# Truing up for FY 2012-13 Review of FY 2013-14 & Aggregate Revenue Requirement and Tariff Proposal for FY 2014-15

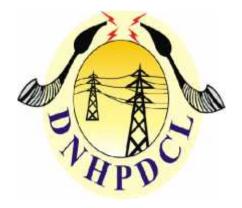
Main Text & Formats (Volume I)

# Submitted to:

Joint Electricity Regulatory Commission Gurgaon

By

DNH Power Distribution Corporation Ltd.



November 2013

# BEFORE THE JOINT ELECTRICITY REGULATORY COMMISSION FOR THE STATE OF GOA & UNIION TERRITORIES

	Filing No
	Case No
IN THE MATTER OF:	Filing of Aggregate Revenue Requirement (ARR) for the FY 14-15 for Union Territory of Dadra and Nagar Haveli under Section 61, 62 and 64 of the Electricity Act, 2003 AND
IN THE MATTER OF	DNH Power Distribution Corporation Limited (hereinafter referred to as "DNHPDCL" or "The Petitioner" or "The Department") Petitioner

The Applicant respectfully submits as under: -

- 1. DNH Power Distribution Corporation Limited (DNHPDCL) is a statutory body engaged in the procurement of electricity and distribution in the Union Territory of Dadra & Nagar Haveli. Consequent to the enactment of the Electricity Act, 2003 (hereinafter referred to as the "Act"), the process of approval of proposed tariffs is vested with the State Commission. Based on the provisions of Section 61, 62 and 64 of the Act, DNHPDCL is filing the current Petition, in order to meet its financial requirements.
- 2. This is a Petition indicating the Aggregate Revenue Requirement (ARR) of DNHPDCL and Tariff Revision Proposal of DNHPDCL for the FY 14-15 (Financial Year 2014-15).

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In this Petition:

All currency figures used in this Petition, unless specifically stated otherwise, are in Rs Crore and Million Units.

This petition contains the Main Text of the Petition, Formats and Annexure (Volume II)

# **Chapter 1: Introduction**

#### 1 DNHPDCL Profile

DNH Power Distribution Corporation Limited (DNHPDCL) has been created from the erstwhile Electricity Department of Dadra & Nagar Haveli (ED-DNH) and started its operation from April 1, 2013. The Ministry of Power (MoP) had advised to corporatize the ED-DNH. The Ministry of Home Affairs vide letter no. U-3034/59/2010-CPD dated 29th September 2011 has conveyed approval to corporatize ED-DNH. Subsequently, the MoP vide letter no. 36/1/2010-R&R dated 29th February 2012 has conveyed its "No Objection" for the Corporatization of ED-DNH.

The Administrator of Dadra and Nagar Haveli after satisfying the necessity to Corporatize has incorporated the "DNH Power Distribution Corporation Limited" with the Registrar of Companies, Gujarat under the Companies Act, 1956 on 13<sup>th</sup> July 2012.

The Administrator of Dadra and Nagar Haveli in exercise of powers conferred vide Notification No. F No U-11030/2/2003-UTL dated 22<sup>nd</sup> June 2004, by Ministry of Home Affairs and under section 131,133 and 134 of the Electricity Act., 2003 has prepared the "Dadra & Nagar Haveli Electricity Reforms Transfer Scheme 2013" (hereinafter referred as the "Scheme"). This Scheme has provided the transfer of assets, liabilities, rights, functions, obligations, proceedings and personnel of distribution and associated divisions of ED-DNH to DNHPDCL. The functions and duties of DNHPDCL as mentioned in the Scheme document are as follows:

- (i) To carry out the business of Electricity Sub Transmission, Distribution and retail supply in the Union Territory of Dadra and Nagar Haveli and other places permitted by the appropriate authorities and for this purpose to plan, acquire, establish, alter, renovate, modernize, work and us a power system network in all its aspect.
- (ii) To carry on the business of purchasing, importing, exporting, wheeling, trading of all forms of electricity energy; whether nuclear

steam, hydro or tidal, water, wind, solar, hydrocarbon fuel, thermal or any other form generated by any source like Generating companies, Captive power plants, Electricity Utilities, Government, other bodies and organizations, trading concerns licences and others including import from abroad.

(iii) To carry on the business of selling, supplying, trading, formulation of tariff to the extent to which Govt. Instructions/regulations permits, billing and collection thereof, plan, research, design and prepare project reports, diagnose operational difficulties and weakness and advice on remedial measures to improve and modernize subtransmission and supply line and sub-stations.

The present distribution system of DNHPDCL consists of 48.5 circuit km of 220 kV double circuit (D/C) lines, 154. 6 km of 66 kV D/C lines, 637 circuit km of 11 kV lines and 1786 kms of LT lines along with 1930 transformers.

At present, the UT of Dadra & Nagar Haveli gets power from 400/220 kV PGCIL Vapi and 100 MW from 220/66 kV Bhilad sub-station of GETCO.

The present firm and non-firm power allocation of Dadra & Nagar Haveli is 1049.77 MW in the peak hours and 940.60 MW in the off-peak hours from the various Generating Stations, which includes 647.77 MW and 538.60 MW from the Central Generating stations during peak and off-peak hours respectively, 164 MW from NTPC-SAIL plant at Bhilai, 38 MW from Ratnagiri gas based power plant (RGPPL) and 200 MW from EMCO EMCO Energy Limited (GMR). The power supply from the EMCO has been stated from April 2013.

Earlier in FY 12-13, the peak electricity demand of 660 MVA was recorded in DNHPDCL periphery. The total energy requirement recorded during FY 2012-13 was 4572 MU, against that 4399 MU was available, resulting in a power deficit of 173 MU (3.8%) during FY 12-13. DNHPDCL has made the necessary arrangement with various power generation companies to meet the energy requirement is the UT of Dadra & Nagar Haveli for FY 13-14 and FY 14-15.

The power demand is primarily dependent on the HT and LT industrial consumers contributing approximately 98% of the total sales in FY 12-13. The high demand from industrial consumers is primarily due to tax holiday benefit extended by the Govt of India in UT of Dadra & Nagar Haveli which has attracted a large number of industries to set up their industry in this region.

Considering the increase in demand from large industries, the demand is likely to increase around 5000 MUs by the end of FY 2014-15. In view of this huge power requirements, DNHPDCL had proposed a number of schemes to be implemented during FY 13-14 to FY 14-15 for strengthening and augmentation of the transmission and distribution system in the territory.

DNHPDCL has already signed power purchase agreements (PPAs) with NTPC for allocation of power from North Karanpura Super Thermal Power Station (NKSTP) and Barh Super Thermal Power Project (BSTPP). Besides, DNHPDCL has also shown its willingness for allocation of power for Vindyachal Super Thermal Power Project (VSTPP) – V, Lara Super Thermal Power Project (LSTTP) and RGPPL Expansion II of NTPC. DNHPDCL has also shown its interest for allocation of 50 MW power from the Ultra Mega Power Projects from Ministry of Power. DNHPDCL has already signed PPA with Emco Energy (GMR) to supply 200MW of power in the next seven years. The supply from the said plant has been started from April 2013.

In addition to this willingness is also given for 50 MW power each from expansion of NSPCL Bhilai power plant, Jagdishpur Thermal Power Plant and Rourkela Thermal Power Plant.

DNHPDCL has total sub-transmission capacity of 720 MVA, including 400 MVA in Kharadpada and 320 MVA Khadoli sub-stations. Further, DNHPDCL is also utilizing 100 MVA capacity of GETCO. Total installed capacity at 66/11 kV sub-stations are 592 MVA. DNHPDCL is continuously striving for increasing its distribution capacity on account of increasing electricity demand from the HT/EHT consumers.

#### 2 Contents of this Petition

This Petition covers the truing up for FY 12-13, review for FY 13-14 and the basis, assumptions and projections of individual elements constituting the determination of ARR for FY 14-15. The Joint Electricity Regulatory Commission (JERC) for the state of Goa and union territories had issued the first Tariff Order for Electricity Department of Dadra & Nagar Haveli (DNHPDCL) on 1st November, 2010 and subsequently the second and third Tariff Orders for FY 11-12 and FY 12-13 were issued on 13th September, 2011 and 31st July, 2012. The Hon'ble Commission had issued the fourth Tariff Order on March 25th 2013. The Commission in its last Tariff Order for FY 13-14 has approved the ARR for FY 13-14 based on the actual cost for FY 11-12 and estimated expenses for FY 12-13.

# Chapter 2: True Up for FY 2012-13

# 1 Principles for True Up for FY 2012-13

As per JERC Terms and Conditions for determination of Tariff Regulations, 2009, the Hon'ble Commission shall undertake the True Up of licensee for FY 2012-13 based on the comparison of the actual performance of the past year with the approved estimates for such year.

In line with the provisions of JERC Regulations, DNHPDCL is filing for True Up for the year FY 2012-13. Information provided in the True Up for FY 2012-13 is based on the Annual Accounts and principles adopted by the Hon'ble Commission in its previous orders on Interest on Term Loan, Return on Equity, Interest on Working Capital and Depreciation. This actual performance has been compared with the approved parameters as per the order dated 31st July 2012 and the revised parameters in the Tariff Order dated March 25th 2013 for the FY 12-13.

Accordingly, revised Aggregate Revenue Requirement, revenue and gap for FY 2012-13 are given in the following sections of this chapter.

# 2 Energy Sales for FY 2012-13

The actual energy sale for FY 2012-13 has been shown below along with approved values by Hon'ble Commission vide Tariff Order dated 31st July 2012 and the revised sales approved in the Tariff Order dated March 25th 2013. The actual energy sales for FY 2012-13 are as under:

Table 1: Category wise Energy Sales for FY 12-13

(MU)

Particulars	FY 12-13		
	Approved (T.O. dated 31st July 2012)	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Actual
Domestic	59.79	80.22	70.82
Commercial	33.47	26.32	26.87
Agriculture	3.00	3.40	3.36

Particulars	FY 12-13		
	Approved (T.O. dated 31st July 2012)	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Actual
LT Industry	152.19	160.88	161.66
HT/EHT Industry	4,420.3	4,489.0	4,322.68
Public Lighting	7.09	4.67	4.45
Temp. Supply	3.59	2.18	1.97
Total Sales	4,679.40	4,766.70	4,591.80

#### Note:

Domestic includes 3.11 MU energy sales to LIG category

It can be observed that the actual sales for FY 12-13 was marginally lower mainly on account of lower sales recorded in the HT/EHT categories in comparison to the sales approved by the Commission vide its Tariff Orders dated 31st July 2012 and 25th March 2013 respectively. The variation in sales of electricity to the consumers is attributed as uncontrollable factor. Therefore, DNPDCL requests the Hon'ble Commission for the truing up of actual sales as shown in the Table above.

#### 3 Distribution Loss for FY 2012-13

DNHPDCL has been making all efforts to contain the distribution losses. Consequent to the efforts, the distribution losses in DNHPDCL area is one of the lowest in the country.

The Hon'ble Commission vide its Tariff Orders dated 31st July 2012 and March 25th 2013 had approved the distribution loss at 6.00% and 4.80% respectively. Against that the actual distribution losses in FY 2012-13 were 5.23%. The following Table shows the comparison of actual distribution losses of the DNHPDCL against that approved by the Hon'ble Commission vide its Tariff Orders dated July 31st 2012 and the revised losses approved in the Tariff Order dated March 25th 2013.

Table 2: Distribution Loss for FY 12-13

## 4 Energy Requirement and Energy Balance

Based on the actual energy sales and the transmission & distribution loss units, the actual energy requirement for DNHPDCL has been furnished below. The energy requirement has been met through various sources as described in the subsequent section.

Table 3: Energy Requirement and Energy Balance for FY 12-13

(MU)

Particulars	FY 12-13			
	Approved (T.O. dated 31st July 2012)	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Actual	
Sales	4679.41	4766.68	4,591.80	
Add: Losses	298.69	240.34	253.29	
T&D Losses	6.00%	4.80%	5.23%	
Energy Required at Periphery	4978.10	5007.02	4,845.09	
Transmission loss	183.76	188.52	186.30	
Transmission loss (%)	3.56%	3.56%	3.56%	
Energy required at generator end	5161.86	5295.50	5233.10	
Surplus/ (Deficit) Power	0.00	99.97	201.71	

#### 5 Power Purchase Cost

DNHPDCL sources power from Central Generating Stations like Korba, Vindyachal, Kahalgaon, Kawas, Sipat, Tarapur and Kakrapar atomic power stations of NPCIL etc. Besides, DNHPDCL also drew power from RGGPL and Tata Power. The power procured during FY 12-13 as against that approved by the Hon'ble Commission is provided in the table below.

Table 4: Power purchase cost for FY 2012-13

(Rs. Cr.)

Particulars	FY 12-13		
	Approved (T.O. dated 31st July 2012)	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Actual
Total power purchase cost	1,765	1,918.72	1,869.04

The Hon'ble Commission had approved a power purchase cost of Rs. 1,918.72 Crore in the last Tariff Order. Against that the actual power purchase cost in FY 12-13 was Rs. 1,869.04 Crore.

The power purchase quantum and cost depends on various parameters such as the energy sales, distribution loss, energy requirement and the energy availability. The variation in the power purchase cost from the Tariff Order is on account of variation in sales and variation in actual cost with respect to the base rate along with purchase of power from short-term sources to meet the shortfall during the year.

#### **6** Operation and Maintenance Expenses

Operations and Maintenance (O&M) Expenses of the company consists of the following elements:

- Employee Expenses
- Repairs and Maintenance Costs
- Administrative and General Expenses

Employee expenses comprise of salaries, dearness allowance, bonus, terminal benefits in the form of pension & gratuity, leave encashment and staff welfare expenses.

Repairs and Maintenance Expenses go towards the day to day maintenance of the distribution network of the DNHPDCL and form an integral part of the company's efforts towards reliable and quality power supply as also in the reduction of losses in the system.

Administration expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances, other debits.

The Hon'ble Commission had approved the O&M cost at Rs. 11.72 Crore and Rs. 12.88 Crore respectively vide Tariff Orders dated 31st July, 2012 and March 25th 2013 respectively.

During FY 2012-13, DNHPDCL incurred actual O&M expense of Rs. 15.27 Crore which included Employee cost of Rs. 7.82 Crore, Repair & Maintenance charges of Rs. 4.45 Crore and Administration & General Expenses of Rs. 3.00 Crore as given in the Table below:

Table 5: Operation & Maintenance Expenses for FY 2012-13

(Rs. Cr.)

Particulars	FY 12-13		
	Approved (T.O. dated 31st July 2012)	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Actual
Employee Cost	3.20	5.17	7.82
R&M	7.16	5.58	4.45
A&G	1.35	2.13	3.00
O&M Expenses	11.72	12.88	15.27

The actual employee expenses of DNHPDCL had exceeded the approved values due to change in salary revision and payment to the contract employees. These factors are uncontrollable factors and need to be trued-up

at actual. Therefore, DNHPDCL requests the Hon'ble Commission to approve the employees expenses as per above submission.

## 7 Capital Expenditure & Capitalization

The actual capital expenditure incurred by DNHPDCL during the FY 12-13 was Rs. 41.57 Crore, which is lower than that approved by the Hon'ble Commission in its tariff order dated 13<sup>th</sup> September, 2011 and 31<sup>st</sup> July, 2012. The capital expenditure incurred and capitalization for FY 2011-12 against that approved by the Hon'ble Commission is as shown below:

Table 6: Capital Expenditure and Capitalization for FY 2012-13

(Rs Cr)

Particulars	FY 12-13		
	Approved (T.O. dated 31st July 2012)	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Actual
Capital Expenditure	61.30		26.44
Capitalization	43.72	46.52	27.46

The reason for variation is due to part capitalization of Pipariya, Kala and Velugam sub-stations.

#### 8 Depreciation

The depreciation has been worked out after applying the Depreciation rates as per the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009.

For computation of depreciation, DNHPDCL has considered the opening balance of the GFA for FY 12-13 approved in the last Tariff Order and subsequently added the assets capitalized in FY 12-13.

Accordingly, the depreciation so arrived and approved depreciation for FY 2012-13 are as shown below:

Table 7: Depreciation for FY 2012-13

(Rs. Cr.)

Particulars	FY 12-13		
	Approved (T.O. dated 31st July 2012)	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Actual
Opening GFA	95.38	273.64	474.40
Addition during the year	43.72	46.52	27.46
Closing GFA	139.10	320.17	501.26
Average GFA	117.24	296.91	487.83
Depreciation during the year	6.11	15.12	19.91

#### 9 Interest and Finance Charges

For assessing interest on Loans in FY 12-13, DNHPDCL has considered the Opening Balance of Loans for FY 12-13 as approved by the Hon'ble Commission in its Tariff Order dated March 25<sup>th</sup> 2013 for the Review of the ARR for FY 12-13. The normative loan addition in FY 12-13 has been computed as 70% of the capitalization for FY 12-13 which works out to Rs. 19.22 Crore. The capitalization for FY 12-13 was Rs. 27.46 Crore as per the annual accounts for FY 12-13.

In line with the approach adopted by the Hon'ble Commission in its previous Tariff Orders, 10% of the opening loans have been considered as the repayment during the year. Further the rate of interest has been considered as equal to the SBI PLR of 14.45%.

The total Interest & Financial charges for FY 2012-13 computed by DNHPDCL as against approved by the Hon'ble Commission is as shown below:

Table 8: Interest on Loan for FY 2012-13

(Rs. Cr.)

Particulars	FY 12-13		
	Approved (T.O. dated 31st July 2012)	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Actual

Particulars	FY 12-13		
	Approved (T.O. dated 31st July 2012)	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Actual
Opening normative loan	61.99	36.76	36.76
Loan for additional Capex (70:30 debt-equity)	30.60	32.57	19.22
Loan Repayment (10% of Opening Balance)	6.68	15.12	1.84
Closing Loan	86.92	54.21	54.14
Average Normative Loan	73.95	45.49	45.45
Rate of Interest (@SBAR rate)	14.75%	14.61%	14.61%
<b>Interest Cost on Avg. Loans</b>	10.91	6.65	6.64

# 10 Interest on Working Capital

The interest on working capital has been calculated based on the normative principles outlined by the Hon'ble Commission in the JERC (Terms and Conditions for determination of Tariff), Regulations, 2009.

DNHPDCL has computed interest on working capital at 14.75% as equal to the SBI PLR. The interest on working capital for FY 12-13 incurred by DNHPDCL against that approved by the Hon'ble Commission is as shown below:

Table 9: Interest on Working Capital for FY 2012-13

(Rs. Cr.)

Particulars	FY 12-13		
	Approved (T.O. dated 31 <sup>st</sup> July 2012)	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Actual
O&M expense for 1 month	0.98	1.08	1.27
Power Purchase Cost for 1 month	147.08	159.91	155.75
Total	148.05	160.98	157.03
Less: Security Deposit	17.73	18.06	17.10

Particulars		FY 12-13	
	Approved (T.O. dated 31st July 2012)	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Actual
Total Working Capital after deduction of Security Deposit from Working Capital Requirement	130.33	142.92	139.93
SBAR Rate	14.75%	14.61%	14.61%
Interest on Working Capital	19.22	20.89	20.44

#### 11 Return on Equity

As per the Tariff regulations issued by the Hon'ble Commission, a return at 16% on the equity base is considered as reasonable and hence allowed by Hon'ble Commission. Accordingly, DNHPDCL has computed the Return on Equity considering a rate of return at 16%.

The return on equity for FY 12-13 is as shown below:

Table 10: Return on Equity for FY 12-13

Particulars		FY 12-13	(Rs. Cr.)
	Approved (T.O. dated 31st July 2012)	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Actual
Return on Equity	2.68	8.98	13.79

#### 12 Payment of Contingency liability

JERC has passed an order to refund an amount of Rs. 81.11 Crores to the consumers with an interest at the rate of 9.50% in regards to the excess PPCA charges recovered from the consumers which has been subsequently reduced to Rs. 41.86 Crores with interest. The Interest has also been waived by the APTEL till the date of signing the Balance Sheet and the department is still in appeals for the waiver of Rs. 41.86 Crores in the APTEL. If the order comes against the department then the liability of payment of Rs.

41.86 Crore may arise. In this regard, DNHPDCL has made a provision of Rs. 41.86 Crore in the Truing up of FY 12-13.

#### 13 Provision for bad and doubtful debt

Provision for bad and doubtful debt approved by the Hon'ble Commission in its Tariff Orders dated 31<sup>st</sup> July 2012 and March 25<sup>th</sup> 2013 and actual computed for FY 12-13 is shown in the following Table:

Table 11: Provision for Bad Debt for FY 12-13

(Rs. Cr.)

Particulars		FY 12-13	
	Approved (T.O. dated 31st July 2012)	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Actual
Provision for bad and doubtful debt	7.57	9.06	19.34

#### 14 Non Tariff Income

The actual Non-Tariff Income of DNHPDCL for FY 12-13 was Rs. 0.10 Crore as shown below:

Table 12: Components of Non-Tariff Income for FY 12-13

(Rs. Cr.)

Particulars	Amount
House Rent Recovery	0.01
Interest Income	0.01
Discount received	0.08
Tender Fees	0.01
Total	0.10

The Hon'ble Commission had approved non-tariff income of Rs. 3.99 Crore and Rs. 10.76 Crore in the Tariff Orders dated 31<sup>st</sup> July 2012 and March 25<sup>th</sup> 2013 respectively. Against that the actual Non Tariff for FY 12-13 was Rs. 0.10Crore as shown in the Table below:

Table 13: Non Tariff Income for FY 12-13

DNHPDCL submits that the variation in non tariff income is uncontrollable. Accordingly, it requests the Hon'ble Commission to allow the variation in Non Tariff Income as uncontrollable for the purpose of truing up.

# 15 Aggregate Revenue Requirement for FY 2012-13

Based on above expenses, the Table below summarizes Aggregate Revenue Requirement for FY 12-13 for DNHPDCL in comparison with values approved by the Hon'ble Commission in the last two Tariff Orders:

Table 14: Aggregate Revenue Requirement for FY 12-13

(Rs. Cr.)

Particulars	FY 12-13		
	Approved (T.O. dated 31st July 2012)	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Actual
Power Purchase Cost	1,764.93	1,918.92	1,869.04
O&M Expense	11.71	12.88	15.27
Depreciation	6.11	15.12	19.91
Interest Cost on Long-term Capital Loans	10.91	6.65	6.64
Interest on Working Capital Loans	20.91	22.60	20.44
Return on Equity	2.68	8.98	13.79
Payment of contingency liability			41.86
Provision for Bad Debt	7.57	9.06	19.34
<b>Total Revenue Requirement</b>	1,824.67	1,994.21	2,006.30
Less:			
Non-Tariff Income	3.99	10.76	0.10

Particulars		FY 12-13	
	Approved (T.O. dated 31 <sup>st</sup> July 2012)	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Actual
Less: Revenue from Surplus Power Sale/UI	0.00	31.61	54.05
Aggregate Revenue Requirement	1,820.83	1,951.85	1,952.16

DNHPDCL requests the Hon'ble Commission to kindly approve the ARR submitted hereinabove.

#### 16 Revenue for FY 2012-13

During the FY 12-13, DNHPDCL's actual revenue from retail sales amounted to Rs. 1,934.13 Crore (including the amount received on account of FPPCA charges) as against Rs. 1,513.35 Crore and Rs. 1,812.80 Crore as approved by the Hon'ble Commission vide its Tariff Order dated 31st July 2012 and March 25th 2013 respectively.

(Rs. Cr.) **Particulars** FY 12-13 Approved Approved (T.O. dated (T.O. dated Actual March 25th 31st July 2012) 2013) Revenue from retail sale of 1,513.35 1,812.80 1,934.13 power

Table 15: Revenue for FY 2012-13

#### 17 Revenue (Gap) / Surplus for FY 2011-12

The Hon'ble Commission in Order dated 31st July 2012 has approved a total Aggregate Revenue Requirement of Rs. 1,820.83 Crore for FY 12-13. Further, the Commission has computed the revised ARR in the Tariff Order dated 25th March 2013 of Rs. 1,951.85 Crore. DNHPDCL has arrived at the trued-up Aggregate Revenue Requirement for FY 12-13 of Rs. 1,898.24 Crore.

This revised Aggregate Revenue Requirement is compared against the revised income under various heads including revenue with existing tariff of Rs. 1,919.42 Crore. Accordingly, total revenue surplus of DNHPDCL for FY 12-13 is computed at Rs. 21.18 Crore as depicted in the Table below:

Table 16: Revenue Gap/Surplus for FY 12-13

(Rs. Cr.)

Particulars		FY 12-13	(Rs. Cr.)
	Approved (T.O. dated 31st July 2012)	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Actual
Aggregate Revenue Requirement	1,820.83	1,951.85	1,952.16
Revenue from sale of power	1,513.35	1,812.80	1,934.13
Net (Gap)/Surplus	(307.48)	(139.05)	23.83
Recovery on account of PPC variations	-	144.17	-
Gap after adjusting PPC variations	-	(5.12)	-
Gap for the previous year	53.73	(45.05)	-
Carrying Cost	-	(6.96)	-
Revenue (Gap)/Surplus	253.74	(57. 13)	(18.03)

DNHPDCL requests the Hon'ble Commission to consider the surplus of 23.83 Crore for FY 12-13 arrived as part of truing up process.

# Chapter 3: Review of FY 2013-14

The review of aggregate revenue requirement for FY 13-14 is based on quantum of energy sales, energy loss as well as various cost elements like power purchase cost, O&M expenses, interest cost and depreciation etc. This has been done based on actual data for 5 months for power purchase cost, and sales, and revised estimates of FY 13-14 based on six months actuals for O&M expenses, interest and depreciation computed by DNHPDCL DNHPDCL analysis in respect of items given below is discussed in the following paras:

- a. Category wise Energy Sales & Revenues at existing tariffs;
- b. T&D Losses;
- c. Energy Requirement;
- d. Determination of Aggregate Revenue Requirement (ARR) by forecasting the following costs, other income & returns:
  - i. Power Purchase Cost
  - ii. Employee Cost
  - iii. Repairs & Maintenance Cost
  - iv. Admin & General Cost
  - v. Capital Investment Plan
  - vi. Interest Cost
  - vii. Interest on Working Capital
  - viii. Depreciation
    - ix. Provision for bad & doubtful debts
    - x. Return on Equity
    - xi. Non-Tariff Income
- e. Determination of Gap between Revenue & Costs, Additional Revenue through the proposed Tariff Revision and the arrangements to cover the revenue gap; and

# 1 Energy Sales

The following table summarizes category wise actual energy sales for the first six months for all the consumer segments. As can be seen, DNHPDCL's overall energy sales are significantly dependent upon HT/EHT Industries to the extent of around 96%.

Table 17: Category wise energy sold to the Consumers from April to September 2013

	(MU)
Consumers	FY 13-14
	Actual
Domestic	42.21
LIGH	1.40
Commercial	15.91
Agriculture	2.04
LT Industry	87.38
HT/EHT Industry	2307.51
Public Lighting	2.49
Temporary Supply	0.94
Total	2,459.88

Based on the actual retail sales to various consumers, DNHPDCL has estimated the total retail energy sold for FY 13-14 as shown in the Table below:

Table 18: Category wise sales for FY 13-14 (Revised Estimate)

(MU) Sales (MUs) FY 2013-14 Approved (T.O. Revised dated March 25th **Estimate** 2013) Domestic 83.24 88.65 LIGH 2.47 2.94 Commercial 31.68 33.40

Sales (MUs)	FY 2013-14				
	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Revised Estimate			
Agriculture	3.40	4.28			
LT Industry	160.88	192.24			
HT/EHT Industry	4,934.90	5,007.30			
Public Lighting	6.48	5.43			
Temp. Supply	2.18	2.08			
<b>Total Sales</b>	5,225.20	5,336.31			

#### 2 Distribution loss for FY 13-14

DNHPDCL has considered the distribution losses of 4.70% for FY 13-14 as approved by the Hon'ble Commission in its last Tariff Order.

Table 19: Distribution losses for FY 13-14

Distribution Losses	FY 20	(%)
	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Revised Estimate
Distribution losses (%)	4.70%	4.70%

# 3 Energy Requirement of the System

The following Table depicts the energy requirement of the DNHPDCL for FY 13-14.

Table 20: Energy Requirement of the System

Energy Balance	FY 2013-14		
	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Revised Estimate	
Sales (MU)	5225.22	5,336.31	
Add: T&D Losses (MU)	257.70	263.18	
T&D Losses (%)	4.70%	4.70%	
Energy Required at Periphery (MU)	5482.92	5,599.49	

Energy Balance	FY 2013-14		
	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Revised Estimate	
Transmission loss (%)	3.55%	3.56%	
Transmission loss (MU)	201.97	212.62	
Energy required at generator end (MU)	5684.90	5972.43	
Surplus/ (Deficit) Power (MU)	0.00	160.32	

# 4 Energy Availability and power purchase cost

Dadra & Nagar Haveli has no generating stations of its own and relies on the firm and infirm allocation of power from Central Generating Stations like Korba, Vindhyachal, Kahalgaon, Kawas, Sipat, Tarapur, Kakrapar etc. to meet its energy requirement.

The DNHPDCL for the purpose of estimation of the power availability during FY 12-13 and FY 13-14 has considered the following sources of power:

- NTPC Western Region Generating Stations
- NTPC Eastern Region Generating Stations
- NSPCL (NTPC-SAIL Power Company Ltd)
- Nuclear Power Corporation of India Limited
- Ratnagiri Gas Power Plant (RGPPL)
- Private Sector Power Generating Companies
- Renewable energy sources Solar and Non-Solar
- Other market sources

The Petitioner has allocation from Western as well as Eastern region from coal, gas and nuclear power stations. However, for meeting the supply-demand gap during the peak hours, the Petitioner has relied on energy exchange and over-drawal from the Grid (UI).

For projecting of the energy availability for FY 13-14, six months actual power purchase has been considered. For projection of remaining six months of power purchase for FY 13-14 energy availability, firm and infirm allocation from various generating stations has been considered. Detailed methodology for projecting the power availability to the Petitioner from various sources is summarized below.

**Table 21: Energy Allocation from Central Generating Stations** 

(MW)

Name of the plant	Weighted average Infirm allocation	Weighted Average Firm allocation	Weighted average total allocation
KSTPP	59.35	-	59.35
KSTPS -3	26.47	2.20	28.67
VSTPP-I	41.62	5.00	46.62
VSTPP-II	31.94	4.00	35.94
VSTPP- III	32.38	6.00	38.38
VSTPP- IV	21.69	2.78	24.47
KAWAS	55.99	25.00	80.99
GGPP	56.46	2.00	58.46
Sipat – I	85.88	9.00	94.88
Sipat – II	31.21	4.00	35.21
KHSTPP - II	3.50	3.50	3.50
Mauda I (MSTPS)	21.69	2.78	24.47
NPCIL - KAPS	10.80	2.00	12.80
NPCIL - TAPP 3&4	39.45	7.00	46.45
Total	518.40	75.26	590.16
NSPCL Bhilai	64.00	100.00	164.00
RGPPL		38.00	38.00
EMCO Energy Ltd. (GMR Group)		200.00	200.00

Actual power purchase cost of the first six months of FY 13-14 is shown below:

Table 22: Actual Power Purchase cost for the first six months of FY 13-14

Source	Units Purchas ed	Fixed Charges	Variable Charges	Arrears	Other Charges	Rebate	All Charges Total	Per Unit Cost
NTPC Stations								
KSTPS	244.11	13.73	23.99	0.00	3.23	0.00	40.95	1.68
KSTPS 3	77.42	12.85	7.81	0.00	2.18	0.00	22.84	2.95
VSTPP-I	162.03	10.84	20.58	0.00	2.47	0.00	33.89	2.09
VSTPP-II	140.38	9.35	16.79	0.00	2.46	0.00	28.59	2.04
VSTPP- III	152.43	16.77	18.22	0.00	0.95	0.00	35.94	2.36
VSTPP- IV	76.21	12.16	9.26	0.00	0.23	0.00	21.65	2.84
KGPP	107.43	27.31	26.65	0.00	1.73	0.00	55.69	5.18
GGPP	72.08	22.82	18.65	0.00	-9.92	0.00	31.56	4.38
Sipat-I	293.71	39.82	47.76	0.00	16.23	0.00	103.81	3.53
Sipat-II	135.23	16.83	22.78	0.00	1.62	0.00	41.23	3.05
Mauda	2.07	8.89	0.58	0.00	0.00	0.00	9.47	45.84
Mauda-II	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FSTPS	0.00	0.00	0.00	0.00	0.04	0.00	0.04	
KhSTPS I	0.00	0.00	0.00	0.00	0.02	0.00	0.02	
RSTPS	0.00	0.00	0.00	0.00	0.01	0.00	0.01	
TSTPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
KHSTPP-II	5.67	1.22	1.35	0.00	0.17	0.00	2.73	4.82
Subtotal - NTPC	1468.76	192.59	214.42	3.32	21.42	5.64	426.12	2.90
NSPCL - Bhilai	460.95	101.67	111.33	0.00	1.38	0.00	214.37	4.65
NPCIL								
KAPS	46.66	0.00	10.78	0.01	0.01	0.00	10.80	2.31
TAPS	123.84	0.00	34.55	0.00	0.45	0.00	35.00	2.83
Subtotal	170.50	0.00	45.33	0.01	0.46	0.00	45.80	2.69
Others								
RGPPL	29.27	15.59	7.83	0.00	0.42	0.00	20.26	6.92
Tata Power - Haldia	1.65	0.00	0.65	0.00	0.00	0.00	0.65	3.95
EMCO Energy Ltd. (GMR Group)	472.95	133.29	83.42	0.00	0.91	0.00	169.92	3.59
Subtotal	503.87	148.88	91.90	0.00	1.33	0.00	242.10	4.80
Power purchase from Other Sources								
Indian E. Exchange/Bilateral	0.00	0.00	0.00	0.00	0.03	0.00	0.03	0.00
UI	74.76	0.00	10.63	0.00	0.00	0.00	10.63	1.42
RPO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Subtotal	74.76	0.00	10.63	0.00	0.03	0.00	10.66	1.43
Misc. Arrears Total Power Purchase	2678.83							

Source	Units Purchas ed	Fixed Charges	Variable Charges	Arrears	Other Charges	Rebate	All Charges Total	Per Unit Cost
Transmission charges								
PGCIL CHARGES		0.00	72.46	2.85	0.00	0.00	75.31	
POSOCO		0.00	0.69	0.00	0.00	0.00	0.69	
WRPC		0.00	0.00	0.00	0.00	0.00	0.00	
Reactive charges		0.00	1.10	0.00	0.00	0.00	1.10	
MSTCL		0.00	1.75	0.00	0.00	0.00	1.75	
Intra-state transmission charges		0.00	0.00	0.00	0.00	0.00	0.00	
Grand Total of Charges	2678.83	443.13	549.61	6.18	24.62	5.64	1017.90	3.80

Based on the actual power purchase cost of the first six months of FY 13-14 and the remaining six months projection, the revised estimated power purchase cost for FY 13-14 is presented in the following Table:

Table 23: Revised estimated Power Purchase cost for FY 13-14

Source	Units Purchas ed	Fixed Charges	Variable Charges	Arrears	Other Charges	Rebate	All Charges Total	Per Unit Cost
NTPC Stations								
KSTPS	449.93	27.46	44.21	0.00	6.46	0.00	78.14	1.74
KSTPS 3	176.85	25.70	17.84	0.00	4.37	0.00	47.91	2.71
VSTPP-I	325.48	21.68	41.34	0.00	4.94	0.00	67.97	2.09
VSTPP-II	266.39	18.69	31.85	0.00	4.93	0.00	55.47	2.08
VSTPP- III	286.99	33.54	34.31	0.00	1.90	0.00	69.75	2.43
VSTPP- IV	161.99	24.31	19.69	0.00	0.46	0.00	44.46	2.74
KGPP	315.15	54.62	78.19	0.00	3.46	0.00	136.27	4.32
GGPP	237.20	45.65	61.37	0.00	(9.92)	0.00	97.10	4.09
Sipat-I	572.50	79.64	93.09	0.00	32.47	0.00	205.20	3.58
Sipat-II	238.69	33.67	40.20	0.00	3.25	0.00	77.12	3.23
Mauda	84.73	17.78	21.25	0.00	(0.01)	0.00	39.02	4.61
Mauda-II	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FSTPS	0.00	0.00	0.00	0.00	0.07	0.00	0.07	
KhSTPS I	0.00	0.00	0.00	0.00	0.04	0.00	0.04	
RSTPS	0.00	0.00	0.00	0.00	0.01	0.00	0.01	
TSTPS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
KHSTPP-II	15.40	2.43	3.67	0.00	0.33	0.00	6.43	4.18
Subtotal - NTPC	3131.29	385.18	487.02	3.32	52.77	11.27	917.01	2.93
NSPCL - Bhilai	1043.18	203.33	251.94		2.76	0.00	458.04	4.39
NPCIL								
KAPS	93.17	0.00	21.52	0.01	0.01	0.00	21.55	2.31
TAPS	264.55	0.00	73.81	0.00	0.90	0.00	74.71	2.82
Subtotal	357.73	0.00	95.33	0.01	0.91	0.00	96.25	2.69
Others								

Source	Units Purchas ed	Fixed Charges	Variable Charges	Arrears	Other Charges	Rebate	All Charges Total	Per Unit Cost
RGPPL	135.65	31.17	36.29	0.00	0.84	0.00	68.30	5.04
Tata Power - Haldia	1.65	0.00	0.65	0.00	0.00	0.00	0.65	3.95
EMCO Energy Ltd. (GMR Group)	1228.18	266.58	216.63	0.00	1.82	0.00	485.02	3.95
Subtotal	1365.48	297.75	253.56	0.00	2.66	0.00	553.97	4.06
Power purchase from Other Sources								
Indian E. Exchange/Bilateral	0.00	0.00	0.00	0.00	0.03	0.00	0.03	0.00
UI	74.76	0.00	10.63	0.00	0.00	0.00	10.63	1.42
RPO	0.00	0.00	30.00	0.00	0.00	0.00	30.00	0.00
Subtotal	74.76	0.00	40.63	0.00	0.00		40.63	5.43
Misc. Arrears								
Total Power Purchase	5972.43	886.26	1128.48	3.33	59.10	11.27	2065.90	3.46
Transmission charges								
PGCIL CHARGES	0.00	0.00	144.92	2.85	0.00	0.00	147.77	
POSOCO	0.00	0.00	1.39	0.00	0.00	0.00	1.39	
WRPC	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Reactive charges	0.00	0.00	2.20	0.00	0.00	0.00	2.20	
MSTCL	0.00	0.00	3.50	0.00	0.00	0.00	3.50	
Intra-state transmission charges	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Grand Total of Charges	5972.43	886.26	1280.49	6.18	59.10		2220.76	3.72

Per unit variable cost, fixed cost and other charges have been considered at the same level as actual from April to September 2013.

Power purchase arrear for the remaining six months has been considered as nil as DNHPDCL has no prior information of arrear bills from the generators and transmission companies.

DNHPDCL has received 100 MW power from EMCO energy during April to June 2013 and 150 MW power from July to September 2013. DNHPDCL received its full quota of 200 MW from EMCO from the month of October 2013.

#### 5 Operation & Maintenance Costs

The approved and revised estimated O&M cost for FY 13-14 is shown in the following Table:

Table 24: O&M Expense for FY 13-14

(Rs. Cr.) **Particular** FY 13-14 Approved (T.O. dated March 25th Revised Estimate 2013) Employee Expenses 5.63 8.52 2.32 A&G Expenses 4.856.08 R&M Expenses 3.27 Total **14.03** 16.64

The revision on the O&M cost for FY 13-14 is mainly on escalation in employee expenses.

#### 6 Capital Expenditure Plan

The present transmission and distribution infrastructure of DNHPDCL does not have adequate standby source arrangement for restoring the power supply in case of major breakdowns. Further, considering the increase in demand from HT & LT consumers, DNHPDCL would be required to undertake significant capital expenditure for system augmentation and strengthening. System augmentation would not only help DNHPDCL in handling increased load but would also ensure better quality of supply and network reliability to the consumers. Though, DNHPDCL T&D loss levels are quite low, the capital expenditure would help in further reduction of T&D losses.

DNHPDCL each year drafts an Annual Plan for the capital investment for new schemes and continuing schemes which it plans to incur in the ensuing year. Due to lower allocation of funds from the Government of India as compared with the requested funds, the actual capital expenditure has been lower than the planned capital expenditure in the previous years. Therefore, the capital expenditure for the subsequent years is higher as it includes the schemes for which the funds were not allocated in the previous capital expenditure proposal. DNHPDCL's Annual Capital Expenditure Plan in FY 13-14 for various schemes is summarized below:

Table 25: Capital Expenditure Plan for FY 13-14

(Rs. Cr.)

		(Rs. Cr.)
Sr. No	Item Description	Cost (Rs.
		Crore)
New W	orks	
1	Scheme for Integrated Solution for electrical network	10.00
2	Corporate Building	5.00
3	Scheme for Smart Grid in SMC area at Silvassa	3.00
4	Solar Generation at Various location of UT	4.00
5	Under Ground Project of Silvassa Town	3.00
6	Normal Development	5.00
7	Augmentation of existing 66/11KV Rakholi and Khadoli sub-station from 10 to 20MVA Transformer	3.00
8	Up-gradation and modernization of existing 66/11 KV Amli and Khadoli s/s	3.75
9	Providing standby power transformer 20MVA, 66/11KV sub stations of UT of DNH	2.00
10.	Establishment of 220 kV at Waghchhipa	67.54
11.	Inter connecting 220 kV transmission line from 400 kV proposed sub-station at Kala to 220 kV substation Khadoli	13.97
12.	Inter connecting 220 kV transmission line from 400 kV proposed sub-station at Kala to 220 kV substation Kharadpara	19.85
13.	Augmentation of 220 Khadoli 1X 160 kVA substation	12.96
	SPILL OVER WORK	
10	Establishment of 2 x 20MVA, 66/11KV sub-station at Pipariya	5.00
11	Establishment of 2 x 20MVA, 66/11KV sub-station at Kala	6.00
12	Establishment of 2 x 20MVA, 66/11KV sub-station at Velugam	0.25
13	Grand Total	164.32

Out of the total scheme of Rs. 164.32 Crore, Rs. 50.00 Crore is proposed for augmentation in FY 13-14 for up-gradation of the distribution network. The remaining Rs. 114.32 Crore is budgeted for development of

the intra-State transmission network of DNHPDCL (highlighted in item no. 10-13).

The capitalization of new schemes has been considered at 40% of the planned capital expenditure in the same year while the balance 60% has been capitalized in subsequent year. A summary of the capital expenditure and capitalization for FY 13-14 vis-à-vis approved by the Commission is summarized in Table below:

Table 26: Capital Expenditure & Capitalization for FY 13-14

(Rs.	Cr.

Capital Expenditure & Capitalization	FY 1	3-14
(Rs. Crore)	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Revised Estimate
Capital Expenditure	81.48	164.32
Asset Capitalization	81.48	66.86
Capital Work in Progress (closing)		142.23

#### 7 Gross Fixed Assets

The Commission in its last Tariff Order has approved the opening GFA, addition of assets and closing GFA for FY 13-14 at Rs. 320.17 Crore, Rs. 61.60 Crore and Rs. 381.77 respectively.

DNHPDCL had Opening Gross Fixed Assets (GFA) of Rs. 474.40 Crore in FY 12-13. DNHPDCL has further added assets worth Rs 27.46 Crore during FY 12-13. The closing GFA by the end of FY 12-13 stands at Rs. 501.26 Crore.

Based on the actual capitalization of the first six months and estimated addition in GFA during the remaining six months of FY 13-14, assets amounting to Rs. 66.86 Crore have been estimated to be capitalized during FY 13-14.

A summary of the Opening and Closing GFA and capitalization for FY 13-14 vis-à-vis approved by the Commission has been summarized in Table below:

Table 27: Opening and Closing GFA for FY 13-14

(Rs. Cr.)

Particulars	FY 13-14	
	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Revised Estimate
Opening Value of Assets at the beginning of the year	320.17	501.26
Additions during the year	61.60	66.86
Gross Fixed Assets at the end of year	381.77	568.12
Average Assets	350.97	534.69

#### 8 Depreciation

Depreciation is charged on the basis of straight-line method, on the Gross Fixed Assets in use at the beginning of the year and addition in assets during the financial year. The depreciation is based on the original cost of the Gross Fixed Assets.

Based on the CERC norms, DNHPDCL has applied the following depreciation rates as specified by CERC in the Tariff Regulations for FY 2009-14.

Table 28: Depreciation rate specified by CERC

Asset Category	Depreciation Rate %
Plant & Machinery	5.28%
Buildings	3.34%
Vehicles	9.50%
Furniture & Fixtures	6.33%
Computers & Others	6.33%
Land	0.00%

Depreciation for the current year and FY 13-14 is determined by applying aforesaid category-wise assets depreciation rates on the opening balance of Gross Fixed assets and average of the addition during the year projected for FY 13-14. The Table below summarizes the asset-wise depreciation vis-à-vis approved by the Commission and computed by DNHPDCL:

Table 29: Depreciation for FY 13-14

(Rs. Cr.)

Particulars	FY 13-14			
	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Revised Estimate		
Opening Value of Assets at the beginning of the year	320.17	501.26		
Additions during the year	61.60	66.86		
Gross Fixed Assets at the end of year	381.77	568.12		
Average Assets	350.97	534.69		
Depreciation Amount	17.97	26.99		

#### 9 Interest & Financial Costs

## 9.1 Interest on Long-term / Capital Loans

The normative interest on long-term/capital loans against approved by the Commission in the Tariff Order dated 25<sup>th</sup> March 2013 is shown in the Table below:

Table 30: Interest on Long-term/Capital Loans for FY 13-14

(Rs. Cr.)

Interest on Long-term Loans	FY 13-14		
Rs Crore	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Revised Estimate	
Opening Normative Loan	54.21	54.14	
Add: Normative Loan during the year	43.12	46.80	

Interest on Long-term Loans	FY 13-14		
Rs Crore	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Revised Estimate	
Less: Normative Repayment pegged at Depreciation	17.97	2.71	
Closing Normative Loan	79.36	98.24	
Average Normative Loan	66.79	76.19	
Rate of Interest (@SBAR rate)	14.45%	14.45%	
Interest on Normative Loan including bank charges	8.00	11.01	

DNHPDCL requests the Hon'ble Commission to approve the interest cost on long-term loans as projected above.

## 9.2 Interest on Working Capital Borrowings

DNHPDCL has computed the Interest on Working Capital for FY 13-14 based on normative basis as per the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009.

DNHPDCL has been computed the working capital requirement for FY 13-14 considering the following parameters on normative basis:

- a. One month Power purchase cost
- b. One month Employees cost
- c. One month Administration & general expenses
- d. One month Repair & Maintenance expenses.
- e. Sum of two month requirement for meeting Fuel cost.

The rate of interest of 14.45% has been considered for FY 13-14 on the working capital requirement as approved by the Hon'ble Commission in its last Tariff Order.

The normative interest on working capital for FY 13-14 considering the above methodology is summarized in the Table below:

Table 31: Interest on Working Capital for FY 13-14

(Rs. Cr.)

Interest on Working Capital	FY 13-14		
	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Revised Estimate	
One Month Power Purchase Cost	171.48	185.06	
One Month Employee Expenses	0.47	0.71	
One Month R&M Expenses	0.19	0.40	
One Month A&G Expenses	0.51	0.27	
Two Month Fuel Cost	0.00	0.00	
<b>Total Working Capital requirement</b>	172.65	186.45	
Security deposit		18.81	
Total Working after deduction of Security Deposit from Working Capital Requirement	154.59	167.64	
Rate of Interest on Working Capital	14.45%	14.45%	
<b>Total Interest on Working Capital</b>	22.34	24.22	

#### 10 Return on Equity

As per the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009, DNHPDCL is entitled for a Return on Equity (RoE). However, the Rate of return has not been specified in the Regulations issued by JERC.

As per the CERC revised Tariff Regulations FY 2009-14, Generation and Transmission utilities are entitled for a pre-tax Return on Equity of 15.50% with an additional return of 0.50% for projects completing before a specified timeline. DNHPDCL would like to submit that Distribution Business is perceived to be a higher risk business as compared with Generation and Transmission Business. Therefore, a higher RoE should be provided for the Distribution Business given that DNHPDCL is primarily a distribution utility with no generating assets.

However, considering that the other State Electricity Regulatory Commissions in India are allowing a RoE of 16% for distribution business, DNHPDCL has claimed RoE of 16% for FY 13-14 in its Review Petition.

Return on equity has been computed based on the actual issued and paidup capital of Rs. 40.00 Crore.

Return on equity for DNHPDCL has been computed at Rs 6.40 Crore for FY 13-14 as detailed in the Table below:

Table 32: Return on Equity for FY 13-14

(Rs. Cr.)

Return	FY 13-14		
Rs Crore	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Revised Estimate	
Opening Equity	-	40.00	
Addition in Equity	-	0.00	
Closing Equity Amount	-	40.00	
Average Equity Amount	-	40.00	
Rate of Return on Equity	-	16.00%	
Return on Equity	10.83	6.40	

#### 11 Interest on consumer security deposits

The Hon'ble Commission in its last Tariff Order has approved Rs. 1.58 Crore as interest payable on consumer security deposits. Accordingly, DNHPDCL has made a provision to pay Rs. 1.58 Crore as interest on consumer security deposits in FY 13-14.

#### 12 Provision for Bad & Doubtful Debts

DNHPDCL has considered provision for Bad and Doubtful Debts as 1% of the receivables in the revenue requirement for FY 13-14.

DNHPDCL requests the Hon'ble Commission to approve the provision for bad & doubtful debts as summarized in the Table below:

Table 33: Provision for Bad & Doubtful debts for FY 13-14

(Rs. Cr.) Provision for Bad & Doubtful Debts FY 13-14 Approved (T.O. dated Revised **Rs Crore** March 25th **Estimate** 2013) Receivables 2,275.06 Provision for Bad &Doubtful Debts as 1% 0.50% of Receivables Provision for Bad & Doubtful Debts 10.39 22.75

#### 13 Non-Tariff & Other Income

For estimating the non-tariff income for FY 13-14, an increase of 10% p.a. has been considered over the actual non-tariff income of FY 12-13. Details of the year wise non-tariff income is provided in table below:

Table 34: Non-tariff Income for FY 13-14

(Rs. Cr.)

Particulars	FY 13-14		
	Approved (T.O. dated Revised March 25 <sup>th</sup> Estimate 2013)		
Non-tariff Income	11.29	0.11	

## 14 Aggregate Revenue Requirement

The following Table summarizes DNHPDCL's Aggregate Revenue Requirement for FY 13-14 against approved by the Hon'ble Commission in the Tariff Order March 25<sup>th</sup> 2013.

Table 35: Aggregate Revenue Requirement for FY 13-14

(Rs. Cr.) **Annual Revenue Requirement** FY 13-14 Approved (T.O. dated Revised Rs. Crore March 25th **Estimate** 2013) Power Purchase Cost 2,057.71 2,220.76 O&M Expense 14.03 16.64 17.97 Depreciation 26.99 Interest Cost on Long-term Capital 9.65 Loans 11.01 Interest on working capital & 23.92 Interest on Security Deposit 24.22 Return on Equity 10.83 6.40 10.39 Provision for Bad Debt 1.58 **Total Revenue Requirement** 2,144.50 2,330.35 Less: Non-Tariff Income 11.29 0.11 Less: Revenue from Surplus Power 20.84 Sale/UI **Net Revenue Requirement** 2,133.21 2,309.40

#### 15 Revenue from Existing Tariff

Revenue from sale of power for FY 13-14 is determined based on the energy sales estimated and category wise tariff prevalent in the UT of Dadra & Nagar Haveli.

Revenue from sale of power at existing tariff is estimated to be Rs. 2,275.06 Crore in FY 13-14, as shown in the following Table. The estimated revenue for FY 13-14 is based on the four month actual revenue at the exiting tariff. The revenue for remaining eight months of FY 13-14 has been computed based on the retail tariff notified by the Commission in the Tariff Order for FY 13-14 dated 25<sup>th</sup> March 2013. The fuel purchase adjustment surcharge approved by the Hon'ble Commission is being levied to all the consumer categories except Domestic, LIG and Agriculture consumers, and has also been included in the remaining eight month revenue estimation for FY 13-14.

The Table below summarizes the revenue from sale of power at existing tariff for FY 13-14:

Table 36: Revenue from Sale of Power at Existing Tariff for FY 13-14

(Rs. Cr.)

Revenue @ Existing Tariff	EV 1	2 1/1	
Revenue & Existing Tariff	FY 13-14		
	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Revised Estimate	
Revenue from Retail Sales at Existing Tariff	2,078.93	2,275.06	

# 16 Coverage of Revenue Gap

Revenue from sale of power within DNHPDCL is determined in the previous Table.

The following Table summarizes the Revenue gap at existing tariff at Rs. 34.34 Crore for FY 13-14.

Table 37: Revenue Gap/Surplus for FY 13-14

Annual Revenue Requirement	FY 13-14		
Rs Crore	Approved (T.O. dated March 25 <sup>th</sup> 2013)	Revised Estimate	
Net Revenue requirement	2,133.21	2,309.40	
Revenue @ Existing Tariff	2,078.93	2,275.06	
Revenue (Gap)/Surplus	(54.28)	(34.34)	
Covered by			
Previous Years' surplus Carried Over	57.13	-	
Net (Gap)/Surplus	2.84	(34.34)	

# Chapter \$: Annual Revenue Requirement for FY 2014-15

DNHPDCL is submitting its ARR and Tariff petition for the determination of tariff for FY 14-15 broadly on the basis of the principles outlined in Tariff Regulations notified by JERC. DNHPDCL has considered the past trends and taken cognizance of other internal and external developments to estimate the likely performance for FY 14-15.

The following sections explain in detail the basis and forecasts of the following elements for FY 14-15:

- f. Category wise Energy Sales & Revenues at existing tariffs;
- g. T&D Losses;
- h. Energy Requirement;
- i. Determination of Aggregate Revenue Requirement (ARR) by forecasting the following costs, other income & returns:
  - i. Power Purchase Cost
  - ii. Employee Cost
  - iii. Repairs & Maintenance Cost
  - iv. Admin & General Cost
  - v. Capital Investment Plan
  - vi. Interest Cost
  - vii. Interest on Working Capital
  - viii. Depreciation
    - ix. Provision for bad & doubtful debts
    - x. Return on Equity
    - xi. Non-Tariff Income
- j. Determination of Gap between Revenue & Costs, Additional Revenue through the proposed Tariff Revision and the arrangements to cover the revenue gap; and

k. Tariff revision proposal for FY 14-15 to meet the Revenue Gap.

# 17 Energy Sales

DNHPDCL has a diverse consumer mix constituting of domestic, commercial, HT Industry, LT Industry and agriculture consumers. The number of consumers in various categories is summarized in the Table below:

**Table 38: Category wise number of Consumers** 

Consumers	FY 12-13
	Actual
Domestic	36,109
LIGH (BPL)	13,870
Commercial	7,051
Agriculture	1,099
LT Industry	1,901
HT/EHT Industry	871
Public Lighting	237
Temporary Supply (LT)	240
Total	61,378

The following summarizes category wise actual energy sales from FY 07-08 to FY 11-12 for all the consumer segments. As can be seen, DNHPDCL's overall energy sales are significantly dependent upon HT/EHT Industries to the extent of around 96%. Energy sold to various consumer categories over the past 5 years have grown at approximately 10% p.a., mainly contributed by increase in the industrial LT and HT/EHT sales.

Table 39: Category wise sales from FY 08-09 to FY 12-13

Sales (MUs)	FY 08- 09	FY 09- 10	FY 10- 11	FY 11- 12	FY 12- 13
Domestic	41.00	47.00	54.13	53.75	67.70
LIGH				2.47	3.11

Sales (MUs)	FY 08- 09	FY 09- 10	FY 10- 11	FY 11- 12	FY 12- 13
Commercial	18.00	19.00	20.69	27.81	26.87
Agriculture	3.00	3.00	2.26	3.00	3.36
LT Industry	115.00	125.00	147.23	152.19	161.66
HT/EHT Industry	2889.00	3131.00	3668.28	3990.20	4,322.68
Public Lighting	2.00	2.50	2.74	5.12	4.45
Temp. Supply	1.00	1.50	1.64	2.60	1.97
Total Sales	3069.00	3329.00	3,896.99	4,237.14	4,591.80

The DNHPDCL is of the view that the factors affecting the actual consumption of electricity are numerous and often beyond the control of the utility including factors such as Government Policy, economic climate, weather conditions and force majeure events like natural disasters, etc. DNHPDCL, therefore for projecting the category-wise consumption for FY 13-14 has considered the past growth trends in each of the consumer category including growth trend in number of consumers and connected load.

Actual energy sales in the DNH periphery in the first six months of the FY 13-14 was 2,459.88 MUs and energy billed was Rs 1,048.48 Crore.

The energy sales for FY 13-14 have been determined based on CAGR for past years and actual energy sales in various consumer categories. Since the energy sales in each category depends upon a number of factors like growth in economy, climate, Government policies, etc, normalization in sales has been undertaken in order to remove any wide fluctuations.

A five-year CAGR has been considered for estimation of sales in domestic, HT/EHT industry and public lighting categories.

For the LT industry category, large variations have been seen in the growth in the past. While a CAGR growth in the last five years in LT industry category was 4.79%. Therefore, for FY 14-15, a reasonable growth rate of 4.79% has been considered for projecting the sales LT consumers. In the

commercial category 10% growth has been considered to project the sales for FY 14-15. In case of LIG and agriculture, 10% growth has been considered while projecting for FY 13-14 energy sales.

The following Table summarizes category wise projected energy sales for FY 14-15 for DNHPDCL. As can be observed, the overall energy sales in UT of Dadra & Nagar Haveli are significantly dependent upon LT and HT/EHT industrial consumption.

The Electricity Department of Dadra & Nagar Haveli submits to the Hon'ble Commission to approve the energy sales forecasted herein.

Table 40: Projected Category wise Energy Sales for FY 14-15

Sales (MUs)	FY 13-14	Adjusted	FY 14-15
	Revised Estimated	CAGR	Projected
Domestic	88.65	8.00%	99.14
LIGH	2.94	10.00%	3.23
Commercial	33.40	10.00%	38.06
Agriculture	4.28	10.00%	4.71
LT Industry	192.24	4.79%	201.85
HT/EHT Industry	5,007.30	4.00%	5,407.89
Public Lighting	5.43	10.00%	5.97
Temp. Supply	2.08	10.00%	2.28
Total Sales	5,336.31		5,763.13

#### 18 T&D Loss Reduction

The DNHPDCL has achieved a significant reduction in transmission & distribution losses. The DNHPDCL would like to submit that the system improvement works executed every year under the plan schemes as well as increase in energy sales quantum at higher voltages has resulted in the reduction of T & D losses.

DNHPDCL has considered the T&D loss of 4.70% for FY 13-14 i.e. at the same level of FY 13-14. As the T&D losses of DNHPDCL are already low further reduction of losses in FY 14-15 has not projected. The following Table summarizes the T&D losses projected for FY 14-15

Table 41: T&D Losses projected for FY 14-15

T&D Losses	FY14-15
	Projected
T&D Losses (%)	4.70%

The DNHPDCL would like to bring in the notice of the Honorable Commission that the T&D losses of the Dadra & Nagar Haveli are one of the lowest in the country.

It's quite difficult to reduce losses by more than 0.1% p.a., due to low base loss level of 4.70% in Dadra & Nagar Haveli. It requires significant effort and resources to reduce losses even by 0.1%. Moreover, the quantum of energy handled by the system has increased over a period of time and this also marginally affects the T & D Losses in the System.

The DNHPDCL submits to the Commission to approve the T&D losses submitted herein.

#### 19 Energy Requirement of the System

Overall energy sales to various categories are estimated to grow at approximately 11.00% during FY 14-15. Thus, the overall energy requirement is projected to be 6,047.36 MU in FY 14-15.

As depicted in the Table below, energy requirement of the Dadra & Nagar Haveli for FY 14-15 has increased by approximately 11.70%.

Table 42: Energy Requirement of the System in FY 14-15

Energy Balance	FY14-15
	Projected
Sales (MU)	5,763.13
Add: T&D Losses (MU)	284.23
T&D Losses (%)	4.70%
Energy Required at Periphery (MU)	6,047.36
Energy Available (MU)	6,346.56
Surplus/ (Deficit) Power (MU)	299.20

#### 20 Energy Availability

Dadra & Nagar Haveli has no generating stations of its own and relies on the firm and infirm allocation of power from Central Generating Stations like Korba, Vindhyachal, Kahalgaon, Kawas, Sipat, Tarapur, Kakrapar etc. to meet its energy requirement.

The DNHPDCL for the purpose of estimation of the power availability during FY 12-13 and FY 13-14 has considered the following sources of power:

- NTPC Western Region Generating Stations
- NTPC Eastern Region Generating Stations
- NSPCL (NTPC-SAIL Power Company Ltd)
- Nuclear Power Corporation of India Limited
- Ratnagiri Gas Power Plant (RGPPL)
- Private Sector Power Generating Companies
- Renewable energy sources Solar and Non-Solar
- Other market sources

The Petitioner has allocation from Western as well as Eastern region from coal, gas and nuclear power stations. However, for meeting the supply-demand gap during the peak hours, the Petitioner has relied on over-drawal from the Grid (UI).

For projecting of the energy availability for FY 14-15, energy availability, firm and infirm allocation from various generating stations has been considered. Detailed methodology for projecting the power availability to the Petitioner from various sources is summarized below.

#### 20.1 Power Purchase

Dadra & Nagar Haveli has firm and infirm allocated share in Central Sector Generating Stations (CSGS) of NTPC, Nuclear Power Corporation of India Ltd (NPCIL), and NTPC Sail Power Company Ltd (NSPCL).

Additional power allocation from 38 MW from RGPPL has been considered for the purpose of FY 14-15 power availability projection.

DNHPDCL has 164 MW of firm and infirm allocations from 2X250 MW NSPCL Bhilai power plant. Entire allocation of 164 MW has been considered for projecting power availability during FY 13-14. Further the entire allocation from RGPPL of 38 MW has also been considered for projecting power availability for FY 2013-14.

DNHPDCL has considered power purchase from VSTPP-IV, Mauda power plant for the FY 14-15. Out of the total plant capacity of 500 MW, DNHPDCL will get around 21.90 MW from Mauda.

Additionally, the DNHPDCL is procuring power from EMCO Energy Limited (GMR) power plant in Maharashtra through competitive bidding guidelines of Ministry of Power through Case-I route for which the petition has already been filed before the Hon'ble JERC. DNHPDCL will receive 200 MW power from EMCO in FY 14-15. For projection of power purchase from EMCO, DNHPDCL has project 95% PLF and 9% auxiliary consumption for FY 14-15.

Power purchase quantum from the NTPC stations for FY 14-15 has been calculated based on the installed capacity of each plant and by applying the average of previous one and half years PLF to calculate the plant-wise

gross generation. For NSPCL, an average PLF of 90% has been considered in line with the actual PLF for the first six months of FY 13-14.

For gas based generating stations i.e. Kawas (KGPP) and Gandhar (GGPP) weighted average PLF of the last one and half year have been taken into account.

Auxiliary consumption of 9% and 3% has been considered for coal and gas based generating stations, respectively.

Actual external transmission losses (PGCIL losses) on power purchase for FY 12-13 was 3.56%. Therefore, for computing the power availability at the periphery, 3.56% external transmission losses have been applied on the gross power purchase for FY 14-15. The following Table lists down station wise estimated power purchase for FY 14-15.

Table 43: Power Purchase for FY 14-15

Source	Units Purchased
NTPC Stations	
KSTPS	412.76
KSTPS 3	199.41
VSTPP-I	327.78
VSTPP-II	252.71
VSTPP- III	269.87
VSTPP- IV	172.04
KGPP	416.59
GGPP	331.16
Sipat-I	559.11
Sipat-II	207.47
Mauda	97.52
KHSTPP-II	19.52
Subtotal - NTPC	3265.94
NSPCL - Bhilai	1167.66
NPCIL	
KAPS	93.27
TAPS	282.20
Subtotal	375.47
Others	

Source	Units Purchased
RGPPL	257.15
EMCO Energy Ltd. (GMR Group)	1514.60
Subtotal	1771.76
Power purchase from Other Sources	
Indian E. Exchange/Bilateral	
UI	
RPO	0.00
Subtotal	0.00
<b>Total Power Purchase</b>	6580.83

The Petitioner requests the Commission to approve the Power Purchase quantum estimated in the Table above.

#### 20.2 Power Purchase Cost

The cost of purchase from the central generating stations for FY 12-13 and FY 13-14 is estimated based on the following assumptions:

- 1. The cost of power purchase for FY 14-15 is based on actual power purchase bills, received by the DNHPDCL during the first five months of FY 13-14. Each element of the power purchase cost i.e. fixed, variable and other cost has been estimated for each generating station by considering 5 month (Apr 12 to Aug. 12) cost incurred by the DNHPDCL (copies of the power purchase cost is enclosed at Annexure II) and 6 month estimated power purchase.
- 2. Fixed cost for FY 14-15 has been projected considering a 10% escalation over the estimated fixed cost for various stations for FY 13-14. The escalation has been considered based on impact of new Tariff Regulations FY 2009-14 issued by CERC for computation of tariff for Central Generating Stations and recent increase in fix charges of the NTPC power plants by CERC.
- 3. Variable cost for each NTPC generating stations for FY 13-15 has been projected based on the actual average variable cost per unit for the first five months of FY 13-14.
- 4. The DNHPDCL has projected other charges for FY 14-15 by 10%.

- 5. DNHPDCL has provisioned Rs. 74.83 Crore for fulfilling RPO i.e. at the same level of FY 13-14.
- 6. DNHPDCL has proposed Rs. 0.04 Crore as incentive for the solar roof top users.

The Total Power Purchase cost from various sources for FY 14-15 is summarized in Table below:

Table 44: Projected Power Purchase Cost for FY 14-15 (in Rs. Crore)

Source	Units Purchased	Fixed Charges	Variable Charges	Arrears	Other Charges	Rebate	All Charges Total	Per Unit Cost
NTPC Stations								
KSTPS	412.76	27.46	40.56		7.11		75.13	1.82
KSTPS 3	199.41	25.70	20.12		4.80		50.62	2.54
VSTPP-I	327.78	21.68	41.63		5.44		68.75	2.10
VSTPP-II	252.71	18.69	30.22		5.42		54.33	2.15
VSTPP- III	269.87	33.54	32.26		2.09		67.89	2.52
VSTPP- IV	172.04	24.31	20.91		0.51		45.73	2.66
KGPP	416.59	54.62	103.36		3.80		161.78	3.88
GGPP	331.16	45.65	85.68		0.00		131.33	3.97
Sipat-I	559.11	79.64	90.91		35.71		206.27	3.69
Sipat-II	207.47	33.67	34.94		3.57		72.18	3.48
Mauda	97.52	17.78	24.38		0.00		42.16	4.32
KHSTPP-II	19.52	2.43	4.65		0.37		7.44	3.81
Subtotal - NTPC	3265.94	385.18	529.63	0.00	68.81		983.62	3.01
NSPCL - Bhilai	1167.66	203.33	282.01		3.04		488.38	4.18
NPCIL								
KAPS	93.27	0.00	21.55		0.02		21.56	2.31
TAPS	282.20	0.00	78.73		0.99		79.72	2.82
Subtotal	375.47	0.00	100.28	0.00	1.00		101.28	2.70
Others								
RGPPL	257.15	31.17	68.79		0.93		100.89	3.92
Tata Power - Haldia								
EMCO Energy Ltd. (GMR Group)	1514.60	266.58	267.14		2.00		535.72	3.54
Subtotal	1771.76	297.75	335.93	0.00	2.92	0.00	636.61	3.59
Power purchase from Other Sources								
Indian E. Exchange/Bilateral							0.00	0.00
UI							0.00	0.00
RPO	0.00	0.00	45.00	0.00	0.00	0.00	45.00	0.00
Subtotal	0.00	0.00	45.00	0.00	0.00	0.00	45.00	
Total	6580.83	886.26	1292.85	0.00	75.78	0.00	2254.89	3.43

## 20.3 Transmission and Other Charges

Transmission charges payable to PGCIL are based on the total capacity allocation in the transmission network. DNHPDCL has a mix of firm and infirm capacity allocation from various Central Generating Stations which is revised by the Ministry of Power at regular intervals. Therefore, considering the changing capacity allocation, DNHPDCL has estimated the transmission charges.

For projecting the PGCIL transmission charges for FY 14-15, no escalation in the transmission charges have estimated from FY 13-14.

Table 45: Total Power Purchase Cost for FY 14-15 (Rs. Crore)

Particulars	FY 14-15 (Projected)			
	Energy available at DNH Periphery (MUs)	Total Cost (Rs. Cr)	Per Unit Cost (Rs/kWh)	
Gross Power Purchase Cost	6346.56	2254.89	4.05	
PGCIL charges		147.77		
POSOCO		1.39		
Reactive charges		2.20		
MSTCL		3.50		
Total Power Purchase Cost (including Transmission Cost)	6346.56	2409.74	3.66	

#### 21 Operation & Maintenance Costs

Operation and Maintenance expenses comprise of the following heads:

 Employees Expenses which includes the salaries, dearness allowances, dearness pay, other allowances and retirement benefits paid to the staff;

- Repair and Maintenance (R&M) Expenses, which include all expenditure incurred on the maintenance and upkeep of transmission and distribution assets; and
- Administrative and General Expenses, which include all expenditure incurred in operating a business such as telephone charges, regulatory and consultancy fees such as energy auditing and chartered accountant fees, conveyance and travel expenses, water charges etc.

Summary of the past four year operation and maintenance expense is summarized in table below:

 Year
 O&M Expense

 Actual

 FY 09-10
 6.34

 FY 10-11
 6.56

 FY 11-12
 11.83

 FY 12-13
 15.27

Table 46: Operation & Maintenance Expense (Rs. Crore)

The total O&M expense for FY 12-13 was Rs. 15.27 Crore as compared with FY 11-12 total O&M expense of Rs. 11.83 Crore. The increase in operation and maintenance cost in FY 12-13 was primarily due to increase in Employee and R&M expenses.

The methodology adopted by DNHPDCL for projecting the values of each component of the O&M expense for FY 14-15 has been explained in following section.

#### 21.1 Employee Expense

The Employee expense estimated by the Petitioner comprise of all costs related to employees like basic salary, dearness allowances, medical cost, leave travel allowances, honorarium, etc. But the Petitioner does not maintain cost related to leave salary contribution and pension of the

employee in the employee cost. Therefore, the Petitioner will claim these expenses relating to the employee cost at an appropriate time when the respective cost items become payable.

Based on the various expense head related to employee booked during five months of FY 13-14, DNHPDCL has estimated the total employee cost for full year of FY 14-15 will be at Rs. 11.84 Crore. Employee expenses for FY 14-15 is estimated based on the variation in the rate of WPI Index per annum published by the Office of Economic Adviser, Government of India.

For projecting the employee cost for FY 14-15, the Petitioner has considered an 8.94% escalation over the estimated employee cost for FY 13-14. The employee cost for FY 14-15 is summarized in table below:

Table 47: Project Employee Expense for FY 14-15 (Rs. Crore)

Particular	FY 14-15
	Projected
Employee Expenses	11.84

DNHPDCL would like to pray to the Hon'ble Commission that salaries/employee cost increase should be considered as uncontrollable factor specially factors like DA/Basic hike through Government. Therefore, DNHPDCL requests the Hon'ble Commission to approve the employee costs as projected in the foregoing table by the Petitioner.

#### 21.2 Repairs & Maintenance Expense

Repairs and maintenance expense comprise of expenses incurred by the Petitioner with regard to maintenance and upkeep of the transmission and distribution system. Adequate R&M activities help in reduction of transmission and distribution losses and breakdowns in the system.

The actual R&M expense for FY 12-13 for DNHPDCL was Rs. 4.45 Crore. The revised estimate of R&M expense for FY 13-14 has been estimated at Rs. 4.85 Crore.

Based on WPI index, the R&M expense for FY14-15 has been estimated at Rs. 5.28 Crore. The escalation of cost from the previous year expenses is due to outsourcing of additional EHV sub-stations to third party agencies as DNHPDCL is facing severe shortages of staff for proper O&M of the substations.

The R&M cost for FY 14-15 is summarized in the Table below:

Table 48: Projected Repairs & Maintenance Expense for FY 14-15 (Rs. Crore)

Particular	FY 13-14
	Projected
R&M Expenses	5.28

DNHPDCL requests the Commission to approve the R&M expense without any disallowances as the same is necessary for proper maintenance and strengthening of the system and quality of supply in the region in order to ensure consumer satisfaction.

#### 21.3 Administration & General Expense

Administrative and General (A&G) expense comprise of various sub-heads including the following:

- Telephone, postage & telegrams charges;
- Travel and conveyance expenses;
- Consultancy and regulatory fees; and
- Consumer indexing fee

The actual A&G expense for FY 12-13 was Rs. 3.00 Crore. Further, DNHPDCL has estimated the A&G expense of Rs. 3.27 Crore for FY 13-14.

For FY 14-15 the A&G expenses has been projected at Rs. 3.56 Crore in consideration of the above expenses.

DNHPDCL, therefore, requests the Hon'ble Commission to approve the A&G expenses projected for the FY 2014-15.

## 21.4 Total Operation and Maintenance Expense

Based on the employee, R&M and A&G expenses projected above, the total O&M expenditure for FY 14-15 is summarized in table below. The Hon'ble Commission is requested to approve the total O&M expense as projected by DNHPDCL.

Table 49: Total O&M Expense for FY 14-15 (Rs. Crore)

O&M Expenditure	FY14-14
	Projected
Employee Expenses	12.24
R&M Expenses	5.28
A&G Expenses	3.56
Total O&M Expenses	21.08

#### 22 Capital Expenditure Plan

The present transmission and distribution infrastructure of DNHPDCL does not have adequate standby source arrangement for restoring the power supply in case of major breakdowns. Further, considering the increase in demand from HT & LT consumers, DNHPDCL would be required to undertake significant capital expenditure for system augmentation and strengthening. System augmentation would not only help DNHPDCL in handling increased load but would also ensure better quality of supply and network reliability to the consumers. Though, DNHPDCL T&D loss levels are quite low, the capital expenditure would help in further reduction of T&D losses.

DNHPDCL each year drafts an Annual Plan for the capital investment for new schemes and continuing schemes which it plans to incur in the ensuing year.

For FY 14-15, the DNHPDCL has proposed a capital expenditure of Rs. 75.30 Crore.

Table 50: Capital Expenditure Plan for FY 14-15 (Rs. Crore)

Sr. No.	Name of Work	Expenditure proposed to be incurred
1	2	3
1	Construction of Corporate office building at Silvassa	10.00
2	Construction of store building at Silvassa	1.00
3	Normal Development Scheme	5.00
4	Upgradation and modernisation of Masat S/s	0.50
5	Various Roof-top Solar projects in UT of DNH	2.50
6	Integrated Scheme for implementation of IT in power sector in DNH	15.00
7	3 MW Solar Project at Velugam	28.00
8	Establishment of 66/11 KV Piparia s/s	1.00
9	Upgradation scheme for Silvassa town/ SMC area	3.00
10	Upgradation and modernisation of Amli s/s	2.00
11	Augmentation of 20 MVA transformer at Waghdhara s/s	1.80
12	Upgradation and modernisation of Khadoli s/s	2.00
13	Establishment of 66/11 KV Kala s/s	1.00
14	Augmentation of Velugam s/s by adding 20 MVA transformer	2.00
15	Upgradation and modernisation of Dadra s/s	0.50
	Total	75.30

The capitalization of new schemes has been considered at 40% of the planned capital expenditure in the same year while the balance 60% has been capitalized in subsequent year. A summary of the capital expenditure and capitalization for FY 14-15 is summarized in Table below:

Table 51: Capital Expenditure & Capitalization for FY 14-15 (Rs. Crore)

Capital Expenditure & Capitalization	FY 14-15
(Rs. Crore)	Projected
Capital Expenditure	73.50
Asset Capitalization	114.74
Capital Work in Progress (closing)	100.99

#### 23 Gross Fixed Assets

The Opening Gross Fixed Assets (GFA) for FY 14-15 has been computed at Rs. 381.81 Crore. DNHPDCL has further proposed an addition of Rs. 108.84 Crore during FY 14-15.

A summary of the Opening and Closing GFA and capitalization has been summarized in table below:

Table 52: Opening and Closing GFA in FY 14-15 (in Rs. Crore)

Particulars	Opening GFA	Additions during the Year	Closing GFA
FY 2012-13 (Actual)	474.40	27.46	501.26
FY 2013-14 (Revised Estimate)	501.26	66.86	568.12
FY 2014-15 (Projected)	568.12	114.74	682.86

#### 24 Depreciation

Depreciation is charged on the basis of straight-line method, on the Gross Fixed Assets in use at the beginning of the year and addition in assets during the financial year. The depreciation is based on the original cost of the Gross Fixed Assets.

Depreciation for the for FY 14-15 is determined by applying category-wise assets depreciation rates notified by CERC on the opening balance of Gross Fixed assets and average of the addition during the year projected for FY 14-15. The Table below summarizes the asset-wise depreciation considered computed by DNHPDCL:

Table 53: Depreciation (in Rs. Crore)

Particulars	FY 14-15
Rs. Crore	Projected
Opening GFA	568.12
Additions	114.74
Closing GFA	682.86
Average GFA	625.49
Depreciation Amount	31.74
Average Depreciation Rate	4.65%

#### 25 Interest & Financial Costs

#### 25.1 Interest on Long-term / Capital Loans

Assets capitalized during FY 14-15 have been considered based on normative debt-equity ratio of 70:30 as per the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009.

Interest rate of 14.45% has been considered for computation of interest cost for long-term loans which is similar to the prevailing SBI Prime Lending Rate. Details of the loan amounts and interest cost computed for FY 14-15 is summarized in Table below:

**Table 54: Total Interest on Long-term Loans** 

Interest on Long-term Loans	FY 14-15
Rs Crore	Projected
Opening Loan	98.24

Interest on Long-term Loans	FY 14-15	
Rs Crore	Projected	
Addition in Loan (70% of Asset Capitalization)	80.32	
Repayment of Loan (10% of Opening Balance)	4.91	
Closing Loan Amount	173.64	
Average Loan	135.94	
Interest Rate on Loan	14.45%	
Total Interest Cost on Long-term Loans	19.64	

Therefore, DNHPDCL requests the Hon'ble Commission to approve the interest cost on long-term loans as projected above.

## 25.2 Interest on Working Capital Borrowings

DNHPDCL has computed the Interest on Working Capital for FY 14-15 based on normative basis as per the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009.

The working capital requirement for FY 14-15 has been computed considering the following parameters:

- a. One month Power purchase cost
- b. One month Employees cost
- c. One month Administration & general expenses
- d. One month Repair & Maintenance expenses.
- e. Sum of two month requirement for meeting Fuel cost.

A rate of interest of 14.45% has been considered for FY 14-15 on the working capital requirement, being the SBI Prime Lending Rate as approved by the Commission in the last Tariff Order for FY 13-14.

The normative interest on working capital for FY 14-15 considering the above methodology is summarized in the Table below:

Table 55: Interest on Working Capital for FY 14-15

Interest on Working Capital	FY 14-15	
Rs Crore	Projected	
One Month Power Purchase Cost	200.81	
One Month Employee Cost	1.02	
One Month R&M Cost	0.44	
One Month A&G Cost	0.30	
Two Month Fuel Cost	0.00	
Total Working Capital requirement	202.57	
Less: Security Deposit	20.69	
Total Working Capital after deduction of Security Deposit from Working Capital Requirement	181.88	
Rate of Interest on Working Capital	14.45%	
Total Interest on Working Capital	26.28	

#### 26 Return on Equity

As per the JERC (Terms and Conditions for Determination of Tariff) Regulations, 2009, DNHPDCL is entitled for a Return on Equity (RoE). However, the Rate of return has not been specified in the Regulations issued by JERC.

As per the CERC revised Tariff Regulations FY 2009-14, Generation and Transmission utilities are entitled for a pre-tax Return on Equity of 15.50% with an additional return of 0.50% for projects completing before a specified timeline. DNHPDCL would like to submit that Distribution Business is perceived to be a higher risk business as compared with Generation and Transmission Business. Therefore, a higher RoE should be provided for the Distribution Business given that DNHPDCL is primarily a distribution utility with no generating assets.

However, considering that the other State Electricity Regulatory Commissions in India are allowing a RoE of 16% for distribution business, DNHPDCL has claimed RoE of 16% for FY 14-15 in its Review Petition.

Return on equity has been computed based on the actual issued and paidup capital of Rs. 40.00 Crore.

Return on equity for DNHPDCL has been computed at Rs 6.40 Crore for FY 14-15 as detailed in the Table below:

Table 56: Return on Equity for FY 14-15

Return	FY14-15
Rs Crore	Projected
Opening Equity	40.00
Addition in Equity	0.00
Closing Equity Amount	40.00
Average Equity Amount	40.00
Rate of Return on Equity	16.00%
Return on Equity	6.40

#### 27 Provision for Bad & Doubtful Debts

DNHPDCL has considered provision for Bad and Doubtful Debts as 1% of the receivables in the revenue requirement for FY 14-15.

DNHPDCL requests the Hon'ble Commission to approve the provision for bad & doubtful debts as summarized in the Table below:

Table 57: Provision for Bad & Doubtful debts for FY 14-15

Provision for Bad & Doubtful Debts	FY 14-15	
Rs Crore	Projected	
Receivables	2,456.58	
Provision for Bad &Doubtful Debts of Receivables	1%	
Provision for Bad & Doubtful Debts	24.57	

## 28 Interest on consumer security deposits

DNHPDCL has made a provision to pay Rs. 1.74 Crore as interest on consumer security deposits in FY 14-15.

#### 29 Non-Tariff & Other Income

Non-tariff income includes meter rent/service line rentals, recovery for theft of power/malpractices, miscellaneous charges from consumers. Other income includes Interest on Staff loans & advances, Delayed payment charges from consumers, Interest on advances to suppliers/contractors, and Miscellaneous receipts.

For estimating the non-tariff income for FY 14-15, an increase of 10% p.a. has been considered over the actual non-tariff income of FY 13-14 (revised estimate).

Details of the year wise non-tariff income is provided in the Table below:

Table 58: Non-tariff Income for FY 14-15

Particulars	FY 14-15
Rs Crore	Projected
Non-tariff Income	0.12

# 30 Aggregate Revenue Requirement

The following Table summarizes DNHPDCL's Aggregate Revenue Requirement for FY 14-15.

Aggregate Revenue Requirement for FY 14-15 is estimated to be Rs 2,456.31 Crore.

Table 59: Aggregate Revenue Requirement for FY 14-15

Annual Revenue Requirement	FY14-15
	Projected
Power Purchase Cost	2,409.74
O&M Expense	21.08
Depreciation	31.74
Interest Cost on Long-term Capital Loans	19.64
Interest on Working Capital Loans	26.28
Return on Equity	6.40
Interest on Security Deposit	1.74
Provision for Bad Debt	24.57
Gross Annual Revenue Requirement	2,541.18
Less:	
Non-Tariff Income	0.12
Net Annual Revenue Requirement	2,541.06

## 31 Revenue at Existing Tariff

Revenue from sale of power for FY 14-15 is determined based on the energy estimated sales and category wise tariff prevalent in the UT of Dadra & Nagar Haveli.

Revenue from sale of power at existing tariff is estimated to be Rs. 2,502.17 Crore for FY 14-15 as shown in the following Table. The estimated revenue for FY 14-15 is based on the exiting tariff structure. The fuel purchase adjustment surcharge approved by the Hon'ble Commission is being levied to all the consumer categories except Domestic, LIG and Agriculture consumers, and has also been included in the revenue estimation for FY 14-15.

During FY 14-15, DNHPDCL has estimated a surplus power of 299.20 MU based on the energy available and sale to various consumer categories. This surplus power is primarily available to DNHPDCL due to allocation of 200 MW from EMCO Energy. DNHPDCL has sold approximately 26.58 MU during the first six months of FY 13-14 at an average rate of Rs. 1.30 per

unit. Revenue from sale of balance surplus units during FY 14-15 has been computed at the same rate.

The Table below summarizes the revenue from sale of power at existing tariff for FY 14-15.

Table 60: Revenue from Sale of Power at Existing Tariff in FY 14-15 (Rs. Crore)

Revenue @ Existing Tariff	FY 14-15
(Rs Crore)	Projected
Domestic	21.40
LIGH	0.23
Commercial	13.91
Agriculture	0.49
LT Industry	70.06
HT/EHT Industry	2347.97
Public Lighting	1.39
Temp. Supply	1.14
Total revenue from existing tariff	2,456.58
Revenue from Surplus Power Sale	38.90
Total Revenue	2,495.48

## 32 Coverage of Revenue Gap

The following Table summarizes the Revenue Gap at existing tariff at Rs. 56.09 Crore for FY 14-15.

As depicted in the following Table, total Revenue Gap for the FY 14-15 is proposed to be covered through the gap of Rs. 56.09 Crore for FY 14-15 and additional Revenue from proposed tariff revision of Rs. 56.09 Crore (Revenue at proposed tariff is covered in detail in Formats enclosed with this petition).

Table 61: Revenue Gap for FY 14-15

Annual Revenue Requirement	FY 14-15		
Rs Crore	Projected		
Total ARR	2,541.06		
Revenue @ Existing Tariff	2,456.58		
Revenue from Surplus Power Sale	38.90		
Total Revenue	2,495.48		
Revenue (Gap)/Surplus for FY 14-15	(45.59)		
Previous year's gap	(52.36)		
Covered by			
Additional Revenue @ Proposed Tariff	97.95		
Net (Gap)/Surplus	0.00		

# 33 Average Cost of Supply

The following Table summarizes Average Cost of supply and total average realization at the existing tariff approved by the Hon'ble Commission.

Table 62: Average Cost of Supply & Revenue Realization

Average Realization & Cost of Supply	FY 14-15	
(Rs/Unit)	Existing Tariff	
Average Cost of Supply of DNHPDCL	4.19	
Average Realization *	4.12	
Revenue Gap at Existing Tariff	(0.08)	
Additional revenue at Proposed Tariff depicted in Table 44	0.08	

# 34 Tariff Proposal for FY 14-15

DNHPDCL submits to the Commission that the sales to LT industrial and HT/EHT category form approximately 98% of the total sales within the UT of Dadra & Nagar Haveli. However, the per unit revenue realization from this category is below the average cost of supply leading to revenue losses for DNHPDCL. Further, the average cost of supply has also increased over the past years due to increase in power purchase cost. Therefore, the current two-part Tariff structure is inadequate to compensate for the loss of revenue.

Table below summarizes the existing and proposed tariff structure for various consumer categories.

Table 63: Proposed Tariff Structure for FY 14-15

Tariff Structure Existing				Proposed FY 14-15	
	Energy Charges (Rs/kWh)	Fixed Charges	for FPPCA formula for FY 2013-14	Energy Charges (Rs/kWh)	Fixed Charges
LT-D/Domestic					
Ist 50 Units	1.10		0.28	1.10	
51 to 200 Units	1.70		0.45	1.70	
201 to 400 Units	2.20		0.57	2.20	
Beyond 401 Units	2.50		0.64	2.50	
LIGH		Rs. 5 per connection per month	N.A		Rs. 5 per connection per month
LT-C/Commercial					
1st 100 Units	2.25		0.57	2.25	Rs. 45 per connection per month
Beyond 100 Units	3.00		0.76	3.00	Rs. 60 per connection per month
LT- Ag/ Agriculture					
Upto 10 HP	0.65		0.00	0.65	
10 HP to 99 HP	0.95		0.00	0.95	
LTP Motive Power					
Upto 20 HP	3.00	0.00	0.77	3.00	Rs. 20/HP
Above 20 HP	3.00	Rs. 20/HP	0.81	3.00	Rs. 50/HP
LT-PL/Public Lighting					

Tariff Structure	Existing FY 13-14		K Factor	Proposed FY 14-15	
	Energy Charges (Rs/kWh)	Fixed Charges	for FPPCA formula for FY 2013-14	Energy Charges (Rs/kWh)	Fixed Charges
Public Lighting	1.60		0.42	3.00	
HT					
HTA: Industrial & Motive power- 11KV or 66KV having CMD above 100 KVA					
50000 units	3.70	Rs. 75/KVA	0.98	3.70	Rs. 150 KVA
50000 to 5 lakh units	3.80	Rs. 75/KVA	1.00	3.80	Rs. 150 KVA
Beyond 5 lakh units	3.85	Rs. 75/KVA	1.02	3.85	Rs. 150 KVA
HTB: Ferro Metallurgical/ Steel Melting/ Steel Rolling/ Power Intensive					
First 300 Units per KVA	2.70	Rs. 500/KVA	0.94	2.70	Rs. 750/KVA
Next 200 units per KVA	3.40	Rs. 500/KVA	1.11	3.40	Rs. 750/KVA
Above 500 units per KVA	3.70	Rs. 500/KVA	1.19	3.70	Rs. 750/KVA

# **Chapter 4: New Initiatives**

## A) Introduction of Pre-paid metering

The DNHPDCL proposes to introduce pre-paid metering in the domestic and commercial categories. Pre-paid metering will help the department in terms of revenue collection, saving of energy and saving of man power. The pre-paid metering will be optional for the domestic and commercial consumers.

- **1. Meter Rent for Pre-Paid Meters:** Monthly charges for hiring of the meter and indicator where they are the property of Electricity Department, payable by the consumers shall be as follows:
  - (i) Pre-Paid energy meter for AC single phase Temporary supply:
    - Rs. 20 per meter per month
  - (ii) Pre-Paid energy meter for AC three phase Temporary supply:
    - Rs. 40 per meter per month
- **2. Tariff for Pre-Paid Meters:** The department proposes to charge the following tariff for the domestic and commercial consumer category, using the pre-paid energy meters:

#### **Domestic Supply:**

Description	Slabs (KWh per month)	Energy Charge (Rs./kWh)
Prepaid meter consumers	Entire consumption	1.73

#### **Commercial Supply:**

Description	Slabs (KWh per month)	Energy Charge (Rs./kWh)	
Prepaid meter	Entire	2.95	

Description	Slabs (KWh per month)	Energy Charge (Rs./kWh)
consumers	consumption	

## B) Promotion of Solar energy

- 1. The department has also floated tender for the installation of grid interactive Solar Photovoltaic (SPV) power plants in Dadra and Nagar Haveli. The department proposes to install a 3MW capacity solar plant in Dadra and Nagar Haveli.
- 2. In order to encourage the use of solar power, the department proposes to purchase excess power from all the consumers having grid interactive roof top solar panels at the rate of Rs. 3.50 per unit.

## **Chapter 5: Compliance of Directives**

The Hon'ble Commission vide Tariff Order dated March 25<sup>th</sup> 2013 had issued a set of directives to be followed by DNHPDCL to comply with the JERC (Terms and Conditions of Determination of Tariff) Regulations, 2009.

In compliance with the directives issued by the Hon'ble Commission, DNHPDCL has initiated a number of steps during FY 13-14. The purpose of this Chapter is to appraise the Hon'ble Commission on progress made by DNHPDCL on compliance of the Commission's directives since the issuance of the last Tariff Order.

## 1. Directive 1: Segregation of T&D losses and loss reduction trajectory:

The Petitioner is directed to submit the status report and progress of the said facility by September 2013.

### Compliance:

The consultant appointed for the task has been submitted their draft report. The said report is reviewing by DHHPDCL. Upon finalization of the report, DNHPDCL will submit the report before the Hon'ble Commission.

#### 2. Directive 2: Load Forecasting study:

The Petitioner is directed to submit the status report and progress in this regard by September 2013.

#### Compliance:

M/s Panacean Energy Solutions Pvt. Ltd., Mumbai has been appointed to undertake loss reduction study for short term (2-5 years), medium term (7-10 years) and long term (15-25 years) in order to understand the future load requirements of DNHPDCL. The department will submit the load forecasting before the Hon'ble Commission by December 2013.

# 3. Directive 3: Long Term PPA, overdrawl/underdrawl under UI mechanism and Banking of Power

The Commission directs the Petitioner to be prudent while purchasing power through the UI route. All efforts should be made by the licensee to meet its RPO obligations and maintain compliance with the RPO regulations of the Commission.

## Compliance:

DNHPDCL has made substantial efforts to bridge the gap between peak demand and supply in its territory. DNHPDCL has already signed PPA with Emco Energy (GMR) to supply 200MW of power in the next seven years. The power supply from the said plant has been started from April 2013. Further, DNHPDCL is also getting power from NTPC Mauda Plant from September 2013.

Further, DNHPDCL is fully committed to comply with the RPO guidelines issued by the Hon'ble Commission. In this regard DNHPDCL has already submitted a compliance report before the Commission vide letter no. 1-1(536)/ELE/2011/2280 dated September 27<sup>th</sup> 2013.

## 4. Directive 4: Online Bill Payment:

The progress of the facility of 'online bill payments' as per the earlier directions should be submitted to the Commission by July 31st 2013.

#### Compliance:

The on-line bill payment facility has been started by DNHPDCL with effect of June 2013 for the all the consumer categories. DNHPDCL consumers can now pay their bills on-line. Further DNHPDCL also maintaining ATP machines and bill payment desks at the division/sub-division/corporate offices. The payment facility is also available in the post offices.

#### 5. Directive 5: Renewable Purchase obligation:

The Petitioner should ensure that its RPO obligations as per the JERC Procurement of Renewable Energy Regulations 2010 are met for FY 2012-13 and FY 2013-14. The RPO obligations in respect of both solar and non-solar power purchase should be ensured separately by the licensee.

#### Compliance:

DNHPDCL is fully committed to comply with the RPO guidelines issued by the Hon'ble Commission. In this regard DNHPDCL has already submitted a compliance report before the Commission vide letter no. 1-1(536)/ELE/2011/2280 dated September 27<sup>th</sup> 2013. In the said compliance report DNHPDCL has submitted its plan to meet the RPO. Key extracts of the compliance report is presented below:

- Installation of 3 MW grid connected Solar PV plant at Velugam, Silvassa. Bids are invited from the parties (Tender id 124850) and the contract is expected to be awarded by November 2013. The Solar Plant is expected to generate 4.8 MU on annual basis. DNHPDCL also plans to install more grid connected Solar PV project of MW scale as well as solar rooftop in its territory.
- Purchase of 5 MW solar power from JNNSM. DNHPDCL has already shown its willingness to procure 5 MW solar power from JNNSM vide letter no. 1-1 (38)./PDCL-AE (Comml.)/2013/2003 dated 7<sup>th</sup> September 2013.

Purchase of Renewable Energy Certificate from power exchange. DNHPDCL has already buying approximately 10,000 (ten thousand) RECs on monthly trading session at power exchange.

#### 6. Directive 6: Rural Electrification:

## Compliance:

DNHPDCL has already complied with this directive.

#### 7. Directive 7: Capital expenditure:

The timeline stipulated for the submission as per the direction should be adhered to and quarterly submissions should be made for the remaining quarters of FY 2012-13 and going forward for the coming years.

### Compliance:

The actual capital expenditure for FY 12-13 is submitted in the truing-up chapter. Proposed capital expenditure for FY 13-14 and FY 14-15 are also furnished in this petition.

#### 8. Directive 8:Enforcement Cell:

The petitioner is directed to status report of the progress made in this direction on quarterly basis. The report of the quarter ending March 31'2013 should be sent by April 15'2013.

### Compliance:

It is submitted that the DNHPDCL has a separate division for Lab & Vigilance to monitor and conduct vigilance check on all consumer categories. The quarterly progress report will be submitted to the Hon'ble Commission shortly.

# 9. Directive 9: Data on the consumption and load profile of Advertisement Hoardings, Sign boards, Signage's etc.

The Commission understands that as per the existing tariff schedule there is no separate category for the users of advertisement, hoardings, signboards, signage's etc. The Petitioner was directed to separately capture the data regarding consumption and the load profile of these users so that differential tariff for this category could be set.

As the directive has not been adhered to, the Commission re-directs the Petitioner to separately capture the data regarding consumption and the per load profile of the users of advertisement hoardings, signboards, signage's etc. in its licensee area and submit the same to the Commission by July 31' 2013, failing which the Commission would be forced to take serious action.

## Compliance:

DNHPDCL would like to submit that it is process of segregating the data related to the consumption and load profile of the users of advertisement, hoardings, signboards, signage's etc. Previously, the said data was not maintained by the department as there was no separate consumer category for this type of users. However, in compliance to the directive of the Hon'ble Commission, DNHPDCL has initiated the process to segregate the data for the same.

## 10. Directive 10:Assessment of the open access consumers

The process of operationalization of open access in the licensee's area should be expedited and the Commission should be updated about the progress of the same by September 2013.

### Compliance:

The task of preparing the road map for operationalization of open access consumers has been initiated. The said road map will be submitted to the Hon'ble Commission shortly.

#### 11. Directive 12: Standard of Performance

Timely submission as per the requirements laid down in the JERC (Standards of Performance) Regulation, 2009 should be duly adhered to. The process of developing the software for availing the data of each complaint centre and office details should be expedited so that data collection can happen in a timely manner.

### Compliance:

DNHPDCL is complying with this directive.

#### 12. Directive 14 :Forecasting Power requirements

The status and the progress of the load forecasting study should be submitted to the Commission by September 2013.

### **Compliance:**

M/s Panacean Energy Solutions Pvt. Ltd., Mumbai has been appointed for this task and will submit the report soon.

#### 13. Directive 16: Continuous & Non-Continuous Industries

The petitioner is directed to submit the status report of the progress made in this direction by September 30′ 2013.

#### **Compliance:**

DNHPDCL is preparing the status report for the aforementioned submit and submit this to the commission soon.

#### 14. Directive 17: Assets verification

Ongoing through the submission of the Petitioner, it was observed that the fixed asset register submitted did not have any mention of the actual physical verification of the assets by the Chartered Accountant. The same was pointed out to the Petitioner during the technical validation session dated January 17'2013, but the petitioner did not responded to the same. As per para 5.10, the petitioner to indicate the value list of assets being used for rendering the services or alternatively indicate as to what %age of Gross block be considered on ad hoc basis & the basis thereof

### Compliance:

DNHPDCL would like to highlight that physical verification has been done while preparing the asset register for FY 2012-13.

### 15. Directive 18: Roadmap for reduction in cross-subsidy

The petitioner is directed to file the roadmap latest by July 31'2013.

## Compliance:

DNHPDCL is process to prepare the road map for reduction in crosssubsidy.

# 16. Directive 19: Overdrawls/Underdrawls beyond the frequency band specified by CERC

The Commission would like to reiterate that overdrawals/underdrawals beyond the frequency band specified by CERC attract penal charges and would not be allowed as a pass-through in the ARR. This puts undue burden on the grid and should be avoided by the licensee through proper load management and appropriate load forecasting.

#### Compliance:

DNHPDL is mostly complying with this directive.

#### **Tariff Schedule**

#### **General Terms and Conditions:**

- 1. The tariffs are exclusive of electricity duty, taxes and other charges levied by the Government or other competent authority from time to time which are payable by the consumers in addition to the charges levied as per the tariffs.
- 2. Unless otherwise agreed to, these tariffs for power supply are applicable for supply at one point only.
- 3. Supply to consumers having contracted load between 100 kVA to 2500 kVA (including licensee common feeders and express feeders/dedicated feeders) shall generally be at 11 kV and for more than 2500 kVA up to 25000 kVA at 66 kV. The consumer who requires load more than 25000 kVA load, the supply voltage shall be at 220 kV level. However, wherever the existing feeders are required to be augmented, the DNHPDCL shall carry out such augmentation by 30th September, 2013. This satisfies the grievances of 97% of the total consumers having connected load above 1500 kVA.
- 4. If energy supplied for a specific purpose under a particular tariff is used for a different purpose, not contemplated in the contract for supply and / or for which higher tariff is applicable, it will be deemed as unauthorized use of electricity and shall be dealt with for assessment under the provisions of section 126 of the Electricity Act, 2003 & Supply Code Regulation notified by JERC.

#### Provided that

a) If a portion of the domestic premises limited to only one room is used for running small household business having connection under domestic category, such connection shall be billed under domestic category provided that the total monthly consumption of the consumer (including consumption for above mentioned small household business) does not exceed 150 kWh.

- b) If either more than one room or only one room having monthly consumption exceeding 150 kWh for consecutive three months is detected in the domestic premises being used for mixed purposes having domestic connection, such connection shall further be billed under commercial category until a separate connection of appropriate tariff is taken for that portion used for non-domestic purpose.
- 5. In case a buyer is purchasing an existing premise from a seller:
  - (i) It will be the duty of the seller and of the purchaser to find out the outstanding electricity dues up to the date of sale, and further that both seller and purchaser will be either/or jointly and severely liable to pay the outstanding electricity dues/obtain No dues certificate from the department
  - (ii) Before sale of a premise is made, the outstanding dues will be cleared out, in the alternative the deed to agreement/sale will specifically mention the outstanding dues and the method of its payment. "Outstanding dues" means all dues pending on a premise including late payment surcharge.
  - (iii) In case the no-dues certificate is not obtained by the old owner, new owner before purchase of property may approach the licensee for no-dues certificate, by giving reference of the connection in said premises. The licensee shall either intimate the pending dues, if any, on the premises or issue no dues certificate within 30 working days from the date of application.
  - (iv) The outstanding dues will be first charge on the assets of the company, and the licensee shall ensure that this is entered in an agreement with new applicant.
  - (v) The recovery proceedings against the defaulting consumer, and where the defaulting consumer is a company, from the Directors of the company, shall be ensured. Where a financial institution has auctioned the property without consideration to licensees charge on assets, claims may be lodge with the concerned financial institution with diligent pursuance.
  - (vi) In case the electricity connection to the said premises was given with the consent of house owner, such person shall ensure the

- payment of all arrears/dues of electricity by the tenant before the tenant vacates the premises.
- (vii) However the above conditions shall not apply if inconsistent with the provision of any higher court order or an order as a consequence to it.
- (viii) The application shall be processed by licensee on clearing of dues.
- 6. If connected load of a domestic category is found to be at variance from the sanctioned/contracted load as a result of increase of load or due to replacement of lamps, fans, fuses, switches, low voltage domestic appliances, fittings, etc it shall neither fall under unauthorized use of electricity (Section 126 of EA 2003) nor under theft of electricity (Section 135 of EA 2003).
- 7. If the consumer fails to pay the energy bill presented to him by the due date, the Department shall have the right to disconnect the supply after giving 7 days' notice as per provision of the Act & Supply Code Regulation.
- 8. Fixed charges, wherever applicable, will be charged on pro-rata basis from the date of release of connection. Fixed charges, wherever applicable, will be double as and when bi-monthly billing is carried out, Similarly slabs of energy consumption will also be considered accordingly in case of bi-monthly billing.
- 9. DNHPDCL would like to introduce fixed charge for industrial upto 20 HP category. Further, DNHPDCL would like to hike to fixed charges for industrial HT/EHT categories. Currently, the fixed charges levied in the tariff are much below the fixed charges levied by the generators. In FY 12-13 the fixed charges paid to the generators was Rs. 243.31 Crore. Against that DNPDCL has recovered only Rs. 207 Crore from the consumers. To bridge this gap DNHPDCL would like to introduce fixed charges for the industrial upto 20 HP category and increase the existing fixed charge for the HT/EHT consumers.

- 10. DNHPDCL has not proposed any increase in the energy charges for FY 14-15. The cumulative revenue gap upto FY 14-15 will be recovered from the escalation in fixed charges.
- 11. It is also proposed the industrial using two meters for lights & fans and motive power will now be billed on only one meter. If the industrial unit not using motive power then the billing would done based on the highest domestic slab rate.
- 12. The billing in case of HT/EHT shall be on the maximum demand recorded during the month or 75% of contracted demand, whichever is higher. If in any month, the recorded maximum demand of the consumer exceeds its contracted demand, that portion of the demand in excess of the contracted demand shall be billed at double the normal rate. Similarly, energy consumption corresponding to excess demand shall also be billed at double the normal rate. The definition of the maximum demand would be in accordance with the provisions of the Supply Code Regulation. If such over-drawl is more than 20% of the contract demand then the connections shall be disconnected immediately.

**Explanation:** Assuming the contract demand as 100 kVA, maximum demand at 120 kVA and total energy consumption as 12000 kWh, then the consumption corresponding to the contract demand will be 10000 kWh (12000\*100/120) and consumption corresponding to the excess demand will be 2000 kWh. This excess demand of 20 kVA and excess consumption of 2000 kWh will be billed at twice the respective normal rate. Such connections drawing more than 120 kVA, shall be disconnected immediately.

- 13. Unless specifically stated to the contrary, the figures of energy charges relates to paise per unit (kWh) charge for energy consumed during the month.
- 14. Delayed payment surcharge shall be applicable to all category of consumers. Delayed payment surcharge of 2% per month or part

thereof shall be levied on all arrears of bills. Such surcharge shall be rounded off to the nearest multiple of one rupee. Amount less than 50 paise shall be ignored and amount of 50 paise or more shall be rounded off to next rupee. In case of permanent disconnection, delayed payment surcharge shall be charged only upto the month of permanent disconnection.

- 15. **Prompt Payment Rebate:** If payment is made at least 7 days in advance of the due date of payment a rebate for prompt payment @ 0.25 % of the bill amount shall be given. Those consumers having arrears shall not be entitled for such rebate.
- 16. The adjustment on account of Fuel and Power Purchase Cost variation shall be calculated in accordance with FPPCA formula separately notified by the Commission under the Regulation. Such charges shall be recovered / refunded in accordance with the terms and conditions specified in the FPPCA formula.
- 17. The values of the 'K' factor applicable for the different consumer categories for use in the FPPCA formula shall be specified by the Commission in the Tariff Order for FY 14-15.
- 18. Schedule of other charges approved in this Tariff Order will remain in force till March 2015 until it is amended by the Commission.
- 19. The detailed tariff Schedule is outlined as under:

#### **DETAILED TARIFF SCHEDULE**

### I. (A) Domestic Category

Applicable to private houses, hostels, hospitals run on Non-commercial lines, Charitable, Educational and Religious Institutions for light, Fans, Radios, domestic heating and other household appliances including water pumps up to 2 HP.

## 1. Energy Charges

Usage(Units/Month)	Energy Charge (Ps./Unit)
0-50 units	110
51-200 units	170
201-400 units	220
401 and above	250

## (B) Power Supply to Low Income Group (Up to 2x40 W bulbs only)

Power supply to low income group connections will be charged at Rs. 5 per service connection per month. For any unauthorized increase in the load beyond 2x40 watts, penal charges at the rate of Rs. 5 per month per point will be levied and the installation will be liable for disconnection.

## II. Non-Domestic Category/Commercial

This includes all categories which are not covered by other tariff categories including Domestic Category, Power Supply to Low Income Group, Industrial LT, HT/EHT Category (A&B), Agriculture and Poultry, Public Lighting.

Applicable for Shops, Offices, Restaurants, Bus Stations, Photo Studios, Laundries, Cinema Theatres, Industrial Lighting, clubs and other Commercial installations.

## 1. Energy Charges

Usage(Units/Month)	Energy Charge (Ps./Unit)
1-100 units	225
101 units and above	300

## 2. Fixed charges

Usage(Units/Month)	Fixe	ed Cha	rge
	Rs.	45	per
1-100 units	connec	tion	per
	month		
	Rs.	60	per
101 units and above	connec	ction	per
	month		

## III. Industrial-LT

Applicable to all Low Tension Industrial Motive Power Connections including water works/pumps with sanctioned load upto 99 HP.

# 2. Energy Charges

Usage(Units/month)	Energy Charge (Ps./Unit)-
Upto 20 HP	300
For loads above20 HP	300

## 3. Fixed Charges

	Fixed charge
	(Rs./HP/month) or
	part thereof
Linto 20 HD	Rs 20.00/- per HP or
Upto 20 HP	part thereof
Earlands above 20 HD	Rs 50.00/- per HP or
For loads above20 HP	part thereof

### 4. Power Factor Charges

Any motive power connection above 3 HP running without proper capacitors installed so as to maintain Power Factor 0.90 as per Commission's regulation 11/2010 shall be charged extra 2.5 % of units consumed as additional power factor charges. Payment of the power factor charge won't exempt the consumer from his responsibility to maintain the power factor. In case of abnormal power factor decrease, the department will give the consumer 15 days' time to install appropriate capacitors and maintain the standard power factor. If the consumer is not able to rectify the problem within the notice time, the connection will be liable for disconnection. DNHPDCL reserves the right to install a suitable capacitor at its own cost and recover the cost thereof as arrears of energy charges. In case the monthly average power factor is less than 0.70 lagging, the installation is liable for disconnection after due notice.

## IV. HT/EHT Category

## A. High Tension Consumer

Applicable to all Industrial/Motive power consumers drawing through 11 kV and 66 kV systems having contract demand of 100 kVA and above.

## 1. Fixed Charges(Demand Charges)

For Billing Demand	Charges (Rs./KVA/month) or part thereof
Up to Contract Demand	Rs. 150/-
In Excess of Contract Demand	Rs 300/-

## 2. Energy Charges

Usage(Units/Month)	Tariff (Ps./Unit)
1-50,000 units	370
50,001-500000 units	380
500001 and above	385

## **3. Penalty Charges**: Twice the applicable Charges.

- a) Penalty charges will be levied on those units which are drawn beyond the contact demand. These Units will be worked out on pro-rata basis co - relating the total consumption of the month with billing demand.
- b) If Industries are overdrawing power by more than 20% of the Contract demand, their electricity connection will be disconnected immediately.

## 4. Power Factor Charges

The power factor of the consumer if, less than 0.90; for every 0.01 of the power factor decrease, 0.5% of the total units consumed will be charged

extra as surcharge at the rate of 500 ps/unit. Payment of the power factor charge won't exempt the consumer from his responsibility to maintain the power factor. In case of abnormal power factor decrease, the department will give the consumer 15 days' time to install appropriate capacitors and maintain the standard power factor. If the consumer is not able to rectify the problem within the notice time, the connection will be liable for disconnection. In case the monthly average power factor is less than 0.70 lagging, the installation is liable for disconnection after due notice.

All High tension and Extra High Tension installations where the monthly average power factor is maintained above 0.95 lagging shall be eligible for an incentive in the form of rebate at the rate of 1% of the energy charge for every 0.01 improvement in power factor above 0.95 lagging in the energy charges billed in the month. The Power factor value will be rounded to two decimal places. For example 0.944 shall be treated as 0.94 and 0.946 shall be treated as 0.95. In case, any dispute arises about the applicability of any tariff for any particular class or service or as to the interpretation of any clause of these tariffs, the decision of the Commission shall be final and binding.

#### 5. Billing Demand

Billing demand will be the highest among the following:

- (a) 100 kVA
- (b) 75% of the Contract demand
- (c) Actual Demand Established

# B. HT Industrial (Ferro Metallurgical/ Steel Melting/ Steel Rerolling/Power Intensive)

## 1. Fixed Charges(Demand Charges)

For Billing Demand	Tariff (Rs./KVA/month) or part thereof
Up to Contract Demand	Rs. 750/-

For Billing Demand	Tariff (Rs./KVA/month) or part thereof
In Excess of Contract Demand	Rs 1500/-

## 2. Energy Charges

Usage(Units/Month)	Tariff (Ps./Unit)
First 300 units / kVA	270
Next 200 units / kVA	340
Above 500 units / kVA and above	370

- 3. **Penalty Charges**: Twice the applicable Charges.
- c) Penalty charges will be levied on those units which are drawn beyond the contact demand. These Units will be worked out on pro-rata basis co relating the total consumption of the month with billing demand.
- d) If Industries are overdrawing power by more than 20% of the Contract demand, their electricity connection will be disconnected immediately.

#### 4. Power Factor Charges

The power factor of the consumer if, less than 0.90; for every 0.01 of the power factor decrease, 0.5% of the total units consumed will be charged extra as surcharge at the rate of 500 ps/unit. Payment of the power factor charge won't exempt the consumer from his responsibility to maintain the power factor. In case of abnormal power factor decrease, the department will give the consumer 15 days' time to install appropriate capacitors and maintain the standard power factor. If the consumer is not able to rectify the problem within the notice time, the connection will be liable for disconnection. In case the monthly average power factor is less than 0.70 lagging, the installation is liable for disconnection after due notice.

All High tension and Extra High Tension installations where the monthly average power factor is maintained above 0.95 lagging shall be eligible for

an incentive in the form of rebate at the rate of 1% of the energy charge for every 0.01 improvement in power factor above 0.95 lagging in the energy charges billed in the month. The Power factor value will be rounded to two decimal places. For example 0.944 shall be treated as 0.94 and 0.946 shall be treated as 0.95. In case, any dispute arises about the applicability of any tariff for any particular class or service or as to the interpretation of any clause of these tariffs, the decision of the Commission shall be final and binding.

## V. Agriculture

Agriculture or poultry loads upto 99 HP sanctioned load will be considered in this category.

## 1. Energy Charges

Usage	Tariff (Ps./Unit)
For connected load upto 20 HP	65
Beyond 10 HP and upto 99 HP connected load	95

## VI. Public Lighting

#### 1. Energy Charges

Usage	Tariff (Ps./Unit)
For all units	300

**VII. Temporary Supply:** Tariff for Temporary Connection shall be Fixed / Demand charges (if any) plus energy charges (for relevant slab if any) under corresponding permanent supply category plus 50% of both.

For multi activity pursuit, applicable tariff for temporary connection shall be with reference to that of non-domestic category for permanent supply.

The Temporary Tariff are applicable for temporary period of supply up to 1 (one) month, which can be extended for another period of supply up to maximum period of 2 years.

## VIII. Schedule of Other Charges

#### a. Meter Rent

S.No.	Meter type	Tariff (in Rs.)/Month or part thereof
1	Single Phase	Rs 10
2	Three Phase	Rs 25
3	LT Meter with MD indicator	Rs 200
4	Tri- vector Meter	Rs 500

Note: The type of meters to be installed in consumer premises will be decided by the department. Generally the consumers having connected load above 50 HP will be provided with L.T.M.D meters.

## b. Reconnection Charges

S.No.	Connection type	Tariff (in Rs.)/Month or part thereof
1	Single Phase LT	Rs 50
2	Three Phase LT	Rs 100
3	HT	Rs 1000

## c. Service Connection Charges

S.No.	Connection type	Tariff (in Rs.)/Month or part thereof
1	Single Phase LT	Rs 250
2	Three Phase LT	Rs 1000
3	HT (First 500 KVA)	Rs 10000

S.No.	Connection type	Tariff (in Rs.)/Month or part thereof
4	HT (Beyond 500 KVA)	Rs 1000 per 100 KVA or part thereof

## d. Extra Length Charge

S.No.	Connection type	Tariff (in Rs.)/Month or part thereof
1	Single Phase	Rs 25/meter
2	Three Phase	Rs 50/meter

Extra length Chargeable will be beyond permissible 30 meters free length from existing network for new connection for all categories except Agriculture. Free length in respect of New Agriculture consumer is 300 meters.

#### e. Cost of HT connection

Entire Cost of setting up HT connection would be borne by the consumer and the agreement period would be two years for the category. 15% supervision charges shall be recovered by DNHPDCL.

## f. Testing Fee for various Metering Equipment

S.No.	Types of Metering Equipment	Fee per unit (in Rs.)
1	Single Phase	100
2	Three Phase	300
3	Three Phase Tri-vector Meter (0.5 Class) Industrial LT Consumer	500
4	Three Phase Tri-vector Meter (0.5 Class) 11 KV HT Consumer	500
5	Three Phase Tri-vector Meter (0.2 Class) 66KV EHT Consumers	1000

S.No.	Types of Metering Equipment	Fee per unit (in Rs.)
6	Combined CTPT Unit for 11	500
U	KV Consumer	300
7	66 KV CT / PT Unit	500
8	Three Phase CT Block	300
9	CT Coil	100

# g. Fees (Non-refundable) for submission of Test Report of wiring Completion

S.No.	Types of Connection	Fee per test report (in Rs.)
1	Single Phase Lighting / Domestic	10
2	Three Phase Lighting / Domestic	25
3	Single Phase Lighting / Non Domestic	50
4	Three Phase Lighting / Non Domestic	100
5	Three Phase LT Industries	250
6	Single Phase / Three phase Agriculture / Streetlight / Public Lighting & others	50
7	HT Industries upto 500 KVA	1000
8	HT Industries upto 2500 KVA	5000
9	HT Industries above 2500 KVA	10000

## **Prayer**

- 1. DNHPDCL requests the Honorable Commission to:
  - Admit and approve the Aggregate Revenue Requirement of FY 14-15 as submitted herewith.
  - Make the proposed Retail Supply Tariffs applicable from April 1, 2014.
  - Approve the proposal for Aggregate Revenue Requirement and Tariff Hike for FY 14-15.
  - Admit and approve the Trued up ARR for FY 2012-13.
  - Condone any inadvertent omissions/ errors/ shortcomings and permit the Petitioner to add/ change/ modify/ alter this filing and make further submissions as may be required at a future date.
  - Submit necessary additional information required by the Commission during the processing of this petition.
  - And pass such other and further orders as are deemed fit and proper in the facts and circumstances of the case

#### BY THE APPLICANT THROUGH

PETITIONER
DNH Power Distribution Corporation Ltd.

Silvassa Dated: