

In-House Paper on Rationalizing Rural Domestic Tariff & achieving 100% Metering

The paper proposes a Model which aims at the following:

1. Achieving 100% metering of rural unmetered consumers.
2. Synchronizing rural tariff structure with the urban tariff structure.
3. Reducing the cross-subsidies among the categories / sub-categories over the years.
4. Ensuring no Tariff Shock to the rural unmetered consumers while doing the above three.

On the issue of Rural Metering the legislative provisions and the earlier directions of the Commission are very clear that 100% metering of all the consumers should be done in a time bound manner. It is ironical that while quite a few of the States have achieved 100% metering but Uttar Pradesh is lagging behind in rural metering. Uttar Pradesh still has about 64 lacs unmetered consumers in rural area. This number is quite large keeping in view the total number of consumers in all the State owned Distribution Companies.

Unmetered rural supply in rural areas in Uttar Pradesh has unfortunately not been recognized as a problem and the distribution companies have not made enough efforts on this front over the last many years. In July 2015, one sincere step was taken and 24 lacs new connections were given and the cost of meters was also charged from the consumers but in rural areas even new consumers have not been metered. In Rajeev Gandhi Vidyut Gramin Vidyutikaran Yojna there was a provision for metering of all the new connections in rural area, therefore only those connections have been metered but still the new connections given in 2015 and the earlier connections which are continuing are all unmetered. The Commission has been continuously insisting for metering of rural consumers but the results are far from satisfactory.

Unmetered supply in rural areas causes loss to the distribution companies in the following ways:

- 1) The distribution companies are not able to understand the consumption pattern in households and the commercial establishments. Therefore any norm of consumption per kilowatt is based on estimate. Since the consumption depends on the geographical pattern and hours of supply, the normative consumption estimates are illusionary as a result of which the energy accounting and planning is always inaccurate.

- 2) The unmetered supply creates the tendency of misuse of electricity in rural areas. It has been observed that even in the day time the households do not switch off the electricity. This kind of state is neither in the interest of the Discoms nor in the national interest.
- 3) The electricity distribution divisions which have both urban and rural load have a tendency to book the urban theft in rural consumption. This promotes the malpractices even in the areas of metered supply.
- 4) In the absence of the meters it is very difficult to ascertain the requirement of subsidy which the State Government should pay for subsidized tariff in the rural areas.
- 5) Discoms have to abide by the metering plan submitted by them to ensure 100% metering in a time frame as decided by the Commission i.e. March 31, 2018.

Uttar Pradesh is a large state and rural supply is also quite significant. It has a direct impact on the financial health of the distribution companies and therefore proper energy audit and appropriate recovery from rural consumers is a need of the hour to bring AT&C loss to 15% by 2019-20 as has been promised by Discoms under UDAY Scheme. Without rural metering, billing and collection in rural areas distribution companies can never achieve the AT&C target of 15%.

Since the rural supply is subsidized therefore accurate computation of subsidy payable by the State Government is also necessary. If the distribution companies are able to prove the actual supply in rural areas, it can claim due amount of subsidy from the State Government.

Keeping all the above in mind, a Model is being proposed / conceptualized. There are a few assumptions which have been taken are as discussed in detail below:

PROPOSED MODEL FOR RURAL DOMESTIC CONSUMERS

1. No new connection will be released without a meter.
2. All existing unmetered rural domestic consumers will apply for getting a metered connection by 31st August, 2017. The licensee will widely publicise the same vide newspapers, banners, camps, media, loud-speakers etc (The dates displayed / used are just indicative for the purpose of demonstrating the implementation time frames etc. to give an idea of the roll-out).

3. The licensee will install meters on all such consumers who have applied for meters as soon as possible and not in any case later than 31st December, 2017.
4. All unmetered rural domestic consumers who have applied for meters by 31st August, 2017 will continue to pay the unmetered rural domestic tariff till 31st December, 2017 after which they will be paying the tariff applicable to the metered rural domestic consumers.
5. All unmetered rural domestic consumers who have not applied for meters by 31st August, 2017 will continue to pay the unmetered rural domestic tariff till 31st August, 2017 after which they will pay the bill on the basis of normative consumption with energy charge of 2 times of rural metered domestic tariff till they do not get themselves converted to metered.
6. If the licensee does not install meters by 31st December, 2017 on the premises of all such consumers who have applied for metered connection by 31st August, 2017, then such consumers will continue paying the unmetered rural domestic tariff; however an equivalent amount i.e. will be considered as deemed revenue and this will be borne by the licensee. The licensee will be required to keep a separate and transparent account of the same.
7. Any unmetered rural domestic consumer who applies for getting metered after 31st August, 2017 will be metered by the licensee as soon as possible and not in any case later than 4 months and if the licensee fails to do so then such consumers will continue paying the unmetered rural domestic tariff; however an equivalent amount will be considered as deemed revenue and this will be borne by the licensee. The licensee will be required to keep a separate and transparent account of the same.
8. The Tariff payable by the converted rural metered consumers presently will be 35% of urban tariff and this percentage will progressively increase over the years (i.e. 45% next year, 55% next to next year and so on). The figure of 35 % is arrived at from sensitivity analysis as discussed later at Page 11.

ASSUMPTIONS AND DATA USED FOR EVOLVING THE MODEL:

Assumptions and data used for evolving the Model are detailed as follows:

1. Consumers having load of 1 kW, 2 kW, above 2 kW have mix of 30.72%, 49.28% and 20% respectively as per data submitted by Licensees in the ARR / Tariff petition in FY 2016-17.
2. Billing determinants for Domestic consumers (getting power supply under rural schedule) for FY 2016-17 (as submitted by the licensees)

Particulars	DVVNL		MVVNL		PVVNL		PuVVNL		Consolidated	
	Un-metered	Metered	Un-metered	Metered	Un-metered	Metered	Un-metered	Metered	Un-metered	Metered
Consumer (Numbers)	669,043	1,835,980	1160891	900159	1,376,050	786,858	2,240,934	1,412,506	5,446,918	4,935,503
Connected Load (kW)	896,206	2,619,356	1643949	786815	2,571,863	1,647,745	3,568,840	1,990,879	8,680,858	7,044,795
Projected Billed Energy (MU)	1,161	3,957	2,131	965	3,333	965	4,625	2,944	11,250	8,831

3. Based on the above table percentage of rural domestic metered and rural domestic unmetered consumers of the total rural domestic consumers is as follows:

Consumer Category (Rural Domestic)	Sales	Percentage Sales
Unmetered	11,250	56.02%
Metered	8,831	43.98%
Total	20,081	100.00%

4. ACOS as Approved by the Commission is as follows:

ACOS for FY 2016-17

Particulars	Name of Licensee				Consolidated (4 Discom) - (Rs./kWh)
	MVVNL	PuVVNL	PVVNL	DVVNL	
ACOS	6.42	6.50	6.09	6.47	6.35

5. ABR for the Rural domestic and Agriculture consumer as approved by the Commission is as follows:

ABR for FY 2016-17

Categories	ABR (Rs./kWh)
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Categories	ABR (Rs./kWh)
Rural Domestic unmetered	1.70
Rural Domestic metered	2.68
Agriculture	1.50

As per billing determinants submitted by the Licensees, it is pertinent to note that the percentage sales of rural domestic unmetered consumers is more than that of rural domestic metered consumers and also the ABR of rural domestic unmetered consumers is less than half of the ABR of rural domestic metered consumers. It is apparent that ABR of rural domestic unmetered consumer is much too short of ACOS and hence, abiding by the intent of the Section 55 of Electricity Act, 2003, electricity should not be supplied without installation of the correct meter.

ANALYSIS FOR EVOLVING THE MODEL:

1. The Tariff Structure for the domestic consumers getting supply under rural schedule is as follows (as per Tariff Order for FY 2016-17 dated August 1, 2016):

Rate Schedule for Consumers getting Supply under Rural Domestic Category (FY 2016-17)			
Metered (Two Part Tariff)			
Fixed Charges	Rs. / kW / month	A	50
Energy Charges	Rs. / kWh	B	2.2
Unmetered (Single part Tariff)			
Fixed Charges			
Upto Load of 2 kW	Rs. / kW / month	C	180
For load more than 2 kW	Rs. / kW / month	D	200

2. The Tariff Structure for the domestic consumers getting supply under Urban schedule is as follows (as per Tariff Order for FY 2016-17 dated August 1, 2016):

OTHER METERED DOMESTIC CONSUMERS:

Lifeline consumers: Consumers with contracted load of 1 kW, energy consumption up to 150 kWh / month.

Description	Fixed Charge	Energy Charge
Loads of 1 kW only and for consumption up to 50 kWh / month (0 to 50 kWh / month)	Rs. 50.00 / kW / month	Rs. 2.00 / kWh
Loads of 1 kW only and for consumption above 50 kWh / month up to 150 kWh / month (51 to 150 kWh / month)		Rs. 3.90 / kWh

Others: Other than life line consumers (i.e. consumers who do not qualify under the criteria laid down for lifeline consumers.)

Description	Consumption Range	Fixed Charge	Energy Charge
All loads	For first 150 kWh / month	Rs. 90.00 / kW / month	Rs. 4.40 / kWh
	For next 151 - 300 kWh / month		Rs. 4.95 / kWh
	For next 301 – 500 kWh / month		Rs. 5.60 / kWh
	For above 500 kWh / month (Starting from 501 st unit)		Rs. 6.20 / kWh

3. An analysis of the consumption behavior of rural domestic consumers with different loads was attempted. A typical consumption pattern is as follows:

(a) Typical Consumption by a Rural Domestic Consumer with connected load of 1 kW would be as follows:

Typical Consumption by a Rural Domestic Consumer (1 kW)							
Sl. No.	Electrical Appliances	No. of Appliances	Rating (W)	Connected load (W)	Hours of Running	Load Factor	Consumption per Month (kWh)
1	Tube light	1	40	40	6	1	7.30
2	CFL Bulb	1	15	15	6	1	2.74
3	Incandescent Bulb	2	100	200	6	1	36.50
4	Ceiling Fan	3	70	210	12	1	76.65
5	Television	1	125	125	6	1	22.81
	Total			590.00			146.00

(b) Typical Consumption by a Rural Domestic Consumer with connected load of 2 kW would be as follows:

Typical Consumption by a Rural Domestic Consumer (2 kW)							
Sl. No.	Electrical Appliances	No. of Appliances	Rating (W)	Connected load (W)	Hours of Running	Load Factor	Consumption per Month (kWh)
1	Tube light	2	40	80	6	1	14.60
2	CFL Bulb	1	15	15	6	1	2.74
3	Incandescent Bulb	5	100	500	6	1	91.25
4	Ceiling Fan	3	70	210	12	1	76.65
5	Television	1	125	125	6	1	22.81
6	Fridge	1	100	100	12	1	36.50
7	Pump	1	375	375	2	1	22.81
	Total			1,405.00			267.36

(c) Typical Consumption by a Rural Domestic Consumer with connected load of 4 kW would be as follows:

Typical Consumption by a Rural Domestic Consumer (4 kW)							
Sl. No.	Electrical Appliances	No. of Appliances	Rating (W)	Connected load (W)	Hours of Running	Load Factor	Consumption per Month (kWh)
1	Tube light	1	40	40	6	1	7.30
2	CFL Bulb	1	15	15	6	1	2.74
3	Incandescent Bulb	5	100	500	6	1	91.25
4	Ceiling Fan	5	70	350	12	1	127.75
5	Electric Iron	1	450	450	1	1	13.69
6	Television	1	125	125	6	1	22.81
7	Fridge	1	100	100	12	1	36.50
8	Cooler	1	170	170	6	1	31.03
9	Pump	1	375	375	2	1	22.81
10	Mixer	1	500	500	1	1	15.21
	Total			2,625.00			371.08

4. Typical Consumption for Rural Domestic Consumers can thus be summarized as follows:

Load (kW)	1 kW	2 kW	4 kW
Consumption (kWh)per month	146.00	267.36	371.08
Consumption per	1752.00	3208.32	4452.96

Load (kW)	1 kW	2 kW	4 kW
Annum			

The licensee is presently using the normative figure of 144 unit/ kW/ month for such rural domestic consumers. From this norm, the consumption for 4 kW comes to 576 units. However, it is obvious that as load increases the consumption will not increase in multiples of 144. Hence for the purpose of this Model, the consumption figures have been taken as 267.36 kWh /month for 2 kW consumers and 371.08 kWh /month for 4 kW consumers as estimated in the Tables above. It is also pertinent to point out that for all such unmetered domestic consumers who get converted into metered, consumption is bound to fall as the consumers are likely to be austere in their consumption once they are metered.

5. Unmetered rural domestic consumer for load 1kW, 2kW, 4 kW presently pay the following:

Load (kW)	1 kW	2 kW	4 kW
Net Payable (Rs.) per month	180	360	800
Payable per Annum	2160	4320	9600

An unmetered rural domestic consumer would be encouraged to take metered connections, as he is being allowed to pay the same bill amount as rural domestic unmetered consumers (i.e. what he is paying so far), at least initially.

6. **Bill amount for metered rural domestic consumer at metered rural Tariff (i.e. Energy Charge @ Rs. 2.2 / unit and Fixed Charge @ Rs. 50/kW/month) would be as follows :**

(a) Bill calculation for 1 kW

1 kW		
Particulars	Unit	
Connected Load	kW	1.00
No. of Units Consumed in a month	kWh	146.00
Energy Charge	Rs.	321.20
Fixed Charges	Rs.	50.00
Total Electricity Charge	Rs.	371.20

(b) Bill calculation for 2 kW

2 kW		
Particulars	Unit	

2 kW		
Particulars	Unit	
Connected Load	kW	2.00
No. of Units Consumed in a month	kWh	267.36
Energy Charge	Rs.	588.20
Fixed Charges	Rs.	100.00
Total Electricity Charge	Rs.	688.20

(c) Bill calculation for 4 kW

4 kW		
Particulars	Unit	
Connected Load	kW	4.00
No. of Units Consumed in a month	kWh	371.08
Energy Charge	Rs.	816.38
Fixed Charges	Rs.	200.00
Total Electricity Charge	Rs.	1016.38

7. If we compare the above Bill amounts (at rural domestic metered tariff) with the bill amounts of rural domestic unmetered consumers, the picture emerges as below:

Particulars	Unit	Formula	1 kW	2 kW	4 kW
Net Payable by a metered consumer at rural metered Tariff	Rs./month	A	371.20	688.20	1016.38
Bill amount of existing Rural Un-metered consumer	Rs./month	B	180	360	800
% bill of unmetered consumer to the bill of rural metered consumer	Percentage	$C=B*100/A$	49.49%	52.31%	78.71%

8. Further, Bill amount for domestic metered consumer at Urban Tariff for these consumption levels would be as follows:

(a) Bill calculation for 1 kW

1 kW		
Particulars	Unit	
Connected Load	kW	1.00
No. of Units Consumed in a month	kWh	146.00

1 kW		
Particulars	Unit	
Energy Charge	Rs.	474.40
Fixed Charges	Rs.	50.00
Total Electricity Charge	Rs.	524.40

(b) Bill calculation for 2 kW

2 kW		
Particulars	Unit	
Connected Load	kW	2.00
No. of Units Consumed in a month	kWh	267.36
Energy Charge	Rs.	1240.94
Fixed Charges	Rs.	180.00
Total Electricity Charge	Rs.	1420.94

(c) Bill calculation for 4 kW

4 kW		
Particulars	Unit	
Connected Load	kW	4.00
No. of Units Consumed in a month	kWh	371.08
Energy Charge	Rs.	1800.57
Fixed Charges	Rs.	360.00
Total Electricity Charge	Rs.	2160.57

9. So, bill amount comparison of rural domestic metered (at urban domestic metered tariff) and rural unmetered category of consumers would be as follows:

Particulars	Unit	Formula	1 kW	2 kW	4 kW
Net Payable by an metered domestic consumer at urban metered Tariff	Rs./month	A	524.40	1420.94	2160.57
Bill amount of existing Rural Un-metered domestic consumer	Rs./month	B	180	360	800
% bill of unmetered domestic consumer to the bill of urban metered domestic consumer	Percentage	$C = \frac{B \times 100}{A}$	34.32%	25.34%	37.03%

10. In this background, a sensitivity analysis was done to arrive at the percentage of urban tariff which would be almost equal to the existing rural tariffs. Setting such a tariff (to be paid by the converted rural domestic unmetered consumers) will ensure least resistance by them in getting themselves metered. The sensitivity table is shown below:

Sensitivity Analysis:

Load in kW		1 Kw				2 kW				4 kW			
Units consumed per month per consumer		50	100	108	150	100	150	200	216	200	250	300	432
Rural Unmetered (at existing tariff)		180	180	180	180	360	360	360	360	800	800	800	800
Rural metered (at existing tariff)	FC	50	50	50	50	100	100	100	100	200	200	200	200
	EC	110	220	237.6	330	220	330	440	475.2	440	550	660	950.4
	Total	160	270	287.6	380	320	430	540	575.2	640	750	860	1150.4
Rural Unmetered (at urban metered tariff - existing)	FC	50	50	50	50	180	180	180	180	360	360	360	360
	EC	100	390	421.2	585	440	660	907.5	986.7	907.5	1155	1402.5	2055.9
	Total	150	440	471.2	635	620	840	1087.5	1166.7	1267.5	1515	1762.5	2415.9

Sensitivity Analysis - 1													
Amount to be paid by consumer (%)	Subsidy liable to be provided by GoUP (%)	Amount to be paid by the consumer (at various % of urban metered tariff)											
80.0%	20%	120.00	352.00	376.96	508.00	496.00	672.00	870.00	933.36	1,014.00	1,212.00	1,410.00	1,932.72
75.0%	25%	112.50	330.00	353.40	476.25	465.00	630.00	815.63	875.03	950.63	1,136.25	1,321.88	1,811.93
70.0%	30%	105.00	308.00	329.84	444.50	434.00	588.00	761.25	816.69	887.25	1,060.50	1,233.75	1,691.13
60.0%	40%	90.00	264.00	282.72	381.00	372.00	504.00	652.50	700.02	760.50	909.00	1,057.50	1,449.54
50.0%	50%	75.00	220.00	235.60	317.50	310.00	420.00	543.75	583.35	633.75	757.50	881.25	1,207.95
40.0%	60%	60.00	176.00	188.48	254.00	248.00	336.00	435.00	466.68	507.00	606.00	705.00	966.36
35.0%	65%	52.50	154.00	164.92	222.25	217.00	294.00	380.63	408.35	443.63	530.25	616.88	845.57
30.0%	70%	45.00	132.00	141.36	190.50	186.00	252.00	326.25	350.01	380.25	454.50	528.75	724.77
25.0%	75%	37.50	110.00	117.80	158.75	155.00	210.00	271.88	291.68	316.88	378.75	440.63	603.98
Bill Amount at Rural Unmetered Tariff		180	180	180	180	360	360	360	360	800	800	800	800

As can be seen from the table above, at 35% of urban domestic metered tariff, the present unmetered rural domestic consumer will get least Tariff Shock when they switch from unmetered to metered category. This percentage will be, however, scaled up progressively over the years. Hence, this Model suggests that the converted (from rural domestic unmetered to rural domestic metered) consumers will pay only 35% of the urban domestic metered tariffs initially.

11. As per the Model proposed, the tariff of the existing rural domestic metered consumers will be more than the rural domestic consumers who get themselves converted from unmetered to metered under this scheme. However, this will be a temporary phenomenon as in future, the rates will be increased, bringing the converted rural domestic consumers equal to existing rural domestic metered consumers.

12. This Model also entwines the concept of Direct Benefit Transfer (DBT) in which a subsidy is transferred directly to the consumer's account. The consumer will have to pay the Electricity Bill in a designated account of the Discoms and thereafter, an amount of subsidy will be transferred to the consumer's bank account. The bank accounts could be

linked to Aadhar thus, making the electronic transfers easier and accurate. In case of any default the subsidy could be stopped. Implementation of this scheme will increase the transparency, accountability and will also make such rural consumers realize the amount of subsidy being given to them. As they will have to first pay their bills, they will be now wary of spending electricity wastefully and it will also introduce the habit of energy conservation in them.

13. Subsidy Calculation (monthly) under DBT would be as follows:

Load in kW	Amount billed to unmetered domestic consumer at urban Tariff	Subsidy Percentage to be provided by GoUP	Amount payable by GoUP vide DBT to the rural domestic unmetered consumer	Amount payable by Consumer (Rural domestic unmetered)	Existing Bill amount (Rural domestic unmetered)
Formula	A	B	C=AXB	D=A-C	E
1	524.40	65%	340.86	183.54	180
2	1420.94	65%	923.61	497.33	360
4	2160.57	65%	1404.37	756.20	800

14. Total Subsidy Calculation (yearly) under DBT would be as follows:

Load (kW)	Percentage of unmetered rural domestic consumer	#No of rural domestic Un-metered consumers	Amount payable by GoUP to one rural domestic consumer vide DBT in Rs.	Subsidy provided to Un-metered consumer vide DBT (Monthly) amount in Rs.	Subsidy provided to Un-metered consumer vide DBT (Yearly) amount in Rs. Cr
	A	B	C	D=BXC	E=D*12/10 ⁷
1	30.72%	1,673,293.21	340.86	570,358,723.42	684.43
2	49.28%	2,684,241.19	923.61	2,479,202,323.42	2,975.04
4	20.00%	1,089,383.60	1,404.37	1,529,895,830.69	1,835.87
Total Subsidy provided to the rural unmetered consumers vide DBT					5,495.35

#Summation of no. of rural domestic unmetered consumers under 1 kW, 2kW and 4 kW is same as the total no. of rural domestic unmetered consumers provided in the billing determinant for FY 2016-17

15. Calculation for Total Subsidy to be provided by GoUP under this Model:

1. **Subsidy provided under DBT** to the rural domestic unmetered consumers (assuming rural domestic unmetered consumers billed at 35% of Urban Tariff)

= Rs. **5495.35** Crore..... (i)

2. **Subsidy required for the licensee** to reach at the level of ACoS under this Model

= (ACoS - ABR of rural domestic unmetered consumers at urban Tariff) * Sales of rural domestic unmetered consumers

Calculation of ABR of rural domestic unmetered consumer at urban tariff would be as follows:

Amount Billed (Rs. Crore)					
Load (kW)	Bill Amount of rural domestic unmetered consumers (billed at urban tariff)	Percentage of rural domestic unmetered consumers	No. of rural domestic Un-metered consumers	Total billed amount to the rural domestic unmetered consumer (Rs./month)	Amount billed to rural domestic unmetered consumers (Rs. Crore /annum)
A	B	C	D	E =B*D	F=E*12/10 ⁷
1	524.40	30.72%	1,673,293.21	877,474,959.11	1,052.97
2	1,420.94	49.28%	2,684,241.19	3,814,157,420.64	4,576.99
4	2,160.57	20.00%	1,089,383.60	2,353,685,893.37	2,824.42
					8,454.38

Sale (MUs)					
Load (kW)	Consumption of rural domestic unmetered consumers (kWh)	Percentage of rural domestic unmetered consumers	No. of rural domestic Un-metered consumers	Total consumption of the rural domestic unmetered consumers (Rs./month)	Total Energy consumed by the rural domestic unmetered consumer (MUs/annum)
A	B	C	D	E =B*D	F=E*12/10 ⁶
1	146.00	30.72%	1,673,293.21	244,300,808.60	2,931.61
2	267.36	49.28%	2,684,241.19	717,665,435.27	8,611.99
4	371.08	20.00%	1,089,383.60	404,252,097.57	4,851.03
					16,394.62

Now ABR is being calculated at Urban Tariff as follows:

=8454.38*10 / 16394.62

=Rs. 5.16 / unit

Now subsidy to be provided to licensee by GoUP (to cover the gap between ACOS i.e. Rs. 6.35/ kWh and ABR i.e. Rs. 5.16/ kWh) will come as follows:

$$= (6.35-5.16) * 16394.62/10$$

=Rs. **1962.40** Crore(ii)

So, Total Subsidy to be provided by GoUP for the Unmetered rural domestic category consumers under this Model = Subsidy Provided to Licensee + Subsidy provided to the rural domestic unmetered consumer (DBT)

= **5495.35 + 1962.40**= Rs. **7457.75** Crore

However, present level of subsidy is Rs. **5231.34** Crore.

16. Subsidy Summary for unmetered rural domestic consumers would be as follows :

Rs. Crore

Existing level of Subsidy	Subsidy provided to the consumers under DBT	Subsidy provided to Licensee	Total Subsidy to be provided by GoUP under this Scheme	Additional Subsidy required for implementation of the Scheme
A	B	C	D = B+C	E= D-A
5231.34	5495.35	1962.40	7457.75	2226.41

Considering all the variables constants (ABR, ACOS, etc.), and by decreasing the subsidy percentage by 10% (initially subsidy provided under DBT by GoUP is 65%) every year, the additional subsidy amount i.e. Rs 2226.41 Crore will come down to near zero in 3.5 years. In the years after 3.5 years, the subsidy burden will in fact start coming down.

17. Revised subsidy bill as per the Model for rural domestic unmetered consumers who have been converted to metered, to be borne by GOUP thus comes to Rs. **7457.75** Crore. However the subsidy bill burden for GoUP for this category was earlier Rs. **5231.34** Crore. The difference of the two is just Rs. **2226.41** Crore. However this is an estimated computation and the actual subsidy may come out to be even lesser because:

- Once the consumers get themselves metered, their consumption will go down drastically and hence the estimated normative consumption (used for calculation) will go down drastically.
- Over the years the 35% (35% of total bill amount payable by rural domestic unmetered consumer who have been converted into metered and billed at urban

metered tariff) percentage will be scaled up progressively. It will ultimately reach 100% of the urban tariffs in future.

- c) In future, 24 hours of supply will be provided for all rural consumers, this will in turn reduce the subsidy bill as the revenue will increase.
- d) Transparency will increase, 100% metering would help Discoms in energy accounting and energy auditing and would prevent theft.

18. It may be clarified here that presently the State Government does not pay to the Discoms what is payable to them on account of power being supplied to certain categories of the consumers at a subsidised cost. However, in this paper figures of what is payable by the State Govt. only, have been considered.

WHAT ALL WILL BE ACHIEVED?

1. The existing rural domestic unmetered consumers will get metered, thereby achieving 100% metering targets and hence attaining one of the prime objectives of the Electricity Act, 2003, the biggest challenge being that the existing unmetered tariff is far less than the metered tariff of rural domestic consumers.
2. Most States in India do not have 2 separate tariffs for rural and urban domestic. Further the legal framework requires gradual reduction of cross subsidy. So the Model has been developed with an objective of having uniform tariff applicable for all the domestic consumers. While doing this we were also able to retain the Life line Tariff in rural areas, and also the tariffs of rural consumers having a load of 1 KW and consumption upto 50 units goes down in this Model.
3. The emphasis has been to have uniform tariff for domestic category of consumers with an aim to achieving revenue neutrality in the current year and then scaling down the subsidy to rural domestic consumers progressively over the years.
4. All unmetered rural domestic consumers who have not applied for meters by the notified date will continue to pay the unmetered rural domestic tariff till the notified date after which they will pay the bill on the basis of normative consumption with energy charge of 2 times of rural metered domestic tariff till they do not get themselves converted to metered. Thus, the recalcitrant unmetered consumers will be penalised.
5. Distribution losses will reduce positively.
6. Greater Energy auditing & accounting will be achieved and theft could be prevented.
7. It is a well-known fact that "A unit saved is equivalent to two units generated". In future when the unmetered consumers get converted to metered, the consumers will tend to restrict their usage of electricity which will help in achieving the objective of

conservation of energy. It will also result in substantial increase in revenue realization for the licensees with a gradual reduction in burden of subsidy for GoUP.

STEPS FOR FUTURE

- i) The Discoms should start meter reading of all the rural consumers where the meters have been installed and raise the bill strictly on the basis of meter reading.
- ii) The Discoms should make an assessment of consumption pattern of the metered consumers in order to arrive at the norms of consumption for unmetered consumers as per the provisions of the UPERC MYT Distribution Tariff Regulations, 2014.
- iii) The Discoms should go for smart metering in rural areas also, to get over the problem of meter reading due to geographical spread. To start with they should immediately install smart meters on all DTs.
- iv) All the transformers in the rural area should be metered for energy accounting and to assess the distribution loss and impact of theft in the area. The concerned staff and officers must be made accountable for this.

You are requested to send your valuable comments & suggestions on the above concept paper by January 31, 2017 through email at - secretary@uperc.org or by post -

**Secretary,
Uttar Pradesh Electricity Regulatory Commission,
2nd Floor, Kisan Mandi Bhawan,
Vibhuti Khand, Gomti Nagar,
Lucknow –226010.
Phone: +91-522-2720426**