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**Inhouse Paper on Tariff Related Issues for Inviting
Comments/Suggestions from various Stakeholders**

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IN-HOUSE PAPER ON TARIFF RELATED ISSUES

Subsection (g) of Section 61 of the Electricity Act, 2003 stipulates that the tariff should progressively reflect cost of supply of electricity and also reduces cross subsidies in the manner specified by the Appropriate Commission. The relevant extract is produced herewith:

“61. The Appropriate Commission shall, subject to the provisions of this Act, specify the terms and conditions for the determination of tariff, and in doing so, shall be guided by the following, namely:-

...

g) that the tariff progressively reflects the cost of supply of electricity and also, reduces and eliminates cross-subsidies within the period to be specified by the Appropriate Commission;”

Section 62 (3) of the Electricity Act, 2003 provides for the factors on which the tariffs of various consumers can be differentiated. Some of these factors like load factor, power factor, voltage, total electricity consumption during any specified period or time or geographical position also affects the cost of supply to the consumer. Due weightage can be given in the tariffs to these factor to differentiate the tariffs. The relevant extract is produced herewith:

“(3) The Appropriate Commission shall not, while determining the tariff under this Act, show undue preference to any consumer of electricity but may differentiate according to the consumer's load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required.”(emphasis added)

The Tariff Policy prescribes the principles to be adopted by the Commission for determining tariffs for generation, transmission, distribution and retail consumers.

Para 8.3(2) stipulates as under:

“For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the SERC would notify roadmap within six months with a target that latest by the end of year 2010-2011 tariffs are within ± 20 % of the average cost of supply. The road map would also have intermediate milestones, based on the approach of a gradual reduction in cross subsidy.”

The UERC (Terms and Conditions for Determination of Tariff) Regulations, 2011 specifies as under:

“93. Determination of Retail Supply Tariff

- (1) While determining tariff for retail supply of electricity, the Commission shall be guided by the provisions of Section 61 and 62 of the Act.*
- (2) The Commission, shall not, while determining the tariff, show undue preference to any consumer of electricity but may differentiate according to consumer’s load factor, voltage, total consumption of electricity during any specified period or time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required.*
- (3) The Distribution Licensee in the tariff petition shall propose the suitable tariff structure for different category of consumers. The Distribution Licensee may further propose kVAh/ToD based tariffs for categories considered appropriate by it for such implementation.*
- (4) The Commission may merge categories and sub categories to evolve a simple, easy to comprehend and logical tariff structure.”(emphasis added)*

The tariff design exercise refers to the design of the tariff structure and components of the charges applicable to consumers of the Distribution Licensee. An optimal tariff design effectively recovers all the costs approved and allowed to be recovered while supplying electricity to the consumer or class of consumers and at the same time promotes efficient usage of electricity. The tariff design exercise has some important principles, which the Commission follows during every tariff determination exercise. Besides determination of (level of) tariff, during every tariff exercise, the Commission rationalizes the existing tariff categories and consumption slabs in order to simplify the tariff structure. The Commission believes that tariff rationalisation is a dynamic and ongoing process and it is essential to accommodate the socio-economic and technological changes taking place in the system over a period of time.

The Commission, through the present Paper, intends to assess further scope for rationalization of the tariff, in respect of the following issues:

- I. Levying Fixed Charges for Domestic Consumers based on Consumption;**
- II. Removal of the Tariff Category ‘RTS-1A:Snowbound’;**
- III. Extension of Continuous Supply Option to the Non-Continuous Industries as well;**
- IV. Load Factor based Slabs for HT Industrial Consumers;**
- V. Tariff Categorisation for Horticulture and Floriculture Consumers;**

LEVYING FIXED CHARGES FOR DOMESTIC CONSUMERS BASED ON CONSUMPTION

Levying Fixed Charges for Domestic Consumers based on Consumption

The tariff structure applicable in the State of Uttarakhand for sale of electricity by the Distribution Licensee, i.e. Uttarakhand Power Corporation Limited (UPCL) to the domestic consumers as well as other consumers, is a two-part tariff, comprising of fixed/demand charges and energy charges.

The fixed charge component is intended to reflect and recover the fixed cost of supplying electricity to the consumer and the energy charge component is intended to reflect and recover the variable cost of electricity supplied to the consumers.

Section 45(3) of the Electricity Act, 2003 provides for levy of Fixed Charges, as reproduced below:

*“(3) The charges for electricity supplied by a distribution licensee may include -
(a) a **fixed charge** in addition to the charge for the actual electricity supplied;
(b) a rent or other charges in respect of any electric meter or electrical plant provided by the distribution licensee.”(emphasis added)*

Fixed costs are all costs that have to be incurred, and are not linked to the quantum of electricity sold, and are thus, fixed in nature. Fixed Charges are intended to recover such fixed cost of supplying electricity to the consumer which mainly includes fixed cost payable to Generating Companies and fixed charges for providing service to the consumers. A Distribution Licensee is required to set up infrastructure for distribution and supply of electricity such as sub-stations, distribution lines, transformers, meters, collection centres, etc., all of which require a large capital outlay, which are raised either through debt or equity; both of which come at a cost. All these activities require large number of employees and their related cost. As a thumb-rule, around 50% of the total costs of the distribution licensee are fixed in nature, with the balance 50% being variable in nature.

It is a well accepted economic principle that the fixed costs of the Distribution Licensee should be recovered to a certain extent through fixed charges levied on the consumers, in order to ensure revenue stability. At the same time, if the entire fixed costs is recovered through fixed charges, the Licensee shall have no incentive to ensure that the consumers are supplied electricity to the fullest requirement and hence, quality of supply may suffer.

It should be noted that the Distribution Licensee is incurring fixed cost directly attributable to individual consumers such as costs incidental to meter reading, bill preparation, bill distribution and collection, which ideally should be allocated to and recovered from each

consumer, along with the share of the other fixed costs incurred by the Distribution Licensee for distributing and supplying electricity to the consumers.

In order to ensure that levy of higher fixed charges does not impact the consumers adversely, the Commission, in its Tariff Order dated March 18, 2008 for FY 2008-09, introduced a nominal fixed charge for all the consumer categories, in its endeavour to design the tariff structure linked to cost structure. In the above-said Order, while introducing the fixed charges for most of the consumer categories, the Commission stated as under:

“8.3.1 Fixed Charges and Minimum Charges

....

The Commission is of the view that as about 45% of the Petitioner’s costs is fixed in nature, recovery of some minimum portion of fixed costs should be allowed through fixed charges. In order to move towards cost of supply, it is desirable to have two-part tariff. Further Section 45(3) of the Electricity Act, 2003 provides for levy of fixed charges. The relevant section is reproduced below:

“The charges for electricity supplied by a distribution licensee may include -

- (a) a fixed charge in addition to the charge for the actual electricity supplied;*
- (b) a rent or other charges in respect of any electric meter or electrical plant provided by the distribution licensee.”*

*Further, the licensee is incurring fixed cost directly attributable to individual consumers such as meter reading, bill preparation, distribution and collection, which should ideally be allocated to and recovered from each consumer. **The Commission has, therefore, decided to move towards this concept of two-part tariff and in this Order introducing fixed charges for most of the consumer categories.***

Considering that levy of fixed charges may not impinge adversely, the Commission, to start with, has introduced only a nominal fixed charge as a movement towards designing the tariff structure linked to cost structure.

Ideally, the fixed charges should be levied on the basis of sanctioned load, for all the categories. However, for Domestic category, considering the quality of metering and billing data which has been analysed in detail in Section 5 on Analysis of Billing Data and reflects under/overstated loads, the Commission, for the present, has introduced the fixed charges on per connection basis.

....”(emphasis added)

Further, in its subsequent Tariff Orders for FY 2009-10, FY 2010-11, FY 2011-12, FY 2012-13 and FY 2013-14, keeping in view the proportion of fixed costs as percentage of total costs of UPCL and level of revenue recovery from fixed charges, the Commission marginally increased the fixed charges for most of the categories, to improve the revenue recovery from fixed charges and at the same time avoid tariff shock to any consumer category. The change in the fixed charges levied on domestic consumers over the years, as approved by the Commission in the Tariff Orders of UPCL, are shown in the Table below:

Table 1: Movement of fixed charges for domestic category in Uttarakhand

Sl.	Tariff Order for the Financial Year	Fixed Charges	
		Unit	Amount
1	FY 2008-09		
	Domestic Metered		
	1.1) Lifeline consumers - Below Poverty Line and Kutir Jyoti having load upto 1 kW and consumption upto 30 units per month	Rs./Connection/month	Nil
	1.2) Other domestic consumers	Rs./Connection/month	Rs. 15
	2) Single Point Bulk Supply	Rs./kW/month	Rs. 15
2	FY 2009-10		
	Domestic Metered		
	1.1) Lifeline consumers - Below Poverty Line and KutirJyoti having load upto 1 kW and consumption upto 30 units per month	Rs./Connection/month	Nil
	1.2) Other domestic consumers		
	Upto 4 kW	Rs./Connection/month	Rs. 20
	More than 4 kW	Rs./Connection/month	Rs. 40
	2) Single Point Bulk Supply	Rs./kW/month	Rs. 20
3	FY 2010-11		
	Domestic Metered		
	1.1) Lifeline consumers - Below Poverty Line and Kutir Jyoti having load upto 1 kW and consumption upto 30 units per month	Rs./Connection/month	Nil
	1.2) Other domestic consumers		
	Upto 4 kW	Rs./Connection/month	Rs. 20
	More than 4 kW	Rs./Connection/month	Rs. 40
	2) Single Point Bulk Supply	Rs./kW/month	Rs. 20
4	FY 2011-12		
	Domestic Metered		

Sl.	Tariff Order for the Financial Year	Fixed Charges	
		Unit	Amount
	1.1) Lifeline consumers - Below Poverty Line and Kutir Jyoti having load upto 1 kW and consumption upto 30 units per month	Rs./Connection/month	Rs. 5
	1.2) Other domestic consumers		
	Upto 4 kW	Rs./Connection/month	Rs. 25
	More than 4 kW	Rs./Connection/month	Rs. 60
	2) Single Point Bulk Supply	Rs./kW/month	Rs. 25
5	FY 2012-13		
	Domestic Metered		
	1.1) Lifeline consumers - Below Poverty Line and KutirJyoti having load upto 1 kW and consumption upto 30 units per month	Rs./Connection/month	Rs. 6
	1.2) Other domestic consumers		
	Upto 4 kW	Rs./Connection/month	Rs. 30
	More than 4 kW	Rs./Connection/month	Rs. 80
	2) Single Point Bulk Supply	Rs./kW/month	Rs. 30
6	FY 2013-14		
	Domestic Metered		
	1.1) Lifeline consumers - Below Poverty Line and Kutir Jyoti having load upto 1 kW and consumption upto 30 units per month	Rs./Connection/month	Rs. 7
	1.2) Other domestic consumers		
	Upto 4 Kw	Rs./Connection/month	Rs. 35
	More than 4 kW	Rs./Connection/month	Rs. 90
	2) Single Point Bulk Supply	Rs./kW/month	Rs. 35
7	FY 2014-15		
	1) Domestic Metered		
	1.1) Lifeline consumers - Below Poverty Line and Kutir Jyoti having load upto 1 kW and consumption upto 30 units per month	Rs./Connection/month	Rs. 7
	1.2) Other domestic consumers		
	Upto 4 kW	Rs./Connection/month	Rs. 35
	More than 4 kW	Rs./Connection/month	Rs. 90
	2) Single Point Bulk Supply	Rs./kW/month	Rs. 35

The revenue from fixed charges, as per the prevalent tariffs approved by the Commission in the Tariff Order for FY 2014-15, contributes around 11% of the total revenue, whereas, the fixed costs including fixed charges of power purchase contribute around 50% of the ARR.

The Commission, in the past, has opined that ideally, the fixed charges should be levied on the basis of contracted/sanctioned load for all the categories. However, for domestic category, considering the data on sanctioned load, which had number of consumers having fraction of load (<1 kW) and also considering the quality of metering and billing data, the Commission in its Tariff Order dated March 18, 2008 introduced the fixed charges on per connection basis. Subsequently, the Commission in its Tariff Order dated October 23, 2009 approved differential fixed charges on per connection basis for domestic consumers having connected load/sanctioned load upto 4 kW and domestic consumers having contracted/sanctioned load above 4kW. Though the fixed charges have been increased over the years, the structure of fixed charges has remained the same in the subsequent Tariff Orders.

The domestic category contributes to around 85% of the total consumer base of UPCL, and contributes to around 20% of the total consumption of UPCL. However, the revenue from fixed charges from the domestic category contributes only 16% of the total revenue from fixed charges earned by UPCL.

In this regard, the Commission is contemplating different approaches to modify the structure of levy of fixed charges to the domestic category of consumers, viz., on per kW basis, on the basis of consumption slabs, separate for single-phase and three-phase supply, etc. Towards this, the practice adopted in some other States has been studied, and a comparison thereof is shown in the Table below:

Table2: Comparison of fixed charges levied on Domestic Category in various States

Sl.	Name of State	Fixed Charges	
		Units	Amount
1	Uttar Pradesh (PVVNL, MVVNL, PuVVNL, DVVNL, KESCO, NPCL)		
	Lifeline consumers with contracted load of 1 kW, energy consumption up to 150 kWh/ Month	Rs./ kW/ Month	50
	Other than life line consumers for all loads	Rs./ kW/ Month	75
2	Delhi (TPDDL, BYPL, BRPL)		
	Up to 2 kW connected load	Rs./ Connection/ Month	40
	Between 2 kW and 5 kW connected load	Rs./ Connection/ Month	100

Sl.	Name of State	Fixed Charges	
		Units	Amount
	Above 5 kW connected load	Rs./ kW/ Month	25
	Delhi (NDMC)	Rs./ kW/ Month	20
3	Uttarakhand (UPCL)		
	1) BPL and kutirjyoti with loads up to 1 KW	Rs./ Connection/ Month	7
	Up to 4 kW	Rs./ Connection/ Month	35
	Above 4 kW	Rs./Connection/ Month	90
	2) Single Point Bulk Supply	Rs./kW/month	35
4	Haryana	Fixed Charges are Nil, but Monthly Minimum Charges are applicable	
5	Punjab	Fixed Charges are Nil, but Monthly Minimum Charges are applicable	
6	Himachal Pradesh	Rs/Connection/Month	Rs 30 for Lifeline and Rs 40 for other consumers
7	Rajasthan (JVNL, AVNL, JdVNL)		
	LT-1: BPL Category up to 50 kWh/ Month	Rs./ Connection/ Month	80
	General Domestic-1 (Up to 50 units/ month, 50-150 units/ month)	Rs./ Connection/ Month	160
	General Domestic-2 (150-300 units/ month)	Rs./ Connection/ Month	175
	General Domestic-3 (300-500 units/ month)	Rs./ Connection/ Month	210
	General Domestic-4 (Above 500 units/ month)	Rs./ Connection/ Month	225
	Domestic Category (HT-1) For contract demand over 50 kVA	Rs./ kVA/ Month	140
8	Bihar (NBPDC, SBPDCL)		
	KutirJyoti (Unmetered)	Rs./ Connection/ Month	55
	DS-I (Unmetered)	Rs./ Connection/ Month	160
	DS-I (Metered) upto 2 KW	Nil	Nil
	DS-II, 1 Phase, Up to 7 kW (1-100 units, 101-200 units, 201-300 units, above 300 units)	Rs. per month	55 for first kW (Additional kW Rs. 15/ kW/month or part thereof)
	DS-II, 3 Phase, Above 5 kW (1-100 units, 101-200 units, 201-300 units, above 300 units)	Rs. per month	250 for 5 kW (Additional kW Rs. 15 /kW/month or part thereof)

Sl.	Name of State	Fixed Charges	
		Units	Amount
9	Maharashtra (MSEDCL)		
	LT I- LT- Residential (BPL)	Rs. Per month	10
	LT I- LT- Residential	Rs. Per month	40 for 1-ph (130 for 3-ph*)
10	Gujarat (UGVCL, MGVCL, DGVCL and PGVCL)		
	BPL	Rs./ Connection/ Month	5
	Up to and including 2 KW	Rs./ Connection/ Month	15
	Above 2 to 4 kW	Rs./ Connection/ Month	25
	Above 4to 6 kW	Rs./ Connection/ Month	45
	Above 6 kW	Rs./ Connection/ Month	65
11	Nagaland (DPN)	Rs./ Connection/ Month	10
12	Mizoram (Electricity Department, GoM)		
	KutirJyoti	Rs./ Connection/ Month	10
	Other LT Domestic	Rs./ Connection/ Month	25
13	Manipur(Electricity Department, GoM)		
	KutirJyoti	Rs./ kW/ Month	20
	Domestic light & power	Rs./ kW/ Month	60
14	Meghalaya (MePDCL)		
	KutirJyoti (Unmetered)	Rs./ Connection/ Month	90
	Domestic	Rs./ kW/ Month	40
15	Assam (APDCL)		
	Jeevan Dhara (up to 30 units)	Rs./ Connection/ Month	15
	Domestic - A (up to 5 kW)	Rs./ kW/ Month	30
	Domestic - B (5-20 kW)	Rs./ kW/ Month	30
16	Kerala (KSEBL)		
	Single phase	Rs./ Connection/ Month	20
	Three phase	Rs./ Connection/ Month	60
17	Madhya Pradesh (East, West and Central Discoms)		
	Domestic LV-1.1: Consumers having sanctioned load not more than 100 watts (0.1 kW) and consumption (Up to 30 units)		NIL
	Domestic LV-1.2: Up to 50 units	Rs. per connection	40 (urban) 25 (rural)
	Domestic LV-1.2: 51 to 100 units	Rs. per connection	65 (urban) 40 (rural)
	Domestic LV-1.2: 101 to 300 units	Rs. for each 0.5kW of authorised load	75 (urban) 50 (rural)

Sl.	Name of State	Fixed Charges	
		Units	Amount
	Domestic LV-1.2: 301 to 500 units	Rs. for each 0.5kW of authorised load	80 (urban) 70 (rural)
	Domestic LV-1.2: Above 500 units	Rs. for each 0.5kW of authorised load	85 (urban) 70 (rural)
18	Chhattisgarh (CSPDCL)		
	LV-1: Domestic including BPL (0-200 units)	Rs./ kWh	1.80
	LV-1: Domestic including BPL (201-600 units)	Rs./ kWh	2.60
	LV-1: Domestic including BPL (601 and Above)	Rs./ kWh	3.90

Source: Latest Tariff Orders of the respective Utilities

The above comparison shows that most of the utilities levy fixed charges in form of Rs. per month or Rs./connection/month. Maharashtra and Bihar has separate fixed charges for single-phase and three-phase supply. Chhattisgarh is the only State in which the fixed charges are levied on each units of consumption for different consumption slabs. Discoms in UP, Manipur, Assam (except BPL), Meghalaya (except BPL) and Delhi (NDMC) have fixed charges on per kW basis. MP (in case of consumption slabs above 100 units) has fixed charges worked out on authorised load determined based on consumption in each month. Some of the States have fixed charges specified in terms of Rs./connection/month or Rs./kW/month linked to the consumption slabs.

However, as discussed earlier, the data regarding connected/sanctioned load of domestic category consumers is not reliable, and hence, levying fixed charges on per kW basis for domestic category is not considered appropriate.

The other alternative, which is in vogue in Rajasthan and Madhya Pradesh, is to link the fixed charges also to the consumption slab or to the actual consumption, in such a way that the consumers in the higher consumption slabs pay higher fixed charges.

For domestic consumers, the data related to connected load is not an authenticated data as the actual connected load keeps on changing from time to time, while the same is not updated in utilities records. The most authenticated data available with respect to domestic consumers is the consumption data which is based on meter reading and is regularly updated.

The Commission therefore intends to introduce billing of fixed charges in case of domestic consumers linked to consumption which is authenticated data and to ensure that the fixed charges are more reflective of the costs incurred to supply electricity to the domestic category. It is also intended to progressively reduce cross subsidy available to such domestic consumer who have higher consumption as they are affluent consumers and should be paying the cost

of supplying electricity to them. Under this mechanism, it is proposed to specify the fixed charges per connection per month based on consumption for each 100 units or part thereof per month.

- For Consumption upto first 100 units/month
- For Consumption between 101-200 units/month
- For Consumption 201-300 units/month
- For each incremental consumption of 100 units or part thereof/month

REMOVAL OF THE TARIFF CATEGORY 'RTS-1A: SNOWBOUND'

Removal of the Tariff Category 'RTS-1A: Snowbound'

The existing rate Schedule for 'RTS-1A: Snowbound' states as under:

“2. Applicability

- (i) Domestic and non-domestic consumers in snowbound areas.
- (ii) This Schedule applies to areas notified as snowbound/snowline areas by the concerned District Magistrate.

3. Rate of Charge

	Fixed Charges	Energy Charges
1) Domestic	Rs. 7/connection/ month	Rs. 1.50 /kWh
2) Non-domestic upto 1 kW		
3) Non-domestic more than 1 kW & upto 4 Kw		Rs. 2.15 /kWh
4) Non-domestic more than 4 kW	Rs. 14/connection /month	Rs. 3.25 /kWh

4. All other conditions of this Schedule shall be same as those in RTS-1.”

The Commission in its Tariff Order for FY 2005-06 stated as under:

“7.3.2 Tariff in Snowbound Areas

The Commission is aware of the fact that consumers in snowbound areas require electricity for their subsistence and deserve to be treated differently from other consumers. The Commission has also obtained a list of such villages along with number of households and population from the Revenue authorities. Most of the population living in such high altitude areas migrates to lower altitudes during the winter months, when question of consumption of electricity by these villagers does not arise. The Commission has, therefore, decided to exempt all domestic consumers and small non-domestic consumers with load upto 1 kW of these areas from payment of minimum charges and also to give such consumers the same tariff as under the sub-category of BPL consumers with upto 1 kW load and 30 units/month consumption. This concession will apply to only villages notified as snowbound/snowline villages by the concerned District Magistrate.”

In this context, the Tariff Order for FY 2006-07 recorded stakeholders response to the proposals and UPCL's comments as under:

"2.1.3 Snow-Bound Areas

Power Department of Uttaranchal Government has suggested that Syanchatti, Hanuman Chatti, Rane Chatti at the height of 6000 feet, may also be included in the snow-bound area tariff category.

Petitioner's Comments

It is clarified that as per the provision contained in the existing Tariff Order, the concession in tariff of RTS-1 and RTS-2 is admissible to the consumers of snowbound/snowline villages which have to be notified by the concerned DM."

The Commission in its Tariff Order for FY 2007-08 & FY 2008-09 stated as under:

"8.6.2 RTS 1-A: Concessional Snowbound Area Tariff

As the domestic and non-domestic consumers in snow bound areas of the State having limited paying capacity and are few in numbers and account for only a modest quantity of power consumption, no increase in tariff is contemplated. Further, considering the requests made by the consumers in snowbound area, the Commission has approved the concessional tariff for all Non Domestic consumers in snow bound areas...."

The Commission in its Tariff Order for FY 2010-11 stated as under:

7.1.1 Domestic (RTS-1)

...

For snowbound consumers, the Commission has projected the sales by considering the growth rate of 6.49% equivalent to two years CAGR on the approved sales for FY 2009-10 as the data for snowbound consumers is not available for last 5 years only.

The Commission in its Tariff Order for FY 2011-12 stated as under:

"7.2.1 Domestic (RTS-1)

The Petitioner has considered a growth rate of 12.60% in respect of sales to domestic consumers including consumers in Snow Bound Areas. The consumption of un-metered category

has been recasted by applying the load factor of metered category. Accordingly, UPCL has projected energy sales to domestic consumers and consumers in snow bound areas during FY 2011-12 as 1717.07 MU and 26.70 MU respectively. The total consumption for domestic category for FY 2011-12 is projected at 1743.77 MU.

For projecting the sales for FY 2011-12, the Commission has considered five years' Compounded Average Growth Rate (CAGR) of 9.47% for metered category. For projecting sales to un-metered category, the Commission has, further, considered the same load factor as that of metered category. Hence, the sales for domestic category for FY 2011-12 works out to 1622.81 MU.

For snowbound consumers, the Commission has projected the sales at 25.24 MU by considering the same growth rate of 9.47% as applied to domestic consumers in other areas.

..."

During the previous tariff determination exercise, a request was made by UPCL to abolish the RTS-1A category stating that there were no consumers under this category over last five years. The Commission, during the last tariff exercise, retained this tariff category and had directed UPCL to check this aspect about existence or non-existence of consumers in Snow-bound areas and submit the same with the evidence duly validating its claim. The relevant extract of the Tariff Order is as under:

"5.3.2.2 Abolish the snowbound category (RTS-1A)

The Petitioner submitted that there are no existing consumers under this category over last 5 years. The Petitioner has proposed to abolish the snowbound category (RTS-1A).

...

5.3.3.2 Abolish the snowbound category (RTS-1A)

*The Petitioner has requested the Commission to abolish the RTS-1A category stating that there have been no consumers under this category over last five years. In this regard, it is important to note that the Petitioner has been filing the Tariff Proposal for this category of consumers in its earlier/ previous Petitions also and, accordingly, the Commission has been approving the Tariff for this category. The Commission is of the view that it is unlikely that there are no consumers in the snow bound areas however, it might be a case that the Petitioner is not able to identify the consumers under such category. Thus, in view of the above, the Commission has continued with the category of RTS-1A- Concessional Snowbound Area Tariff. **The Commission directs the Petitioner to check this aspect about existence or non existence of consumers in Snowbound Area and submit the same with evidence duly validating its claim in this regard in the Annual Performance Review Petition for FY 2014-15. For the***

present, the Commission decides to retain this category in Tariff Schedule.” (emphasis added)

UPCL in its Petition for APR for FY 2014-15 and Tariff determination for FY 2015-16 submitted as follows:

“UPCL vide its letter no. 1319/UPCL/RM/C-10, dated 17-06-2014 issued instructions to all the Executive Engineer of the distribution divisions covering any hilly areas to contact the concerned District Magistrate and to seek the copies of orders by which any area has been notified as snow bound / snow line.

During discussion in the meetings, field officers informed that no snow bound / snow line areas have been notified in the supply area of their distribution divisions / circles / zones and therefore no consumer / consumption details are being shown in the commercial statements. In view of the submission made hereinabove, Hon’ble Commission is requested to kindly abolish the rate schedule RTS -IA (Snow bound).”

In this context, it is observed that other snow affected States such as Jammu & Kashmir, Himachal Pradesh, Arunachal Pradesh, and Sikkim does not have such separate consumer category for consumers in snowbound areas.

In view of the above, the Commission invites the views/suggestions from the stakeholders, i.e. consumers, State Government (including concerned District Magistrates) as to whether the separate tariff category for Snowbound Consumers be abolished.

**EXTENSION OF CONTINUOUS SUPPLY
OPTION TO THE NON-CONTINUOUS
INDUSTRIES AS WELL**

EXTENSION OF CONTINUOUS SUPPLY OPTION TO THE NON-CONTINUOUS INDUSTRIES AS WELL

The Commission, in its Tariff Order dated October 23, 2009, had approved continuous supply surcharge @ 10% of the Energy Charge for consumers opting for supply during restricted hours (continuous supply). The relevant extract of the Order is reproduced below:

“8.5.8 Supply during Restricted Hours

The Petitioner has proposed to abolish the higher energy charges for industrial consumers opting for supply during restricted hours (continuous supply) and has proposed ToD tariff of Rs. 7/unit during peak hours.

Some of the respondents have suggested that this charge may be increased to 25% of energy charges but should be levied only during the period of load shedding instead of levying it throughout the year.

On the issue of levy of these charges throughout the year, the Commission is of the view that for making available the continuous supply to the industrial consumers, who have opted for it, the Petitioner may have to contract the capacity with generating stations and for which the Petitioner will have to pay the Fixed Charges for the entire year. If the capacity is not contracted to meet continuous supply, the additional energy required during the load shedding period will have to be procured through short term trading or through UII route at very high rates. If the power is procured on short term basis and the impact of same is to be passed on to the consumers who have opted for continuous supply only during the period of load shedding, the additional charges to be levied will be more than 100% of normal energy charges considering the prevalent short term trading rates in the market. In order to avoid higher impact on consumers during load shedding period and to motivate the licensee to make long term arrangements for continuous supply of power, there is merit in charging reasonable premium in energy charges throughout the year.

The Commission would like to further clarify that the additional surcharge for availing uninterrupted continuous supply cannot be compared with the peak hour ToD rates as the objective and concept of these two charges are totally different. The additional surcharge for availing uninterrupted continuous supply is a kind of premium that the consumers will have to pay to enjoy the uninterrupted supply of power irrespective of supply in shortage. As discussed earlier, if the Licensee has to supply the uninterrupted continuous supply to some of the consumers, it has to make additional arrangement for procuring such power during supply deficit

scenario or resort to load shedding to other consumers and, hence, the cost of such additional power needs to be recovered from the consumers getting such benefits.

The Commission would also like to impress upon the fact that many industries which are operating in single shift and do not have continuous process have also opted for continuous power and are paying 20% higher energy charges which clearly and amply demonstrates that higher charges are not for getting continuous supply during restriction period only but for getting premium supply throughout the year. Since the charges are levied for premium supply throughout the year, i.e. for ensuing supply even at the times when others are subjected to load shedding, they cannot be linked with either the price of costlier power or to the period of restriction/load shedding.

On the other hand, conceptually the Time of Day Tariffs is a Demand Side Management (DSM) measure to shift the load from peak hours to non-peak hours. Thus, the surcharge during peak hours and rebate during non-peak hours is specified to incentivise the consumers to reduce their consumption in peak hours and/or to shift the consumption. However, in case of severe supply shortage situation, it is essential to specify the higher surcharge during peak hours so that only those consumers who cannot reduce their consumption during such peak hours should only consume power and, accordingly, pay for the higher power purchase costs arranged during the peak hours.

*Though the Petitioner has proposed to abolish the continuous supply surcharge, the Commission in this Order is not abolishing the same considering the fact that the consumers who have opted for continuous supply and have paid this charge for first six months should get benefit of continuous supply throughout the year. The Commission will again review the continuous supply surcharge during the next tariff determination exercise. **However, considering the views of various stakeholders and the Petitioner, the Commission has reduced the surcharge from the existing level of 20% to 10% in this Order and the consumers opting for supply during restricted hours (continuous) shall pay only 10% higher energy charge instead of 20%.**"(emphasis added)*

Under these provisions all the consumers had the option to opt for continuous supply, irrespective of whether they were on dedicated independent feeder or on mixed feeder. In accordance with the above provision, even if a single consumer on a mixed feeder opted for continuous supply, its benefit got extended to all the consumers on that mixed feeder. This created a situation wherein if one consumer connected to mixed feeder opted for continuous supply, all the other consumers connected to that feeder also got free continuous supply. On the other hand, if the supply of the mixed feeder was required to be cut during rostering, the supply of the continuous supply consumer was also required to be unintentionally cut.

The Commission, in order to rectify this anomaly, had taken a view in its Tariff Order dated April 10, 2010 that the option of continuous supply be made available only to consumers who are connected on a dedicated independent feeder or industrial feeder provided that all the industrial consumers on such feeder opt for continuous supply option. The relevant extract of the Order is reproduced below:

“8.3.5 Continuous Supply

The Commission, in its previous Tariff Order dated October 23, 2009, had approved continuous supply surcharge @ 10% of the Energy Charge for consumers opting for supply during restricted hours (continuous). Further all the consumers had this option to opt for continuous supply irrespective of whether they are on dedicated independent feeder or on mixed feeder. In accordance with above provision even if a single consumer connected through mixed feeder opted for continuous supply, its benefit got extended to all the consumers on the mixed feeder. This was a sort of discrimination amongst the consumers who had opted for continuous supply on mixed feeder and those who have not opted for continuous supply on mixed feeder as both enjoyed the benefit of continuous supply irrespective of the fact that they were paying any continuous supply surcharge or not. On the other hand, if the supply of the mixed feeder is required to be cut during roastering, the continuous supply consumers were also unintentionally cut.

*The Commission in order to rectify this anomaly has taken a view that the option of continuous supply should be made available only to consumers who are connected through dedicated independent feeder or industrial feeder provided that all the industrial consumers on such feeder opt for continuous supply option. The Commission is also of the view that considering the supply shortage position, this option needs to be provided only to the continuous process industries requiring continuous supply due to continuous nature of their process.
...”(emphasis added)*

The Commission was earlier of the view that considering the supply shortage position, this option of continuous supply be made available only to consumers who are either connected on a dedicated independent feeder or industrial feeder provided that all the industrial consumers on such feeder opt for continuous supply, was to be provided only to the continuous process industries requiring continuous supply due to the continuous nature of their process.

In this connection, Regulation 3(2) of the UERC (Release of new HT & EHT Connections, Enhancement and Reduction of Loads) Regulations, 2008, specifies that loads for all HT

consumers having continuous processes, irrespective of load applied for, shall be released through independent feeder only. The Commission, in its Tariff Order dated April 10, 2010 had, therefore, decided that with effect from May 1, 2010, the option of continuous supply shall remain available only to continuous process industries operating twenty four hours a day and for seven days in a week without any weekly off. Further, this option was only to be available to continuous process industries connected through an independent feeder or industrial feeder provided that all the industrial consumers on such feeder opted for continuous supply option and for availing such an option, they were required to pay 15% extra energy charges at revised tariff with effect from May 1, 2010 or from the date of connection, whichever is later till March 31, 2011 irrespective of actual period of continuous supply option.

In its Tariff Order dated May 24, 2011 for FY 2011-12, Tariff Order dated April 11, 2012 for FY 2012-13 and MYT Order dated May 6, 2013 for FY 2013-14 to FY 2015-16, the Commission decided to continue with the same provisions for Continuous Supply as approved in its Order dated April 10, 2010.

Further, the Commission in its Tariff Order for FY 2014-15 has not increased the continuous supply surcharge and has retained the surcharge at 15% of energy charges.

At present, the option of continuous supply is only available to continuous process industries operating twenty four hours a day and for seven days in a week without any weekly off. Further, this option is only available to continuous process industries connected through an independent feeder or industrial feeder provided that all the industrial consumers on such feeder opt for continuous supply option and for availing such option, they need to pay 15% additional energy charges.

The Commission in its last tariff order also clarified the following key issues, pertaining to applicable conditions for existing and new continuous supply consumers in order to avoid any misinterpretation of the conditions:

- Consumers who are existing Continuous Supply consumers shall continue to remain Continuous Supply consumers and they need not apply again for seeking continuous supply option. However, in case of any pending dispute with UPCL in the matter of continuous supply on certain feeders, those consumers will have to apply afresh, for availing the facility of continuous supply, by May 31, 2014;
- The new applicants for continuous supply for power (including those who are applying afresh as per above) can apply for seeking the continuous supply option at any time during the year. However, continuous supply surcharge for existing consumers shall be applicable with effect from May 1, 2014 till March 31, 2015. UPCL shall provide the

facility of continuous supply within 7 days from the date of application, subject to fulfilment of Conditions of Supply as mentioned in Clause 6 under Tariff Schedule of RTS-7. However, in case of re-arrangement of supply through independent feeder, UPCL shall provide the facility of continuous supply from the date of completion of work of independent feeder subject to fulfilment of Conditions of Supply;

- The existing consumers availing continuous supply option, who wish to discontinue the continuous supply option granted to them earlier, will have to communicate in writing to UPCL latest by May 31, 2014, and they shall continue to pay continuous supply surcharge alongwith the tariff approved in this Order till May 31, 2014. Further, in this regard, if due to withdrawal by one consumer from availing continuous supply option on a particular feeder, which supplies to other continuous supply consumers as well, the status of other continuous supply consumers on that feeder is affected, then UPCL shall inform all the affected consumers in writing, well in advance;
- UPCL shall not change the status of continuous supply feeder to a non-continuous supply feeder;
- UPCL/PTCUL shall take up augmentation, maintenance and overhauling works on top priority, especially in the sub-station where circuit breakers, other equipments, etc., are in dilapidated condition and, thereby, shall ensure minimisation of interruptions of the continuous supply feeders;
- UPCL/PTCUL shall carry out periodical maintenance of the feeders supplying to continuous supply consumers. The licensees shall prepare preventive maintenance schedule, in consultation with the continuous supply consumers, well in advance, so that such consumers can plan their operations, accordingly.

In this regard, during the previous tariff determination process, non-continuous supply industries had requested to extend the provision of continuous supply option to non-continuous industries as well. Some of the suggestions received in this regard are summarised below:

- a. Due to power cuts, the production processes of machines get hampered and the efficiency of machines also decreases. The power cuts also create lot of problems for the tourists visiting the State. Therefore, continuous power supply should also be kept in proposed tariff for the industrial and tourism development in the State.
- b. The equipment required for installation of mobile towers needs uninterrupted electricity supply. Any obstruction in power supply leads to disruption of network adversely impacting various segments of the society.
- c. The continuous supply is applicable to independent and industrial feeders. In case of industrial feeders, it is necessary to provide the continuous supply to all connected consumers on a feeder. In case, any of the connected consumer of that feeder not

- opting for continuous supply, then continuous supply is not provided to all the other connected consumers to that industrial feeder. An appropriate arrangement may be made where other consumers connected on the feeder, who have not opted for continuous supply, are penalized if they consume power during scheduled load shedding/load restriction. However, this can be considered as one of the option and the Commission is requested to find a solution for this problem to facilitate power supply to industries who want to avail continuous supply.
- d. Continuous power supply should be allowed on all industrial feeders with penalty clause for non-continuous consumers on that feeder. In case they use power during declared rostering time and period, the power supply should not be cut from the source in any case. It is not possible to have independent feeder everywhere due to various reasons and hence, genuine consumers are deprived of this facility just because they are not having independent feeder.
 - e. The industries opting for continuous supply connected on independent/industrial feeder should be provided continuous supply irrespective of their process and option by other industries. The non-opting industries can be restricted to use small percentage of load during restricted hours and in case of exceeding the load, very heavy penalty for excess usage of load and double the continuous supply surcharge can be imposed on them to make them disciplined.

Considering the suggestions made by stakeholders, the Commission is contemplating to provide the continuous supply option to non-continuous industries also. Towards this, the practice adopted in some other States in this regard is also summarised below:

Maharashtra (MSEDCL)

RATE SCHEDULE FOR FY 2012-13

HT I: HT- Industry

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Consumer Category	Demand Charge(Rs./kVA/ month)	Energy Charge (Rs./kWh)
HT I -Industry		
Continuous Industry(on express feeder)	190.00	7.01
Non-continuous Industry (not on express feeder)	190.00	6.33
Seasonal Industry	190.00	7.79
ToD Tariffs (in addition to above base Tariffs) (in paise/kWh)		
2200 Hrs-0600 Hrs		-100
0600 Hrs-0900 Hrs& 1200 Hrs-1800 Hrs		0
0900 Hrs-1200 Hrs		80
1800 Hrs-2200 Hrs		110

Note:

.....

iv. Only HT industries connected on express feeders and demanding continuous supply will be deemed as HT continuous industry and given continuous supply, while all other HT industrial consumers will be deemed as HT non-continuous industry.

Uttar Pradesh

RATE SCHEDULE FOR FY 2014-15

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10. PROTECTIVE LOAD:

Consumers getting supply on independent feeder at 11 kV & above voltage, emanating from sub-station, may opt for facility of protective load and avail supply during the period of scheduled rostering imposed by the Licensee, except under emergency rostering. An additional charge @ 100% of base demand charges fixed per month shall be levied on

the contracted protective (as per Electricity Supply Code) load each month. However, consumers of LMV-4 (A) -Public Institutions will pay the additional charge @ 25% of base demand charges only. During the period of scheduled rostering, the load shall not exceed the sanctioned protective load. In case the consumer exceeds the sanctioned protective load during scheduled rostering, he shall be liable to pay twice the prescribed charges for such excess load."

As it is observed, in other States, i.e. Maharashtra and Uttar Pradesh, an option of availing supply on continuous basis during load shedding period is only available for consumers getting supply on independent feeders.

In view of the above, the Commission intends to extend an option of continuous supply to non-continuous process industries also and to remove the condition of continuous process industries operating twenty four hours a day and for seven days in a week without any weekly off provided these industries are connected through an:

- (a) independent feeder ; or**
- (b) industrial feeder provided that all the industrial consumers on such feeder opt for continuous supply option.**

LOAD FACTOR BASED SLABS FOR HT INDUSTRIAL CONSUMERS

Load Factor based Slabs for HT Industrial Consumers

The existing rate schedule for 'RTS-7: LT and HT Industry' is as follows:

Description	Energy Charge		Fixed/Demand Charge per month	Minimum Consumption Guarantee (MCG) Charge
1. LT Industry having contracted load upto 75kW (100 BHP)				
1.1 Contracted load up to 25 kW	Rs. 3.75/kWh		Rs. 100/kW of contracted load	60kWh/kW of contracted load/month & 720 kWh/kW of contracted load/annum
1.2 Contracted load more than 25 kW	Rs. 3.40/kWh		Rs. 100/kVA of contracted load	60kVAh/kVA of contracted load/month & 720 kvAh/kVA of contracted load/annum
2. HT Industry having contracted load above 88kVA/75kW (100 BHP)	Load Factor	Rs./kVAh		
2.1 Contracted Load up to 1000 kVA	Upto 33%	3.05	Rs. 210/kVA of the billable demand*	
	Above 33% and upto 50%	3.30		
	Above 50%	3.60		
2.2 Contracted Load More than 1000 kVA	Upto 33%	3.05	Rs. 270/kVA of the billable demand*	
	Above 33% and upto 50%	3.30		
	Above 50%	3.60		

During previous tariff determination exercise, some stakeholders suggested that some of the industries opting in one shift also had to pay the higher tariffs as their load factor worked out to marginally higher than 33% and this also resulted in mal-practices in certain instances. Some

stakeholders suggested to re-categorise the slabs in two slabs. Some stakeholders also suggested that if a HT consumer starts consuming more power it would lead to higher tariffs as the tariff for load factor above 50% is higher and hence load factor based tariff should not be there. Further, some of the stakeholders also suggested that the tariff at higher load factors should be lower than the tariff at lower load factors.

The Commission in its Multi Year Tariff Order dated May 6, 2013 had discussed this issue in detail. The relevant extract of the Order is reproduced below for reference:

“Categorisation of HT Industries and Load Factor based Tariff

The Commission has considered the stakeholders/industries responses and observed that some of the consumers have again raised the issue of load factor based tariff for HT Industries. Some of the stakeholders submitted that the load factor based tariff for HT Industries is discriminatory as well as against the provisions of the Act, Tariff Policy and the Commission’s Tariff Regulations.

The Commission would like to highlight Section 62(3) of the Act, which empowers the Appropriate Commission, while determining the tariff, to differentiate according to the consumer’s load factor, power factor, voltage, total consumption of electricity etc. Section 62(3) of the Act is reproduced below:

“The Appropriate Commission shall not, while determining the tariff under this Act, show undue preference to any consumer of electricity but may differentiate according to the consumer's load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required” (emphasis added).

Regulation 93(2) of UERC (Terms and Conditions for Determination of Tariff) Regulations, 2011, specifically empowers the Commission to design load factor based tariffs for any category of consumers and is reproduced below:

“The Commission, shall not, while determining the tariff, show undue preference to any consumer of electricity but may differentiate according to consumer’s load factor, voltage, total consumption of electricity during any specified period or time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required. “

The Commission would like to highlight that it had first introduced the load factor based tariff for the steel industries in its Order dated August 24, 2004. The Commission had recorded the rationale for load factor based tariff in Para 4 of the said Order, which is reproduced below:

“4. Tariff Design for Power Intensive Units 4.1 Approach

(1) The tariff for any consumer category should reflect the cost of supply, which comprises of power purchase cost and all other costs that the licensee incurs. For realizing the additional cost

of power required to be purchased for meeting their demand from the PIUs themselves, the charges realizable from them will have to be linked to their consumption levels.

(2) The power consumption of any unit is a function of its contracted load and the extent of its utilization, which in turn get reflected in the demand charges and energy charges respectively. Both these elements of tariff need to increase with consumption beyond a threshold level.

(3) The Two Part Tariff suffers from a drawback that it inherently tends to encourage high consumption as the same reduces the effective per unit composite rate. This inevitable distortion is more pronounced with higher consumption levels. To correct this, tariff also needs to increase in a manner so as to achieve a near uniform composite rate. To do this demand and energy charges would have to increase with every small increase in contracted demand or load utilization percentage. Although theoretically possible, such an approach would make the tariffs too complex, incomprehensible and will pose serious problems in implementation.

(4) There is, therefore, a trade off between the simplicity of the tariff structure and precision in correcting the above distortion. The Commission's attempt has been to strike a balance between the two by choosing a uniform rate of demand charge and three rates of energy charges linked to the consumption levels represented by the Load Factor.

(5) The Commission has avoided sharp increases in energy charges and has relied more on demand charges to be levied on such consumers. This approach is likely to be helpful in discouraging overuse and wastage by consumers induced by high minimum charges as substantial part of the minimum charge gets subsumed in the demand charges and the temptation to use extra energy gets limited to the balance minimum charge.

(6) Accordingly while the demand charges have been increased for all Power Intensive Units, the energy charge has not been changed upto a maximum load factor of 33%, where after it increases in stages."

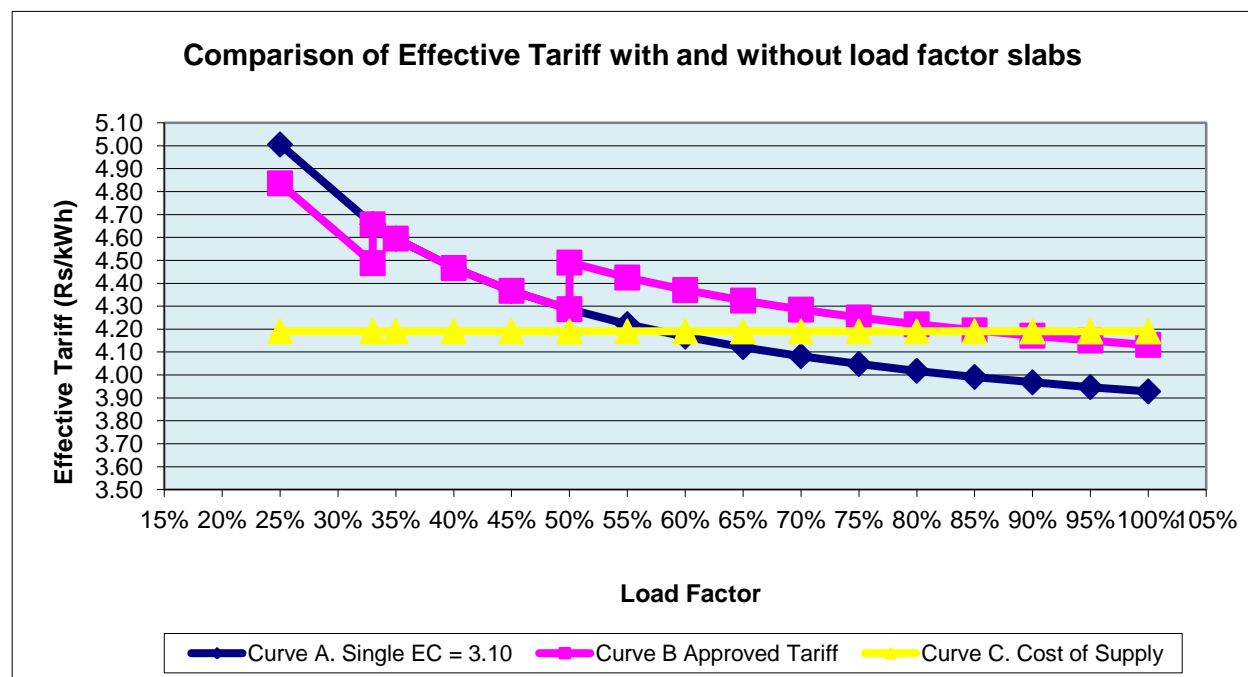
The above reasoning can be easily explained by taking an example with the figures of approved tariff (Demand Charges Rs. 270/kVA/month and Energy Charges in three slabs of Rs. 3.05, 3.30 & 3.60/kVAh in current Tariff Order for FY 2013-14, where Average Cost of Supply has been taken as Rs. 4.19/kWh (Refer Curve C in the graph) and average tariff from HT industrial consumers including ToD surcharge and rebate has been designed to be Rs. 4.58/kWh. It is evident that in case of single energy charge (i.e. Rs. 3.30/kVAh of middle slab and demand charge of Rs. 270/kVA/month), without any load factor slabs, the effective tariff of an intended cross-subsidising consumer goes down steeply with increasing load factor, thereby reducing the quantum of cross-subsidy charged from it (Curve A in the graph). After a threshold level of load factor, this structure leads to an undesirable anomaly that the effective tariff becomes lower than the Cost of Supply and the consumer instead of being subsidising consumer becomes subsidised consumer. Thus, this structure apart from leading to the abovesaid anomaly is highly inequitable amongst the consumers of same category with consumers having low load factor being loaded with much higher tariff and making up for the loss due to lower tariff, even below the cost of

supply paid by consumers having high load factor consumers. The Table & Graph below shows these anomalies of consumers getting cross-subsidised after a particular load factor and wide range of tariffs over different load factors with the single rate structure. Increase of subsidy with increasing load factor is not only incorrect but also highly undesirable.

Table 7.7 : Effective Tariff & Cross-subsidy for HT Industry having contracted load 1 kVA

Load Factor	Consumption (kVAh)	Demand Charge (Rs./kVA)	Energy Charge (Rs./kVah)		Total Amount		Effective Tariff (Rs.kWh)		Cost of Supply Rs./kWh	Cross Subsidy %	
			Single EC of Rs.3.30 /kVah	Approved Tariff	Single EC of Rs.3.30/kVah	Approved Tariff	Single EC of Rs.3.30 /kVah	Approved Tariff		Single EC of Rs.3.30 /kVah	Approved Tariff
(1)	(2)	(3)	(4)	(5)	(6)=(3) + (4)	(7)=(3)+(5)	(8)=(6)/(2) x 0.9575	(9)=(7)/(2) x 0.9575	(10)	(11)=(8-10)/(8)	(12)=(9-10)/(10)
25%	180.00	270.00	670.94	639.12	940.94	909.12	5.01	4.84	4.19	19.46%	15.42%
33%	237.60	270.00	885.65	843.64	1,155.65	1,113.64	4.66	4.49	4.19	11.15%	7.11%
35%	252.00	270.00	939.32	939.32	1,209.32	1,209.32	4.59	4.59	4.19	9.66%	9.66%
40%	288.00	270.00	1,073.51	1,073.51	1,343.51	1,343.51	4.47	4.47	4.19	6.60%	6.60%
45%	324.00	270.00	1,207.70	1,207.70	1,477.70	1,477.70	4.37	4.37	4.19	4.22%	4.22%
50%	360.00	270.00	1,341.89	1,341.89	1,611.89	1,611.89	4.29	4.29	4.19	2.32%	2.32%
55%	396.00	270.00	1,476.08	1,560.10	1,746.08	1,830.10	4.22	4.43	4.19	0.76%	5.61%
60%	432.00	270.00	1,610.27	1,701.92	1,880.27	1,971.92	4.17	4.37	4.19	-0.54%	4.31%
65%	468.00	270.00	1,744.45	1,843.75	2,014.45	2,113.75	4.12	4.32	4.19	-1.64%	3.21%
70%	504.00	270.00	1,878.64	1,985.58	2,148.64	2,255.58	4.08	4.29	4.19	-2.58%	2.27%
75%	540.00	270.00	2,012.83	2,127.40	2,282.83	2,397.40	4.05	4.25	4.19	-3.39%	1.45%
80%	576.00	270.00	2,147.02	2,269.23	2,417.02	2,539.23	4.02	4.22	4.19	-4.11%	0.74%
85%	612.00	270.00	2,281.21	2,411.06	2,551.21	2,681.06	3.99	4.19	4.19	-4.74%	0.11%
90%	648.00	270.00	2,415.40	2,552.88	2,685.40	2,822.88	3.97	4.17	4.19	-5.30%	-0.45%
95%	684.00	270.00	2,549.59	2,694.71	2,819.59	2,964.71	3.95	4.15	4.19	-5.80%	-0.95%
100%	720.00	270.00	2,683.78	2,836.54	2,953.78	3,106.54	3.93	4.13	4.19	-6.25%	-1.40%

Graph : Effective HT Industrial Tariff



Accordingly, the Commission decided to keep lower energy charge for industries having low load factor and increase it after defined steps so that effective tariff remains within a small band around the desired tariff for a wide range of load factor (Curve B in the above graph). Ideally, to reduce the band width the number of slabs should be large. However, this poses practical problem of complexity in billing and comes at the cost of difficulty in understanding the bills. To strike a balance between complexity in tariff structure and band size of effective tariff, the Commission decided to have three slab structure. Thus, although it appears from the tariff structure that the consumers with higher load factor are paying higher tariff, actually their effective tariff is being brought closer to others and not made higher by staggered rates.

Further, as discussed in Chapter 3 of the Order, some of the stakeholders submitted that the principle applied for the categorisation of the industry on the basis of load factor should be on the principle of higher the load factor, lower the tariff as prevalent in other States. They further expressed that the higher load factor implies that the consumer consumes nearly as much as it has contracted for and has paid demand charge, accordingly, and the Utility stands to benefit by higher load factor because the utility is able to sell the electricity which it has arranged for meeting the demand of the consumer. They further opined that if the load factor is lower, the utility would find itself having contracted higher power from generating companies than it would be able to sell to the consumers and in this process may suffer loss. Some of the stakeholders also submitted that the higher tariff for higher load factor is not in line with Section 63 of Electricity Act, 2003 and the tariff principles incentivising low load factor is likely to cause

no demand side management, inefficient/unplanned utilization of resources and inefficient recording of electricity consumption.

The Commission does not agree with the views of the stakeholders that higher load factor implies that the Utility stands to benefit because the Utility is able to sell the electricity which it has arranged for meeting the demand of the consumer. The Commission would like to clarify that there is diversity in time of usage of electricity by different consumers and, hence, the actual simultaneous maximum demand of all the consumers put together shall always be less than the summation of their contracted loads. Further, nowhere, the Utility makes the power purchase arrangement equivalent to the contracted demand of its consumers. Further, increasing or decreasing the contracted load, and, hence, the load factor, on paper would not influence the consumption pattern of consumers and, hence, their simultaneous maximum demand, which is the basis for contracting power from different sources by the licensee rather than the contracted load/load factor of consumers. Therefore, the argument that if the load factor increases, the Utility is able to sell the electricity which it has arranged is totally incorrect. As discussed in Section 6 of the Order, currently there is huge demand supply gap and, hence, UPCL has to purchase additional power to meet the peak demand. Further, the utilisation of the contracted capacity from firm sources by UPCL is more than 90% and with the increase in load factor of consumers, the energy requirement of the Utility will further increase, which the Petitioner will have to purchase at marginal price, i.e. the Petitioner will have to purchase costlier power to meet the increase in energy requirement at higher load factor. Thus, to have cost reflective tariffs, the energy charges should increase with load factor.

Further, as regard to the practice adopted with respect to load factor billing in other States, the Commission is of the view that the cross-subsidies in some of these States are so high that even with these rebates and very high load factors, the effective tariff remains above cost of supply. In Uttarakhand, as the cross-subsidies are very low, the tariff needs to be corrected at different load factors to ensure that steepness of the effective tariff curve does not reduce the cross-subsidies to very low level or make them negative (subsidised). Infact, the slab based tariff specifying higher rate for higher slab of consumption is applicable in almost all States of the country, including Uttarakhand, even for the subsidised domestic category. In some of the States for domestic category, the slab based tariff is non-telescopic similar to the existing tariff structure for HT industries in Uttarakhand, which in a way is nothing but load factor based tariff under which consumer with higher consumption pays higher rates. Further, there is a practical difficulty in implementing slabs of tariffs for excess consumption only, due to ToD tariffs in vogue. Apportionment of various slabs of consumption for different time slots would be very complicated and would result in disputes between licensee and consumers as consumer would like to book cheapest slab (1st slab) against peak hour consumption and highest slab (last slab) against off-peak hour consumption. The licensee, on the other hand, would like to book 1st slab against off-peak consumption and last slab under peak hour consumption. Thus, this structure would unnecessarily complicate the billing process and would also lead to disputes. Due to these reasons, the Commission is not implementing slab based tariff for HT industrial consumers.

In view of the above, the Commission is continuing with the existing load factor based tariff structure for HT Industry. "

Considering the views of some of the stakeholders whose consumption is marginally higher than 33%, the Commission proposes to modify the load factor based slab structure for HT Industry and specify the tariff for two slabs as under:

- Slab 1 : Load Factor upto 40%
- Slab 2 : Load Factor above 40%

This will address the issue faced by some single shift industries whose consumption is marginally above 33% as their total period of operation would normally be around 9-10 hours per day and even with this modification also, the effective tariff of HT Industry consumers with the load factor in the range of 33% to 50% will not be lower than the average cost of supply.

TARIFF CATEGORISATION FOR HORTICULTURE AND FLORICULTURE CONSUMERS

Tariff Categorisation for Horticulture and Floriculture Consumers

As per the current Tariff Schedule, the Horticulture and Floriculture Consumers are covered under RTS 7 : LT and HT Industry.

The relevant extract of Tariff Order for FY 2014-15 dated 10 April, 2014 is as follows:

“RTS-7: LT and HT Industry

1. Applicability

This schedule shall apply to:

(i) All consumers of electrical energy for industrial and /or processing or agro- industrial purposes, power loom as well as to Arc/Induction Furnaces, Rolling/Re-rolling Mills, Mini Steel Plants and to other power consumers not covered under any other Rate Schedule

(ii) The Vegetable, Fruits, Floriculture & Mushroom integrated units farming, Processing, storing and Packaging shall also be covered under this Rate schedule.”

Some of the consumers have requested the Commission to include the Horticulture, Floriculture and other Agricultural related activities as a part of Agriculture Category. In this regard, the Commission has examined the Categorization of Horticulture and/or Floriculture in Tariff Schedules of some other States, which is summarised in the Table below:

Table: Horticulture and/or Floriculture Tariff Categorisation in other States:

States	Consumer Category which include Horticulture and/or Floriculture:
Delhi	Non-Domestic (Low Tension) - NDLT
Uttar Pradesh	LMV- 6: Small and Medium Power (loads up-to 100 BHP (75kW))
	HV- 2: Large and Heavy Power (load above 75 kW (100 BHP))
Madhya Pradesh	LV - 5.2: Agriculture and allied activities
	HV - 5.2: Other than agricultural use
Maharashtra	LT IV: Agricultural
	HT V: Agricultural
Karnataka	HT-2(a): Industries
	HT-3(b): Irrigation and Agriculture Farms
	LT-4(c): Private Horticulture Farms
	LT-5: Heat and Motive Power

States	Consumer Category which include Horticulture and/or Floriculture:
Chhattisgarh	LV-3: L.T. Agriculture
Himachal Pradesh	Irrigation and Drinking Water Power Supply (IDWPS)
Andhra Pradesh	LT-III: Industry
Kerala	Low Tension - V (B) - Agriculture
Punjab	Agriculture pumping supply(AP)
Tamil Nadu	Low Tension III-A: Cotton and Tiny Industries
	Low Tension IV: Pumping Supply to Agriculture and allied activities
Haryana	Agriculture Pump Set Supply (AP Supply)

As observed from the Table above, some States such as Madhya Pradesh, Karnataka, Kerala, Punjab, Tamil Nadu have included consumers of Horticulture, Floriculture and other Agricultural allied activities in a separate category meant for these consumers. In the States of Maharashtra, Chhattisgarh and Haryana, these consumers are included in Agriculture category. In case of Delhi, these consumers are part of Non-Domestic category and in case of Uttar Pradesh, these consumers are part of Industrial category.

As discussed earlier, in the State of Uttarakhand, these consumers as of now are part of Industrial category with the tariff (average billing rate) being slightly higher than Average Cost of Supply. It may not be appropriate to shift the category of these consumers from Industrial category to Agriculture category as the tariff of agriculture consumers is substantially lower than the Average Cost of Supply.

However, as the activities involved in these are in nature close to agricultural activities, the Commission intends to create a separate category for the Agriculture Allied Activities which will apply to the consumers engaged in Horticulture, Floriculture, etc. with an appropriate tariff.

Stakeholders' Comments /suggestions

Comments/suggestions on the above issues may be submitted in writing (letter or e-mail) by all stakeholders and public at large to the Secretary, Uttarakhand Electricity Regulatory Commission, on or before 16.02.2015 at the following address:

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