

Understanding Electricity Bill Charges- Part I

Introduction

- Electricity Bills of any commercial & industrial client is governed by the Indian Electricity Act 2003.
- Every state has different charges levied for various purpose
- PESTEL Analysis: Present political: Economical: Social: Technological: Environmental: Legal
- Solar substitution tariff

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Contract Demand

- A customer's contract demand is the amount of power which a customer agrees to pay to have available at all times.
- This refers to power which must be made available, as opposed to energy which can actually be consumed, contract demand is measured in kilowatts, not kilowatt-hours.
- Contract demand is based on the customer requirement with power supplier as per the supply agreement.
- Contract demand above 20 KW shall not be allowed to be reduced more than once within a period of thirty-six months from the date of initial supply or from the date of last reduction.
- Contract demand of 20 KW and below shall not be allowed to be reduced more than once within a period of twelve months from the date of initial supply or from the date of last reduction.

Reduction of Contract Demand

- Every application for reduction of contract demand shall be accompanied by:-
 1. Such processing fees as may be notified by the licensee for the particular category of consumer.
 2. Test report from the licensed contractor where alteration of installation is involved.
 3. Meter reading of the previous three months.
 4. Letter of approval of Electrical Inspector wherever applicable.

Enhancement of Contract Demand

- Every application for enhancement of contract demand shall be made to the designated authority of the licensee and accompanied by :-
 1. Such processing fee as notified by the licensee for the particular category of consumer.
 2. Test report from the licensed contractor where alteration of installation is involved.
 3. Letter of approval of Electrical Inspector wherever applicable.

Sanctioned Demand

- Sanctioned demand would be the amount of a facility's electrical demand that would be accepted without incurring any special fees/billings/charges.
- Sanctioned demand means the load in KW/ KVA which the licensee has agreed to supply from time to time subject to the governing terms and conditions.
- Contracted Demand is the demand viewed from the user angle and Sanctioned Demand is the demand viewed from the supplier angle.

Contract Load

- Contract load is the load (either in kW or kVA) decided in accordance with the written agreement/contract between the consumer and distribution companies.
- As contract load has a direct impact on monthly bill value, the consumer should judiciously decide their actual load requirement based on the existing pattern of consumption and future demand.
- There is no time barred restriction for upward revision of contract load. But downward revision of contract load is valid on the basis of application only once a year (i.e. keeping at least one year gap from the date of execution of last downward revision)

Sanctioned Load

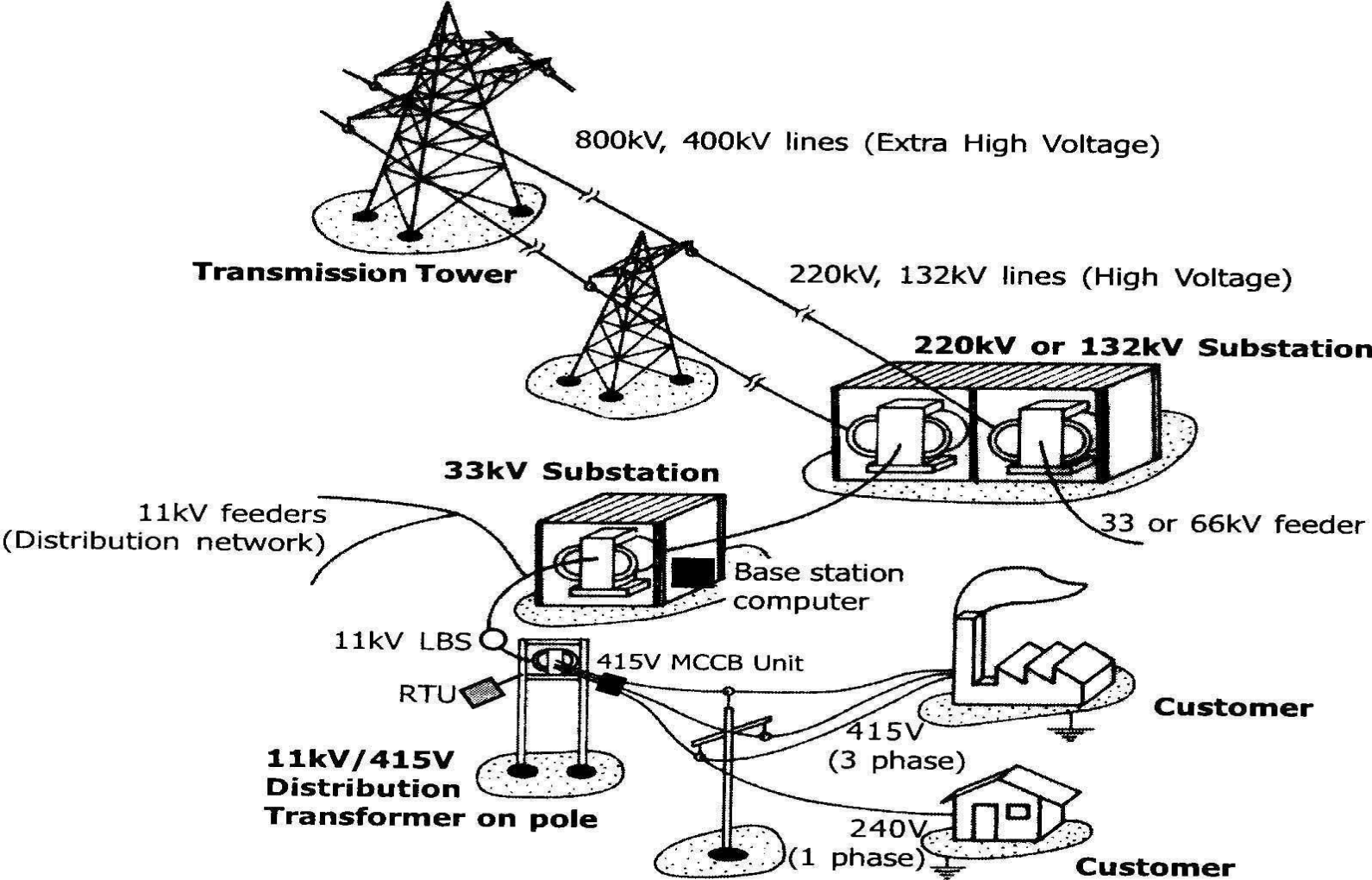
- Sanctioned load means the load in which the licensee has agreed to supply from time to time subject to the governing terms and conditions.
- It means that our electricity board has permitted us to use the amount of electricity which we might be exceeded once in a while but not always.
- The Electricity Act 2003 envisages that, consumers would keep a reasonable security with the distribution licensee based on electricity consumption. Currently, the security deposit is linked to sanctioned load.
- The commission has permitted the distribution licensees of Delhi to take up annual revision of sanctioned load of the domestic consumers based on the average of the three highest maximum demand readings recorded during the last financial year.

Transmission Voltage Levels

- Electric power transmission is the bulk movement of electrical energy from a generating site, such as a power plant, to an electrical substation.
- Most transmission lines are high-voltage three phase alternating current.
- Electricity is transmitted at high voltages (115 kV or above) to reduce the energy loss which occurs in long-distance transmission.

Voltage Level	Value Level Mark	System	Valid Section
Low Voltage Level	Below 1000V	AC	Secondary distribution
Medium Voltage Level	1000V to 69kV	AC	Primary distribution
High voltage Level	Below 100kV	AC	Secondary transmission
Extra High Voltage level	230kV to 800kV	AC, DC both	Primary Transmission
Ultra High Voltage Level	800kV to 1000kV	AC, DC both	Primary transmission
	Over 1000kV	HVDC is preferable	Primary Transmission

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Transmission Lines	Addition by 2012 (Ckm)	Addition by 2017 (Ckm)
765 kV	7,612	25000-30000
HVDC Bipole	11,078	4000 - 6000
400 kV	1,25,000	50000
220 kV	1,50,000	40000
Total	2,93,852	119,000 – 126,000
Substations	Addition by 2012	Addition by 2017
HVDC	14,700 MW	16,000 -22,000 MW
765 kV	53,000 MVA	1,10,000 MVA
400kV	1,45,000 MVA	80,000 MVA
220 kV	2,30,000 MVA	95,000 MVA
Total Capacity	4,28,000MVA	2,85,000MVA
Inter Regional Transfer Capacity	38,000 MW	75,000 MW

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- Electric power is normally generated at 11-25kV in a power station.
- To transmit over long distances, it is then stepped-up to 400kV, 220kV or 132kV as necessary.
- Power is carried through a transmission network of high voltage lines. These lines deliver the power into a common power pool called the grid.
- The grid is connected to load centers through a sub-transmission network of normally 33kV (or sometimes 66kV) lines. These lines terminate into a 33kV (or 66kV) substation, where the voltage is stepped-down to 11kV for power distribution to load points through a distribution network of lines at 11kV and lower.

Multiplying Factor (MF)

- MF means Multiplying Factor which is used to calculate our bill.
- Energy meters are generally designed to withstand continuously 440 Volts and a maximum of 60 A current.
- If customer's load is more than 60 A or supply voltage is higher than 440 Volts, Current and voltage transformers are used in metering circuit to restrict the current and voltage to the rated capacity of meter.
- These transformers reduce the voltage & current applied to meter in certain proportion which is called transformation ratio.

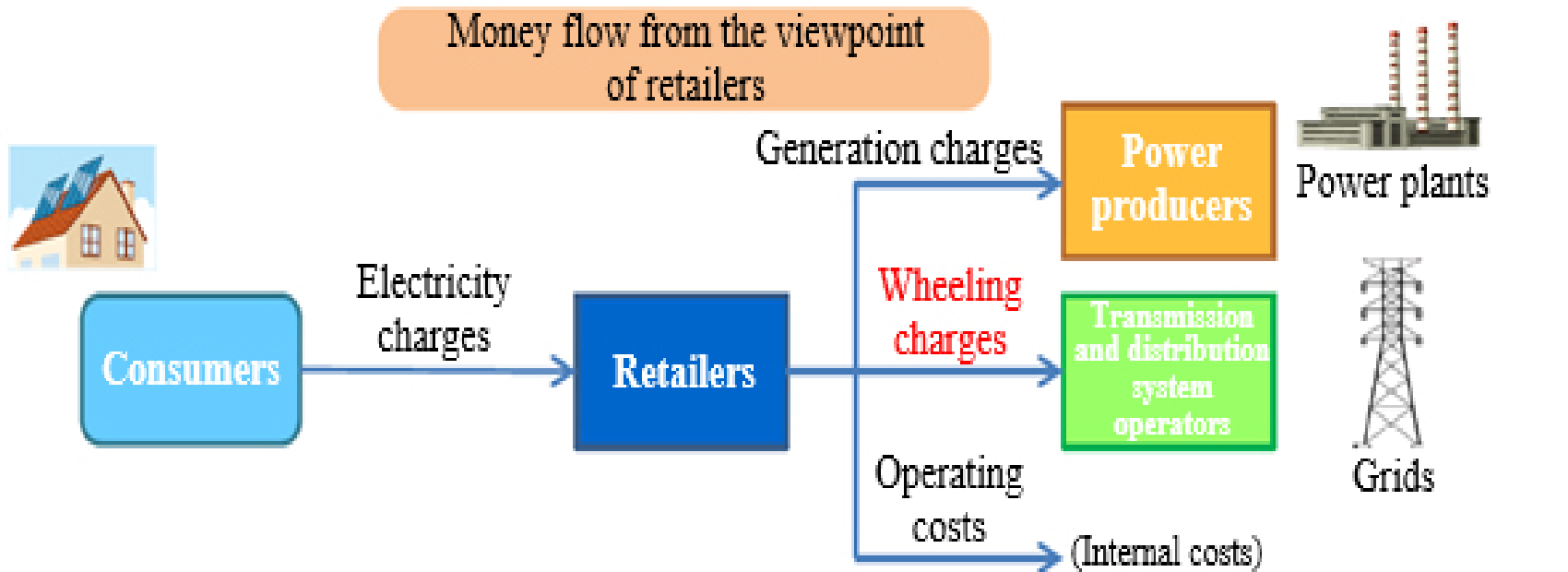
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- The consumption recorded by the meter is therefore less than the actual consumption of the customer in the same proportion.
- To arrive at actual consumption of customer, consumption registered by meter is multiplied by proportionality factor which is called Multiplying factor or MF.
- Thus $MF = CT \text{ ratio} \times VT \text{ ratio}$
- The ratio for CT & VT for a particular customer is designed in accordance with customer's load requirement and load pattern.

Wheeling Charges

- Wheeling is the transportation of electric energy (megawatt-hours) from within an electrical grid to an electrical load outside the grid boundaries.
- Two types of wheeling are :-
 1. **Wheel-through**, where the electrical power generation and the load are both outside the boundaries of the transmission system.
 2. **Wheel-out**, where the generation resource is inside the boundaries of the transmission system but the load is outside.
- Since the wheeling of electric energy requires use of a transmission system, there is often an associated fee which goes to the transmission owners.

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Electricity charges	Generation charges	About 30-40% of household electricity charges (Consists of personnel costs in the transmission and distribution sector, and repair and depreciation costs for transmission and distribution facilities, etc.)
	Wheeling charges	
	Operating costs	
	Profits	

Contd....

- The licensees, generating stations, captive generating plants and consumers shall be eligible for open access to distribution system of a distribution licensee on payment of the wheeling charges as may be determined by the Commission.
- **Applicability:** These charges are applicable to generating stations, captive generating plants and consumers who are connected to discom network i.e., at 11 and 33 kV.

Energy Charge

- This is the per unit electricity charge that we pay on our bill. It is mostly defined slab wise and the cost increases as units on electricity bill increases.

TARIFF

Consumption Slab	Fixed Charges (Rs/connection/month)	Energy Charges (Paise/kWh)
(a) 0-100 units	Single Phase Rs. 20/Month Three Phase Rs. 45/Month	130
(b) 101-200 units		190
(c) 201 to 400 units		310
(d) Above 400 units		360

Note

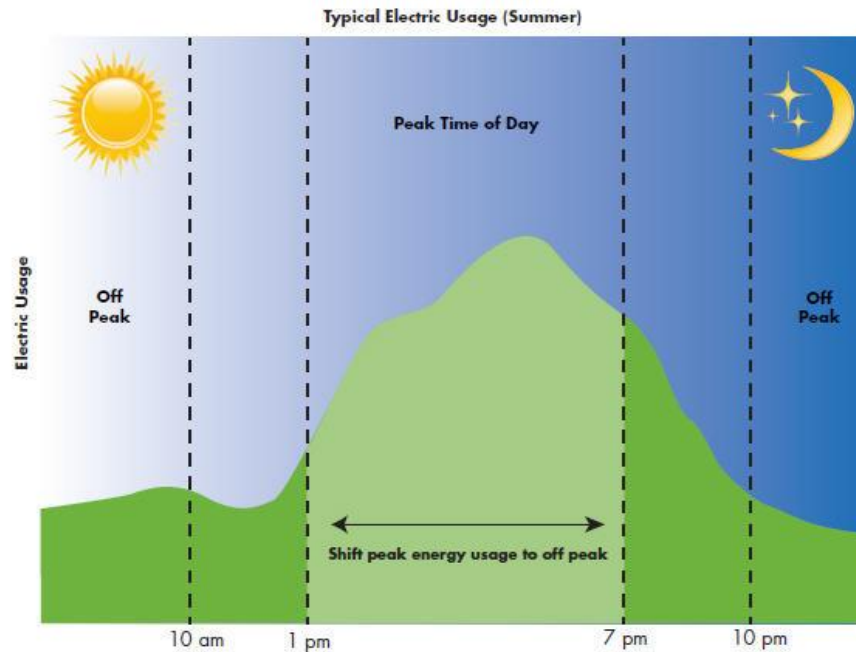
- a. The applicable monthly minimum charges for Single Phase connection would be Rs.100 per month and monthly minimum charges for Three Phase connection would be Rs.300 per month.
- b. The premises or flats which are closed or locked for continuous period of more than three months and having sanctioned / connected load more than 10 kW, the

How are energy charges calculated?

- Electricity consumption is recorded in terms of kWh or units by the electricity meter installed in your premise.
- A Kilowatt Hour is equivalent to running an appliance of 1 Kilowatt (or 1000 Watts) for 1 hour.
- A person from your utility (or DISCOM or distribution company) visits your premise at a selected frequency and records the reading on your meter.
- This meter reading is subtracted from your previous meter reading to come up with the units consumed for the period.
- The units consumed are then applied to a slab based tariff structure to come up with energy or electricity charges.

Time-of-Day (TOD) Charges

- The TOD rate charges a premium for electricity during periods of high demand on the electrical system, and offers a discount rate during off-peak hours.
- TOD allows the customer the choice of when to use electricity to do everyday tasks.
- The rate incentive encourages the customer to do their tasks, such as water heating, laundry, cooking, etc., during the off-peak, lower rate periods, with the reward being a lower monthly electric bill.
- **Peak Time:-**The peak times vary during the year. In the summer months of June, July, and August, they are from 11 AM to 7 PM. In the winter months of December, January, and February, the peak times are from 4 PM to 10 PM. During the months of March-May and September-November the peak times are 5 – 8 PM.



Summer Pricing (May 1 - October 31)

Weekends/Holidays (All Year)

Winter Pricing (November 1 - April 30)



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- Existing tariff stipulates a 25% rebate during off peak hours, whereas, an additional 20% surcharge over the normal tariff is levied on consumption recorded during peak hours.
- This is applicable to all categories of consumer other than domestic. It is mandatory for consumers having a sanctioned load or maximum demand above 50 kW / 54 kVA. However, it is optional for the consumers in the load range of 25-50 kW.
- The peak and non peak hours with applicable TOD tariff is:-

Month	Peaks Hours	Surcharge on energy charges	Off peak Hours	Rebate on energy Charges
April - September	1500-2400 Hrs	20%	00:00 – 06:00 Hrs	25%
October - March	1700-2300 Hrs	20%	23:00 – 06:00 Hrs	25%

Electricity Duty

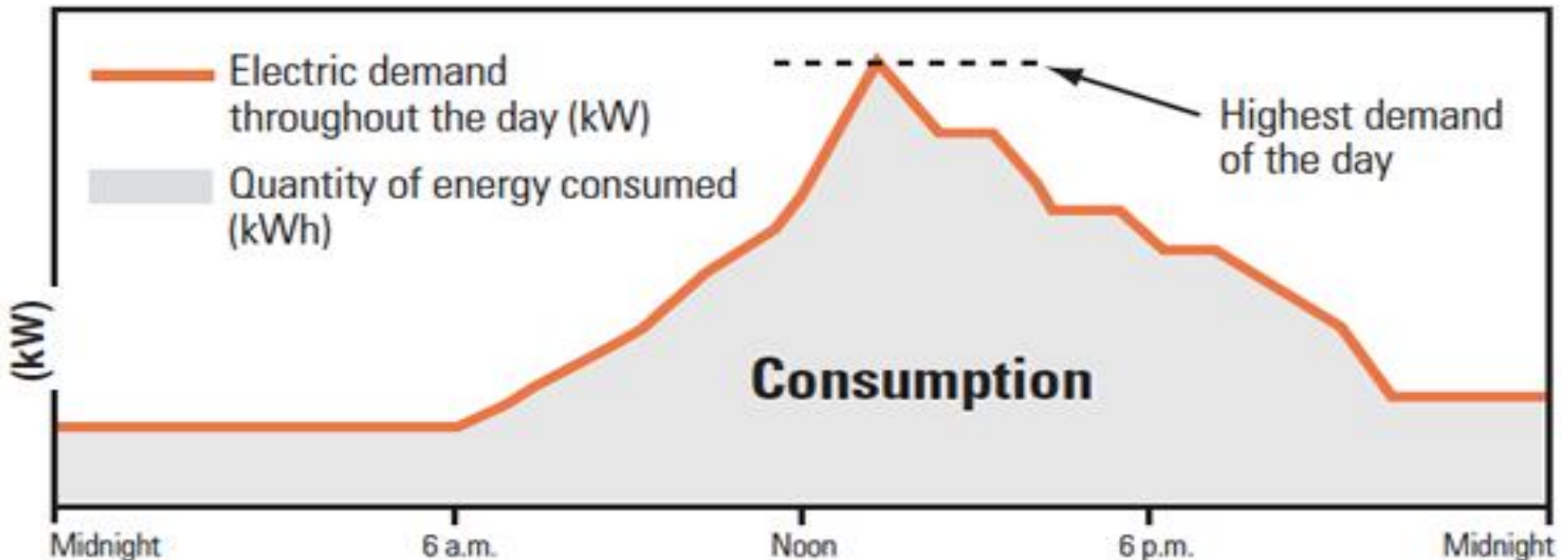
- As a substitute to cross subsidy the Tariff Policy gives option to state government to raise resources through mechanism of electricity duty and giving direct subsidy to only needy consumers.
- This is thought to be a better way of targeting subsidies effectively.
- Electricity duty is charged at different rates for different categories of consumers.
- Collection of electricity duty ensures that government is able to manage all finances related to the subsidies that are provided to needy customers for use of electricity.
- The duty is charged on consumption at the applicable rate per unit of electricity consumed.
- If our electricity consumption is higher, we will be getting a higher electricity duty.
- In certain states the duty is charged on the total charges. The only way to reduce the duty is to reduce the consumption per month.

State	Domestic	Commercial	Agriculture	LT Industry	HT industry	Railway
Andhra Pradesh	6	6	-	6	6	-
Assam	10	10	10	10	10	-
Bihar	6%	6%	4	6%	6%	6%
Chandigarh	9	11	-	11	11	-
Delhi	5%	5%	5%	5%	5%	5%
Goa	20	70	20	70	70	-
Gujarat	Rural - 7.5% Urban – 15%	25%	-	10%	15%	-
Haryana	15	15	-	15	15	-
Himachal Pradesh	3%	8%	10%	Small – 10% Medium – 15%	17%	-

Kashmir	14 – 22%	14 – 22%	22%	22%	22%	-
Jharkhand	20-24	24-30	2	5	5	15
Karnataka	6%	6%	-	6%	6%	6%
Kerala	10%	10%	10%	10%	10%	-
Madhya Pradesh	9-15%	9-15%	-	9%	15%	-
Maharashtra	15%	17%	-	9%	9%	-
Manipur	2 Surcharge – 10%	2 Surcharge – 10%	2 Surcharge – 10%	2 Surcharge – 10%	2 Surcharge – 10%	-
Meghalaya	5	6	6	1-3%	1-3%	-
Orissa	4%	4%	2%	4%	7%	-
Punjab	13%	13%	-	13%	13%	13%
Rajasthan	40	40	4	40	40	-
Tamil Nadu	-	5%	-	5%	5%	-

Demand Charges

- Demand is the rate at which we consume electricity or the amount needed to power our business at any given point in time.
- Our demand charges are based on the highest level of electricity supplied at one time during the billing period and at the time of day it's needed by our business.



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- Demand charges are based on the highest 15-minute average usage recorded on the demand meter within a given month.
- Demand charges cover electric utilities' fixed costs of providing a certain level of energy to their customers.
- Demand charges usually apply to commercial and industrial customers that pay time-of-use rates and at certain bill sizes.

Billed Demand

- The customer is billed every month based on the highest energy demand recorded during any 15 min slot during anytime of the month.
- Penalty if billed demand is higher than contract demand

Load Factor Incentive

- Consumers belonging to the consumer category HTP – I & HTP – II and having a load factor over 75% will be entitled to a rebate of 0.75% for every percentage point increase in load factor from 75% to 85%, and at the rate of 1% on the energy charges for every percentage point increase in load factor above 85%.
- The total rebate under this head will be subject to maximum ceiling of 15% of the energy charges for that consumer.
- Load factor rebate will be available only if the consumer has no arrears with the Board, however the rebate shall be available to the consumers who are in arrears, provided payment of such arrears in installments has been permitted by the Board and installment due has been regularly paid as scheduled.

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- Load Factor Rebate will be available only if payment of the energy bill is made within seven days from the date of the Bill or within five days from the date of receipt of the Bill, whichever is later. The period of seven days or five days will be determined from the date of issue or the date of receipt of the energy bill, as the case may be.
- If Billing Demand of a consumer exceeds the Contract Demand in any particular month, then the Load Factor Rebate will not be payable to the consumer in that month.

Power Factor Incentive

- Whenever the average power factor is more than 0.95, an incentive will be given to High Tension industrial (HTP-I, HTP-II, & HT- SEASONAL), and HTP-III & HTP-IV consumers, irrespective of status of TOD meter installation.
- The said incentive will be at the rate of 1% (one percent) of the amount of the monthly energy bill (excluding Regulatory Liability Charges, Demand Charges, FOCA, Electricity Duty) for every 1% (one percent) improvement in the average power factor above 0.95.

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- For power factor of 0.99, the effective incentive will amount to 5% (five percent) reduction in the energy bill and for unity power factor; the effective incentive will amount to 7% (seven percent) reduction in the energy bill.
- Such incentive will not be applicable to Railways.
- Power factor will be computed, by the method of kWh / KVAh & rounded off to two decimal points as per the existing practice.

Cross Subsidy Surcharge

- Cross subsidization is the practice of charging higher prices to one group of consumers to subsidize lower prices for another group.
- Indian industrial and commercial consumers have been paying a higher tariff for the electricity they consume. This is in order to ensure that domestic and agricultural consumers receive power at a more affordable rate.
- This additional amount, known as **cross-subsidy** has continued under the Electricity Act, since regulators are allowed to set differential tariff based on the consumer category.

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- When an industrial or commercial consumer decides to purchase power from an independent generator and not from the distribution licensee in that area, that distribution licensee loses the cross subsidy amount.
- The CS Surcharge is imposed on the consumer to ensure that the distribution licensee does not pass on this additional amount to the domestic and agricultural consumers, which can result in a steep rise in the cost of power.
- Cross subsidy surcharge is the single biggest roadblock to an open access regime, and the development of a market where a consumer can choose to purchase power from a generator of its choice.

Fuel Adjustment Charges

- Fuel adjustment charge is amount that utilities apply on bills based on varying price of fuel or Coal.
- The price of coal or fuel changes every month based on demand and supply of coal and thus cost of producing electricity changes accordingly. The generation companies pass on this cost to distribution companies who there by pass it on to consumers.
- The electricity fee adjustment is made, using a predetermined method for calculation, on the basis of fluctuations between a 3-month (actual recorded) average fuel price and the standard fuel price (i.e., the fuel price used as the basis for electricity rates).

Electricity Bill Analysis: MH

- Bill types
 - Connection voltage: HT/ LT
 - Consumer Category (Industrial, Commercial, Social Services,)
 - Urban/ Rural
 - Contract Demand
- Used for solar capacity estimation & making proposal



Maharashtra State Electricity Distribution Co. Ltd
ELECTRICITY BILL FOR THE MONTH OF JUN -2017 No. 201706151104183
 BARAMATIRURAL CIRCLE DAUND DN 510 D SHIKRAPUR SUB-DN 600

Consumer No. 154019040000 EVER ELEC

Consumer Name MS. EVER ELECTORNICS PVT.LTD

Address GAT NO. 161/2, KOREGAONBHIMA, TAL. SHRUR, DIST. PUNE

Village KOREGAONBHIMA Mobile No. 7767816194
 Connected Load (KW) 950.00 Pin Code 412210
 Contract Demand (KVA) 770 Sanct. Load (KW) 950.00
 50% of Con. Demand (KVA) 385.00 Sanct. Demand 770.00
 Date of Connection 15-03-2007 Meter No. 055 - MSE84310
 Tariff 101 HT-I A

Supply at: HT Prev. Highest MAY Bill Demand 560 Elec. Duty 10
 DTC old of HT-I A PART F

BILL DATE	01-07-2017	
DUE DATE	15-07-2017	20,68,810.00
F PAID UPTO	07-07-2017	20,50,060.00
F PAID AFTER	15-07-2017	20,94,670.00
Last Receipt No/Date :	XXXXXXXXXX / 07-06-2017	
Last Month Payment :		28,09,440.00
D.G. Set (KVA) :		
Scale/Sector :	Small Scale	Private Sector
Activity :	ELECTRIC CPONT&ACERS	
Seasonal :	Load Shed Ind	INDUST
Urban/Rural Flag :-	R	Express Feeder Flag :- No
Feeder Voltage (KV) :-	22	LIS Indicator :-
Email ID :	santosh@everelectronics.com	

Current	30-06-2017	2288875.000	2938038.000	380632.000	53.100	55.900
Previous	31-05-2017	2285259.000	2915384.000	374510.000		
Difference		218380.000	228540.000	62220.000		
Multiplying Factor		10.0000	10.0000	10.0000	10.000	10.0000
Consumption		218380.000	228540.000	62220.000	531.000	559.000
LT Metering		0.000	0.000	0.000	0.000	0.000
Adjustment		0.000	0.000	0.000		
Assessed Consump		0.000	0.000	0.000		0.000
Total Consumption		218380.000	228540.000	62220.000	531.000	559.000

Billed Demand (KVA)	550	@ Rs.	250
Assessed P.F.		Avg. P.F.	055
Billed P.F.	055	L.P.	41

Consumption Type	Units	Rate	Charges Rs.
Industrial	2,18,380	7.07	1529565.20
Residential	0	5.82	0.00
Commercial	0	11.4	0.00
E.D. on (Rs.)	Rate %	Amount Rs.	
18,94,282.00	9.3	176158.23	
	15		
	21		
Zone	Units	Demand	Charges Rs.
A Zone	62,540	457.00	- 93,810.00
B Zone	87,700	559.00	0.00
C Zone	31,200	553.00	24,960.00
D Zone	34,940	529.00	38,412.00

Demand Charges	1,39,750.00
Wheeling Charge@ 0.83 /Rs/U	1,70,578.80
Energy Charges	15,20,685.20
TOD Tariff EC	-30,438.00
FAC @ 35 /Rs/U	75,728.00
Electricity Duty	1,78,158.23
Other Charges	0.00
Tax on Sale @ 8 /Rs/U	17,308.80
P.F. Penal Charges/P.F. Inc.	-18,942.83
Charges For Excess Demand	0.00
	0.00
Debit Bill Adjustment	0.00
TOTAL CURRENT BILL	20,68,818.21
Current Interest 30/06/2017	0.00
Principle Arrears	-2.81
Interest Arrears	0.00
Total Bill (Rounded) Rs.	20,68,810.00
Delayed Payment Charges Rs.	25,860.20
Amount Payable After 15-07-2017	2094670
Amount Rounded to Nearest Rs. (10/-)	

TWENTY LAKH SIXTY EIGHT THOUSAND EIGHT HUNDRED TEN ONLY

Security Deposit Held Rs.	15,70,800.00
Addl. S.D. Demanded Rs.	0.00
S.D. Arrears Rs.	2,19,300.00

BILL MONTH	MAY-17	APR-17	MAR-17	FEB-17	JAN-17	DEC-16
UNITS	3,08,740	2,85,428	2,31,540	1,80,090	1,80,440	1,08,290
BILL AMOUNT	20,89,077	21,80,880	19,95,480	15,22,405	14,40,815	10,02,838

A	B	C	D	E	F
Address	Ever Electronics Pvt Ltd, KOREGAONBHIMA TAL. SHIRUR, DIST. PUNE				
Consumer Category	Industrial				
Contract Demand (kVA)	770				
Feeder Voltage (kV)	11/22 kV				
Area	Other area				
Month	Jun-17	May-17	Apr-17	Mar-17	Feb-17
Billed Demand (kVA)	559	560	557	537	515
Billed Power Factor	0.956	0.954	0.958	0.985	0.991
Load Factor	41%	56%	50%	41%	35%
FAC	75,726	199,381	-209,681	-50,938	-
A Zone	62,540	93,200	75,600	61,540	48,130
B Zone	87,700	120,800	106,210	96,550	75,850
C Zone	31,200	41,840	36,140	33,280	27,420
D Zone	34,920	50,900	47,470	40,170	29,530
Consumption	216,360	306,740	265,420	231,540	180,930
					1,290,030.90
Bill details					

Consumer No. 184019040000 EVER ELEC

Consumer Name M/S. EVER ELECTORNICS PVT.LTD

Address GAT NO. 161/2, KOREGAONBHIMA
TAL. SHIRUR, DIST. PUNE

BILL DATE	01-07-2017
DUE DATE	15-07-2017
IF PAID UPTO	07-07-2017
IF PAID AFTER	15-07-2017

Last Receipt No./Date : XXXXXXXX

Last Month Payment :

Village KOREGAONBHIMA Mobile No. 7767816194
Pin Code 412210

D.G. Set (KVA) :

Connected Load (KW) 950.00

Sanct. Load (KW) 950.00

Scale/Sector : Small Scale

Contract Demand (KVA) 770

Sanct. Demand 770.00

Activity : ELCTRNC

50% of Con. Demand (KVA) 385.00

Meter No. 055 MSE64310

Seasonal Load Shed

Date of Connection 15-03-2007

Tariff 101 HT-I A

Urban/Rural Flag :- R Express Fe

Supply at: HT Prev. Highest MAY Bill Demand 500 Elec. Duty 10
DTC old trf HT-I A PART F

Feeder Voltage (KV) :- 22

Email ID : santosh@everelectronix

Current	30-06-2017	2286875.000	2338038.000	380932.000	53.100	55.900
Previous	31-05-2017	2265239.000	2315384.000	374310.000		
Difference		21636.000	22654.000	6622.000		
Multiplying Factor		10.0000	10.0000	10.0000	10.000	10.0000
Consumption		216360.000	226540.000	66220.000	531.000	559.000
LT Metering		0.000	0.000	0.000	0.000	0.000
Adjustment		0.000	0.000	0.000		
Assessed Consump		0.000	0.000	0.000		0.000
Total Consumption		216360.000	226540.000	66220.000	531.000	559.000

Billed Demand (KVA)	559	@ Rs.	250
Assessed P.F.		Avg. P.F.	.956
Billed P.F.	.956	L.F.	41

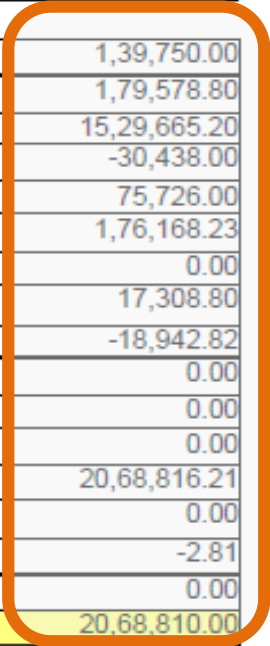
Demand Charges	1,39,750.00
Wheeling Charge@ 0.83 Rs/U	1,79,578.80
Energy Charges	15,29,665.20
FOR Tariff EC	38,438.00

Consumption Type	Units	Rate	Charges Rs.
Industrial	2,16,360	7.07	1529665.20
Residential	0	5.82	0.00

FAC @ 35 Ps/U	75,728.00
Security Duty	1,79,166.24
Other Charges	0.00

C Zone		31,200	41,840
D Zone		34,920	50,900
Consumption		216,360	306,740
Bill details			
Demand Charges		139,750	140,000
Energy Charges	✓	1,529,665	2,168,652
Wheeling Charges	✓	179,579	254,594
ToD Charges	✓	-30,438	-50,338
FAC		75,726	199,381
Electricity Duty		176,168	252,243
	Fixed	12,997	13,020
	Variable	163,171	239,223
Tax on Sale		17,309	24,539
PF Incentive		-18,943	-
	Fixed	-1,398	-
	Variable	-17,545	-
Load Factor Incentive		-	-
EHV Rebate		-	-

0.000	0.000	0.000	
0.000	66220.000	531.000	
		559.000	
250	Demand Charges		1,39,750.00
.956	Wheeling Charge@	0.83 Rs/U	1,79,578.80
41	Energy Charges		15,29,665.20
	TOD Tariff EC		-30,438.00
s.	FAC @	35 Ps/U	75,726.00
35.20	Electricity Duty		1,76,168.23
0.00	Other Charges		0.00
0.00	Tax on Sale @	8 Ps/U	17,308.80
	P.F. Penal Charges/P.F. Inc.		-18,942.82
38.23	Charges For Excess Demand		0.00
			0.00
	Debit Bill Adjustment		0.00
s.	TOTAL CURRENT BILL		20,68,816.21
10.00	Current Interest	30/06/2017	0.00
0.00	Principle Arrears		-2.81
30.00	Interest Arrears		0.00
12.00	Total Bill (Rounded) Rs.		20,68,810.00
	Delayed Payment Charges Rs.		25,860.20
	Amount Payable After	15-07-2017	2094670
	Amount Rounded to Nearest Rs. (10/-)		
10.00			
0.00			



After entering values, verify the above highlighted sheet values with actual bill value

**In case of value mismatch, the formula needs to be edited. Details after 3 slides.*

36	Per unit charges				
37	Demand Charges	0.65	0.46	0.52	0
38	Energy Charges	7.07	7.07	7.07	7
39	Wheeling Charges	0.83	0.83	0.83	0
40	ToD Charges	-0.14	-0.16	-0.12	-0
41	FAC	0.35	0.65	-0.79	-0
42	Electricity Duty	0.81	0.82	0.70	0
43	Fixed	0.06	0.04	0.05	
44	Variable	0.75	0.78	0.65	
45	Tax on Sale	0.08	0.08	0.08	0
46	PF Incentive	-0.09	-	-0.08	-0
47	Fixed	-0.01	-	-0.01	-
48	Variable	-0.08	-	-0.07	-
49	Load Factor Incentive	-	-	-	
50	EHV Rebate	-	-	-	
51					
52	Fixed (Rs. per Unit)	0.70	0.50	0.57	0
53	Variable (Rs. per Unit)	8.86	9.25	7.65	7
54	Total (Rs. per Unit)	9.56	9.74	8.22	8
55					
56					
57	Per unit charges for Solar				
58	Energy Charges	7.07	7.07	7.07	7
59	Wheeling Charges	0.83	0.83	0.83	0

Discom per unit

Consumption

Waterfall graph

Parameters



	Jun-17	May-17	Apr-17	Mar-17	Feb-17	Jan-17	Dec-16	Nov-16	Oct-16	Sep-16	Aug-16	Jul-16
A Zone	62540	93200	75600	61540	48130	39840	21420	33450	68660	77660	77850	62540
B Zone	87700	120800	106210	96550	75850	70210	50620	56870	87290	99460	99530	87700
C Zone	31200	41840	36140	33280	27420	24180	18000	19940	31330	34570	33480	31200
D Zone	34920	50900	47470	40170	29530	26210	18250	19960	37860	40460	41300	34920
B+C	118900	162640	142350	129830	103270	94390	68620	76810	118620	134030	133010	118900
A+B+C	181440	255840	217950	191370	151400	134230	90040	110260	187280	211690	210860	181440

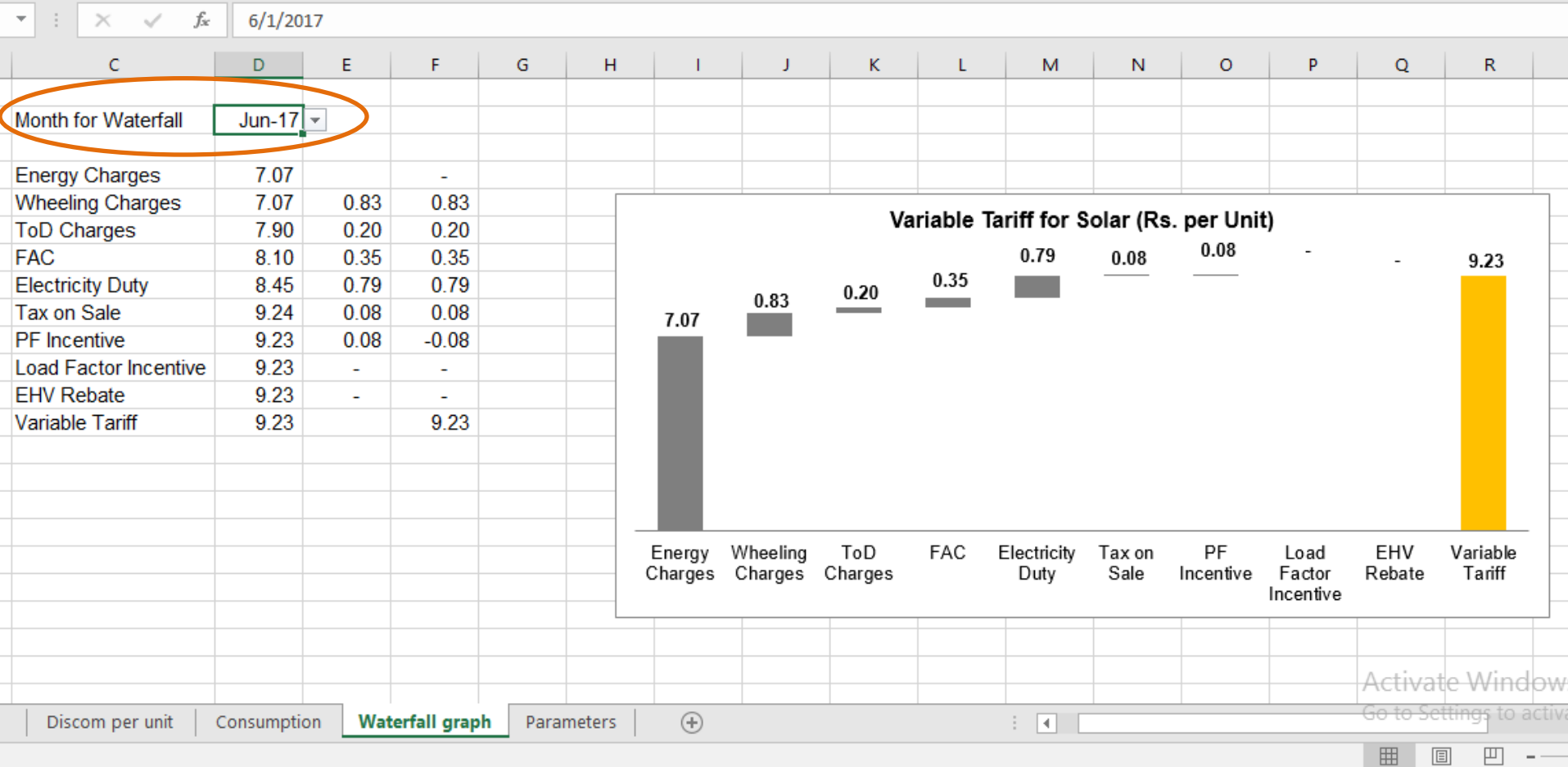
	B+C	A+B+C
No of months	12	12
Consumption/Yr	1,401,370	2,123,800
Solar Generation/ Yr	1,450	1,450
Solar DC	966	1,465

Discom per unit **Consumption** Waterfall graph Parameters +

Step 1: Make an yearly average for B+C & A+B+C zone

Step 2: Considering yearly solar generation of 1,450 kWh/Yr for 1 kW, find the respective solar DC required for B+C (Without net-metering) & A+B+C (under net-metering)

**For net-metering, daily and hourly load consumption is analyzed.*



Select month to view day time substitution per unit tariff built up.

This substitution tariff is used in proposals