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ASSOCIATION OF PRIVATE AIRPORT OPERATORS

Regn S/64468/2009

Kiran Kumar Grandhi President | **R.K. Jain** Vice President | **Satyan Nayar** Secretary General

APAO/AERA CP-32/2011-12 Date: 29/02/2012

To,

Capt. Kapil Chaudhary
Secretary,
Airport Economic Regulatory Authority of India,
AERA Building,
Administrative Complex,
Safdurjung Airport,
New Delhi – 110 003

Subject: Determination of Aeronautical Tariff in respect of IGI Airport, New Delhi for the 1st Regulatory Period (01.04.2009 – 31.03.2014)

Dear Madam,

A kind reference is invited to your letter number AERA/20010/MYTP/DIAL/2011-12/Vol. IV dated 15th February 2012 seeking comments on determination of Aeronautical Tariff in respect of IGI Airport, New Delhi for the 1st Regulatory Period (01.04.2009 – 31.03.2014). The comments of APAO on the above Consultation Paper are enclosed herewith.

We would request you to kindly consider our submissions while finalizing the Aeronautical Tariff of IGI Airport, New Delhi. We would be happy to provide any further information if required.

Thanks & Regards
For Association of Private Airport Operators

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Association of Private Airport Operators (APAO)

Response to AERA's Consultation Paper No. 32/2011-12 dt. 03 Jan. 2012, on determination of Aeronautical Tariff in respect of IGI Airport, New Delhi, for the 1st Regulatory Period (01.04.2009 – 31.03.2014)

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List of Abbreviations

Term	Description
AAI	Airports Authority of India
ACI	Airports Council International
AERA	Airports Economic Regulatory Authority of India
AS	Accounting Standard
ATM	Air Traffic Movements
Capex	Capital Expenditure
CAPM	Capital Asset Pricing Model
CGD	City Gas Distribution
Consultation Paper	Consultation paper issued by AERA on Determination of Aeronautical Tariff in respect of IGI Airport, New Delhi for the 1st Regulatory period (1.4.2009 – 31.03.2014)
CWIP	Construction Work in Progress
DERC	Delhi Electricity Regulatory Commission
DEL	Delhi
D/E	Debt Equity
DF	Development Fee
DIAL	Delhi International Airport Private Limited
DGCA	Directorate General of Civil Aviation
FRoR	Fair Rate of Return
HRAB	Hypothetical Regulatory Asset Base
ICAO	International Civil Aviation Organisation
IDC	Interest during construction
IGI Airport / IGIA	Indira Gandhi International Airport, New Delhi
MoCA	Ministry of Civil Aviation
mppa	Million passengers per annum
MYTP	Multi Year Tariff Proposal
NIPFP	National Institute of Public Finance and Policy
NPV	Net Present Value
NTA	Non Transfer Asset
OMDA	Operation, Management and Development Agreement
OSC	Operation Support Cost
OSP	Operation Support Period
PNGRB	Petroleum and Natural Gas Regulatory
RAB	Regulatory Asset Base
RoCE	Return on Capital Employed
RoE	Return on Equity
RSD	Refundable Security Deposit
SSA	State Support Agreement
Tariff Guidelines	Terms and Conditions for Determination of Tariff for Airport Operators Guidelines, 2011
TAMP	Tariff Authority of Major Ports
The Act	The Airports Economic Regulatory Authority of India Act, 2008
UDF	User Development Fee
VRS	Voluntary Retirement Scheme
WACC	Weighted Average Cost of Capital
X Factor	Tariff escalation factor
y-o-y	Year on year

1 Executive Summary

1.1 Airports Economic Regulatory Authority of India (AERA/ the Authority) has issued a Consultation Paper No. 32/2011-12 dated 3 January 2012 on Determination of Aeronautical Tariff in respect of IGI Airport, New Delhi for the 1st Regulatory Period (01.04.2009 – 31.03.2014).

1.2 AERA has sought feedback, comments and suggestions on the Consultation Paper from stakeholders.

1.3 **Cost of Equity:** AERA has proposed a cost of equity of 16% for determination of tariffs at IGIA based on NIPFP report, benchmarks with other infrastructure sectors in India and incentives to investors. However, the cost of equity as 16% appears to underestimate the risk to equity investors of IGI Airport. The aviation sector in India competes with other sectors in India as well as global airport projects around the world for investments. Thus, the returns to equity investors in airports should adequately incentivize global developers and operators to invest in this sector. Other reputed external agencies have estimated IGI Airport's cost of equity in the range of 20%-25%. APAO requests the Authority to adopt the cost of equity as estimated by KPMG and Leigh- Fisher Management which is in the range of 20% -25%.

1.4 **Traffic Forecast:** The traffic projection used by the Authority for determination of tariff is higher than the forecasts by DIAL and other reputed bodies such as AAI, ACI, ICAO and MOTT. We request the Authority to consider the following points:

a. DIAL's traffic growth since the start of the concession period has increased from a lower base;

b. Current macroeconomic scenario suggests a slowdown in India's GDP growth, which is likely to impact passenger and cargo traffic growth; and

c. Since traffic risk is primarily borne by the airport operator, the operator's estimates of traffic growth are more appropriate for the purpose of determining tariffs

1.5 **Non Aeronautical Revenues:** The Authority has used higher of estimated and actual non aeronautical revenue while determining tariffs instead of the actual audited non aeronautical revenue figures available for IGI Airport for the period for FY 2010 and FY 2011. The State Support Agreement (SSA) for IGI Airport does not explicitly state that the forecasted data should be used when actual data is available. The Authority has however considered actual figures while considering aeronautical revenue, operational cost etc. APAO would like to request the Authority to consider actual audited numbers for non aeronautical revenue also, while determining tariff.

1.6 **Refundable Security Deposit:** The Authority has not provided returns on capitalized airport asset funded through RSD by considering it as zero cost funds. However, it is evident that there is an opportunity cost associated with RSD in terms of the foregone lease rentals. Professor Asawath Damodaran defines cost of capital as "opportunity cost of all the capital invested in an enterprise". Lenders have treated the RSD funding as part of promoter's contribution (quasi-equity). RSD utilised to fund the capex is expected to have risk inherent to that associated with equity. There are examples from other

infrastructure sectors where regulators provide a pre-specified return on the capital employed by the concessionaire and do not consider the sources and associated costs of capital while calculating tariff. APAO would like to humbly submit that the Authority should consider providing returns on RSD commensurate with the return on equity.

1.7 **Cargo Revenues**: AERA's stand of treating cargo revenue of DIAL from concessioned/outsourced cargo services as non-aeronautical is well appreciated. However treating cargo revenue as "aeronautical" during the period it was handled directly by DIAL would be inconsistent with the provisions of OMDA. The provisions of concession offered by the Central Government and the Act may be reconciled harmoniously by treating cargo services for the period it was directly handled by DIAL as "aeronautical" (to be consistent with the provisions of the AERA Act), but considering revenue from cargo services as revenue from Revenue Share Assets (as per the concession offered by the Central Government), 30% of which may be considered as revenue for calculation of aeronautical tariffs.

1.8 **Hypothetical Regulatory Asset Base (HRAB)**: DIAL has incurred additional manpower expenses during the operation support period, where both AAI and DIAL staff were employed to support the transition. The manpower expenses were the highest in FY 2009 which was the last full financial year in the Operation Support Period (OSP), and also the reference point for determination of the HRAB. The duplication of manpower expenses only pertains to the OSP and is not a recurring expense during the control period. APAO would like to submit that only the sustainable manpower cost, i.e. the manpower cost related to AAI staff may be considered by the Authority for determination of HRAB. Additionally, APAO would also like to request the Authority to adopt a consistent approach for treatment of cargo revenue both for the purpose of calculating HRAB and determination of tariffs.

1.9 **Service Quality**: The OMDA already provides for penalties for deficiencies or defaults in performance or service quality. AERA's proposal to levy additional penalties for defaults in service quality would amount to additional cost burden for DIAL. There is no evidence of regulators in other infrastructure sectors imposing dual penalties on service providers. While APAO recognizes that regulating service quality is a statutory obligation of the Authority, the objectives of incentivizing service quality and penalizing poor performance are achieved per force by the provisions of the OMDA and are consistent with the objectives of the Authority.

APAO requests the Authority to duly recognize the provisions of OMDA with regard to penalties on specific defaults in service quality. AERA may observe the process followed by AAI in reviewing cases of defaults and imposition of penalties thereof, and satisfy itself that the actions taken are in compliance with the OMDA

1.10 **DF Collection charge**: DIAL has been allowed to collect DF to part fund the capital expenditure. Collection charges with respect to DF are similar to the financing expenses paid to the lenders for arranging debt. The Authority has considered such financing expenses as part of the capital expenditure which are allowed as part of the tariff calculation. Additionally, DF collection charges have been mandated by the DGCA vide Directive Number AIC s. no. 2/2009 dated 28th February 2009. However, this directive was later cancelled in June 2011 following Delhi High Court's order[1] to stop

[1]Source: http://dgca.nic.in/aic/aic07_2011.pdf

the levy of DF at IGIA until analyzed and approved by AERA. APAO would like to request the Authority to allow DF collection charges as pass-through expenses as these were mandated expenses.

1.11 **Voluntary Retirement Scheme (VRS):** As per Accounting Standard 10, cost related to bring an asset to its working condition can be treated as part of capital expenditure. Since, in the current scenario, DIAL could not have obtained the concession rights for IGIA without accepting the obligation of VRS. Hence such payments may be treated as cost related to bringing an asset to its working condition. Further, the Authority has argued that since, VRS payments are staggered, amortizing such expenses would not be prudent. It may be noted that Interest during Construction (IDC), is also generally paid to lenders every quarter (or similar periodicity), but is capitalized and depreciated. APAO would like to submit to the Authority to consider capitalizing VRS as a part of the RAB.

1.12 **CPI – X:** APAO would request the Authority to provide details on its treatment of inflation for the components in the price cap model and the resultant estimation of X Factor. We propose that the Authority should estimate the initial tariff based on X Factor. The tariffs can then be adjusted for inflation annually based on the initial tariff estimated using the X Factor.

1.13 **Interest on DF Loan**: The Authority has treated the interest on DF Loan as a cost to IGI Airport. The pragmatic approach adopted by the Authority is appreciated; as otherwise, this interest cost would have resulted in a loss to DIAL even though the levy of DF had been approved by Ministry of Civil Aviation. APAO would request the Authority to treat the interest on DF Loan as part of DF, thus reducing the X Factor and thereby reducing the increase in tariffs.

2 Background

2.1 Airports Economic Regulatory Authority of India ('AERA or the Authority') has brought out a Consultation Paper No.32/2011-12 ('Consultation Paper') on "Determination of Aeronautical Tariff in respect of IGI Airport, New Delhi for the 1st Regulatory Period" on 3 January 2012.

2.2 The Consultation Paper is based on Delhi International Airport Private Limited's ('DIAL') Multi Year Tariff Proposal ('MYTP or filing') to AERA and AERA's interpretation of DIAL's filing, DIAL's Operation, Management and Development Agreement ('OMDA') and State Support Agreement ('SSA') along with AERA's regulatory philosophy. AERA's regulatory philosophy is specified in "Terms and Conditions for Determination of Tariff for Airport Operators Guidelines, 2011" ('Tariff Guidelines')

2.3 AERA has sought feedback, comments and suggestions on the Consultation Paper from stakeholders.

2.4 APAO has reviewed the Consultation Paper on AERA's approach towards determining the following key parameters and the following have been identified as areas of concern for APAO and its member stakeholders:

a. Cost of equity

b. Traffic forecast

c. Non-aeronautical revenue

d. Refundable security deposit

e. Cargo revenue

f. Hypothetical Regulatory Asset Base (HRAB)

g. DF collection charges

h. Service quality

i. VRS

j. CPI-X

k. Interest on DF Loan

2.5 The following paragraphs explains our point of view and proposals to AERA on the issues highlighted above.

3 Cost of Equity

3.1 ***AERA has proposed a cost of equity of 16% for determination of tariffs at IGI Airport.***

3.2 In its review of the cost of equity for IGI Airport, the Authority had requested National Institute of Public Finance and Policy ('**NIPFP**') to estimate the expected cost of equity for the private airports at Delhi, Mumbai, Hyderabad, Bangalore and Cochin ('**NIPFP Report**'). NIPFP recommended a cost of equity of 14.06% for IGI Airport. The Authority has also analyzed return on equity ('RoE') as provided by government authorities in other infrastructure sectors such as electricity, ports and road and has observed that the RoE in these sectors ranges from 15.5% to 18%. In view of the above, the Authority in its Consultation Paper has proposed 16% as RoE for IGI Airport to give a strong signal to investors and to be in line with other infrastructure regulators. However, the RoE of 16% is not appropriate and reasonable as explained in our report. Further, this estimate does not appear to have a proven mathematical basis as illustrated in the Authority's report.

3.3 The methodology adopted by NIPFP underestimates the risks inherent to an emerging market such as India and more specifically to an evolving sector like aviation. The key concerns with the NIPFP report have been listed below.

3.4 ***Source of Data:*** NIPFP has based its analysis on data from a report published by Strategic Finance Group (SFG) for Air New Zealand.

3.5 The SFG report has been critiqued by multiple agencies including PricewaterhouseCoopers (PwC), a global consultant and New Zealand's Commerce Commission.

a. PwC in its review of the empirical analysis in the SFG report has stated[2], *"We found two technical errors in the SFG analysis, a **gearing measurement** that was not consistent with the Commission's approach (which SFG appeared to intend to implement) and **anomalies in a number of SFG's beta estimates**."*

b. Regulation Branch, Commerce Commission, New Zealand mentioned[3], *"The Commission identified similar **technical issues with the NZIER and SFG expert reports** on the asset beta analysis."*

3.6 The anomalies in SFG's beta estimates which has been considered by NIPFP in its determination of the cost of equity for Indian Airports is shown below:

[2] Analysis of airport asset betas, PricewaterhouseCoopers dated 3 August 2010
[3] Input Methodologies (Airport Services), Reasons Paper dated 22 December 2010, Regulation Branch Commerce Commission, Wellington, New Zealand

S. No.	Airport	Country	Asset Beta (NIPFP Estimates)	Asset Beta (New Zealand Commerce Commission's Estimates[4])	Asset Beta (PwC Estimates[5])
1.	Auckland International Airport	New Zealand	0.3	0.77	0.74
2.	Fraport AG Frankfurt	Germany	0.5	0.61	0.62
3.	Guangzhou Baiyun International	China	0.2	0.55	0.64
4.	Shanghai International Airport	China	0.2	0.72	0.73
5.	Shenzhen Airport Co	China	0.2	0.83	0.94
6.	Xiamen International Airport Co	China	0.2	0.75	0.79

3.7 The SFG report also included a number of companies ***which are not directly related to or limited to airport operations***. The diverse operations of these companies affect the overall business risk of the company and thus, using their beta estimates as comparables provides an incorrect assessment of risk. These incomparable companies have been included by NIPFP as 'comparable firms' in its determination of cost of equity for Indian Airports. The details of diverse non airport business operations of these incomparable companies are mentioned below:

S No.	Airport	Country	Details of Business
1.	Beijing Airport High-Tech Park	China	Principally engaged in the architectural construction, real estate sale and leasing and land development.
2.	Derichebourg SA	France	Offers: 1. Environmental services: Provides recycling and conversion of end of life consumer

[4] Input Methodologies (Airport Services). Reasons Paper dated 22 December 2010, Regulation Branch Commerce Commission, Wellington, New Zealand
[5] Analysis of airport asset betas, PricewaterhouseCoopers dated 3 August 2010

S No.	Airport	Country	Details of Business
			goods, management of industrial and household waste, and urban cleansing, among others. 2. Airport services: Specializes in the airport passenger services, services to airport infrastructures, fuel management, and maintenance of runway equipment, among others. 3. Service to businesses: Offers cleaning, security and electrical services, temporary staff recruitment, aircraft maintenance and others.
3.	DynCorp International Inc	US	Global government services provider in support of U.S. national security and foreign policy objectives, delivering support solutions for defense, diplomacy, and international development
4.	Infratil Ltd	New Zealand	Owner and operator of businesses in the 1. Energy (mainly renewable), 2. Airport 3. Public transport sectors. Its energy operations are predominantly in New Zealand and Australia. The Company owns Wellington Airport in New Zealand and airports in Glasgow and Kent. Infratil's public transport services are in Auckland and Wellington, New Zealand.
5.	Multiplus SA	Brazil	Engaged in the operation and management of customer loyalty programs. It provides customer loyalty programs mainly to airline and financial industry clients through which the clients can accumulate the points from a variety of these loyalty programs and exchange them into prizes and rewards from different companies.

3.8 ***Comparable Airports:*** NIPFP has included airports from developed as well as emerging markets as comparable airports while determining comparable beta for IGI Airport. Beta is a measure of systemic risk of an asset as compared to the market as a whole. Inclusion of airports from developed markets implies that airport assets in these

markets have similar risk as Indian Airports. The rationale provided by NIPFP for including airports from developed as well as emerging markets is:

*"In terms of **traffic volume**, all the private airports in India have grown very fast and they are now mostly comparable with airports in developed countries. This is substantiated by the surveys of Airports Council International (ACI) (www.aci.aero), the representative body of the airports, which has rated the **Hyderabad airport as the best in the world** in the category of airports in the 5-15 million category for the year 2010. Similarly, **Mumbai airport and Delhi airport have been rated the 2nd best and 4th best in their respective categories** (Mumbai -15 to 25 million and Delhi -25 to 40 million)."*

3.9 India, as a result of its large population, has similar traffic volume as some other airports in developed countries. However, traffic volatility and underlying factors of traffic growth (such as per capita income, GDP growth rate, and income and price elasticity) in these developed countries are different from those in India, which is an emerging market. Thus, riskiness of airport assets in India is higher than those in developed markets.

3.10 ACI rankings primarily reflect service quality of airports and are not a measure of riskiness of an airport asset. On the contrary, the stringent quality norms for Indian Airports as specified under OMDA and AERA's tariff guidelines have necessitated capital expenditure to maintain minimum service quality levels and thus increase riskiness of the assets because of higher operating leverage.

3.11 Unlike airports in developed markets which are mature assets, Indian private airport operators are still at a nascent stage and are confronted with various business risks and uncertainties in addition to the risks faced by all airport operators. These additional risks are highlighted below:

a. **Revenue sharing with the Government:** Unlike most of the airports globally, airports operated by DIAL and MIAL involve significant revenue-sharing with the Government. Cash flows available to capital providers are highly susceptible to changes in air traffic volumes due to the high degree of operating leverage. The high revenue share at Delhi and Mumbai airports makes them more susceptible to risks than airports in emerging markets.

b. **Capital constraints**: One of the foremost reasons for government to adopt the PPP model for developing airport infrastructure was to bring in private financing and efficiencies in operations. However, with the revenue sharing model the ability of a private airport operator to borrow is constrained as the cash available to service debt is relatively lower and this translates into a lower debt service coverage ratio, thereby making funds available at premium compared to other businesses.

3.12 ***Riskiness of Indian Airports***: The risk profile of Indian Airports is comparable to those in emerging markets than in developed markets. Inclusion of airports from developed markets while determining beta of IGI Airport tends to underestimate the beta (risk).

3.13 The asset beta for comparable airports, in line with the above is shown below:

S No	Airport	Country	Asset Beta (NIPFP Estimates)	Asset Beta (KPMG estimates)[6]
1.	Airports of Thailand Public Co Ltd	Thailand	-	0.54
2.	Beijing Capital International Co Ltd	China	-	0.61
3.	Grupo Aeroportuario Del Sureste SA de CV	Mexico	0.7	0.87
4.	Guangzhou Baiyun International	China	0.2	0.80
5.	Malaysian Airport	Malaysia	1.0	0.79
6.	Shanghai International Airport	China	0.2	0.87
7.	Xiamen International Airport Co	China	0.2	0.91
	Mean		0.5	0.77
	Median		0.2	0.8

3.14 ***Equity Risk Premium:*** NIPFP has suggested the following approach for calculating the equity risk premium for determination of cost of equity –

"One approach proposed by Aswath Damodaran, a Professor at New York University and one of the leading corporate finance experts in the world, is to take equity risk premium of a mature equity market like United States and add the country risk premium (or the default spread implied in the country risk rating). For the United States market, taking the time horizon of 1928-2010, we get the historical equity risk premium of 4.31 %, which is the geometric average of premium for stocks over treasury bonds'. We take this as the equity risk premium for a mature market', to this, we add the default risk spread for India (given the local currency sovereign rating of Ba1), which is 2.4%. So, adding the United States equity risk premium (1928-2010) to this default spread, we get an equity risk premium of 6.71 %."

[6] As on 31 March 2010

3.15 The approach suggested by NIPFP underestimates the equity risk premium of the project. Aswath Damodaran mentions three approaches for calculating equity risk premium, when using developed market historical data –

a. Country Bond Default Spread (As used by NIPFP)

b. Relative Equity Market Standard deviations

c. Melded Approach (Bond Default Spread and Relative Standard Deviation)

Aswath Damodaran recommends using the third approach for calculation of equity risk premium and says[7],

"The country default spreads provide an important first step in measuring country equity risk, but still only measure the premium for default risk. Intuitively, ***we would expect the country equity risk premium to be larger than the country default risk spread****. To address the issue of how much higher, we look at the volatility of the equity market in a country relative to the volatility of the bond market used to estimate the spread."*

"We believe that the larger ***country risk premiums that emerge from the last approach are the most realistic for the immediate future****..."*

3.16 Aswath Damodaran also regularly calculates equity risk premium for different countries. Damodaran's current estimation of ***equity risk premium for India is 9.0%***[8].

3.17 ***Risk Free Return:*** NIPFP in its methodology for calculating of equity risk premium has taken an arithmetic average of daily yield on 10-year Government of India bonds resulting in a risk free return of 7.35%. This risk free return is lower than the current 10 year bond yield of 8.2%.

3.18 Aswath Damodaran suggests taking the current risk free rate rather than a 'normal' risk free rate during valuations and says[9],

"Interest rates generally change over time because of changes in the underlying fundamentals. ***Using a normal risk free rate, which is different from today's rate, without also adjusting the fundamentals that caused the current rate will result in inconsistent valuation.*** *For example, assume that the risk free rate is low currently, because inflation has been unusually low and the economy is moribund. If risk free rates bounce back to normal levels, it will be either because inflation reverts back to historical norms or the economy strengthens. Analysts who use normal interest rates will then have to also use higher inflation and/or real growth numbers when valuing companies."*

"'Normal' is in the eyes of the beholder, with different analysts making different judgments on what comprises that number. To provide a simple contrast, analysts who started working in the late 1980s in the United States, use higher normal rates than analysts who joined in 2002 or 2003, reflecting their different experiences."

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[7] Source: Equity Risk Premiums (ERP): Determinants, Estimation and Implications – The 2011 Edition, Aswath Damodaran, Stern School of Business, New York University

[8] Country Default Spreads and Risk Premiums, January 2012, Aswath Damodaran, available at http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ctryprem.html

[9] Source: What is the riskfree rate? A Search for the Basic Building Block,. Dec 2008 Aswath Damodaran, Stern School of Business, New York University

3.19 ***Market Value of Equity:*** NIPFP has suggested using market value of equity of IGI Airport while re-levering to get equity beta. NIPFP has relied on a research report by Bank of America (BoA) – Merill Lynch, August 2011.

3.20 Using a single estimate of market value of equity may result in incorrect calculation of cost of equity. The estimate of market value of equity as developed by Bank of America (BoA) – Merill Lynch is dependent upon the analysts assumption regarding regulatory regime, traffic forecast, discounting factor, operation and capital expenditure, some or all of which may be different from IGI Airport's actual data or forecasts during this control period.

3.21 The market value of equity as estimated by Bank of America would have been with respect to an assumed cost of equity which may not reflect the Authority's view. Further, the analyst may have considered a certain traffic and tariff growth path for IGI Airport while determining the market value of equity, which may be in divergence with Authority's or DIAL's assumptions. Hence, using the market value of equity estimated by BoA- Merill Lynch may not be appropriate.

3.22 NIPFP has used the market value of equity based on a research report by an analyst from Bank of America – Merill Lynch which is significantly different from estimates of market value for DIAL from other analysts. Thus, the estimate of market value used by NIPFP is not appropriate for regulatory assessment as this market value is dependent upon analyst's assumptions about the business, who holds no responsibility to the Authority.

3.23 The estimation of market value of equity should also not be based on an off market transaction. The valuation of a company in an off market transaction is also dependent upon strategic considerations of the partners and may thus, exaggerate the value of the company. In the absence of public traded securities, the un-levering and re-levering of beta may thus be based on book value of the companies.

3.24 For the comparable airports mentioned in 3.13, no significant difference in the asset betas of the airports based on book value and market value of equity has been observed and the effect of this difference on cost of equity is marginal. In the absence of market value of equity data for Indian airports, the Authority may thus use the book value of equity for unlevering and relevering of betas.

S No	Airport	Debt/ Equity (Market Value)	Debt/ Equity (Book Value)	Asset Beta (Market Value)	Asset Beta (Book Value)
1.	Airports of Thailand Public Co	1.11	1.01	0.54	0.56
2.	Beijing Capital International Co	1.1	1.72	0.61	0.49
3.	Grupo Aeroportuario Del Sureste SA de CV	0.03	0.2	0.87	0.78
4.	Guangzhou Baiyun International	0.15	0.72	0.8	0.58
5.	Malaysian Airport	0.16	0.2	0.79	0.78
6.	Shanghai International	0.09	0.31	0.87	0.76

S No	Airport	Debt/ Equity (Market Value)	Debt/ Equity (Book Value)	Asset Beta (Market Value)	Asset Beta (Book Value)
	Airport				
7.	Xiamen International Airport Co	0.01	0.16	0.91	0.82
	Mean			0.77	0.68
	Median			0.80	0.76

3.25 APAO had commissioned a study on Cost of Equity on Indian Airports by M/s. KPMG and the report has been made available to the Authority during 2010. M/s. KPMG after extensive research had recommended a return on equity of 20-23% for Indian Airports. APAO also made a presentation before the Authority on this report. So far we have not heard any concern or doubts or clarifications on this account from the Authority.

3.26 ***Estimates by other consultants:*** KPMG and Leigh – Fisher Management Consultants are global consultants with vast knowledge and experience in airports including valuation of airports.

3.27 Both Leigh – Fisher Management Consultants (Cost of Equity for Indira Gandhi International Airport dated June 2011) and KPMG (Cost of Equity Estimates of Indian Airport Industry) have estimated a higher cost of equity than NIPFP. Comparison between cost of equity estimates of NIPFP, KPMG and Leigh – Fisher Management Consultants are shown below:

S No.	Consultant	Cost of Equity Estimates
1.	NIPFP	14.06%
2.	KPMG	20% - 23%[10]
3.	Leigh – Fisher Management Consultants	25.1%

3.28 The validity of data used by NIPFP in its study has been questioned by independent agencies. Due to underestimation of risks prevalent in emerging markets, specifically the aviation market in India, the NIPFP study would not be an appropriate benchmark for estimation of cost of equity for IGI Airport.

3.29 ***Benchmarking of returns with other regulated sectors:*** The Authority has analyzed the returns on equity with other regulated sectors –

"Central Electricity Regulatory Commission (CERC), in its Terms and Conditions of Tariff Regulations for 2009-14 issued on 20.01.2009, vide regulation 15, computes the RoE at the base rate of 15.5% in the manner indicated therein. The Authority, has noted that in its regulatory framework the Corporate Tax is being allowed as a cost pass through and the RoE on CAPM.

It is understood that State Electricity Regulatory Commissions normally consider 16% as cost of equity in respect of distribution companies.

In the Port sector, the Tariff Authority of Major Ports (TAMP) is understood to be using 16% as return on equity. However, the model of tariff determination of TAMP is different – TAMP finalizes and announces the tariff and escalation factor upfront and then bids out with revenue share as the decision or selection parameter.

In case of National Highways, the NHAI also determines the tolls and escalation factor upfront. In a recent report, a Committee headed by Shri B.K. Chaturvedi, Member, Planning Commission has stated that Equity IRR of upto 18% may be acceptable for certain types of projects."

[10] As on 31 March 2010

Illustration on return to equity investors in Power Sector

As per CERC guidelines, tariff for supply of electricity comprises of **capacity charge** for recovery of Annual Fixed Cost and **energy charge**. Relevant extract is as below:

"The tariff for supply of electricity from a thermal generating station shall comprise two parts, namely, capacity charge (for recovery of annual fixed cost consisting of the components specified to in regulation 14) and energy charge (for recovery of primary fuel cost and limestone cost where applicable)."

Following comprises Annual Fixed Cost of a generating or a transmission system:

a. **Return on equity;**
b. **Interest on loan capital;**
c. **Depreciation;**
d. **Interest on working capital;**
e. Operation and maintenance expenses;
f. Cost of secondary fuel oil (for coal-based and lignite fired generating stations)
g. Special allowance in lieu of R&M or separate compensation allowance,

Return on Equity is calculated on the equity considered as part of the Capital Employed. As a result, even though CERC guidelines provide a return equity equivalent to 16%, actual returns available to the equity investor is higher than 16%. An illustration comparing the returns to equity investors in airport companies to those in electricity companies is shown in **Appendix 1**. In comparison, return to equity investors of airport companies is based on **Regulated Asset Base which depreciates over the life of the assets**. The diminishing returns for investors in an airport company are thus lower than those for investors in electricity generating or transmitting companies.

3.30 There are key differences, some of which have been detailed by the Authority, between aviation sector and the above mentioned infrastructure sectors.

a. The ***volatility of revenue drivers*** such as units of electricity consumed is lower than the volatility of revenue drivers in airport viz. traffic.

b. The ***concessioning terms for the highway and port sector***s are different from Aviation sector with a ***pre determined tariff/ toll charge***. There is ***no regulation on the revenue or profits*** earned on a project[11]. More importantly, the return to the equity investors is based on project assumptions which may be significantly different from actual growth of revenue drivers. For example, the equity IRR of 16% to 18% in NHAI projects is used to determine the minimum revenue share or maximum viability gap funding for the project assuming a traffic growth of 5%. The actual traffic growth may be significantly different for a project as is evident from

[11] Except in cases where concession period is reduced when the actual traffic exceeds target traffic for a specified year. However, the concession period is only reduced by a maximum of 10% of the original period in such cases.

the average return of 20%-23% earned by the investors in road projects[12].

3.31 ***UDF as risk mitigant tool:*** NIPFP has recommended downward adjustment of asset Beta to 0.4 from its calculated value of 0.5 in view of its view that UDF acts as a risk mitigant for airport, although, with the following caveat –

"....we are given to understand that it is only over the past 3-4 years that this instrument has been extensively used. Therefore, sufficient historical data is not available to estimate how well will UDF as a mitigant work to reduce the Beta for the respective airports. So, we have to estimate the impart as Beta, based on an a priori understanding of how this might work, and then revisit the estimate once we have data on its effectiveness during the coming years."

The Authority in its analysis in the consultation paper has suggested that,

*"**In view of this caveat it would appear that, presently, adjustment of asset beta downwards for UDF as a mitigant may not be sufficiently justifiable.** Further, in the present determination, only 2 years of regulatory period would be left for operationalisation of tariff. Though, DIAL have proposed charging of UDF during this period, since any true up would be possible only in the next regulatory period, there is no practical likelihood of UDF being used as a tool to recover a revenue shortfall during the current regulatory period."*

3.32 As per AERA's Tariff Guidelines,

*"The User Development Fee (UDF) and other aeronautical charges cover the same range of services, and therefore **UDF shall be considered as a revenue enhancing measure** to ensure economic viability of the airport operations and shall be allowed only in specific cases upon due consideration."*

Thus, the levy of UDF is only a revenue enhancing measure and covers the same range of services as under other aeronautical revenue heads. It does not act as a risk mitigating revenue source for the airport as the levying of UDF would imply reduction in other aeronautical tariffs levied by the airport. Further, the levying of UDF, which is a passenger traffic related charge, instead of increase in Air Traffic Movement (ATM) related charges such as landing and parking charge increases the volatility in revenues of the airport as the volatility of traffic is higher than volatility in ATMs.

Issues with UDF Implementation
Trivandrum Airport: AAI had the approval from AERA to charge Rs 755 per departing international passenger for a period of 10 years. However the decision was challenged in Court. The AERA Appellate Tribunal reduced the user development fee from international passengers flying out of airport to Rs. 575 from Rs.755.

Further, additional risks and delays in implementation of UDF, as illustrated above, when compared to other charges levied by the airport operator increases the risk of cash flows to the airport operators and thus increases the risk for the airport operator which can have an impact on cost of equity.

3.33 **Conclusion: The cost of equity of 16% as proposed by the Authority for determination of aeronautical tariffs at IGI Airport underestimates the riskiness**

[12] Source: Crisil database & news research

of the IGI Airport. Further, the aviation sector in India competes with other sectors in India as well as global airport projects around the world for investments.

Based on these arguments, APAO would like to submit to the Authority to ensure that the returns available to investors suitably covers the riskiness of the assets and provides a strong incentive for attracting new investments in the sector. Further, APAO would request the Authority to use the cost of equity for determination of tariffs as estimated by KPMG and Leigh – Fisher Management Consultants, which is in the range of 20% - 25%.

4 Traffic Forecast

4.1 ***The Authority has adopted a higher forecast of passenger and cargo traffic at IGI Airport, for determination of tariffs, than the forecast provided by DIAL in its tariff proposal.***

4.2 The Authority in its review of traffic forecasts made by DIAL, commented –

"In view of the observations made by Prof. Bhanumurthy and the fact that the forecasts presented by DIAL vary significantly from long term historical trends, it is felt that ***forecast of traffic in line with the historical trends would be a more reliable basis.*** *Further, in its recent decision in respect of DF levy, vide Order No.28 dated 14.11.2011, the Authority has used traffic forecasts on 10 year CAGR basis (albeit over the period 2000-01 to 2009- 10). Thus, the Authority proposes to use the 10 years CAGR figures (for 2001-02 to 2010-11) for tariff projections."*

4.3 The growth in traffic forecasted by the Authority is higher than the projections made by other agencies as listed in Table below

Table: Traffic Forecast by Aviation Agencies

Traffic Forecast % AAGR for 2011 - 2014						
Traffic Head	DIAL[1]	AERA[1]	AAI[2]	ACI[2]	ICAO[3]	Mott[3]
Domestic pax	8.9 – 9.4%	17.7%	9 – 12%	10.0%	11.4%	8.0%
International pax	7.8 – 8.9%	10.7%	7 – 9%	8.8%	8.7%	8.0%
Domestic ATM	7.7 – 8.9%	13.4%	7 – 8%	NA	10.6%	6.16%
International ATM	2.4 – 8.0%	11.5%	5 – 6%	NA	9.2%	5.5%
Export Cargo	6.8 – 8.7%	6.0%	9 – 10%	NA	NA	NA
Import Cargo	5.7 – 6.8%	15.7%	9 – 10%	NA	NA	NA
Domestic Cargo	10.3 – 13.6%	13.9%	10 – 15%	NA	NA	NA

Sources: 1. MSE Forecast, DIAL's presentation in Stakeholder consultation meeting on 18 January 2012
2. AAI Annual Review of Traffic, 2009 – 10
3. DIAL's presentation in Stakeholder consultation meeting on 18 January 2012

4.4 The traffic forecasts by Authority are significantly higher than forecasts made by other agencies. Historic increases in traffic were at a lower base and the same percentage growth trend may not be sustainable in the future.

4.5 The current downturn in economic conditions across the world especially in Europe and the tightening of monetary conditions in India has impacted India's economic growth. India's GDP growth for FY 2011 – 12 is expected to be 6.9 per cent[13], according to advance estimates. This is the slowest growth after 2008-09 when India registered a growth rate of 6.7 per cent [14]and the traffic at IGI Airport decreased by 4.7%.[15]

[13] Source: Press Note on Advance Estimates of National Income , 2011-12, dated 7 February 2012 by MOSPI
[14] Source: Press Note on Revised Estimates of Annual Income 2008-09 dated 29 May 2009 by MOSPI
[15] Source: Airports Authority of India; http://www.aai.aero/traffic_news/traffic_news.jsp

4.6 AERA's Tariff Guidelines, also stipulate a band of traffic for forecast mechanism, beyond which the impact of traffic is shared equally between the users and the airport operators. As DIAL did not specify such a band in its MYTP, the Authority has proposed a 5% band for the forecasted traffic.

4.7 As the risk for traffic movement beyond the band is borne by the airport operator, it is reasonable to base the determination of tariff as per airport operator's traffic forecast. If traffic forecast, which is significantly different from airport operator's forecast, is used to determine tariff, it may result in a loss of revenue to airport operator, especially when the actual traffic for the control period is in line with airport operators' forecast.

4.8 **Conclusion: The traffic projection used by the Authority for determination of tariff is higher than the forecasts by DIAL and other reputed bodies such as AAI, ACI, ICAO and MOTT. The use of historical traffic data which increased from a lower base would result in overestimation of traffic forecast. The current macroeconomic scenario also suggests a slowdown in India's GDP growth which would have an adverse impact on traffic. Further, as the risk of traffic is primarily borne by DIAL, any deviation from the DIAL's forecast may result in an unfair loss to DIAL. Hence, APAO would request the Authority to kindly consider the traffic forecasted by DIAL for determination of tariff. We would further submit that the Authority should consider adopting a standardized methodology for determination of traffic at various airports.**

5 Non Aeronautical Revenue

5.1 ***The Authority has used "estimated non aeronautical revenue" for FY 2009-10 and FY 2010 – 11 while determining tariffs instead of the available actual and audited non aeronautical revenue data from IGI Airport.***

5.2 The Authority's estimate of non aeronautical revenue for FY 2009 – 10 and FY 2010 - 11 is the maximum revenue for different non aeronautical services as calculated using the following approaches:

a. *"The non-aeronautical revenues for various revenue heads for 2008-09 to be considered as the base figure for forecasting the non-aeronautical revenues for FY 2009-10 and 2010-11, escalated by the historical passenger/ cargo growth rates plus a certain %age increase due to higher penetration as may be applicable (as proposed by DIAL) for those years"*
b. *"For 2011-12 to 2013-14, the base value of revenue arrived for 2010-11 to be projected based on the traffic growth plus a certain %age year on year increase due to penetration as per DIAL's estimate".*

5.3 On the basis of the above-mentioned approaches, the Authority arrived at the following numbers for non aeronautical revenue[16]:

Year/ Rs in crores	Non Aeronautical Revenues under Scenario 1	Non Aeronautical Revenues under Scenario 2	Non Aeronautical Revenues under Scenario 3
2009-10	605	605	495
2010-11	599	599	687
2011-12	708	726	835
2012-13	772	810	986
2013-14	832	904	1146

5.4 The Authority has considered highest numbers from the above table for determination of tariff for IGI Airport. The rationale mentioned by the Authority in using the above methodology is -

"In line with the universally accepted principle that airports should strive to generate higher non-aeronautical revenue and DIAL's own objective of obtaining higher revenues through —concession under Joint Venture with the airport operator, it will only be fair if the higher of the figures in the above tables are used for present tariff determination purposes...."

5.5 **Consistency with SSA:** As a general principle, the Authority has been consistent with the provision of the SSA:

"...the provision of SSA should also be reconciled to the extent possible with the provisions of the Act. It is only where the provisions of the SSA are not consistent with the Act and cannot be reconciled thereto, a deviation may need to be made."

Also the Act states that the Authority shall determine the tariff for aeronautical services taking into consideration, among other things, the following-

[16] Source: Consultation paper

"Section 13(1)(a)(vi) the concession offered by the Central Government in any agreement or memorandum of understanding or otherwise;"

5.6 Schedule 1 of SSA defines revenue target as:

TRi = RBi x WACCi + OMi + Di + Ti - Si ,

where *"S= 30% of the gross revenue generated by the JVC from the Revenue Share Assets. The costs in relation to such revenue shall not be included while calculating Aeronautical Charges"*

SSA does not recommend using higher of actual or forecasted non aeronautical revenue numbers instead of actual audited data.

5.7 **Consistency:** With respect to other items like operation and maintenance expenses, aeronautical revenue etc., the Authority has rightly considered actual numbers for FY 2010 and FY 2011 while determining increase in tariff.

5.8 **Higher projected traffic:** The Authority has used higher estimates of traffic growth rate for FY 2012 to FY 2014 than as forecasted by DIAL while for projecting future non-aeronautical revenues, which is also not in line with the traffic forecasts provided by various reputed organizations like Airports Council International (ACI), Airports Authority of India (AAI), International Civil Aviation Organization (ICAO) and MOTT.

5.9 <u>Conclusion</u>: **As per Schedule 1 of SSA, 30% of the gross revenue generated should be utilized for calculating target revenue. SSA does not state that estimated non aeronautical revenue should be considered when actual numbers are available. APAO would therefore humbly submit that the Authority should**

a) **Reconsider their traffic forecasts in the light of forecasts made by other reputed organizations**

b) **Maintain a consistent approach in using actual numbers wherever available for the purpose of determining tariffs**

6 Refundable Security Deposit (RSD)

6.1 ***The Authority has proposed not to provide any returns on capitalized aeronautical assets funded through refundable security deposits collected by DIAL from lease of Non Transfer Assets (NTA).***

6.2 The Authority in its review of refundable security deposits has mentioned -

"The cost of this amount to DIAL is zero as the security deposits are interest free. Further, SSA contemplates a return on RAB on WACC basis which has been defined therein as under:

"WACC = nominal post-tax weighted average cost of capital, calculated using the marginal rate of corporate tax"

Thus, WACC has to be calculated by taking into account the cost of each component of capital, which in the case of RSD is zero. In this light, the Authority is not persuaded to consider RSD as quasi-equity and proposes to consider its actual cost, i.e., zero for computation of WACC."

6.3 Further, the Authority has also considered the following while proposing the above:

a. OMDA defines Equity and RSD is not covered as per the Equity definition in OMDA:

" only the items specifically stated therein can be considered as —equity‖ and it may not be permissible to include any other items therein"

b. Development Fund (DF) would not have been allowed to DIAL in case RSD was utilized for any other purpose.

"DF would not have been permitted to DIAL in case it would have applied a ready source of finance like RSD for any other purpose. In this light, the argument that RSD amount was available to DIAL to be used as it wished can at best be termed as hypothetical"

6.4 **Definition of Equity as per OMDA:** OMDA defines Equity only for the limited purpose of defining Equity Capital to be considered in OMDA. The definition does not define Equity as used in a common business parlance which is shareholders' net worth.

6.5 **Foregone Lease Rentals[17]:** RSD from lease of Non Transfer Assets (NTA) was structured by DIAL to part fund the capital expenditure. In lieu of upfront money received by DIAL in the form of RSD, it is expected that DIAL would have foregone some part of the lease rentals to maintain the lessee at par in NPV terms. Additionally, DIAL could have invested RSD in the non aeronautical business or other related businesses which could have earned a higher return for DIAL. Therefore, it can be considered that there is a cost associated with RSD.

6.6 **WACC is determined based on opportunity cost of capital[18]:** Professor Aswath Damodaran, defines cost of capital as "opportunity cost of all the capital invested in an

[17] Source: Secondary research and DIAL
[18] Source: http://pages.stern.nyu.edu/~igiddy/articles/wacc_tutorial.pdf

enterprise[19]". "Opportunity cost is what you give up as a consequence of your decision to use a scarce resource in a particular way". By this definition, the opportunity cost of RSD, in DIAL's case, ought to be measured by the foregone lease rentals or returns from RSD in the next best use, and **not** the actual cost of funds.

6.7 **Risk-Reward relation:** Further in business practice, return on investment is expected to be commensurate with the risk associated with the project. For example, while pricing debt, lenders would try to map interest rates with risk associated with the project. Similarly, return on equity is determined based on risk associated with the project and the opportunity cost.

6.8 DIAL has already received RSD as part of lease agreement. This amount would show as liability in the books of DIAL. DIAL's investment in the aeronautical business is not expected to dilute DIAL's liability towards lessees of NTA. In event of early termination of lease agreement, DIAL would be required to repay such RSD, subject to the conditions of the agreement.

6.9 Principle 1 of Schedule 1 of the SSA states that:

"Incentives Based: The JVC will be provided with appropriate incentives to operate in an efficient manner, optimising operating cost, maximising revenue and undertaking investment in an efficient, effective and timely manner and to this end will utilise a price cap methodology as per this Agreement."

Providing zero return on RSD would not be in line with the Principle 1 of the SSA.

6.10 Zero return on RSD at this stage may not set the right precedent for any future investment by a private player in airport sector in India. Importantly, it contradicts Principle 1 of Schedule 1 of the SSA by not providing any incentive for investment of RSD or equivalent sources of funds in the aeronautical business.

6.11 Since lenders have recognized funding through RSD as part of promoter's contribution, it is expected that the risk associated with RSD would be similar to the risk associated with equity share capital (covered in detail in the next section). Hence, it can be concluded that return on RSD should be at the least commensurate to the risk associated with investment in the aeronautical business.

6.12 **Lender's recognition:** DIAL has stated that its lenders have treated RSD funding as promoter's contribution (quasi-equity) to compute debt-equity ratio. It is reasonable to assume that lenders would have considered this debt-equity ratio for determining the cost of debt. If RSD is not treated as part of sponsor's contribution, the debt-equity ratio would go up. With higher gearing, interest cost would increase resulting in higher pass-through cost.

6.13 Lenders have treated RSD as part of sponsor's contribution, while sanctioning debt. RSD utilised to fund the capex has risk inherent to that associated with equity. Accordingly, for the purpose of FRoR calculation returns equivalent to equity may be considered for RSD.

6.14 **Case Study:** Other infrastructure sectors, where tariff is also regulated, allow a return on the capital employed. Regulators in these sectors do not provide a return on the basis

[19] Source: http://pages.stern.nyu.edu/~igiddy/articles/wacc_tutorial.pdf

of source and associated cost of funds. Case studies from the relevant sectors are presented below:

a. City Gas Distribution (CGD): Petroleum and Natural Gas Regulatory Board (PNGRB) allows return to concessionaires on the basis of the capital employed. It even recognizes that the security deposits received by the concessionaire would exist as liability and these **should not be reduced** from the total capital employed while determining tariff. Relevant extracts from the guidelines issued by PNGRB for determination of network tariff for city or local natural gas distribution network and compression charge for CNG have been reproduced below:

"Entity [20] may collect refundable interest free security deposit as specified under the Petroleum and Natural Gas Regulatory Board (Authorizing Entities for Laying, Building, Operating or Expanding City or Local Natural Gas Distribution Networks) Regulations, 2008. Such deposit is towards the safe-keeping of the meter and is to be refunded in full to the domestic PNG customer in case of a dis-connection. ***Further, since the amount collected as interest-free refundable security deposit shall exist as a liability in the books of accounts of the entity, the same shall not be reduced from the total capital employed while determining the network tariff.***

The reasonable rate of return shall be the rate of return ***on capital employed*** *equal to* ***fourteen percent*** *post-tax considering the rate of return on long-term risk-free Government securities and the need to incentivize investments in creation of CGD infrastructure"*

b. Other factors to be considered from the CGD guidelines:
   i. PNGRB guidelines regulates tariff for CGD networks, which **applies directly to end-users.** PNGRB allows the security deposits provided by end users to be invested in the business and earn return on such investments, whereas in case of DIAL, security deposits have been availed from lessees of NTA, who are not direct users of the airport assets.
   ii. **Demand risks are less for a CGD network** as compared with traffic risk at an airport. Additionally, tariffs for CGD networks are for an essential commodity.
   iii. Guidelines issued by PNGRB are one of the **most recent** guidelines in the Infrastructure sector in India and should have considered learnings from other regulated sectors.

c. Port Sector: In port sector, Tariff Authority for Major Ports (TAMP) sets tariff for Major Ports based on cost plus Return on Capital Employed (ROCE) approach. Capital Employed is calculated as a summation of net fixed assets and working capital. Relevant extracts from the regulation have been reproduced below:

"Return will be allowed on Capital Employed (ROCE), both for Major Port Trusts

[20] Source: Petroleum and Natural Gas Regulatory Board (Determination of Network Tariff for City or Local Natural Gas Distribution Networks and Compression Charge for CNG) Regulations, 2008, point 2, Attachment 3 to Schedule A

and Private Terminal Operators, at the same pre-tax rate, fixed in accordance with the Capital Asset Pricing Model (CAPM)."

"Capital Employed will comprise Net Fixed Assets (Gross Block minus Depreciation minus Works in Progress) plus Working Capital (Current Assets minus Current Liabilities)"

6.15 **Conclusion: The Authority has proposed to provide zero returns on capitalized airport asset funded through RSD. However, it is evident that there is an opportunity cost associated with RSD in terms of the forgone lease rentals. Also, lenders have treated the RSD funding as part of equity and return on an investment should be commensurate with the associated risk. On the basis of the above arguments, APAO would like to humbly submit to the Honorable Authority to consider providing returns on project cost funded through RSD equivalent to the returns available on equity. Additionally, there are examples from other infrastructure sectors where regulator provides a pre-specified return on the capital employed by the Concessionaire and does not consider the source or actual cost of funds while calculating tariff.**

7 Cargo Revenue

7.1 ***The Authority has considered revenues from direct cargo handling as Aeronautical revenues while determining tariffs when cargo services are being provided by the airport operator itself.***

7.2 In its review of cargo revenues, AERA has mentioned –

"However, it is noted that DIAL was, for the part of 2009-10, providing cargo services on its own before the concessionaire Celebi Delhi Cargo Terminal Management India Pvt. Ltd., took over these activities. ***Consequently, the revenue received by DIAL from the cargo services during the part period of 2009-10 (when DIAL themselves were providing the services) may be treated as aeronautical revenue.*** *Further, DIAL continues to provide cargo screening services at the concessioned out Cargo Terminals. The revenue and costs relating to cargo screening would, therefore, also need to be treated as aeronautical"*

7.3 As per OMDA Schedule 6, Cargo handling and Cargo terminals are non aeronautical services.

7.4 As a general principle, the Authority has been consistent with the provision of the SSA and has also recognized the need to reconcile the provisions of SSA and the Act to the extent possible :

"...the provision of SSA should also be reconciled to the extent possible with the provisions of the Act. It is only where the provisions of the SSA are not consistent with the Act and cannot be reconciled thereto, a deviation may need to be made."

Also the Act states that the Authority shall determine the tariff for aeronautical services taking into consideration, among other things, the following-

"(vi) the concession offered by the Central Government in any agreement or memorandum of understanding or otherwise;"

7.5 **Conclusion: AERA's stand of treating cargo revenue of DIAL from concessioning/outsourcing of cargo services as non-aeronautical is a reasonable and pragmatic stand and is well appreciated. However treating cargo revenue as "aeronautical" during the period it was handled directly by DIAL would be inconsistent with the provisions of OMDA. APAO would submit to the Authority that the provisions of concession offered by the Central Government and the Act may be reconciled harmoniously by treating Cargo Services for the period it was directly handled by DIAL as "aeronautical", to be consistent with the provisions of the AERA Act, but considering revenue from cargo services as revenue from Revenue Share Assets (as per the concession offered by the Central Government), 30% of which may be considered as revenue for calculation of aeronautical tariffs.**

8 Hypothetical Regulated Asset Base (HRAB)

8.1 ***The Authority has considered the entire manpower cost, including the duplicated manpower cost, while determining hypothetical regulated asset base.***

8.2 In the Consultation Paper, AERA has observed following points with regard to HRAB

"With respect to the issue of considering sustainable operating and maintenance costs... no such guidance is provided in the SSA..."

Further, the Authority has also quoted "Principle 5, Schedule 1 of the SSA – Economic Efficiency" *"...Further in respect of regulation of Aeronautical Services the approach to pricing regulation should encourage economic efficiency and only allow efficient costs to be recovered through pricing,* ***subject to acceptance of imposed constraints such as the arrangements in the first three years for operation support from AAI"***

Based on the quote, the Authority has stated that "*...there appears to be no warrant in the SSA to exclude the manpower cost of DIAL staff...*"

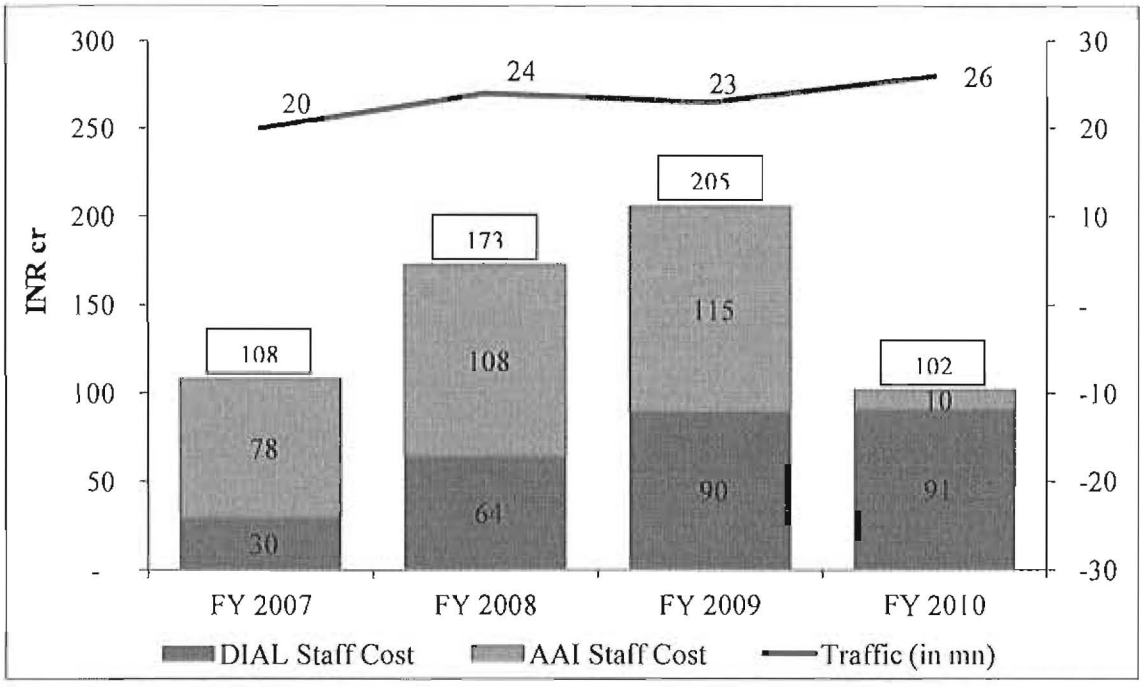
8.3 ***Logical reasoning****: Apparent intent of the SSA and its implications*

a. As per Chapter VI of OMDA, AAI had to provide operational support, through General Employees, to DIAL during the three years immediately after the Effective Date. In this period, DIAL had to bear the operational support cost (OSC) including manpower cost of AAI staff related to IGI, Airport.

b. Therefore, it appears that the **apparent intent** behind including the extra cost incurred due to such *imposed constraints* as part of Principle 5, Schedule 1 of the SSA was to *enable and safeguard* the private developer, while determination of tariff based on economic efficiency, against the uncertainties and duplication of cost as a result of such constraints.

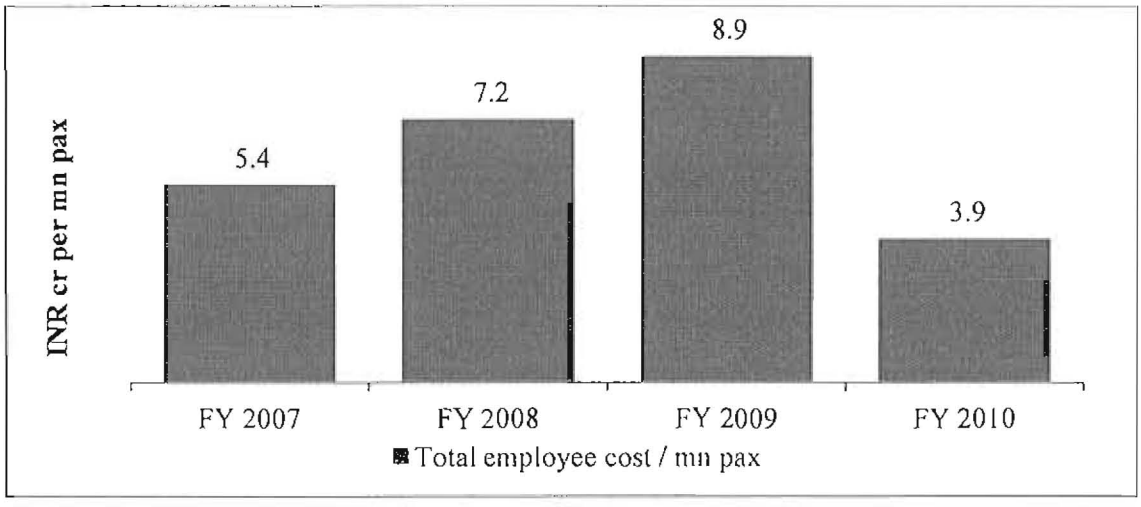
c. Graph 1 below presents the breakup of manpower in terms of manpower cost of AAI and manpower cost of DIAL. It can be observed that during the operation support period (OSP), DIAL has slowly ramped up its manpower. Manpower cost is the highest in FY 2009, which is the last full financial year of operation support period. In FY 2009, in addition to AAI's manpower, DIAL's manpower was in full force because it had to take complete charge of the operations of the airport.

Graph 1: IGI Airport – Breakup of Total manpower cost (including aeronautical & non aeronautical) compared with total passenger traffic[21]



It can also be observed from the graph that the real reason for growth in ***total*** manpower cost for IGI Airport was not the growth in traffic, but rather ***duplication*** of manpower. Graph 2 demonstrates this point more clearly that total personnel cost per million passengers was highest in FY 2009.

Graph 2: Total manpower cost (including aeronautical & non aeronautical) per million passengers[22]



d. It can be inferred from the above two graphs that:

i. Duplication of manpower cost is maximum in FY 2008-09

[21] Source: DIAL
[22] Source: DIAL and Minutes of Stakeholder Consultation Meeting held on 18.01.2012

ii. Total manpower cost per million passengers is highest in FY 2009

e. Since the regulatory period is starting from FY 2010, entire expenditure for FY 2009, including duplicated manpower cost has been considered while assessing the value of HRAB. From the above chart, it is evident that this duplicated cost is not a recurring cost. There is reduction in manpower cost from the FY 2010 after the OSP. The additional manpower cost was incurred only during the OSP. Determining HRAB, which is a perennial asset throughout the concession period, considering duplicated expenditurewhen such expenditure was at the maximum, does not seem to be appropriate, since it is clearly a one-off cost recognised under the SSA.

8.4 **Consistent treatment of Cargo Revenue:** The Authority has considered cargo revenue as Non Aeronautical Revenue while determining the HRAB. The Authority mentions,

*"It is observed that the solely the Hypothetical Asset Base is to be determined in line with the SSA provisions as there is no provision in this regard in the Act. As already indicated in para 61 above, the Authority proposes to take the following approach towards determination of tariffs for aeronautical services provided by DIAL – i.e. be guided by provisions of the SSA read with the provisions of OMDA and other agreements as far as these are consistent with provisions of the Act; and wherever possible, have recourse to principles of tariff determination contained in its Airport Order and Guidelines. As per the Schedule 6 of the OMDA, Cargo handling and Cargo Terminals are —**Non Aeronautical services**. Further, as per the Schedule 1 of the SSA (refer para 176 above), the book value of —Aeronautical Assets in the books of the JVC and —.... prevailing tariff and the revenues, operation and maintenance cost, corporate tax pertaining to **Aeronautical Services** at the Airport..... shall be considered for computation of hypothetical RAB."*

8.5 AERA has treated revenue from cargo operations as "aeronautical" during the period when airport operator was operating cargo services. This is contrary to the provisions of the OMDA, which clearly states the cargo services are non-aeronautical services. The Authority has also considered cargo revenue as no-aeronautical revenue for the purpose of determining the HRAB, which is in accordance with the provisions of the OMDA and SSA. Therefore, it may be suggested that a consistent approach be adopted by the Authority for treatment of cargo revenue.

8.6 **<u>Conclusion</u>: Duplication of manpower is maximum in FY2009 because it is the last full financial year in the OSP. The duplicated manpower cost incurred during the OSP is not a recurring cost. APAO would like to submit to the Authority to kindly consider only the sustainable manpower cost, i.e. the manpower cost related to AAI staff. APAO would also request the Authority to adopt a consistent approach for treatment of cargo revenue.**

9 Service Quality

9.1 ***DIAL would get penalized by the Concessioning Authority and AERA for not maintaining the specified service quality standards.***

9.2 The Authority has proposed to use a tariff rebate mechanism for maintaining service quality in case of IGI Airport. Rebate mechanism is proposed to be implemented as:

"While the Authority will discharge its other functions under the Act with respect to monitoring the set performance standards as may be specified by the Central Government (Section 13 (1) (d) of the Act), it will, in accordance with the provisions of Section 13(1) (a) (ii) of the Act, take into consideration the quality of service provided by Airport Operators on specified parameters and measures while determining tariffs.

The Authority will require the specific service parameters to be measured at major airports. It hereby adopts a mechanism that will consider reduced tariffs for under-performance vis-a-vis specified benchmarks on quality of service to adequately protect the interest of users.

Under such a mechanism, the calculated level of rebate for a year will be passed on to users of airport services in the form of reduced tariffs in the following year(s)."

9.3 In addition to the AERA Act, 2008 (the Act), SSA also mandates AERA to monitor service quality:

"As per Principal no.7 of Schedule 1 of SSA- —in undertaking its role AERA will monitor, pre-set performance in respect to service quality performance as defined in the Operations Management Development Agreement (OMDA) and revised from time to time."

9.4 The rebate mechanism proposed in the Consultation Paper would be in addition to the penalty clause specified in OMDA. The Authority has taken the following position regarding fixation of tariff and quality of service:

"...it has been the stated position of the Authority that the penalties contemplated in the concession agreements / contractual arrangements are contractual requirements whereas fixation of tariff commensurate with the quality of service is a statutory requirement."

9.5 Since, OMDA already lays down detailed quality parameters /requirements a separate rebate mechanism as part of tariff would tantamount to penalizing the same default twice.

9.6 **Case Study:** In other infrastructure sectors like Ports, Roads, and Power, Concessionaire/private investor is penalized by a single entity for not maintaining the service quality parameters.

9.7 Ports & Roads: In ports and road sector, penalties for underperformance with respect to specified service benchmarks, are defined only in the concession agreement (CA). Tariff Authority does not penalize the Concessionaire.

9.8 Power Sector: In case of power sector, the private investor would enter into multiple agreements with different entities. Different agreements would specify different

penalties for default with respect to their contractual agreements, rights and obligation. Private Investor would not be penalized by different entities for the same default.

9.9 Conclusion: **APAO requests the Authority to duly recognize the provisions of OMDA with regard to penalties on specific defaults in service quality. These penalties are to be levied by AAI as per Clauses 9.1.2 and 9.1.3 of the OMDA. In case additional penalties are levied by AERA in respect of the same default, it may result in double jeopardy and impose additional cost burden on the operator.**

AERA may agree that the provisions of the OMDA in this respect are quite stringent in nature and provide an adequate deterrent to the operator against non-compliance. AERA may observe the process followed by AAI in reviewing cases of defaults and imposition of penalties thereof, and satisfy itself that the actions taken are in compliance with the OMDA.

Instances from other infrastructure sectors also indicate the non-prevalence of dual penalties. Based on the above, APAO would like to request the Authority to kindly reconsider its decision of imposing penalties twice for the same default.

10 DF collection charges

10.1 ***The Authority has disallowed collection charges with respect to DF as a pass through cost.***

10.2 AERA has not accepted the proposal of DIAL to defray the collection charges paid by them to airlines in respect of DF through OPEX. The Authority has quoted:

"As per the provisions of Section 13 (1) (b) of the Act read with Section. 22A of the AAI Act, 1994, the AERA's function in respect of DF is only confined to determination of the rate/amount thereof. Further, the issue of collection, deposit etc., of DF is not within the purview of the AERA. Thus AERA should abstain from forming any conclusion on this issue."

10.3 **DF as part of means of finance:** DIAL has been allowed to collect DF to part fund the capital expenditure. Collection charges with respect to DF are similar to the financing expenses paid to the lenders for arranging debt. The Authority has considered financing expenses as part of the capital expenditure and allowed as part of the tariff calculation.

10.4 **Mandated by the Government:** DF collection charge was mandated by the Government. DIAL was obligated to pay DF collection charge to the airlines because of the constraint imposed by the Government vide Directive no. AIC sl.no. 2/2009 dated 28 February 2009 through DGCA[23]. This directive was later cancelled in June 2011 following Delhi High Court's order[24] to stop the levy of DF at IGIA until analyzed and approved by AERA.

10.5 **Conclusion: APAO would like to request the Authority to allow collection charges with respect to DF collection as part of operational expenses.**

[23] Source: http://www.aera.gov.in/documents/pdf/DIAL_11.pdf
[24] Source: http://dgca.nic.in/aic/aic07_2011.pdf

11 Voluntary Retirement Scheme (VRS)

11.1 ***The Authority has proposed to expense the VRS paid by DIAL with respect to AAI staff instead to amortising it over the life of the asset.***

11.2 AERA has taken a view to expense the VRS payments made by DIAL, since the payments made were staggered. The Authority has mentioned:

"It is noted that the payments made by DIAL on account of the VRS are staggered. Since the VRS amount is not being paid on a one time basis, the Authority considers the treatment of amortization of this amount incorrect."

11.3 **Mandatory requirement as per OMDA:** Payment of VRS with respect to AAI staff was a mandatory condition as per OMDA. Concession rights were granted to DIAL subject to their acceptance of all the obligations under OMDA. Relevant section from OMDA is stated below:

"The JVC shall be the new employer for these employees on terms and conditions mutually agreed between the JVC and such employees. Provided however that if less than 60.00 % of the General Employees (as reduced for retirements, transfers, resignations and death and any fractions to be rounded off to the nearest whole number) accept the offers of employment made by the JVC, then the JVC shall pay to AAI ***Retirement Compensation*** *for such number of General Employees as represent the difference between 60.00 % of the General Employees (as reduced for retirements, transfers, death and any fractions to be rounded off to the nearest whole number) and the number of General Employees accepting offers of employment made by JVC, including cumulatively the offers made and accepted during the Operational Support Period.*

"Retirement Compensation" *shall mean the average 'voluntary retirement scheme' ("VRS") cost for all the General Employees other than those General Employees who have accepted offers of employment made by the JVC under the provisions of Article 6 hereof, as per the latest VRS of the AAI, if any, or, in the absence of an AAI specific VRS, the highest VRS as applicable for the then available profitable schedule A public sector undertakings"*

11.4 **Accounting Standard (AS) 10**: As per AS10, cost related to bring an asset to its working condition would be treated as part of capital expenditure. Since, in the current scenario, DIAL could not have obtained the concession rights over IGI Airport without accepting the obligation of VRS, such payments may be treated as cost related to bringing an asset to its working condition. Hence, payments made towards VRS could be capitalized. Relevant section from AS 10 is presented below:

"The cost of an item of fixed asset comprises its purchase price, including import duties and other non-refundable taxes or levies and any directly attributable cost of bringing the asset to its working condition for its intended use";

11.5 **Staggered Payments:** The Authority has proposed that since VRS amount are not being paid on a one time basis, treatment of amortization would be incorrect. It would not be appropriate to consider it as part of operational expense because the payments are being staggered. It may be noted that interest during construction (IDC) is also paid to the lenders every quarter (or as based on the agreement between the lenders and the

party) and is not a one-time expense. However, IDC is capitalized and amortized along with fixed asset.

11.6 **Conclusion: On the basis of above, APAO would like to submit to the Honorable Authority to kindly consider capitalizing the VRS payments as part of RAB (in the year of actual payments made by DIAL) and allow amortizing these capitalized expenses over the concession period.**

12 CPI-X

12.1 ***The actual approach and methodology used by the Authority for determination of X (***Escalation ***Factor) is not clear from the consultation paper.***

12.2 The tariff at IGI Airport is determined using the shared till inflation – X price cap model. In the approach, the Authority determines the X Factor that equates the present value of the target revenue over the regulatory period with the present value that results from applying the forecast traffic volume with a price path based on the initial average aeronautical charge, increased by CPI – X for each year.

12.3 The maximum average aeronautical charge in a particular year i is calculated as, $AC_i = AC_{i-1} \times (1 + CPI - X)$

12.4 The X Factor is then calculated, as mentioned in point 2, using the following equation,

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

12.5 DIAL had submitted to the Authority that they did not consider any inflationary increase and had assumed that the regulator would adjust the charges annually based on the actual CPI data. DIAL provided a 5 year forecast of CPI-IW at 7% per annum based on Survey of Professional Forecasters as published by RBI on its website.

12.6 The actual approach and methodology used by the Authority is not clear from the consultation paper.

12.7 While the details of the methodology used by the Authority are not available, it is expected that the Authority would provide adequate allowance for inflation in its determination of tariff. It is proposed that the Authority may estimate the initial tariff based on X Factor. The tariffs can then be adjusted for inflation annually based on the initial tariff estimated using the X Factor.

12.8 **<u>Conclusion</u>: APAO would request the Authority to provide details on its treatment of inflation for the components in the price cap model and the resultant estimation of X Factor. It is proposed that the Authority may estimate the initial tariff based on X Factor. The tariffs can then be adjusted for inflation annually based on the initial tariff estimated using the X Factor.**

13 Interest on DF Loan

13.1 ***The Authority has treated the interest on DF Loan as a cost to IGI Airport.***

13.2 The Central Government had approved the levy of DF by DIAL from 1 March 2009, on an adhoc basis, to bridge a funding gap of Rs 1,827 crore (NPV as on 1 March 2009). DIAL had securitized these future DF receipts to raise a loan of equivalent amount.

13.3 The assets funded through DF have not been included in the Regulated Asset Base (RAB). Further, the debt raised by DIAL on securitization of DF has not been considered as an element in the means of finance. Therefore, the cost of this debt is not being allowed to be recovered through WACC.

13.4 The Authority has decided to consider expensing out this interest thereon while determining tariffs for IGI Airport.

13.5 The pragmatic approach adopted by the Authority is appreciated; as otherwise, this interest cost would have resulted in a loss to DIAL even though the levy of DF had been approved by Ministry of Civil Aviation.

13.6 The interest cost could also be recovered as DF through an extension of the period of collection of DF. This approach would help in reducing the X Factor and thereby help in reducing the increase in tariffs to that extent.

13.7 **Conclusion: APAO would request the Authority to treat the interest on DF Loan as part of DF, which would help reducing the X Factor, and thereby reducing the increase in tariffs.**

14 Conclusion

14.1 AERA's initiative in preparing a Consultation Paper to seek stakeholders' feedback is well appreciated. Stakeholder's interaction provides for a open fair and transparent process in determining an approach to tariff setting which is acceptable by all the stakeholders.

14.2 APAO would like to submit the following for the kind consideration of the Authority while determining tariff:

a. **Cost of Equity**: To ensure that the returns available to investors suitably cover the riskiness of the assets and provide a platform for attracting further investments in the sector. Further, APAO would request the Authority to adopt the cost of equity for determination of tariffs as estimated by KPMG and Leigh – Fisher Management Consultants, which is in the range of 20% - 25%.

b. **Traffic Forecast**: The use of historical traffic data which increased from a lower base may result in overestimation of traffic forecast. Due consideration may be given to current traffic forecasts based on projected economic conditions. Risk of traffic variations is primarily borne by DIAL, and any deviation from the DIAL's forecast may result in an unfair loss to DIAL. Hence, DIAL's traffic forecasts should be considered for determination of tariff. We also request the Authority to consider a standardized approach for traffic forecasts based on established methodologies adopted by reputed industry bodies.

c. **Non Aeronautical Revenue**: SSA does not state that estimates of non aeronautical revenue should be considered when actual data is available; the Authority should utilize actual non aeronautical revenue for financial year 2010 and 2011. We request the Authority to adopt a consistent approach in using actual data for determination of aeronautical tariffs

d. **Refundable Security Deposits**: APAO believes that return on investment should be commensurate with the risk associated with the investment. Since, lenders have considered RSD as part of sponsor's contribution; risk associated with RSD investment should be similar to the risk associated with equity. Returns on project cost funded through RSD equivalent to the returns available on equity should be considered.

e. **Cargo Revenue**: The provisions of concession offered by the Central Government and the Act should be reconciled harmoniously by treating Cargo Services for the period it was directly handled by DIAL as aeronautical (as per the Act), thereby regulating the cargo services but considering revenue from Cargo Services as revenue from Revenue Share Assets (as per the concession offered by the Central Government), thereby using 30% of such revenue to subsidize aeronautical revenue while calculation of tariff.

f. **Hypothetical Asset Base**: Duplication of manpower is maximum in FY2009 because it is the last financial year in the OSP. Also, additional manpower cost is not a recurring cost. Therefore, only the sustainable manpower cost, i.e. the manpower cost related to AAI staff should be considered. Additionally, APAO would also like to request the Authority to adopt consistent approach in the treatment of cargo revenue.

g. **Service Quality**: APAO requests the Authority to duly recognize the provisions of OMDA with regard to penalties on specific defaults in service quality. In case additional penalties are levied by the Authority in respect of the same default, it may result in double jeopardy and impose additional cost burden on the operator. The Authority may agree that the provisions of the OMDA in this respect are quite stringent in nature and provide an adequate deterrent to the operator against non-compliance..We suggest that AERA may observe the process followed by AAI in reviewing cases of defaults and imposition of penalties thereof, and satisfy itself that the actions taken are in compliance with the OMDA .

h. **DF Collection Charges**: Since DF collection charges are similar to the financing expenses and were mandated by DGCA, the Authority may allow collection charges with respect to DF.

i. **Voluntary Retirement Scheme**: VRS paid to AAI may be capitalized as per AS 10. Capitalizing the VRS payments made by DIAL as part of RAB and amortizing these capitalized expenses over the concession period may be allowed.

j. **CPI-X**: APAO would request the Authority to provide details on its treatment of inflation for the components in the price cap model and the resultant estimation of X Factor. APAO would like to propose that the tariffs may be adjusted for inflation annually based on the initial tariff estimated using the X Factor

k. **Interest on DF Loan**: APAO would request the Authority to treat the interest on DF Loan as part of DF, which would help reduce the X Factor, thereby by reducing the increase in tariff requirement.

15 Appendix 1

Comparison of returns to equity investors in Electricity and Airport companies

15.1 Equity investment of INR 1000 crore in a power project is expected to yield the following returns:

Parameter	1st year	10th year	20th year	30th year
Equity investment	(1,000)			
Y-o-y return		160	160	160
Depreciation on equity component		35	35	35
Cash flows for equity	(1000)	195	195	195
EIRR				**19.33%**

15.2 In addition to the above, CERC provides additional incentives to the developer for meeting certain set criteria. It has been observed that these set criteria are very nominal and a concessionaire can easily avail.

15.3 Equity investment of INR 1000 crore in an airport project is expected to yield the following returns:

Parameter	1st year	10th year	20th year	30th year
Closing RAB for equity contribution	1000	690	345	0
Y-o-y return	0	113	58	3
Depreciation on equity component		35	35	35
Cash flows for equity	(1000)	148	92	37
EIRR				**15.65%**

15.4 It can be observed from the above calculation, that even though CERC allows ROE of 16% to equity investor, actual returns available to equity investor in power sector is higher than 16%. Therefore, considering a benchmark of ROE of 16% from power sector to set the ROE for airport sector will not be prudent.

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