

b) Approach

On reviewing methodologies adopted globally for social impact assessment of electricity tariffs by studying international research reports and studying model practices internationally, the Commission found that Tariff Affordability Ratio (TAR) is a reliable parameter to measure affordability of electricity in households.

TAR is defined by obtaining the burden incurred by a household for electricity as compared to the overall household expenditure. The rationale behind this concept is that the electricity is basic utility and is unavoidable in today's scenario, however, this does not ensure that the expenditure level is in line with the overall household expenditure. Hence, this concept helps to understand the affordability level of electricity on households with different economic levels.

The electricity expenditure can be determined initially for domestic consumers by computing the average consumption levels across each slab and the household expenditure can be estimated from national surveys of household expenditure across economic levels conducted by organizations like NSSO. Thereafter the distribution of consumers of the Discom across tariff slabs can be mapped across the established economic levels to develop the final affordability ratio matrix for the Discom's domestic consumer base.

Following the identification of the current ratio of Tariff Affordability, the Commission in consultation with the stakeholders will develop benchmarks for acceptable affordability levels by studying trends across countries with a demography and energy scenario similar to that of India and propose appropriate tariffs. The final output shall help understand the Commission to modify tariffs in cases where there is more room for tariff increase or a need to correct tariffs. The exercise would also help the Commission in setting tariff slabs as per the paying capacity of the consumers which would be beneficial especially for Domestic category consumers. Additionally, this shall also help the Government to formulate better schemes to effectively channelize its intended benefits.

The Commission in these tariff proceedings is not carrying out this exercise due to unavailability of accurate data. The Petitioner is directed to ensure the sanctity of the data-maintained pertaining to various categories.

The Commission, after analysis of the various components of the ARR for FY 2021-22, has come to the conclusion that the utility has to increase the average tariff from the existing level of INR 6.63 per unit to INR 29.51 per unit to recover the full amount of ARR as approved for FY 2021-22. This however will not be a practical proposition under the socio-economic circumstances.

Keeping in view the above principles and based on the category wise information submitted by the Petitioner, and in view of the socio-economic constraints of the people residing in the licensee's area, the Commission feels that aligning the tariff with Average Cost of Supply would be unjust to the consumers. Duly considering the difficult terrain where people reside in remote areas spread across the various islands with limited access to basic amenities, the Commission has approved a marginal increase in the tariff of FY 2021-22 over the FY 2020-21.

Accordingly, considering the revised tariff proposal submitted by the Petitioner for FY 2021-22 and the net ARR approved by the Commission for FY 2021-22, the Commission has approved the tariffs for FY 2021-22. The Commission has also given due consideration to the guiding principles as stated in the Electricity Act 2003, the Tariff Policy, MYT Tariff Regulations 2018, the suggestions/observations of the stakeholders in this regard and the Petition submitted by EDA&N, while deciding the tariff for FY 2021-22. Accordingly, the Commission has considered a marginal increase in tariff for FY 2021-22.

The approved tariff for FY 2020-21 is as follows:

Table 87: Existing vs. Tariff approved by the Commission for FY 2020-21

Existing			Approved		
Category	Fixed Charge	Energy Charge (INR/kWh)	Category	Fixed Charge	Energy Charge (INR/kWh)
Life Line Connection			Life Line Connection		
0 to 50 units	INR 10 per connection per month or part thereof	2.05	0 to 100 units	INR 10 per connection per month or part thereof	2.05
Domestic Connection			Domestic Connection		
0 to 100 units	INR 20 per connection per month or part thereof for Single Phase & INR 70 per connection per month for three phase or part thereof for three phase	2.25	0 to 100 units	INR 20 per connection per month or part thereof for Single Phase & INR 70 per connection per month for three phase or part thereof for three phase	2.25
101 to 200 units		5.00	101 to 200 units		5.00
201 to 500 units		7.20	201 to 500 units		7.20
501 units & above		7.50	501 units & above		8.50
Commercial			Commercial		
0-200 Units	INR 30 per connection per month or part thereof for Single Phase & INR 125 per connection per month for three phase or part thereof for three phase	7.50	0-200 Units	INR 30 per connection per month or part thereof for Single Phase & INR 125 per connection per month for three phase or part thereof for three phase	7.50
201 to 500 Units		9.50	201 to 500 Units		9.50
501 units & above		12.00	501 units & above		12.75
Govt. Connection			Govt. Connection		
0-500 Units	INR 35 per connection per month or part thereof for Single Phase & INR 125 per connection per month for three phase or part thereof for three phase	9.20	0-500 Units	INR 35 per connection per month or part thereof for Single Phase & INR 125 per connection per month for three phase or part thereof for three phase	10.00
501 units & above		10.60	501 units & above		11.50
Industrial			Industrial		

Existing			Approved		
Category	Fixed Charge	Energy Charge (INR/kWh)	Category	Fixed Charge	Energy Charge (INR/kWh)
0 to 500 units	INR 50/kVA/Month or part thereof	6.00	0 to 500 units	INR 50/kVA/Month or part thereof	6.00
501 units & above		8.00	501 units & above		9.00
Bulk Supply	INR 100/kVA/Month or part thereof	12.50	Bulk Supply	INR 100/kVA/Month or part thereof	13.00
Public Lighting	INR 150/kVA/Month or part thereof	6.10	Public Lighting	INR 150/kVA/Month or part thereof	7.00
Irrigation Pumps & Agriculture	INR 50/kVA/Month or part thereof	1.60	Irrigation Pumps & Agriculture	INR 50/kVA/Month or part thereof	1.60
EV Charging Stations		6.90	EV Charging Stations		6.90
	-				
Temporary Supply	1.5 times the rate applicable to the relevant category of consumers.		Temporary Supply	1.5 times the rate applicable to the relevant category of consumers.	

The Commission has also analyzed the Petitioner's proposal of lower tariffs to incentivise the consumers to become prosumers (producing Consumers) by installing solar on their roofs or other available areas. The Andaman Islands has a very high average cost of supply on account of Diesel generation. The Commission appreciates the Petitioner's effort to reduce Diesel generation which shall bring down the average cost of supply and accordingly approves the reduced tariffs for Domestic, Commercial and Industrial categories installing solar on their roofs or other available areas as shown in the following table:

Table 88: Approved Tariff for consumers installing solar in their premises

Sr. No	Particulars	Slab	Approved Tariff	
			Fixed Charges	Energy Charges (INR/kWh)
1	Domestic (Solar)*	0 to 200 units	Rs. 20/- per connection per month or part thereof for single phase	2.05
		201 to 500 units		7.20
		501 & above units	Rs. 70/- per connection per month or part thereof for three phase	8.50
2	Commercial (Solar)*	0 to 200 units	Rs. 30/- per connection per month or part thereof for single phase	7.00
		201 to 500 units		9.50

Sr. No	Particulars	Slab	Approved Tariff	
			Fixed Charges	Energy Charges (INR/kWh)
		501 & above units	Rs. 125/- per connection per month or part thereof for three phase	12.75
3	Industrial (Solar)*	0 to 200 units	INR 50/- per KVA per month or part thereof	5.50
		201 to 500 units		6.00
		501 & above units		9.00

* Consumers shall be considered under Domestic (Solar), Commercial (Solar) and Industrial (Solar) category after having installed Rooftop / Ground Mounted Solar Power Plant in their premises equivalent to 15% of the connected load/contract demand or 25% of the roof area whichever is less. Further, if minimum of 250 kWh per kW Solar plant is not generated for more than 6 months, the consumer shall be brought back to their respective non-solar category.

6.4.2. Revenue from Approved Retail Tariff for FY 2021-22

Based on the retail tariff approved above, the revenue at revised tariff approved by the Commission for FY 2021-22 is given in the following Table:

Table 89: Revenue at tariff approved by the Commission for FY 2021-22

Sr. No.	Category	No. of Consumers	Energy Sales (in MU)	Approved Tariff		Fixed Charges (INR Crore)	Energy Charges (INR Crore)	Total Revenue (INR Crore)
				Fixed Charges	Energy Charge (INR/Kwh)			
1	Life line Connection							
	0 to 100 units		7.84	INR 10 per connection per month or part thereof	2.05	0.00	1.61	1.61
2	Domestic							
	0 to 100 units	120910	66.30	INR 20 per connection per month or part thereof for Single Phase & INR 70 per connection per month for three phase or part thereof for three phase	2.25	3.05	14.92	
	101 to 200 units		44.30		5.00		22.15	
	201 to 500 units		19.61		7.20		14.12	
	501 units & above		9.92		8.50		8.43	
	Sub-total		140.14			3.05	59.62	62.67
3	Commercial							

Sr. No.	Category	No. of Consumers	Energy Sales (in MU)	Approved Tariff		Fixed Charges (INR Crore)	Energy Charges (INR Crore)	Total Revenue (INR Crore)
				Fixed Charges	Energy Charge (INR/Kwh)			
	0-200 Units	18787	17.39	INR 30 per connection per month or part thereof for Single Phase & INR 125 per connection per month for three phase or part thereof for three phase	7.50	0.97	13.04	
	201 to 500 Units		6.37		9.50		6.05	
	501 units & above		5.22		12.75		6.65	
	Sub-total		28.97			0.97	25.74	26.71
4	Govt. Connection							
	0-500 Units	2726	3.64	INR 35 per connection per month or part thereof for Single Phase & INR 125 per connection per month for three phase or part thereof for three phase	10.00	0.24	3.64	
	501 units & above		14.57		11.50		16.75	
	Sub-total		18.21			0.24	20.40	20.63
5	Industrial							
	0-500 Units	485	6.30	INR 50 per kVA per month or part thereof	6.00	1.05	3.78	
	501 units & above		3.39		9.00		3.05	
	Sub-total		9.70			1.05	6.84	7.89
6	Bulk Supply							
	All units	68	30.46	INR 100 per kVA per month or part thereof	13.00	2.02	39.60	41.63
7	Public Lighting							
	All units	743	6.15	INR 150 per kVA per month or part thereof	7.00	0.56	4.31	4.86
8	Irrigation Pumps & Agriculture							
	All units	509	1.03	INR 50 per connection per	1.60	0.03	0.16	0.19

Sr. No.	Category	No. of Consumers	Energy Sales (in MU)	Approved Tariff		Fixed Charges (INR Crore)	Energy Charges (INR Crore)	Total Revenue (INR Crore)
				Fixed Charges	Energy Charge (INR/Kwh)			
				month or part thereof				
9	Electric Vehicle Charging Station	0	0.00		6.90	0.00	0.00	0.00
10	Temporary Supply							
	All units		0.00	1.5 times the rate applicable to the relevant category of consumers.		0.00	0.00	0.00
11	Total		242.50			7.91	158.28	166.19

The revenue gap at the revised tariff approved by the Commission is given in the Table below:

Table 90: Revenue gap at tariff approved by the Commission for FY 2021-22 (INR crore)

S. No.	Particulars	FY 2021-22	
		Claimed	Approved
1	Net Revenue Requirement	906.14	715.75
2	Revenue from Sale of Power at Revised Tariff	192.17	166.19
3	Net Gap during the year	713.97	549.56
4	Add: Previous Year Gap	0.00	0.00
5	Total Gap	713.97	549.56

In view of solar rooftop scheme introduced by the Petitioner, it is expected that there will be migration of consumers in all the categories (Domestic, Commercial & Industrial) from higher slab to lower slab, which will impact the revenue calculation of EDA&N. However, the Commission has not projected any reduction in revenue considering the solar panel installation shall bring down the diesel generation and power purchase cost. The following comparative chart gives the overview of the category-wise levels of percentage recovery of Average Cost of Supply at existing and revised tariffs.

Table 91: Percentage recovery of ACOS at tariff approved by the Commission for FY 2021-22

S. No.	Category	Average Cost of Supply (INR/unit)	Average Billing Rate (INR/unit)	% of AcoS
1	Life Line Connection (Upto 100 Units)	29.51	2.05	6.95%
2	Domestic	29.51	4.47	15.15%
3	Commercial	29.51	9.22	31.23%
4	Government Connection	29.51	11.33	38.39%
5	Industrial	29.51	8.13	27.56%
6	Bulk Supply	29.51	13.66	46.30%
7	Public Lighting	29.51	7.91	26.79%
8	Irrigation Pumps & Agriculture	29.51	1.90	6.43%
9	Electric Vehicle Charging Station	29.51	0.00	0.00%

S. No.	Category	Average Cost of Supply (INR/unit)	Average Billing Rate (INR/unit)	% of ACoS
10	Temporary Supply	29.51	0.00	0.00%
11	Overall	29.51	6.85	23.22%

Table 92: Approved ACoS and ABR by the Commission at approved tariff for FY 2021-22

Sr. No.	Particulars	FY 2021-22
1	Net Revenue Requirement (INR Crore)	715.75
2	Revenue from Revised Tariff (INR Crore)	166.19
3	Energy Sales (MU's)	242.50
4	Average cost of supply/unit (INR/kWh)	29.51
5	Average Billing Rate (INR/kWh)	6.85
6	Gap (INR/kWh)	22.66

The highlights of the tariff structure approved by the Commission for FY 2021-22 is as follows:

1. The Commission has approved a tariff hike of 3.36% for FY 2021-22 over the tariff for FY 2020-21.
2. The Commission has approved the ABR for FY 2021-22 as INR 6.85/kWh as against the approved Average Cost of Supply of INR 29.51/kWh.

The Petitioner has confirmed that the Revenue Gap shall be borne by the Administration of Andaman & Nicobar Islands, with budgetary support from the Government of India.

7. Chapter 7: Tariff Schedule

7.1. Tariff Schedule

Sr. No.	Category	Fixed Charges	Energy Charge (INR/kWh)
1.	Life Line Connection		
	0 to 100 units	INR 10/- per service connection per month or part thereof	2.05
2.	Domestic Connection		
	0 to 100 units	INR 20/- per connection per month or part thereof for single phase	2.25
	101 to 200 units		5.00
	201 to 500 units	INR 70/- per connection per month or part thereof for three phase	7.20
	501 units & above		8.50
3.	Commercial		
	0-200 Units	INR 30/- per connection per month or part thereof for single phase	7.50
	201 to 500 Units		9.50
	501 and above	INR 125/- per connection per month or part thereof for three phase	12.75
4.	Govt. Connection		
	0-500 Units	INR 35/- per connection per month or part thereof for single phase	10.00
	501 Units & above	INR 125/- per connection per month or part thereof for three phase	11.50
5.	Industrial		
	0-500 Units	INR 50/- per KVA per month or part thereof	6.00
	501 Units & above		9.00
6.	Bulk Supply		
	All Units	INR 100/- per KVA per month or part thereof	13.00
7.	Public Lighting		
	All Units	INR 150/- per KVA per month or part thereof	7.00
8.	Irrigation Pumps and Agriculture		
	All Units	INR 50/- per KVA per month or part thereof	1.60
10	Electric Vehicle Charging Station		6.90
9	Temporary supply		
	All Units	1.5 times the rate applicable to the relevant category of consumers.	

7.2. Applicability

Sr. No.	Category	Applicability	Point of Supply news
1	Life Line	Applicable to domestic consumers with monthly consumption of upto 100 units and below.	Note: The Domestic Consumer having consumption above 100 units shall be charged according to the slabs defined under Domestic Category.
2	Domestic	This schedule will apply for single delivery point including light, fan, domestic pumping sets and household appliances. a) Single private house/flat b) Government schools along with related facilities. c) Housing colonies and multi-storeyed flats/buildings as defined in the Electricity Supply Code Regulations notified by the JERC	NOTE: Where a portion of the dwelling is used for mixed load purposes, the connection will be billed for the purpose for which the tariffs are higher
3	Commercial	This schedule will apply to all consumers, using electrical energy for light, fans, and appliances like pumping sets, motors of up to 3 HP used for commercial purpose, central air conditioning plants, lifts, welding sets, small lathe machines, electric drills, heaters, battery chargers, embroidery machines, printing presses, ice candy, dry cleaning machines, power presses, small motors in commercial establishments/ non-residential private premises such as printing presses, rest houses, restaurants, hostels, nursing homes, bus stands, clubs, auditoriums, communication, cinema theatres, operas, circus, exhibitions, and bakeries, and grinders and installations for private gains, etc. Commercial supply will also be applicable to multi-consumer complex including commercial complexes as defined in the Electricity Supply Code Regulations notified by JERC. This schedule will also apply to the places of worship like temples, mosques, churches, gurudwaras, Buddhist Pongl Chung (except residential areas), public Pooja celebrations and religious ceremonies. No separate circuit/connection for power load including pumping set/ central air conditioning plant, lifts, etc., is permitted.	
4	Government Connection	This schedule will apply to all government connections.	The supply will be given through a single delivery and metering point and a single voltage.
5	Industrial Supply	The schedule will apply for supply of energy for lighting, fan and power to industrial establishments, Hotels & industries such as wood-based, cottage,	The supply will be given through a single delivery and metering point and at a single voltage.

Sr. No.	Category	Applicability	Point of Supply news
		small scale, medium-scale, finishing shell based and any other establishments/ organisations engaged in the manufacturing and processing of goods for sale, rice mills, flour mills, workshops, dry docks, factories base repair organisations, public water works & gem cutting units	
6	Bulk Supply	This schedule will apply to general or mixed loads receiving supply of energy through a bulk energy meter at either HT or LT supply and distribution is maintained by them. For dedicated transformers, the complete cost of technical transmission lines of transformer sub-station, switch gear & installation is to be borne by the consumer.	The supply will be given through a single delivery and metering point and at a single voltage.
7	Public Lighting	This schedule will apply for lighting on public roads, footpaths, streets and thoroughfares in parks & markets, etc.	Cost of spares, materials and labour required for maintenance is to be borne by respective panchayati raj institution / local body.
8	Irrigation Pumps & agriculture	This schedule will apply to all consumers for use of electrical energy for irrigation and agricultural purposes including animal husbandry.	The supply will be given through a single delivery and metering point and at a single voltage.
9	Electric Vehicle Charging Station	This tariff schedule shall apply to consumers that have set up Public Charging Stations (PCS) in accordance with the technical norms/ standards/specifications laid down by the Ministry of Power, GoI and Central Electricity Authority (CEA) from time to time. The tariff for domestic consumption shall be applicable for domestic charging (LT/HT)	
10	Temporary Supply	The supply may be given for a limited period as per the provisions of JERC Supply Code Regulations, 2018, and amendments thereon.	

7.3. General conditions of HT and LT Supply

The above mentioned LT/HT Tariffs are subjected to the following conditions, applicable to all category of consumers.

- 1) The tariffs are exclusive of electricity duty, taxes and other charges levied by the Government or other competent authority from time to time which are payable by the consumers in addition to the charges levied as per the tariffs.
- 2) Unless otherwise agreed to, these tariffs for power supply are applicable for supply at one point only.
- 3) If energy supplied for a specific purpose under a particular tariff is used for a different purpose, not contemplated in the contract for supply and / or for which higher tariff is applicable, it will be deemed as