

DIAL/2011-12/Fin-Acc/520

The Chairman

Airports Economic Regulatory Authority of India
Administrative Complex
Safdarjang Airport
New Delhi – 110 003

249/CH(AERA)
21/6/2011

June 20, 2011

Dear Sir,

Tariff determination for Delhi Airport

Recd AERA

AGM/ABS
21/6
10/3/11

This is in reference to our various discussions and correspondence on the above subject. We are pleased to submit, for your consideration, our regulatory filing for determination of aeronautical tariffs for Delhi International Airport Private Limited (enclosed). The salient features of current application are, *inter alia*, as follows:

- 1 The current application is based on the tariff principles as laid down under our concession agreements.
- 2 The tariff period has been taken for a 5 year period viz. FY 2009-10 to 2013-14. The charging period is assumed to be commencing from September 1, 2011.
- 3 The enclosed document elaborates in detail the assumptions for the determination of tariff which include:
 - a. The principles used for the current filing.
 - b. The project cost considered in the current filing and the calculation of Regulated Asset Base.
 - c. The means of finance and calculation of WACC.
 - d. The forecasts of operation and maintenance expenses and the rationale for the same.
 - e. The forecasts of non-aeronautical revenues and the rationale for the same.



- 4 The submissions include supporting reports/studies in respect of the following:
 - a. Report on terminal area allocation – undertaken by Jacobs Consultancy.
 - b. Certification of values of the regulated asset base as per books of accounts - certified by Statutory Auditors.
 - c. Report on allocation of the operation and maintenance costs – undertaken by Jacobs Consultancy.
 - d. Report on the determination of cost of equity of Delhi Airport by the international aviation advisory firm Leigh Fisher.
 - e. Traffic forecast study for Delhi Airport carried out by Madras School of Economics.
- 5 Considering the provisions of concession documents and various assumptions laid out in our submissions, the target revenue has been determined. Thereafter the X factor has been computed which is the average equalization factor of the discounted target revenues and projected aeronautical revenues over the regulatory period. This X factor works out to a one-time average increase of 629% in the aeronautical tariffs.
- 6 Inflation has not been factored in our forecasts for future years. It is assumed that AERA will provide a CPI based increase over and above X factor, based on actual CPI data.
- 7 While we have not considered any discounts in our tariff proposals, it is requested that AERA may like to consider published discounts available to eligible customers to be allowed as cost, for healthy growth of the industry.
- 8 The current proposal is for the approval of an average percentage increase 'X' in aeronautical tariffs. At the appropriate stage we would like to submit a detailed pricing proposal, to achieve this average increase, which may be a combination of various aeronautical charges including UDF.

It will be appreciated that DIAL has delivered world class airport assets within the stringent timelines. The current aeronautical tariffs have remained unchanged over the past many years with just a 10% increase three years ago. The revenue streams thus do not support a capital investment of the scale and magnitude undertaken at Delhi Airport. DIAL has incurred a net loss of Rs.450 Crores for the year ended



Delhi International Airport (P) Limited

March 31, 2011. Given the provisions of OMDA, principle of cost relatedness and fair remuneration and also the need to sustain viability of the Delhi Airport, we request AERA to kindly approve our tariff proposal at the earliest.

In case you require and further information or clarification, we will be glad to provide the same.

Thanking you

Yours Faithfully

For Delhi International Airport Private Limited



(Sidharath Kapur)

(Chief Financial Officer-Airports)





Regulatory Filing for Aeronautical Tariff

Delhi International Airport Private Limited

New Delhi

India

June 2011

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GLOSSARY OF TERMS

AAI	: Airports Authority of India
ACI	: Airports Council International
AERA	: Airport Economic Regulatory Authority
AGL	: Airfield Ground Lighting
AOA	: Airport Operator Agreement
ATC	: Air Traffic Controller
ATF	: Aviation Turbine Fuel
ATM	: Air Traffic Movement
BOOT	: Build, Own, Operate & Transfer
CA	: Concession Agreement
CAGR	: Compounded Annual Growth Rate
CISF	: Central Industrial Security Force
CNS	: Communications Navigation and Surveillance
COD	: Commercial Operation Date
DIAL	: Delhi International Airport Pvt. Ltd.
ECB	: External Commercial Borrowing
EBIDTA	: Earnings before Interest, Depreciation, Tax and Amortization
EBIT	: Earnings before Interest and Tax
Fraport	: Fraport AG Frankfurt Airport Services Worldwide
FY	: Financial Year ending March 31 st
GDP	: Gross Domestic Product
GIL	: GMR Infrastructure Ltd.
Gol	: Government of India
GoNCT	: Government of National Capital Territory of Delhi
GSE	: Ground Support Equipment
IATA	: International Air Transport Authority
IATT	: Inland Air Travel Tax
ICAO	: International Civil Aviation Organization
ICE	: Independent Consulting Engineer
IDC	: Interest During Construction
IDF	: India Development Fund
IFK	: In-flight Kitchen
IGIA/Airport	: Indira Gandhi International Airport
JVC	: Joint Venture Company
LCC	: Low Cost Carriers
LTA	: Lead Technical Advisor

MAG	:	Minimal Annual Guarantee
MAHB	:	Malaysia Airports Holding Berhad
MAMPL	:	Malaysia Airports (Mauritius) Private Limited
MARS	:	Multiple Aircraft Ramp System
MDP	:	Major Development Plan
MPPA	:	Million Passenger Per Annum
MoA	:	Memorandum of Association
MoCA	:	Ministry of Civil Aviation
MoD	:	Ministry of Defence
MSE	:	Madras School of Economics
MT	:	Metric Tonnes
MTOW	:	Maximum Take Off Weight
MW	:	Megawatt
N.A.	:	Not Applicable
NCA	:	Net Cash Accruals
OAG	:	The Official Airline Guide
OMDA	:	Operations, Management & Development Agreement
P.A.	:	Per Annum
PAT	:	Profit After Tax
PBT	:	Profit Before Tax
PPP	:	Public Private Partnership
PSF	:	Passenger Service Fees
ROCE	:	Return on Capital Employed
RTL	:	Rupee Term Loan
SGSA	:	State Government Support Agreement
SHA	:	Shareholders Agreement
SPV	:	Special Purpose Vehicle
Sq.ft.	:	Square feet
Sq.m.	:	Square meter
SSA	:	State Support Agreement
STD	:	Short Term Debt
TNW	:	Tangible Net Worth
TOI	:	Total Operating Income

I. BACKGROUND

Regulated entity name	Delhi International Airport Private Limited	
Registered Office	New Udaan Bhawan, Terminal 3, Indira Gandhi International Airport, New Delhi- 110 037 India	
Consortium members	GMR Group Fraport AG Worldwide MAHB acting through MAMPL	
Shareholding		(In %)
	GMR Group	54.0
	Fraport	10.0
	MAMPL	10.0
	AAI	26.0
	Total	100.00

II. INTRODUCTION

As per the Indian Constitution, Civil Aviation is under the legislative jurisdiction of the Government of India (GoI). GoI has been the owner of the national and international airports of country through its public sector undertakings viz AAI. Private carriers were for the first time, in the year 1994, given licenses to operate scheduled services on the domestic sector. Efficient operation and high passenger throughput are the prime drivers for growth of airlines industry. Robust performance of the Indian economy, sustainable GDP growth and new opportunities opening up across all the sectors were key drivers behind the growth which necessitated the delivery of new airport infrastructure in New Delhi.

The hitherto available airport infrastructure during the growth phase was inept to handle such high unanticipated growth and therefore, GoI recognized the need for new airport developments by improving the infrastructure and the level of services to bring them at par with international standards. Pursuant to the above vision, GoI embarked on the drive to modernize both Delhi and Mumbai airports along with AAI and in furtherance thereof, undertook the task of comprehensively addressing legal, commercial and operational requirements for executing the airport development projects through a special vehicle based on a public-private partnership model within the overarching regulatory frameworks.

To achieve this objective set out by GoI, it was decided to undertake the task of restructuring the airports under the Airports Authority of India (AAI) and encourage private sector participation in modernizing airports across the country. Some of the major initiatives taken by GoI in the context include:

- Amendment of the AAI Act, 1994 in order to create an effective legal framework for restructuring existing airports under the AAI and for encouraging private sector participation in the airport sector.
- In 2004, GoI approved the modernization, up-gradation and development of the Delhi and Mumbai Airports through private sector participation.

AAI initiated the process of selection of lead partner for executing the modernization projects and undertook a competitive bidding. In so far as Delhi Airport is concerned the consortium led by the GMR Group was awarded the bid and as a financial consideration, the consortia agreed to share 45.99% of the gross revenue of DIAL with AAI. Post selection of the private consortia, AAI incorporated a special purpose vehicle, DIAL on March 01, 2006 with the objective of modernization and development of IGI Airport with AAI retaining 26% equity stake and balance 74% of equity capital acquired by members of consortia. The GMR consortia comprised of GMR Group entities, Fraport AG, Malaysia Airports Holdings Bhd and India Development Fund (exited subsequently). On April 04, 2006, DIAL signed Operation, Management and Development Agreement (OMDA) with AAI and took over the operations of IGI Airport on May 03, 2006 (Effective Date).

Contractual Arrangement

DIAL has entered into various agreements with AAI, GoI and Government of National Capital Territory of Delhi (GoNCT) to give effect to the various provisions, which will govern the arrangement between DIAL and AAI. The key agreements in the transaction are:

1. **The Operations, Management & Development Agreement (OMDA)**, executed between DIAL and AAI on April 04, 2006, is the main Concession Agreement for the project. The agreement has tenure of 30 years with the option available to DIAL to extend the agreement for a further period of 30 years subject to its satisfactory performance under the OMDA.

2. **Lease Deed Agreement** signed between AAI (Lessor) and DIAL (Lessee) on April 25, 2006 allowing use of assets.
3. **Shareholders' Agreement** entered into amongst the Private Participants and AAI on April 4, 2006. The agreement outlines the ways and means of ensuring smooth functioning of DIAL, more importantly because of both private sector and public sector entities being equity holders in DIAL.
4. **State Support Agreement (SSA)** entered into between GoI and DIAL on April 26, 2006. The SSA outlines the support from GOI in consideration for DIAL entering into OMDA with AAI for the modernization of IGIA.
5. **State Government Support Agreement** signed between GoNCT and DIAL on April 26, 2006. The agreement outlines the support that GoNCT shall provide on a best effort basis to DIAL during the term of OMDA in various areas including clearing the land from encroachments, making available additional land, if required, expand existing modes and develop additional modes of surface access to the Airport and provision of requisite quantities of the utilities.
6. **Airport Operator Agreement (AOA)** signed between DIAL and Fraport AG on May 1, 2006 whereby Fraport is appointed as Airport Operator for Delhi Airport.
7. **CNS/ATM Facilities and Services Agreement** entered into between AAI and DIAL on April 25, 2006 whereby AAI has agreed to provide Communication, Navigation, Surveillance and Air Traffic Management Services at the Airport.

III. PRINCIPLES OF TARIFF FILING

The current tariff filing is based on the principles laid down in the concession documents of DIAL. It is relevant to note the following extract of clause 3.1.1 of the SSA:

".....Gol further confirms that, subject to Applicable Law, it shall make reasonable endeavours to procure that the Economic Regulatory Authority shall regulate and set/re-set Aeronautical Charges, in accordance with the broad principle set out in Schedule 1 appended hereto....."

It is also relevant to note the following extract of clause 13 (I) the AERA Act, 2008:

The Authority shall perform the following functions in respect of major airports, namely:-

- a) To determine the tariff for the aeronautical services taking into consideration—
 - vi. The concessions offered by the Central Government in any agreement or memorandum of understanding or otherwise;

It is understood that the Gol has clarified to AERA that the OMDA and all agreements listed in clause 1.1. of OMDA are to be considered as concession offered by the Central Government.

SSA authorizes DIAL, under Article 3.1.2 and Schedule 6, to levy Aeronautical Charges for various Aeronautical Services at the rates set forth in Schedule 8 of SSA. Further, the same schedule requires, from the 4th year after the Effective Date, Aeronautical Charges will be set by Economic Regulatory Authority/Gol in accordance with the formula set forth in Schedule 1 of the SSA.

1. Target Revenue Determination:

Target Revenue (TR) is determined by aggregating the formula:

$$RAB_i \times WACC_i + OM_i + D_i + T_i - S_i$$

Where;

- **RAB:** Regulated Asset Base pertaining to Aeronautical assets only. The assets other than Aeronautical Assets will be excluded from the scope of RAB.
- **WACC:** Weighted average cost of capital
- **OM:** Efficient Operating and Maintenance costs pertaining to aeronautical services.
- **D:** Annual Depreciation charged on aeronautical assets based on depreciation reference rates prescribed as per the Companies Act, 1956
- **T:** Corporate Income taxes pertaining to aeronautical services only.
- **i:** Number of year in the regulatory control period
- **S:** Subsidy to the extent of 30% of the Gross Revenue generated from the Revenue Share Assets, which are defined to include:
 - a. Non Aeronautical Assets (defined in greater detail in following para.)
 - b. Assets required for provision of aeronautical related services not including in the Non Aeronautical Assets

However, Gross Revenue from assets other than Aeronautical and Non Aeronautical i.e. revenues from **Non-Transfer Assets** are not included for the purpose of determining the revenue base on which cross subsidy shall be calculated.

OMDA defines the such assets as under:

"Non Transfer Assets " shall mean all assets required or necessary for the performance of Non Aeronautical services as listed in Part II of Schedule 6 hereof as located at the Airport Site (irrespective of whether they are owned by the JVC or any third entity provided the same are not Non Aeronautical Assets).

As such from the provisions of OMDA all assets which are providing Non Aeronautical services as listed in part II of schedule 6 and which are;

- Not located within or form part of any terminal building
- are not conjoined to any other Aeronautical Assets,
- such assets are capable of independent access and independent existence or
- are not predominantly servicing/catering any terminal complex/Cargo complex.

are Non-Transfer assets.

Incomes from such assets are not to be included for the purpose of cross subsidization.

2. Determination of Equalisation Factor (X):

The methodology of calculating 'X' factor has been given in the SSA. The value of 'X' is derived by equating the sum of present value of the target revenue with the sum of present value of the Project aeronautical revenues, applying the forecasted traffic volume.

The following equation is used to solve the value of 'X'

$$\sum_{i=1}^n \frac{RB_i \times WACC_i + OM_i + D_i + T_i - S_i}{(1 + WACC_i)^i} = \sum_{i=1}^n \sum_{j=1}^m \frac{AC_{ij} \times T_{ij}}{(1 + WACC_i)^i}$$

Where;

AC_{ij}: Average aeronautical charge for the Jth category of aeronautical revenue in the ith year

T_j = volume of the Jth category of aeronautical traffic in the ith year

X = escalation factor

n = number of years considered in the regulatory period

m = number of categories of aeronautical revenue e.g. landing charges, parking charges, housing charges, Facilitation Component etc.

The price path shall be set by considering the value of X, derived from the following equation, and the projected CPI inflation index for arriving at the charges for the subsequent years in the regulatory control period.

$$AC_i = AC_{i-1} \times (1 + CPI - X)$$

CPI = average annual inflation rate as measured by change in the All India Consumer Price Index (Industrial Workers) over the regulatory period.

As such inflationary increase over and above tariff increase will be allowed while determining the aeronautical charges. In our current filing, we have not considered any inflationary increase and it has been assumed that the regulator will adjust the charges annually based on the actual CPI data.

3. Cross Subsidy from Non-Aeronautical Income:

As envisaged in the SSA, DIAL will offset 30% from the total of non-aeronautical income as contribution from non-aeronautical revenue towards setting aeronautical charges. As a corollary, any non-aeronautical income accruing from investment disallowed as part of Project Cost shall not be used for cross subsidization.

The SSA states that only the gross revenue from the 'Revenue Share Assets' will be considered while determining the total subsidy contribution.

The Revenue Share Assets under SSA are:

- Non Aeronautical Assets; and
- Assets required for provision of aeronautical related services arising at the airport and not considered in revenue from Non Aeronautical Assets.

Non Aeronautical assets have not been defined in SSA. Para 1.1 of the SSA – last paragraph has laid down that:

"Other Capitalized terms used herein (and not defined herein) but defined under the OMDA shall have the same meaning ascribed to the term under OMDA."

OMDA lays down the following:

"Non-Aeronautical Assets" shall mean:

1. *all assets required or necessary for the performance of Non-Aeronautical Services at the Airport as listed in Part I of Schedule 6 and any other services mutually agreed to be added to the Schedule 6 hereof as located at the Airport (irrespective of whether they are owned by the JVC or any third Entity); and*
2. *All assets required or necessary for the performance of Non-Aeronautical Services at the Airport as listed in Part II of Schedule 6 hereof as located at the Airport (irrespective of whether they are owned by the JVC or any third Entity), to the extent such assets (a) are located within or form part of any terminal building; (b) are conjoined to any other Aeronautical Assets, asset included in paragraph (i) above and such assets are incapable of independent access and independent existence; or (c) are predominantly servicing/ catering any terminal complex/cargo complex and shall specifically include all additional land (other than the Demised Premises), property and structures thereon acquired or leased during the Term, in relation to such Non-Aeronautical Assets.*

Therefore cross subsidy of 30% shall be computed on gross revenue from Part I of Schedule 6 of OMDA as well as that from Part II of Schedule 6 to the extent these later assets:

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- a. form part of terminal building; or
 - b. are conjoined to an aeronautical asset and such assets are incapable of independent access and independent existence; or
 - c. Predominantly servicing/catering any Terminal complex/ Cargo complex.

Non Transfer Assets: Non Transfer Assets have been defined in OMDA as under:

"Shall mean all assets required or necessary for the performance of Non-Aeronautical Services as listed in Part II of Schedule 6 hereof as located at the Airport Site (irrespective of whether they are owned by the JVC or any third entity), provided the same are not Non-Aeronautical Assets."

Therefore, the gross revenue from Non-Transfer Assets shall not contribute towards (30% or any other percentage) for cross-subsidisation of aeronautical cost while determining the target revenue.

4. Regulatory Period:

Schedule 6 of the SSA requires that AERA/GOI to regulate the Aeronautical Charges of DIAL from the start of 4th year from the Effective Date. Further, the Schedule 1 of the SSA states that tariffs are to be set once every five years and therefore, DIAL is making a five year tariff filing. In accordance with the concession agreement we have taken the 5 year block comprising 2009-10 to 2013-14 as the first regulatory period. This comprises of past years of 2009-10 and 2010-11, current year 2011-12 and future years of 2012-13 and 2013-14. This implies that the collection period of the revised tariff is considered from September 1st 2011 to March 31st 2014.

5. Cargo, Ground Handling and Fuel (Throughput charges):

In accordance with the provisions of SSA and OMDA, Cargo and Ground Handling are explicitly stated as Non-Aeronautical services and therefore would entail contribution to the extent of 30% of their respective earnings while determining the Aeronautical Charges. It is submitted that in compliance of the AERA Act, the services and tariff of the providers of these services be treated as Aeronautical and appropriately regulated by AERA in line with the approved philosophy. However the revenue to DIAL from the providers of these services is being considered as Non-Aeronautical.

Schedule 5 of OMDA clearly earmarks Fuel Farm Infrastructure as aeronautical services and Fuel throughput is not listed in the same schedule. Fuel throughput charge is akin to royalty and a profit sharing arrangement with the Oil Companies and not related to Hydrant Infrastructure usage. We understand that the issue of treatment of fuel throughput charges as aeronautical or non-aeronautical is sub-judice with the Appellate Authority. While we have treated, at this point of time, the Fuel Throughput charges as Aeronautical, appropriate modification in the tariff determination may please be made in the event of a contrary decision of the Appellate on this matter.

6. Inflation:

In addition to the value of 'X' determined by equating the NPV of the Target and the Actual revenues, CPI Inflation will be added to the tariff. Accordingly, it is understood that the regulator will give an allowance towards inflation (CPI) over and above the target revenue being submitted herewith based on actual CPI numbers.

7. Pricing Strategy for aeronautical charges:

SSA has laid down determination of tariff based on price cap formula. DIAL has the flexibility to develop its own tariff structure that would enable it to innovatively design the tariff structure in line with market positions and marketing objectives. The current proposal is for the approval of a one-time increase in aeronautical revenues. At the appropriate stage, when AERA confirms the increase in aeronautical revenues, we shall submit the pricing mix which may be a combination of various aeronautical charges including User Development Fee.

IV. PROJECT COST

The Project Cost as approved by the DIAL Board was submitted to AERA for their approvals vide letter no DIAL/2009-10/MoCA-DF/2651 dated March 31st 2010.

AERA vide its consultation paper no. 2/2011-12 has considered Rs. 12,760 Crores as the final project cost. However, we have vide our submission dated May 13th 2011 have responded to the disallowances and have requested the AERA to consider the entire amount for tariff calculation even if disallowed for ADF.

Details of Project Cost

Project Description	Project Cost (Rs. Crores)
T1, T2 and Initial CWIP	754
Runway/Taxiway/Apron and Lighting	2,634
Terminal 3 and Associated Buildings	6,836
Airport Service Building and Airport Connection Building	160
Preliminary, Preoperative and Interest during construction	1,320
Payment to Delhi Metro	350
Upfront payment to AAI	150
Rehabilitation of Runway 10/28	110
Payment to Delhi Jal Board for Infrastructure Funding	54
New ATC Tower and Associated facilities	350
Security Capex	139
Total Capex	12,857

Based on this request, the project cost for the purpose of determination of RAB has been considered as Rs. 12,857 Crores. Appropriate adjustment has been made for removing upfront fee to AAI while determining RAB.

V. ALLOCATION MECHANISM

In a hybrid till model, costs and assets are to be allocated for determining the target revenue over the regulatory period. The definitions in section of SSA and OMDA define and also make distinction amongst following terms as:-

- Aeronautical charges;
- Aeronautical services;
- Aeronautical assets
- Non-aeronautical assets
- Non-transfer assets

As such, this requires distinctions to be made and assets accordingly to be segregated and allocated.

The list of activities to be included in Aeronautical Services is shown given in OMDA Schedule 5 and shown in the Box below.

OMDA Schedule 5 Extract

Aeronautical services means the provision of the following facilities and services:

1. *provision of flight operation assistance and crew support systems;*
2. *ensuring the safe and secure operations of the Airport excluding national security interest;*
3. *the movement and parking of aircraft and control facilities;*
4. *general maintenance and upkeep of the Airport;*
5. *the maintenance facilities and the control of the and hangarage of aircraft;*
6. *Flight Information Display screens*
7. *rescue and fire fighting services*
8. *management and administration of personnel employed at the Airport*
9. *the movement of staff and passengers and their interchange between all modes of transport at the airport*
10. *operation and maintenance of passenger boarding and disembarking systems including vehicles to perform remote boarding; and*
11. *any other services deemed to be necessary for the safe and efficient operation of the airport*

A more detailed list would include the following

- | | |
|--|--|
| 12. <i>Aerodrome control services</i> | 30. <i>Foul and surface water drainage</i> |
| 13. <i>Airfield</i> | 31. <i>Aircraft Docking Guidance systems and marshalling</i> |
| 14. <i>Airfield lighting</i> | 32. <i>Information desks</i> |
| 15. <i>Air taxi services</i> | 33. <i>Inter-terminal transit systems</i> |
| 16. <i>Airside and landside access roads and forecourts including writing, traffic signals, signage and monitoring</i> | 34. <i>Lifts escalators and passenger conveyors</i> |
| 17. <i>Common hydrant infrastructure for aircraft fuelling services by authorized providers</i> | 35. <i>Loading Bridges</i> |
| 18. <i>Apron and aircraft parking area</i> | 36. <i>Lost property</i> |
| 19. <i>Apron control and allocation of aircraft stands</i> | 37. <i>Passenger and hand baggage search</i> |
| 20. <i>Arrivals concourses and meeting areas</i> | 38. <i>Piers and gate rooms</i> |
| 21. <i>Baggage systems including outbound and reclaim</i> | 39. <i>Policing and general security</i> |
| 22. <i>Bird-scaring</i> | 40. <i>Prayer rooms</i> |
| | 41. <i>Infrastructure/Facilities for Post offices</i> |
| | 42. <i>Infrastructure/Facilities for Public telephones</i> |
| | 43. <i>Infrastructure/Facilities for Banks</i> |
| | 44. <i>Infrastructure/facilities for Bureaux de Change</i> |
| | 45. <i>Runways</i> |
| | 46. <i>Signage</i> |
| | 47. <i>Staff search</i> |

- | | |
|--|---|
| 23. Check-in concourses | 48. Taxiways |
| 24. Cleaning, heating, lighting, and air conditioning public areas | 49. Toilets and nursing mothers rooms |
| 25. Customs and immigration halls | 50. Waste and refuse treatment and disposal |
| 26. Emergency services | 51. X-ray service for carry on and checked-in luggage |
| 27. Facilities for the disabled and other special needs people | 52. VIP/special lounges |
| 28. Fire service | |
| 29. Flight information and public-address system | |

Based on above, a systematic approach has been adopted for allocating costs and assets between aeronautical and non-aeronautical segments. The following key principles have been considered while allocating costs and assets:-

1. **Full allocation:** No Items should be missed out in allocation exercise.
2. **Attribution quality:** The methodology of measurement must be credible.
3. **Relevance:** The allocation must be used based on the relevant usage of that area.
4. **Consistency:** The methodology adopted must be applied consistently.
5. **Continuity:** The methodology adopted for allocation of assets must also continue to apply to costs.
6. **Avoidable Cost:** the primary activity of the airport is to provide aeronautical services and the users should bear their full cost. The resources essential to the primary activity of operation of the airport, even if there were no secondary (non-aeronautical) should be allocable to aeronautical activities. Where, however, the presence of non-aeronautical activities has generated an additional requirement for space or facilities, which would otherwise have not been needed, these resulting avoidable costs should be regarded in full as non-aeronautical.
7. **Transparency:** The allocation must be carried out in a transparent manner.

In general the vast majority of the income at a given airport tends to be clearly allocable to either Aeronautical or Non-Aeronautical categories as the case may be. Most assets are also relatively simple to deal with the important exception of the terminal (in which Aeronautical and Non-Aeronautical activities take place alongside each other under a common roof).

1) Terminal area allocation

The most important asset used for both aeronautical and non-aeronautical services is the terminal building. For terminal assets allocation, as advised M/s Jacobs Consultancy (airport consultancy firm), the floor area requirement within the terminal building, provides a fair, credible and accurate measurement system. The same allocation can be used for allocation of aeronautical and non-aeronautical capex on the terminal building. A separate exercise of allocation of terminal areas was carried out by them. A certificate to this effect obtained from them is enclosed as **Annexure A**. The summary of aero and non-aero classification obtained in the aforesaid exercise for the terminal areas at IGIA is as under:

Summary of Area Allocation of all Passenger Terminal Assets at IGIA

Passenger Terminal	Aeronautical Area (%)	Non-Aeronautical Area (%)
Terminal 3	82.32	17.68
Terminal 1A	96.00	4.00
Terminal 1C	75.00	25.00
Terminal 1D	83.00	17.00
Terminal 1 (A, C & D)	84.00	16.00
Terminal 2	84.20	15.80
Overall Weighted Average	82.70	17.30

2) Assets Allocation

Methodology adopted: Most of the assets, at individual level, can be clearly classified as aeronautical or non-aeronautical. However, where this is not the case, assumptions have been made and the following methodology has been adopted in the assets allocation:

1. Firstly, the admissibility test has been applied on all the assets. The upfront fee paid to AAI, capitalized as Intangible asset, is not considered as part of RAB as per provisions of the SSA.
2. On the other assets, identification on individual asset level having direct relation to an activity (Aeronautical, Non Aeronautical or Mixed Asset) is established. Assets on airside are classified into Aeronautical Assets and are 100% allocable to the aeronautical RAB. For e.g. investment in runway, drainage and culverts, taxiway, apron and bays, AGL, satellite rescue and fire station, perimeter road, boundary wall, sub-stations etc.
3. Investment in cargo terminal building is considered as non-aeronautical on the premise that this is leased to the cargo concessionaire and the revenue of the same is considered as non-aeronautical. For areas within passenger terminal building used for passenger processing and facilitation have been considered as aeronautical. This is in accordance with principle of avoidable cost concept. Incremental areas in the terminal building necessitated due to presence of retail or commercial activities, have been considered as non-aeronautical.
4. Finally, assets which were not directly allocable to either asset (aeronautical and non-aeronautical) are classified as mixed assets.
5. The mixed assets have been allocated based on respective terminal area mix, in case they are related to the respective terminal. In case of other non-related mixed assets, overall terminal area mix has been applied.

The allocation of assets carried out using the aforesaid principle and facts have been independently verified by statutory auditors. The allocation of the assets, as on March 31st 2011, into aeronautical and non-aeronautical has been certified (enclosed as **Annexure B**) by the statutory auditors and the summary of the same is given below.

(Figures in Rs. Crores)

Total Gross Block as on March 31st 2011	Rs. 12,565.63
Less: Inadmissible assets	Rs. 150.00
Balance Gross Block	Rs. 12,415.63

Aeronautical Assets	Non-Aeronautical Assets	Total Assets
Rs. 11,080.65 Cr.	Rs. 1,334.98 Cr.	Rs. 12,415.63 Cr
89.25%	10.75%	100%

3) Costs Allocation

a) Staff costs

The allocation of Manpower costs has been made directly in line with the split of activities undertaken by the respective departments, which are as under:

Basis of Allocation

Department/Function	Basis of allocation
Operations	Direct allocation to aeronautical activities
APDE (Maintenance)	Pro rata to assets
IT	Pro rata to assets
Legal	Pro rata to assets
Finance & Accounts	Pro rata to assets
HR	Based on average deployment of other departments
Quality	Direct allocation to aeronautical activities
Internal Audit	Pro rata to assets
Corporate Communication.	Pro rata to assets
Corporate Relations	Pro rata to assets
Commercial	50% manpower is assumed for airlines marketing and recoveries.
CEO	Pro rata to assets
Security	Direct allocation to aeronautical activities
Property	Direct allocation to NON aeronautical activities

b) Non Staff costs

There has been a stepwise process of allocation of expenses amongst aero and non-aero segments. The same has been explained herewith:

- 1 Firstly the total expenses of each department like Operations, Maintenance, etc. have been identified.
- 2 Thereafter each and every expense of that department has been identified at activity level (fund centre). In this exercise the expenses have been identified and related to various activities like airside expenses, terminal expenses, runway lighting expenses, procurement expenses etc.
- 3 Thereafter the activities are allocated amongst aero and non-aero based on following principles:
 - a. The activities which can be directly attributable to aero assets have been classified as aero like operation and maintenance of runways and taxiways etc.
 - b. The activities which can be directly attributable to non-aero assets have been classified as non-aero like commercial/retail promotions etc.
 - c. Terminal costs have been allocated based on the area mix for the respective terminal as certified by M/s Jacobs Consultancy into aero and non-aero.
 - d. Remaining unallocated common expenses of support functions like finance and accounts, legal, corporate communication, corporate relation, CEO office etc. have

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been allocated based on the overall asset value allocation as mentioned in the foregoing section.

Conclusion

Based on the foregoing, the allocation of costs is set out in the table below. This has been certified by M/s Jacobs Consultancy (**Annexure C**). The summary of the same is given below:

Summary of Operating Expense Allocation for IGIA for FY 2011-12

Operating Expense	Aeronautical Cost (%)	Non-Aeronautical Cost (%)
Manpower Cost	89.79	10.21
Administration Cost	70.28	29.72
Operating & Maintenance Cost	91.89	8.11
Airport Property Tax	90.99	9.01
Utilities Cost	100.00	0.00
Overall	87.54	12.46

VI. HYPOTHETICAL ASSET BASE

From the 4th year after the Effective Date, the Aeronautical Charges are to be determined in accordance with the formula set forth in Schedule 1 of the SSA. The Schedule 1 lay down a comprehensive mechanism and formulae for determination of the Target Revenue. One of the components in the determination of the Target Revenue is the Regulatory Asset Base (RAB) pertaining to the Aeronautical Assets. The mechanism set forth in the SSA for the computation of the Regulatory Base of Aeronautical Assets in any given year is based on the following formula:

$$RB_i = RB_{i-1} - D_i + I_i$$

The RAB of the Aeronautical Assets in any year (RB_i) is the Regulatory Base for the immediately preceding year (RB_{i-1}), subject to negative adjustment on account of depreciation (D_i) and positive adjustment on account of investments in the relevant year (I_i).

Schedule 1 of the SSA specifies ' RB_0 ' as follows:

- (i) the Book Value of the Aeronautical Assets in the books of the JVC; and
- (ii) the 'hypothetical regulatory base' computed using the then prevailing tariff and the revenues, operation and maintenance cost, corporate tax pertaining to Aeronautical Services at the Airport, during the financial year preceding the date of such computation

RB_0 is the Regulatory Asset Base at the start of the regulatory period.

The Schedule 1 requires, at the time of determination of Initial Regulatory Asset Base (RB_0), a Hypothetical Asset Base. SSA prescribed the components to be considered while determining the Hypothetical Asset Base. The following are considered in this respect:

Table 19-Formula of Hypothetical Asset Base

	Calculation	Explanation
	Aeronautical revenue	Aeronautical revenue of preceding Year of tariff determination.
Less	(-)O and M costs	Aeronautical Operation and Maintenance costs*
Less	(-)Taxes	Net Of Taxes if any
Balance	(=) Net Revenue	
Multiply	(X) 1/WACC	Multiplied by reverse of WACC: as the hypothetical asset base multiplied by WACC should give last year's Net Aero Income. We have considered the Bid WACC for the aforesaid purpose.

Considering the provisions of the SSA, we have considered 2009-10 as the first year of the regulatory period and Hypothetical Asset Base has been considered based on revenues and expenses of the year 2008-09.

Hypothetical Assets Base represents the assets that were transferred to DIAL as part of the concession. Therefore the valuation of such assets should be based on sustainable operating and maintenance costs and also excludes operation and maintenance costs of new assets created after the start of concession e.g. new runway.

In the year 2008-09 there was an overlap of manpower costs of AAI staff as well as DIAL staff. From a valuation point of view the manpower cost of only AAI staff for the relevant period is considered (Operational Support Cost) to result in a fair valuation. The manpower cost of DIAL staff has been excluded as the AAI staff was mandated to support the working of existing terminals for that period while the DIAL staff was getting oriented and trained. The operation and maintenance cost of the new assets viz. new runway are also excluded.

Calculation of Hypothetical Asset Base

Figures in Rs. Crores

	2008-09
Aero Revenue [A]	434
Landing Charges	244
Parking & Housing Charges	13
Passenger Service Fees	85
Baggage X-Ray Revenue	4
In-Line X-Ray Revenue	15
Fuel Throughput Revenue	72
Aero Expenses [B]	385
Less: Expenses Not Considered [C]	82
DIAL Manpower Cost	81
Runway 11/29 Operations & Maintenance cost	1
Eligible Expenses [D=B-C]	304
Aero EBITDA [A-D]	130
WACC *	11.60%
Hypothetical Asset Base	1,119

Note: Bid WACC has been used to determine Hypothetical Asset Base.

VII. REGULATORY ASSET BASE

As contemplated in State Support Agreement (SSA), the following principle has been used to compute RAB. RAB representing the aeronautical assets is calculated as below:

$$\begin{array}{r}
 \text{RAB at the start of a year/period (Opening RAB)} \\
 + \\
 \text{Projected capital investment} \\
 - \\
 \text{Projected depreciation} \\
 = \\
 \text{RAB at the end of a year/period (Closing RAB)}
 \end{array}$$

This calculation of RAB for each year is the average of the opening and the closing RAB. Movement, of RAB is depicted by applying the aforesaid methodology. The return is calculated on the average RAB.

- Opening RAB is calculated based on the historical cost of assets created by the airport. In addition to above a value is determined on the assets acquired on privatization (Hypothetical Asset Base) in line with the SSA. Hypothetical Asset Base has been added based on the calculation explained earlier.
- Working Capital is not included in the RAB.
- Capital expenditure during the relevant year is added to the RAB.
- In addition to the interest during construction, additional capitalization for the financing allowance being the amount due on equity invested (including quasi-equity), foregone at the WIP stage, has been considered as part of RAB as Financing Allowance. However the same has been considered only upto the date of actual capitalization of assets.
- Upfront fees and pre-operative expenses, incurred by DIAL towards bid preparation are considered as inadmissible and therefore not included in RAB.

Following approach has been adopted for firming up the RAB during the regulatory control period:

1. Financial year 2009-10 has been taken as the first year of the control period.
2. Opening RAB has been firmed up by aggregating the aeronautical assets as on the last day of the previous year.
3. Addition and deletion thereafter during 2009-10 and 2010-11 has been taken as per audited financial statements.
4. For the financial year 2011-12, 2012-13 and 2013-14, Capex is projected and added to the respective years.
5. Apart from above an addition of financing allowance on WIP during construction period, to extent of Rs. 645.1 Crores, has been added to the RAB.
6. Further, an amount of Rs. 17.50 Crores spent towards Runway 10/28 rehabilitation, has been reduced from RAB in FY 2011-12 due to disallowance of the same as capital expenditure proposed by AERA (the same has been treated as revenue expenditure).
7. Addition in 2011-12 and onwards are on account of:
 - a. Project cost pending capitalization and also finalization due to on-going closure of contracts, etc.
 - b. An amount of Rs. 93 Crores for 2011-12, Rs. 183 Crores for 2012-13 and Rs.200 Crores for 2013-14 towards Capex that would be necessitated at the airport.
 - c. On-going New ATC tower works.

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Summary of firmed up and rolling forward RAB

Regulated Asset Base (Aeronautical) Yearwise

Figures in Rs. Crores

Year	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Opening RAB [A]	-	58	132	2,987	3,677	10,539	9,313	8,986
Book additions: [B]	60	77	1,784	835	8,325	606	181	550
Capex	60	77	1,784	835	8,325	513	-	350
Future Capex	-	-	-	-	-	93	181	200
Other additions: [C]	-	-	1,119	-	645	-	-	-
Hypothetical Asset Base	-	-	1,119	-	-	-	-	-
Financing Allowance on CWIP	-	-	-	-	645	-	-	-
DF Funded Assets [D]	-	-	-	-	1,827	1,449	138	109
Deletions/Disallowance [E]	-	-	-	-	-	18	-	-
Net Additions [F=B+C-D-E]	60	77	2,903	835	7,143	(861)	43	441
Less: [G]	1	4	48	144	282	365	370	404
Depreciation on Assets in Books	1	4	48	103	237	301	304	334
Depreciation on Hypothetical Asset	-	-	-	42	29	41	42	44
Depreciation on Financing Allowance on CWIP	-	-	-	-	17	23	24	26
Closing RAB [A+F-G]	58	132	2,987	3,677	10,539	9,313	8,986	9,023
Average Aeronautical RAB	29	95	1,559	3,332	7,108	9,926	9,149	9,005

Figures in Rs. Crores

Yearwise addition to RAB-Gross Block	Project & Operations Capex
2006-07	59.5
2007-08	77.4
2008-09	1,784.1
2009-10	834.6
2010-11	8,325.0
Total Aeronautical Gross Block	11,080.7

The Regulated Asset Base of Rs.11,080.7 Crores as on March 31st 2011 has been certified by the statutory auditors vide their certificate dated June 15th 2011.

VIII. FINANCING

The means of finance for the project cost of Rs. 12,857 Crores is as follows:

Means of Finance

Particulars	Firmed up Cost (In Rs. Cr)	
EQUITY		3,971
Equity	1,200	
Additional Equity	1,250	
Internal Accruals	50	
Quasi Equity(Lease Deposits / Trade Deposits)	1,471	
Debt		5,363
Rupee Term loan	3,650	
External Commercial Borrowing (ECB)	1,616	
Additional Debt proposed*	97	
Airport Development Fee (incl. additional)		3,523
Total		12,857

- **Equity:** The total equity infused by promoters is Rs. 2,500 Crores (2,450 Crores by way of Equity and internal accrual of 50 Crores).
- **Quasi Equity:** DIAL has leased out 45 acres of land (Non-Transfer Assets) and the Security Deposit of Rs. 1,471 Crores from this transaction has been used to part finance the project cost. Non-Transfer Assets are Non-Revenue Share Assets and are not to be used to subsidize in determination of the aeronautical tariffs. These assets are outside the regulatory till and it was not mandated for DIAL to use this funding for financing the project cost. Given the fact that these funds have been utilized for financing the project, DIAL should be provided a fair return on these funds which has opportunity cost. These funds are quasi-equity by nature given their super long tenor and being culled out from a bottom-line impacting revenue stream. Thus an equity return has been considered on these funds.
- **Debt:** The debt for the project was Rs. 5,266 Crores comprising Rupee Term Loan of Rs. 3,650 Crores and External Commercial Borrowings (ECB) of Rs. 1,616 Crores. Lenders had expressed their concern on raising further debt in the company as this would lead to serviceability issues. However, a notional debt of Rs. 97 Crores* has been assumed on account of disallowance proposed in ADF given the fact that this is a small number.
- **ADF:** MoCA had approved collection of DF from embarking passengers for a period of 3 years, on NPV basis which, as on March 1, 2009, worked out to Rs. 1,827 Crores. In addition to the above, an additional DF of Rs. 1,696 Crores (NPV) to complete the project has been reduced upfront from the Regulatory Asset Base.

IX. COST OF EQUITY

Given the importance of an accurate estimate of the cost of equity, DIAL had mandated an independent study by consultancy firm Leigh Fisher for this purpose. A copy of the report of Leigh Fisher is enclosed as **Annexure D**. The study of Leigh Fisher is based on CAPM Model and considers in detail, the risk free rate in India, the risk premiums and airport betas. The study is specific to DIAL and the recommended cost of equity is 25.1%. In line with this recommendation, we have taken a marginally lower number of 24% as the cost of equity.

X. COST OF DEBT

In this section we present the various components of current and forecast cost of debt over the proposed five year regulatory period.

Details of Debt for funding the Project Cost

(Figures in Rs. Crores)

Debt facility	Amount
Rupee Term Loan	3,650
External Commercial Borrowing	1,616
Proposed additional debt	97

The cost of debt of DIAL is determined by the cost of the different tranches within the rupee term loan and the external commercial borrowing facility, as set out below.

➤ Rupee Term Loan

DIAL has signed a rupee facility agreement with a consortium of ten domestic lenders for INR 3,648 Crores with door to door tenor of 17 years. The banks have committed INR 3,648 Crores and their shares in the facility are outlined below:

Details of Rupee Loan Bank-wise

Rupee Term Loan	Amount (INR)	Interest rate (%)
Andhra Bank		
Tranche 1	1,100,000,000	10.25
Tranche 2	620,000,000	11.50
Tranche 3	410,000,000	10.75
Tranche 4	200,000,000	9.75
Tranche 5	170,000,000	9.50
Sub Total	2,500,000,000	
Bank of India		
Tranche 1	1,100,000,000	10.00
Tranche 2	620,000,000	11.25
Tranche 3	410,000,000	10.50
Tranche 4	200,000,000	9.25
Tranche 5	170,000,000	9.25
Sub Total	2,500,000,000	
Canara Bank		
Tranche 1	2,600,000,000	10.00
Tranche 2	1,530,000,000	11.25
Tranche 3	990,000,000	10.50

Rupee Term Loan	Amount (INR)	Interest rate (%)
Tranche 4	500,000,000	9.25
Tranche 5	380,000,000	9.25
Total	6,000,000,000	
Central Bank of India		
Tranche 1	1,800,000,000	10.50
Tranche 2	950,000,000	11.50
Tranche 3	660,000,000	10.75
Tranche 4	330,000,000	9.50
Tranche 5	260,000,000	9.50
Total	4,00 0,000,000	
IDFC		
Tranche 1	1,100,000,000	10.68
Tranche 2	620,000,000	12.47
Tranche 3	410,000,000	12.01
Tranche 4	200,000,000	10.05
Tranche 5	170,000,000	9.75
Total	2,500,000,000	
IIFCL		
Tranche 1	2,200,000,000	10.50
Tranche 2	1,240,000,000	12.47
Tranche 3	820,000,000	12.01
Tranche 4	420,000,000	9.75
Tranche 5	320,000,000	9.75
Total	5,000,000,000	
Oriental Bank of Commerce		
Tranche 1	1,800,000,000	10.50
Tranche 2	950,000,000	11.25
Tranche 3	660,000,000	10.50
Tranche 4	330,000,000	9.25
Tranche 5	260,000,000	9.25
Total	4,000,000,000	
Punjab National Bank		
Tranche 1	1,100,000,000	11.50
Tranche 2	620,000,000	11.50
Tranche 3	410,000,000	11.50
Tranche 4	200,000,000	11.50

Rupee Term Loan	Amount (INR)	Interest rate (%)
Tranche 5	170,000,000	8.50
Sub Total	2,500,000,000	
Union Bank of India		
Tranche 1	2,200,000,000	10.00
Tranche 2	1,240,000,000	11.25
Tranche 3	820,000,000	9.75
Tranche 4	420,000,000	9.00
Tranche 5	320,000,000	9.00
Sub Total	5,000,000,000	
Vijaya Bank		
Tranche 1	1,100,000,000	10.50
Tranche 2	620,000,000	11.50
Tranche 3	410,000,000	10.75
Tranche 4	200,000,000	9.75
Tranche 5	170,000,000	9.75
Sub Total	2,500,000,000	
Grand total	36,500,000,000	

The most significant other terms and conditions of the Rupee Term Loan are as follows:

Particulars	Terms and conditions
Nature of Facility	Rupee Term Loan
Amount of Facility	INR 3,648 Crores
Door to Door Tenure	17 Years
Average Maturity	13.5 Years
Pricing	Sub BPLR Interest Rate decided on the Date of Drawdown

Using the information above, the weighted average cost of debt for the Rupee Term Loan upto FY 2010-11 was 10.62%. This rate has been recently reset upwards by the rupee lenders at 11.75%.

Seeing the hardening trend of interest rates, we have forecasted a nominal increase of 50 basis points every year for each of the FY 2012-13 and 2013-14.

➤ **External Commercial Borrowing**

In addition to the Rupee Term Loan, DIAL has entered in to an External Commercial Borrowing (ECB) Facility Agreement for USD 350 million.

Details of ECB Lending Bank-wise

ECB	Amount (USD)	Margin	Libor Hedged	Total pricing
Tranche A				
ICICI Bank	100,000,000	4.75	4.99	9.74
Sub Total	100,000,000			
Tranche B				
Union Bank of India	75,000,000	4.75	2.76	7.51
AXIS Bank	25,000,000	4.75	1.98	6.73
Sub Total	100,000,000			
Tranche C1				
AXIS Bank	22,450,000	4.75	1.96	6.71
Bank of India	10,000,000	4.75	1.96	6.71
Bank of Baroda	22,050,000	4.75	1.96	6.71
DBS	40,000,000	4.75	1.96	6.71
Sub Total	94,500,000			
Tranche C2				
AXIS Bank	8,750,000	4.82	1.96	6.78
Bank of India	20,000,000	4.82	1.96	6.78
Bank of Baroda	8,750,000	4.82	1.96	6.78
Sub Total	37,500,000			
Tranche C3				
AXIS Bank	3,800,000	4.84	1.96	6.80
Bank of India	10,000,000	4.84	1.96	6.80
Bank of Baroda	4,200,000	4.84	1.96	6.80
Sub Total	18,000,000			
Grand total	USD 350,000,000			

Using the information above, the weighted average cost of debt for the ECB facility is 7.76%. The same has been used for the purpose of calculating the weighted average cost of capital (WACC).

XI. WEIGHTED AVERAGE COST OF CAPITAL (WACC)

The SSA prescribed a nominal post-tax WACC methodology for determining the Return on RAB. A post-tax vanilla approach which is equivalent to above approach has been used to determine the WACC. The formula used is as under:

$$WACC = K_d \times G + K_e \times (1-G)$$

Where

K_d: Weighted average Pre-tax cost of debt used for funding the RAB

K_e: Post-tax cost of equity using the Capital Asset Pricing Model 'CAPM' Approach.

G: Gearing of Debt to total Equity/Quasi-equity utilised for RAB.

Security deposit as quasi equity: As explained earlier, DIAL has utilized the security deposits from lease of Non-Transfer Assets to part finance the capital expenditure programme for Phase 1. This has been done despite any mandate/requirement under any of the project agreements to utilize the deposit towards funding the aeronautical assets.

The aforesaid deposits are for the concession period co-terminating with the concession of DIAL and as such have been treated as quasi-equity. The reasons of this being treated as quasi-equity are as under:

- These amounts are culled out from a bottom-line impacting revenue stream.
- The amount is not repayable during the term of concession – same as in case of equity.
- The utilization of the money is at the discretion of the shareholders and had no limitations.
- The money could have been invested in any other venture and/or developing Non Transfer Assets/Non Aeronautical Assets by DIAL and has opportunity cost of equity.
- The amount has been used to finance the RAB and as such it needs to be serviced.
- Lenders have also treated this amount as equity to compute debt-equity ratio for lending purposes.

Therefore, security deposit from CPD is treated as quasi-equity and the cost of equity applied to this to compute WACC.

Based on the weighted average cost of debt for the Rupee Term Loan and the External Commercial Borrowing facility, a combined weighted average can be calculated in rupee-denominated terms, which will provide the overall cost of debt for DIAL's cost of capital calculation. The calculation is set out in the table below.

Fair Rate of Return (WACC)

Means of Finance (other than DF)	Total	2009-10	2010-11	2011-12	2012-13	2013-14
Equity Funding						
Equity Share Capital	11,000	1,200	2,450	2,450	2,450	2,450
Internal Accruals	250	50	50	50	50	50
Additional Share Capital	1,250	1,250	-	-	-	-
Lease Deposits	6,754	951	1,389	1,471	1,471	1,471
Sub Total [A]	19,254	3,451	3,889	3,971	3,971	3,971
Debt Funding						
Rupee Facility	19,198	3,648	3,650	3,840	4,021	4,039
Interest Rate on Rupee Facility		10.62%	10.62%	11.75%	12.25%	12.75%
ECB Facility	7,707	1,604	1,580	1,580	1,540	1,402
Interest rate on ECB Facility		7.76%	7.76%	7.76%	7.76%	7.76%
Sub Total [B]	26,904	5,253	5,230	5,420	5,561	5,441
Grand Total [A+B]		8,704	9,119	9,391	9,532	9,412
Cost of Equity	4,621	828	933	953	953	953
Cost of Debt	2,832	512	510	574	612	624
Gearing		60.35%	57.35%	57.72%	58.34%	57.81%
Average Gearing for 5 Years	58.29%					
Cost of Equity	24.00%					
Weighted Average Cost of Debt	10.52%					
Fair Rate of Return (WACC)	16.15%					

XII. OPERATING EXPENSES

SSA allows for the recovery of efficient operating and maintenance expenses pertaining to aeronautical services. In our filing we have adopted the following principle to determine the efficient aeronautical operating and maintenance costs:

1. In line with the principle of allowing efficient cost recovery as enshrined in SSA, all aeronautical operating and maintenance cost incurred by DIAL has been considered, in computing target revenue requirement. Further, SSA also acknowledges that there may be certain mandated cost which would be borne by DIAL (subject to the imposed constraints as referred in point 5 of Schedule 1 laying down the principle of tariff fixation) and the same should be considered in the O & M cost block.
2. We understand that any savings in operating expenditure during the control period beyond those forecasted shall accrue to DIAL. This creates an incentive for DIAL to identify savings which aids to innovation and will benefit users in the subsequent regulatory period.
3. We understand that uncontrollable costs will be a pass-through. In addition to security costs, uncontrollable costs include other genuinely uncontrollable operating costs like statutory operating costs (including but not limited to DGCA, Customs, Immigration, etc.), property taxes, safety and environment cost, cost variance due to increase in service levels, exchange rate, etc. Further, any change in direct and indirect tax, should be allowed as pass-through.

In accordance with the principle of efficiency as laid down in Schedule 1 of the SSA, only efficient costs are to be considered in the tariff building block while determine the target revenue. Therefore, the target revenue itself incorporates the efficiency factor and no additional improvement factor should be imposed on DIAL.

The basis and the assumptions considered for each category have been presented hereunder. Though we have provided the rationale and justification for the variance in detail in the latter part of the chapter, in general, the addition of new integrated Terminal 3 to the existing terminals, with the improved level of service, is the primary reason for increase in the operating and maintenance costs. In addition to the increase in terminal area due to commissioning of Terminal 3, currently the airport is functioning with 3 fully operating runways as against 2 previously.

Earlier, IGIA had an aggregate terminal floor area of less than 1 lacs sq. mtrs as against approx. 6.lacs sq. mtrs operational terminal area currently. This has resulted in 6 times increase in total area. However the resultant operating cost has increased only marginally.

Summary of Operating, Maintenance and Manpower Costs (Aeronautical)

Aero Expenses	2009-10	2010-11	2011-12	2012-13	2013-14
Staff Cost	91.3	125.1	131.4	144.8	152.1
Administrative & General Expenses	60.0	102.0	127.4	133.7	140.4
Electricity & Water Charges	31.2	60.8	121.7	125.3	129.1
Operating Expenses	113.1	166.2	244.0	240.2	250.3
Airport Operator Fee	25.2	31.4	33.1	84.0	128.3
Property Tax	-	-	52.5	21.9	21.9
Total Aero Expenses	320.8	485.6	710.0	750.0	822.0

1) Manpower costs

The Project completed by DIAL in record time has been due the relentless effort of every DIAL employee. DIAL has a separate human resource department which manages the employee relations, retention and new recruitments. DIAL considers its manpower as its biggest asset.

In addition to manpower deployed directly on DIAL roles, the manpower costs upto May 2nd 2009 included a major portion pertaining to Operation Support, payable and mandated under OMDA Clause 6.1.4 to AAI, requiring DIAL to retain 100% AAI's existing staff base at IGIA for a period of three years from the Existing Date. This period was known as the 'Operation Support Period'. The operation Support cost incurred during this period has been charged to the P & L Account.

In this filing, we have estimated a 5% p.a. real increase in salaries and wages. This real increase has been considered keeping in mind the competitive environment DIAL is subject to and also addressing the managing the attrition levels being currently experienced. The airport industry in India is getting transformed and is maturing leading to high competition for the skilled talent, which is quite scarce. Based on the inputs received from the departments, due to increase level of activity, we have assumed a 5% increase in manpower in FY 2012-13.

As compared to FY 2011-12, the manpower cost in the FY 2010-11 is shown net of capitalization due to completion of project.

2) Administrative and general costs

The administrative cost category contains a number of types of costs, the most significant ones of which are consultancy expenses, advertisement, travel and communication costs, business promotion etc. The majority of these costs are attributable to the airport as whole.

The forecast of administrative costs have been based on the actual data for the FY 2010-11 and the same are escalated by 5% p.a. in real terms. Further, as compared to the FY 2011-12, some portion of the cost in the FY 2010-11 was capitalized.

3) Operations and Maintenance Cost

I. Operation Cost

The entire operation at the airport is carried out under the Operations department. This department is one of the most crucial functions ensuring that airport functions in a safe, efficient and smooth environment. The department has set out the following objectives w.r.t. Airport Operation for both Airside and Terminal:

- Keep safety and security excellence as the first priority
- Operate an efficient airport dedicated to exceptional customer service
- Become a cost and price competitive airport
- Broaden and increase the airport's revenue base to ensure on-going viability
- Maintain strong relationships with "neighbors", communities, and industries

Airport Operations is sub-divided into various sub-departments:

- **Airside Operation** looks after the various activities on the airside. It includes activities like Follow-me vehicles to guide aircraft, Bird Chasing, Wildlife monitoring etc. The department has outsourced activities like vehicle hire, Bird Chasing, Wildlife, and other operational services in the airside. These services are all manpower intensive and have been contracted for one year and

come up for renegotiation every year. So these contracts costs are likely to increase in line with labour cost.

- **Airside Planning:** Primary role of airside planning team is to do air survey of airside for safe and secure airside operations.
- **Airport Operation Control Centre (AOCC):** This is the nerve centre of the airport operation as it provides essential support to terminal as well as airside and keeps an eye on various activities taking place anywhere in the airport. This requires highly trained manpower and regular training of these personnel are carried out.
- **Airfield Rescue Fire Fighting (ARFF)** is the main fire fighting unit at the airport. They have been equipped with all modern equipment and provide safety to the entire airport. Their costs include the training, uniform and various and the material required for fire fighting.
- **BHS operation** is there to take care of housekeeping activities of baggage handling area and storage of early baggage arrival.
- **Safety, Health and Environment (SHE)** team is there for environmental issues. For clean and eco-friendly environment. They monitor air quality, noise level and water usage, etc.
- **Slot department** manages slot of airlines with the help of sophisticated software. Annual license fee and maintenance of software is done on contractual basis.
- **Terminal standards** facilities mainly covers all housekeeping contracts which are there for upkeep of terminal and other services like wheelchair, strollers, maintenance of play area, medical facilities, etc.

IT function has been outsourced to an independent entity by a competitive bidding process. This entity provides the IT solution to all users at the airport. IT costs are forecasted based on payments due from DIAL to the joint venture company providing IT services. Any IT-related revenues received from end users are deducted and the deficit is borne by DIAL.

The housekeeping component of operations costs is projected to increase in the FY 2011-12 due to the first full year of Terminal 3 operations.

The amount committed in the FY 2011-12 is based on individual departments and associated sub-activities (fund centre). Some of the costs are through committed contracts and the balance are forecasted based on individual department assessment. For the future years, we have forecasted expenses assuming 5% p.a. increase in costs due to higher level of activity. However in cases, where there are long term contracts, no escalation has been considered.

II. Maintenance Cost

The maintenance department looks after the entire repair and maintenance of the airport site primarily covering:

- All Airside (including 3 operating runways, taxiways, aprons, parking bays, aerobridges, hangars, drains, general airfield upkeep, power sub-stations, water & waste management and all other allied airside infrastructure for all civil, electrical and mechanicals works)
- Terminal Buildings (Specifically includes all passenger and cargo terminal building including the existing terminal for all civil, electrical and mechanicals works inside the PTB) and
- City Side (Upkeep and maintenance of access roads, landscaping and traffic management)

Under the Maintenance department, there are various sub-functions which relate to the maintenance of earmarked activities. These sub-functions (fund-centre) contribute to the overall maintenance costs. The activities undertaken are unique which require specialized engineering and technical skills. The main functions are as under:

➤ **Airside**

- **Air Ground Lighting (AGL) 09/27 and 10/28** – which predominantly looks after the maintenance of existing runway namely R/w 09/27 and R/w 10/28 and the associated set of taxiways. The primary cost of this function, comprises of regular maintenance related to the Airfield Ground Lighting (AGL) including replacement of approach lights, power backup etc. Runway and taxiway are under the control of ATC Tower and regular checks are initiated so as to ensure a smooth and safe airfield operating environment. Apart from above, necessary inventory levels and consumable are also maintained internally as these are required for conducting speedy and efficient maintenance.
- **Air Ground Lighting (AGL) 11/29:** This department looks after the repair and maintenance of new R/w 11/29 and its associated taxiways. The budget of this department comprises of AGL Comprehensive Maintenance Contract (CMC), sub-station maintenance contract and Power backup (UPS) maintenance contract. Apart from above there is provision for housekeeping, replacement of UPS batteries and provisioning of spares and consumables.
- **Airport Systems:** Terminal 3 and all new airfield infrastructure development have been procured with the best available technologies and equipment's for augmenting the airport infrastructure to a world class airport. All these sophisticated equipment like Passenger Boarding System, Visual Docking Guidance System, travellerator and Escalators (VHT), Terminal and Airfield Resource Management System, etc are specialized and domain specific resources sourced from respective OEM vendors. Since, the spares and upkeep of such equipment requires skilled know how, we have Comprehensive Maintenance Contracts (CMC) for all such airport systems.
- **Airside Civil:** This department looks after regular maintenance and usually services the request of the Operation Department for the following works:
 - Runway marking Painting;
 - Pavement repairs;
 - Joint filling;
 - Fencing;
 - Gate Repairs;
 - Drain cleaning;
 - Bitumen repair;
 - Building Painting;
 - Fence painting etc.

Most of these works are carried out based on requirement and past experience of the domain department. The estimation of these expenses is based on the historical spends achieved during the preceding year.

- **Electrical 10/28:** This department looks after the repair and maintenance of the electrical works of substation and associated facilities of R/w 10/28.
- **Cargo:** Repair and maintenance of all the facilities relate to cargo except the terminal building is being taken care by this department.

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➤ **Terminals**

Terminal 1

- T1 Civil
- T1 Mechanical
- T1 Electrical

This department takes care of all the repair and maintenance of the T1 terminal. The costs herein include the civil costs which include regular civil work which include water proofing, sewage, road repair. Major cost herein comprises of annual repair and maintenance contract which is a rate contract.

This department also looks after the electrical and mechanical repair, maintenance related to T1 plant and machinery, baggage handling, consumables etc. The cost herein comprises of AMC related to electrical, manpower, BHS, city side maintenance, etc.

Terminal 3

- T3 Civil
- T3 Electrical.
- T3 Maintenance BHS.

This department takes care of the entire repair and maintenance of T3 building which comprises of the AMC of the baggage handling equipment, electrical parts, consumables, the communication systems like tetra, walkie-talkie etc. The mechanical department pre dominantly looks after the air conditioning etc.

- **Procurement:** This department is the centralised department for procurement of all the spare and consumables related to repair and maintenance.
- **Engineering:** This department takes care of all engineering related inputs related to repair and maintenance.
- **T3 Auxiliary :** This department accounts for the electricity and water of T3
- **Central store:** This department maintains the inventory for all the terminals and finalises the procurement strategy and store maintenance.
- **Landscape:** It includes the maintenance cost of city side landscaping etc.
- **Motor Transport (MT):** Transport department looks after the repair and maintenance of airport vehicles used on the airside like:
 - Fire tenders and other supporting fighting vehicles;
 - Follow-me vehicles
 - Runway rubber removal vehicles;
 - Runway marking machines;
 - Runway Friction Tester
 - Heavy earth moving machines; maintenance and general consumables.

Major maintenance expenditure herein is for;

- Baggage handling system maintenance.
- Passenger boarding bridges maintenance.
- Electrical maintenance.
- Mechanical maintenance of mechanical items as air Conditioning system etc.

The increase in cost for the FY 2011-12 is mainly due to first full year of Terminal 3 operations as compared to last financial year. The increases in total utility costs in FY 2011-12 as compared to FY 2010-11 is principally due commissioning of Terminal 3 and new Runway 29/11. The increase in maintenance cost associated with the first full year of Terminal 3 operations is partially offset by the decrease associated with the full year closure of Terminals 1A and 2.

The amount committed in the FY 2011-12 is based on individual departments and associated sub-activities (fund centre). In some cases, costs are committed through long term contracts and the balance cost are forecasted based on individual department assessment of works to be undertaken. For the future years, we have forecasted expenses assuming 5% p.a. increase in costs due to higher level of activity. However in cases, where there are long term contracts, no escalation has been considered.

4) Utility costs

Utility costs are calculated at gross level for both electricity and water less recoveries from the airlines and concessionaires. The utilities cost has been escalated by 3% p.a. in real terms on account of increase in consumption due to higher passengers and air traffic movements. This is based on the facts that going forward, there will be increase in the throughput of passengers and increased aircraft movements. Further, there is a scarcity of fossil fuels leading to abnormal increase in energy cost.

The substantial increase in FY 2011-12 is due to the fact that FY 2011-12 includes the first full year of Terminal 3 operations.

5) Property Tax

In a recent development, both DIAL and AAI have been adjudicated to bear liability on account of property tax to the Municipal Corporation of Delhi. Out of the above, AAI would settle its share of liability pre Effective Date i.e. for period upto May 2nd 2006. Thereafter, DIAL has to pay a sum of Rs. 60 Crores for the period upto 31st March 2011 from the Effective Date. Thereafter it is estimated that DIAL will need to pay approx. Rs. 25 Crores annually based on the current property tax rates. In future there can additional demands of property tax from other civic bodies which should be allowed as a pass through.

XIII. DEPRECIATION

Depreciation is the Return of Capital and is dependent on the life of the underlying assets. Depreciation has been computed as per schedule XIV of the Companies Act 1956.

The concession agreement has laid down that DIAL must follow the depreciation rates as given in the Companies Act and in case the depreciation rates are not mentioned in the said schedule, the depreciation rates as per Income Tax Act as converted to straight line method, should be used. In case either Acts does not have rates, the rates as per generally accepted Indian accounting standards will be used. Schedule XIV of the Companies Act lays down the minimum rate to be charged.

In case of Companies Act, 1956 the depreciation is calculated under a straight line method as against written down value method under Income Tax Act, 1961. Companies Act, 1956 prescribes the assets lives for the following classes of assets as under:

SLM Depreciation Rate as per Companies Act, 1956

Asset Classification	Rate	Useful life (Years)
Plant & Machinery	4.75%	21.1
Buildings	3.34%	29.9
Furniture	6.33%	15.8
Plant & Machinery (Computers)	16.21%	6.2
Intangible-Airport Rights	1.67%	59.9
Vehicles	9.50%	10.5
Runway, Taxiway and Apron	3.34%	29.9

No depreciation has been charged on asset funded from Development Fund Grant.

Depreciation Forecast

Year	2009-10	2010-11	2011-12	2012-13	2013-14
Aeronautical Depreciation	144.1	281.7	365.4	369.8	404.0
Depreciation on Assets in Books	102.5	236.6	301.4	304.2	334.0
Depreciation on Hypothetical Asset	41.6	28.6	40.6	41.6	44.4
Depreciation on Financing Allowance on CWIP	-	16.5	23.4	24.0	25.6

Figures in Rs. Crores

XIV. TAXATION

In this section, we describe the key considerations in relation to determination of corporate tax on the aeronautical services. SSA require that corporate tax pertaining to aeronautical earning shall be separately calculated and added as a building block to compute the final target revenue.

The computation of income tax, on aeronautical income, has been made on the prevailing Income Tax laws and rules. Further, the assumptions are as under:

- The Aeronautical Segment has been treated as a standalone entity with its own tax computations. This may not necessarily reflect the overall tax computation of DIAL as a whole;
- In line with this, all items excluded from the calculations of the regulatory building blocks have been excluded from the regulatory tax computation. The items not taken into account include:
 - Non-aeronautical operating costs or depreciation;
 - Revenue share costs as they are mandated to be excluded as per concession documents.
 - Tax Computation has also considered MAT provisions.

XV. AERONAUTICAL RELATED INCOME

In this section of the regulatory filing, we present forecasts of aeronautical-related revenues, together with explanations. Aeronautical-related revenues are considered to include the following:

- Fuel throughput revenues and Into-Plane Concession Fee;
- Concession Fee from Cargo ;
- Concession Fee from In-flight kitchen ;
- Concession Fee from Bridge-mounted equipment ;
- Concession Fee from Ground handling;

An overview of the aeronautical related revenue forecast is provided in the table below:

Summary of Forecasted Aero Related Revenues

(INR crore)	2009-10	2010-11	2011-12	2012-13	2013-14
Fuel Thruput royalty	85.0	105.3	120.2	139.8	160.9
Into Plane	-	0.8	1.1	1.2	1.4
Cargo	175.3	138.6	131.8	130.1	132.6
In-flight kitchen	13.0	28.9	31.5	34.6	37.5
Bridge-mounted equipment	-	1.6	5.5	6.0	6.4
Ground handling	37.7	42.9	31.2	33.9	36.4
Space, Land & Hangar	132.1	123.3	144.0	152.6	148.8
CUTE	5.0	5.1	5.8	6.2	6.6
Total	448.1	446.5	471.1	504.4	530.6

The three most significant categories of aeronautical-related revenues are fuel throughput royalty, cargo revenues and rentals. Growth in fuel throughput and cargo revenues is linked to the independent traffic forecasts prepared for DIAL by the Madras School of Economics (through kilolitres of fuel and cargo tonnage respectively).

The Aviation Turbine Fuelling infrastructure and service has been historically been owned and managed by the Public sector oil companies. Post T3 developments, the new investments in fuelling infrastructure including the hydrant infrastructure and tankage and other allied assets have been through a competitive bidding process outsourced to an independent commercial undertaking namely Delhi Aviation Fuel Facility Private Limited.

➤ Fuel throughput and Into Plane Concession revenues

In line with widespread international practice, there are two revenue streams from Fuel:

- Rental or an annual licence fee, which has been covered under land rental below; and
- A royalty income generally referred as volume-based concession fee.

This section is concerned with the forecast of the volume-based concession fee. The level of this fee is based on concession contracts with fuel providers and is assumed to be escalated by 7% p.a. as the same is linked to CPI Index with a cap of 7%. In addition this revenue has been assumed to grow at the same growth rate as air traffic movements (ATMs). DIAL is submitting a separate proposal for the revision of fuel throughput royalty to AERA wherein an increase of 7% p.a. has been sought. The current forecast is based on the assumption that the aforesaid request will be positively considered.

An overview of the forecast is provided below.

INR Crores	2009-10	2010-11	2011-12	2012-13	2013-14
Fuel throughput revenues	85.0	105.3	120.2	139.8	160.9
Into Plane Concession Fee	Nil	0.8	1.1	1.2	1.4

The Into plane service in FY 2010-11 was operational only for the part of the year.

Although as per the concession agreement the aforesaid revenue is Non-Aeronautical, however for our calculation purpose, we have assumed the revenues as Aeronautical as already discussed in foregoing section of 'Principle of Tariff Filing'.

➤ **Cargo revenues**

OMDA has mandated us to provide for two independent cargo providers to introduce competition in the Cargo Business. The existing brownfield cargo business was outsourced through a competitive bidding process to Celebi Delhi Cargo Terminal Management India Private limited. (Celebi) and a second Greenfield operator brought in through a competitive bidding process viz. Delhi Cargo Service Centre (DCSC). Both providers make two payments:

- Rental (annual fixed area licence fee), which has been covered under land rental below; and
- A concession fee expressed as a percentage of the gross revenue of the cargo service providers. Celebi has a contracted revenue share of 36% of its turnover as a concession fee and DCSC has a revenue share of 24% of its turnover as a concession fee.

This section covers the forecast of the cargo concession fees payable to DIAL. These fees depend in part on the revenue percentages. These are based on concession contracts with cargo service providers, and are fixed throughout the concession term. The other variable is the forecast total revenue to the providers. This forecast is based on:

- The cargo traffic forecast is based on the growth, sourced from the Madras School of Economics;
- Market share assumptions made by DIAL. Currently Celebi provides 100% of international cargo services and CSC provides 100% of domestic cargo services. As the two providers start competing, market shares are assumed to be shared by both the operators. The International share of Celebi is assumed to go down from 100% to 70% in FY 2013-14 and Domestic share to increase from 0% to 30% in FY 2013-14.
- Considering the emerging competition in the cargo business, the tariff has been projected to reduce by 5% p.a. in FY 2011-12 and 2.5% p.a. in subsequent years.

An overview of the forecast is provided below.

INR Crores	2009-10	2010-11	2011-12	2012-13	2013-14
Cargo revenues	175.3	138.6	131.8	130.1	132.6

The revenue of year 2009-10 also includes the gross turnover of the cargo business before it was concessionised out. There has been fall in the cargo revenue from the year 2010-11 due to outsourcing the cargo handling operations undertaken in terms of provision of OMDA wherein, we receive a fixed revenue share from the cargo operator.

The revenue for the year 2010-11 was on a higher side due to higher demurrage charges. This was because of following reasons:

- There was software up gradation by customs which resulted in interruption of operations at the terminal leading to pile up of cargo.
- The closure of European skies due to the ash Cloud problem.

It has been assumed that going ahead the demurrage charges, will be lower due to higher efficiency and this will lead to lower waiting time and demurrage resulting in lower revenue for DIAL. It is also important to note that going forward some of the revenues of international cargo will accrue from DCSC which a lower revenue share of 24% as has compared to 36% of Celebi. As such on an overall basis there will be a fall in the revenue to DIAL from cargo business.

The cargo services are under the regulatory ambit. The tariff proposal of Celebi is pending approval of AERA. Going forward, DCSC would also seek tariff approval from AERA w.e.f. November' 2011. In light of the above facts, any change in the tariff rates would need to be suitably adjusted by AERA in our tariff determination.

➤ In-flight kitchen revenues

There are currently four providers of (IFK's) services at the airport: Ambassador, Oberoi, Sky Gourmet and Taj Sats. All providers make two payments to DIAL:

- Rental or an annual licence fee, which has been covered under land rental below; and
- A concession fee expressed as a percentage of their total revenue.

This section is concerned with the forecast of the in-flight kitchen concession fees payable to DIAL. These are based on concession contracts with in-flight kitchen providers. It has been assumed that the market share and pricing of these concessionaires will remain the same. Forecast revenue of this revenue stream grows in line with the increase in number of departing passengers as forecast by the Madras School of Economics. The rates have been assumed to remain same due to competitive scenario.

An overview of the forecast is provided below.

INR Crores	2009-10	2010-11	2011-12	2012-13	2013-14
In-flight kitchen revenues	13	28.9	31.5	34.6	37.5

➤ Bridge-mounted equipment

Providers of bridge-mounted equipment pay a fixed percentage of revenue as concession fee. The total concession fee payable is calculated by multiplying total revenue by the revenue share percentage. Total revenue consists of:

- Ground power unit revenue;
- Pre air-conditioning unit revenue; and
- Potable water revenue.

Forecasts for each revenue stream are based on the Madras School of Economics forecast of air traffic movements as well as assumptions in aircraft types and use of remote stands. Rates are assumed to remain unchanged in real terms.

In case of International movements, the revenues have been considered from opening of Terminal 3 effective 28th July 2010 whereas, revenues from domestic movements have been considered from 1st November 2010.

An overview of the forecast is provided below.

INR Crores	2009-10	2010-11	2011-12	2012-13	2013-14
Bridge-mounted equipment revenues	Nil	1.60	5.5	6.0	6.4

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The high growth rate in FY 2011-12 is caused by the fact that the concession starts part-way through FY 2010-11. This means the 2011 numbers only include eight months of revenue.

➤ **Ground handling revenues**

There are currently four providers of Ground Handling services at the airport: Cambata, WFS-Bird, Air India-SATS and Celebi. These providers make two payments:

- Rental or annual licence fees, which has been covered under land rental below; and
- A concession fee expressed as a percentage of revenue.

This section is concerned with the forecast of the ground handling concession fees payable. These are based on concession contracts with ground handling providers, and are fixed until the end of concession term. This forecast is based on:

- The ATM forecast, sourced from the Madras School of Economics as set out in latter section;
- It is assumed that all providers will have an equal market share;
- Split between different aircraft types, based on the current split and assumed to remain unchanged;
- Tariff assumptions, based on the current tariffs and assumed to remain unchanged in real terms.
- No revenues have been considered for NACIL "Air India" Flights (Both International and Domestic) as they being self-handled by Air India SATS Ground handling company.

The current ground handling forecast has been based on historic ground handling revenues. The forecasted revenues have been increased at the ATM growth rate of each year.

An overview of the forecast is provided below.

INR Crores	2009-10	2010-11	2011-12	2012-13	2013-14
Ground handling revenues	37.7	42.9	31.2	33.9	36.4

The sharp increase in revenue for the FY 2010-11 is because of one time settlement of old dues of NACIL.

➤ **Space, Land and Hangar rentals revenues**

Space rental comes from lease of space within the existing terminals and from the new Terminal 3. Due to a one-time settlement of legacy issues pertaining to NACIL in the FY 2009-10, space revenues for past 4 years were recognized. This one-time settlement resulted in the spike in the FY 2009-10. The revenue for the subsequent years is based on the contracts and the existing arrangements. The rates have been escalated by 7.5% p.a. based on relevant contracts.

In case of Land revenues, the same is based on various leases with Airlines, Government Agencies, Oil Companies and Private Agencies the lease revenue is derived. Due to a one-time settlement of legacy issues pertaining to NACIL in the year 2009-10, land revenues for past 4 years were recognized and this one-time settlement has resulted in the spike in the year 2009-10. In addition to the above, the incremental land revenues for the year 2011 are mainly on account of the following:

- New lease with the Ground Handling Companies
- Concession of Cargo both Brownfield and Greenfield, and
- Revision of lease rates with Oil Companies.

INR Crores	2009-10	2010-11	2011-12	2012-13	2013-14
Land License, Space Rental and Hangars	132.1	123.3	144.0	152.6	148.8

It is assume that from 2013-14 the revenue from CISF is expected to stop accruing to DIAL as the CISF has the proposal to move their camp to their own land parcel.

XVI. NON AERONAUTICAL INCOME

In this section of the regulatory filing, we present forecasts of non-aeronautical revenues, together with explanations to support these. Non-aeronautical revenues forecasted herein are:

- Car parking and Public admission fee revenues;
- Advertisement revenues;
- Duty free revenues;
- Retail revenues;
- Food & beverage revenues;
- Lounge revenues;
- Transit Hotel;
- Radio taxi revenues;
- Foreign exchange and ATM revenues;
- Airport Service Charges

An overview of the aeronautical-related revenue forecast is provided in the table below:

Summary of Forecasted Non Aero Revenues

INR Crores	2009-10	2010-11	2011-12	2012-13	2013-14
Advertisement	28.0	42.6	57.6	66.5	75.7
Duty-free	120.0	81.1	118.1	135.1	152.9
Duty-paid	9.5	28.0	39.7	46.1	52.8
Food & beverage and Lounges	31.2	41.2	53.1	60.5	67.2
Car parking (Incl. Entry ticket & Left Luggage Fee)	26.1	10.1	5.6	6.5	11.0
Radio taxi	3.1	7.0	9.0	10.4	11.9
Transit Hotel	Nil	Nil	1.8	1.9	2.1
Forex, ATM and others	*	36.7	49.4	55.3	61.4
Airport Service Charge (ASC)	**	**	11.4	12.3	13.4
Telecom	*	6.58	7.5	8.7	9.9
Miscellaneous	23.7	4.9	5.0	5.0	5.0
Total	241.6	258.0	358.3	408.3	463.3

*earlier included in Miscellaneous income

** earlier included in concession incomes

DIAL expects an increase of approx. 38.76% in the total non-aeronautical revenues for FY 2011-12 vis-a-vis FY 2010-11. This is on account of T3 attaining first full year of operation in FY 2011-12 and thereafter it is expected to reach a stabilization stage.

➤ **Car parking, Entry Ticket and Left Luggage Facility revenues**

The scope of new concession include: Car parking, entry ticket and left luggage facility. The car parking include the new multi-level car parking (MLCP) provided at Terminal 3, Surface Car Parking at Terminal 1 and Cargo Terminal.

Under the new concession, the concessionaire is operating and maintaining the MLCP and has also funded a huge capex of the one of the largest car park in India. In a typical multi-level car park model because of the huge capex involved, the margin left with the operator is minimal. The revenue share payable under the concession is on gross receipts as against fixed monthly license fee paid under the old concession. The revenue share as per the concession terms is increasing progressively from 10% of gross receipts in the initial three years to 15% for next two years.

An overview of the car parking, entry ticket and left luggage facility forecasts is provided below:

INR Crores	2009-10	2010-11	2011-12	2012-13	2013-14
Car park (Incl. Entry ticket and Left Luggage Fee)	26.1	10.1	5.6	6.5	11.0

Total turnover of car parking concessionaire for the year 2011-12 is forecasted based on annualized turnover of 4 months (Dec, 2010 to Mar, 2011) of previous year. This is based on the rationale that this is true reflection of the future revenues as in this period all the 3 terminals including T3 were operational. This turnover is further increased by traffic growth and an additional increase of 5% p.a. on account of higher penetration.

The fall in the revenues from car park in 2010-11 is mainly due to new concession of the MLCP whereon the concessionaire incurred the entire capex for the MLCP. Forecasted revenue of the provider is escalated on two accounts:

1. Passenger traffic growth
2. Additional growth of 5% p.a. is anticipated on account of higher penetration

In the year 2013-14 there will be a 71% increase compared to year 2012-13 because of increase in revenue share from 10% to 15%.

➤ **Advertisement revenues**

The advertisement concessionaire pays, as per the terms of the concession, a percentage of revenue. Revenue to DIAL therefore depends on the revenue share percentage and on the turnover of advertisement concessionaire. The revenue share has been concessioned out under a competitive bidding process at percentage of 55% of the gross revenue of concessionaire.

INR Crores	2009-10	2010-11	2011-12	2012-13	2013-14
Advertisement	28.0	42.6	57.6	66.5	75.7

Total turnover of advertisement concessionaire for the FY 2011-12 is forecasted based on annualized turnover of 4 months (Dec, 2010 to Mar, 2011) of previous year. This is based on the rationale that this is true reflection of the future revenues as in this period all the 3 terminals including T3 were operational. The turnover so derived is thereafter increased by traffic growth and an additional increase of 5% p.a. on account of higher penetration.

Forecasted revenue of the concessionaire is escalated on two accounts.

1. Passenger traffic growth
2. Additional growth of 5% pa is anticipated on account of higher penetration

There is a substantial jump of 52% in revenue of financial year 2010-11 as compared to revenue of year 2009-10 mainly on account of opening of terminal 3. Even in financial year 2011-12 a substantial growth of 34.6% is forecasted as terminal 3 was operational only for part of year in 2010-11.

➤ **Duty-free revenues**

Duty free has been concessioned out on a competitive bidding where the highest bidder was selected. The revenue share payable to DIAL is a percentage of total duty-free revenue. Contract with duty free provider also specifies a minimum amount of guaranteed revenue to DIAL (minimum monthly guarantee of MMG). If the provider's revenue is multiplied by the revenue share percentage falls below this minimum guaranteed amount, the revenue share payment is replaced by the minimum guarantee. This is the case in every year of the forecast. The minimum guarantee for the concessionaire DDFS is expressed as a constant amount per passenger in US dollars.

An overview of the forecasts is provided below:

INR Crores	2009-10	2010-11	2011-12	2012-13	2013-14
Duty-free	120.0	81.1	118.1	135.1	152.9

Total turnover of duty free concessionaire for the FY 2011-12 is forecasted based on annualized turnover of 4 months (Dec, 2010 to Mar, 2011) of previous year. This is based on the rationale that this is true reflection of the future revenues as in this period all the 3 terminals including T3 were operational. Thereafter for future years, turnover so derived is increased by traffic growth and also an additional increase of 5% p.a. on account of higher penetration.

Forecasted revenue of the provider is escalated on two accounts.

1. Passenger traffic growth
2. Additional growth of 5% pa is anticipated on account of higher penetration

The decrease of 32.5% in revenue in 2010-11 as compared to previous year is primarily due to the fact that during the first 4 months of FY 2010-11, the earlier concessionaire's contract was on a revenues share of 15% on gross sales without any minimum guarantee or Fixed Monthly License Fee (FMLF) compared to 32% being paid now by the new concessionaire.

There is a substantial jump of 45.7% in revenue of FY 2011-12 as compared to revenue of year 2010-11 mainly due to T3 being operational only for part of year.

➤ **Duty Paid**

There are a number of concessionaires in Duty Paid category at Delhi Airport. The revenue shares payable to DIAL are expressed as a percentage of total retail revenue. The percentage is included in concession agreements with the providers. The contracts with providers also specify a minimum amount of guaranteed revenue (minimum monthly guarantee of MMG). If the provider's revenue multiplied by the revenue share percentage falls below this minimum guaranteed amount, the revenue share payment is replaced by the minimum guarantee.

An overview of the forecasts is provided below:

INR Crores	2009-10	2010-11	2011-12	2012-13	2013-14
Duty-paid	9.5	28.0	39.7	46.1	52.8

Total turnover of duty paid concessionaires for the year 2011-12 is forecasted based on annualized turnover of 4 months (Dec, 2010 to Mar, 2011) of previous year and is increased by traffic growth and an additional increase of 5% pa on account of higher penetration.

Forecasted revenue of the provider is escalated on two accounts.

1. Passenger traffic growth
2. Additional growth of 5% pa is anticipated on account of higher penetration

There is a jump of 193% in revenue in FY 2010-11 compared to FY 2009-10 and also increase of 42% in FY 2011-12 on account of T3 being operational.

➤ **Food & Beverage and Lounges**

In case of food & beverage concessionaires, the revenue shares payable to DIAL are expressed as a percentage of total food & beverage revenue. The contracts with providers also specify a minimum amount of guaranteed revenue (minimum monthly guarantee of MMG). If the provider's revenue multiplied by the revenue share percentage falls below this minimum guaranteed amount, the revenue share payment is replaced by the minimum guarantee.

Total turnover of food & beverage service providers for the FY 2011-12 is forecasted based on annualized turnover of 4 months (Dec, 2010 to Mar, 2011), during this period passenger movement through terminals got stabilized. The estimation for FY 2011-12 and subsequent years are increased by traffic growth and also 5% p.a. increase on account of increased penetration.

Lounge revenues

The revenue shares payable to DIAL are expressed as a percentage of total lounge revenue. The total turnover of lounges for the FY 2011-12 is forecasted based on annualized turnover of 4 months (Dec, 2010 to Mar, 2011). For the subsequent years, turnover has been increased by traffic growth and also a 5%p.a. increase in penetration.

An overview of the forecasts is provided below:

INR Crores	2009-10	2010-11	2011-12	2012-13	2013-14
Food & beverage and Lounges	31.2	41.2	53.1	60.5	67.2

➤ **Transit Hotel**

Transit Hotel facility has been provided to the passengers at Terminal 3. The hotel business has been concessioned out to a third party for consideration in form of revenue share which is a fixed percentage of gross revenue.

The revenue shares payable to DIAL are expressed as a percentage of total turnovers of concessionaire. Contract with provider also specify a minimum amount of guaranteed revenue (minimum monthly guarantee of MMG).

This is new venture and initiative taken and has recently begun its operations. This venture is expected to take some time to attain profitability and generate higher revenues. Based on above it is expected that only MMG will be payable by the concessionaire.

The expected revenues are projected as under:

INR Crores	2009-10	2010-11	2011-12	2012-13	2013-14
Transit Hotel	Nil	Nil	1.8	1.9	2.1

➤ **Radio taxi**

Radio taxi service providers pay different fees to DIAL for the use of the facilities:

An overview of the forecasts is provided below:

INR Crores	2009-10	2010-11	2011-12	2012-13	2013-14
Radio taxi	3.1	7.0	9.0	10.4	11.9

The sales of four months (Dec, 2010- Mar, 2011) have been annualized and increased with passenger traffic growth together with 5% p.a. increase in spend. This is multiplied with average revenue share to arrive at revenue projection for the FY 2011-12.

Forecasted revenue of the provider is escalated on two accounts.

1. Passenger traffic growth
2. Additional growth of 5% p.a. is anticipated on account of higher penetration

➤ **Foreign exchange and ATM revenue**

On ATMs, there is a monthly rental per location per month. This is a fixed monthly amount payable to DIAL. In case of foreign exchange, there is a cap on the commission chargeable by the concessionaires. The concessionaire share part of their commission with DIAL which is expressed as a percentage their total turnover. The contracts with concessionaries also specify a minimum amount of guaranteed revenue (minimum monthly guarantee of MMG).

An overview of the forecasts is provided below:

INR Crores	2009-10	2010-11	2011-12	2012-13	2013-14
Forex, ATM and Other		36.7	49.4	55.3	61.4

Turnover of foreign exchange concessionaires for the FY 2011-12 is forecasted based on annualized turnover of 4 months (Dec, 2010 to Mar, 2011) after considering an increase based on traffic growth and also a 5% p.a. increase on account of increased penetration.

The revenue forecasted for subsequent years has been escalated on the following accounts:

1. Passenger traffic growth
2. Additional growth of 5% p.a. is anticipated on account of higher penetration

In the FY 2010-11, Foreign exchange revenue includes ATM revenues. Projected revenue for FY 2011-12 shows one time exponential increase as compared to previous year actual revenue because of the opening of T3.

**Note: Income for year 2009-10 was clubbed under the head of telecom and currency.*

➤ **Airport Service Charges**

All the concessionaires pay fixed monthly service charges for common services. Annually, the airport service charges are escalated by CPI on the first day of January every year.

An overview of the forecasts is provided below:

INR Crores	2009-10	2010-11	2011-12	2012-13	2013-14
Airport Service Charges			11.4	12.3	13.4

Note: In the year 2009-10 and 2010-11, ASC is included as part of total revenue

The revenue of the FY 2009-10 and 2010-11 of various concessionaires include ASC charge under respective heads. However while forecasting for the year 2011-12 onwards we have treated this as a separate revenue source. Based on current estimates it is assumed that a total Rs. 11 Crores will be generated from ASC for the year 2011-12. A CPI based growth of 8.4% pa is assumed for future years.

➤ **Telecom**

Revenue of telecom for the year 2011-12 is forecasted based on 2010-11 revenue and is escalated by passenger growth and further increased by 5% pa.

INR Crores	2009-10	2010-11	2011-12	2012-13	2013-14
Telecom		6.6	7.5	8.7	9.9

XVII. TRAFFIC FORECAST

Traffic forecasts form an important component of the price cap regulatory framework. Once total allowable revenue has been calculated by adding the building blocks, this total revenue is divided by the forecasted traffic to arrive at a forecast for allowable yield within the regulatory period.

DIAL has commissioned an independent study of traffic at the airport from the Madras School of Economics, the findings of which are presented in this section.

In terms of the traffic forecast developed to support our regulatory filing, DIAL commissioned a study from the Madras School of Economics with the following scope:

'to develop a forecast model using advanced time series techniques developed recently. The study will examine the short run as well long run relationship between air-travel demand and other economic factors. One of the important objectives would also be to compare the results across various benchmark studies already existing for India.'

The report for traffic forecasts of Delhi Airport, prepared by MSE, is attached as **Annexure E**. The tariff determination is worked out considering the base case growth forecasted by MSE. The summary of the same is as under:

Summary of Traffic Forecast

Year	Pax Growth		ATM Growth		Cargo Growth	
	Domestic	International	Domestic	International	Domestic	International
2011-12	9.39%	8.22%	8.18%	2.44%	10.34%	7.75%
2012-13	10.23%	8.94%	8.89%	8.00%	13.63%	9.04%
2013-14	8.87%	7.78%	7.74%	6.98%	11.53%	8.06%

XVIII. TARIFF PROPOSAL

1. The first five year tariff period is assumed to start from April 1st 2009 and ending on March 31st 2014.
2. Based on the assumptions discussed in this submission, the target revenues for the 5 year in the quinquennium are as under:

Figures in Rs. Crores

<i>Building Blocks-Aeronautical</i>	<i>2009-10</i>	<i>2010-11</i>	<i>2011-12</i>	<i>2012-13</i>	<i>2013-14</i>	<i>Total</i>
<i>Return on Capital Employed</i>	538	1,148	1,603	1,477	1,454	6,219
<i>Total Expenses</i>	321	486	710	750	822	3,088
<i>Depreciation & Amortization</i>	144	282	365	370	404	1,565
<i>Taxes</i>	-	-	172	484	522	1,179
<i>Gross Target Revenue</i>	1,003	1,915	2,850	3,081	3,202	12,051
<i>Cross Subsidisation</i>	181	180	213	232	250	1,056
<i>Net Target Aero Revenue</i>	822	1,735	2,638	2,849	2,952	10,996

3. As per the SSA, the X factor is the average equalization factor of the discounted target and projected aeronautical revenues over the regulatory period. The X factor has been calculated as an average percentage increase as of September 1st 2011 by discounting the above target revenue with the WACC. This X factor work out to a one-time average increase of 629% in the aeronautical tariff as shown below:

Figures in Rs. Crores

<i>Determination of 'X'</i>	<i>2009-10</i>	<i>2010-11</i>	<i>2011-12</i>	<i>2012-13</i>	<i>2013-14</i>	<i>Total</i>
<i>Net Target Aero Revenue</i>	822	1,735	2,638	2,849	2,952	10,996
<i>Actual/Projected Aero Revenue</i>	502	565	2,404	4,021	4,335	11,826
<i>Discounting Factor @ 16.15%</i>	1.24	1.07	0.91	0.79	0.68	
<i>Net Target Revenues (NPV)</i>	1,018	1,852	2,410	2,242	2,000	9,523
<i>Actual/Projected Revenues (NPV)</i>	622	603	2,197	3,164	2,937	9,523
<i>Increase Percentage "X"</i>			629%			

4. Inflation has not been factored in our forecast for future years. It is assumed that AERA will give a CPI based increase over and above X factor, based on CPI data.
5. We have not considered any landing discounts in our tariff proposals. However it is requested that published discounts available to all the eligible customers should be allowed, as cost, for healthy growth of the industry.
6. The current proposal is for the approval of an average percentage increase 'X' in aeronautical tariff. After this approval from AERA, we shall submit a detailed pricing proposal to achieve this average increase which may be a combination of various aeronautical charges including UDF.
7. A summary of the projected Profit and Loss Account is given below.

Profit & Loss Account

Figures in Rs. Crores

<i>Financial Year</i>	<i>2009-10</i>	<i>2010-11</i>	<i>2011-12</i>	<i>2012-13</i>	<i>2013-14</i>
<i>Aeronautical Income</i>	502	565	2,404	4,021	4,335
<i>Non Aeronautical Income</i>	605	599	709	773	833
<i>Non Transfer</i>	46	79	84	88	93
<i>Other Income</i>	19	19	2	2	3
<i>Total Revenue</i>	1,172	1,262	3,198	4,884	5,263
<i>Less: Revenue Share payable on:</i>	539	577	1,471	2,246	2,421
<i>Aeronautical Income</i>	231	260	1,106	1,849	1,993
<i>Non Aeronautical Income</i>	287	281	327	356	384
<i>Non Transfer</i>	21	36	39	41	43
<i>Net Revenue</i>	633	684	1,727	2,638	2,843
<i>Total Expenses</i>	370	562	810	858	941
<i>Expenses</i>					
<i>Aero</i>	321	486	710	750	822
<i>Non Aero</i>	49	76	100	108	119
<i>EBITDA</i>	263	122	917	1,779	1,902
<i>Depreciation & Amortization</i>	117	268	361	363	393
<i>Finance Cost</i>	129	332	590	606	632
<i>PBT</i>	17	(478)	(34)	810	876
<i>Taxes</i>	(3)	(28)	-	162	175
<i>Profit After Tax</i>	20	(450)	(34)	648	701
<i>Reserve & Surplus</i>	82	(368)	(402)	246	947
<i>Cash Profit/(Loss)</i>	133	(209)	327	1,011	1,094