	31st March 2015	264.50		264.50
	31st March 2016	61.66		61.66
Maintenance Capital Expenditure (B)				364.11
Total Capitalisation				2,214.24
Maintenance capital expenditure for 2011-12 and 2012-13 given net of disposals				

6.1.2 As against the above, actual amounts added to RAB for the period is as follows:

Table 24: Comparison of Additions to RAB - As considered in MYTO-CP1 and actuals (Rs. Crore)

Particulars	2011-12	2012-13	2013-14	2014-15	2015-16	Total
Addition as per MYTO-CP1	15.43	22.52	1,671.60	443.04	61.66	2,214.25
Actuals as per BIAL Submissions	15.36	23.84	1,637.49	60.21	30.07	1,766.97
Difference (unspent mainly from Maintenance Capex)	0.07	-1.32	34.11	382.83	31.59	447.28

6.1.3 BIAL has stated the following as key reasons for difference between Projections and actuals:

"…The amount capitalized for Apron Extension and Terminal 1 is in line with the projections.
Others includes various works towards Terminal refurbishment & Forecourt expansion, maintenance capital expenditure, minor projects and sustaining capital

expenditure. The major difference in other projects is due to deferment of various works to FY 2017 and FY 2018.

Apart from the items discussed above, BIAL could not undertake major expansion projects due to shortage of funds..."

6.2 BIAL's submissions on Capital Expenditure during Second Control Period

6.2.1 BIAL has projected for a large scale Capital Expenditure and commissioning of assets in Second Control Period.

6.2.2 Further to the MYTP submissions in March 2016, BIAL had updated the business plan considering increase in capacity plan for first Phase of Terminal II Project from 20 mppa to 25 mppa.

6.2.3 BIAL has submitted as follows.

5.2.2.1 Brief details of key projects under execution in Control Period 2

<u>Airfield Development (South Runway (Runway 2) and Associated Works)</u>

The total passenger traffic is expected to reach 35 mn between FY 2020-21 and FY2021-22. In addition, the Cargo traffic is expected to reach 445,850 MT in FY 2020-21, which is more than three times the original traffic of the Airport in 2009. This expected traffic shows that there is an urgent need to increase capacity and hence Runway 2 and Associated Works are required.

Prior to starting the work on the Airfield Development, BIAL would undertake activities such as levelling, landfills, any excavation and land drainage among others. The site preparation work has begun in FY 2017 and is planned for completion by FY 2017-18. The works for Runway 2 are expected to be completed by FY 2019-20.

The new Terminal and Airfield Development will also require development of adjoining areas that facilitate access to the terminal and surrounding retail outlets for the ease and comfort of the passengers. These are separate projects such as Forecourt, roadways and landside development subsequent to Terminal 2 and Airfield Development and other projects.

<u>Terminal & Associated Landside and Airside Development</u>

Terminal 2 development was initially planned in two phases

Phase 1 with a capacity of 20 mppa

Phase 2 with a capacity of 25 mppa

Phase 1 of Terminal 2 is planned for completion in February 2021, which means that the combined capacity of Terminal 1 and Terminal 2 will be 40 mppa by February 2021.

However due to strong traffic growth at BIAL (on the basis of historical growth), it is expected that the annual traffic will be between 32 mppa to 36 mppa (i.e. 80% to 90% of the combined terminal capacity) by FY 2022. This scenario will result in:

A. Inability to serve the growing air travel and connectivity requirements

B. Need to immediate start of Terminal 2 Phase 2 construction

C. Sub-optimal level of service at both the terminals

Hence to provide a more appropriate capacity on opening day, Terminal 2 Phase 1 is planned for 25 mppa, enhancing the total airport capacity to 45 mppa.

As discussed in Chapter 1, this proposed increase in the capacity of T2 and allied infrastructure is the reason for this revised MYTP submission by BIAL.

<u>Runways/Taxiways</u>

The facilities and functionalities as envisaged earlier for the runway and taxiway systems remain unchanged due to the increase of the T2 Phase 1 size from 20 mppa to 25 mppa.

<u>Basis of the Revised Project Cost Estimate:</u>

The revised project cost estimate were prepared. The basis of the cost estimate are:

- *Same unit rates and related assumptions maintained as considered in the earlier MYTP submission for the revised project capex estimate.*
- *Based on the above major quantity changes, the revised phasing of the works, the revised interest calculations and after considering Krishi Kalyan Cess @ 0.5% the revised project cost is computed.*

The total capacity of airport is forecast to serve the passenger demand for at least five years from opening day and the planning horizon is in line with the present *growth requirements. Phase-2 of the T2, will commence from FY 2025 and is expected to be completed by FY 2027.*

<u>Other projects</u>

Other items in capital expenditure include utilities, airport offices, rescue and firefighting, aircraft and airport maintenance and existing runway/taxiway improvements.

A summary of the key projects to be capitalized in Control Period-2 is given below-

Particulars (Rs. Crore)	*Total*
Airfield Development (South Runway (Runway 2) and Associated works)	*3246.6*
Terminal & Associated Landside (Terminal 2) and Airside Development	*4583.2*
Others	*4033.8*
Total	*11863.5*

5.2.2.2 AUCC consultations

BIAL conducted stakeholder consultation workshops for Terminal 2 and Airfield Development including Runway 2 and other projects proposed in Control Period 2 between FY 2017 and FY 2021. These workshops were conducted for three stages of two projects as per schedule below:

Date of workshop	*Projects on Agenda*	*Stage*
June 2015	*Project 1: Airfield Development (South Runway and associated works)* *Project 2: Terminal & Associated Landside and Airside Development*	*I and II*
October 2015	*Project: Airfield Development (South Runway and Associated works)*	*III*

In June 2015, the first AUCC Meeting was held, where BIAL presented the following for projects planned in Control Period 2:

Project 1: Airfield Development (South Runway and Associated Works)

- *Need Identification*

- *Options Development*

Project 2: Terminal & Associated Landside and Airside Development

- *Need identification*

The minutes of this meeting were circulated to all stakeholders on 24 July 2015 and have been attached in the Annexure to this document.

Subsequently, another workshop was held where BIAL presented the following for the projects:

Project 1: Airfield Development (South Runway and Associated Works)

- *Stage III: Detail Design and Cost*

For Project 2 - Terminal & Associated Landside and Airside Development, need identification has been completed and next stage will be completed in the next 3-6 months.

6.2.4 BIAL has subsequently carried out Stakeholder consultation for Project 2 for State III also in November 2017 and submitted minutes of meeting.

6.2.5 Based on the above, the additions to RAB and the Financing allowance/ Interest thereon, submitted as part of Business Plan in April 2017 is as follows:

Table 25: Overview of Capital Expenditure and addition to RAB for second control period as submitted by BIAL (Rs. In Crores)

Project	Year of Captln.	Infra Cost	Financing allowance	Interest during Construction	Total addition to RAB	RAB - Aero	RAB - Non-Aero	Total Captln. in books	Captln - Aero	Captln - Non-Aero	Category	Aero Ratio
Site preparation & Earthworks to Runway 2, Taxiway & Apron	2018	908.32	66.49	47.04	974.82	974.82	0.00	955.36	955.36	0.00	Buildings2-RW/TW	100%
Runway 2, Taxiway & Apron - Phase Ia	2020	1655.60	279.70	159.95	1935.29	1935.29	0.00	1815.54	1815.54	0.00	Buildings2-RW/TW	100%
Runway 2, Taxiway & Apron - Phase II	2021	847.67	208.58	112.63	1056.25	1056.25	0.00	960.30	960.30	0.00	Buildings1-T,B,R	100%
Second Terminal - Phase I	2021	3757.52	825.66	398.08	4583.18	4170.70	412.49	4155.60	3781.60	374.00	Buildings1-T,B,R	91%
Forecourt roadways & landside development - Phase Ia	2021	460.04	89.87	40.76	549.91	500.42	49.49	500.80	455.73	45.07	Buildings1-T,B,R	91%
Rescue & Fire Fighting	2019	12.45	0.81	0.44	13.27	13.27	0.00	12.89	12.89	0.00	PM3-Safety	100%
Airport Offices - Phase I	2018	71.39	0.00	0.74	71.39	64.96	6.42	72.12	65.63	6.49	Buildings1-T,B,R	91%
Utilities - Phase Ia	2020	118.59	15.94	9.09	134.53	122.43	12.11	127.68	116.19	11.49	Buildings3-WMS	91%
Existing runway / taxiway improvements - Phase 1a	2018	69.30	0.98	1.40	70.28	70.28	0.00	70.70	70.70	0.00	Buildings2-RW/TW	100%
Forecourt roadways & landside development - Phase Ib	2020	649.41	82.73	62.81	732.14	666.25	65.89	712.22	648.12	64.10	Buildings1-T,B,R	91%
Forecourt roadways & landside development - Phase Ic	2019	258.88	15.27	8.77	274.14	249.47	24.67	267.65	243.56	24.09	Buildings1-T,B,R	91%
Existing runway / taxiway improvements - Phase Ib	2021	103.33	0.00	0.00	103.33	103.33	0.00	103.33	103.33	0.00	Buildings2-RW/TW	100%
Terminal refurbishment	2017	79.99	4.59	0.01	84.58	76.97	7.61	80.00	72.80	7.20	Buildings1-T,B,R	91%
Forecourts	2017	79.73	3.02	0.44	82.75	75.31	7.45	80.17	72.95	7.22	Buildings1-T,B,R	91%
Sustaining capex - I	2017	65.12	2.98	0.43	68.10	61.97	6.13	65.54	59.65	5.90	Buildings1-T,B,R	91%
Sustaining capex - II	2018	85.44	10.10	10.13	95.54	86.94	8.60	95.57	86.97	8.60	Buildings1-T,B,R	91%
Second Terminal - Phase I	2021	209.38	45.66	22.06	255.04	232.08	22.95	231.44	210.61	20.83	ICT - Blended	91%
Second terminal - Phase II	2027	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	ICT - Blended	91%
Special Repairs, Refresh Capitalisation		779.00	0.00	4.52	779.00	735.29	43.70	783.51	739.52	43.99		0%
TOTAL		**10211.16**	**1652.38**	**879.29**	**11863.54**	**11196.02**	**667.52**	**11090.45**	**10471.46**	**618.99**		

6.2.6 BIAL has also informed vide letter dated 21st November 2017 that certain works have been awarded at costs lower than that of the estimates and are to be considered accordingly in the MYTP submissions.

6.2.7 BIAL has, subsequently, in February 2018, given the break-up details of the savings detailed in the letter, and has also submitted changes in the Capital Expenditure estimates, key reasons being:

6.2.7.1 Consideration of Goods and Services Tax (GST) instead of the erstwhile Service Tax (ST)/ Works Contract Tax (WCT).

6.2.7.2 Changes in estimates of Special Repairs.

6.2.8 BIAL, in its submissions made on the same in February 2018 stated as follows:

"…Also, due change in law (GST regime), there is additional GST impact. We have estimated GST at 13% as against WCT at 6%..."

6.2.9 BIAL has considered a total of Rs. 929.55 crores as "Sustaining Capex / Special Repairs" for addition to RAB, in addition to the Projects detailed above, in addition to other minor Projects viz Terminal Refurbishment and Forecourts (Rs. 160 crores). In the revised details submitted by BIAL, the total estimate of Sustaining Capex/ Special Repairs and minor projects have increased to approx. Rs. 1700 crores – Rs. 1800 crores for the control period. Break-down details of these projections on the same which were provided by BIAL in February 2018 & March 2018 are detailed in **Annexure-IV.** Certain key costs/ projects include Terminal Refurbishments, Airfield Pavement works, ICT Requirements, Additional parking stands, ITI project, Express Cargo, Aadhaar enabled entry, 220KV substation etc.

6.2.10 Further, BIAL has, on 12th March 2018, submitted details of certain costs to be incurred out of the savings submitted in November 2017. BIAL has also submitted details of another project proposed to be executed by it. BIAL, in its mail has stated as follows:

"…BIAL vide its letter dated 21st November 2017 vide ref: AERA/Finance/2017-18/13 had informed AERA about the award of tender for the New South Parallel Runway(NSPR) - including Pavement, T2 aprons, Remote aprons and AGL. It was submitted that there were cost savings to the extent of Rs.723Cr.

However, BIAL wishes to submit that post the award of tender, there have been some additional works to NSPR/T2 Apron Works which were not previously considered. These are essential works amounting to Rs. 143 cr. (excluding Design, GST, Project Management, Contingency , IEDC and Pre-operatives). The cost break up is given below:

Additional Works that needs to be considered as part of NSPR/T2 Apron Works

Description	*Construction Cost estimated (Cr Rs)*
Gate House No 2 / surrounding infrastructure / Utilities /Road security infrastructure	*15*
Infrastructure required for airside but being constructed as part of terminal - substation equipment, VDGS server /support system, support utilities, interfacing infrastructure.	*30*
Additional Rainwater Harvesting Ponds / Pumping & Piping Infrastructure /Utilities	*20*
Remote Stands – VDGS	*20*
Taxi Bots Infrastructure provisions	*50*
Additional GSE Parking	*8*
Total - Construction Cost	*143*

The Detailed explanation for the above works are given in Annexure 1.

BIAL wishes to submit that the above Construction cost for these works amount to Rs. 143 cr. which are imperative and need to be executed along with the NSPR project. As BIAL has already shared with the Authority the savings form NSPR tendered project, BIAL would request the Authority to consider these additional costs as a reduction from the savings and approve of the same for the capital expenditure to be considered for the MYTP for 2nd Control Period.

<u>Eastern Tunnel Works</u>

The Kempegowda International Airport (KIA) currently has a single external access through the Trumpet on NH 44 (earlier NH 7). As this was of a serious security concern, the BIAL Management explored alternate access points to the airport and evaluated options which were discussed with Government of Karnataka (GoK)/ Infrastructure Development Department (IDD). Also, the construction works on the South Western connectivity has commenced and is planned for operationalization by March 2018. An Eastern Connectivity Road providing connection to the proposed MRO/Cargo facilities on the KIA Eastern development pocket (not connected to the airport west areas and the terminals) is under construction by the PWD department. Further BIAL is also evaluating alternate connectivity options to the Terminals (T1 & proposed T2) like the Southern Tunnel Option (below the proposed second runway/taxiway) and the Eastern Tunnel Option (below the proposed T2 Apron, east cross field taxiway).

BIAL has conducted a feasibility study to evaluate options and based on the study it is proposed that the Eastern Tunnel Access road would be feasible and which would make the airport more easily accessible for the eastern part of Bengaluru city.

The construction of the Eastern Tunnel works is proposed to be built in two phases. The Phase 1- Early Works includes construction of Tunnel below cross field taxiway (approximately 300 m, only civil works) is estimated at a cost of Rs. 88 cr. (including construction, design, PMC, pre-operatives and contingency). The tentative construction schedule is planned for June 2018 to June 2019.

The Phase 2- Main Works including the construction of remaining portion of the tunnel, ramps, for operationalization of the road along with all the pending works in earlier works such as pavements, utilities etc. The Main Works package at an estimated cost of Rs.1033 cr. (at 2017 price levels) including construction, design, PMC, pre-operatives and contingency. The tentative construction Schedule is planned for June 2021 to June 2023. A detailed note is attached as Annexure 2.

BIAL wishes to submit that given the rapid growth of KIA and security concerns of having only a single access road to KIA, it is necessary to consider the alternative connectivity options along with the development of airfield development works so as to facilitate traffic and address security concerns*…"*

6.3 Authority's analysis of Capital expenditure during Second Control Period

Additions to RAB - Projects

6.3.1 Authority has carefully examined the detailed submissions made by BIAL with respect to the large-scale Capital Expenditure projects being undertaken by it during the second control period which will be added to RAB.

6.3.2 Authority has also noted submission made by BIAL dated 21st November 2017 wherein BIAL has stated that:

"… BIAL wishes to inform AERA that BIAL has invited tenders for the New South Parallel Runway (NSPR) – including Pavement, T2 aprons, Remote Aprons and AGL. The financial proposals received through e-tendering were evaluated and Larsen & Toubro is the L1 bidder. The Lumpsum Contract Price including the associated works are estimated at INR 1428 crores excluding soft costs amounts (Design and Engineering, Contingency and Preoperative expenses). The costs for the NSPR as considered by BIAL in the Business Plan submitted was INR 2151 crores. These were cost estimates and cost savings to the extent of INR 723 crores primarily on account of value engineering proposition as expected from the bidders which ensured that the short-listed contractors could bid at optimized cost levels. At the same time, we ensured that quality and specifications as required under the tender documents are safeguarded. BIAL will endeavour to work with the contracting partners to ensure value engineering proposition to arrive at optimal costs for Terminal T2 and allied projects as well…"

6.3.3 The Authority has taken note of the above and asked BIAL to submit a reconciliation mapping the costs as considered in Business Plan versus the revised estimates. This was received from BIAL on 20th February 2018, 12th March 2018 and 21st March 2018.

6.3.4 The Authority had issued Order No. 07/ 2016-17 with reference to Normative Approach to Building Blocks in Economic Regulation of Major Airports – Capital Costs Reg. wherein certain normative ceiling limits were specified for key airport costs viz Terminal and Runway/ Taxiway/ Apron. The Authority had accordingly engaged a consultant to review and evaluate the Capital Expenditure Proposals submitted by BIAL covering the following:

6.3.4.1 Assessing the need for the proposed project and its capacity/scope with reference to Passenger growth/Cargo Volumes/Air Traffic Movement and also to suggest cost effective alternatives

6.3.4.2 Evaluation of Building standards and designs with reference to IMG/ IATA/ ICAO norms

6.3.4.3 Evaluate reasonableness of the proposed costs with reference to the tentative cost ceiling detailed in Order No. 07

6.3.4.4 Review design and specifications and evaluate if proper procedures have been followed for award of work and

6.3.4.5 Review and justify the reasonableness of the time schedule of completion of work proposed by BIAL.

6.3.5 The Consultant had shared the final report on 25th January 2018. Report of the Consultant is attached as **Annexure-III**.

6.3.6 Tabulation detailing the Broad Project head, submission by BIAL, cost evaluated and considered reasonable by the Consultant etc. are detailed below:

Table 26: Comparison of block cost estimates considered by BIAL and that evaluated by the Consultant

Particulars	Estimate submitted by BIAL	Cost evaluated by consultant	Key differences
New south airfield development works	2,304	1910	As against Rs. 726.66 crores planned for earthworks, works awarded is Rs. 547.31 crores – This is incorporated.
			Cost of Bitumen considered at 59,000 per MT at 2014 level – this has reduced subsequently – considered 38,550 per MT
T2 Apron 1	678	640	Rate of Reinforcement reviewed and changed
Second Terminal Phase 1	3,174	3077	Rate of steel reviewed
Forecourts, roadways and landside development	1,256	1124	Steel rates corrected
Aircraft maintenance and Airport maintenance	132	130	

Particulars	Estimate submitted by BIAL	Cost evaluated by consultant	Key differences
Rescue and Fire Fighting	10	10	
Fuel storage & Distribution - Phase 1	1	1	
Airport and Administration offices	57	57	
Utilities Phase 1	98	98	
Existing Runway, Taxiway improvements	320	275	Cost of Bitumen corrected
Design/ PMC 10%, Contingency 10%, Pre-Op 5%	2,008	613	Design and PMC - 10% claimed by BIAL reduced to 5% based on review of other projects and reasonableness for a large project Contingencies claimed at 10% by BIAL. BIAL reduced it to 6% at the time of providing clarifications. 3% considered reasonable
Site Preliminaries		76	Submitted by BIAL additionally - Preliminaries at 1% considered reasonable.
Second Terminal ICT		257	Submitted later by BIAL, Considered reasonable
TOTAL WITHOUT IEDC	10,038	8268	

Notes:

Additionally, RITES has commented on Project Management Cost incurred by BIAL for which Authority has to take a view.

The total block cost estimate submitted by BIAL does not match with the additions to RAB in the MYTP submitted by BIAL as:

i) Block cost estimates do not consider minor project capitalised in 2016-17 and estimates towards Sustaining Capex and Special Repairs

ii) Above Block cost includes certain projects which are expected to be capitalised beyond the second control period, in the year 2021-22

6.3.7 The Authority also notes BIAL's submissions relating to certain additional projects to be done, as a withdrawal from the savings submitted as detailed in Para 6.2.10 above. The Authority accordingly proposes to evaluate costs based on approval by RITES and adjusting the net savings shared by BIAL.

6.3.8 The Authority notes that BIAL has requested for additional amounts to be considered due to difference between the Indirect Taxes considered earlier at the time of submissions and the Goods and Services Tax (GST) which is applicable currently. The Authority notes that while the indirect taxes applicable have changed, the amounts to be considered for Capitalisation would be after considering the credits that can be taken on the same. Hence, the Authority proposes not to consider the impact due to GST currently and will evaluate the same after the costs are incurred and capitalized in books.

6.3.9 The Authority has noted that RITES has commented about the Pre-Operating Expenses submitted by BIAL, as follows:

"…An amount of Rs. 461 Crores has been included in the revised submissions towards preoperative costs which includes Rs. 180 Crores towards PMC. The cost towards PMC is already taken into consideration at sl.no.14 above and hence to be excluded. AERA may therefore like to take a view on the balance amount of Rs.281 Crores claimed towards Pre-Operative expenses…"

6.3.10 Authority has obtained certificate from Chartered Accountant on the details of Pre-Operative expenses carried in books and sought confirmation that these costs were not considered as part of the expenditure debited to P&L account. Extract from the certificate of the Chartered Accountant is as below.

This is to certify that Bangalore International Airport Limited (BIAL) has incurred the below mentioned preoperative expenditures for various projects, during the FY 2016-17 and FY 2017-18 (Till Dec 2017).

Amount in INR

Particulars	FY 2016-17	FY 17-18 (Till Dec 17)
Opening Balance of Preoperative Expenses	**45,84,96,394**	**65,50,28,603**
Add: Expenses Incurred during the year :		
Payroll Costs	30,20,48,698	21,80,13,508
Professional & Technical Consultancy	3,96,77,225	17,15,417
Travelling and Conveyance	1,76,46,197	70,77,721
Other Project Costs	23,71,514	1,83,72,626
Less: Preoperative Expenses capitalized	**(16,52,11,424)**	**(5,03,79,160)**
Closing Balance of Preoperative Expenses	**65,50,28,603**	**81,13,63,283**
No. of Employees whose cost included above	**105**	**92**

Also confirm that these costs are part of Capital work-in-progress and not included in Operating Expenditure debited to P&L account.

6.3.11 The Authority has reviewed the certificate provided. The Authority also notes that certain costs relating to Pre-Operative Expenses are carried over from the year 2015-16 (and may be before too). The Authority also notes that BIAL has submitted details of the personnel deployed, cost of which will be debited to Pre-Operative Expenses. The Authority notes that there is a need for BIAL to have its own Project Management Team when large scale Capital Expenditure Projects are being executed. The Authority urges BIAL to ensure that the costs relating to Pre-Operative Expenses be optimally managed based on the requirements of the stated projects only. As these costs are proposed to be incurred over the second control period, the Authority proposes to consider an amount of Rs. 150 crores towards the same, as against BIAL submission, for the purpose of estimating the costs and capitalisation for MYTP. The Authority will review and true up the same after the Projects are commissioned and based on detailed review and evaluation of the actual costs incurred and its reasonableness.

6.3.12 The Authority has noted submissions made by BIAL with respect an additional project viz. Eastern Tunnel Works. The Authority notes that this is at a very initial conceptual stage and there is a need for carrying out Stakeholder consultations for the project. The Authority, accordingly, proposes to not consider the submission made relating to Eastern Tunnel Works, for the purpose of estimating the additions to RAB. The Authority seeks views from Stakeholders on the same and would true up the same after these are incurred and capitalised, based on detailed review and evaluation of the actual costs incurred, comments from stakeholders and the reasonableness of costs incurred.

6.3.13 Based on the above analysis, the Authority has, keeping RITES report as the base and giving effect to the savings submitted by BIAL in the letter dated 21st November 2017 and subsequently, considered the following costs against the block estimates for consideration in the MYTP for the second control period.

Table 27: Cost estimates proposed to be considered by the Authority (Rs. Crores)

Particulars	Block estimate (A)	Loading 25% as per BIAL (B)	Total cost – BIAL April 17 submission (A+B)	RITES analysis as against Column A	Base value to consider	Cost incl. apportion	Rationale for the base value considered
New south airfield development works	2,304	576	2,880	1,910	1,910	2123	Base value of BIAL reworked (Rs. 2010 crores) is higher than the Base value considered by RITES (Rs. 1910 crores). Hence, RITES value considered.
T2 Apron 1	678	170	848	640	414	460	Base value as per RITES is Rs. 640 crores and BIAL value is Rs. 271 crores plus Rs. 143 crores. BIAL base value considered

Particulars	Block estimate (A)	Loading 25% as per BIAL (B)	Total cost – BIAL April 17 submission (A+B)	RITES analysis as against Column A	Base value to consider	Cost incl. apportion	Rationale for the base value considered
Second Terminal Phase 1	3,174	794	3,968	3,077	3,077	3420	As per RITES analysis and reduction. BIAL revised base value is with 6.6% increase due to GST, not considered
Second Terminal ICT				257	257	286	
Forecourts, roadways and landside development	1,256	314	1,570	1,124	1,124	1249	As per RITES analysis and reduction. BIAL revised base value is with 6.6% increase due to GST, not considered
Aircraft maintenance and Airport maintenance	132	33	165	130	130	145	As per RITES analysis. BIAL revised base value is with 6.6% increase due to GST, not considered
Rescue and Fire Fighting	10	3	13	10	7	8	BIAL revised analysis lower and hence considered
Fuel storage & Distribution - Phase 1	1	0	1	1	-	0	Not available in Business Plan. Not considered
Airport and Administration offices	57	14	71	57	57	63	As per RITES analysis. BIAL revised base value is with 6.6% increase due to GST, not considered
Utilities Phase 1	98	25	123	98	98	109	As per RITES analysis. BIAL revised base value is with 6.6% increase due to GST, not considered
Existing Runway, Taxiway improvements	320	80	400	275	275	306	As per RITES analysis and reduction. BIAL revised base value is with 6.6% increase due to GST, not considered
Site Preliminaries				76	72		1% of above costs
Sub-Total	8,030	2,008	10,038	7,655	7,423	8,167	
Design/ PMC 10%, Contingency 10%, Pre-Op 5%	2,008	-2,008	-	613	593		8% as per RITES estimate
Add: Pre-Operating Expenses					150		
TOTAL	**10,038**	**-**	**10,038**	**8,268**	**8,167**	**8,167**	

Particulars	Block estimate (A)	Loading 25% as per BIAL (B)	Total cost – BIAL April 17 submission (A+B)	RITES analysis as against Column A	Base value to consider	Cost incl. apportion	Rationale for the base value considered
Note: The numbers above do not match with the additions to RAB for second control period, as this includes certain items which are proposed to be completed and commissioned in the year 2021-22, after the second control period. Above Block cost includes certain projects which are expected to be capitalised beyond the second control period, in the year 2021-22							

6.3.14 The Authority has also reviewed report by RITES on time schedule for completion of Projects. RITES analysis is detailed below:

> *"5.4. Construction Schedule*
>
> *BIAL has submitted the overall implementation schedule with date of commencement as April 15 and completion in March 2022 including design development, procurement and construction. The construction works is planned to begin from July 2017 to March 2021 for pavement works (45 months) and from Oct. 2017 to March 2021 (42 months) for the building works. The time for construction stipulated by AAI in some of the tenders for airport terminal building projects for Project Management Consultancy including design and supervision is 9 months planning & design and 36 months for construction. Hence the time schedule proposed by BIAL is considered to be reasonable."*

6.3.15 The Authority notes that BIAL has commenced works relating to Runway and Airside expansion works but the works relating to Terminal Building have not commenced as yet. As the construction activities have not started on the same, the Authority proposes to estimate Terminal Building completion in 2021-22 and accordingly proposes to exclude the same from additions to RAB for the second control period. The Authority seeks detailed explanations from BIAL on the plan of construction for Terminal Building and its expected date of capitalisation.

6.3.16 The Authority has accordingly considered the revised cost for computing additions to RAB for the purpose of determining ARR for the second control period.

Additions to RAB – Special Repairs/ Sustaining Capital Expenditure

6.3.17 The Authority also notes that BIAL has considered a total of Rs. 929.55 crores as "Sustaining Capex / Special Repairs" for addition to RAB, in addition to the Projects detailed above, in addition to other minor Projects viz Terminal Refurbishment and Forecourts (Rs. 160 crores).

6.3.18 The Authority notes that in the revised details submitted by BIAL, the total estimate of Sustaining Capex/ Special Repairs and minor projects have increased to approx. Rs. 1700 crores – Rs. 1800 crores for the control period. The Authority has reviewed the details provided by BIAL for the same.

6.3.19 The Authority notes that BIAL would need to incur Special Repairs / Sustaining Capex works for the regular upkeep and carrying out minor activities. The Authority also notes BIAL's submissions on need for managing the current constraints in Terminal Capacity and planning certain IT and other solutions for the same which necessitate certain Capital Expenditure projects to be implemented. While the Authority notes that, on an average around Rs. 32 crores - Rs. 34 crores is the value of Special repair / Sustaining Capex cost capitalised in the first control period, the Authority, also notes that BIAL has actually incurred around Rs. 200 crores per annum towards special repairs/ minor projects in the years 2016-17 and 2017-18. A certificate to this effect has been submitted by BIAL.

6.3.20 The Authority notes where cost of the Project is over Rs. 50 crores, appropriate stakeholder consultation is required to be carried out, as per the Airport Guidelines.

6.3.21 The Authority, proposes to consider actual costs capitalised in 2016-17 and 2017-18 and approx. Rs. 200 crores per annum from 2018-19 to 2020-21 in the estimate of Special Repairs / Sustaining Capex for the purpose of the MYTP submissions, on an adhoc basis. The Authority urges BIAL to ensure that the costs incurred towards these are justified based on its need and are incurred based on optimal evaluation of costs and alternates. Expenses actually incurred on these projects would be reviewed in detail and considered for true up at the end of the control period, based on its need and reasonableness of costs spent and after considering any disposal proceeds/ realisations from replaced assets.

6.3.22 The Authority notes that BIAL has considered Financing allowance for addition to RAB as provided in Direction 5 – Airport Guidelines, against Interest cost during construction which will be capitalised as cost of the asset. The Authority also understands that these estimates will vary considering the Debt / Equity mix in the funding for Airport Project, where the

Projections made by BIAL consider substantial funding of the Project by Equity (which is estimated to be available considering BIAL's estimate of ARR for the second control period). (In doing the calculations in the Business Model submitted, the Authority has considered gearing of upto 75% and 70% respectively instead of a lower gearing as considered by BIAL).

6.3.23 Accordingly, RAB recomputed by the Authority considering direct changes to the cost estimates based on Consultant values and Special Repairs/ Sustaining Capex as above, together with other changes in ARR and resultant Equity and Debt mix is as detailed below:

Table 28: Overview of Capital Expenditure and addition to RAB for second control period as recomputed by the Authority

Project	Year of Capitalisation	Infra Cost	Financing allowance	Total addition to RAB	RAB - Aero	RAB - Non-Aero	Category
Site preparation & Earthworks to Runway 2, Taxiway & Apron	2018	670.00	43.57	713.57	713.57	0.00	Buildings2-RW/TW
Runway 2, Taxiway & Apron - Phase Ia	2020	1,228.14	183.67	1,411.81	1,411.81	0.00	Buildings2-RW/TW
Runway 2, Taxiway & Apron - Phase II	2021	460.21	99.92	560.13	560.13	0.00	Buildings1-T,B,R
Forecourt roadways & landside development - Phase Ia	2021	372.33	64.20	436.54	397.25	39.29	Buildings1-T,B,R
Rescue & Fire Fighting	2019	7.93	0.46	8.39	8.39	0.00	PM3-Safety
Airport Offices - Phase I	2018	63.05	0.00	63.05	57.37	5.67	Buildings1-T,B,R
Utilities - Phase Ia	2020	105.40	12.55	117.95	107.33	10.62	Buildings3-WMS
Existing runway / taxiway improvements - Phase 1a	2018	58.23	0.73	58.96	58.96	0.00	Buildings2-RW/TW
Forecourt roadways & landside development - Phase Ib	2020	442.51	49.98	492.49	448.16	44.32	Buildings1-T,B,R
Forecourt roadways & landside development - Phase Ic	2019	258.88	13.56	272.44	247.92	24.52	Buildings1-T,B,R
Existing runway / taxiway improvements - Phase Ib	2021	80.46	0.00	80.46	80.46	0.00	Buildings2-RW/TW
Terminal refurbishment	2017	79.99	4.09	84.08	76.51	7.57	Buildings1-T,B,R
Forecourts	2017	79.73	2.70	82.43	75.01	7.42	Buildings1-T,B,R
Sustaining capex - I	2017	65.12	2.66	67.78	61.68	6.10	Buildings1-T,B,R
Sustaining capex - II	2018	85.44	8.97	94.41	85.91	8.50	Buildings1-T,B,R
Total Infra Capitalisation		**4,057.42**	**487.06**	**4,544.48**	**4,390.47**	**154.00**	
Special Repairs and Refresh Capitalisation	2018 - 2021	781.75	0.00	781.75	693.57	88.18	
TOTAL		**4,839.17**	**487.06**	**5,326.23**	**5,084.05**	**242.18**	

6.3.24 The Authority notes that the actual cost of Capital Expenditure may vary till the Project is completed. The Authority also notes that the capitalisation/ addition to RAB would vary due to various factors such as the timing of expenditure, manner of funding etc. The Authority therefore proposes to true up the cost based on actuals subject to a cap of 10% over the cost as per the Consultant approval for the Projects.

Proposal No 5. Regarding Capital Expenditure

5.a. Based on the material before it and its analysis, the Authority proposes:

i. To consider Capital Expenditure detailed in Table 28 Para 6.3.23 above for computing the Average RAB and return for the second control period.

ii. To true up the Capital Expenditure on actuals at the time of determination of tariff for the next control period, subject to a cap of 10% over the cost as per the Consultant approval for the Projects.

7. Allocation of Assets between Aeronautical and Non-Aeronautical services

7.1 Allocation basis submitted by BIAL for Assets

7.1.1 BIAL has submitted basis of allocation of Assets – for existing assets and new assets as follows:

> *"The Allocation of Assets into Aeronautical and Non-Aeronautical for Control Period 2 has been considered based on the certificate given by the Statutory Auditor.*
>
> *The certificate of the auditors has been attached in Annexure 5.*
>
> *The details of the allocation have been provided below:*
>
> ….."

7.1.2 BIAL has submitted that according to the computation and certification, the average of 5 years from 2012 to 2016 works out to 90.71% and 9.29% between Aeronautical and Non-Aeronautical accordingly.

7.1.3 BIAL has accordingly considered 91% of the Opening RAB as towards Aeronautical Services and 9% as Non-Aeronautical.

7.1.4 On additions to RAB due to projects proposed during the second control period, BIAL has allocated 100% as relating Aeronautical for Airside works and for other works 91% of the value has been considered to be Aeronautical. Asset wise listing of Aeronautical % considered by BIAL is listed in Table 25.

7.2 Authority's analysis of Allocation basis submitted by BIAL for Assets

7.2.1 The Authority has carefully reviewed the submission and allocation made by BIAL between Aeronautical and Non-Aeronautical assets.

7.2.2 Authority has also carefully reviewed the certificate given by Statutory Auditor as detailed by BIAL.

7.2.3 The Authority noted that according to BIAL's submission, BIAL had appointed KPMG as its auditors for Asset allocation. Perusal of KPMG's opinion indicates that it is a "*Report in connection with Agreed-upon procedures related to the Statement of allocation of fixed assets into Aeronautical and Non-Aeronautical*".

7.2.4 However, KPMG had also indicated that its report that:

"…Because the procedures performed do not constitute either an audit or a review made in accordance with the generally accepted auditing standards in India, we do not express any assurance on the allocation of the fixed assets between Aeronautical and Non-Aeronautical as on 31 March 2012, 31 March 2013, 31 March 2014, 31 March 2015 and 31 December 2015"

"..Had we performed additional procedures, an audit or a review in relation to the basis of allocation of fixed assets between Aeronautical and Non-Aeronautical, other matters might have come to our attention that would have been reported to you…."

7.2.5 Scope of auditors as specified in their certificate of "Agreed Upon Procedures" is reproduced below.

"…The agreed upon procedures to be performed on the Statement of allocation of fixed assets into Aeronautical and Non-Aeronautical for the years ended 31st March 2012, 31st March 2013, 31st March 2014, 31st March 2015 and period 31 December 2015 are as below:

- *Trace the total value of fixed assets i.e. Gross block, Additions, deletions, accumulated depreciation and net book value as per the statement with the audited financial statements for the years ended 31 March 2012, 31 March 2013, 31 March 2014 and 31 March 2015 and unaudited trial balance as at 31 December 2015;*
- *Read the basis of allocation ("Annexure 3") which details the guidelines followed by the company for the allocation of fixed assets into Aeronautical and Non-Aeronautical;*
- *Verify the items of fixed assets as at 31 March 2012, 31 March 2013, 31 March 2014 and 31 March 2015 and unaudited trial balance as at 31 December 2015 on a test check basis and using the concept of Materiality for the allocation into Aeronautical and Non-Aeronautical on the basis of guidelines as enumerated in Annexure 3;*

- *For common assets, verify the basis of allocation and compare the same with the basis of allocation as enumerated in the guidelines enumerated in Annexure 3; and*
- *Report the factual findings and the observations, if any based on the procedures performed…"*

7.2.6 The Authority understands that this is a standard paragraph to indicate that the auditor has not performed an Independent audit on the stated subject.

7.2.7 The Authority had also gone through the report of the auditors on segregation of assets and noted that the auditors appear to have carried out a check of the principles / methodology already established by BIAL for asset allocation and have only validated the same with the financials and not carried out any independent study to classify the assets between Aeronautical and Non-Aeronautical Services.

7.2.8 The Authority has gone through Annexure – 3 of the said certificate and notes that BIAL has listed a set of activities as "Aeronautical services" and another set of activities as "Non-Aeronautical services". The Annexure also lists common assets as those relating to plant and equipments where not directly attributable to Aeronautical or Non-Aeronautical services and Terminal and other buildings. The Key used for bifurcation of common assets is Terminal Area which is 89% Aeronautical till March 2013 and 86% Aeronautical from March 2014 due to Terminal Expansion.

7.2.9 The Authority refers to the review carried out by the Authority (Refer Para 8.17 to 8.26 of MYTO-CP1) wherein the Authority had reviewed the submissions made by BIAL relating to Opening RAB and arrived at an allocation of 88.52% as Aeronautical in Opening RAB as of 1st April 2011 and 87.70% as Aeronautical in Terminal Area Expansion works commissioned in 2013-14.

7.2.10 The Authority notes that the Terminal Area usage, specifically in case of BIAL, has been modified over the period in order to create facilities to accommodate the substantial increase in Passenger traffic. Hence the Aeronautical Ratio in Terminal Building area cannot be kept as a static number.

7.2.11 The Authority hence, proposes to consider the allocation between Aeronautical Area and Non-Aeronautical Area of Opening RAB as per Authority's analysis detailed in MYTO-1. The Authority will review the Terminal Area allocation for Terminal 1 and Terminal 2 once the Terminals reach a steady state usage, before the commencement of next control period.

7.2.12 As for additions to RAB due to Capital Expenditure in the current control period, the Authority had asked BIAL to submit details of the planned space in Terminal 2 segregated as Aeronautical Non-Aeronautical and Common Areas. BIAL has submitted that "*The Terminal 2 - Phase 1 plan is under design stage and detailed outlay is not available."*

7.2.13 The Authority notes that BIAL has considered asset allocation as 100% Aero for Airside works and as 91% in case of Terminal 2, Forecourts and other landside development works. The Authority notes that the allocation would largely depend on Terminal Building Area allocation between Aeronautical and Non-Aeronautical (which by BIAL's own estimate is 89% and 86% originally and after Terminal 1 expansion). Hence, in the absence of details, the Authority proposes that for Terminal Building works, the Authority will consider an approximate allocation of 85% as Aeronautical and 15% as Non-Aeronautical. This will be reviewed once Terminal 2-Phase 1 is operational.

7.2.14 The Authority notes that actual asset costs could change from the projections made herein, based on which the allocation of costs between Aeronautical and Non-Aeronautical is also likely to change. Authority also notes that the allocation of assets depends on various factors including the value of Capital Expenditure, year of capitalization, actual usage of area etc. The Authority hence proposes to consider the above for the purpose of computation of ARR now and true up the same at the end of the second control period based on actuals.

7.2.15 The Authority also notes that area segregation done between Aeronautical usage and Non-Aeronautical usage of Terminal building needs to be technically validated and confirmed.

Proposal No 6. Regarding assets allocation between Aeronautical and Non-Aeronautical services

6.a. Based on the material before it and its analysis, the Authority proposes:

i. **To consider allocation of assets and between Aeronautical and Non-Aeronautical services as detailed in Paras 7.2.11 above and 7.2.13 above for determination of tariff for the second control period.**

ii. **To carry out a technical study on the area used between Aeronautical and Non-Aeronautical in the existing and new terminal once the operations are commissioned and stabilised.**

iii. **To true up the details considered in Paras 7.2.11 above and 7.2.13 above based on the actuals and consider the same in the next control period.**

8. Depreciation

8.1 BIAL's submissions on Depreciation

8.1.1 BIAL has submitted that depreciation on assets has been provided on the basis of Straight line Method (SLM) over the useful life of the asset estimated by the management where it believes that the useful lives represent the period over which it expects the use of the such assets.

8.1.2 BIAL had submitted that the value of assets considered for Depreciation i.e. additions to RAB and the methodology of depreciation proposed were in line with the prescriptions of Airport Guidelines namely:

8.1.2.1 Depreciation on assets at 100% of the original cost of the asset on straight line basis

8.1.2.2 Depreciation on additions made at 50% of the applicable depreciation rate

8.1.3 The useful life for computation of rates considered by BIAL for key assets are as below:

Table 29: Useful lives and depreciation rates adopted by BIAL

Asset Type	Assets Covered	SLM %	Salvage Value	No. of years
Buildings1-T,B,R	Building, Roads, Culverts, Apron	3.34%	Nil	30.00
Buildings2-RW/TW	Engineering structure: - Runway, Taxiway	5.00%	Nil	20.00
Buildings3-WMS	Water Management System	3.34%	Nil	30.00
PM1	Equip.-Airport/Comm /E&M/Office, Vehicles	10.34%	Nil	10.00
PM2-Lighting	Lighting	10.34%	Nil	10.00
PM3-Safety	Safety and Security	16.21%	Nil	6.00
PM4 - IT Equipment	IT equipments	16.21%	Nil	6.00
Software	Software	20.00%	Nil	5.00
ICT - Blended	ICT Future CapEx / Refresh	16.21%	Nil	6.00
FF	Furniture and Fixtures	6.33%	Nil	16.00
Intangibles	Preliminary Expenses, Goodwill etc.	3.33%	Nil	30.00

8.1.4 Accordingly, the total Depreciation considered by BIAL for the assets, under Hybrid Till, for the control period 2, considering the capital expenditure proposed by BIAL and RAB considered by BIAL is as listed below:

Table 30: Depreciation considered by BIAL for Second control period

Asset Type	Covers	2017	2018	2019	2020	2021
Buildings1-T,B,R	Building,Roads,Culverts,Apron	74.25	85.69	97.95	115.00	230.71
Buildings2-RW/TW	Engineering structure :- Runway,Taxiway	6.11	32.76	59.46	107.89	159.39
Buildings3-WMS	Water Management System	3.72	3.76	3.86	6.17	8.42
PM1	Equip.-Airport/Comm/E&M/Office,Vehicles	65.39	66.89	69.88	72.21	37.21
PM2-Lighting	Lighting	40.05	40.07	40.10	40.18	0.93
PM3-Safety	Safety and Security	18.13	18.13	6.17	2.15	2.15
PM4 - IT Equipment	IT eq.,	14.84	2.78	6.59	8.83	22.89
Software	Software	6.06	1.16	0.00	0.00	0.00
ICT - Blended	ICT Future CapEx / Refresh	0.00	0.00	0.00	0.00	20.67
FF	Furniture and Fixtures	7.16	7.16	7.16	7.16	7.16
Intangibles	Preliminary Expenses, Goodwill etc.	0.99	0.99	0.99	0.99	0.99
Total		236.70	259.38	292.14	360.56	490.52
	Aero Depreciation	213.15	233.80	271.92	335.26	465.31
	% of Aero Depreciation to total Depreciation	90.05%	90.14%	93.08%	92.98%	94.86%

8.1.5 BIAL has, on 25th April 2018 and 27th April 2018 submitted the computations relating to Extra shift depreciation and impact of changes to useful life in line with Authority's Order No. 35/ 2017-18.

BIAL has submitted as follows:

"…KIA is a fast growing airport and has witnessed rapid passenger growth and high air traffic movement. Airport specific equipment such as aero bridges, baggage handling system, escalators, elevators, travellite, HVAC equipments, cargo ASRS, ETV Equipment, X Ray machine, RT set, DFMD, HHMD, security equipment are continuously used and need maintenance. Being used in triple shift, these equipments undergo wear and tear and this reduces their useful life. BIAL wishes to submit they it would adopt lower useful life for certain assets used 24/7 on triple shift based on technical justification. Based on the above AERA Order and technical evaluation done, summary of changes in useful life of assets, and one-time impact to opening reserves are summarised in below table…."

8.1.6 BIAL has, as per its computations indicated that a total of Rs. 271.46 crores is additionally estimated to be charged to assets, including the one-time adjustment in 2018-19.

8.2 Authority's analysis of Depreciation

8.2.1 Authority on 12th Jan 2018 has issued Order No. 35/2017-18 (Order No. 35) on determination of useful life of the Airport assets, which will be effective from 1st April 2018.

8.2.2 Summary of comparatives on useful life adopted by BIAL and Order No. 35 is detailed below.

Table 31: Comparison of Useful lives as per BIAL and Order No. 35

Asset Type	Covers	No. of Years stated in the Order	No. of Years applied by BIAL
Buildings1-T,B,R	Building	30 /60 years	30 years
	Roads	5 /10 years	30 years
	Apron	20 to 30 years	30 years
Buildings2-RW/TW	Runway	30 years	20 years
	Taxiway	30 years	20 years
PM1	Equip. - Airport	15 years	10 years
	Equip. - E&M	10 years	10 years
	Office Equipment	5 years	10 years
	Vehicles	8 years	10 years
PM2-Lighting	Lighting	10 years	10 years
PM3-Safety	Safety and Security	15 years	6 years
PM4 - IT Equipment	IT equipment	6 years	6 years
Software	Software	NA	5 years
ICT - Blended	ICT Future CapEx / Refresh	6 years	6 years
FF	Furniture and Fixtures	7 years	16 years
Intangibles	Preliminary Expenses, Goodwill etc.	NA	30 years

8.2.3 The Authority notes that in certain cases, BIAL has projected a higher useful life and in certain cases BIAL has projected a lower useful life as compared to Order No. 35.

8.2.4 The Authority notes that giving effect to the changes as per the Order would necessitate recomputation of depreciation considering individual line items, considering the balance useful lives. The Authority notes that BIAL has submitted its estimate regarding the same as detailed in Para 8.1.6 above. The Authority notes that this estimate includes a charge for assets where useful life has ended and extra shift depreciation for certain asset categories.

The Authority also notes that BIAL has considered useful life of 20 years for Runway and Taxiway along with considering certain unique assets at specific rates which needs to be technically justified. The Authority notes that certain part of this cost could relate to the period from Airport Opening till September 2009 which the Authority proposes to exclude. The Authority proposes to consider the estimates as provided by BIAL for the purpose of considering depreciation and Average RAB for the consultation paper. The Authority has asked BIAL to submit the complete calculations and relevant technical justifications and details for Authority's review, which will be evaluated and considered at the time of Order.

8.2.5 Authority notes that Land Development works have been considered for Capitalisation with useful life of 20 years. The Authority proposes to consider the same based on the lease period available with BIAL (50 years) and consider this as an adjustment to the depreciation rate estimates in the Consultation Paper.

8.2.6 Authority also noted, as detailed in MYTO-CP1 that AAI had appointed EIL as Independent Engineer for verification of Capital Expenditure incurred for Bangalore International Airport. The scope of works was to:

8.2.6.1 Study the overall Development plan / master plan indicating various airport facilities for BIAL.

8.2.6.2 Study for all drawings, specifications and procurement documents for cost assessment.

8.2.6.3 Carry out verifications to assess the cost incurred as per the various awarded works.

8.2.7 In MYTO-CP1, after deliberation on the material facts, Authority had decided to reduce opening RAB as of 24th May 2008 (the day of the commencement of Airport Operations) by Rs. 69.45 crores.

8.2.8 Authority noted that BIAL has not made adjustments towards the disallowance and has claimed depreciation on such assets. Authority proposed to carry out the adjustment in Opening RAB and the resultant adjustment in the depreciation.

8.2.9 The Authority has also made adjustment for Depreciation based on actuals for 2016-17.

8.2.10 The Depreciation recomputed by the Authority, considering changes to the Capital Expenditure and other factors, is as follows:

Table 32: Depreciation recomputed by the Authority (Rs. Crores)

Asset Type	Covers	2017	2018	2019	2020	2021
Buildings1-T,B,R	Building,Roads,Culverts,Apron	74.23	83.02	94.41	109.22	134.21
Buildings2-RW/TW	Engineering structure :- Runway,Taxiway	6.11	25.43	44.79	80.13	117.97
Buildings3-WMS	Water Management System	3.72	3.72	3.77	5.80	7.78
PM1	Equip.-Airport/Comm/E&M/Office,Vehicles	65.39	65.39	67.68	89.30	68.49
PM2-Lighting	Lighting	18.75	40.05	40.05	40.13	22.18
PM3-Safety	Safety and Security	18.13	18.13	5.77	1.36	1.36
PM4 - IT Equipment	IT eq.,	14.84	0.00	1.04	3.28	4.47
Software	Software	6.06	1.16	0.00	0.00	0.00
ICT - Blended	ICT Future CapEx / Refresh	0.00	0.00	0.00	0.00	0.00
FF	Furniture and Fixtures	7.16	7.16	7.16	7.16	7.16
Intangibles	Preliminary Expenses, Goodwill etc.	0.99	0.99	0.99	0.99	0.99
Total		**215.38**	**245.04**	**265.65**	**337.36**	**364.61**
	% of Aero Depreciation to total Depreciation	89.20%	89.37%	91.97%	91.33%	93.59%
	Aero Depreciation	192.12	218.99	244.32	308.12	341.25
	Less: Adjustment EIL	-3.68	-3.68	-3.68	-3.68	-3.68
	Less: Adjustment for Development works			-9.00	-9.00	-9.00
	Add: Additional Depreciation as per BIAL - Aero			186.12	28.15	30.04
	Aero Depreciation for RAB	188.44	215.31	417.76	323.59	358.61

8.2.11 Accordingly, the Authority proposes to consider the recomputed depreciation for the purpose of computing Average RAB and review of depreciation. Authority proposes to true up the depreciation based on actual costs incurred and recomputing depreciation based on Order No.35 at the end of the current control period, and true up the same.

Proposal No 7. Regarding Depreciation for the second control period

7.a. Based on the material before it and its analysis, the Authority proposes:

i. To consider depreciation as per Table 32 Para 8.2.10 above to compute Average RAB and depreciation to be considered in ARR.

ii. To true up the Depreciation based on the actual Capital Expenditure and other factors as per the Order No. 35 on Useful lives.

iii. **To ask BIAL to submit details of Technical evaluation for various asset useful lives considered in estimating the additional depreciation charge and its computations which will be evaluated and considered at the time of the Order.**

9. Regulatory Asset base

9.1 BIAL's submission of Regulatory Asset Base for the second control period

9.1.1 Based on the above Capital Expenditure and Depreciation, average RAB computed by BIAL for the second control period under Hybrid Till is as given below:

Table 33: Average RAB computation as per BIAL, under Hybrid Till (Rs. Crores)

RAB under Hybrid Till as per BIAL	2017	2018	2019	2020	2021
Opening RAB	2274.48	2275.57	3580.48	3625.93	6049.96
Additions during the year	214.24	1538.71	317.37	2759.29	6366.41
Depreciation during the year	213.15	233.80	271.92	335.26	465.31
Closing RAB	2275.57	3580.48	3625.93	6049.96	11951.06
Average RAB	2275.02	2928.03	3603.21	4837.95	9000.51

9.2 Authority's analysis of Regulatory Asset Base for the second control period

9.2.1 The Authority's individual assessment of Capital Expenditure, Land and Depreciation are as detailed in earlier paragraphs.

9.2.2 The Authority has commissioned a study to evaluate the reasonableness of the costs incurred as part of additions to RAB in first control period. The Authority will consider the results of the study, when available and consider appropriate adjustments to RAB, if required.

9.2.3 The Authority had, in MYTO-CP1 Paras 10.34 to 10.41 considered the report submitted by Engineers India Limited (EIL) whereby Opening RAB was reduced by Rs. 69.45 Crores. The Authority proposed to continue with the adjustment for the purpose of arriving at Opening RAB for the second control period also.

9.2.4 Considering the above, the Authority's computation of Average RAB under Shared Revenue Till (considering allocation of assets between Aeronautical and Non-Aeronautical as detailed in Section 7 above) is as given below:

Table 34: Recomputed Average RAB as per Authority under Hybrid Till (Rs. Crores)

Particulars	2017	2018	2019	2020	2021
Opening RAB	2,224.29	2,249.05	3,071.86	3,051.85	5,056.70
Additions during the year	213.20	1,038.13	397.75	2,328.43	1,106.54
Depreciation during the year	188.44	215.31	417.76	323.59	358.61
Closing RAB	2,249.05	3,071.86	3,051.85	5,056.70	5,804.63
Average RAB	2,236.67	2,660.45	3,061.86	4,054.27	5,430.66

Proposal No 8. Regarding Regulatory Asset Base for the second control period

8.a. Based on the material before it and its analysis, the Authority proposes:

i. To consider Regulatory Asset Base as given in Table 34 Para 9.2.4 above for the purpose of computation of Aggregate Revenue Requirement.

ii. To true up the Regulatory Asset Base at the end of the Control period based on actuals and based on results of the study on reasonableness of the costs incurred as part of additions to RAB in First Control Period at the time of determination of tariff for the next control period.

10. Operating Expenditure

10.1 BIAL's submission on Allocation of expenditure between Aeronautical and Non-Aeronautical services and Authority's analysis

10.1.1 BIAL has stated as follows:

"..The table below shows the allocation of Operating expenses into Aeronautical and Non-Aeronautical expenses. The basis for the allocation is given for each component of Operating Expenses. Broadly, the allocation has been done on the basis of auditor's reports for the last financial year FY 2015-16.

The report of Auditors on Allocation of Expenses is attached as Annexure 9.

Table 35: Expenses Allocation ratio as per BIAL

Cost Element	FY 2013-14		FY 2014-15		FY 2015-16	
Personnel cost	94%	6%	95%	5%	95%	5%
Operations and Maintenance Cost	87%	13%	88%	12%	89%	11%
Marketing & Advertisement	87%	13%	93%	7%	95%	5%
General Administration Cost	96%	4%	98%	2%	99%	1%
Lease Rent	100%	0%	100%	0%	100%	0%
OMSA Fee	100%	0%	100%	0%	100%	0%
Utilities Cost (Net)	100%	0%	100%	0%	100%	0%
Insurance	91%	9%	91%	9%	91%	9%
Property tax	100%	0%	100%	0%	100%	0%

10.1.2 Authority had reviewed the basis of segregation of expenses between Aeronautical and Non-Aeronautical assets and expenditure submitted by BIAL. Authority's analysis is as follows:

10.1.3 Authority has also carefully reviewed the certificate given by Statutory Auditor as detailed by BIAL.

10.1.4 The Authority noted that according to BIAL's submission, BIAL had appointed KPMG as its auditors for Asset allocation. Perusal of KPMG's opinion indicates that it is a "*Report in connection with Agreed-upon procedures related to the Statement of allocation of expenses* *(excluding depreciation, finance costs and tax expenses) into Aeronautical and Non-Aeronautical"*

10.1.5 However, KPMG had also indicated that its report that:

"…Because the procedures performed do not constitute either an audit or a review made in accordance with the generally accepted auditing standards in India, we do not express any assurance on the allocation of expenses between Aeronautical and Non-Aeronautical for the periods 31 March 2014, 31 March 2015 and 31 December 2015"

"..Had we performed additional procedures, an audit or a review in relation to the basis of allocation of expenses between Aeronautical and Non-Aeronautical, other matters might have come to our attention that would have been reported to you…."

10.1.6 Scope of auditors as specified in their certificate of "Agreed Upon Procedures" is reproduced below.

"…The agreed upon procedures to be performed on the Statement of allocation of expenses into Aeronautical and Non-Aeronautical for the years ended 31st March 2014, 31st March 2015 and period 31 December 2015 are as below:

- *Read the basis of allocation ("Annexure 3") which details the guidelines followed by the company for the allocation of expenses into Aeronautical and Non-Aeronautical;*
- *Trace the items of expenses to the audited financial statements and verify the methodology and samples for the periods ended 31 March 2014, 31 March 2013, 31 March 2014 and 31 March 2015 and 31 December 2015 on a test check basis and using the concept of Materiality for the allocation into Aeronautical and Non-Aeronautical on the basis of guidelines as enumerated in Annexure 3;*
- *For common expenses, trace the same to the basis of allocation as enumerated in the guidelines enumerated in Annexure 3; and*

- *Report the factual findings and the observations, if any based on the procedures performed…"*

10.1.7 The Authority understands that this is a standard paragraph to indicate that the auditor has not performed an Independent audit on the stated subject.

10.1.8 The Authority had also gone through the report of the auditors on segregation of expenses and noted that the auditors appear to have carried out a check of the principles / methodology already established by BIAL for asset and cost allocation and have only validated the same with the financials and not carried out any independent study to classify the expenses between Aeronautical and Non-Aeronautical Services.

10.1.9 The Authority has gone through Annexure – 3 of the said certificate and notes that BIAL stated that personnel costs, operations and maintenance cost, marketing and advertisement expenses and general administration overheads have been classified based on department wise reports maintained by the company. The Annexure also lists down the various departments and stating whether the same is considered as Aero, Non-Aero or allocated between Aero and Non-Aero.

10.1.10 As many of the cost elements are driven by the ratio of personnel cost and personnel cost is one of the significant element of cost, Authority had sought for details of the personnel cost by department. Details provided by BIAL is as below:

Table 36: Department wise cost break-up provided by BIAL

S.No.	Particulars	FY 2014	FY 2015	FY 2016
1	Support Services	28,55,82,094	34,28,47,415	39,08,30,019
2	Commercial	5,22,13,067	3,17,48,366	5,22,26,921
3	Operations	39,11,79,525	42,28,80,040	43,50,07,510
4	Business Development, Marketing & Strategy	2,11,89,040	2,79,69,802	3,58,13,794
5	Engineering & Maintenance	15,35,46,519	17,12,56,305	18,43,35,176
	Grand Total	90,37,10,245	99,67,01,928	1,09,82,13,422

10.1.11 BIAL has submitted as follows:

> *"…Common costs under personnel expenses includes the salaries and related costs of ICT and Real estate departments who devote their time to both Aero and Non aero activities and under other heads includes events, promotion, administration and other costs, which are common in nature, is allocated in the ratio of Aero and Non Aero percentage of the respective heads, further commercial department's time is devoted on both Aero and Non Aero activities hence cost is allocated between Aero and Non Aero…"*

10.1.12 From the above, considering S # 3,4,5 as Aero and 2 as Non-Aero, the Authority notes that the ratio of Aero cost to total is around 91.5% in 2013-14, 95% in 2014-15, 92.6% in 2015-16. The Authority notes that the allocation changes based on composition of teams. The Authority proposes to consider 90% of Personnel cost and General Administration cost as towards Aeronautical Services.

10.1.13 The Authority proposes to carry out a study on allocation of expenses and would consider truing up of the estimates for the current control period based on the results of the study.

10.1.14 Recomputed Aeronautical Ratio of O&M expenses is as given below:

Table 37: Recomputed allocation ratio of Aeronautical Expenses to total expenses, category wise

Cost Element	% of cost considered as Aeronautical
Personnel cost	90%
Operations and Maintenance Cost	Based on asset ratio
Marketing & Advertisement - Others	85%
General Administration Cost	90%
Lease Rent, Property Tax	100%
Utilities Cost (Net)	100%
Insurance	91%

10.2 BIAL's submission on Operating Expenditure

10.2.1 BIAL in its submission dated 13th April 2017 provided the details of Operating and Maintenance expenditure. These are:

10.2.1.1 Personnel Expenses

10.2.1.2 Operations & Maintenance

10.2.1.3 Lease Rent

10.2.1.4 Utilities

10.2.1.5 Insurance

10.2.1.6 Rates & Taxes (other than IT)

10.2.1.7 Marketing and Advertising

10.2.1.8 Waivers & Bad Debts

10.2.1.9 CSR

10.2.1.10 OMSA Fee

10.2.1.11 General Administration Costs

10.2.2 BIAL had submitted details of the above expenditure incurred for Control period 1 and proposed expenditure for Control period 2 in their submission. A summary of costs incurred towards Aero operating expenses is detailed below:

Table 38: Aero Operating Expenses submitted by BIAL for first control period (Excl. Concession Fee) (Rs. Crore)

Operating Expenses - Past as per BIAL	2012	2013	2014	2015	2016
Aero operating Expenses					
Personnel Expenses	67.21	77.70	87.92	98.61	107.37
Operations & Maintenance	34.91	45.18	43.11	51.03	53.57
Lease Rent	6.35	6.35	6.35	6.35	11.79
Utilities	21.90	22.86	24.76	36.06	39.90
Insurance	1.88	2.08	2.06	1.84	1.90
Rates & Taxes (other than IT)	0.78	0.22	13.01	27.15	13.32
Marketing and Advertising	5.67	4.86	11.43	6.27	7.62
Waivers & Bad Debts	0.00	47.51	0.00	0.00	1.87
CSR	0.00	0.00	0.00	0.00	1.16
OMSA Fee	7.84	6.64	9.99	15.05	2.65
General Administration Costs	20.30	20.89	24.12	22.97	23.69
Total Operating Expenses - Aero	**166.83**	**234.28**	**222.75**	**265.34**	**264.85**

Table 39: Operating Expenditure for second control period as submitted by BIAL (Excl. Concession Fee) (Rs. Crore)

Particulars	2017	2018	2019	2020	2021
Personnel Expenses	119.54	152.96	171.81	196.26	246.72
Operations & Maintenance	82.73	99.32	131.50	149.42	211.93
Lease Rent	13.03	13.42	13.83	14.24	14.67
Utilities	43.97	46.95	54.16	57.84	71.60
Insurance	3.54	4.54	5.36	6.23	9.11
Rates & Taxes (other than IT)	8.72	8.80	8.87	8.96	9.40
Marketing and Advertising	7.58	8.31	9.10	9.94	10.84
CSR	3.72	13.90	23.19	31.47	34.88
General Administration Costs					
- Consultancy and Legal	10.07	13.06	14.36	15.80	17.38
- Travel Costs	5.44	5.98	6.58	7.24	7.96
- Office Costs	11.07	12.17	13.39	14.73	16.20
Total Operating Expenses - Aero	**309.41**	**379.40**	**452.14**	**512.14**	**650.70**

10.2.3 BIAL has submitted as follows:

"…The Operating Expenses discussed in this section pertains to the Aeronautical Operating Expenses.

5.6.2 Personnel Costs

BIAL considers human resources as its strongest asset and recognizes the vital role being played by the employees of the organization in catering to the needs of the growth, expansion and successful operations. The headcount projections are based on the requirements for existing business and future expansion plans.

Employee headcount for the five years in Control Period 2 is detailed below:

Particulars	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Total No. of Employees	816	914	936	959	959

Further, the additional headcount towards future expansion projects namely Airfield Development and Terminal & Associated Landside and Airside Development is *estimated to be 235 and 467 respectively. These additions are planned to be hired in FY 2021 and FY 2022 respectively.*

The table below represents the personnel cost for the Control Period 2 for Aeronautical business.

Personnel Cost (Rs. Crore)	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Personnel Cost	119.5	153.0	171.8	196.3	246.7

Personnel cost is expected to increase at a CAGR of 19.86% over Control Period 2. This is due to the fact that there was no increase in manpower on account of expansion in Terminal 1 in Control Period 1. In order to maintain the quality of service provided by BIAL, it is important to increase the manpower with the increase in number of passengers. Hence, the Management of BIAL has assumed that due to passenger growth, there will be a corresponding need to increase the manpower. Furthermore, adequate manpower would need to be hired to manage the upcoming assets such as Airfield works – Runway 2, Apron, etc. and Terminal 2. The increase in manpower due to this has also been considered as part of the Business Plan.

Personnel cost relating to Aeronautical Services, has been derived based on a pre-determined allocation of Aero and Non-Aero in the total Personnel Cost. This is based on the number of employees directly related to Aeronautical services as defined by BIAL.

The increase in personnel cost also considers the competitive environment by addressing the attrition levels being currently experienced. The airport industry is unique and requires skilled talent and is maturing over the period of time. It is difficult to identify and hire trained manpower and hence there is a need to retain the existing skilled manpower. In order to enhance retention, it is assumed that every third year (starting from FY2017), there will be a 2% upward correction in the average CTC for all levels…"

10.2.4 On Operations and Maintenance, BIAL submitted as follows:

"…5.6.3 Operations and Maintenance (O&M) Costs

BIAL is dedicated at ensuring that all operations and activities are supported by well-maintained machinery and equipment. The process setup at BIAL ensures state of the art maintenance comparable to international standards. To address the ever evolving expectations, a separate Engineering & Maintenance department has been set up to ensure safe, efficient and smooth functioning of the Airport.

Engineering and maintenance department basically meets the requirements of infrastructure facilities on landside, airfield, utilities and maintenance of IT enabled services. The department looks after the complete repair and maintenance of airfield including runways, taxiways, aprons, parking bays, aerobridges, hangers, drains, general airfield upkeep, power sub-stations, water and waste management and all allied airside infrastructure for all the civil, electrical and mechanical works.

IT and ITES are handled by a separate department having specialized skill set which provides IT solutions for all the users at the airport.

Certain key areas call for round the clock support and maintenance viz., Airside planning, Airport Operation Control Centre (AOCC), Airfield Rescue Fire Fighting (ARFF), Baggage Handling Systems, Safety Health and environment, terminal operations and so on. O&M expenditure forecast for MYTP, relating to Aeronautical business is detailed below

Particulars (Rs. Crore)	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
O&M Expenditure	82.7	99.3	131.5	149.4	211.9

The O&M expenditure includes the operation and maintenance expenditure towards facilities at landside, airfield, utilities, ICT and others and is assumed as a percentage of the Gross Block.

On the other hand, the Airport would have completed 13 years of operation by the end of Control Period 2. Hence, it would be critical to replenish the assets to maintain the quality standards which BIAL has maintained so far…"

10.2.5 BIAL has submitted the following on Utility costs.

"… 5.6.4 Utilities Costs

Utility costs comprise of power and water costs. The Utilities Costs have been calculated after netting off the recoveries from the concessionaires. The Utilities Costs considered in the MYTP submitted for Control Period 2 relating to aeronautical services is given below:

Particulars (Rs. Crore)	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Utilities Cost	44.0	46.9	54.2	57.8	71.6

10.2.6 BIAL has submitted the following on Concession Fee

"…4.6.5 Concession Fee

A Concession Agreement (CA) was entered into between Ministry of Civil Aviation, Government of India (GoI) and BIAL on 5th July 2004.

For the grant of concession, exclusive rights and privilege to carry out various activities as listed in the CA (Article-3), BIAL has to pay an annual fee 4% of annual gross revenue to the GoI. The payment terms, accounting, provisional payment, interest and taxes have been detailed in Article 3.3 of the CA.

As per the CA (Article 3.3.5), the concession fee is to be paid for the first 10 financial years from the airport opening date (AOD). This fee is to be paid in twenty equal half yearly instalments with the first such payment due and payable in the 11th financial year from AOD.

The concession fee at a rate of 4% of the gross revenue payable has been considered and provided as year-on-year expenditure…"

10.2.7 BIAL has submitted the following on Lease Rent.

"…4.6.6 Lease Rent

The Land Lease Deed was executed between Karnataka State Industrial Investment and Development Corporation (KSIIDC) and Bangalore International Airport Limited (BIAL) on 30th April 2005. As part of this Deed, KSIIDC leased to BIAL, free from encumbrances and / or encroachments, of all that piece and parcel of land measuring 3,884 acres and 25 guntas and further agreed to lease out 133 acres and 16 guntas together with all rights, liberties, privileges, benefits, rights of way, paths, *passages pertinent to the site to hold, possess, use and enjoy the site and or any part thereof, in accordance with the provisions of the Deed.*

However, KSIIDC handed over the possession of 124 acres 6-guntas in the years 2006 & 2007 and subsequently an Additional Land Lease Deed dated 31st December 2011 has been executed and registered.

As per the Deed, the lease rent payable to KSIIDC is nominal lease rent of one rupee per annum up to AOD. After the AOD, the lease rent is calculated at a fixed percentage as per following schedule:

Period	Lease rent as a percentage share of land value
From AOD to beginning of 8th year	3%
For 8th year	6%
From 8th year onwards	Annual escalation at 3% of lease rental at end of previous year

Based on the above, Lease rent considered for Control Period 2 is given below:

Particulars	2017	2018	2019	2020	2021
Lease Rent	13.0	13.4	13.8	14.2	14.7

10.2.8 On General Administration and other costs, BIAL submitted as follows:

"…The General Administration costs category majorly includes Consultancy & Legal Cost, Travel Costs, Office Costs, Insurance, Marketing and Advertisement, Rates and Taxes. These costs are incurred to meet the day-to-day running and administration of the airport.

The General Administration and other costs relating to the Aeronautical business is shown below:

Particulars (Rs. Crore)	2017	2018	2019	2020	2021
Consultancy and Legal	10.1	13.1	14.4	15.8	17.4
Travel Costs	5.4	6.0	6.6	7.2	8.0
Office Costs	11.1	12.2	13.4	14.7	16.2

Particulars (Rs. Crore)	2017	2018	2019	2020	2021
Insurance	3.5	4.5	5.4	6.2	9.1
Rates & Taxes (other than IT)	8.7	8.8	8.9	9.0	9.4
Marketing and Advertising and others	11.3	22.2	32.3	41.4	45.7
Total	50.1	66.8	80.9	94.4	105.8

BIAL has begun to undertake various initiatives to enhance its passenger and cargo traffic – especially international traffic, and embark on a digital journey. The underlying vision is to develop Bengaluru as the Gateway to South India and enhance its brand as the Silicon Valley of India, while at the same time align with the vision of the GoI of a 'Digital India'.

The initiatives include conducting roadshows, industry outreach programs, catchment area programmes and industry alignment meetings. BIAL is transforming the Kempegowda Airport into a smart airport, is embracing technology and embarking on a digital journey. This will further enhance the 'naturally easy experience' BIAL offers to its customers…"

10.3 Authority's analysis of Operating Expenditure

10.3.1 Authority has carefully analysed each component of the Operating Expenditure. Authority's analysis of each head of expenditure is as follows:

Employee Cost

10.3.2 Authority has reviewed the Grade-wise headcount projected by BIAL and the details of costs considered per grade.

10.3.3 Authority notes that, based on the above, the Personnel cost computed is as follows:

Table 40: Salary cost computed for the second control period by BIAL

Salary cost	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Grade F	3.18	3.53	3.89	4.35	4.79
Grade E	11.07	18.21	20.04	22.44	24.68
Grade D	17.87	23.95	27.07	31.14	35.16
Grade C	34.25	41.97	47.39	54.45	70.06

Salary cost	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Grade B	19.53	24.50	27.61	31.65	44.13
Grade A	8.42	9.55	10.74	12.36	19.20
Grade O	0.20	0.35	0.39	0.43	0.48
Other	6.95	7.79	8.72	9.77	10.94
Total	101.47	129.85	145.85	166.61	209.44
Add: - Incentives	14.21	18.18	20.42	23.32	29.32
Add: - Others (Staff Activities/Transport/Education/ Training etc.)	10.15	12.98	14.58	16.66	20.94
Total Personnel Expenses	125.83	161.01	180.85	206.59	259.71
Share of Aero	95.00%	95.00%	95.00%	95.00%	95.00%
Personnel Expenses - Aero	119.54	152.96	171.81	196.26	246.72

10.3.4 The Authority noted that salary cost has been projected with an annual increase listed above from the existing levels on a year on year basis for the control period 2 between 7% and 12%.

10.3.5 The Authority noted that the movement in employee cost over the past 5 years varies between 3% and 54%. Authority noted that BIAL has considered growth at 10 % YOY and every 3rd year additional 2% has been factored. The Authority enquired about these growth rates and trends considered by BIAL.

10.3.6 BIAL has submitted as follows:

"…Grade F: - Increase in CTC by 12% in FY 2017 is due to actual payout & by 11% in FY 2018 is due to budget projection for the year on salary increase for the grade

Grade E: Increase in CTC by 54% in FY 2017 is due to hiring of expatriates in that grade.

Grade others: Fluctuating payout is due to commission payouts to Managing Director…"

10.3.7 The Authority proposes to moderate the increase in employee costs considering 10% increase from financial year 2018 onwards instead of increase in rate that has been proposed by BIAL.

10.3.8 The Authority noted that the increase in headcount for 2017 has been considered 30% & 8% for grade D (28 employees) & grade A (6 employees) respectively. The Authority also noted that 98 resources have been considered across various grades for 2018 and 235 employees are added for FY 2021. The Authority enquired about these increase in resources for 2017 and 2018 considered by BIAL. In addition, BIAL had also considered 14% YOY increase in staff variable pay and incentives of the Salary cost and 10% increase in staff welfare, transportation, training and other costs on the Salary costs.

10.3.9 BIAL has submitted as follows:

"… Grade B, D, C, A & O: Increase in resource strength due to carry forward/replacement of positions that were approved by Board previously but could not be hired. Marginal increase in % increase in strength to cater YoY increase in regular business growth.

Incentives and Others: Increase in incentive and other Staff and training cost has been considered based on historical performance trend, which ranges around 14%-15% of CTC…"

10.3.10 The Authority proposes to reduce employee strength considering a maximum increase of 15% (Changes made to Grade D) for Phase 1. Also, for the expansion, Authority seeks clarification on the number of resources considered and proposes to consider 50% of the increase submitted by BIAL in FY 2021 for the expansion (117 employees) and consider increase of 7 % towards incentive payments and 5% on other cost from financial year 2018 onwards and proposes to recalculate the projected Salary cost accordingly.

Operations and Maintenance Expenditure

10.3.11 Break-up of the Operating Expenditure proposed by BIAL is as follows:

Table 41: Operating Expenses break-down as estimated by BIAL

Particulars	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
O&M Infra Running Costs - Aero	49.93	58.05	86.10	99.48	157.00
- Phase 1	49.93	54.92	60.41	66.45	73.10
- Phase 2	0.00	3.13	3.44	3.79	4.17
- Phase 3	0.00	0.00	22.24	29.24	79.73
O&M Costs - ICT - Phase 1- Aero	23.29	25.61	28.18	30.99	34.09
O&M Costs - Aero	9.52	15.66	17.23	18.95	20.84
Operations & Maintenance	82.73	99.32	131.50	149.42	211.93

10.3.12 Authority noted that BIAL had considered operating and maintenance (O&M) cost at certain percentage of the assets capitalized in books and additionally 10% increase in budgeted expenditure on a year on year basis. % value of asset considered for estimating Operating & Maintenance Expenditure is as follows:

Table 42: Phase-wise % of asset value considered as Operating Expenses by BIAL

Particulars	Landside	Airside	Utilities
Phase 1	1.50%	0.73%	1.71%
Phase 2	1.53%	0.73%	1.71%
Phase 3	1.92%	2.00%	2.96%

10.3.13 The Authority noted that there has been increase in % of the O&M cost on the asset base in phase 3 compared to phase 1 and 2 while, actual expenditure in CP1 was lower than budgeted. Comparison of Budget Vs. Actuals is tabulated below.

Table 43: Comparison of cost projected versus cost incurred in CP1

Particulars	2012	2013	2014	2015	2016
Estimated for Control period 1	35.19	45.35	45.07	69.88	80.04
Actuals for Control period 1	34.91	45.18	43.11	51.03	53.57
Excess /(shortfall)	0.29	0.18	1.96	18.84	26.47

10.3.14 Authority noted that BIAL had also considered O&M cost towards phase 3, which is expected capitalization from FY-2019 onwards, as below.

Table 44: Aeronautical Asset expected to be capitalized in phase 2 & 3 as per BIAL — Rs. Crore

Particulars	2017	2018	2019	2020	2021
Phase 2					
Landside	-	204.60	204.60	204.60	204.60
Phase 3					
Landside	-	-	142.71	378.29	969.25
Airside	-	-	977.63	990.08	2,645.68
Utilities	-	-	-	-	107.92

10.3.15 Authority observed that significant cost capitalized for 2019 is towards site preparatory & Earthworks to Runway 2, which may not have a recurring maintenance cost. Also, Authority is of the view that asset during the capitalization period and 1st year would be covered by Manufacturers' warranty and may not require huge maintenance expenditure as projected by BIAL.

10.3.16 Authority noted that BIAL has considered increase of 65 % in FY 2018 on Other O&M Costs.

10.3.17 BIAL response for clarifications sought by the Authority on the O&M cost is as follows:

"…Increase in O&M cost at 10% in-spite of increase in wear & tear of assets with higher utilization due to increased traffic growth, which has direct bearing on the O&M cost.

The O&M cost % for Phase 3 is arrived based on the O&M cost estimates and the infra O&M expenses are labor intensive and normally the annual increase in AMC is around 10% to 12% and the cost base has increased with sharp increase in minimum wages by around 25%-27%. Apart from these AMC's we have OEM / Proprietary item AMC's / CMC's. We are on single runway operationalized in May 2008 and faster ageing of the runway due to higher ATMs has resulted in increased frequency of maintenance of runway & taxiway thereby increases in O&M costs.

Re-laying of existing runway and taxiways is considered in FY 2021 after second runway is operationalized. Due to capacity constraints there are certain equipment *whose utilization is beyond design capacity thereby increasing the frequency of servicing resulting in higher O&M costs.*

Further, due to capacity constraints there are certain equipment which are out of support that are on maintenance support, also the estimates include certain onetime initiatives like hiring of cleaning machines, trumpet wall painting, hotline support for ALCS system, civil works on airside, airside vegetation management (regulatory requirement), Arrival-10 carousal with two in feed lines, etc…

The increase in 'Other O&M costs' are mainly towards new initiatives / improved services to enhance customer experience like Self check-in kiosk on kerbside, customer engagement program for Airport community, VIP lounge expenses due to substantial increase in VIP movement, Trolley maintenance (increase in qty & ageing), manpower costs - trolley & landside parking, customs baggage clearance and custom stamping, Increase in minimum wages impact, Q-Managers, ARRF requirements, higher spares consumption…"

10.3.18 The Authority has gone through the clarifications provided by BIAL. The Authority also notes the increased growth in passenger traffic, ageing of Airport and need for higher maintenance. However, the Authority notes that BIAL has estimated a huge increase in O&M Expenditure across the second control period. Also, the Authority notes that BIAL has projected incurring Capital Expenditure for replacement of assets etc. where required. The Authority accordingly hence increase of 15% for estimating Operations and Maintenance Expenditure for the years 2017-18 to 2020-21 from the previous year's cost and proposes to recalculate the expenses accordingly. Actual costs incurred will be reviewed and trued up based on review of the expenses including need and justification of the costs incurred.

Lease Rentals

10.3.19 BIAL pays lease rent at 3% of the land value upto 23rd May 2015 and 6% of rental value in the 8th year and with a 3% escalation per annum thereafter, to GoK as per State Support Agreement and projections for control period 2 has been based on the Agreement.

10.3.20 Authority observed that BIAL has allocated 100% of lease rentals to Aeronautical expenditure. Authority understands that usage towards Non-Aero/ Airport would be a small percentage of the total lease land hence decides not to allocate any cost to Non-Aeronautical services.

Utilities

10.3.21 Authority understands that the Utility cost computations for the second control period are as below.

Table 45: Computation of Utilities Cost for second control period as per BIAL

Particulars	2017	2018	2019	2020	2021
Power					
Power Costs – Consumption	58.30	62.38	72.72	77.81	88.96
Power Costs - Contracted Demand	2.51	2.51	2.51	2.51	5.02
Less: - Recovery					
Recovery towards demand charges	1.88	1.88	1.88	1.88	1.88
Recovery towards Power Costs	18.95	20.27	23.63	25.29	28.91
Net Power Cost	39.98	42.73	49.71	53.15	63.19
Water					
Potable Water Costs - Own Consumption	2.31	2.47	2.65	2.83	5.34
Potable Water Costs - Others' Consumption	2.83	3.02	3.24	3.46	7.17
Total Raw Water Costs	0.91	0.91	0.91	0.91	0.91
Recoveries					
Recovery - Potable Water Costs	2.06	2.20	2.35	2.52	5.00
Potable Water Costs – Aero	4.00	4.21	4.44	4.69	8.42
Utilities Total	43.97	46.95	54.16	57.84	71.60

10.3.22 Authority noted that BIAL has projected increase in water and power charges by 7% YOY basis and also there is increase in consumption of water for FY 2021 from 0.51 million KL to 0.95 million KL. Authority sought clarifications from BIAL.

10.3.23 BIAL response is as below:

"…Power - The average increase during CP 1 is 5%. The historical trend may not be true representative of future costs and hence conservatively assumed at 7% increase in Power cost for CP 2.

Potable Water - The revision in tariff by BWSSB in not done on yearly basis, but typically happens once in 2-3 years' timeframe. The last revision happened in FY16 *and this resulted in an increase of 20% in FY 16. Given that the average increase in CP 1 is 6.4%, a nominal increase of 7% is forecasted for CP 2.*

Increase in water: - In FY 2021, the South runway and Associated Works is expected to become operational. This will result in additional water consumption towards airside landscaping and vegetation maintenance apart from the increase in water consumption in airside buildings and allied infrastructures…"

10.3.24 The Authority proposes to moderate the increase in power and water charges by 5% per annum in line with the past trends and proposes to recalculate the expenses accordingly. Also, additional recoveries are made by BIAL from concessionaires which is considered as Non-Aeronautical Revenues. The Authority proposes to net off such recoveries from Power and Water costs and consider the net cost as Utilities cost under Operations & Maintenance Expenditure.

Insurance cost

10.3.25 BIAL has taken Insurance under Industrial All Risks (IAR), AOL Policy, Business Interruption Risks (BIR), Others insurance policy covering assets etc. BIAL has considered annual increase in premium on IAR policy at 3% for FY-2017 and 5% increase thereon, value of coverage on AOL policy has been increased from $500Mn to $750Mn from 2017 to 2020 and $1000Mn for 2021 and BIR policy coverage has been increased from Rs. 2168 Cr to Rs. 4000 Cr for 2017 to 2020 and Rs. 6000 Cr thereon.

10.3.26 Authority has sought clarification from BIAL on the basis for considering premium at the rate of 0.05% while historical trend reveals average rate of premium at 0.03% and reason for increase in insurance coverage for AOL and BIR Policy.

10.3.27 BIAL response is given below:

"…Recent GIC guidelines on the pricing of the large risks has pushed the premium upwards since the minimum rates are now defined and need to be adhered to, unlike in the past where insurers were offering huge discounts on the tariff rate. The GIC guideline applies to 13 industries and airports is one of the listed industries. This has led to hardening of the premium and hence higher premium rate has been assumed.

BIAL currently has AOL policy for 600 MUSD. The limit of liability for AOL is linked to the exposure viz., the passengers, cargo and aircraft handling. Going forward the traffic is expected to increase further, and with higher levels of international passengers being handled, and large aircraft operations (such as B747/A380), this will trigger the higher sum insured. Therefore, the increase to 1000 MUSD by FY22 is assumed.

With the planned expansion and higher traffic levels, the sum insured for the assets including CWIP and the Business Interruption cover and the other miscellaneous policies will increase and hence the BI and Terror cover/others needs to be increased to mitigate the higher risk…"

10.3.28 The Authority notes the responses from BIAL and basis for considering increase in value of underlying assets and basis for considering increase in premium. The Authority hence proposes to consider the estimates as provided by BIAL and true up the costs based on actuals at the end of the current control period.

Rates and Taxes

10.3.29 The Authority noted that BIAL has paid Rs. 25.54 Crore and Rs. 13.32 crore in 2015 and 2016 respectively towards Property tax. Authority sought clarification on sudden increase in expenditure incurred during control period 1.

10.3.30 BIAL has submitted that:

"…The Property taxes amount of Rs. 36.25 crore for FY 2014 and FY 2015 is the charge raised by tax authorities including arrears

The Property taxes spend for FY 2016 is towards Property tax - Rs. 7.25 crore and balance towards BIAPPA Tank rejuvenation cess…"

10.3.31 The Authority notes the response from BIAL.

Waivers and Bad Debts

10.3.32 BIAL has claimed bad debts of Rs. 44.87 Cr and 1.87 Cr for 2013 and 2016 respectively. Authority noted that in MYTO-CP-1, Authority had approved write off towards outstanding of Kingfisher Airlines becoming unrecoverable as one-off event for Rs. 47.51 Cr and also stated that managing the risk of Bad Debts was within the Business Activity to be undertaken by the Airport Operator. Authority proposes to not consider write off of any Bad debts other than Kingfisher, as the Airport Operator is expected to recover the same, in the normal course of business.

CSR Expenses

10.3.33 BIAL has submitted CSR expenditure incurred for Control period 1 and projections % of the profit for Control period 2. Details of expenditure is summarized below:

Table 46: CSR Expenditure estimated by BIAL (Rs. Crores)

Particulars	1	2	3	4	5
Control period 1	0.00	0.00	0.00	0.00	1.16
Control period 2	3.72	13.90	23.19	31.47	34.88

10.3.34 The Authority noted that BIAL has estimated the CSR cost as part of the Operating Expenditure. Being an appropriation from profits and not related to the Airport Activity, the Authority proposes to not allow CSR expenditure for CP1 and CP2 and proposes to recalculate the expenses accordingly.

General and Administration Costs

10.3.35 BIAL has claimed increase in Consultancy and Legal charges by 30% in 2017 and 10% thereon, travel and office cost has been considered at 13% increase in 2017 and 10% there on. Authority sought clarification for basis of significant increase in cost for 2017 and 10% increase YoY.

10.3.36 BIAL response is given below:

"…BIAL is transforming the Kempegowda Airport into a smart airport, is embracing technology and embarking on a digital journey. The underlying vision is to develop Bengaluru as the Gateway to South India and enhance its brand as the Silicon Valley of India, while at the same time align with the vision of the GoI of a 'Digital India'. This will enhance the 'naturally easy experience' BIAL offers to its customers.

The initiatives include conducting roadshows, industry outreach programs, catchment area programmes and industry alignment meetings. Hence, the estimates for Consultancy and Legal for FY 2018 is slightly higher mainly towards various new *digital initiatives and there after annual increase of 10% considered for Consultancy & Legal, Travel costs and Office costs as per the past trend…"*

10.3.37 The Authority notes that the past trends on increase in General Admin and Maintenance costs are fluctuating. The Authority proposes to moderate the increase in General & Administrative expenditure to 10% per annum and proposes to recalculate the expenses accordingly.

10.3.38 Considering the changes above, the Authority has recalculated the Operating Expenditure relating to Aeronautical Services as follows:

Table 47: Operating Expenditure recomputed by Authority under Hybrid Till (Rs. Crores)

Particulars	2017	2018	2019	2020	2021
Personnel Expenses	107.77	128.73	146.70	164.60	193.92
Operations & Maintenance	82.73	95.14	109.41	125.82	144.69
Lease Rent	13.03	13.42	13.83	14.24	14.67
Utilities	38.42	40.55	46.66	49.18	56.22
Insurance	3.54	4.54	5.13	6.06	8.84
Rates & Taxes (other than IT)	8.72	8.80	8.87	8.96	9.40
Marketing and Advertising	7.58	8.52	9.57	10.74	12.06
CSR					
General Administration Costs	19.66	21.63	23.79	26.17	28.78
Total Operating Expenses - Aero	**281.45**	**321.32**	**363.96**	**405.76**	**468.59**
Less: Disallowance - Interest/ Hotel cost etc.	-0.20	-0.28			
Concession fee	26.77	30.67	42.64	44.71	54.71
TOTAL OPERATING EXPENDITURE - AERO	**308.02**	**351.72**	**406.60**	**450.47**	**523.30**

10.3.39 The Authority notes that all components of Operating Expenditure estimated above, could vary, especially considering the New Runway and Terminal being commissioned, large scale Capital expenditure being proposed by BIAL and other factors. The Authority, hence proposes to true up the costs based on actuals at the end of the current control period after analysis for reasonableness.

Proposal No 9. Regarding Operating Expenditure

9.a. Based on the material before it and its analysis, the Authority proposes:

i. **To consider Operating Expenditure under Hybrid Till as detailed in Table 47 Para 10.3.38 above for determination of tariff for the second control period.**

ii. **To true up the Operating Expenditure for the current control period, at the time of determination of tariff for the next control period.**

iii. **To carry out a study for allocation of expenses between Aeronautical and Non-Aeronautical and consider the results of the study, at the time of truing up.**

11.Non Aeronautical Revenue (NAR)

11.1 BIAL's submissions on Non-Aeronautical revenues

11.1.1 BIAL has submitted as follows:

"…4.9 Non-Aeronautical Revenues

4.9.1 Background

BIAL was the first PPP airport and is a pioneer in developing, maintaining and running the airport operations which primarily aims at focusing on its core competence viz., airport operations. In order to ensure quality service, BIAL has concessioned the aviation concessions and non-aeronautical activities to the experts / market leaders.

Through an extensive international bidding process, BIAL selected partners for non-aeronautical services such as Cargo Facility, Ground Handling, Aviation Fuel, Flight Catering, Retail, Food & Beverages, Advertising, etc. This ensures introduction of best practices from all over the world and helps in maintaining international quality standards. BIAL also ensured that a minimum of 2 concessionaires operate in every business so as to safeguard adequate competition and better service to end users.

BIAL has entered into Service Provider Right Holder Agreement (SPRH) with service providers wherein BIAL is entitled for agreed percentage of revenue share on gross turnover or Minimum Annual Guarantee (MAG), whichever is higher.

4.9.2 Treatment of Non-aeronautical Revenue (NAR)

As per Article 10 of the Concession Agreement (CA) read with Schedule-6, Regulated Charges i.e., Landing, Parking, Housing, PSF and UDF are only to be regulated. Further, as per Article 10.3 of the CA, BIAL is free without any restriction to determine the charges to be imposed in respect of the facilities and services provided at the Airport or on the site, other than the facilities and services in respect of which Regulated Charges are levied.

As per Order No. 8/2014-15 of AERA, the Authority had also considered the Cargo, Ground Handling & Fuel (CGF) throughput Revenues, ICT Revenues and Common

Infrastructure Charges (CIC) as Aeronautical Services. However, as detailed in Section 3, BIAL has contested this Order No. 8/2014-15 with the Hon'ble Appellate Tribunal. As a result, for the purpose of this submission, BIAL has considered CGF as Non Aeronautical Revenues.

The following is the list of non-aeronautical services:

1. Landside Traffic

2. Terminal Entry/Miscellaneous services

3. Retail

4. Food and Beverages

5. Advertising and Promotions

6. Rent and Land Lease

7. Lounge Services

8. Utility Charges

9. Flight Catering

10. CGF

11. ICT (including CIC)

4.9.3 Estimation of Non-aeronautical Revenue in Control Period 2

There are basically two potential revenue streams to BIAL from the concessionaires, i.e. (a) fixed percentage revenue share, and (b) Minimum Annual Guarantee (MAG). BIAL realizes whichever of these revenue streams is higher. As per previous experience, projections for most components have been made on fixed percentage revenue share.

As in the previous submission, the projections are majorly based on the business plan projections submitted by the concessionaire as per the agreement entered into with BIAL for a tenure ranging between 1 to 15 years.

The profile of the consumers plays a vital role in terms of actual realization of the non-aeronautical revenue. The trend of the last couple of years shows that the major traffic increase is in the domestic traffic, while International traffic growth is as per estimates.

Furthermore, the major growth of the passenger traffic (within domestic traffic growth) was observed from the increased share of LCC passenger as against FSC passengers. Traditionally, LCC passengers have a lower appetite for spending on non-aeronautical revenues such as retail and F&B. This was suitably considered while arriving at the projections for Control Period 2 for NAR.

Terminal 1 was planned for a capacity of 20 mppa. However, BIAL is currently handling a traffic of 23 million, which is further expected to increase to over 32 million before Terminal 2 is commissioned. In order to accommodate this traffic, BIAL has introduced a host of temporary measures to sweat out the current Terminal. This has been done to increase the passenger area movement, check-in counters and security counters. Consequently, there has been a reduction in the space for retail and F&B outlets. On the other hand, while number of passengers is increasing, the capacity of existing NAR services will remain the same.

Considering all these factors, BIAL has assumed a growth rate of NAR corresponding to CPI growth rate.

The below mentioned are the various components of NAR along with their respective drivers.

S. No.	NAR Component	Primary Drivers
1	Landside Traffic	CPI
2	Retail/ Duty Free	CPI
3	Food & Beverages	CPI
4	Advertisement & Promotions	Revenue share
5	Rent & Land leases	Space
6	Utility charges	Consumption
7	Flight Catering	MAG
8	CGF Revenue	Revenue Share
9	Others (Lounge Revenue, Terminal Entry)	CPI

The major line items of revenue streams which constitute NAR and its percentage share to the total NAR is detailed below:

Particulars	Control Period 2 (Rs. Crore)	Percentage share to total NAR
Landside traffic	350.0	12%
Retail	582.0	20%
Food & Beverage	176.2	6%
Advertising and Promotions	373.5	13%
Rents and Land leases	140.4	5%
Cargo	237.7	8%
Fuel Farm	456.3	16%
Ground handling	24.9	1%
ICT (including CIC)	285.7	10%
Other Revenues	223.6	8%
Total	2850.3	100%

Others includes Lounge Revenue, Terminal Entry and Utility charges

4.10 Other income

Apart from the NAR discussed above, BIAL would also earn income from two other sources – Interest income on Cash balances and on DSRA balances as shown below:

….”

11.1.2 BIAL in its MYTP 2017 provided the details of revenue break-up from Non-Aeronautical. Details of services considered by BIAL as Non-Aeronautical revenue is listed below: -

11.1.2.1 Aircraft cleaning services

11.1.2.2 Airlines lounges

11.1.2.3 Cargo handling

11.1.2.4 Cargo terminal

11.1.2.5 Ground handling services

11.1.2.6 Hangars

11.1.2.7 Heavy maintenance services for Aircraft

11.1.2.8 Observation terrace

11.1.2.9 Banks/ATM

11.1.2.10 Baureaux de change

11.1.2.11 Business Center

11.1.2.12 Conference Center

11.1.2.13 Duty free sales

11.1.2.14 Flight Catering services

11.1.2.15 Freight consolidations / forwarders or agent

11.1.2.16 General retail shops

11.1.2.17 Hotel/motels

11.1.2.18 Hotel reservation services

11.1.2.19 Line Maintenance services

11.1.2.20 Locker rentals

11.1.2.21 Logistics centers

11.1.2.22 Messenger services

11.1.2.23 Porter services

11.1.2.24 Restaurant, bar and other refreshments facilities

11.1.2.25 Special assistances services

11.1.2.26 Tourist information services

11.1.2.27 Travel agency

11.1.2.28 Vehicle fueling services

11.1.2.29 Vehicle rental

11.1.2.30 Vehicle parking

11.1.2.31 Warehousing

11.1.2.32 Welcoming services

11.1.3 BIAL has submitted that under Shared Till, 30% of Non-Aeronautical revenues are considered for adjusting against ARR to determine the tariff. BIAL had submitted details of the above revenue earned for Control period 1 and projected revenue for Control period 2 in their submission. A summary of Non-Aero revenue for first control period and revenue projections for Control period 2 is detailed below.

Table 48: Summary of Non-Aeronautical Revenues for First control period as submitted by BIAL (Rs. Crores)

Particulars	2012	2013	2014	2015	2016
Landside Traffic	22.63	29.27	30.92	37.66	44.47
Terminal Entry/Miscellaneous Income	0.26	0.25	0.24	0.23	0.23
Retail	28.73	33.92	41.62	61.42	88.60
Food & Beverage	13.43	13.96	15.35	19.01	25.18
Advertising & Promotions	33.62	36.95	37.64	46.69	53.32
Rents and Land Leases	19.94	20.47	21.25	22.68	26.05
Lounge Revenues	5.97	6.40	4.88	12.02	14.72
Utility Charges	5.32	5.29	5.37	5.52	6.01
Flight Catering	5.22	5.65	6.11	6.61	8.26
Non-Aviation Revenues - Others	93.91	92.55	98.77	120.60	155.20
Total Non-Aero Revenues	**229.03**	**244.72**	**262.15**	**332.43**	**422.03**

Table 49: Summary of Non-Aeronautical Revenues for Second control period projected by BIAL (Rs. Crores)

Particulars	2017	2018	2019	2020	2021
Landside Traffic	63.34	66.51	69.83	73.33	77.00
Terminal Entry/Miscellaneous Income	0.18	0.18	0.18	0.18	0.18
Retail	105.32	110.59	116.12	121.93	128.02
Food & Beverage	31.88	33.48	35.15	36.91	38.75
Advertising & Promotions	71.77	70.00	73.50	77.18	81.03
Rents and Land Leases	25.42	26.82	28.02	29.29	30.89
Lounge Revenues	19.76	20.75	21.79	22.88	24.02
Utility Charges	5.55	5.55	5.55	5.56	11.08
Flight Catering	8.45	9.25	10.10	11.01	11.94
Non-Aviation Revenues - Others	179.14	190.84	202.73	218.21	243.17
Total Non-Aero Revenues	**510.82**	**533.96**	**562.97**	**596.46**	**646.09**

11.1.4 BIAL has considered Cargo, Ground handling and Fuel Farm operations as Non-Aeronautical services along with considering revenue from ICT services as Non-Aeronautical.

11.1.5 BIAL has submitted as follows, relating to Non-Airport activities:

"…BIAL has conducted studies through International Property Consultants to understand the possible land uses for commercial exploitation, given the conditions provided in the concession agreement. The studies indicate that there will be a sustained demand over a phased period for different asset classes such as commercial office spaces, hospitality – hotels and service apartments, MICE components – exhibition and convention centers, shopping malls, food and beverage, education institutions and hospitals among others.

Furthermore, BIAL has identified 462 acres of land from the total land parcel of 4,009 acres for commercial real-estate development. The land has been leased to the airport and therefore any further transfer of land for development can be on a sub-lease basis only. The land allocated for the commercial development is presently not serviced. A large investment – upwards of INR 500 crores is needed to make the land serviceable by provision of roads, power, water, IT etc. BIAL is currently constrained to allocate resources for the development of airside infrastructure given the rapid rate of increase in passenger and cargo traffic. Real estate development will have to wait for resource allocation for any meaningful development to happen. In Order No. 8/2014-15, AERA proposes to consider income from leased land utilized for non-airport activities for the purpose of tariff determination, on the basis of recommendations from GoK. BIAL has appealed to the Hon'ble Appellate Tribunal and matter is pending for further hearing. BIAL has not considered any real estate development activities during Control Period 2 for the purpose of MYTP submission…"

11.2 Authority's analysis of Non-Aeronautical Revenues

11.2.1 The Authority has carefully evaluated the submissions made by BIAL relating to Non-Aeronautical Revenue. Authority's analysis of individual heads is as given below.

11.2.2 Authority notes the trend of revenue growth in key heads of Non-Aeronautical revenue as follows:

Table 50: Revenue per passenger analysis by Authority for key Non-Aero Revenue heads

Particulars	2012	2013	2014	2015	2016	2017
Revenues for Key Heads (Rs. Crore)						
Landside Traffic	22.63	29.27	30.92	37.66	44.47	63.34
Retail	28.73	33.92	41.62	61.42	88.60	108.32
Food & Beverage	13.43	13.96	15.35	19.01	25.18	31.88
Flight Catering	5.22	5.65	6.11	6.61	8.26	8.45
Lounge Revenues	5.97	6.40	4.88	12.02	14.72	19.76
Growth Rates (Value terms)						
Landside Traffic		29.35%	5.65%	21.77%	18.10%	42.43%
Retail		18.05%	22.71%	47.59%	44.24%	22.27%
Food & Beverage		3.95%	9.94%	23.84%	32.44%	26.63%
Flight Catering		8.23%	8.19%	8.16%	25.03%	2.26%
Lounge Revenues		7.32%	-23.78%	146.31%	22.39%	34.31%
Average Revenue per passenger						
Total Passengers (Mn.)	12.71	11.99	12.87	15.40	18.97	22.88
Revenue per passenger (Rs.)						
Landside Traffic	17.80	24.40	24.03	24.45	23.44	27.68
Retail	22.60	28.28	32.34	39.88	46.70	47.34
Food & Beverage	10.57	11.64	11.93	12.34	13.27	13.93
Flight Catering	4.10	4.71	4.75	4.29	4.35	3.69
Lounge Revenues	4.70	5.34	3.79	7.81	7.76	8.64

Landside Traffic

11.2.3 Landslide Traffic consists of revenue from parking, taxi & limousine. The Authority observed BIAL has projected revenues from each of the service with downward trend in revenue per passenger. Summary of the revenue per PAX and % change is listed below.

Table 51: Landside traffic trend analysis – Revenue per passenger

Particulars	2017	2018	2019	2020	2021
Revenue Share					
Parking Services	21.23	20.35	19.57	18.85	18.26
% change in revenue projections	-13%	-4%	-4%	-4%	-3%
Taxi Services	29.12	27.92	26.84	25.86	25.05

Particulars	2017	2018	2019	2020	2021
% change in revenue projections	41%	-4%	-4%	-4%	-3%
Limousine	4.89	4.69	4.51	4.34	4.21
% change in revenue projections	-12%	-4%	-4%	-4%	-3%

11.2.4 Authority sought clarification and basis for considering fall in revenue per passenger through the Control period 2.

11.2.5 BIAL's response is as given below:

"…Parking - The growth opportunities in parking is constrained on account of landside expansion works - MLCP, roadways, others.

Taxi - The Airport taxi operators business has reduced because of competition from App based taxis. The parking space is constrained and not able to accommodate complete requirements of App based taxi.

Limousine - This business is in MAG and may opt out of the Airport. Hence, annual increase in revenue estimated at 5%.

The passenger has option to take private vehicle, bus or other modes for transport. The entire passenger increase will not result in higher parking/taxi/ limousine revenue for BIAL. Hence, we have assumed an annual increase of 5% of revenue to BIAL…"

11.2.6 The Authority notes BIAL submissions above on Non-Aeronautical Revenues, the constraints faced in the Terminal Building and the change in profile of passengers. While it may not be possible to project a higher growth at revenue per passenger level, the Authority proposes to consider an increase in revenue by 12.5% per annum from FY 2018 onwards, broadly in line with the increase in volume of passengers and proposes to recalculate the revenues accordingly.

Retail

11.2.7 Retail business of BIAL includes domestic, international, Forex & Others. The Authority noted that BIAL has projected lower revenue growth on a year on year basis per passenger. Summary of the revenue and % decrease is tabulated below:

Table 52: Retail revenue trend analysis – Revenue per passenger

Particulars	2017	2018	2019	2020	2021
Revenues Summary - Retail					
Total Revenues - Retail-Domestic	18.35	17.59	16.91	16.29	15.78
% change in revenue projections	1%	-4%	-4%	-4%	-3%
Total Revenues - Retail-Int'l.	413.15	395.21	380.00	366.05	354.24
% change in revenue projections	9%	-4%	-4%	-4%	-3%
Total Revenues - Retail-Others	1.53	1.47	1.41	1.36	1.32
% change in revenue projections	14%	-4%	-4%	-4%	-3%
Total Revenues - Retail-Forex	31.90	30.51	29.34	28.26	27.35
% change in revenue projections	14%	-4%	-4%	-4%	-3%

11.2.8 Authority sought clarification and basis for considering fall in revenue per passenger through the Control period 2.

11.2.9 BIAL response is as below:

"…While there is growth in passengers, the Retail space is not increasing. The Terminal is congested and passenger is constrained for space and time. Hence, we are not expecting more revenues and thus an annual increase of 5% has been assumed…"

11.2.10 The Authority notes BIAL submissions above on Non-Aeronautical Revenues, the constraints faced in the Terminal Building and the change in profile of passengers. While it may not be possible to project a higher growth at revenue per passenger level, the Authority proposes to consider an increase in revenue by 12.5% per annum from FY 2018 onwards, broadly in line with the increase in volume of passengers and proposes to recalculate the revenues accordingly.

Food & Beverage

11.2.11 F&B business of BIAL is classified under 3 categories. i.e. domestic, International & Others. The Authority noted that BIAL has projected lower revenue per PAX for all the 3 categories of service for Control period 2. Summary of the revenue and % decrease is tabulated below:

Table 53: F&B Revenues - Trend of revenue per passenger

Particulars	2017	2018	2019	2020	2021
Revenues Summary - F&B					
Total Revenues - F&B -Domestic	15.20	14.57	14.01	13.50	13.08
% change in revenue projections	9%	-4%	-4%	-4%	-3%
Total Revenues - F&B - Int'l.	20.18	19.35	18.60	17.92	17.34
% change in revenue projections	0%	-4%	-4%	-4%	-3%
Total Revenues - F&B -Others	11.82	11.33	10.90	10.50	10.17
% change in revenue projections	3%	-4%	-4%	-4%	-3%

11.2.12 Authority sought clarification and basis for considering fall in revenue per passenger through the Control period 2.

11.2.13 BIAL's response is detailed below:

> *"…While there is growth in passengers, the F&B space is not increasing. The Terminal is congested and passenger is constrained for space and time. After a certain volume revenue per pax cannot increase continuously due to inherent constraints like competition, pricing, etc... Also, due to various expansion activities, the revenues from Kerbside outlets will get impacted in the next 3 years. Hence, we are not expecting more revenues and thus an annual increase of 5% has been assumed…"*

11.2.14 The Authority notes BIAL submissions above on Non-Aeronautical Revenues, the constraints faced in the Terminal Building and the change in profile of passengers. While it may not be possible to project a higher growth at revenue per passenger level, the Authority proposes to consider an increase in revenue by 12.5% per annum from FY 2018 onwards, broadly in line with the increase in volume of passengers and proposes to recalculate the revenues accordingly.

Advertising and Promotions

11.2.15 BIAL has entered into contract with Advertisement Company with minimum Guaranteed revenue plus % of revenue share. BIAL has projected fall in revenue for 2018 by 2.5% from the previous year and nominal growth thereon at the rate of 5% while the historical trend shows year on year growth of 13.52%. Summary of the revenue and with % Increase / decrease is tabulated below:

Table 54: Trends in Advertising and Promotions

Particulars	2012	2013	2014	2015	2016
Revenues from Advertising & Promotions	33.62	36.95	37.64	46.69	53.28
% of Increase /Decrease in revenue	38%	10%	2%	24%	14%
Particulars	2017	2018	2019	2020	2021
Revenues from Advertising & Promotions	71.77	70.00	73.50	77.18	81.03
% of Increase /Decrease in revenue	35%	-2%	5%	5%	5%

11.2.16 Authority sought clarification on negative projections for 2018 and reason for considering growth of 5% for 2019 to 2021.

11.2.17 BIAL has responded as below:

"...Based on higher actual turnover of concessionaire for FY 2016-17, BIAL has considered 35% hike for FY 2016-17. This is not a regular phenomena and we don't envisage such higher turnover for subsequent periods. Also, the landside expansion (widening of roads - Main access road, approach roads, forecourts and taxi holding areas) projects will have huge impact on outdoor advertisement revenues. Hence, the revenue estimate for FY 2017-18 is revenue share to BIAL based on projected revenue as per agreement and thereafter growth of 5%..."

11.2.18 The Authority understands that outdoor advertisement revenues for BIAL could be impacted considering landside expansion. Hence the Authority proposes to consider the revenues estimated by BIAL and true up the revenues based on actuals at the end of the current control period.

Rent and Land Leases

11.2.19 Rent and Lease land consist of rental revenues from Airside / Landside, PTB – Office, PTB - Storage / GSE, Cargo Warehouse / Offices, Land Lease & AAI. BIAL has projected expected rentals with the area available and occupancy.

11.2.20 Authority had reviewed the computations and sought clarification from BIAL to explain the reason for significant fall in price for FY-2015 on Airside/Landside, PTB - Storage / GSE, & Cargo Warehouse / Offices. Also, the Authority noted that BIAL has considered conservative increase of 5% on year on year basis.

11.2.21 Authority also noted that rentals are received from various service providers who provide Aeronautical services. Authority proposes to consider revenue from Aeronautical service providers as Aeronautical Revenues.

Lounge Revenues

11.2.22 Lounge revenue consists of rentals derived from domestic, international & day hotels. Authority observes that BIAL has projected revenues per passenger in decreasing trend on a year on year basis. Summary of the revenue and with % Increase / decrease is tabulated below:

Table 55: Lounge Revenue - Trend analysis of revenue per passenger

Particulars	2017	2018	2019	2020	2021
Revenues Summary - Lounge Revenues					
Domestic Rental per PAX	8.31	7.97	7.66	7.38	7.15
% Decrease in revenue projections	27%	-4%	-4%	-4%	-3%
International Rental Per PAX	62.40	59.69	57.40	55.29	53.51
% Decrease in revenue projections	16%	-4%	-4%	-4%	-3%
Day Hotel Rentals per PAX	0.52	0.50	0.48	0.46	0.45
% Decrease in revenue projections	-20%	-4%	-4%	-4%	-3%

11.2.23 Authority sought clarification and basis for considering fall in revenue per passenger through the Control period 2.

11.2.24 BIAL has submitted as follows:

"…There is a constraint in seating capacity for lounges during peak period and this impacts revenue. Also, the lounge caters to niche travellers and does not increase proportionately with traffic. Thus an increase in annual growth of 5% revenue is estimated for CP 2.

The day hotel is in MAG with a 5% year on year increase as per Agreement. The higher passenger growth has resulted in a decrease in per depax revenue. Hence, it is estimated that annual increase in revenues will continue to grow at 5%..."

11.2.25 The Authority notes BIAL submissions above on Non-Aeronautical Revenues, the constraints faced in the Terminal Building and the change in profile of passengers. While it may not be possible to project a higher growth at revenue per passenger level, the Authority proposes to consider an increase in revenue by 12.5% per annum from FY 2018 onwards and proposes to recalculate the revenues accordingly.

Utility Charges

11.2.26 BIAL has considered revenue collected from concessionaries on electricity, potable water and waste management services as part of utility revenue under Non-Aeronautical Revenue. The Authority has carefully examined the same and proposes to consider these recoveries as a reduction to utility cost (OPEX) and therefore consider the net costs relating to Utilities as Aeronautical after set off.

Flight Catering

11.2.27 BIAL has forecasted revenue considering higher of following (i) estimated PAX expected to use services & expected revenue per passenger and (ii) Minimum Annual Guarantee. Authority observes that BIAL has considered lower utilization of services of flight catering considering its double-digit growth in past; analysis is tabulated below:

Table 56: Projected PAX expected to utilization services of flight catering

Particulars	2012	2013	2014	2015	2016
No. of passengers expected to avail FC service	2.42	2.55	2.99	3.64	4.57
% Increase /(Decrease) in Revenue	33%	5%	17%	22%	25%
Particulars	2017	2018	2019	2020	2021
No. of passengers expected to avail FC service	5.50	6.03	6.58	7.17	7.78
% Increase /(Decrease) in Revenue	21%	10%	9%	9%	8%

11.2.28 Authority sought clarification and basis for considering lower passenger base while the past trend reveals continuous increasing trend in volumes.

11.2.29 BIAL has submitted as follows:

> *"…The flight catering revenue until FY 2014-15 was in MAG, hence the past trend shows higher revenue per passenger growth. There on they are on revenue share for FY 2015-16 and we don't anticipate higher growth on account of passenger growth as we observe there is higher increase in LCC model as against FSC model. Hence, the same revenue per passenger of FY 2015-16 is considered for entire CP 2…"*

11.2.30 As detailed above, while it may not be possible to project a higher growth at revenue per passenger level, the Authority proposes to consider an increase in revenue by 12.5% per annum from FY 2018 onwards, broadly in line with the increase in volume of passengers and proposes to recalculate the revenues accordingly.

Non- Aviation Revenues - Others

11.2.31 Revenues from non-aviation includes revenues from Cargo services, Ground handling, Fuel farm, ICT, CIC charges, Reception desk, Oil Spillage, infra services etc.

11.2.32 Authority notes that revenue from Cargo Ground Handling, Fuel Farm, ICT and CIC charges are considered as Aeronautical revenues by BIAL. This has been analysed in detail by the Authority in MYTO-CP1 and Authority has elaborated its reasoning and analysis for considering these revenues as Aeronautical Revenues, as detailed below:

> *Decision No. 16 Treatment of Revenue from Ground Handling, Fuel throughput and Cargo Services*
>
> *The Authority decides:*
>
> *To note that the Fuel Farm Facility is operated by IOSL and the assets of this facility are on the balance sheet of IOSL. To further note that IOSL is paying Airport Operator Fee (commonly understood as Fuel Throughput charge) of Rs. 1067 per KL to BIAL. Accordingly to consider the Throughput Fee revenue from fuel farm service concessioned out by BIAL to IOSL as Aeronautical Revenue in the hands of BIAL.*
>
> *To consider the revenue from Cargo Facility, Ground Handling and Into Plane services (provided by third party concessionaires) accruing to BIAL as Aeronautical revenue for determination of tariffs of aeronautical services for the current control period.*

11.2.33 Accordingly, the Authority considers these revenues as Aeronautical Revenues.

11.2.34 The Authority is aware that in certain cases, the Non-Aeronautical activities are concessioned out and are operated by different concessionaires from whom a Minimum Guarantee or a share is earned. However, in certain cases, the Airport Operator would carry out certain business ventures (either in the same company or through a controlled subsidiary), which are not allied to Airport Business. In these cases, the entire financial results of the operations would reflect in the financials of the Operator/ controlled subsidiary entity.

11.2.35 The Authority notes that BIAL has a subsidiary BAHL, which runs the hotel at the Airport. Revenues earned from the Hotel operations are reflected in the income statement of BAHL. The Authority understands that BIAL does not earn any revenues out of leasing out space to the Hotel.

11.2.36 The Authority has detailed its policy on consideration of Non-Aeronautical Revenues and decision to treat revenues arising out of monetisation of land development activities by considering 30% of the revenues as subsidisation towards Aeronautical charges.

11.2.37 The Authority had sought for details of the Income statement of the subsidiary, which has been submitted by BIAL. Summary information is presented below:

Table 57: BAHL Financials and projections submitted by BIAL

Amount in Rs. Crore	Audited 2016-17	Estimates 2017-18	Estimates 2018-19	Estimates 2019-20	Estimates 2020-21
Revenue from Hotel	27.84	61.10	70.17	80.61	88.59
Room Income	16.61	31.91	36.69	40.00	42.93
F&B Income	9.44	23.93	27.52	33.60	37.84
F&B - Others	1.28	1.15	1.32	1.60	1.85
Other Income	0.52	4.12	4.65	5.41	5.98
Total Revenue	**27.84**	**61.10**	**70.17**	**80.61**	**88.59**
Personnel	6.35	13.14	14.19	15.32	16.55
Raw Materials	2.91	5.92	6.81	8.32	9.37
Utilities	3.60	7.52	7.41	7.31	7.23
Rates & Taxes	0.24	0.26	0.27	0.29	0.30
Management Fee	0.37	2.39	2.94	3.55	4.01
Consultancy & Legal	0.44	0.49	0.54	0.59	0.65
Others	6.94	14.22	15.35	16.58	17.41

Amount in Rs. Crore	Audited 2016-17	Estimates 2017-18	Estimates 2018-19	Estimates 2019-20	Estimates 2020-21
Net Operating Expenses	**20.85**	**43.94**	**47.52**	**51.96**	**55.51**
EBITDA	**6.99**	**17.16**	**22.66**	**28.65**	**33.08**
EBITDA % on revenue	**25%**	**28%**	**32%**	**36%**	**37%**
Financing Costs	18.28	35.80	34.20	31.67	29.02
Earnings before depreciation	**(11.29)**	**(18.64)**	**(11.54)**	**(3.02)**	**4.06**
Depreciation	15.08	31.00	31.12	31.21	31.31
PBT	**(26.37)**	**(49.64)**	**(42.67)**	**(34.23)**	**(27.25)**
Taxes	-	-	-	-	-
Profit/(Loss) after tax	**(26.37)**	**(49.64)**	**(42.67)**	**(34.23)**	**(27.25)**
PAT % on revenue	***-95%***	***-81%***	***-61%***	***-42%***	***-31%***
Profit / Loss carried to B/ S	**(26.37)**	**(49.64)**	**(42.67)**	**(34.23)**	**(27.25)**

11.2.38 The Authority notes from the actual and projected financials of the Hotel Operations that it will incur a loss. The Authority also notes that there is no income accruing to BIAL, even on the land area given on lease. The Authority accordingly proposes to consider a land lease rent for the area given on lease to the Hotel Operator as non-aeronautical revenue for the purpose of this control period, considering the losses in the Hotel. This would be reviewed again based on the changes in scenarios.

11.2.39 The Authority notes that BIAL has not carried out any other land development activities.

11.2.40 The Authority has also obtained the details of Security deposits raised by BIAL. The Authority understands that BIAL has obtained Security Deposits from Parties which could also be used to fund the project expenses or reduce Non-Aeronautical Revenue. An amount of Rs. 148.34 crores as of 31st March 2012 and Rs. 208.08 crores as of 31st March 2016 is appearing as Security Deposit. The Authority notes that the matter of considering Security Deposit for computing FRoR is sub-judice.

11.2.41 These Security Deposits could mean a reduction in the rentals/ charges collected from the respective users. The Authority accordingly proposes to consider a notional revenue on the Security Deposits collected from Non-Aeronautical service providers.

11.2.42 The Authority is also cognizant of the large-scale Infrastructure development activities which necessitate changes/ alternations to the space utilisation with the Terminal Building and possible change in landscape to the forecourts and the access roads, which could all impact the Non-Aeronautical earnings of the Airport Operator. Hence, while certain drivers or growth rates have been changed for the process of estimation, the actual results may vary from the estimates considered herein. Hence the Authority proposes to review and true up the Non-Aeronautical Revenue based on actuals at the end of the current control period while determining tariff for the next control period.

11.2.43 Recomputed Non-Aeronautical Revenues as computed by the Authority is as follows:

Table 58: Recomputed Non-Aeronautical Revenues (Rs. Crore)

Particulars	**2017**	**2018**	**2019**	**2020**	**2021**
Landside Traffic	63.34	71.26	80.16	90.19	101.46
Terminal Entry/Miscellaneous Income	0.18	0.18	0.18	0.18	0.18
Retail	108.32	121.86	137.10	154.23	173.51
Food & Beverage	31.88	35.87	40.35	45.39	51.07
Advertising & Promotions	71.77	70.00	73.50	77.18	81.03
Rents and Land Leases	2.92	4.32	5.52	6.79	8.39
Lounge Revenues	19.76	22.23	25.01	28.14	31.66
Utility Charges	0.00	0.00	0.00	0.00	0.00
Flight Catering	8.45	9.50	10.69	12.03	13.53
Non-Aviation Revenues - Others	0.00	0.00	0.00	0.00	0.00
Total Non-Aero Revenues	**306.62**	**335.22**	**372.51**	**414.12**	**460.82**
Add: Revenue considered for Land Lease - Hotel	9.26	9.26	9.26	9.26	9.26
Add: Revenue considered for Security Deposits	3.70	3.70	3.70	3.70	3.70
Total Non-Aero Revenues	319.58	348.18	385.47	427.08	473.78
Add: Interest Income on estimated cash	21.41	9.63	9.67	4.80	1.36
Total considered for computing 30% for adjustment	**340.99**	**357.81**	**395.14**	**431.87**	**475.14**

Notes:

1) Rent and Land Lease is reduced from BIAL estimation as balance is considered as Aeronautical to be considered as reduction in ARR for determining charges viz. Landing, Parking etc.

2) Utility income reduced from Operating Expenses hence no income considered

3) Non-Aviation Revenues projected by BIAL was towards Cargo, Ground Handling, Fuel Farm, ICT and related services which are considered as Aeronautical, hence are to be reduced from ARR while computing charges viz. Landing, Parking etc.

Proposal No 10. Regarding Non-Aeronautical Revenues

10.a. Based on the material before it and its analysis, the Authority proposes:

i. **To consider Non-Aeronautical Revenues as detailed in Table 58 Para 11.2.43 above for determination of tariff for the second control period.**

ii. **To review and true up the Non-Aeronautical Revenues on actuals, at the time of determination of tariff for the next control period.**

12.Cost of Equity, Cost of Debt and Fair Rate of Return (FRoR)

12.1 BIAL's submissions on Cost of Equity, Debt and FRoR

Cost of Equity

12.1.1 BIAL has submitted that Cost of Equity has been computed considering the Capital Asset Pricing Model. BIAL's submissions are detailed below:

"…Cost of Equity for Control Period 2 has been computed using the Capital Asset Pricing Model (CAPM). For the purpose of this submission, BIAL has prepared the following scenarios using the same approach as used by AERA in Order No. 8/2014-15.

5.5.3.1 Approach considered for submission to be in-line with Authority's approach as per Order No. 8/2014-15

The values used for each of the parameters in CAPM and the corresponding logic/source are summarized below:

Component of CAPM	*Value*	*Logic/ Source*
Rf (Risk free rate)	*7.86%*	*10 year average of 10 year bond yield (2005 – 2015)*
Equity Risk Premium (ERP) for India	*8.01%*	*Revised ERP for India as per Aswath Damodaran approach (July 2015)*
Asset Beta (Ba)	*0.51*	*As suggested by NIPFP and AERA in Order No. 8/ 2014-15*
Debt (D)	*70*	*Expected Debt Equity Ratio for BIAL*
Equity	*30*	*Expected Debt Equity Ratio for BIAL*
D:E	*0.7*	*Expected Debt Equity Ratio for BIAL*
Equity Beta (Be)	*1.7*	*Ba/ (1-D:E)*
Ke (Cost of Equity)	*21.48%*	*Rf + Be*(ERP(India))*

Risk Free Rate (Rf)

As shown above, the Risk Free Rate (Rf) has been considered as an average of 10 year bond yield of the past 10 years (01 January 2005 to 01 January 2015). This is the same as the methodology used by AERA and NIPFP in Order No. 8/2014-15. The Rf works out to 7.86%.

The Interest rates on Central and State Government Dated Securities – RBI have been provided in Annexure 6.

Equity Risk Premium (ERP)

As per Aswath Damodaran (2005), the Equity Risk Premium (ERP) of a developing/emerging market (EM) is calculated using the following formula:

ERP (EM) = ERP (Developed Market) + Default Risk Spread (EM)

This is the same formula as has been used by NIPFP and AERA in Order No. 8/2014-15.

Using the updated estimates by Damodaran (July 2015), the following is the revised calculation:

ERP (India) = ERP (US) + Default Risk Spread (India)

ERP (US) is 5.81% and Default Risk Spread for India is 2.20% (given Moody's rating of Baa3). Thus the ERP (India) is considered as 8.01%.

The revised estimates of ERP as per Aswath Damodaran are provided in Annexure 7.

Asset Beta (Ba)

As per Order No. 8/2014-15 for BIAL, AERA has used the Asset Beta of 0.51 based on a report prepared by the Strategic Finance Group (SFG) for Air New Zealand. Hence for the purpose of this analysis, asset beta (Ba) has been considered at 0.51.

Debt: Equity Ratio

As part of its analysis, AERA had used the following formula for estimating the leverage

Leverage (D:E) = Debt / (Debt + Equity)

The Debt Equity Ratio in the Control Period 1 was 70:30 and the same has been considered in Control Period 2.

Equity Beta (Be)

Using the same approach as used by AERA in Order No. 8/2014-15, the asset beta is re-levered using the Debt Equity Ratio as follows:

Equity Beta (Be) = Ba/ (1-D:E)

This gives an Equity Beta of 1.7.

Cost of Equity (Ke)

Using the above inputs and the CAPM model, the Cost of Equity for BIAL is calculated at 21.48%. The following formula is used for this calculation:

*Ke=Rf + Be * (ERP (India))*

5.5.3.2 BIAL's eligible cost of equity

The Cost of Equity was also computed considering the latest available Equity Risk Premium and Asset Beta as per NIPFP April 2012 Report and the Cost of Equity has been arrived at as 24.66% as explained below.

Equity Risk Premium

Using the updated estimates by Damodaran (11 February 2016), the following is the revised calculation:

ERP (India) = ERP (US) + Default Risk Spread (India)

ERP (US) is 6.25% and Default Risk Spread for India is 2.44% (given Moody's rating of Baa3). Thus the ERP (India) is considered as 8.69%.

Asset Beta

In April 2012, in its paper titled "Cost of Equity for Private Airports in India – Comments on DIAL‟s response to AERA Consultation Paper No. 32, and the report by SBI Caps", NIPFP calculates Asset Beta for selected airports. This is the same sample as was considered by the SFG Report for Air New Zealand, which was used by NIPFP for suggesting asset beta as per Order No. 8/2014-15 for BIAL.

The table below is extracted from this April 2012 paper of NIPFP

…

As seen above, the weighted average for the Asset Beta, when Debt Equity Ratio is at market value of equity is 0.61. Further, when Debt Equity Ratio is at book value of equity, asset beta is 0.58. When the median is taken, asset beta is 0.58 for both cases of Debt Equity Ratio. Hence for this computation, Ba is considered as 0.58.

The NIPFP Response to DIAL for Asset Beta Calculations – April 2012 is provided in Annexure 8.

With these two changes, the revised Cost of Equity for BIAL becomes 24.66%.

However, for the purpose of this submission, we request the Authority to consider the Cost of Equity as 21.48%...”

Cost of Debt

12.1.2 BIAL has submitted details of the loan taken for the initial project, T1 Expansion and other works and the proposed loans for the next phase of works. BIAL has submitted that initially a portion of funding was obtained through rupee loans with a small portion of the remainder amount from External Commercial Borrowings (ECB) loan from ICICI Hong Kong in USD. This USD loan has been fully hedged until final repayment in 2018 to take care of the exchange and interest rate risks associated with it. The T1 expansion loan was raised in INR only.

12.1.3 BIAL has proposed an Interest rate of 11.5% on the Rupee Term Loans proposed to be taken during the second control period for the future expansion works.

Fair Rate of Return

12.1.4 BIAL has computed Fair Rate of Return by considering Cost of Equity and Cost of Debt as above along with considering the State Support Loan as a source of funding.

12.1.5 As per BIAL, the basis for estimating Fair Rate of Return is as follows:

“…4.5.3 Fair Rate of Return (FRoR)

Based on the projected Cost of Debt and Equity as detailed above, a combined weighted average is computed. Borrowing received from Government of Karnataka, as a State Support Loan has been considered as part of Debt.

The weighted average gearing for the second Control Period is calculated based on the projected values of debt and equity, including accruals, at the end of each year.

FRoR is computed as mentioned below:

*FRoR = (WG (Debt) * Kd) + (WG (SS) * Ks) + (WG(Equity)*Ke)*

where,

WG (Debt) – Weighted average gearing of Debt to Total Debt + Equity

WG (SS) - Weighted average gearing of State Support to Total Funds

WG (Equity) - Weighted average gearing of Equity to Total Debt + Equity…"

12.1.6 Accordingly, the FRoR computed by BIAL as part of the revised Business Plan submitted in April 2017 is as follows:

Table 59: FRoR computed by BIAL for second control period

Particulars	2016-17	2017-18	2018-19	2019-20	2020-21
Cost of Funding Sources					
Ke	21.48%	21.48%	21.48%	21.48%	21.48%
Ks	0.00%	0.00%	0.00%	0.00%	0.00%
Kd	11.47%	11.47%	11.47%	11.47%	11.47%
Weighted average gearing (WG) of Equity	60.33%	60.33%	60.33%	60.33%	60.33%
Weighted average gearing (WG) of SS	3.57%	3.57%	3.57%	3.57%	3.57%
Weighted average gearing (WG) of debt	36.10%	36.10%	36.10%	36.10%	36.10%
Total	100.00%	100.00%	100.00%	100.00%	100.00%
FRoR	17.10%				

12.2 Authority's analysis of Cost of Equity, Cost of Debt and Fair Rate of Return (FRoR)

12.2.1 An overview of the shareholder's funds and loan funds of BIAL as of March 2016 is as below:

Table 60: Overview of Shareholders' Funds (Rs. Crores)

Particulars	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Share Capital	384.60	384.60	384.60	384.60	384.60	384.60	384.60	384.60
Reserves & Surplus	-150.31	-72.50	59.59	220.35	324.67	391.78	467.09	904.72
Shareholder Funds	234.29	312.10	444.19	604.95	709.27	776.38	851.69	1,289.32
Secured Loans	1,408.96	1,379.91	1,285.63	1,128.02	1,816.27	1,911.10	1,641.88	1,349.02
Unsecured Loan - State Support	330.52	333.50	333.50	333.50	333.50	333.50	332.50	332.50
Others	3.04	1.76	0.13	0.03	0.03	0.03	0.03	10.03
Loan Funds	1,742.52	1,715.17	1,619.26	1,461.55	2,149.80	2,244.63	1,974.41	1,691.55
Total Funds	1,976.81	2,027.27	2,063.45	2,066.50	2,859.07	3,021.01	2,826.10	2,980.87

Cost of Equity

12.2.2 Authority notes that BIAL has considered Cost of Equity at 21.48% in its MYTP computations and as per the submissions made BIAL has estimated its Cost of Equity to be 24.66%. The Authority understands that BIAL has applied the Capital Asset Pricing Model (CAPM) to arrive at the Cost of Equity values.

12.2.3 The Authority notes the request for a higher % of cost of equity as computed by BIAL. The Authority also notes that BIAL has established and has been running the airport for 10 years with consistent trend of profits. The Authority also notes the increase in Passenger base of BIAL and the growth in passenger traffic in the past 3 years.

12.2.4 The Authority has elaborated its detailed considerations on the risk assessment of Kempegowda International Airport in its MYTO-CP1. The Authority notes that there are no adverse scenarios affecting the risk assessment of BIAL airport, on the contrary, very favourable traffic and profitability has been witnessed over the last 3 years from the time of issue of MYTO-CP1. Considering the past operations, profitability and established traffic base, the Authority proposes to consider return on equity at 16% for BIAL for the second control period, in line with the decision taken on Cost of Equity in the first control period.

12.2.5 The Authority also proposes to carry out a study on Cost of Equity for Airports and consider the results at the time of true up based on actuals for the second control period.

Cost of Debt

12.2.6 With respect to Cost of Debt, the Authority has sought clarifications and detail from BIAL on whether the funding has been tied up for the expansion project and the rate of interest at which loans are tied up. BIAL has submitted to the Authority that the funding for the planned expansions are yet to be tied up.

12.2.7 The Authority also notes that while BIAL has proposed Interest rate of 11.5% in its submissions, Financial statements for the year 2016-17 indicate that the existing loans have been refinanced with SBI with Interest rate of around 9.9%.

12.2.8 Also, the Authority notes that Reserve Bank of India has issued guidelines for setting lending rate of loans under the name marginal cost of funds based lending rate instead of the base rate from April 2016.

12.2.9 Considering the above, the Authority proposes to consider an interest of 10.25% for the second control period.

12.2.10 The Authority understands that the funding for the Initial project and Terminal 1 expansion happened through Equity and Debt. The Authority also understands that an unsecured Interest free loan has been given by GoK called as state support loan which was also used to fund the Initial phase of project.

12.2.11 The Authority also notes that the state support loan has been taken from GoK at no interest and accordingly, BIAL has considered the same as part of funds at zero cost.

Fair Rate of Return

12.2.12 The Authority understands that BIAL has invested in subsidiary Bangalore Airport Hotels Limited in December 2013. From the Balance sheet of BIAL as of 31st March 2016, the Authority notes that BIAL has invested an amount of Rs. 2 Crores in Equity of the entity. Also an amount of Rs. 220.27 crores appear as Long-Term loans and advances as being given to BAHL under “related party disclosures” in the Financial statements. The Authority noted that BIAL has invested funds as Long Term Investments in other businesses not relating to Airport Operations.

12.2.13 The Authority proposes to recompute FRoR considering the below factors:

12.2.13.1 Exclude Investments in other businesses for computing Equity for FRoR.

12.2.13.2 Compute FRoR considering Shareholder funds, Debts and Interest Free State Support Loan.

12.2.13.3 Considering changes in gearing in the Business Plan to utilise debt drawings to the maximum. (The Authority understands that the Business Plan projects Debt and Equity and Gearing based on the changes made to ARR).

12.2.14 Based on changes to other factors of the Regulatory Building Block (Changes to Capex etc.) and the changes to FRoR detailed above, the Authority has recomputed the Fair Rate of return as follows.

Table 61: Recomputed FRoR as per Authority

Fair Rate of Return as computed by the Authority	For the Second Control Period
Cost of Funding Sources	
Ke	16.00%
Ks	0.00%
Kd	10.26%
Weighted average gearing (WG) of Equity	27.92%
Weighted average gearing (WG) of SS	5.17%
Weighted average gearing (WG) of debt	66.91%
FRoR	11.33%

12.2.15 The Authority notes that the loan taken by BIAL carries a floating rate of Interest. The Authority is also aware that the actual Equity and Debt balances may change from the estimates based on various factors including Capital Expenditure, Revenues collected and other components of the ARR. The Authority accordingly proposes to true up the cost of debt, changes to cost of equity based on results of study, if necessary and the FRoR based on change in gearing, during the current control period.

Proposal No 11. Regarding Cost of Equity, Cost of Debt and Fair Rate of Return

11.a. Based on the material before it and its analysis, the Authority proposes:

i. To consider Cost of Equity at 16% for computation of Fair Rate of Return.

ii. To commission a study on Cost of Equity and consider the results of the same at the time of truing up Second control period revenues.

iii. To consider Cost of Debt at 10.25%

iv. To consider the FRoR as detailed in Table 61 Para 12.2.14 above for the purpose of computing ARR for the second control period

v. To true up the Cost of Debt based on any changes to Interest rate and to true up the Fair Rate of Return based on changes to the gearing between Equity and Debt considering actual position for the control period, at the time of determination of tariff for the next control period.

13.Taxation matters

13.1 BIAL's submission on Taxation

13.1.1 BIAL in its submissions have stated that they were entitled to a tax holiday under Section 80 IA of Income Tax Act for 10 years in the period of first 15 years of operations. During this period, they were required to pay the Minimum Alternate Tax on the Book Profits of the company. BIAL had submitted that they propose to avail this tax holiday from the Financial Year 2012-13 for a period of 10 years. During the 5 years of the control period, BIAL proposed that they would be paying only the Minimum Alternate tax (MAT) as applicable. The company has considered rate of MAT at 20% plus surcharge for the control period.

13.1.2 BIAL has submitted as follows:

"…Direction No. 5/2011-12 details that the actual tax payments projected for tariff computations will be allowed as a reimbursement in arriving at the Aggregate Revenue Requirement.

The computation of projected income tax payments has been made based on the prevailing Income Tax laws and rules.

Tax Computations also considered MAT provisions and 80IA of Income tax act. BIAL is eligible for Income Tax holiday for a continuous 10 year period, starting FY 2012-13, in the first 15 years since AOD. BIAL plans to avail the benefit during the second control period also. Accordingly the tax payment projections for the second control period is based on Minimum Alternate Tax computed on Book profits, as given below…"

13.1.3 Accordingly, the MAT payments proposed to be included as part of the Aggregate Revenue Requirement, as submitted by BIAL under Hybrid Till were as detailed below.

Table 62: Tax outflow considered as part of ARR computations under Shared Till by BIAL for second control period (Rs. Crores)

Particulars	2017	2018	2019	2020	2021
Aero PBT	962	1,127	1,195	1,360	1,287
Effective Tax rate	21.41%	21.43%	21.45%	22.10%	22.95%

Particulars	2017	2018	2019	2020	2021
IT Reimbursement	205.85	241.47	256.32	300.46	295.29

13.1.4 BIAL has also submitted as follows:

"…As the financial projections are based on Indian GAAP, the tax computation are also based on the same income base with adjustments required under the Income tax provisions. However, impact due to application of IND AS and Income Computation and Disclosure Standards (ICDS) is yet to be ascertained due to lack of clarity. BIAL would like to submit to the Authority that any impact on tax computation due to proposed changes in IND AS and ICDS will be submitted to Authority for necessary consideration and tariff computation…"

13.2 Authority's analysis of Taxation

13.2.1 The Authority noted that Minimum Alternate Tax (MAT) is the minimum tax outflow that the company has to make, on the book profits. The Authority also notes that MAT paid can be carried forward and adjusted against the normal tax payable by the entity on the tax computed on profits from the year after the tax holiday period.

13.2.2 The Authority notes that the Authority's guidelines detail that tax payments will be considered for ARR computations. Accordingly, the Authority considers the tax outflow projected based on the Aeronautical P&L as the tax cost to be added to the ARR.

13.2.3 Tax numbers projected by BIAL is impacted by the other changes in the ARR and projected revenues. Hence the Authority has recomputed the tax considering the aforementioned paras and other changes to ARR as detailed in the relevant section of this Consultation Paper.

13.2.4 The Recomputed Tax estimate is as follows:

Table 63: Tax estimate as computed by the Authority (Rs. Crore)

Tax Outflow as computed by Authority	2017	2018	2019	2020	2021
IT Reimbursement	0.00	2.90	0.00	0.18	0.00

13.2.5 The Authority notes that similar to other numbers, the tax cost estimate also has to be trued up based on actuals which will be carried out by the Authority at the end of the current control period.

Proposal No 12. Regarding Taxation

12.a. Based on the material before it and its analysis, the Authority proposes:

i. To consider tax outflow estimate (MAT) as detailed in Table 63 Para 13.2.4 above for computation of Aggregate Revenue Requirement.

ii. To true up the projections based on actuals, at the end of the control period, in computation of tariff for the next control period.

14. Working Capital Interest

14.1 BIAL's submission on Working Capital Interest

14.1.1 BIAL has submitted as following, in case of Working Capital Interest:

"…Working capital requirement is considered and the cost of funds is estimated at 12% per annum…"

Table 64: Working Capital Requirement projected by BIAL (Rs. Crores)

Particulars (Rs. Crore)	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021
Working capital Requirement	0.00	56.68	145.14	150.19	152.36
Interest on WC borrowing	0.00	5.75	17.42	18.07	18.28

14.2 Authority's analysis of Working Capital Interest

14.2.1 The Authority notes that BIAL has projected Working Capital Interest at 12% from first year together with lender / engineer fee for the loans taken. The Authority also understands that as of date, while the Working Capital limits are sanctioned by the bank, these have not been availed.

14.2.2 The Authority proposes to compute WC Interest on the funds estimated as per Financial Model at 9.5% from 2018-19 onwards. Accordingly, the recomputed fee/ Working Capital is as detailed below:

Table 65: Working Capital Interest/ Lender Fee estimate (Rs. Crore)

Working Capital/ Lender Fee	2016-17	2017-18	2018-19	2019-20	2020-21
Lender / Engineer Fee	21.54	2.73	2.73	2.73	2.73
WC Interest	0.00	0.00	10.59	10.86	10.25
Total	21.54	2.73	13.32	13.59	12.98

14.2.3 The Authority notes that the actual Working Capital facility availed and the Interest rates could vary considering the cash flow of the entity. The Authority hence proposes to true up the actual borrowing and Interest at the end of current control period, based on actuals.

Proposal No 13. Regarding Working Capital Interest

13.a. Based on the material before it and its analysis, the Authority proposes:

i. **To consider Working Capital Interest / Fee as detailed in Table 65 Para 14.2.2 above for computation of Aggregate Revenue Requirement.**

ii. **To true up the projections based on actuals, at the end of the control period, in computation of tariff for the next control period.**

15.WPI Computations

15.1 BIAL's submission on Wholesale Price Index/ Inflation

15.1.1 BIAL has submitted as follows:

"…The WPI and CPI projections are based on a review of two key government sources - namely the Reserve Bank of India (RBI) and the Office of Economic Advisor, Ministry of Commerce and Industry.

4.13.1 Reserve Bank of India (RBI)

RBI publishes the results of a quarterly survey of professional forecasters on macroeconomic indicators. The table below shows the results of Round 35 of the Survey, on 04 August 2015.

…..

As per RBI's Survey, the CPI will increase at an average of 4.5% annually for the next ten years and the WPI will increase at an average of 3.98% annually over the same period.

However, since the longer is the prediction range, the higher is the standard error. Hence for the purpose of the model, a WPI increase of 4% has been considered for Control Period 2.

Similarly, the CPI has been considered to increase at a rate of 5% for Control Period 2.

The RBI Report on WPI and CPI – September 2016 has been provided in Annexure 10.

4.13.2 Office of Economic Advisor, Ministry of Commerce and Industry

As per the Office of Economic Advisor, the historical trend of WPI and PPI (Producer Price Index) was reviewed. The table below shows the values of WPI and PPI inflation over the last nine years.

….

Using the above data, the Geometric Mean of the WPI over the last nine years, is calculated as 5.78%.

On the basis of these two sources, the WPI has been assumed at 4% and CPI has been assumed at 5% for Control Period 2.

5.13.2 Office of Economic Advisor, Ministry of Commerce and Industry

As per the Office of Economic Advisor, the historical trend of WPI and PPI (Producer Price Index) was reviewed. The table below shows the values of WPI and PPI inflation over the last nine years.

Year	WPI	PPI
2014-15	2.00%	2.81%
2013-14	5.98%	-0.10%
2012-13	7.36%	1.14%
2011-12	8.94%	2.89%
2010-11	9.56%	8.23%
2009-10	3.80%	5.29%
2008-09	8.05%	2.51%
2007-08	4.74%	15.54%
2006-07	6.59%	12.89%

Using the above data, the Geometric Mean of the WPI over the last nine years, is calculated as 5.78%.

On the basis of these two sources, the WPI has been assumed at 4% and CPI has been assumed at 5% for Control Period 2…"

15.2 Authority's analysis on WPI/ Inflation

15.2.1 The Authority has reviewed BIAL's submission on CPI and WPI. The Authority notes that CPI has been used by BIAL in forecasting increases in cost/ revenue etc. where relevant and WPI is used in forecasting target revenues etc. for Yield computations.

15.2.2 The Authority proposes to consider inflation forecasts as per the quarterly survey conducted by the RBI in January 2017. As per the "Results of the Survey of Professional Forecasters on Macroeconomic Indicators – Round 44", the median percentage change in WPI over the succeeding five years is projected at 3.9% p.a. An extract of the results of RBI's forecast has been reproduced below:

"...

	Annual Average Percentage change over next 5 years			
	Mean	Median	Max	Min
Real GVA	7.5	7.5	8.4	6.5
CPI combined	4.8	4.7	5.4	4.2
WPI	3.8	3.9	4.6	3
Source: https://rbi.org.in/Scripts/PublicationsView.aspx?id=17433				

..."

Proposal No 14. Regarding WPI

14.a. Based on the material before it and its analysis, the Authority proposes:

i. To consider WPI at 3.9% for all the years of the 2nd Control Period based on the results of the latest survey by RBI. The Authority would update this inflation rate at the Order stage based on the latest forecasts.

16.Quality of Service

16.1 BIAL's Quality of Service

16.1.1 BIAL has not made any submissions related to Quality of Service as part of its MYTP submission dated 25.03.2016 and its revised submission in April 2017.

16.2 Authority's analysis of BIAL's Quality of Service

16.2.1 Authority had, in MYTO-CP1 noted the provisions of the Concession Agreement with respect to performance standards (particularly Article 9 and Schedule 9 Part 2 thereof). The Authority noted that these standards were based on IATA Global Airport Monitor service standards. The provisions of the Concession Agreement also indicate the consequences of not coming upto the prescribed level of performance standards. Therefore, the Authority felt that the scheme of performance standards as indicated in the Concession Agreement would be reasonable for this purpose.

16.2.2 Hence the Authority decided as follows:

The Authority decides that BIAL shall ensure that service quality conforms to the performance standards as indicated in the Concession Agreement.

16.2.3 Concession Agreement of BIAL states as follows:

"…9.2 Monitoring of Performance Standards

9.2.1 Throughout the term of this Agreement the Airport's performance shall be monitored by passenger surveys in accordance with this Article 9. The criteria used to measure the Airport's performance shall be the IATA Global Airport Monitor service standards set out in Schedule 9, Part 2 or such criteria as may be mutually agreed upon from time to time (the Standards).

9.2.2 BIAL shall participate in IATA surveys and shall ensure that a survey is conducted each year in accordance with IATA's requirements to determine the Airport's performance. The first such survey shall be conducted during the third (3rd) year after Airport Opening.

9.2.3 If three (3) consecutive surveys show that the Airport is consistently rated in respect of the service standards under BIAL's direct control, as lower than IATA rating of three and a half (3.5) (in the current IATA scale of 1 to 5), BIAL will produce an action plan in order to improve the Airport's performance which must be implemented within one (1) year…"

16.2.4 The Authority understands that BIAL has got an ASQ rating of 4.85 in the year 2016 and 4.83 in the year 2017. Hence, the Authority is of the view that BIAL is meeting the required performance standards and there is no need for any penal provisions to be applied on BIAL.

16.2.5 Similarly, for the 2nd Control period, the Authority proposes that BIAL shall ensure that service quality at Kempegowda International Airport, Bengaluru conforms to the performance standards as indicated in the Concession Agreement.

Proposal No 15. Regarding Quality of Service

15.a. Based on material before it and its analysis, the Authority proposes:

i. **The Authority proposes that BIAL shall ensure that service quality at Kempegowda International Airport conforms to the performance standards as indicated in the Concession Agreement over the 2nd Control Period.**

ii. **The Authority proposes not to levy any penalties / rebates against BIAL for the 1st Control Period as BIAL has managed to ensure prescribed levels of service quality during the review period.**

17.Aggregate Revenue Requirement

17.1 BIAL's submission on Aggregate Revenue Requirement (ARR)

17.1.1 BIAL has submitted its total Aggregate Revenue Requirement for the second control period, under Shared Revenue Till as follows, based on the submissions on various building blocks discussed in earlier sections.

Table 66: Aggregate Revenue Requirement as per BIAL under Hybrid Till (Rs. Crores)

ARR as computed by BIAL	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Total
Average RAB	2275.02	2928.03	3603.21	4837.95	9000.51	
FRoR	17.10%	17.10%	17.10%	17.10%	17.10%	
Return on RAB	389.01	500.67	616.12	827.26	1539.03	3872.10
Depreciation	213.15	233.80	271.92	335.26	465.31	1519.44
Operating Expenditure incl. Concession Fee	350.25	429.29	512.23	587.81	766.39	2645.98
Working Capital Interest/ Fee	21.54	8.48	20.15	20.80	21.01	91.98
Tax	205.85	241.47	256.32	300.46	295.29	1299.40
Less: Non-Aero Revenues	-158.75	-166.48	-174.55	-179.86	-194.78	-874.42
Aggregate Revenue Requirement	1021.05	1247.24	1502.19	1891.73	2892.26	8554.47
Add: Shortfall recovery for Pre-Control and First Control period						2121.02
Total Requirement as per BIAL						**10675.49**

17.1.2 Accordingly, the Yield computed per passenger (YPP) is 582.20 at the beginning of the Control period.

17.2 Authority's analysis of Aggregate Revenue Requirement (ARR)

17.2.1 Authority's analysis on individual building blocks of ARR are detailed in the individual sections of this Consultation Paper.

17.2.2 Based on the individual analysis detailed above, the recomputed ARR for the second control period under Hybrid Till is as given below.

Table 67: Recomputed Aggregate Revenue Requirement under Hybrid Till (Rs. Crores)

ARR as computed by Authority	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Total
Average RAB	2236.67	2660.45	3061.86	4054.27	5430.66	
FRoR	11.33%	11.33%	11.33%	11.33%	11.33%	
Return on RAB	253.45	301.48	346.96	459.42	615.39	1976.71
Depreciation	188.44	215.31	417.76	323.59	358.61	1503.71
Operating Expenditure	308.02	351.72	406.60	450.47	523.30	2040.11
Working Capital Interest	21.54	2.73	13.32	13.59	12.98	64.15
Tax	0.00	2.90	0.00	0.18	0.00	3.08
Less: Non-Aero Revenues	-102.30	-107.34	-118.54	-129.56	-142.54	-600.29
Aggregate Revenue Requirement	669.15	766.79	1066.10	1117.69	1367.74	4987.47
Add: Shortfall / (Over) recovery for Pre-Control and First Control period						-618.34
Total ARR recalculated by Authority						**4369.14**

17.2.3 The recomputed YPP at the beginning of the control period is 219.38

17.2.4 Analysis of key differences from the submission made by BIAL to the computation done by the Authority is as follows:

Table 68: Summary of changes and impact on ARR (Rs. Crores)

<table>
<tr><th colspan="2">Particulars</th><th>Amount</th></tr>
<tr><td colspan="2">Total ARR at the beginning of the control period for 5 years as per BIAL</td><td>10,675.49</td></tr>
<tr><td>Impact of Changes</td><td></td><td></td></tr>
<tr><td>Building Block</td><td>Description of Change</td><td></td></tr>
<tr><td rowspan="4">Fair Rate of Return</td><td>Change Cost of Equity to 16%</td><td rowspan="4">-2,833.25</td></tr>
<tr><td>Change Cost of Debt to 10.25%</td></tr>
<tr><td>Change gearing ratio - 2018 - 2021</td></tr>
<tr><td>Advance and Investment to Subsidiary reduced from Equity</td></tr>
<tr><td rowspan="7">Operating Expenditure</td><td>Utility recovery in Non-Aero Income reduced from Operating Expenditure</td><td rowspan="7">-599.83</td></tr>
<tr><td>Staff cost increases reduced as detailed in CP and actual for 2016-17</td></tr>
<tr><td>O&M Cost increases reduced as detailed in CP</td></tr>
<tr><td>Utilities Cost increases reduced as detailed in CP</td></tr>
<tr><td>General Maintenance costs reduced as detailed in CP</td></tr>
<tr><td>CSR costs projected disallowed, Hotel arbitration costs / penalties / interests disallowed</td></tr>
<tr><td>Personnel cost allocation, General Admin - 90% considered Aero</td></tr>
<tr><td rowspan="2">Non-Aero Revenues</td><td>Increase in NAR by 12.5% instead of increase considered by BIAL - explained in CP</td><td rowspan="2">-969.09</td></tr>
<tr><td>Interest on Hotel deposit excluded re-added</td></tr>
</table>

Particulars		Amount
	CGF considered as Aero	
	Lease rent considered for Hotel	
	Space on rent - where given to Aero concessionaires - Remove (to consider as Aero)	
	Security deposit - Imputed income cost considered as Non-Aero income	
Traffic	PAX - 2017-18 traffic corrected to match best estimates and projections based on CAGR	11.02
	Cargo and ATM Projections for 2017-18 match with best estimates	
Pre-Control/ First Control Period	Change claw back to 40%	-1,097.58
	Error in Equity/ Debt ratio corrected	
	Pre-control period shortfall / clawback computed from 1st Sep 2009	
	Recompute Clawback / Under recovery for first control period	
Working Capital	Change Working Capital Rate to 9.5%, no WC for 17-18	-13.27
	Update WPI	
RAB, Capital Expenditure, Depreciation	Asset allocation ratio changed as per CP1 - Opening RAB	-804.35
	RAB reduced as per EIL Report in CP1	
	Depreciation - True up actuals 2016-17	
	Adjust depreciation for Site Preparation works	
	Change in Capex Spend Estimates, T2 shifted to 2021-22	
	Change in T2 Asset allocation ratio	
Sum of changes		**-6,306.35**
Revised Aggregate Revenue Requirement as computed by the Authority		**4,369.14**

17.2.5 The Authority notes that two years in the first control period is over and the tariff that would be determined would be applicable for the balance 3 years in the current control period. The Authority proposes to consider 1st July 2018 as date of implementation of new tariff.

17.2.6 The Authority proposes to consider and approve tariff for the balance years in the control period along with the Multi Year Tariff Order for Aggregate Revenue Requirement, together and not have an individual assessment year wise.

17.2.7 The Authority noted that BIAL has not submitted the Annual Tariff Plan for the years in the second control period. BIAL has stated as follows:

"…4.2.8 Annual Tariff Plan

Clause 3.4 of the Direction No. 5/2010-11 states that: 'After issuance of the Multi Year Tariff Order, the concerned Airport Operator(s) shall submit to the Authority its Annual Tariff Proposal(s): Provided that an Annual Tariff Proposal shall be submitted at least 105 days prior to the start of the Tariff Year.' BIAL requests the Authority that the ATP submission be allowed to be done after the Authority issues the MYT Order for Control Period 2.

4.2.9 Variable Tariff Plan

In the Control Period 1, BIAL had proposed the Variable Tariff Plan (VTP) which was accepted by the Authority and the Tariff Card for the VTP was approved by the Authority. However, for Control Period 2, BIAL proposes that it should be allowed the option of filing the VTP along with the Annual Tariff Plan, after the Authority has issued the MYT Order for Control Period 2..."

17.2.8 The Authority also notes that, it would be necessary to have the individual year wise tariff card laying down the different Aeronautical charges and the workings for the Aeronautical Revenues, in order to have a constructive stakeholder discussion and hence BIAL is expected to submit the detailed Annual Tariff proposals in line with the ARR and Yield arrived at by the Authority within 7 days of issue of the Consultation Paper.

Proposal No 16. Regarding Aggregate Revenue Requirement

16.a. Based on the material before it and its analysis, the Authority proposes:

i. To consider the Aggregate Revenue Requirement as detailed in Table 67 Para 17.2.2 above as the eligible ARR for the second control period for BIAL

ii. To ask BIAL to submit the Annual Tariff Proposals within 7 days from issue of this Consultation Paper which will be reviewed and put up for stakeholder consultations.

18.Summary of Proposals put forth for Stakeholder consultations

19. Stakeholder Consultation Timeline

19.1.1 In accordance with the provisions of Section 13(4) of the AERA Act 2008, the proposal contained in the Summary of Proposals (Para 18 above) read with the Authority's analysis, is hereby put forth for Stakeholder Consultation. To assist the stakeholders in making their submissions in a meaningful and constructive manner, necessary documents are enclosed (Annexure - I to IV). For removal of doubts, it is clarified that the contents of this Consultation Paper may not be construed as any Order or Direction of this 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 decision fully documented and explained in terms of the provisions of the Act.

19.1.2 The Authority welcomes written evidence-based feedback, comments and suggestions from stakeholders on the proposal made in Para 18 above latest by **14th June, 2018** at the following address:

Secretary
Airports Economic Regulatory Authority of India
AERA Building, Administrative Complex, Safdarjung Airport,
New Delhi- 110003
Email: puja.jindal@nic.in
Tel: 011-24695043; Fax: 011-24695039

(S. Machendranathan)
Chairperson

20. List of Annexures

Annexure Number	Particulars
Annexure – I	MYTP submission from BIAL
Annexure – II	Additional Submissions from BIAL
Annexure – III	Report from RITES
Annexure – IV	Details of Special Repair submitted by BIAL

21.List of Tables