Scan QR Code Tariff

TARIFF

SCHEDULE OF TARIFF AND TERMS AND CONDITIONS FOR RETAIL SUPPLY OF ELECTRICITY BY KERALA STATE ELECTRICITY BOARD LIMITED AND ALL OTHER LICENSEES WITH EFFECT FROM 05.12.2024 to 31.03.2027

(Vide Order dated 05.12.2024 in OP No. 18/2023)

The rates specified in this Schedule are exclusive of Electricity Duty and / or surcharge and/or any other cess, taxes, minimum fees, duties and other impositions existing or that may be levied or imposed in future by the Government or the Commission, which are payable in addition to the charges payable as per the tariff mentioned in this Schedule.

PART A - LOW TENSION (LT) TARIFF

The expression 'Low Tension Consumer' (LT) means a consumer who is supplied with electrical energy at low or medium voltage by the Kerala State Electricity Board Limited and other distribution licensees in the State. The voltage limits specified for low tension supply are however subject to the variations allowed under the provisions of the Kerala Electricity Supply Code, 2014.

General Conditions

1. The minimum charge payable by all LT consumers shall be the fixed charge or demand charge as the case may be of the respective category even during the period of disconnection.
2. All LT Industrial (both LT-IV (A) and LT-IV (B) consumers) and LT Agricultural consumers shall, for power factor improvement, install static capacitors with ISI certification as specified in Annexure D attached to this schedule and obtain the approval of the licensee. Such consumers shall submit to the licensee, an application for approval of the capacitor, as soon as it is installed. The licensee shall communicate to the consumer, its decision about such approval or otherwise within a period of 15 days from the date of submission by the consumer, the application for approval of capacitor. If the licensee does not communicate to the consumer its decision about such approval or otherwise within a period of 15 days, it shall be deemed that the licensee has granted the required approval for the installation of the capacitor.
3. For LT Industrial and Agricultural consumers who have not installed capacitors with ISI certification of specified value, the fixed charge and energy charge shall be higher by 20% of the tariff applicable to the respective categories.
4. For the consumers using welding sets without installing capacitors with ISI certification of specified value, the fixed charge and energy charge shall be higher by 30% of the tariff applicable to the respective categories.
5. The officer of the licensee who is authorized to take meter reading shall inspect the static capacitor and ensure that it is functioning properly. If such officer notices that the static capacitor has become faulty or unserviceable, he shall forthwith intimate the matter to the officer in charge of the Electrical Section / Sub-division of Kerala State Electricity Board Limited or to the concerned officer in the case of other distribution licensees, who shall issue notice to the consumer directing him to replace such faulty or unserviceable capacitor within one month or within such other time limit as stipulated by the concerned officer of the licensee. The consumer shall replace such faulty /unserviceable capacitors within the time limit as directed by the officers of the licensee.
6. If the capacitor is not replaced or put back into service duly repaired, to the satisfaction of the concerned officer of Kerala State Electricity Board Limited or of other distribution licensees, as the case may be, within one month or such other time limit as stipulated by the concerned officer of the licensee, enhanced charges as per clause 3 or clause 4 above shall be payable for the whole period during which the capacitor remains faulty or unserviceable.
7. Such consumers other than those in LT-IV Industry and LT-V Agriculture category who install capacitors as specified above shall be eligible for a rebate at the rate of 5% on the energy charges. Such rebate shall be allowed from the billing month succeeding the month in which the approval / deemed approval has been obtained for the capacitors installed by the consumer. No rebate is admissible on the fixed charges.
8. (a) Power supply for common facilities in high rise buildings/ apartment complex etc used exclusively for domestic (housing) purpose such as fire control, common lighting, lifts, water pumping, sewage treatment, waste disposal, offices of the residential associations in residential apartment complexes shall be billed at domestic tariff.

   (b) Power supplies to common facilities in high rise buildings mainly for domestic occupation shall be under the domestic tariff if the connected load other than for domestic purpose, is less than 5% of the total load.
9. (a) Power supply for common facilities such as fire control, common lighting, lifts, water pumping, sewage treatment, waste disposal etc in the high rise buildings, for the occupation by consumers in LT-VI or in LT-VII categories shall be charged at the respective tariffs for such categories.

   (b) In the case of combination of occupation of different categories of consumers, common facilities shall be charged at the highest of LT-VI or LT-VII tariff applicable to such categories.

10. ToD tariff shall be applicable to all LT-IV Industrial consumers (except the pumphouses of Kerala Water Authority, Municipal Corporations, Municipalities and Panchayats) and to LT-I domestic consumers (3 Phase) having monthly consumption above 250 units. The charges and other terms & conditions for To D tariff shall be as per Annexures 'A, B,E & F' to this schedule.
11. Optional Demand Based Tariff can be availed by all categories of consumers having connected load above 20kW, other than those billed under ToD Tariff as per the conditions in Annexure – G to this schedule.
12. The consumers who are required to avail supply at HT and above as per the Regulation 8 of the Kerala Electricity Supply Code, 2014, but availing supply at LT, shall pay the low voltage surcharge at the following rates.

Low voltage surcharge for consumers having connected load/contract demand above 100 kVA and availing supply at LT level. Approved by the Commission w.e.f 05.12.2024 to 31.03.2027

Tariff	Low Voltage supply surcharge in Rs	Tariff	Low Voltage supply surcharge in Rs
LT 1 A	Rs 170/ kVA/month	LT-VI(C) category	Rs 287/kW/month
LT-IV (A) category	Rs 205/kVA/month	LT-VI(D) category	Rs 170/kW/month
LT-IV (B) category	Rs 210/kVA/month	LT- VI(E) category	Rs 170/kW/month
LT- V (A) category	Rs 196/kW/month	LT-VI(F) category	Rs 287/kW/month
LT- V (B) category	Rs 209/kW/month	LT-VI(G) category	Rs 307/kW/month
LT-VI(A) category	Rs 320/kW/month	LT-VII (A) category	Rs 260/kW/month
LT-VI(B) category	Rs 295/kW/month	LT-VII(C) category	Rs 310/kW/month

*Domestic consumers shall avail Optional Demand Based Tariff for availing the benefit of low voltage surcharge

LOW TENSION - I DOMESTIC (LT-I)

The tariff applicable to supply of electrical energy of domestic purpose (both single phase and three phase)

Low Tension - I- Domestic (LT- I)				
Monthly consumption slab	Fixed charge (Rs/ Consumer/ month)		Energy Charge	Remarks
	Single phase	Three phase	(Rs/Unit)	
0-40	Nil		1.50	This rate is applicable only to BPLcategory with connected load of and below 1000 Watts
0-50	50	130	3.35	Telescopic
51-100	85	175	4.25	
101-150	105	205	5.35	
151-200	140	215	7.20	
201-250	160	235	8.50	
0-300	220	240	6.75	Non- Telescopic
0-350	240	250	7.60	
0-400	260	260	7.95	
0-500	285	285	8.25	
Above 500	310	310	8.20	

Note-1. Fixed charges shall not be applicable to consumers belonging to below poverty line (BPL) category with connected load of and below 1000 Watts and monthly consumption of and below 40 units.

Note-2. BPL families having cancer patients or persons having permanent disability of 40% or above as family members, consuming upto 100 units per month shall be billed @Rs 1.50/unit, provided their connected load is of and below 2000 watts. The excess consumption over 100 units in a month may be charged at normal tariff.

Note-3. Home stay units approved as such by Department of Tourism shall be billed under LT-I domestic.

Note-4. Farm stay at farm houses (agriculture, dairy and animal husbandries) having a total connected load upto 20kW and certified by appropriate authority shall be billed under LT-I domestic.

Note-5. Domestic consumers shall be allowed to utilize electrical energy in a portion of their residence for their own

use for purposes other than domestic if the connected load for the purposes other than for domestic, in their premises does not exceed 20% of the total connected load or 1000

Watts whichever is less. When connected load other than for domestic use in such cases exceeds 20% of the total connected load or 1000 Watts whichever is less, such loads shall be segregated and separate service connection shall be obtained under appropriate tariff. When this is not done, the tariff applicable to the whole service connection shall be at the appropriate tariff applicable to the connected load used for purposes other than domestic, if such tariff is higher than the tariff for LT-I category.

Note.6: Nano household units shall be allowed to be billed under domestic tariff to promote entrepreneurial environment in the State.

Note.7: (a) The tariff for domestic consumption by the families of the victims of endosulfan tragedy in Hosdurg and Kasaragod Taluks of Kasaragod District shall be Rs.1.50 / unit for a monthly consumption up to 150 units.

If the consumption of the consumer, who is eligible for the above concession, exceeds 150 units per month, the consumption in excess of 150 units will be charged at the rates specified for the slabs 151-200 units or 201-250 units as the case may be. This concession will not be available for the consumers with monthly consumption above 250 units.

(b)The consumer who is eligible for this concession granted to endosulfan victims has to submit to the officer in charge at the section office of the licensee, a certificate from the revenue authorities or from the local selfgovernment authority to prove his / her eligibility for this tariff concession.

Note-8: (a) The domestic water supply schemes approved by the Government including the following shall be charged under domestic tariff.

(i) water supply schemes under Jalanidhi, Jaladhara or Swajaladhara Projects;

(ii) water supply schemes coming under water supply societies or under beneficiary committees;

(iii) water supply schemes for Scheduled Caste (SC) and / or Scheduled Tribe (ST) colonies;

(iv) water supply schemes for Laksham Veedu Settlements taken over and managed by Local Self Government Institutions;

(v) social drinking water supply schemes established using local area development funds of Members of Legislative Assembly (MLA) and / or Members of Parliament (MP);

(vi) social drinking water supply schemes established using funds of Local Self Government Institutions;

(vii) social drinking water supply schemes under Peoples Participatory Schemes (PPS);

(viii) Rajeev Gandhi Drinking Water Schemes managed by beneficiary groups.

(b) The method for billing for the above mentioned water supply schemes solely for domestic purpose shall be as specified hereunder;

(c) The total monthly consumption of electricity of the units of such water supply schemes will be divided by the number of beneficiary households and the average consumption per households will be billed under LT – I domestic tariff. The amount of electricity charges assessed for the average consumption per beneficiary household will then be multiplied by the number of beneficiary households to assess the total electricity charges to be paid by the units of such schemes.

(d) Anganwadies, if any, availing drinking water from the above water supply schemes shall also be considered as a beneficiary availing the water supply for domestic purpose and the benefit of such community drinking water schemes shall be extended to them.

LOW TENSION – II TEMPORARY CONNECTIONS {LT II }

Tariff applicable for single or three phase temporary connections for purposes such as illumination, exhibition, festivals, public meeting and fairs.

LT – II Temporary connections	
Energy Charge (Rs/kWh)	12.50 /kwh OR Daily minimum of Rs.100/ kW or part thereof of the connected load, whichever is higher

Note-1. 40% concession in the rates shall be allowed if the connection is for;

(a) the exhibitions conducted or sponsored by the Government or Local Self-Government institutions or by Government educational institutions or by Public Sector Undertakings and the exhibitions conducted by recognized private educational institutions;

(b) Festivals of religious worship centres for the illumination, public address system and security lighting. (This concession is limited to the energy availed by the religious worship centres and not by other agencies who function in the premises of religious worship centres where festival is being organized).

Note-2. Auditoriums, marriage halls, conventions centers etc who have limited use of electricity during a month and year', have the option to avail the LT-II Temporary tariff. In case additional loads other than that provided in the service connection agreement is proposed to be connected to the grid while availing temporary tariff, granting connection for such additional load to the grid shall be subject to technical feasibility. If temporary tariff is availed, such consumers need to pay electricity charges only for the actual consumption of electricity and they are completely exempted from the payment of fixed charge/ demand charge including daily minimum charges.

LOW TENSION – III TEMPORARY EXTENSIONS {LT III}

Applicable to temporary extension taken from the premise of existing consumers.

LT - III Temporary extensions
Fixed charges per day - Rs.65/kW or part thereof of, the temporarily connected load plus the application fee, test fee etc. Energy charges shall be recovered from the consumer wherefrom extension is availed, at the tariff applicable to him

Note: Temporary extension shall be allowed only for a maximum period of 15 days at a time.

LOW TENSION IV - INDUSTRY (LT- IV)

(a) LT- IV (A) – INDUSTRY

LT-IV (A) Industrial tariff is applicable for the general purpose industrial loads (single or three phase) which include,-

(i) manufacturing units,
(ii) grinding mills, flour mills, oil mills, rice mills,
(iii) saw mills, units using electric hydraulic axe machine to break down logs into small pieces.
(iv) ice factories,
(v) rubber smoke houses, tyre vulcanizing/re-treading units, units manufacturing rubber sheets from latex, coconut drying units,
(vi) workshops using power, mainly for production and/or repair,
(vii) public waterworks, drinking water pumping for public by Kerala Water Authority, Corporations, Municipalities and Panchayats, telemetry stations of KWA, pumping water for non- agricultural purposes, sewage pumping units,
(viii) power laundries,
(ix) screen printing of glass ware or ceramic, SSI units engaged in computerized colour printing excluding photo studios/ colour labs.
(x) audio/video cassette/CD manufacturing units,
(xi) printing presses including presses engaged in printing dailies,
(xii) bakeries (where manufacturing process and sales are carried out in the same premises)
(xiii) diamond- cutting units, stone crushing units, granite cutting units (where boulders are cut into sheets in the same premises)
(xiv) book binding units with allied activities,
(xv) garment making units,
(xvi) seafood processing units, prawn peeling and processing units, granite cutting units (where large granite blocks are cut into sheets in the same premises),
(xvii) plantations of cash crops, tea factories, cardamom and nutmeg drying and curing units,
(xviii) units carrying out extraction of oil in addition to the filtering and packing activities carrying out in the same premise and under the same service connection,
(xix) dairy, processing of milk by pasteurization and its storage and packing,
(xx) soda manufacturing units, bottling plants/ packaging drinking water.
(xxi) Crematoria.
(xxii) Dewatering of agriculture land.
(xxiii) Dewatering of water logged areas.
(xxiv) De-siltation plants
(xxv) Units engaged in cleaning, grading, blending and storage of food grains.
(xxvi) Units engaged in catering services without facility for retail sales as that of restaurents and hotels.
(xxvii) Manufacturing of concrete rings, concrete blocks and concrete tanks

LT - IV (A) INDUSTRY		
Particulars	Fixed Charge	Energy Charge (Rs/unit)
(i) Connected load of and below 10 kW (Rs. perconsumer per month)	140	5.90
(ii) Connected load above 10kW and up to 20 kW (Rs. per kW or part thereof per month)	95	5.95
(iii) Connected load above 20kW (Rs. per kVA or part thereof per month)	215	6.00

Note: 1- Workshops with automobile service stations shall segregate the workshop load for availing the benefit of industrial tariff. If loads are not segregated the charges shall be realized at the rates applicable to automobile service stations.

Note: 2- General conditions relating to installation of capacitors will apply.

LOW TENSION – IV (B) – IT and IT Enabled Services. {LT IV (B)}

Tariff applicable to Information Technology (IT) and IT enabled services including akshaya-e-centres, computer consultancy services units, call centers, software services, data processing activities, desktop publishing (DTP), software development units and such other IT enabled services.

LT - IV (B) and IT Enabled Services		
Particulars	Fixed Charge	Energy Charge (Rs/unit)
(i) Connected load of and below 10 kW (Rs. perconsumer per month)	175	6.65
(ii) Connected load above 10kW and up to 20 kW (Rs. per kW or part thereof per month)	135	6.70
(iii) Connected load above 20kW (Rs. per kVA or part thereof per month)	220	6.80

Note: General conditions relating to installation of capacitors will apply.

LOW TENSION - V- AGRICULTURE

(a) LT- V AGRICULTURE (A) {LT- V (A)}

This tariff applicable to the use of electricity for:

(1) pumping, dewatering of agriculture land and lift irrigation for cultivation of food crops, fruits and vegetables.

(2) pumping, dewatering and lift irrigation for the cultivation of cash crops such as cardamom and coffee and for the cultivation of crops such as coconut, areca nut, pepper, nutmeg, cloves, cocoa and betel leaves as pure crops or as inter crops.

LT - V (A)- AGRICULTURE	
Fixed Charge (Rs. per kW or part thereof per Month)	20
Energy Charge (Rs/kWh)	2.40

Note:- 1.General conditions relating to installation of capacitors will apply.

2. The electricity for pumping and lift irrigation for the cultivation of cash crops only are included under LT V(A) agriculture tariff and the electricity for general purpose industrial loads like drying, further processing, value addition etc. of plantation of cash crops shall be billed under LT IV(A) tariff'.

(b) LT – V - AGRICULTURE (B) {LT -V (B)}

The tariff under this category is applicable to the supply of electricity for the use of the following activities such as,-

(i) livestock farms, combination of livestock farms with dairy, poultry farms, rabbit farms, piggery farms, hatcheries,

(ii) silk worm breeding units, sericulture,

(iii) floriculture, tissue culture, agricultural and floricultural nurseries, mushroom culture, aquaponics and hydroponics

(iv) aquaculture, fish farms including ornamental fish farms, prawn farms, other aqua farms, aquarium run by the Agency for Development of Aquaculture, Kerala, and

(v) cheenavala without fish farming and egger nurseries

LT - V (B)- Agriculture	
Fixed Charge (Rs. per kW or part thereof per Month)	30
Energy Charge (Rs/kWh)	3.40

Note1: General conditions relating to installation of capacitors will apply.

Note-2: LT-V (B) Agriculture tariff is applicable to the dairy farms, which have facilities for collection, chilling and storing of milk, till it is sent to the processing units, and also applicable to the primary milk producer's co-operative societies, the primary function of which is the collection of milk from the farmers and to sell the same to the processing units in bulk. This tariff will be also applicable for retail sales outlets if the connected load of sales outlets does not exceed 10% of the total connected load.

Note-3: The electricity used for running electric motors for making rubber sheets from Latex by individual farmers shall be billed under LT-VAgriculture

Note -4: The electricity used for running Shredding machines used for powdering dry waste such as coconut leaves, coconut husk, grass etc by individual farmers

LOW TENSION –VI GENERAL

LT-VI- General (A) [LT- VI (A)]

The tariff under LT-VI (A) category is applicable to,-

(i) Government or Government aided educational institutions; libraries and reading rooms of Government or Government aided educational institutions,

(ii) Educational institutions administered by the Government such as LBS, IHRD, CAPE etc.

(iii) Educational institutions run by Universities in the State of Kerala.

(iv) Primary health centres, dispensaries and hospitals under the Central Government or State Government or Local Self Government Institutions; X-Ray units, laboratories, blood banks, mortuaries and such other units attached to such primary health centres, dispensaries and hospitals; blood banks of IMA; poly clinics under Ex-servicemen Contributory Health Scheme (ECHS).

(v) Centres for religious worship such as temples, mosques and churches; institutions imparting religious education, monasteries and convents;

LT - VI GENERAL (A)	
(a) Fixed Charge (Rs. per kW or part thereof per Month)	90
(b) Energy Charge (Rs/kWh) (Non telescopic)	
(i) Of and Below 500 kWh (all units)	6.00
(ii) Above 500 kWh (all units)	6.85

LT - VI GENERAL (B)

The tariff under this category is applicable to,-

(i) offices and institutions under the State or Central Governments or under the Local Self Government Institutions, except those which are included in the category LT-VI General (C); village offices; Government Treasuries.

(ii) offices of the Corporations, Boards and other Public Sector Undertakings under State or Central Governments;

(iii) offices of the Kerala Water Authority (KWA), Kerala State Road Transport Corporation (KSRTC) and Kerala State Water Transport Corporation (KSWTC);

(iv) museum and / or zoo;

(v) hostels of educational institutions affiliated to Universities, hostels under the control of the Director of Technical Education or the Director of Medical Education or the Director of Public Instruction or such other institutions of Government, hostels run by the State or Central Government, hostels run by State Social Welfare Board, hostels run by institutions registered under the Travancore - Cochin Literary, Scientific and Charitable Societies Registration Act, 1955 (12 of 1955) or under the Societies Registration Act, 1860 (21

of 1860) or under Indian Trust Act, 1882, the donations to which are exempted from payment of Income Tax; Working women hostels operating under the scheme approved by the Ministry of Women and Child Development, Government of India, hostels under the supervision and monitoring of Department of Social Welfare, Government of Kerala;

(vi) Pay wards and institutions of Kerala Health Research and Welfare Society (KHRWS);

(vii) travellers' bungalows, rest houses and guest houses under government; Police Clubs,

(viii) type writing institutes;

(ix) offices of social service organizations, offices of service pensioners' associations.

(x) offices of political parties not approved by the Election Commission of India;

(xi) collection centres of 'FRIENDS'; single window service centres under Department of Information Technology;

(xii) offices of Department of Posts, all post offices including extra departmental (ED) post offices;

(xiii) cameras at traffic signal points, surveillance cameras installed by the Local Self Government Institutions and also under Operation Kaval Kannukal

(xiv) offices of KMRL

(xv) Old age homes which charge the inmates for boarding and lodging.

(xvi) Offices of Railways including Railway Stations,

(xvii) Light houses

(xviii) Offices of the document writers.

LT - VI GENERAL (B)	
(a) Fixed Charge (Rs. per kW or part thereof per Month)	115
(b) Energy Charge (Rs/kWh) (non-telescopic)	
(i) Of and below 500 kWh (all units)	6.65
(ii)Above 500 kWh (all units)	7.30

LT- VI GENERAL (C)

The tariff under this category is applicable to:

(i) offices or institutions under Income Tax or Central Excise and Customs Departments,

(ii) offices under Motor Vehicles Department or Sales Tax department or Excise Department; Sub-Registry offices; and such other tax earning departments under State or Central Government (other than Local Self Government Institutions);

(iii) banking and / or financing institutions (excluding micro financing institutions registered and functioning as per the guidelines issued by Reserve Bank of India);

(iv) ATM counters including the ATM counters of post offices.

(v) offices of Airport Authority of India except airports;

(vi) Insurance companies,

(vii) Offices of the Goods and Service Tax (GST)

(viii) Microfinancing Institutions,

(ix) Offices of the LIC Agents

(x) Offices of the pawn brokers; and

(xi) any other LT categories not included any where in this schedule.

LT - VI GENERAL (C)	
(a) Fixed Charge (Rs. per kW or part thereof per Month)	200
(b) Energy Charge (Rs/unit) (Non telescopic)	
(i) Upto 500 units (all units)	7.15
(ii) Above 500 units (all units)	8.65

LT- VI GENERAL (D)

The tariff under LT-VI (D) category is applicable to:

(i) orphanages;

(ii) anganwadis; schools and hostels for differently abled or physically challenged persons (including mentally challenged persons, deaf/dumb/blind/physically challenged persons),

(iii) old age homes where no charges are levied for the boarding and lodging of inmates,

(iv) Cheshire homes; polio homes; SoS Childrens' Villages,

(v) charitable centres for cancer care, pain and palliative care and HIV rehabilitation,

(vi) charitable hospital guidance centres registered under the Travancore - Cochin Literary, Scientific and Charitable Societies Registration Act, 1955 (12 of 1955) or under the Societies Registration Act, 1860 (21 of 1860) or under Indian Trust Act, 1882, donations to which are exempted from payment of Income Tax,

(vii) shelters exclusively for orphaned animals and birds run by charitable institutions registered under the Travancore - Cochin Literary, Scientific and Charitable Societies Registration Act, 1955;

(viii) charitable institutions recognized by the Government for the care and maintenance of the destitute and differently abled or physically challenged persons including mentally retarded persons and deaf/dumb/blind persons,

(ix) libraries and reading rooms with connected load of and below 2000 watts and monthly consumption of and below 100 units.

(x) e-toilet and public comfort stations, where no charges levied for use.

(xi) Dialysis centres providing free dialysis to the poor.

(xii) Buds school and school for children with Autism

LT - VI GENERAL (D)	
(a) Fixed Charge	Rs .35.00/ consumer/ month
(b) Energy Charge (Rs/kWh)	2.10

LT VI GENERAL (E)

The tariff under LT-VI(E) category is applicable to:

(i) sports and / or arts clubs (with connected load not exceeding 2000 Watts);

(ii) sailing and / or swimming clubs (with connected load not exceeding 2000 Watts);

(iii) gymnasium (with connected load not exceeding 2000 W);

(iv) libraries and reading rooms excluding those which are included in LT VI-A and LT VI-D categories,

(v) press clubs;

(vi) offices of political parties approved by Election Commission of India;

(vii) e-toilet and public comfort stations, where charges are levied for use

LT-VI-GENERAL (E)	
(a) Fixed charge (Rs/ consumer/month)	
Single phase consumers	50
Three phase consumers	130
(b) Energy charges (Rs /kWh) (Non telescopic)	
0 to 50 units per month	3.80
0 to 100 units per month	4.80
0 to 200 units per month	5.50
Above 200 units per month	7.20

LT VI GENERAL (F)

The tariff under LT- VI (F) is applicable to:

(i) Computer training institutes, private coaching or tuition centres, selffinancing educational institutions including the hostels run by them,

(ii) Cinema studios, audio/video cassette recording/duplication units, CD recording units, cinema dubbing and animation studios,

(iii) All construction works,

(iv) Installations of cellular mobile communications, satellite communications, offices and / or exchanges of telecom companies,

(v) Offices or institutions of All India Radio (AIR), Doordarshan and other television broadcasting companies, cable TV networks, radio stations,

(vi) Hall marking centres.

(vii) Offices of the advocates or chartered accountants or company secretary or consulting engineers or tax consultants or architects or cost accountants or of management consultants.

(viii) Offices of the 'on line news channels and on line portals'.

(ix) Printing press engaged in printing dailies along with online media channels.

LT VI GENERAL (F)	
Fixed charge (Rs/ kW or part thereof per month)	
Single Phase	105
Three phase	195
Energy Charge (Rs per unit) (Non- telescopic)	
0 to 100 units per month	6.00
0 to 200 units per month	6.80
0 to 300 units per month	7.50
0 to 500 units per month	8.15
above 500 units per month	9.25

LT-VI- GENERAL (G)

The tariff under this category is applicable to all the private hospitals, private clinics, private clinical laboratories, private X-ray units, private mortuaries, private blood banks and private scanning centers and such other private institutions in health care sector.

LT VI General (G)	
Fixed charge (Rs/ kW or part thereof per month)	
Single Phase	90
Three phase	175
Energy Charge (Rs per unit) (Non-telescopic)	
0 to 500 units per month	5.85
0 to 1000 units per month	6.60
0 to 2000 units per month	7.70
Above 2000 units per month	8.60

LOW TENSION - VII – COMMERCIAL

LT- VII-Commercial (A) [LT- VII (A)]

The tariff under LT-VII (A) category is applicable to commercial and trading establishment such as,

(i) shops, showrooms, display outlets, business houses,

(ii) hotels and restaurants (having connected load exceeding 2000 Watts),

(iii) house boats

(iv) private lodges, private guest houses, private rest houses, private travellers bungalows,

(v) freezing plants, cold storages, milk chilling plants for the purpose of marketing the milk and milk products.

(vi) shops selling confectioneries, sweetmeat, breads and such other eatables without manufacturing process,

(vii) petrol/diesel/ LPG /CNG bunks, LPG bottling plants,

(viii) automobile service stations, computerized wheel alignment centres,

(ix) marble and granite cutting units,

(x) units carrying out filtering, packing and other associated activities of oil brought from outside,
(xi) share broking firms, stock broking firms, marketing firms,
(xii) godowns of Kerala State Beverages Corporations,
(xiii) photo studios/ colour labs

LT VII Commercial (A)	
(a) Fixed charge (Rs/ kW or part thereof per month)	
(i) Single Phase	95
(ii) Three phase	190
(b) Energy Charge (Rs per unit) (Non telescopic)	
(i) 0 to 100 units per month	6.05
(ii) 0 to 200 units per month	6.80
(iii) 0 to 300 units per month	7.50
(iv) 0 to 500 units per month	8.15
(v) Above 500 units per month	9.40

LT- VII Commercial (B) [LT-VII-B]

Tariff applicable to commercial and trading establishments such as,-

(i) shops, bunks, hotels, restaurants, having connected load of and below 2000 Watts.

(ii) telephone / fax / e-mail / photocopy booths and internet cafes having connected load of and below 2000 Watts.

When connected load of the above mentioned consumers exceeds 2000 Watts, such consumers shall be charged under LT -VII (A) tariff. If monthly consumption of LT- VII (B) consumers having connected load of and below 2000 Watts, exceeds 300 units, the energy charges shall be realized at the rate of energy charges applicable to LT -VII (A) consumers.

LT - VII Commercial (B)	
(a) Fixed Charge	
Upto 1000 watts (Rs. Per consumer/month)	70
Above 1000 watts and upto 2000 watts (Rs. Per kW/month)	80
(b)Energy charge (Rs/unit) (Non telescopic)	
(i) 0 to 100 units	5.40
(ii) 0 to 200 units	6.25
(iii) 0 to 300 units	6.90

LT- VII Commercial (C) [LT-VII-C]

The tariff under LT VII (C) is applicable to,-

(i) cinema theatres;
(ii) circus;
(ii sports and arts clubs, sailing or swimming clubs and gymnasium having connected load exceeding 2000W.
(iv) Stadiums, turf courts, and indoor courts.
(v) Multiplexes
(vi) Auditoriums
(vii) Private hostels.

LT - VII Commercial (C)	
(a) Fixed Charge (Rs. per kW or part thereof / Month	145
(b) Energy Charge (Rs/ unit) (Non telescopic)	
(i) Upto 1000 units	6.40
(ii) Above 1000 units	7.80

LOW TENSION – VIII PUBLIC LIGHTING (LT- VIII)

LT – VIII (A) Unmetered street lights {LT VIII (A)}

Tariff applicable to various categories of unmetered public lighting per lamp.

LT- VIII(A)- Composite Tariff approved for Unmetered Street Lights					
Sl No	**Type of Lamp**	**Watts(W)**	**Burning hours per day Rs/lamp/ month**		
			4 hours	**6 hours**	**12 hours**
1	Ordinary	40	29	43	86
2	Ordinary	60	43	63	131
3	Ordinary	100	71	107	215
4	Fluro. Tube	40	29	43	86
5	Fluro. Tube	80	56	86	171
6	Flood light	1000	718	1076	2152
7	MV Lamp	80	64	90	184
8	MV Lamp	125	98	144	286
9	MV Lamp	160	123	184	367
10	MV Lamp	250	191	286	573
11	MV Lamp	400	306	457	916
12	SV Lamp	70	54	82	161
13	SV Lamp	80	61	90	184
14	SV Lamp	100	75	114	228
15	SV Lamp	125	98	144	286
16	SV Lamp	150	114	171	344
17	SV Lamp	250	191	286	573
18	CFL	11	6	10	20
19	CFL	14	8	12	27
20	CFL	15	9	14	29
21	CFL	18	11	16	34
22	CFL	22	14	20	42
23	CFL	30	19	29	56
24	CFL	36	22	34	68
25	CFL	44	27	42	82
26	CFL	72	46	68	135
27	CFL	144	90	135	269
28	LED	9	3	5	12
29	LED	12	5	6	17
30	LED	15	6	8	22
31	LED	18	6	14	26
32	LED	20	9	14	30
33	LED	24	12	17	39
34	LED	25	12	17	41
35	LED	30	14	20	49
36	LED	35	16	26	50
37	LED	40	19	30	58

38	LED	45	20	32	68
39	LED	70	35	50	102
40	LED	80	38	58	116
41	LED	110	52	81	159
42	LED	150	71	110	217
43	MV Lamp on semi high mast only for 12 hrs burning per day	1200			2722
44	SV Lamp on semi high mast only for 12 hrs burning per day	250			577

LT – VIII (B) METERED STREET LIGHTS AND TRAFFIC SIGNAL LIGHTS {LT-VIII (B)}

Tariff applicable for metered street lights and tariff signal lights.

LT – VIII (B) Tariff for Metered Street Lights and Traffic Signal Lights	
(a) Fixed charge (Rs/ meter/month)	100
(b) Energy Charge (Rs/unit)	5.00

Note: 1.- When public lighting is to be done after extension of lines, the beneficiaries shall pay the cost of the work as per the cost data approved by the Commission.

Note: 2.- In campuses where lines and lights are provided by the beneficiary, LT metered supply shall be provided at Rs. 4.80 per kWh plus fixed charge of Rs.90.00 per meter per month subject to other conditions regarding the payment of cost of the work.

Note: 3.- Supply to light houses when taken from the street mains of Kerala State Electricity Board Limited or any other licensee will be charged at appropriate public lighting tariff. Where metered independent supply is provided at low tension, the rate applicable will be Rs. 4.80 per kWh plus fixed charge at Rs.90.00 per meter per month and subject to other conditions regarding payment of cost of the work.

Note: 4.- In areas where low tension distribution lines of Kerala State Electricity Board Limited and other licensees exist, metered supply shall be given by the respective licensee for special type of lamps, for which the rates are not given in the table above, provided the lamps are installed and maintained by the local bodies at their cost. The tariff applicable in such cases shall be Rs 4.80 per unit plus fixed charge at Rs 90.00 per meter per month, subject to other conditions regarding payment of cost of the work.

Note: 5.- Separate charges shall not be collected from the consumers towards service charges for street lighting.

Note: 6.- Electricity duty is not payable for public lighting as per the provisions of Kerala Electricity Duty Act, 1963.

LT IX : DISPLAY LIGHTING AND HOARDINGS

Tariff applicable to display lighting, hoarding, external illumination of buildings for publicity and sales- promotion purposes.

LT - IX Display Lighting and Hoardings	
Fixed Charge	
(a) Rs. per Connection per month upto 1 kW 700	700
(b) For every additional kW above 1kW (Rs. per kW per month)	150
Energy Charge (Rs/unit)	12.50

Note: The electricity used for the purposes of displaying the name, address, working time and such essential details of commercial, industrial or other category of consumers is allowed to be charged at same tariff applicable to the category to which such consumers belongs.

LT-X : ELECTRIC VEHICLES PUBLIC CHARGING STATIONS

Tariff applicable to public electric vehicle charging stations at LT, including that of water metro

LT – X : ELECTRIC VEHICLES PUBLIC CHARGING STATIONS			
Particulars	**Ruling tariff**	**Solar hours from 9 AM to 4 PM**	**Non Solar hours (remaining hours of the day)**
Fixed Charge (Rs. per KW per month)	Nil	Nil	Nil
Energy Charge (Rs per unit)	7.15	5.00	9.30

Note: Till 31.03.2025, Solar hours may be treated as per existing time Zone- 1, and time Zone- 2 and time Zone- 3 together may be treated as Non – Solar hours. KSEBL shall re-set the time zone of the meters to 'solar hours and non-solar hours' latest by 31.03.2025.

PART B—HIGH TENSION (HT) AND EXTRA HIGH TENSION (EHT) TARIFF

General conditions for HT and EHT Tariff

1. For the purpose of conversion from kVA to kW or vice versa, an average power factor of 0.9 shall be taken.
2. Billing demand shall be the recorded maximum demand for the month in kVA or 75% of the contract demand as per the agreement, whichever is higher.
3. All the HT&EHT consumers shall be allowed to use up to 130% of the contract demand during off-peak hours without the payment of excess demand charge. However, when the recorded maximum demand during normal period or peak period in a month exceeds the contract demand as per the agreement or the recorded maximum demand during off-peak hours exceeds 130% of the contract demand, the excess demand shall be charged at a rate of 150 per cent of the demand charges applicable, as per the billing procedure specified under Annexure-E to this Schedule.
4. (a) As per Section 55 of the Electricity Act, 2003 and provisions of the Central Electricity Authority (Installation and Operation of meters) Regulations, 2006, consumer meter shall generally be installed and owned by the licensee.

   (b) Even if the consumer elects to purchase the meter as stipulated in proviso under sub-section (1) of Section-55 of the Electricity Act, 2003, such meter shall be tested, calibrated, sealed, installed, operated and maintained by the licensee as provided in the said regulations.

   (c) The consumer has to purchase only such meters which are included in the list of manufactures and models which has to be provided by the licensee, as stipulated in clause (c) of Sub-Regulation (2) of Regulation 6, of the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006.

   (d) If any existing consumer, having elected to purchase and supply the meter for replacement of the defective meter in his premises, fails to do so within two months, such consumer will be charged 50% extra over the prevailing rates applicable to him for both demand and energy, for the said two months and one month thereafter.
   (e) The licensee shall, in performance of its duty under Section 55 of the Act, replace the defective meter and realize the security deposit and meter rent in accordance with the provisions of Section 55 of the Electricity Act, 2003.
5. All EHT consumers (except Railway Traction) and all HT consumers (except drinking water supply pumping stations of Kerala Water Authority, Municipal Corporations, Municipalities and Panchayats) shall be billed on ToD tariff as per the formula indicated in the Annexure - A to this schedule.
6. The monthly minimum charge payable shall be the minimum guarantee amount as per Minimum Guarantee Agreement, if any, or the billing demand as per condition 2 above, whichever is higher. This applies even during the period of disconnection of power supply.

7. In the case of factory lighting and colony supply of HT/EHT (Industrial) consumers, the applicable tariff shall be subject to the following conditions:

(a) Colony Supply.—Colony supply, when availed from the HT/EHT supply of the consumer, such supply shall be segregated and metered by means of a sub-meter and the consumption will be charged at 20 paise extra per kWh for HT and 10 paise extra per kWh for EHT consumers.

(b) If no segregation is made as specified above, the bill amount of the consumer shall be increased for demand and energy charges by 10% for both HT and EHT consumers.

8. Power factor incentives/penalties as per Annexure-C shall be applicable to all HT and EHT consumers.

TARIFF FOR HIGH TENSION (HT) CONSUMERS

This tariff shall be applicable to all high tension consumers to whom the Kerala State Electricity Board Limited or other licensees has undertaken or undertakes to supply energy. The expression 'high tension' (HT) consumer means a consumer who is supplied with electrical energy at a voltage of 33,000 Volts, 22,000 Volts or 11,000 Volts under normal conditions, subject however to, the variation indicated in the agreement with the Kerala State Electricity Board Limited or other licensees or the variation allowed under the Kerala Electricity Supply Code, 2014.

Category	(a)Demand Charges (Rs./ kVA of Billing Demand / Month)	(b) Energy Charge (Rs/ Unit)
High Tension-I—Industry (A) [HT-I (A)] (Tariff applicable to general purpose industrial load of all classes of consumers listed in LT-IV (A) category availing supply of electricity at high tension.)	420	6.25
High Tension-IT and It Enabled Services [HT-I (B)] (Tariff applicable to all classes of consumers listed in LT-IV (B) category availing supply of electricity at high tension.)	430	6.75
High Tension-II—General (A) [HT-II (A)] (Tariff applicable to all classes of consumers listed in LT-VI (A), LT-VI (B), LT-VI (D), and LT-VI (E) categories availing supply of electricity at high tension.)	460	6.20
High Tension– II— General (B) [HT-II (B)] (Tariff applicable to all classes of consumers listed in LT-VI (C), LT-VI (F) and LT-VI (G) categories availing supply of electricity at high tension. including Airports)	535	(i) Of the below 30,000 units (All units) 6.85 (ii) Above 30,000 units (All units) 7.85
High Tension –III —Agriculture (A)- [HT-III (A)] (Tariff applicable to the classes of agricultural consumers listed in LT-V (A) category, availing supply of electricity at high tension.)	250	3.60
High Tension –III -Agriculture (B)- [HT-III (B)] (Tariff applicable to classes of agricultural consumers listed in LT-V (B) category, availing supply of electricity at high tension.)	270	4.10

High Tension–IV (A)—Commercial [HT–IV A] Tariff applicable to all classes of commercial consumers listed in LT-VII (A) and LT-VII (C) categories availing supply of electricity at high tension, except those who categorize under HT-IV (B).	500	(i) Of and below 30,000 units (All units) 6.90 (ii) Above 30,000 units (All units) 7.90
High Tension–IV (B)—Commercial [HT–IV B] (Tariff applicable to hotels, marriage halls, convention centers, shopping malls and multiplexes availing supply at high tension.)	510	(i) Of and below 30,000 units (All units) 6.90 (ii) Above 30,000 units (All units) 7.90
High Tension– V—Domestic (HT – V) (Tariff applicable to domestic consumers and colonies availing supply of electricity at high tension.)	460	6.35

Note:- The **HT domestic** connection shall be effected subject to the following conditions:

1. The connections provided shall be for domestic use only.
2. The consumer shall not resell the power supplied to the occupants inside or outside the premises to which HT connection is provided.
3. If the apartment /flat/ room is rented out or made use of for any other purpose, he shall take individual LT connection at his cost. Appropriate LT tariff shall apply in such cases, based on the purpose of electricity usage. The consumer shall maintain the transformer and allied equipment at his cost in such cases.

High Tension-VI Electrical Vehicles Charging Stations Tariff applicable to charging stations of electric vehicles including that of water metro availing electricity at high tension.	**Ruling Tariff**	Nil	7.00
	Solar hours from 9 AM to 4 PM	Nil	5.00
	Non Solar Hours (remaining hours of the day)	Nil	9.20

Note: Till 31.03.2025, Solar hours may be treated as per existing time Zone-1, and time Zone-2 and time Zone-3 together may be treated as Non-Solar hours. KSEBL shall re-set the time zone of the meters to 'solar hours and non-solar hours' latest by 31.03.2025.

High Tension VII—Temporary connections [HT–VII] (Tariff applicable availing temporary connections at HT for the purposes such as illumination, exhibition, festivals, public meetings, fairs etc.)	

Note: Auditoriums, marriage halls, conventions centers etc who have limited use of electricity during a month and year', have the option to avail the LT-II Temporary tariff. In case additional loads other than that provided in the service connection agreeemnt is proposed to be connected to the grid while availing temporary tariff, granting connections for such additional load to the grid shall be subject to technical feasibility. If temporary tariff is availed, such consumers need to pay electricity chargfes only for the actual consumption of electricity and they are completely exempted from the payment of fixed charge/ demand charge including daily minimum charges.

HIGH TENSION –VIII —SEASONAL CONSUMERS (HT – VIII)

1. HT consumers with seasonal load shall register themselves with the KSEBL or other licensees as seasonal consumers for the purpose for which electricity is used. They shall be billed under appropriate tariff applicable to the category to which they belong, for the period of use.
2. For registration as a seasonal consumer, the consumer should have a minimum of four working months per annum or he should guarantee a minimum equivalent thereto for the working season.
3. If a consumer registered with the Kerala State Electricity Board Limited or other licensees as a seasonal consumer, specifies the use of electricity for different purposes during different seasons and also specifies the period of

usage for each such purpose, then the consumer shall billed under appropriate tariff for each purpose during different seasons separately.

4. If a registered seasonal consumer using electricity for different purposes without specifying the purposes and the period of usage, then the consumer shall be charged at the highest tariff applicable amongst the different uses, for the various operations for the whole year.
5. The conditions for lighting for seasonal industrial consumers shall be the same as applicable in the case of HT-I.
6. If a registered seasonal consumer opts for disconnection of supply during the period other than the period of usage (specified seasonal usage), then he shall pay higher demand charges during the working season as below:
   (a) Demand charges shall be increased by 5(12-N) % where 'N' is the number of months during which the consumer registers himself with the KSEBL or other licensees to utilize the service in the year.
   (b) There will be no billing for the idling period.
   (c) The service to the consumer will be disconnected without notice immediately on termination of the registered period unless the consumer asks for continuance of the service during the idle period for which also he will be charged at the same seasonal rate applicable for the original period.
   (d) Monthly minimum charge equivalent to demand charges for 75% of the contract demand increased as per (a) above shall be collected from the consumer in each working month.
   (e) The reconnection fee shall be as specified in the Kerala Electricity Supply Code, 2014 and its amendments from time to time.

EXTRA HIGH TENSION (EHT) TARIFF

This tariff shall be applicable to all Extra High Tension consumers. The expression Extra High Tension (EHT) consumer means a consumer who is supplied with electrical energy at a voltage exceeding 33000 Volts under normal conditions subject however to, the variation indicated in the agreement with the Kerala State Electricity Board Limited or other licensees or allowed under the Kerala Electricity Supply Code, 2014.

Category	Voltage level in KV	(a) Demand Charges (Rs./kVA of Billing Demand/Month)	(b) Energy Charge (Rs. Unit)
Extra High Tension (EHT) Industrial (Tariff applicable to general purpose industrial load at 66 kV, 110 kv, 220 kv	**66**	420	6.30
	110	420	6.15
	220	400	5.55
Extra High Tension (EHT) Commercial (66kV, 110 kV, 220 kV) (Tariff applicable to commercial institutions availing power at EHT.	66kV, 110 kV, 220 kV	(b) Energy Charge (Rs. kWh (non-telescopic) 6.10 (i) Upto 60,000 units 6.30 (ii) Above 60,000 units 7.30	
Extra High Tension - General A (EHT-General -A) (66kV, 110kV, 220 kV) (Tariff applicable to the consumers enumerated under LT-VI(A) category, availing supply at EHT level.	66kV, 110 kV, 220 kV	420	5.90
Extra High Tension - General B (EHT-General -B) (66kV, 110kV, 220 kV) (The Tariff under the category is applicable to Indian Space Research Organisation (ISRO) and Government Research Institutions.	66kV, 110 kV, 220 kV	460	(non telescopic) (i) Above 60,000 units 6.10 (ii) Above 60,000 units 7.10
Extra High Tension - General C (EHT-General -C) (66kV, 110kV, 220 kV) (The Tariff under the category is applicable to utility services such as Airports, Self financing educational institutions and any other EHT consumers not included elsewhere.	66kV, 110 kV, 220 kV	470	(non telescopic) (i) Upto 60,000 units 6.45 (ii) Above 60,000 units 7.45

Railway Traction (110kV) (Tariff applicable to Railway Traction in the State of Kerala.	110	390	5.70
Defence installations excluding defence housing colonies (Tariff applicable to defence installations excluding defence housing colonies.	110	390	5.70
Kochi Metro Rail Corporations (Tariff applicable to tractions for KMRL	110	320	5.30

PART-D OTHER CHARGES

Summary of other charges applicable with effect from 05.12.2024 to 31.03.2025

(1) The **transmission charges**
(a) For STOA and open access by embedded consumers from RE sources within the State - Rs 0.49 /unit
(b) For LRA and MTOA- Rs 10925/MW /day

(2) The **wheeling charges** — Rs.0.64/unit.

(3) SLDC Charges - Rs 104/MW/day

(4) The **cross subsidy surcharge.**

Category	Cross Subsidy Surcharge (Rs / unit)
EHT— Industrial (66 kV)	1.41
EHT—Industrial (110 kV)	1.34
EHT—Industrial (220 kV)	1.36
EHT—General A	1.36
EHT—General B	1.89
EHT—General C	2.08
Railways	1.40
Defence Installations	1.32
KMRL	1.40
HT—1(A) Industry	1.58
HT—I(B) Industry	1.71
HT—II(A)	1.65
HT—II (B)	1.92
HT—III(A)	1.25
HT—III(B)	0.53
HT—IV (A)	2.08
HT—IV (B)	2.17
HT—V	1.68
HT—VI	1.38

5. Meter rent to be levied from the consumers

Sl. No.	Description	Meter rent approved (Rs /meter/ month)
1	Single phase static energy meters with LCD and ToD facility and with ISI certification	6
2	Three phase static meters with LCD and ToD facility with ISI certification	15
3	LT CT operated three phase four wire static energy meters (Class 0.5 accuracy) with LCD and ToD facility and ISI certification	30
4	3 phase AC static tri-vector energy meters with ABT, ToD facility and compliant to Device Language Message Specification (DLMS) protocol	1000

6. Meter rent for Renewable Energy meter

Sl.No.	Item	Meter rent for RE meters approved (Rs/meter/ month)
1	Renewable Energy meter - Single phase 2 wire 5-30-A,static LCD meters with TOD facility	10
2	Renewable Energy meter - Three phase 10-60A static LCD meters with TOD facility	20
3	Renewable Energy meter - LTCT Meter DLMS Class 0.5 S -/5A	25
4	Renewable Energy meter - 3 Phase 4 Wire, CT/PT Operated, HT, Static Energy Meters of Class 0.2S Accuracy + GPRS Modem	200
5	Renewable Energy Meter - 3 Phase 4 Wire, CT/PT Operated, EHT, Static Energy Meters of Class 0.2S Accuracy+ GPRS Modem	200
6	Net Meter - single phase 5-30A class 1.0	30
7	Net Meter - Three phase 10-60A class 1.0	35
8	Net Meter- LTCT meter, class 0.5S,-/5A 70	70
9	Net meter- CTPT operated HT meter Class 0.2S	435

7. **Green Tariff** - Rs0.77/unit over and above the normal tariff.

The consumers voluntarily opr for the purchase of RE power from distribution licensees shall pay green tariff over and above the normal demand charge/fixed charge and energy charge of the respective tariff category in which the consumer belongs to

8. The transmission charges, wheeling charges, SLDC Charges, cross subsidy surcharge, green tariff and meter rent approved in this order shall be applicable to KSEB Ltd. and other licensees in the State.

ANNEXURE -A
ToD Tariff applicable to EHT, HT (except HT-V domestic) Consumers

The ToD tariff applicable to EHT, HT (except HT-V domestic) for energy consumption is given below:

	Rates		
Particulars	Normal period (06.00 hrs. to 18.00 hrs.)	Peak period (18.00 hrs. to 22.00 hrs.)	Off peak (22.00 hrs. to 06.00 hrs.)
Energy Charges	100%	150%	75%

Billing of the demand charges

Monthly Demand Charge shall be:

Billing Demand during the month **×** Demand Charge per kVA

Billing of Energy charges

The billing of the energy charge for HT&EHT consumers shall be done as follows:

(a) Normal time : *Consumption during normal time × energy rate / unit.*

(b) Peak time : *Consumption during peak time × energy rate / unit × 1.50*

(c) Off-peak time : *Consumption during off-peak time × energy rate/unit × 0.75*

Total energy charge during a month = (a) + (b) + (c).

Other conditions

- Demand/energy charges shall be the demand/energy charges for normal period as per the tariff approved in this Schedule.
- Demand charges during a particular month shall be assessed based on the recorded maximum demand during that month or 75% of the contract demand whichever is higher.
- Excess demand charges: Additional demand charges shall be levied if the recorded maximum demand exceeds the contract demand during normal period and peak period,which shall be charged at 50% extra for the excess over the contract demand (ie., additional demand during normal/peak period × ruling demand charges × 0.5). Additional demand charges during off-peak period shall be levied only if the recorded maximum demand during off-peak period is in excess of 130% of the contract demand.
- For the consumption of electricity during normal period ie. 6.00 hours to 18.00 hours the demand/energy charges shall be at the notified rates applicable to the consumer category.

ANNEXURE -B

ToD Tariff applicable to LT industrial Consumers

The ToD tariff applicable to LT industrial consumers for energy consumption is given below:

	Rates		
Particulars	Normal period (06.00 hrs. to 18.00 hrs.)	Peak period (18.00 hrs. to 22.00 hrs.)	Off peak (22.00 hrs. to 06.00 hrs.)
Energy Charges	100%	150%	75%

Billing of the demand charges

Monthly Demand Charge shall be:

Billing Demand during the month **×** Demand Charge per kVA

Billing of Energy charges:

The billing of the energy charge shall be done as follows:

(a) Normal time : *Consumption during normal time × energy rate / unit. x 0.90*

(b) Peak time : *Consumption during peak time × energy rate / unit × 1.50*

(c) Off-peak time : *Consumption during off-peak time × energy rate/unit*

Total energy charge during a month = (a) + (b) + (c).

Other conditions

- Demand/energy charges shall be the demand/energy charges for normal period as per the tariff approved in this Schedule.
- Demand charges during a particular month shall be assessed based on the recorded maximum demand during that month or 75% of the contract demand whichever is higher.
- Excess demand charges: Additional demand charges shall be levied if the recorded maximum demand exceeds the contract demand during normal period and peak period,which shall be charged at 50% extra for the excess over the contract demand (ie., additional demand during normal/peak period × ruling demand charges × 0.5). Additional demand charges during off-peak period shall be levied only if the recorded maximum demand during off-peak period is in excess of 130% of the contract demand.
- For the consumption of electricity during normal period ie. 6.00 hours to 18.00 hours the demand/energy charges shall be at the notified rates applicable to the consumer category.

ANNEXURE -C

Power Factor Incentive/Disincentive

The following incentive and disincentive shall be applicable to LT industrial consumers with a connected load of and above 20 kW, HT&EHT Consumers, and Bulk consumers and distribution licensees for power factor improvement.

PF range (lag and lead)	Incentive/Penalty
Incentive	
Above 0.95 and upto 1.00	0.50% of the Energy Charge for each 0.01 unit increase in power factor from 0.95
Penalty	
0.90 and upto 0.95	0.50% of the energy charges for every 0.01 fall in PF below 0.95 and upto 0.90
below 0.90	1% of the energy charge for every 0.01 fall in PF from 0.90

Note: No penalty and incentives for consumers with leading power factor.

ANNEXURE -D

Recommended values of Static Capacitor in KVAR for Power Factor improvements

A. INDUCTION MOTORS (LT)

Sl. No.	Total Motor Rating (hp)	kVAR rating of capacitors insisted	Sl. No.	Total Motor Rating (hp)	kVAR rating of capacitors insisted
1	Upto 3	1	8	Above 25 up to 30	10
2	Above 3 up to 5	2	9	Above 30 up to 40	12
3	Above 5 up to 7.5	3	10	Above 40 up to 50	14
4	Above 7.5 up to 10	4	11	Above 50 up to 60	18
5	Above 10 up to 15	5	12	Above 60 up to 80	22

6	Above 15 up to 20	6	13	Above 80 up to 100	25
7	Above 20 up to 25	7.5	14	Above 100 up to 130	35

B. WELDING TRANSFORMERS (LT)

Sl. No.	Rating of welding transformers in kVA	kVAR rating of capacitors insisted	Sl. No.	Rating of welding transformers in kVA	kVAR rating of capacitors insisted
1	1	1	16	16	12
2	2	2	17	17	13
3	3	2	18	18	13
4	4	3	19	19	14
5	5	4	20	20	15
6	6	4	21	Above 20 up to 22	16
7	7	5	22	Above 22 up to 24	17.5
8	8	6	23	Above 24 up to 26	18
9	9	7.5	24	Above 26 up to 28	20
10	10	7.5	25	Above 28 up to 30	21
11	11	8	26	Above 30 up to 35	24
12	12	9	27	Above 35 up to 40	27.5
13	13	10	28	Above 40 up to 45	32.5
14	14	10	29	Above 45 up to 50	35
15	15	11			

ANNEXURE -E

ToD TARIFF FOR DOMESTIC CONSUMERS

(Applicable to HT-V and LT consumers with monthly consumption above 250 units)

Particulars	Rates		
	Normal period (06.00 hrs. to 18.00 hrs.)	Peak period (18.00 hrs. to 22.00 hrs.)	Off peak (22.00 hrs. to 06.00 hrs.)
Energy Charges	90% of the ruling tariff	125% of the ruling tariff	100% of the ruling tariff

Note: 1. In the case of LT-domestic category:

(a) Six months consumption shall be monitored from normal bi-monthly readings during January/February and July/August every year. If the average monthly consumption for first or second half of the year is above 250 Units, the consumer will be brought under ToD system after installing ToD meter in the premises.

(b) ToD based billing will be done whenever the monthly consumption exceeds 250 Units. If the consumption falls below 250 Units/month in any month, slab based billing shall be followed.

(c) The ruling tariff for LT-domestic is the energy charge approved for the monthly consumption above 250 units.

2. In the case of HT-V domestic, the ruling energy charge is the energy charge approved for HT-V domestic category.

ANNEXURE -F

BILLING PROCEDURE UNDER TOD TARIFF SYSTEM FOR HT & EHT CONSUMERS

I. Demand Charge (DC)

(i) The recorded maximum demand during normal time zone (T1) from 06.00 hrs to 18.00 hrs = RMD 1

(ii) The recorded maximum demand during peak time (T2) from 18.00 hrs to 22.00 hrs = RMD 2

(iii) The recorded maximum demand during off-peak time (T3) from 22.00 hrs to 06.00 hrs = RMD 3

(iv) Recorded Maximum demand during a billing period, RMD=RMD1, RMD2 or RMD3 whichever is higher

(v) The contract demand (kVA) = CD

(vi) The ruling demand charge (Rs./kVA) = D

(vii) Billing Demand, BMD = RMD or 75% of the CD whichever is higher.

(viii) Demand Charge, DC = BMD x D

(ix) Excess Demand for LT, HT & EHT consumers in each time zone shall be

(a) In time zone (T1), ED1 = (RMD1-CD)

(b) In time zone (T2), ED2 = (RMD2-CD)

(c) In time zone (T3), ED3 = (RMD-(1.30 x CD))

(x) Excess Demand Charge (ED) = Excess demand ED1, ED2 or ED3 whichever is higher x 0.50 x D

(xi) Total Demand Charge (TDC) = DC + ED

II. Energy Charge (EC)

(i) The energy consumption in Time Zone (T1) = X1

(ii) The energy consumption in Time Zone (T2) = X2

(iii) The energy consumption in Time Zone (T3) = X3

(iv) The ruling energy charge (Rs./unit) = E

(v) Energy charges in each time zone shall be :

(a) in Time Zone (T1), Ec1 = X1 x E

(b) in Time Zone (T2), Ec2 = X2 x E x 1.5

(c) in Time Zone (T3), Ec3 = X3 x E x 0.75

(vi) Total Energy Charge (EC) = Ec1 + Ec2 + Ec3

III. Total Monthly Charges = TDC + EC

ANNEXURE -G
OPTIONAL DEMAND BASED TARIFF

Eligibility: All categories of consumers other than those billed undet ToD Tariff with connected load above 20 kW

Billing demand : Recorded maximum demand or 75% of the contract demand whichever is higher

Demand charges: Based on Rs /kVA of billing demand as per tariff mentioned in the table below:

Demand Charge Rs./kVa of billing demand per month	Energy Charges
280	Existing energy charges of respective categories shall apply

Other conditions

(1) Consumers who opt for maximum demand based tariff may, at their option, install ToD compliant meters at their cost. Meters may also be installed at the cost of KSEB Ltd. If the consumers provide meters, it has to be got tested at the laboratory of KSEB Ltd. or of the Electrical Inspectorate. It will be the responsibility of KSEB Ltd. or other licensees as the case may be to ensure the accuracy of the meters after proper testing.

(2) For those who opt for maximum demand based tariff, the contract demand shall be treated as connected load.

(3) The consumers who opt for maximum demand based tariff shall declare the contract demand in kVA by executing a supplementary agreement showing the contract demand and details of connected load in their premises.

(4) The consumers who opt for the new system may be allowed to revise upwards or downwards the declared contract demand within six months from the date of option without any conditions or charges. After this, the usual terms and conditions shall be applicable for changing contract demand.

(5) The Billing demand shall be the recorded maximum demand or 75% of the contract demand whichever is higher. In case the billing demand exceeds the contract demand during normal or peak hours or 130% of the contract demand during night off-peak hours, the demand charges for the excess demand shall be charged 50% extra.

(6) When the consumption of domestic consumers exceeds 250 units in a month, the energy charges will be arrived in accordance with Annexure E of this Order.

(7) The above scheme (optional demand based tariff) shall be effective till ToD tariff is made compulsory.

IMPORTANT STANDARDS AND SPECIFICATIONS

Standards & Specifications	Title
IS SP 30	National Electrical Code
IS 5	Colors for Ready Mixed Paints and Enamels
IS 104	Ready mixed paint, brushing, zinc chrome, priming
IS 335	New Insulating Oils
IS 398	Aluminum Conductors, Galvanized Steel Reinforced
IS 613	Copper Rods and Bars for Electrical Purpose
IS 694	IS 694: Polyvinyl Chloride Insulated Unsheathed and Sheathed Cables / Cords with Rigid and Flexible Conductor Rated Voltages up to and including 450/750 V
IS 731	Porcelain Insulators for Overhead Power Lines with a Nominal Voltage greater than 1000 volts
IS 732	Electrical Wiring Installations
IS 802	Structural Steel In Overhead Transmission Line Towers
IS 1180	Distribution Transformers
IS 1445	Porcelain Insulators for Overhead Power Lines with a Nominal Voltage upto and including 1000 volts
IS 1554	PVC Insulated Heavy Duty Electric Cables
IS 1652	Stationary Cells and Batteries, Lead-Acid Type with Plante Positive Plates
IS 1771	Electroplated Coatings for Silver and Silver Alloys for General Engineering Purposes
IS 1778	Reels and Drums for Electric Conductors
IS 1885	Electro technical Vocabulary
IS 2026	Power Transformers
IS 2032	Graphical Symbols Used in Electro technology
IS 2086	Carriers and bases in Rewirable type Electric Fuses for voltages upto 650 volts
IS 2099	Bushings for alternating voltages above 1000 Volts
IS 2141	Hot Dip Galvanised Stray Strand
IS 2189	Automatic Fire Detection and Alarm System
IS 2309	Protection of Buildings and Allied Structures Against Lightning
IS 2486	Metal fittings of Insulators for Overhead Power Lines with Nominal voltage greater than 1000 volts
IS 2544	Porcelain Post Insulators for Systems with Nominal Voltage Greater than 1000 Volts
IS 2629	Hot Dip Galvanization of Iron and Steel
IS 2633	Methods for testing uniformity of coating of zinc coated articles
IS 2705	Current Transformers
IS 3070	Lightning Arresters for Alternating Current Systems
IS 3043	Earthing
IS 3156	Voltage Transformers
IS 3231	Electrical Relays for Power System Protection
IS 3646	Interior Illumination
IS 3961	Current Rating for Cables
IS 4759	Hot dip Zinc Coating on Structural Steel and Other allied Products
IS 4826	Hot Dipped Galvanized Coatings on Round Steel Wires
IS 5216	Safety Procedures and Practices in Electrical Work
IS 5300	Porcelain Guy Strain Insulators
IS 5422	Turbine Type Generators
IS 5561	Electric Power Connectors

IS 5792	High voltage Fuses
IS 6262	Method of Test for Power Factor and Dielectric Constant of Electrical Insulating Liquids
IS 6639	Hexagon Bolt for Steel Structures
IS 6792	Method for Determination of Electric Strength of Insulating Oils
IS 7098	Cross Linked Poly Ethylene Insulated PVC Sheathed Cables
IS 7421	Porcelain bushings for alternating voltage up to and including 1000 Volts
IS 7935	Insulator fittings for overhead power lines with a nominal voltage up to and including 1000 V
IS 8061	Design, Installation and Maintenance of Service Lines Up To and Including 650 V
IS 8130	Conductors for Insulated Electric Cables and Flexible Cords
IS 8623	Low voltage Switchgear and Control Gear Assemblies
IS 8997	Coupling Devices for PLC Systems
IS 9921	Alternating Current Disconnectors (Isolators) and Earthing Switches for Voltages above 1000 Volts
IS 9482	Single Sideband Power Line Carrier Terminals
IS 10028	Code of practice for selection, installation and maintenance of transformers
IS 10118	Selection, Installation and Maintenance of Switchgear and Control gear
IS 10810	Methods of Test for Cables
IS 11171	Dry type Power Transformers
IS 11353	Uniform System of Marking and Identification of Conductors and Apparatus Terminals
IS 12032	Graphical Symbols for Diagrams in the field of Electro technology
IS 12776	Galvanised Strand for Earthing
IS 13115	Portable First Aid Kit for General Use
IS 13234	Short-circuit Current Calculation in Three-phase A.C. Systems
IS 13410	Glass Reinforced Polyester Sheet Moulding Compounds (SMC)
IS 13779	AC Static Watt Hour Meters Class 1 and 2
IS 14255	Specifications for LT ABC

Central Electricity Authority (Safety Requirement for construction, Operation, & Maintenance of Electrical Plants & Electric Lines) Regulations, 2011 (Amended in 2022)	Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022. (Replaced the earlier regulations of 2010)
Central Electricity Authority (Technical Standards for Communications system in power system operation) Regulations, 2020	Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 (Amended in 2019)
Central Electricity Authority (Flexible operations of coal based Thermal power generating Units) Regulations, 2023.	Central Electricity Authority (Measures relating to safety and electric supply) Regulations, 2023. (Replaced the earlier regulation of 2010)
Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 (Amended in 2010, 2014, 2019 and 2022)	Central Electricity Authority (Technical Standards for Connectivity to the grid) Regulations, 2007 (Amended in 2013 and 2019)

STANDARDS OF PERFORMANCE
(Notification No.1/1/KSERC-2015/ Dated, Thiruvananthapuram 15.12.2015)

Nature of Service	Standards of Performance (Indicative Maximum time limit for rendering service)	Remarks
1. Normal Fuse-off Call	**Urban:** within 6 hrs, **Rural**: within 8hrs, **Difficult area**: within 10 hrs. (from the time of registration of complaint)	The period from 6 PM on the date of complaint to 8 AM on the next day shall not be counted for calculation in difficult areas.
2. Breakdowns for Over Head line / Over Head Cables	**Urban**: within 8 hrs, **Rural**: within 12 hrs, **Difficult area**: within 16 hrs. (from the time of occurrence of breakdown)	The period from 6 PM on the date of occurrence of breakdown to 8 AM on the next day shall not be counted for calculation.
3. Breakdown of Under Ground Cable	**Urban**: within 24 hrs, **Rural**: within 48 hrs, **Difficult area**: within 48 hrs. (from the time of occurrence of breakdown)	Provided that the period required for obtaining approvals ,if necessary from competent authority for breaking open or public path ways shall be excluded while calculating the above limits. The period from 6 PM on the date of occurrence of breakdown to 8 AM on the next day shall not be counted for calculation
4. Distribution Transformer Failure	**Urban**: within 24 hrs, **Rural**: within 36 hrs, **Difficult area**: within 48 hrs. (from the time of occurrence of breakdown)	The period from 6 PM on the date of occurrence of breakdown to 8 AM on the next day shall not be counted for calculation.
5. Period of Scheduled outages	Other than load shedding shall be notified by the licensee at least 24 hrs in advance and such interruption shall not exceed 10 hrs in a day.	
6. Voltage levels	a) LT Single phase 240V between P- N, 3 Ph 415 V- between phases b) HT 3 Ph 11kV,22kV,33kV – between phases c) EHT 3Ph 66,110,220& 400kV between Phases	6% on the higher side & lower side in the case of LT supply 6% on the higher side & 9%lower side in the case of HT supply 10% on the higher side & 12%lower side in the case of EHT supply
7. Meter Complaints Inspect and check correctness	a) LT - Within 7 working days b) CT meter – max 30 days + addl. 7 working days c) HT meter -7 working days d) CT,VT/ CVT meter - max 30 days + addl. 7 working days	from the date of detection of defect * *check the correctness and rectify the defects ,if any relating to meter except its replacement within 5 days from the date of receipt of complaint.*
8. New connection, Temporary connection, Seasonal connection, Enhancement or reduction of conne-cted load or contract demand, Transfer of service connection, Conversion of service connection, Shifting of electrical line or plant, Dismantling & removal of electric line / plant which are not in use, Change of category, Resolution of grievances related to disputed bills, Disconnection of supply on the request of consumer, Reconnection of supply following disconnection due to non payment of bills, Refund of security deposit on termination of service.		As specified in the Kerala Electricity Supply Code,2014 and its amendments

i. **Alternate supply** Where ever feasible , ensure without any delay during the failure of normal supply
ii. **Average Service Availability Index** (ASAI): Every Distribution Licensee shall maintain its distribution system so efficiently that the consumer is ensured in each year, the ASAI is 98% in Urban areas, 97.5% in the Rural Areas, 97% in Difficult areas (Rs.100/- per year in case of failure of service)
ASAI= No. of hrs of Electric supply actually available to the consumer per year / Total no.of hrs. in that year

In the case of KSEBL fails to achieve the above standards, consumers are eligible for payment of compensation **@ Rs.25/- each case** for items 1 to 6, **@ Rs.25/- per day** for item 7, shifting / dismantling of service line / plant, LT meter replacement **@Rs.50/- per day** for new connection from existing system, enhancement / reduction of connected load or contract demand ,Transfer/ conversion ,change of category, disputed bill, disconnection/ reconnection, refund of SD, HT meter replacement **@Rs.100/- per day** New connection with enhancement ,temporary/ seasonal connection.

Tariff At a Glance

Retail Tariff Rates as per KSERC order in O.P. NO. 18/2023 dated 05.12.2024

Revised Tariff rates with effect from 01.04.2025 to 31.03.2027

Tariff	Category of Consumers & slabs			Energy Charges [Rs/Unit]	Fixed Charges Single phase (Rs. /month)	Fixed Charges Three phase (Rs. /month)
LT I	Domestic	Telescopic	0-40 (BPL)	1.50	-	-
			0-50	3.35	50	130
			51-100	4.25	85	175
			101-150	5.35	103	205
			151-200	7.20	140	215
			201-250	8.50	160	235
		Non- Telescopic	0-300	6.75	220	240
			0-350	7.60	240	250
			0-400	7.95	260	260
			0-500	8.25	285	285
			Above 500	9.20	310	310
LT-II Temporary connections			Rs12.50/kWh or Daily minimum of Rs.100/kW or part thereof of the connected load whichever is higher			
LT-III Temporary Extensions			Fixed charge per day –Rs.65/kW or part thereof of the connected load the consumer			

LT - IV(A) Industry	up to 10 kW	140/Consumer	5.9/kWh	LT - IV(B) Industry	175/Consumer	6.65/kWh
	10-20 kW	95/kW	5.95		135/kW	6.70
	above 20 kW	215/kVA	6.00		220/kVA	6.80
LT V (A)Agriculture	Rs.20/kW	2.40 /kWh	LT V (B)Agriculture		Rs.30/kW	3.40 /kWh

LT VI General		VI(A)	VI(B)	VI(C)
Fixed Charge	Rs/kW	90	115	200
Energy Charge {of and below 500 units (all units)}	Rs/kWh	6.00	6.65	7.15
Above 500 units (all units)		6.85	7.30	8.65

LT VI(D) General	Fixed charge	Energy charge
Orphanages, old age home	35/connection	2.10
LT VI(E) General		
Single phase	50/connection	
Three phase	130/connection	
0 to 50 units		3.80
0 to 100 units		4.80
0 to 200 units		5.50
Above 200 units		7.20
LT VI(G) General	Private Health care institutions	
Single phase	90/kW	
Three phase	175/kW	
0 to 500 units		5.85
0 to 1000 units		6.60
0 to 2000 units		7.70
Above 2000 units		8.60
LT VII(B) Commercial	(below 1 kW)	
Up to 1kW	70/Consumer	
Above 1kW upto 2kW	80/kW	
0 to 100 units		5.40
0 to 200 units		6.25
0 to 300 units		6.90

LT VI(F) General (construction, self-financing Instn.)	Fixed charge (kW)	Energy charge
Single phase	105	
Three phase	195	
0 to 100 units		6.00
0 to 200 units		6.80
0 to 300 units		7.50
0 to 500 units		8.15
Above 500 units		9.25
LT VII(A) Commercial (connected load above 2 kW)		
Single phase	95	
Three phases	190	
0 to 100 units		6.05
0 to 200 units		6.80
0 to 300 units		7.50
0 to 500 units		8.15
Above 500 units		9.40
LT VII(C) Commercial (Cinema theatres, Circus)		
Single phase	145	
Three phases		
0 to 1000 units		6.40
Above 1000 units		7.80

LT VIII (B) METERED STREET LIGHTS & TRAFFIC SIGNAL LIGHTS			
	100	5.00	
LT-X: ELECTRIC VEHICLES CHARGING STATIONS			
Solar	5.00	Non- Solar	9.30

LT IX DISPLAY LIGHTING & HOARDINGS	
Fixed charges (Rs. /connection) upp to 1kW	700
For every additional kW above 1kW	150
Energy Charge	12.50

HT Category	Demand Charge (Rs/ kVA)	Energy Charge
HT I (A) Industry	420	6.25
HT I (B) IT and IT Enabled Services	430	6.75
HT –II (A) General	460	6.20
HT –II (B) General ≤ 30000 units	535	6.85
HT –II (B) General > 30000 U		7.85
HT –III (A) Agriculture	250	3.60
HT –III (B) Agriculture	270	4.10
HT –IV (A) Commercial ≤ 30000 U	500	6.90
HT –IV (A) Commercial. 30000 U		7.90
HT –IV (B) Commercial ≤ 30000U	510	6.90
HT –IV (B) Commercial >30000		7.90
HT –V Domestic	460	6.35
HT – VI Electric Vehicle charging Stations	Solar 5.00	Non- Solar 9.20
HT – VII Temporary Connections	Energy charge (Rs/kWh) -11.00 or Daily minimum of Rs.90/kW or part thereof of the connected load whichever is higher	
HT- VIII Seasonal Consumers	Shall be billed under appropriate tariff applicable to the category to which they belong for the period of use.	

EHT Category	Demand Charge (Rs/ kVA)	Energy Charge
EHT Industrial (66kV)	420	6.30
EHT Industrial (110kV)	420	6.15
EHT Industrial (220kV)	400	5.5 5
EHT General-A	420	5.90
EHT General-B ≤ 60000 U	460	6.10
above 60000 units		7.10
EHT General-C ≤ 60000 U	470	6.45
above 60000 units		7.45
EHT Commercial ≤ 60000 U	480	6.30
above 60000 units		7.30
RAILWAY TRACTION	390	5.7
KMRL (110kV)	320	5.30
Defence installations,	390	5.70

SCHEDULE OF SERVICE AND MISCELLANEOUS CHARGES

Sl. No.	Description	Amount
1. Application Fee		
(a) Service connection		
1. L.T. Supply		Rs. 50.00
2. H.T. Supply		Rs. 1000.00
3. E.H.T Supply		Rs. 5000.00
(b) Shifting of meters, change of tariff, connecting up additional load, change of ownership, disconnection & reconnection on request, testing accuracy of meters, testing transformer oil etc. for individual benefit		Rs.10.00
(c) Realignment of lines, shifting of posts / lines etc., for individual benefits		
i. For LT lines		Rs.100.00
ii. For HT lines		Rs.500.00
(d) Hire & Hire Purchase of Materials		Rs. 50.00
(e) Request by consumer		
i. Reduction / increase of connected load/contract demand		Rs.25.00
ii. Meter Reading and associated billing		Rs.50.00
Note : Application for Voltage Improvement, mass petition for line extension and deposit works by local bodies are exempted from remitting application fee. A petition signed by four or more people may be considered as a mass petition.		
Solar connection feasibility study		Rs.1000.00
Solar connection Registration		Rs.1000.00 /kW
2. Processing Fee		
a. For Change of ownership		Rs. 100
b. For shifting of lines	For LT lines	Rs. 200 per work
	For HT lines	Rs. 500 per work
3. Monthly Rental Charges	**Single Phase**	**Three Phase**
Energy Meter (Rupees per month or part thereof) for service connection provided with		
i) Single phase meter		Rs. 6/-
ii) Three phase meter		Rs. 15 /-
iii) Three phase CT meter iv) Three phase AC static try vector energy meters with ABT, TOD facility and compliant to DLMS protocol		Rs. 30 /- Rs. 1000/-
Note: Charges shown above are uniform irrespective of whether the meters are mechanical, electronic or having wide range		
4. Shifting of Meter (labour portion)		
a) Single phase energy meter		Rs. 433 /-
b) Three phase energy meter		Rs. 570 /-
c) Three phase CT meter		Rs.997 /-
d) Single phase TOD energy meter		Rs. 542 /-
e) Three phase TOD energy meter		Rs. 1246 /-

5. Reconnection Fee	L.T	H.T	E.H.T
a. When the supply to installation remains disconnected for period not exceeding six months due to non-payment of electricity charges	Rs. 30	Rs. 1,000	Rs. 2,000
b. When the supply to installation remains disconnected for period exceeding six months due to non-payment of electricity charges or on request of the consumer (including testing fee)	Rs. 100	Rs. 2,000	Rs. 4,000
c. When the supply to installation remains disconnected due to fault in installation/ due to non-compliance with the provisions of the KSEB Terms and Conditions of Supply, 2005 (even if the period of disconnection does not exceed six months) (including testing fee)	Rs. 100	Rs. 3,000	Rs. 6,000
6. Testing Fee			
a. The first test and inspection of a new installation shall be carried out free of charge			
b. If any further test and /or inspection becomes necessary owing to any fault in the installation or due to non compliance with KSEB Terms and Conditions of Supply, 2005 or for testing for extensions, the charges payable in advance for each additional test and /or inspection shall be as follows:			
(i) LT Single Phase			Rs. 25
(ii) LT Three Phase			Rs. 50
(iii) HT			Rs. 1000
(iv) EHT			Rs. 2,000
c. Testing fee for metering equipment at consumer's request per test.			
i. Single Phase Meter			Rs. 335
ii. Three Phase Meter			Rs. 555
iii. CT/TOD Meter			Rs. 1,500
iv. LTCT ToD Net Meter			Rs. 3,000
v. CT/PT Unit			Rs. 8,820
vi. HT - CT alone (per set)			Rs. 1105
vii LT-CT (per CT)			Rs. 225
viii. HT-PT			Rs. 1105
ix. Ratio *1*Phase angle error at a specified burden and HV test			Rs.16540
x. Single phase Net Meter			Rs.665
xi. Three phase Net Meter			Rs. 2205
xii. HT ToD Meter			Rs.2000
xiii. HT Net Meter			Rs.4000
xiv. HT/EHT data downloading			Rs.2500
xv. EHT Meter			Rs.4000
xvi. EHT Meter (bidirectional)			Rs.8000
xvii. HT/EHT ABT Meter			Rs. 15000
Note: 1) Consumer can entrust the meter testing either in the Electrical Section Office, or can directly submit the meter to the approved laboratories of KSEB for testing. Consumer who entrust the meters (to be tested) in the Electrical Section Office are to remit transportation cost with packing charge of Rs. 100/- per meter in addition to testing fee mentioned above.			
2) If the error in the meter is found to be beyond the limits of accuracy as prescribed in the I.E. Rules in force from time to time, the testing fee shall be returned to the consumer.			
d. Testing of Transformer Oil (per sample)			Rs. 200
7. Miscellaneous Charges			
a. Dismantling of service connection (On request by consumer)			Rs. 100
8. Establishing Credit in the meter (prepaid meter)			
a. First Credit establishment for the month			Nil
b. Subsequent Credit establishment			Rs. 100

IV	STREET LIGHTS	Rate Rs.
1.	Installation of double tube fittings including cost of fluorescent tubes	3600
2.	Installation of ordinary street light fittings	1450

Note:- Estimated rates are calculated for 3 phase, with ACSR Rabbit for phase conductor and ACSR Weasel for neutral and street main; for single phase, ACSR Weasel for phase, neutral and street main.

For Over Head service line connection provision for stay is to be included wherever necessary.

COST DATA OF DISTRIBUTION WORKS APPROVED BY K S E R C

Annexure X of Office Order (DF) No. 237/2024 (TRAC/R2/GL/Cost date-2024/23-24) dated 12.02.2024
Cost data of Distribution works approved by the Commission for KSEBL w.e.f 08.02.2024

Annexure	DESCRIPTION OF WORK	Rate approved by the Commission in Rupees
1	Providing support pole for weather proof service connection.	7547
2	Post insertion for LT single phase over head line (without stay)	8563
3	Post insertion for LT single phase over head line (with stay)	11706
4	Post insertion for LT single phase over head line (without strut)	16455
5	Post insertion for LT three phase over head line (with strut)	9365
6	Post insertion for LT three single phase over head line (with stay)	12508
7	Post insertion for LT three phase over head line (with strut)	17257
8	Shifting Single Phase Energy Meters	909
9	Shifting Three Phase Energy Meters	1195
10	Shifting Three Phase CT Meters	1792
11	HT pole insertion in Ht/LT line (with Stay)	18608
12	Ht Pole insertion in HT'LT line (with strut using 8m ple)	22208
13	Providing strut using LT pole	7892
14	Providing strut using HT Pole	10154
15	Providing LT Stay	3143
16	Providing HT stay	4293
17	Adding one conductor (ACSR Rabbit) on the existing poles (where cross arm is not available) inclusive of cost of pin, insulator etc	82 (per metre)
18	Conversion of 1km LT single phase 2 wire line to LT Three phase 4 wire line	180 (per metre)
19	Conversion of 1km LT single phase 2 wire line to LT Three phase 5 wire line	258 (per metre)
20	Conversion of 1km LT single phase 3 wire line to LT Three phase 5 wire line	188 (per metre)
21	Drawing 1 km LT OH line on existing poles 2 wire ACST rabbit	156 (per metre)
22	Drawing 1 km LT OH line on existing poles 3 wire ACST rabbit	229 (per metre)
23	Drawing 1 km LT OH line on existing poles 4 wire ACST rabbit	287 (per metre)
24	Drawing 1 km LT OH line on existing poles 5 wire ACST rabbit	377 (per metre)
25	Constructing 1km LT OH line 2 wire with Rabbit using PSC Poles	487 (per metre)
26	Constructing 1km LT OH line 3 wire with Rabbit using PSC Poles	562 (per metre)
27	Constructing 1km LT OH line 4 wire with Rabbit using PSC Poles	634 (per metre)
28	Constructing 1km LT OH line 5 wire with Rabbit using PSC Poles	718 (per metre)
29	Constructing 1km 11 KV OH line with ACSR Raccoon using PSC Poles	966 (per metre)
30	Constructing 1km 11 KV OH line with UG Cable 300 sqmm by open trench	2657 (per metre)
31	Constructing 1km 11 KV OH line with ACSR Raccoon using A type Poles	1500 (per metre)
32	Installation of 1 No. 11Kv/433 V, 100 KVA Transformer without stay (pole mounted)	*490575
33	Installation of 1 No. 11Kv/433 V, 160 KVA Transformer without stay (pole mounted)	*624092
34	Installation of 1 No. 11 KV/ 433 V, 250 KVA Transformer	*810265
35	Installation of Data Acquisition compatible Extensible type Ring Main Unit without VCB -CCC (E) (Cable -Cable -Cable)	*847800
36	Installation of Data Acquisition compatible Extensible type Ring Main Unit with VCB -CTC (E) (Cable -Transformer -Cable)	*891215
37	Installation of Data Acquisition compatible Extensible add-on type Ring Main Unit without VCB (Single Switch C-Extension)	429904

38	Installation of Data Acquisition compatible Extensible add-on type Ring Main Unit without VCB (Single Switch T-Extension)	561411
39	Installation of Data Acquisition compatible Extensible type Ring Main Unit with provision for isolation and earthing facility on both sides (gCCg)	*536546
40	Drawing 1Km of HT ABC of size 3X150 + 1X 120 sqmm using 9 M PSC poles	2188 (per metre)
41	Drawing 1Km of HT ABC of size 3X120 + 1X 95 sqmm using 9 M PSC poles	2005 (per metre)
42	Drawing 1Km of LT ABC of size 3X70 + 1X 50 +1x16 sqmm using 8 M PSC poles	819 (per metre)
The items on which the Hon'ble Commission had approved 10% increase from previous rates or the rates proposed in the petition, whichever is lower		
43 (Old Annex. 1)	LT Single phase weather proof service connection upto and including 5KW (using static meter with LCD facility)	1914
44 (Old Annex. 2)	LT three phase weather proof service connection upto and including 10KW (using static meter with LCD display and TOD facility)	4642
45 (Old Annex. 3)	LT three phase weather proof service connection upto and including 25KW (using static meter with LCD display and TOD facility)	15862
46 (Old Annex. 4)	LT three phase weather proof service connection above 25KW & below 50 kVA	23925
47 (Old Annex. 5)	LT three phase weather proof service connection from 50kVA and above upto and including 100kVA	25300
48 (Old Annex. 7)	LT single phase over head service connection upto and including 50m with max 1 post	**10076 + 88 per M of OH line
49 (Old Annex. 8)	LT single phase over head service connection above 50m upto and including 100 m with max 2 posts	**24145 + 88 per M of OH line above 50m
50 (Old Annex. 9)	LT single phase over head service connection above 100m upto and including 150m with max 3 posts	**37895 + 88 per M of OH line above 100m
51 (Old Annex. 10)	LT single phase over head service connection above 150m upto and including 200m with max 4 posts	**51425 + 88 per M of OH line aove 150 m
52 (Old Annex. 11)	LT Three phase over head service connection upto and including 50m with max 1 post	**12705 + 176 per M of OH line
53 (Old Annex. 12)	LT Three phase over head service connection above 50m upto and including 100m with max 2 posts	**31680 + 176 per M of OH line above 100m
54 (Old Annex. 13)	LT Three phase over head service connection above 100m upto and including 150m with max 3 posts	**51260+176 per M of OH line above 100m
55 (Old Annex. 14)	LT Three phase over head service connection above 150m upto and including 200m with max 4 posts	**70510 + 176 per M of OH line above150m
56 (Old Annex. 21)	Conversion of LT Single phase weather proof service connection to LT three phase weather proof service connection with connected load upto and including 10KW	4587
57 (Old Annex. 22)	Conversion of LT Single phase weather proof service connection to LT three phase weather proof service connection with load above 10 kW upto and including 25KW	16995
58 (Old Annex. 23)	Conversion of LT Single phase weather proof service connection to LT three phase weather proof service connection with load above 25kW and below 50kVA	24899
59 (Old Annex. 24)	Conversion of LT Single phase weather proof service connection to LT three phase weather proof service connection with load 50kVA and above upto and including 100kVA	26180
60 (Old Annex 25)	Estimate for enhancement of connected load of LT three phase weather proof service connection with a max load of 10kW into the range of 10kW ot 25kW	16005
61 (Old Annex. 26)	Estimate for enhancement of connected load of LT three phase weather proof service connection with a max connected load of 10kW into the range of 25kW ot 50kW	24805

62 (Old Annex. 27)	Estimate for enhancement of connected load of LT three phase service connection with a max connected load of 10kW into the range of 50kVA to 100 kVA	26866
63 (Old Annex. 28)	Estimate for enhancement of connected load of LT three phase service connection with load in the range of 10kW ot 25kW into the range 25kW-50kVA	20594
64 (Old Annex. 29)	Estimate for enhancement of connected load of LT three phase service connection with load in the range of 10kW ot 25kW into the range 50kVA-100kVA	22098
65 (Old Annex. 30)	Estimate for enhancement of connected load of LT three phase service connection with load in the range of 25kW- 50kVA into the range 50kVA-100kVA	19905
***Estimated cost does not include cost of fencing and construction of yard ** Cost of weather proof portion to be collected extra; charges for providing additional pole stays and struts if any required shall be collected extra Note:- GST applicable to be collected as per orders issued by the Central Government and State Government.**		
Other items approved by the Hon'ble Commission		
i	**FENCING FOR TRANSFORMERS AND RMUS** Providing Transformer/RMU fencing to a height of 1.8 m above ground level using MS angle frames of size ISA 50x50x6mm for outer frame, 2 runs of 40x6 MS flat for horizondal bracing and grills with MS rods 8 mm Dia@10cm c/c for verticals, providing danger board & name board, embeding the legs in cement concrete 1:2:4, footing of size 30cmx30cmx50cm,m painting with synthetic enamel paint two coats over one coat of iron primer etc complete, incl cost of transportation	38153
ii	**CONSTRUCTION OF YARD FOR TRANSFORMERS** Cleaning and levelling of transformer yard, spreading 40 mm broken stone in yard for a thickness of 10cm above bed of 10 cm thick 6 mm broken stone, after constructing a curb wall of height 20cm above ground and 10cm below level including cost of all materials and charges for conveying, spreading consolidating etc	23075
iii	**CONSTRUCTION OF YARD FOR RMUs** Cleaning and levelling of RMU yard spreading 40 mm broken stone in yard for a thickness of 10cm above bed of 10 cm thick 6 mm broken stone, after constructing a curb wall of height 20cm above ground and 10cm below level including cost of all materials and charges for conveying, spreading consolidating etc	11538
iv	**ENERGISATION CHARGES PER CONSUMER** Individual consumers located inside colonies, high rise buildings or commercial/industrial/residential complexes developed by promoters/ builders wherein all internal distribution network including installation of energy meter is carried by the developer	300

Supply Voltage for different Connected loads for new Connections		
Supply Voltage	**Maximum Connected Load**	**Maximum Contract Demand**
240V (1 ph)	5 kW	
415 V (3 ph)	100 KVA	
11 KV		3000 KVA
22KV/33KV		6000/12000 KVA
66 KV		20,000 KVA
110 KV		40,000 KVA
220 KV		> 40,000 KVA

TRANSMISSION WORKS - METHODOLOGY FOR PREPARING ESTIMATES

Sl. No.	Description	Amount (Provisional)
1	Cost of materials	A
2	Erection & Commissioning	B = 7.5% of A
3	Transportation, Insurance and Contingencies	C = 6% of A
4	Civil works and special works like SCADA etc if any	As per estimation = D
5	Tree cutting compensation if any	As per estimation = E
6	Sub – Total	F = A + B + C + D + E
7	Overhead / Supervision charges	G = 10% of F
8	Total	F+G
9	Taxes & Duties if any extra	

CLASSIFICATION OF HYDEL PROJECTS

Designation	IS (Unit Capacity)	CEA (Unit Capacity)
Micro Hydel	upto 100 kW	upto 100 kW
Mini Hydel	101 kW to 1000 kW	101 kW to 2000 kW
Small Hydel	1001 kW to 5000 kW	2001 kW to 5000 kW (Total capacity 25000 kW)
Others	Above 5000 kW	Above 5000 kW

Classification on the basis of hydraulic head

High head - above 75 M
Medium head - between 20 M and 75 M
Low Head - upto 20 M
Ultra low head - below 3 M

Selection of turbines on the basis of hydraulic head

Upto 20 M – Kaplan, 20 M to 50 M – Francis, 50 M and above – Pelton

Definition

1. Load factor $= \dfrac{\text{Average load over a designated period}}{\text{maximum load in that period}}$

2. Plant factor $= \dfrac{\text{Plant output}}{\text{Plant capability}}$

3. Capacity factor $= \dfrac{\text{Average load on the machine}}{\text{Rated capacity of th e machine}}$

4. Diversity factor

   (i) For stations $= \dfrac{\text{sum of the peaks of feeders}}{\text{Station peak}}$

   (ii) For Transmission/ Distribution system $= \dfrac{\text{Connected load on the Tr/Distn. System}}{\text{Peak load on the Tr/Distn. System}}$

5. Demand factor $= \dfrac{\text{Maximum Demand of a system or part of a system}}{\text{Connected load of the system or part of the system}}$

KERALA POWER SYSTEM

INSTALLED CAPACITY (MW) as on 31.03.2025

	KSEBL	IPP/CPP	KERALA TOTAL (KSEBL + IPP/CPP)
HYDRO	2196.36	88.06	2284.42
THERMAL	159.96	376.58	536.54
WIND	2.03	69.5	71.53
SOLAR	51.43	1468.24	1519.67
TOTAL	**2409.77**	**2002.38**	**4412.15**

SALES PARAMETERS

CONSUMERS	140.71lakh	Energy Sold within State	28148.34 MU
Distribution Transformers	92203	Morning Maximum Demand (on 05.05.2024)	4280 MW
Street Light Consumers	80941	Maximum Demand (Restricted) (on 31.03.2025)	5797 MW
Per Capita Consumption	816 Units	Maximum Daily Consumption (on 03.05.2024)	115.45MU
AT & C LOSS	6.61%	T & D LOSS	9.27%

Transmission and Distribution Network As on 31.03.2024

Voltage (kV)	No. of Substations	Line length
400	6 (PGCIL) + 2 (KSEBL)	1271.14 +178.26km
220	33	412.39 +3202.17km
110	185	5709.098km
66	47	1472.303km
33	162	2427.132
Total DTR Capacity (MVA)		11323
11 kV +22 kV		70072km
LT		307674km

Inter-state tie lines

Thirunelveli – Tvm 1	400kV	437 km	Thirunelveli – Edamon 1& 2	220 kV	106 km
Thirunelveli – Tvm 2	400 kV	206km	Sabarigiri -Theni	220 kV	4.83 km
Thirunelveli – Kottayam 1& 2	400 kv	95.7km	Pallivasal - Udumal	220 kv	13.9 km
Udumalpet – Palakkad 1& 2	400 kv	160km	Kuzhithura- Kaniyampetta	220 kV	
Mysore - Kozhikode 1& 2	400 kv	111.6km	Kuzhithurai - Parassala	110 kV	
Pugalur- Thrissur HVDC 1&2	400 kV	92km	Konaji - Manjeswaram	110 kV	

INSTALLED GENERATING CAPACITY (STATION WISE) as on 31.03.2024

Sl. No.	Name of Station	Unit Capacity (MW)	Date of Commissioning		Station Capacity (MW)	Annual Generation Capability (MU)	Design PLF (%)
			Original date	After renovation			
I	**PART A - HYDEL**						
1	Pallivasal	Unit #1 - 5 Unit #2 - 5 Unit #3 - 5 Unit #4 - 7.5 Unit #5 - 7.5 Unit #6 - 7.5	19.03.1940 02.02.1941 10.02.1942 01.05.1948 01.10.1949 07.03.1951	19.11.2001 17.11.2001 20.11.2001 26.08.2002 21.08.2002 19.08.2002	37.50	284	86.67
2	Sengulam	Unit #1 – 12.7 Unit #2 - 12.7 Unit #3 - 12.7 Unit #4 – 12.7	01.05.1954 25.07.1954 11.11.1954 05.01.1955	30.11.2002 04.10.2002 05.12.2001 01.12.2001	50.80	182	43.33

3	Neriamangalam	Unit #1 - 17.55 Unit #2 - 17.55 Unit #3 - 17.55	27.01.1961 09.04.1961 11.05.1963	20.10.2004 31.11.2005 29.09.2006	52.65	237	60
4	Panniar	Unit #1 - 16.2 Unit #2 - 16.2	29.12.1963 26.01.1964	01.02.2003 23.11.2001	32.40	158	60
5	Poringalkuthu	Unit #1 - 9 Unit #2 - 9 Unit #3 - 9 Unit #4 - 9	06.03.1957 13.01.1958 24.04.1959 06.02.1960	23.04.2014 15.08.2014 08.02.2015 29.05.2015	36.00	191	61.25
6	Sholayar	Unit #1 - 18 Unit #2 - 18 Unit #3 - 18	09.05.1966 26.01.1968 14.05.1968	05.10.2020 20.01.2020 16.03.2019	54.00	233	38.15
7	Sabarigiri	Unit #1 - 55 Unit #2 - 55 Unit #3 - 55 Unit #4 - 60 Unit #5 - 55 Unit #6 - 60	18.04.1966 14.06.1966 29.12.1966 22.06.1967 09.09.1967 26.11.1967	08.11.2009 07.02.2009 17.03.2008 06.05.2014 05.05.2006 01.07.2005	340.00	1338	51
8	Kuttiyadi	Unit #1 - 25 Unit #2 - 25 Unit #3 - 25	11.09.1972 01.11.1972 28.11.1972	NA	75.00	268	40.80
9	Idukki	Unit #1 - 130 Unit #2 - 130 Unit #3 - 130 Unit #4 - 130 Unit #5 - 130 Unit #6 - 130	12.02.1976 07.06.1976 24.12.1976 04.11.1985 22.03.1986 09.09.1986	16.03.2018 20.01.2020 14.07.2019	780.00	2398	35.92
10	Idamalayar	Unit #1 - 37.5 Unit #2 - 37.5	03.02.1987 28.02.1987	NA	75.00	380	57.73
11	Kallada	Unit #1 - 7.5 Unit #2 - 7.5	05.09.1994 05.01.1994	NA	15.00	65	40.33
12	Peppara	3	15.06.1996	NA	3.00	11.50	43.33
13	Lower Periyar	Unit #1 - 60 Unit #2 - 60 Unit #3 - 60	27.09.1997 22.10.1997 28.11.1997	NA	180.00	493	31.28
14	Mattupetty	2	14.01.1998	NA	2.00	6.40	35
15	Poringalkuthu Left Bank Extension	16	20.03.1999	NA	16.00	74	61.25
16	Kakkad	Unit #1 - 25 Unit #2 - 25	13.10.1999	NA	50.00	262	60
17	Kuttiyadi Extension	50	27.01.2001	NA	50.00	75	17.12
18	Malampuzha	2.5	26.11.2001	NA	2.50	5.60	25.60
19	Chembukadavu Stage I	Unit #1 - 0.9 Unit #2 - 0.9 Unit #3 - 0.9	19.08.2003 19.08.2003 19.08.2003	NA	2.70	6.59	28
20	Chembukadavu Stage II	Unit #1 - 1.25 Unit #2 - 1.25 Unit #3 - 1.25	04.09.2003 04.09.2003 04.09.2003	NA	3.75	9.03	28
21	Urumi Stage I	Unit #1 - 1.25 Unit #2 - 1.25 Unit #3 - 1.25	25.01.2004 25.01.2004 25.01.2004	NA	3.75	9.72	30

22	Urumi Stage II	Unit #1 - 0.8 Unit #2 - 0.8 Unit #3 - 0.8	25.01.2004 25.01.2004 25.01.2004	NA	2.40	6.28	30
23	Malankara	Unit #1 - 3.5 Unit #2 - 3.5 Unit #3 - 3.5	23.10.2005 23.10.2005 23.10.2005	NA	10.50	65	70
24	Lower Meenmutty	Unit #1 - 1.5 Unit #2 - 1.5 Unit #3 - 0.5	28.04.2006 27.04.2006 25.03.2006	NA	3.50	7.63	30
25	Neriamangalam Extension	Unit #4 – 25	27.05.2008	NA	25.00	58.27	30
26	Kuttiadi Tailrace	Unit #1 - 1.25 Unit #2 - 1.25 Unit #3 - 1.25	19.06.2008 22.06.2008 23.10.2009	NA	3.75	15	50
27	Kuttiadi Additional Extension	Unit #1 - 50 Unit #2 - 50	11.10.2010 30.10.2010	NA	100.00	223	30
28	Poozhithode	Unit #1 - 1.6 Unit #2 - 1.6 Unit #3 - 1.6	25.06.2011 25.06.2011 25.06.2011	NA	4.80	10.97	26
29	Ranni Perinad	Unit #1 - 2 Unit #2 - 2	16.02.2012 16.02.2012	NA	4.00	16.73	48
30	Peechi	1.25	07.01.2013	NA	1.25	3.21	30
31	Vilangad	Unit #1 - 2.5 Unit #2 - 2.5 Unit #3 - 2.5	26.07.2014	NA	7.50	22.63	34
32	Chimony	2.5	25.05.2015	NA	2.50	6.7	30
33	Adyanpara	Unit #1 - 1.5 Unit #2 - 1.5 Unit #3 - 0.5	03.09.2015 03.09.2015 03.09.2015	NA	3.50	9.01	30
34	Poringalkuthu Micro	Unit#.011	01.02.2016	NA	0.011	0.082	
35	Barapole	Unit #1 - 5 Unit #2 - 5 Unit #3 - 5	29.02.2016 29.02.2016 29.02.2016	NA	15.00	36	27
36	Vellathooval	Unit #1 - 1.8 Unit #2 - 1.8	26.05.2016	NA	3.60	12.7	40
37	Perunthenaruvi	Unit #1 - 3.0 Unit #2 - 3.0	23.10.2017	NA	6.00	25.77	49
38	Kakkayam	Unit #1 – 1.5 Unit #2 – 1.5	16.07.2018	NA	3.00	7.34	60
39	Chathankottunada Stage II	Unit #1 – 2.0 Unit #2 – 2.0 Unit #3 – 2.0	21.06.2021	NA	6.00	14.76	28
40	Upper Kallar	Unit #1 – 1.0 Unit #2 – 1.0	30.09.2021	NA	2.00	5.14	29
41	Poringalkuthu New	Unit #1 – 24	04.05.2022	NA	24.00	45.02	89
42	Thotiyar HEP	Unit#1-10 Unit#2-30	10.07.2024 30.09.2024	NA	40.00	99.00	28

43	Pallivasal Extension Scheme (PES)	Unit # 1-30 Unit # 2-30	U # 1 completed 72 hrs run on 02.12.24 @ 20:20 hrs U#2 completed 12 hrs run on 3.12.24@ 19:00hrs	NA	60	153.9	29
44	Peruvannamuzhy SHEP	Unit #1 –3 Unit #2 – 3	15.07.2023 18.07.2023	NA	6.00	24.7	76
	Total				**2196.40**	**7555.68**	
	PART B - WIND						
1	Kanjikode	9 x 0.225 MW	18.05.1995	NA	2.025	4.00	20
	Total				**2.025**	**-**	
	PART C - THERMAL						
1	Brahmaputra Diesel Power Plant (BDPP)	Unit #1 - 21.32 Unit #4 - 21.32 Unit #5 - 21.32	06.05.1997 17.12.1997 24.11.1998	NA	63.96	363.60	68.50
2	Kozhikode Diesel Power Plant (KDPP)	Unit #2 - 16 Unit #3 - 16 Unit #5 - 16 Unit #6 - 16 Unit #7 - 16 Unit #8 - 16	11.09.1999 18.09.1999 30.09.1999 11.09.1999 25.10.1999 06.11.1999	NA	96.00	672.00	80
	Total				**159.96**	**1035.6**	
	PART D -KSEB SOLAR						
1	Kanjikode S/s GM	1.00	20.08.2015	NA	1.00	1.58	18.00
2	Kollengode Substation GM	1.00	08.08.2016	NA	1.00	1.66	19.00
3	Edayar Substation premises GM	1.25	05.09.2016	NA	1.25	2.08	19.00
4	Barapole Canal bank	1.00	07.11.2016	NA	1.00	1.66	19.00
5	Barapole Canal top	3.00	17.11.2016	NA	3.00	4.99	19.00
6	Pezhakkappally, Moovattupuzha GM	1.25	15.01.2018	NA	1.25	1.75	16.00
7	Pothencode SS GM	2.00	02.02.2018	NA	2.00	2.80	16.00
8	Agali GM	1.00	22.01.2022	NA	1.00	1.58	18.00
9	Kanjikkode GM	3.00	19.02.2022	NA	3.00	4.73	18.00
10	Brahmapuram	2.75	03.02.2023	NA	2.75	4.34	18.00
11	Other small solar installations	10.92	As on 31.3.2025	NA	10.92	17.22	18.00
12	SOURA under KSEBL fund	23.78	As on 31.3.2025	NA	23.26	34.64	17
	Total				**51.43**	**79.04**	
	Total KSEBL Generation				**2409.98**	**8674.32**	

	PART E - PRIVATE HYDRO						
1	Maniyar (Captive)	Unit #1 - 4 Unit #2 - 4 Unit #3 - 4	31.03.1994 30.12.1994 29.12.1994	NA	12.00	36	30.83
2	Kuthungal (Captive)	Unit #1 - 7 Unit #2 - 7 Unit #3 - 7	01.06.2001 01.06.2001 01.06.2001	NA	21.00	79	42.94
3	Hydel Prosumer under Kannan Devan (Captive	0.5		NA	0.50		
4	Ullunkal	Unit #1 - 3.5 Unit #2 - 3.5	13.11.2008 13.11.2008	NA	7.00	32.22	53
5	Iruttukkanam	Unit #1 - 1.5 Unit #2 - 1.5 Unit #3 - 1.5	18.09.2010 19.09.2010 4.04.2012	NA	4.50	15.86	50
6	Pampumkayam (Mankulam)	Unit #1 - 0.055 Unit #2 - 0.055	3.8.2012	NA	0.11	0.29	-
7	Karikkayam$	Unit #1 - 3.5 Unit #2 - 3.5 Unit #3 – 3.5 Additional 4.5	29.08.2013 02.09.2013 28.09.2013 23.05.2017	NA	15.00	62.42	-
8	Meenvallom	Unit #1 - 1.5 Unit #2 - 1.5	17.6.2014	NA	3.00	8.37	-
9	Western Kallar	0.05	31.3.2015	NA	0.05	0.13	-
10	Pathankayam	Unit #1 - 3.5 Unit #2 - 3.5 Unit #3 -1.0	14.7.2017	NA	8.00	21.02	30.00
11	Deviyar	Unit#1-.025 Unit #2-.025	2020-21	NA	0.05	22.02	18.00
12	Anakkampoil	Unit #1-3.5 Unit #2-3.5 Unit #3-1.0	14.07.2021	NA	8.00	23.02	33.90
13	Arippara	Unit #1-2.25 Unit #2 -2.25	13.10.2021	NA	4.50	24.02	37.33
14	Mukkudam	Unit #1 - 2 Unit #2 - 2	18.11.2023	NA	4.00	11.00	
15	Ezhamkadavu Micro HEP 350 KW (IPP	0.35		NA	0.35		
	Total				**88.06**	**335.37**	
	PART F - PRIVATE THERMAL*						
1	Phillips Carbon Black Ltd (Co-generation plant)(CPP)	52	31.03.2011	NA	17.00	70.08	-
2	Kayamkulam (NTPC)	Unit #1 - 116.6 Unit #2 - 116.6 Unit #3 - 126.6	02.11.1999 28.02.1999 11.12.1999	NA	359.58	2158	68.50
	Total				**376.58**	**2228.08**	

PART G - PRIVATE WIND							
1	Malayala Manorama (CPP)	5 x 2 MW	28.04.2019	NA	10.00	20.15	23
2	Ramakkalmedu Wind Farm - RPPL (CPP)	40 x 0.25 MW		NA	1.00	1.66	19
3	Ramakkalmedu Wind Farm - Vestas (IPP)	6x0.75 MW 12x0.75 MW 1x0.75MW	31.03.2008 31.03.2009 31.03.2010	NA	14.25	32.46	26
4	Agali wind Farm (IPP)	7 x 0.6 MW 16 x 0.6 MW	31.03.2008 31.03.2010	NA	13.80	27.80	23
5	Koundikkal (IPP)	2 x 0.6 MW 6 x 0.6 MW	29.09.2010 31.10.2010	NA	4.80	9.67	23
6	Ahalia Alternate Energy Pvt Ltd, Kanjikode (IPP)	1 x 2.1 MW 3 x 2.1 MW	22.02.2016 23.03.2016	NA	8.40	16.19	22
7	INOX Wind Energy Ltd. (IPP)	8x2 MW	16.08.2017	NA	16.00	30.84	22
8	Kosamattom Finance Pvt. Ltd. (IPP)	4X0.25 MW	22.12.2018	NA	1.00	1.66	19
9	Ramakkalmedu Wind Farm - RPPL(IPP)	1x0.25 MW	08.09.2024	NA	0.25	0.42	19
	Total				**69.50**	**140.8477**	
PART H - PRIVATE SOLAR							
1	Bharat Hospital (CPP)	1.10Mwp		NA	1.10	1.64	17
2	Pyarelal Foams () Limited, Kanjikode (CPP)	1.0 Mwp	30.06.2023	NA	1.00	1.49	17
3	Moulana Hospiral (CPP)	2.7Mwp	19.02.2024	NA	2.70	4.02	17
4	Hindalco (Prosumer)	5Mwp	31.03.2016	NA	5.00	7.88	18
5	Cochin International Airport Ltd. (Prosumer)	39.44 Mwp	24.03.2018	NA	39.44	60.46	17.5
6	KMRL (Prosumer)	10.595 Mwp	21.07.2019		10.60	15.78	17
7	Saint Gobain (Roof Top) (Prosumers)	2.5 Mwp	2024-25	NA	2.50	3.72	17
8	MES (NAD) (Prosumer)	2Mwp	2024-25	NA	2.00	2.98	17
9	ITI, Palakkad (Prosumer)	1.0 Mwp	2024-25	NA	1.00	4.19	17
10	Carborundum Universal Ltd. Kisy (Prosumer)	1.80 Mwp	2024-25	NA	1.80	2.68	17

11	ANERT, Kuzhalmandam (IPP)	2Mwp	9.12.2016	NA	2.00	3.33	19
12	Solar Park, RPCKL, Ambalathara (IPP)	4 Mwp 16 Mwp 8 Mwp 8 Mwp 14 Mwp	14.12.2016 04.01.2017 07.02.2017 30.03.2017 13.09.2017	NA	50.00	78.54	18
13	THDCIL- Paivalike Solar Park (IPP)	50 Mwp	31.12.2020	NA	50.00	78.54	18
14	NTPC (RGCCPP), Kayamkulam Floating Solar (IPP)	92 Mwp	24.06.2022	NA	92.00	137.00	17
15	CIAL Ettukudikka (IPP)	10 Mwp	13.11.2021	NA	10.00	15.33	17.5
16	LR Solar Prosumers	1081.87 MWp	As on 31.03.2025	NA	1081.87	1611.12	17
17	Other HT & EHT Solar Prosumers	96.75 Mwp	As on 31.03.2025	NA	96.75	144.08	17
18	Solar Off grid	1.09 Mwp			1.09	1.62	17
19	Solar < 1 MW (under the licensee CoPA)	0.87 Mwp			0.87	130	17
20	Solar < 1 MW (under the licensee TCED)	9.08 Mwp			9.08	13.52	17
21	Solar < 1 MW (under licensee TECHNOPARK)	1.86 Mwp			1.86	2.77	17
22	Solar < 1 MW (under the licensee KINESCO)	2.78 Mwp			2.78	4.14	17
23	Solar < 1 MW (under the licensee Infopark)	0.41 Mwp			0.41	0.61	17
24	Solar < 1 MW (under the licensee KINFRA)	0.14Mwp			0.14	0.21	17
25	Solar < 1 MW (under the licensee Smart City)	0.72 Mwp			0.72	1.07	17
26	Solar < 1 MW (under the licensee KDHPCL)	0.16Mwp			0.16	0.24	17
27	Solar < 1 MW (under the licensee CSEZA)	1.37Mwp			1.37	2.04	17
	Total	**1468.24 Mwp**			**1468.24**	**2198.20**	
	GRAND TOTAL	**4412.15 Mwp**			**4412.15**	**15734.81**	
*	Note: BSES &KPCL not considered as PPA expired						
$	Karikkayam- On COD 10.5 MW was only allowed due to availability of water. Additional 4.5 Mw allowed for Karikkayam due to increased height of wier						
#	For solar plants, value mentioned against % PLF is % design CUF (approximate)						

KSEB Ground Mounted Solar Power Plants

Sl No	Solar (KSEB)	Installed Capacity (MW)
1	Kanjikode	1
2	Poringalkuthu Powerhouse – CoD 10.09.2015	0.05
3	Floating solar RT- Banasurasagar – CoD 01/2016	0.01
4	Meencut RT NES – CoD 06/2016	0.025
5	Kothamangalam RT – CoD 07/2016	0.125
6	Moolamattom RT – CoD 06/2016	0.05
7	Thrissur RT – CoD 07/2016	0.345
8	Kollengode- IPDS	1
9	Padinjarethara RT - – CoD 29.08.2016	0.44
10	Moozhiyar RT – CoD 08/2016	0.125
11	Edayar Substation Premise- IPDS	1.25
12	Barapole Canal Bank	1
13	Barapole Canal Top	3
14	KDPP,Kozhikode RT – CoD 10.03.2017	0.035
15	Thalakulathoor – CoD 22.04.2017	0.65
16	Vydyuthi bhavan RT – CoD 13.06.2017	0.03
17	Manjeswaram – CoD 24.05.2017	0.5
18	Moovattupuzha – CoD 01/2018	1.25
19	Pothencode – CoD 02/2018	2
20	Kuttippuram GM – CoD 28.11.2017	0.5
21	220kV S/Sn Kundara RT- IPDS- DoC 20.09.2017	0.03
22	110kV S/Sn Kanjikode RT- IPDS- DoC 12.05.2017	0.025
23	220kV S/Sn Palakkad RT- IPDS- DoC 10.07.2017	0.035
24	220kV S/Sn Edappon RT- IPDS- DoC 25.08.2017	0.03
25	220kV S/Sn Edappon RT- IPDS- DoC 21.12.2017	0.045
26	110kV S/Sn Kunnamangalam RT- IPDS-DoC 18.04.2017	0.02
27	220kV S/Sn Orkattery RT- IPDS- DoC 06.09.2017	0.035
28	220kV S/Sn Nallalam RT- IPDS- DoC 05.05.2017	0.035
29	220kV S/Sn Brahmapuram RT- IPDS-DoC 26.04.2017	0.055
30	110kV S/Sn Thycattussery RT- IPDS-DoC 15.12.2016	0.02
31	220kV S/Sn Kattakkada RT- IPDS- DoC 27.09.2017	0.02
32	110kV S/Sn Paruthippara RT- IPDS-DoC 07.10.2017	0.03
33	220kV S/Sn Pothencode RT - IPDS- DoC 18.07.2017	0.035
34	66kV S/Sn GIS LA Complex RT- IPDS-DoC 03.08.2017	0.025
35	66kV S/Sn GIS Power house RT- IPDS-DoC 02.08.2017	0.025
36	66KV S/SnVeli RT- IPDS- DoC 16.02.2018	0.02
37	TMR Thirumala RT- IPDS- DoC 10.07.2017	0.035
38	VB Pathanamthita RT- IPDS- DoC 22.06.2017	0.045
39	220kV S/Sn Malaparamba RT- IPDS-DoC 11.12.2017	0.02
40	VB Manjeri RT- IPDS- DoC 20.01.2018	0.03
41	220kV S/Sn Areacode RT - IPDS- DoC 03.01.2018	0.03
42	PTRU-Kalamassery RT- IPDS- DoC 14.03.2018	0.04
43	220kV S/Sn Mylatty RT- IPDS- DoC 08.02.2018	0.03
44	220kV S/Sn Kanhirode RT- IPDS- DoC 15.02.2018	0.035
45	110kV S/Sn Viyyur RT- IPDS- DoC 12.01.2018	0.02
46	110kV S/Sn Pathanamthitta RT- IPDS-DoC 13.07.2017	0.025
47	Mini CR& Workshop Madakkathara RT-IPDS- DoC 12.01.2018	0.045
48	Main CR & Workshop Madakkathara RT- IPDS- DoC 09.07.2018	0.15
49	Ele Dvn Kollam RT- IPDS- DoC 19.03.2018	0.035
50	Ele Dvn Kundara RT- IPDS- DoC 08.12.2017	0.025
51	Vaidyuthi bhavanam Chathnnoor RT-IPDS- DoC 27.02.2018	0.025
52	VB, Kottarakkara RT- IPDS- DoC 20.02.2017	0.08
53	220kV S/Sn New pallom RT - IPDS- DoC 15.01.2017	0.02
54	220kV S/Sn Ambalamughal RT- IPDS-DoC 31.07.2017	0.02
55	Vaidyuthi bhavanam Thodupuzha-50KW COD(25.02.2017) RT- IPDS	0.05
56	Ele Sn.Beach RT- IPDS- DoC 06.10.2017	0.02
57	Vaidyuthi bhavanam Thrissur RT- IPDS-DoC 23.09.2017	0.045
58	SLDC Building RT- IPDS	0.035
59	ES Kesavadasapuram RT- IPDS- DoC 06.10.2017	0.025
60	110kV S/S Ponnani RT- DoC 16.01.2019	0.5
61	66 kV S/s Peerumedu RT- DoC 23.04.2018	0.5

62	Dam Safety Pallom GM (IPDS)- DoC 27.12.2019	0.05
63	Kottiyam GM (IPDS)- DoC 27.01.2020	0.6
64	Various IPDS projects	
65	66Kv S/s,Kuruvilangad,DOC 27.3.2019RT	0.015
66	110Kv S/s,Kozhenchery,DOC 30.3.2019RT	0.015
67	66KV S/s,Thiruvalla,DOC 30.3.2019RT	0.015
68	VB,Pathanamthitta,DOC 30.3.2019RT	0.025
69	110KV S/s,Kavanad,DOC 26.3.2019RT	0.02
70	66KV S/s,Balaramapuram,DOC 08.4.2019RT	0.015
71	66KV S/s,Neyyattinkara,DOC 26.6.2019RT	0.015
72	110KV S/s,Nedumangad,DOC 4.4.2019RT	0.015
73	66KV S/s,Vattiyoorkavu,DOC 5.4.2019RT	0.015
74	VB,Pattom 4th Floor,DOC 22.3.2019RT	0.035
75	110KV S/s,Ollur,DOC 8.3.2019RT	0.02
76	110KV S/s,Wadakkanchery,DOC 21.3.2019RT	0.015
77	110KV S/s,Ayyampuzha,COD 17.5.19RT	0.02
78	66KV S/s,Angamaly,COD 18.5.19RT	0.03
79	110KV S/s,Rayonpuram,DOC 30.4.2019RT	0.015
80	110KV S/s,Myloor,DOC 22.4.2019RT	0.02
81	110KV S/s,Kadavanthra,COD 1.6.2019RT	0.025
82	110KV S/s,Kandanad,COD 3.6.2019RT	0.025
83	66KV S/s,Alappuzha,DOC 26.3.2019RT	0.015
84	110KV S/s,Mavelikkara,DOC 18.3.2019RT	0.02
85	110KV S/s,Udumbanoor,COD 11.4.19RT	0.015
86	GIS Powerhouse,TVM,DOC 2.8.2017RT	0.01
87	220KV S/s,Pothencode,DOC 27.3.2019RT	0.03
88	Banasurasagar Floating Solar, DOC 21.01.2019	0.5
89	Agali- 1 MW (CoD 22.01.2022)	1
90	Kanjikode-3MW (CoD 19.02.2022)	3
91	Brahmapuram- 2.75 MW, DOC 03.02.2023	2.75
92	Agali -Chaliyur-96kW, COD 31/8/2015	0.096
93	Bar Association Building	0.02
94	Treasury Building	0.02
95	110kV Substation, Ayathil	0.03
96	Mini Civil Station, Kottarakara	0.06
97	Planning Secretariat Building	0.03
98	Civil Station, Pathanamthitta	0.02
99	Civil Station, Kudapanakunnu	0.035
100	B1 Block, Malapuram Civil Station	0.05
101	B3 Block, Malapuram Civil Station	0.05
102	Mini Civil Station, Kunnamangalam	0.02
103	Civil Station, Wayanad	0.015
104	Staff Building, Idukki Civil Station	0.03
105	110 Kv Substation Kinalur	0.035
106	110 Kv Substation Balaramapuram	0.1
107	110 Kv Substation Neyyattinkara	0.05
108	kdpp premises	0.2
109	110 Kv Substation Pazhayangadi	0.1
110	Decommissioned 66 kv Substation Kozhinjampara	0.25
111	KSHEP 100 kW	0.1

Sl No	Solar (IPP)	Installed Capacity (MW)
1	Cochin International Airport	38.99
2	Anert, Kuzhalmandam	2
3	Ambalathara -Solar Park	50
4	Hindalco	5
5	THDCIL Paivalika Solar Park	50
6	RGCCPP Solar	92
7	CIAL Ettukada	10
8	Net Metered Solar Prosumer- LT	446.19
9	Bharat Hospital(CPP)	1.1
10	Net Metered Solar Prosumer- HT & EHT *	131.89
11	Chaliyoor Colony, Agali	0.096
12	SOURA Solar	203.129
13	TP SAURYA	110
14	SECI Solar	50
	Total Solar	**1215.806**

KSEBL GENERATING STATIONS

No.	Station	Year of Commi-ssioning	No of Machines/ Capacity (MW)	Total Capacity (MW)	Average Net Effective Head (m)	Annual yield (MU)	Water required for 1 MU Generation (MCM)	Full load discharge of 1 machine m^3/sec.	Type of Turbine	Firm power at 100% Load factor (MW)	Reservoir	Full reservoir Level (m)	MDDL (M)	Effective Storage (MCM)	Dead Storage (MCM)
1.	Idukki HEP (Moolomattom)	1976-86	6x130	780	660	2398	0.6796	24.50	Pelton	280.2	Idukki	732.43	694.94	1459.70	536.86
2.	Sabarigiri HEP (Moozhiyar)	1966-67	2 x 60	340	750	1338	0.62	8.61	Pelton	153.0	Pamba Kakki	986.332	963.16	31.10	8.10
			4 x55									981.456	908.30	446.54	7.60
3.	Kuttiyadi HEP, Kakkayam	1972	3x25	75.0	640	248	0.82	5.69	Pelton	30.6	Kuttiyadi	758.037	737.62	33.99	4.40
	Kuttiyadi Extn.	2001	1x50	50	640	75	0.71	5.69	Pelton	8.56	Kuttiyadi	758.037	737.62	33.99	4.40
	Kuttiyadi Addl.Extn	2010	2x50	100	630	223			Pelton		Kuttryadi & Thariyode		738.62	240	23.75
4	Lower Periyar (Karimanal)	1997	3x60	180	203.63	493	2.17	36.66	Francis	56.3	Periyar	253	237.74	4.55	0.8
5	Neriamangalam	1961-63	3x17.55	52.65	180	237	2.44	10.12	Francis	27.0	Neriamangalam	456.590	445.91	5 56	1.31
	Neriamangalam Ext scheme	2008	1x25	25	180	58			Francis		Kallarkutty	456.59	438.9	5.56	1.31
6	Idamalayar	1987	2x37.5	75.0	110	380	400	41.67	Francis	43.3	Idamalayar	169.00	115.00	1017.80	72
7	Sholayar	1966-68	3x18	54.0	300	233	1.50	7.50	Francis	20.6	Sholayar	811.682	779.37	149.23	4.25
8	Kakkad	1999	2x25	50.0	132.60	262	3.251	22.58	Francis	30.0	Moozhiyar	192.63	181.36	1.16	0.34
											Veluthodu	192.00	186.00	0.607	0.63
9	Poringalkuthu	1957-60	4x9	36.0	170	170	2.83	6.29	Francis	19.6	Poringalkuthu	423.976	405.69	30.30	1.70
	Poringalkuthu LBE	1999	1 x 16	16.0	170	74	2.57	11.42	Francis	9.8					
10	Sengulam	1954-55	4x12.8	51.2	341	182	1.27	4.23	Pelton	20.80	Sengulam	847.60	844.86	1.61	
11	Pallivasal	1940-51	3x5	37.5	570	284	0.707	0.98	Pelton	32.5	Kundala	1758.696	1735.84	7.80	0.024
			3x7.5				0.792	1.65			Mattuppetty	1599.590	1554.48	55.20	0.127
12	Panniar	1963-64	2 x 16.2	32.4	220	158	2.13	8.83	Francis	18.0	Anayirankal	1207.008	1188.11	48.97	0.85
											Ponmudl	707.75	676.66	47.4	4.15
13	Kallada	1994	2 x 7.5	15.0	43.0	65	9.75	20.32	Kaplan	6.05	Kallada (Thenmala)	115.824	24.38	488.53	16.14
14	Malanka	2005	3 x 3.5	10.5	12.2	65.35	35.5	34.5	Kaplan	5.02	Malanka	42	36	4.16	18.5
15	Poozhithodu (SHP)	2011	3 x 1.6	4.8	72	10.97			Francis (Horiz)		Poozhithodu				
16	Ranni-Perinad (SHP)	2012	2 x 2	4	6.3	16.73		39.17	Kalpan (Horiz)		R-Perunad				
17	Kuttiadi Tail Racce Scheme	2009	3 x 1.25	3.75	21	15			Kalpan (Horiz)						
18	Chembikadavu I	2004	3 x 0.9	2.7	35.5	6.59	12.22	3.06	Francis (Horiz)	0.75	Chembukadu				
19	Chembikadavu II	2004	3 x 1.25	3.75	55	9.03	4.747	2.70	Francis (Horiz)	1.03					
20	Urumi I	2004	3 x 1.25	3.75	96.5	9.72	4.473	1.553		1.10	Urumi - 1				

No.	Station	Year of Commi-ssioning	No of Machines/ Capacity (MW)	Total Capacity (MW)	Average Net Effective Head (m)	Annual yield (MU)	Water required for 1 MU Generation (MCM)	Full load discharge of 1 machine m^3/sec.	Type of Turbine	Firm power at 100% Load factor (MW)	Reservoir	Full reservoir Level (m)	MDDL (M)	Effective Storage (MCM)	Dead Storage (MCM)
21	Urumi II	2004	3 x 0.8	2.4	55	6.28	7.983	1.774		0.71	Urumi - 2				
22	Lower Meenmutty	2006	2 x 1.5 1 x 0.5	3.50	13	7.63	35.9	14.98	Kaplan	0.4	Lower Meenmutty	62.75	61.40		
23	Peppara	1996	1 x 3	3	25	11.5	19.55	16.3	Kaplan	1.30	Peppara	110.5	87.5	67.5	2.5
24	Malampuzha	2001	1 x 2.5	2.5	14.4	5.6	28.24	23.14	Kaplan	0.64	Malampuzha	115.09	99.5	236.7	10.2
25	Kanjikode Wind Farm Project	1995	9 x 0.725 KW	2.025		4				0.40					
26	Mattuppetty	1998	1 x 2	2		6.4			Francis	0.70	Mattuppetty	1599.59	1568.6	55.20	
27	Peechi	2013	1 x 1.25	1.25	24	3.15	20.39	7.08	Kalpan (Horiz)	0.36	Peechi	79.25	66.45	112.6	0.62
28	Vilangad	2014	3 x 25	7.5	99	22.63		2.875	Francis		Panoth, Valluk				
29	Chimmony	2015	1 x 2.5	2.5	45	6.7	10	6.33	Francis (Horiz)	0.765	Chimmony	76.7	56.5	175.34	2.54
30	Adyanpara	2015	2 x 1.5 + 1 x 0.5	3.5	94	9.01	4.96	2.07 0.69	Francis (Horiz)	1.01	Adyanpara				
31	Barapol	2016	3 x 5	15	50.2	.36	8.47	11.30	Francis (Horiz)						
32	Vellathooval	2016	2 x 1.8	3.6	12	12.17	37.8		Kalpan (Horiz)		Vellathoovall	472	470		
33	Peringalkuthu Micro HEP	2016	11 kW	11 kW	1	0.1			Blade Screw		Tail race of PLEB				
34	Perumthenaruvi	2017	2 x 3	6		24.29			Kalpan (Horiz)		Perumthenaruvi	51	47		
35	Kakkayam	2018	2 x 1.5	3	18.36	46.66	19.44		Kalpan (Horiz)	1.2	Kuttiyadi Tail Race	88.63	81.63		
36	Kozhikode Diesel Power Project	1999	6 x 16	96		896									
37	Brahmapuram Diesel Power Project	1997-98	3 x 21.32	63.96		606	208 GM of LSHS/ KWH or 200gm. of Diesel per Kwh			73					
38	Upper Kallar	2021	2x1	2	51		9,18	2.55	Francis (Horiz)		No reservoir				
39	Chathankottunada	2021	2x3	6	90		5.5	3.05	Francis (Horiz)			125.2			
40	Peruvannamuzhy	2023	2x3	6	21.88	24.7	22.2	1.6		76		44.41	36.9	113.44	7.08

REPORT OF SHORT CIRCUIT STUDIES OF KSEBL GRID

Sl. No.	Name of Substation	Voltage Level	3 Phase		1 Phase	
			MVA	kA	MVA	kA
THIRUVANANTHAPURAM						
1	POTHENCODE	220	6679	18	4834	13
		110	4338	23	3151	17
2	NEW KATTAKADA	220	4429	12	3024	8
		110	3554	19	2521	13
3	VIZHINJAM	220	3194	8	2108	6
		110	1843	10	1385	7
4	VISIL	220	3437	9	2334	6
5	ARUVIKKARA	110	2495	13	1635	9
6	ATTINGAL	110	2996	16	2019	11
		66	366	3	340	3
		33	292	5	279	5
7	BALARAMAPURAM	110	2232	12	1432	8
8	KATTAKADA	110	3349	18	2336	12
9	KAZHAKUTTOM	110	3169	17	2169	11
10	KILIMANOOR	110	1098	6	699	4
		33	250	4	223	4
11	MEDICAL COLLEGE-THIRUVANANTHAPURAM	110	2465	13	1660	9
		33	152	3	148	3
12	MUTTATHARA	110	1905	10	1292	7
13	NEDUMANGAD	110	3142	16	2100	11
		33	148	3	145	3
14	NEYYATTINKARA	110	2064	11	1313	7
15	PARASSALA	110	2900	15	1876	10
		33	194	5	280	5
16	PARUTHIPPARA	110	2850	15	1957	10
		66	1324	12	1103	10
17	TERLS	110	2721	14	1841	10
		66	1044	9	842	7
18	THIRUMALA	110	2279	12	1569	8
		66	1250	11	1026	9
		33	283	5	268	5
19	VARKALA	110	1729	9	1114	6
20	VELI	110	2409	13	1622	9
		66	1017	9	806	7
21	LA COMPLEX GIS, TVM	66	1303	11	1079	9
22	PALODE	66	213	2	150	1
23	POWER HOUSE GIS, TVM	66	1286	11	1061	9
24	VATTIYOORKAVU	66	810	7	575	5
25	ARYANAD	33	94	2	69	1
26	CHULLIMANOOR	33	113	2	90	2
27	KACHERI	33	258	5	235	4
28	KADAKKAL	33	131	2	87	2
29	KADAKKAVUR	33	130	2	85	1
30	KALLAMBALAM	33	102	2	64	1
31	KARAMANA	33	247	4	220	4
32	PATTOOR	33	142	2	134	2
32	PEYAD	33	229	4	200	3
33	POOVAR	33	106	2	66	1
34	VELLARADA	33	111	2	70	1
35	VENJARAMMUDU	33	135	2	89	2
36	VITHURA	33	127	1	115	2
37	VYDYUTHI BHAVANAM, TVM	33	142	2	134	2
KOLLAM						
1	EDAMON	220	8335	22	5668	15
		110	2664	14	2085	11
		66	709	6	647	6
2	KUNDARA	220	2859	8	2410	6
		110	3299	17	2513	13
3	AMBALAPPURAM	110	1179	6	757	4
		33	250	4	225	4

Sl No.	Station	Station Code	Voltage Level in kV	3-Phase		SLG	
				MVA	kA	MVA	kA
4	AYATHIL	110	1852	10	1262	7
5	ANCHAL	110	1429	8	980	5
6	AYOOR	110	1324	7	899	5
7	CHAVARA	110	1393	7	896	5
8	KAVANAD	110	1130	6	717	4
9	KOLLAM GIS	110	1463	8	1111	6
10	KOTTARAKKARA	110	1764	9	1182	6
11	KOTTIYAM	110	1387	7	887	5
		33	260	5	236	4
12	PARIPPALLY	110	2448	13	1628	9
		33	153	3	149	3
13	PATHANAPURAM	110	1315	7	874	5
14	PERINAD	110	2643	14	1912	10
15	PUNALUR	110	2318	12	1689	9
16	SHASTHANCOTTA	110	2766	15	1883	10
		66	528	5	145	1
17	KALLADA SHP	66	564	5	440	4
18	KARUNAGAPALLY	66	474	4	179	2
19	THENMALA	66	563	5	439	4
20	ADICHANALLOOR	33	122	2	86	2
21	CHENGAMANAD	33	113	2	73	1
22	EZHUKONE	33	175	3	128	2
23	KANNANALLUR	33	145	3	99	2
24	PARAVOOR	33	178	3	130	2
25	POOYAPALLY	33	120	2	79	1
26	PUTHUR	33	95	2	71	1
27	OCHIRA	33	90	2	65	1
PATHANAMTHITTA						
1	SABARIGIRI HEP	220	7876	21	4679	12
		66	788	7	724	6
2	KAKKAD HEP	110	2453	13	1334	7
3	KARIKKAYAM SHP	110	5531	29	2573	14
4	KOODAL	110	1247	7	824	4
5	KOZHENCHERRY	110	1532	8	959	5
6	MALLAPPALLY	110	1686	9	1079	6
		33	140	2	134	2
7	MANIYAR SHP	110	3681	19	1944	10
8	PATHANAMTHITTA	110	3084	16	2007	11
		33	306	5	292	5
9	RANNI	110	1288	7	807	4
		33	174	3	164	3
10	ADOOR	110	1954	10	1269	7
		66	576	5	400	3
11	CHUMATHRA	66	1074	9	710	6
12	ENATHU	66	350	3	229	2
13	KOCHU PAMPA	66	446	4	310	3
14	THIRUVALLA	110	1617	9	1043	6
		66	907	8	597	5
15	THRIVENI	66	342	3	229	2
16	KADAPRA	33	96	2	72	1
17	KONNY	33	155	3	104	2
18	KUMBANAD	33	90	2	66	1
19	PANDALAM	33	225	4	199	4
20	PERUMTHENARUVI	33	102	2	95	2
21	RANNI PERINAD	33	110	2	73	1
ALAPPUZHA						
1	EDAPPON	220	3467	9	3042	8
		110	3775	20	2999	15
		66	1296	11	1073	9
		33	146	3	145	3
2	KAYAMKULAM (NTPC)	220	5350	14	5544	15

Sl No.	Station	Station Code	Voltage Level in kV	3-Phase		SLG	
				MVA	kA	MVA	kA
3	PUNNAPPRA	220	3880	10		2856	7
		110	3381	18		2471	13
		66	1394	12		1143	10
		33	145	3		143	2
4	AROOR	110	2599	14		1644	9
		66	1119	10		867	8
5	CHENGANOOR	110	2286	12		1539	8
		33	150	3		145	3
6	EDATHUA	110	1720	9		1136	6
		33	143	3		138	2
7	ERAMALLOOR	110	1587	8		1002	5
8	KAYAMKULAM	110	1525	8		1005	5
		33	143	2		136	2
1	MAVELIKKARA	110	2172	11		1526	8
		66	1660	15		1236	11
10	SL PURAM	110	2450	13		1610	8
11	THYCATTUSSERY	110	2081	11		1329	7
		33	279	5		260	5
12	ALAPPUZHA	66	1083	9		766	7
13	CHERTHALA	66	651	6		415	4
14	KARUVATTA	66	784	7		525	5
15	KATTANAM	66	580	5		298	3
16	KUTTANAD	66	675	6		432	4
17	NANGIARKULANGARA	66	1071	9		748	7
18	PATHIRAPPALLY	66	766	7		504	4
19	MANNAR	33	92	2		66	1
20	KALARCODE	33	111	2		70	1
21	KUTHIATHODU	33	213	4		167	3
22	THAKAZHY	33	90	2		65	1
23	VALLIKUNNAM	33	74	1		50	1
KOTTAYAM							
1	KOTTAYAM	400	10338	15		6474	9
		220	7218	19		4920	13
2	NEW PALLOM	220	7086	19		5079	13
3	PALLOM	220	7168	19		5094	14
		110	4937	26		3676	19
		66	2043	18		1695	15
4	AYARKUNNAM	110	2568	13		1652	9
5	CHENGALAM	110	1734	9		115	6
6	ERATTUPETTA	110	1447	8		884	5
7	ERUMELI	110	563	3		346	2
8	KANJIRAPPALLY	110	660	3		407	2
9	KODIMATHA	110	3139	16		2138	11
10	MUNDAKKAYAM	110	634	3		392	2
		66	428	4		302	3
		33	131	2		117	2
11	MUTTOM	110	1625	9		986	5
12	PALA	110	3161	17		2017	11
		66	929	8		767	7
		33	285	5		272	5
13	PAMPADY	110	1540	8		980	5
14	THRIKKODITHANAM	110	1521	8		970	5
		33	135	2		129	2
15	VAIKOM	110	2887	15		1837	10
		66	1190	10		927	8
		33	147	3		143	3
16	CHANGANACHERRY	66	1246	11		829	7
17	ETTUMANOOR	220	5299	14		3590	9
		110	4759	25		3285	17
		66	1240	11		844	7
18	GANDHINAGAR	66	993	9		672	6
19	KOTTAYAM (KANJIKUZHY)	66	1111	10		785	7
20	KURUVILANGAD	110	3730	20		2373	12
21	KALLARA	33	88	2		62	1
22	KADUTHURUTHY	33	116	2		94	2
23	KARUKACHAL	33	103	2		79	1
24	KIDANGOOR	33	139	2		93	2
25	KOOTIKKAL	33	93	2		69	1
26	MANIMALA	33	84	1		56	1
27	PAIKA	33	136	2		90	2
28	RAMAPURAM	33	123	2		80	1
29	VAGAMON	33	65	1		44	1
30	VAKATHANAM	33	113	2		94	2
31	KUTHATTUKULAM	110	3939	21		2557	13
ERNAKULAM							
1	AMBALAMUGAL	220	10544	28		6180	16
2	BRAHMAPURAM	220	11499	30		6737	18
		110	4004	21		3005	16
		33	156	3		154	3
3	KALAMASSERY	220	9948	26		5829	15
		110	6325	33		4161	22
		66	1552	14		1221	11
4	KOTHAMANGALAM	220	6548	17		3759	10
		110	2506	13		1963	10
		66	964	8		823	7
5	ALUVA	220	9675	25		5518	14
		110	4090	21		2939	15
		66	1261	11		1083	9
6	ANGAMALY	110	1318	12		1434	8
7	BSES	110	5339	28		3462	18
8	CHELLANAM	110	1651	9		1038	5
9	EDAPALLY	110	4290	23		2769	15
		33	145	3		142	2
10	EDAYAR	110	4145	22		2634	14
		66	713	6		511	4
11	ERNAKULAM NORTH	110	3389	18		2637	14
		66	493	4		319	3
12	IDAMALAYAR HEP	110	2496	13		1463	8
		66	252	2		236	2
13	KADAVANTHARA	110	2410	13		1586	8
14	KALOOR	220	7396	19		4419	12
		110	4478	24		3066	16
		66	1752	15		1249	11
		33	293	5		285	5
15	KANDANAD	110	2213	12		1429	8
16	KIZHAKAMBALAM	110	2755	14		1697	9
17	KURUMASSERY110	110	1893	10		1184	6
		33	264	5		244	4
18	MALAYATTOOR	110	2780	15		1648	9
		33	295	5		276	5
19	MATTANCHERY	110	1866	10		1174	6
		66	788	7		602	5
20	MUVATTUPUZHA	110	2104	11		1263	7
		33	279	5		257	5
21	MYLOOR	110	1543	8		921	5
22	NEW VYTTILA	110	3502	18		2358	12
23	NORTH PARAVUR	110	2045	11		1260	7
		66	562	5		385	3
		33	260	5		241	4
24	PANANGAD	110	2233	12		1388	7
25	PERUMBAVOOR	110	3689	19		2213	12
		33	144	3		140	2

Sl No.	Station	Station Code	Voltage Level in kV	3-Phase		SLG	
				MVA	kA	MVA	kA
26	PIRAVOM	110	1556	8	970	5	
27	RAYONPURAM	110	3316	17	1986	10	
28	VYTTILA	110	3537	19	2369	12	
		66	2565	22	1737	15	
29	WELLINGTON ISLAND	110	2202	12	1484	8	
30	EDATHALA	110	3363	18	2159	11	
31	FORT KOCHI GIS	66	777	7	592	5	
32	KAKKANAD	66	1540	13	1019	9	
33	KARUKUTTI	66	1103	10	765	7	
34	KOOTHATTUKULAM	66	503	4	324	3	
35	MARADY	110	1740	9	1082	6	
36	MARINE DRIVE	66	1839	16	1299	11	
37	MULAVUKAD	66	607	5	400	4	
38	NJARAKKAL	66	585	5	384	3	
39	NPOL (THRIKKAKARA)	66	1375	12	947	8	
40	ODAKKALI	66	513	4	331	3	
41	PANAMPALLY NAGAR	66	1913	17	1323	12	
42	PERUMANOOR (SHIPYARD)	66	1936	17	1356	12	
43	PUTHEN CRUZ	66	2016	18	905	8	
44	THRIPUNITHURA	66	2554	22	1660	15	
45	ALANGAD	33	137	2	93	2	
46	KALADY	33	173	3	120	2	
47	KALLURKADU	33	111	2	70	1	
48	KOOVAPADY	33	201	4	148	3	
49	KURUMASSERY33	33	264	5	244	4	
50	KURUPAMPADY	33	99	2	75	1	
51	MAZHUVANNUR	33	186	3	136	2	
52	PUTHENVELIKKARA	33	153	3	106	2	
53	THAMMANAM	33	261	5	241	4	
54	VADAKKEKARA	33	135	2	91	2	
55	VARAPPUZHA	33	141	2	96	2	
56	VENGOLA	33	115	2	94	2	
57	CHERAI	110	1819	10	118	6	
IDUKKI							
1	IDUKKI HEP	220	9560	25	4890	13	
		66	640	6	533	5	
2	LOWER PERIYAR HEP	220	7450	20	4018	11	
3	ADIMALY	110	2068	11	1208	6	
4	KUTHUNGAL	110	1026	5	587	3	
		33	133	2	122	2	
5	KUTHUNGAL HEP	110	1026	5	587	3	
6	NERIYAMANGALAM HEP	110	2402	13	1379	7	
7	PANNIYAR HEP	110	2076	11	1258	7	
8	SENGULAM HEP	110	2114	11	1283	7	
		66	1510	13	1087	10	
9	UDUMBANNOOR	110	1258	7	759	4	
		33	252	4	224	4	
10	IRUTTUKANAM SHP	66	673	6	501	4	
11	KARIMANAL	66	255	2	164	1	
12	KATTAPPANA	66	171	1	101	1	
13	KULAMAVU	66	468	4	325	3	
14	MALANKARA SHP	66	422	4	288	3	
15	MARAYOOR	33	35	1	21	0.3	
16	NEDUMKANDAM	66	233	2	140	1	
		33	111	2	84	1	
17	PALLIVASAL HEP	66	1453	13	1147	10	
		220	6698	18	3917	10	
		33	147	3	143	3	
18	PEERUMEDU	66	357	3	237	2	
		33	115	2	99	2	
19	THODUPUZHA	66	426	4	286	3	
20	VANDIPERIYAR	66	347	3	228	2	
		33	107	2	92	2	
21	VAZHATHOPE	66	473	4	304	3	
22	KUMILY	33	70	1	49	1	
23	SENAPATHY	33	90	2	66	1	
24	UPPUTHARA	33	59	1	38	1	
25	VANDANMEDU	33	99	2	63	1	
26	VANNAPURAM	33	94	2	58	1	
THRISSUR							
1	MADAKKATHARA	400	14524	21	8224	12	
		220	9195	24	5950	16	
		110	5300	28	3778	20	
2	MANNUTHY	110	4160	22	2892	15	
3	CHALAKUDY	220	3967	10	2553	7	
		110	4466	23	2774	15	
		66	1495	13	1194	10	
		33	304	5	292	5	
4	ARANGOTTUKARA	110	1904	10	1199	6	
5	ATHANI	110	2015	11	1278	7	
		33	146	3	140	2	
6	AYYAMPUZHA	110	1708	9	1022	5	
7	CHERPU	110	1683	9	1045	5	
		33	150	3	143	2	
8	GURUVAYOOR	110	2040	11	1352	7	
		33	149	3	143	3	
9	IRINJALAKUDA	110	2365	12	1463	8	
		33	264	5	247	4	
10	KANDASSANKADAVU	110	2405	13	1525	8	
		33	146	3	142	2	
11	KATTOOR	110	2644	14	1641	9	
12	KODAKARA	110	3043	16	1900	10	
13	KODUNGALLUR	110	2340	12	1435	8	
14	KUNNAMKULAM	220	3750	10	2354	6	
		110	2420	13	1709	9	
		33	141	2	138	2	
15	MALA	110	2056	11	1255	7	
16	OLLUR	110	3035	16	1891	10	
		33	298	5	282	5	
17	PAZHAYANNUR	110	1267	7	797	4	
18	PORINGALKUTHU HEP	110	1864	10	1045	5	
19	PUDUKKAD	110	2932	15	1809	9	
20	PULLAZHY	110	2320	12	1457	8	
21	PUNNAYURKULAM	110	1410	7	926	4	
22	SHOLAYAR HEP	110	1874	10	1045	5	
23	VALAPPAD	110	1859	10	1151	6	
		33	260	5	240	4	
24	VIYYUR	110	3658	19	2358	12	
		66	1104	10	903	8	
		33	292	5	280	5	
25	WADAKKANCHERY	110	2255	12	1413	7	
		33	151	3	146	3	
26	ANCHANGADY	33	132	2	88	2	
27	ANNAMANADA	33	138	2	92	2	

Sl No.	Station	Station Code	Voltage Level in kV	3-Phase		SLG	
				MVA	kA	MVA	kA
28	ANTHIKADU	33	200	4	156	3	
29	BLANGAD	33	90	2	64	1	
30	CHAVAKKAD	33	109	2	844	1	
31	CHELAKKARA	33	79	1	54	1	
32	CHIRAKKAL	33	114	2	90	2	
33	ERUMAPPETTY	33	85	1	60	1	
34	KAIPAMANGALAM	33	170	3	123	2	
35	KALLETTUMKARA	33	128	2	83	1	
36	KONGANNUR	33	95	2	71	1	
36	KORATTY	33	169	3	117	2	
37	METHALA	33	88	2	54	1	
38	MULLASSERY	33	104	2	79	1	
39	MULLOORKARA	33	106	2	81	1	
40	MUNDUR	33	102	2	77	1	
41	PALAKKAL	110	1975	10	1237	6	
42	PARAPPUKARA	33	167	3	120	2	
43	PARAPPUR	33	170	3	120	2	
44	PARIYARAM (THRISSUR)	33	160	3	109	2	
45	PATTIKAD	33	103	2	64	1	
46	POOMALA	33	131	2	86	1	
47	PUTHUR (THRISSUR)	33	201	4	149	3	
48	VADANAPPILLY	33	120	2	99	2	
49	VELLANGALLUR	33	159	3	113	2	
50	VELLIKULANGARA	33	121	2	77	1	
PALAKKAD							
1	PALAKKAD	220	5391	14	3831	10	
		110	2465	13	1968	10	
2	SHORNUR	220	4364	11	2856	7	
		110	3755	20	2529	13	
3	CHERPULASSERY	110	1138	6	710	4	
4	KALLADIKODE	110	678	4	423	2	
5	KANJIKODE	110	2018	11	1518	8	
		66	925	8	781	7	
6	KOLLENKODE	110	1310	7	875	5	
		33	245	4	225	4	
7	KOOTTANADU	110	1528	8	944	5	
		33	147	3	139	2	
8	KOPPAM	110	2625	14	1724	9	
		33	372	7	329	6	
9	KOZHINJAMPARA	110	1460	8	1014	5	
		33	261	5	242	4	
10	MALAMPUZHA	110	1168	6	753	4	
11	MANNARKKAD	110	535	3	330	2	
		33	256	4	195	3	
12	OTTAPPALAM	110	1881	10	1204	6	
13	PARALI	110	1526	8	987	5	
		33	256	4	195	3	
14	PATHIRIPPALA	110	1445	8	915	5	
15	VADAKKENCHERY	110	1232	6	778	4	
		33	259	5	231	4	
16	VENNAKKARA	110	1954	10	1333	7	
		66	876	8	712	6	
		33	152	3	147	3	
17	WALAYAR	110	1937	10	1444	8	
18	CHITTOOR	66	516	5	366	3	
19	KANNAMPULLY	66	397	3	266	2	
20	MEDICAL COLLEGE, PKD	66	642	6	461	4	
21	NEMMARA	110	1070	6	682	4	

Sl No.	Station	Station Code	Voltage Level in kV	3-Phase		SLG	
				MVA	kA	MVA	kA
22	AGALI	33	104	2	63	1	
23	ALANELLUR	33	200	3	123	2	
24	ALATHUR	33	109	2	69	1	
25	CHALLISSERY	33	118	2	95	2	
26	CHITTADI	33	114	2	73	1	
27	KODUVAYUR	33	116	2	76	1	
28	KONGAD	33	119	2	77	1	
29	MANIAMPARA	33	147	3	100	2	
30	MEENAKSHIPURAM	33	188	3	142	2	
31	MUTHALAMADA	33	128	2	86	2	
32	NELLIYAMPATHY	33	129	2	87	2	
33	OLAVAKKODE	33	98	2	73	1	
34	PALLASSENA	33	135	2	92	2	
36	PATTAMBI	110	1493	8	925	5	
		33	142	2	134	2	
35	SREEKRISHNAPURAM	33	64	1	38	1	
37	TARUR	33	123	2	80	1	
38	THIRUVEGAPPURA	33	126	2	78	1	
39	THRITHALA	33	114	2	91	2	
40	VANNAMADA	33	99	2	63	1	
41	VELANTHAVALAM	33	136	2	92	2	
42	VYDHYUTHI BHAVAN, PKD	33	76	1	52	1	
MALAPPURAM							
1	KOZHIKODE (PGCIL)	400	10377	15	6388	9	
2	AREAKODE	220	8069	21	5439	14	
		110	3427	18	2664	14	
3	MALAPPARAMBA	220	5144	13	3241	9	
		110	3434	18	2392	13	
4	ELANKUR	220	4943	13	3184	8	
		110	2885	15	2095	11	
5	CHELARI	110	1617	8	1032	5	
		33	458	8	373	7	
6	EDAPPAL	110	1732	9	1059	6	
7	EDARIKODE	110	1710	9	1070	6	
		33	308	5	274	5	
8	KEEZHISSERY	110	3238	17	2222	12	
		33	492	9	419	7	
9	KUTTIPURAM	110	2200	12	1412	7	
		33	193	3	175	3	
10	MALAPPURAM	110	3287	17	2202	12	
		66	695	6	631	6	
		33	301	5	251	4	
11	MANJERY	110	2326	12	1579	8	
12	MELATTUR	110	1319	7	838	4	
		33	245	4	201	4	
13	PARAPPANANGADI	110	1270	7	783	4	
14	PERINTHALMANNA	110	1423	7	906	5	
15	PONNANI	110	1342	7	819	4	
16	TIRUR	110	1881	10	1166	6	
17	EDAKKARA	110	1134	6	726	4	
18	MANKADA	110	1065	6	660	3	
19	NILAMBUR	110	1318	7	855	4	
		33	225	4	196	3	
20	ADYANPARA SHP	33	216	4	168	3	
21	EDAVANNA	33	158	3	94	2	
22	KALIKAVU	33	80	1	46	1	

Sl No.	Station	Station Code	Voltage Level in kV	3-Phase		SLG	
				MVA	kA	MVA	kA
23	KALPAKANCHERY		33	153	3	100	2
24	KINFRA		33	402	7	299	5
25	KOORIYAD		33	159	3	105	2
26	MAKKARAPARAMBA		33	221	4	143	3
27	OTHUKKUNGAL		33	156	3	103	2
28	POOKOTTUMPADAM		33	135	2	92	2
29	POTHUKALLU		33	136	2	94	2
30	PULAMANTHOLE		33	301	5	215	4
31	THAZHEKODE		33	195	3	118	2
32	THAVANUR		33	110	2	67	1
33	THIRUNNAVAYI		33	152	3	98	2
34	VALLUVAMBRAM		33	283	5	185	3
35	WANDOOR		33	147	3	89	2
KOZHIKODE							
1	NALLALAM		220	5727	15	3684	10
			110	3862	20	2796	15
			66	1068	9	919	8
			33	365	6	335	6
2	ORKATTERY		220	2298	6	1550	4
			110	1882	10	1331	7
3	AGASTYAMOOZHI		110	1734	9	1259	7
			33	328	6	322	6
4	CHAKKITTAPARA		110	1366	7	1094	6
5	CHEVAYOOR		110	2818	15	2047	11
			66	954	8	782	7
6	GANDHIROAD		110	2140	11	1752	9
7	KAKKAYAMHEP		110	1997	10	2030	11
8	KINALOOR		110	1354	7	1037	5
9	KODUVALLY		110	1830	10	1307	7
10	KUNNAMANGALAM		220	6548	17	3759	10
			110	2506	13	1963	10
			66	964	8	823	7
11	KUTTIYADI		110	1117	6	810	4
			33	175	3	165	3
12	MANKAVU		110	2058	11	1422	7
			66	978	9	797	7
13	MEPPAYUR		110	1078	6	702	4
			33	146	3	136	2
14	NADAPURAM		110	959	5	676	4
			33	150	3	147	3
15	KOYILANDY		110	1331	7	939	5
			33	147	3	141	2
16	THAMBALAMANNA		33	272	5	257	5
			220	2299	6	1550	4
17	VADAKARA		110	1442	8	973	5
			33	143	3	137	2
18	WESTHILL		110	1970	10	1624	9
19	CYBERPARK		66	916	8	683	6
20	KUTTIKATOOR		66	840	7	606	5
21	MAVOOR (AMBALAPARAMBA)		66	276	2	175	2
22	PUTHIYARA GIS		66	968	8	791	7
23	THAMARASSERY		66	478	4	317	3
24	BALUSSERY		33	54	3	43	2
25	CHEMBUKADAVU-I SHP		33	142	2	151	3
26	CHEMBUKADAVU-II SHP		33	151	3	165	3
27	FEROKE		33	93	5	80	4
28	MELADY		33	94	2	69	1
29	PATHANKAYAM SHP		33	169	3	165	3
30	PERAMBRA		33	102	2	76	1
31	POOZHITHODU SHP		33	112	2	110	2
32	RAMANATTUKARA		33	299	5	194	3
33	THIRUVALLUR		33	95	2	70	1
34	URUMI		33	181	3	185	3
35	URUMI-I SHP		33	166	3	170	3
36	URUMI-II SHP		33	181	3	185	3
37	VELLANNUR		33	163	3	111	2
38	VILANGAD SHP		33	90	2	95	2
WAYANAD							
1	KANIYAMPETTA		220	5419	14	3391	9
			66	816	7	723	6
			33	160	3	157	3
2	ANJUKUNNU		66	528	5	343	3
3	KUTHUMUNDA		66	401	4	257	2
4	MANANTHAVADI		66	420	4	258	2
5	SULTAN BATHERY		66	225	2	141	1
6	AMBALAVAYAL		66	395	3	253	2
7	KALPETTA		33	97	2	70	1
8	MEENANGADI		33	95	2	67	1
9	PADINJARETHARA		33	77	1	51	1
10	PULPALLY		33	61	1	39	1
KANNUR							
1	KANHIRODE		220	2200	6	1527	4
			110	1848	10	1331	7
			33	142	2	138	2
			220	1569	4	1078	3
			110	1188	6	863	5
2	TALIPARAMBA		33	237	4	221	4
3	AZHIKODE		110	1118	6	712	4
			33	245	4	219	4
4	CHEMPERI		110	813	4	532	3
5	CHERUPUZHA		110	840	4	577	3
6	CHOVVA		110	1430	8	946	5
7	EZHIMALA		110	877	5	603	3
8	IRITTY		110	814	4	558	3
			33	231	4	219	4
9	KUTHUPARAMBA		110	1026	5	684	4
10	MAHE		110	1363	7	901	5
11	MANGAD		110	1043	5	689	4
12	KINFRA PARK, MATTANNOOR		110	980	5	671	4
			33	129	2	122	2
13	MUNDAYAD		110	1706	9	1153	6
			33	206	4	181	3
14	NEDUMPOYIL		110	710	4	458	2
			33	128	2	117	2
15	PANOOR		110	1449	8	965	5
			33	140	2	134	2
16	PAYYANGADI		110	992	5	696	4
17	PAYYANNUR		110	1021	5	729	4
			33	140	2	133	2
18	PINARAYI		110	1429	8	937	5
			33	308	5	271	5
19	SREEKANTAPURAM		110	907	5	596	3
20	THALASSERY		110	1774	9	1198	6
			220	1523	4	1052	3
21	VALIYAVELICHAM		110	869	5	569	3
			66	387	3	306	3
22	ALAKODE		33	76	1	46	1
23	BARAPOLE SHP		33	206	4	196	3
24	DHARMADOM		33	231	4	163	3
25	KANNURTOWN		33	164	3	118	2
26	KELAKAM		33	111	2	96	2
27	KODIYERI		33	105	2	82	1
28	KUTTIYATTOOR		33	97	2	73	1
29	NADUKANI		33	152	3	110	2
30	PARIYARAM (KANNUR)		33	144	3	102	2
31	PAYYANNUR TOWN		33	110	2	88	2
32	PAZHASSI		33	71	1	48	1
33	PUTHIYATHERU		33	135	2	97	2
34	PUTHUR (KANNUR)		33	95	2	97	2
35	THOLAMBRA		33	63	2	37	1
36	THOTTADA		33	193	3	134	2

Fault Level Data provided are for General Guidance only and should not be used for any design purpose.

KASARGOD						
1	AMBALATHARA	220	1318	3	959	3
		110	1094	6	840	4
		33	754	13	620	11
2	MYLATTY	220	1274	3	937	2
		110	1011	5	824	4
3	CHERUVATHUR	110	917	5	647	3
		33	242	4	219	4
4	KANJANGAD	110	1000	5	761	4
		33	465	8	344	6
5	KUBANUR	110	617	3	429	2
6	MANJESWARAM	110	901	5	558	3
7	MULLERIYA	110	659	3	464	2
		33	13	2	121	2
8	VIDYANAGAR	110	837	4	619	3
		33	135	2	128	2
9	ANANTHAPURAM	33	91	2	68	1
10	BADIYADUKKA	33	81	1	57	1
11	BELUR	33	147	3	87	2
12	KANJANGAD TOWN	33	202	4	123	2
13	KASARGOD TOWN	33	106	2	85	1
14	NEELESWARAM	33	157	3	93	1
15	PERLA	33	73	1	50	1
16	RAJAPURAM	33	80	1	46	1
17	THRIKKARIPPUR	33	118	2	78	1
18	WESTELERY	33	91	2	57	1

OTHER IMPORTANT STATION CODES

Sl No.	Station	Station Code	Voltage Level in kV
	PGCIL SUBSTATIONS		
1	COCHIN EAST	CEST	400
2	ELAPPULLY	ELPY	400
3	PALLIPURAM	TVPM	400
4	AREEKOD	ARKD	400
5	MADAKKATHARA SWITCHING STATION	TSR	400
6	NORTH THRISSUR HVDC	TRSR	400
	INTERSTATE		
1	KADAKOLA	KDKL	220
2	KONAJ	KONJ	110
3	KUZHITHURA	KZTR	110
4	MAHE	MAHE	110
5	TIRUNELVELI	TNVL	400
6	UDUMALPET	UDML	400
7	MYSORE	MYSR	400
8	PUGALUR HVDC	PGLR	400
	GENERATING STATIONS		
1	BOMBAY SUBURBAN ELECTRICITY SUPPLY	BSES	110
2	CHEMBUKADAVU	CBKD	33
3	IDAMALAYAR	IMLR	66
4	IDUKKI	IDKI	220
5	IRUTTUKANAM	IRTK	66
6	KAKKAD	KAKD	110
7	KAKKAYAM	KKYM	110
8	KALLADA	KLDA	66
9	KARIKAYAM	KRKM	110
10	KAYAMKULAM	KYKM	220
11	KUTHUNGAL	KUGL	110
12	KUTTIADI TAIL RACE	KUTR	110
13	LOWER PERIYAR	LPYR	220
14	MALANKARA	MLKA	66
15	MANIYAR	MNYR	110
16	NERIAMANGALAM	NRLM	110
17	PALLIVASAL	PVSL	66
18	PANNIAR	PNNR	110
19	PEECHI	PCHI	11
20	POOZHITHODE	PZTD	33
21	PORINGALKUTHU	POGL	110
22	RAMAKKALMEDU	RKMD	33
23	SABARIGIRI	SBGR	220
24	SENGULAM	SGLM	110
25	SHOLAYAR	SHYR	110
26	URUMI	URMI	33

LIST OF EHT CONSUMERS as on 31.03.2025

Sl. No.	Name of Consumer 2024-25	Supply Voltage
1	ADANI VIZHINJAM PORT PVT. LTD.(AVPPL)	33
2	APOLLO TYRES LTD	66
3	AUTOKAST LIMITED	110
4	BELIEVERS CHURCH HOSPITAL AND CAMPUS	110
5	BHARAT PETROLEUM CORPORATION LTD	110
6	BHARATH PETROLEUM CORPORATION, ERNAKULAM	110
7	CARBORUNDUM UNIVERSAL LTD, EDAPPALLY	66
8	CARBORUNDUM UNIVERSAL LTD, KORATTY	110
9	COCHIN INTERNATIONAL AIRPORT	110
10	COCHIN PORT TRUST	110
11	COCHIN REFINERIES LTD	220
12	COCHIN SHIPYARD LIMITED	66
13	COCHIN SPECIAL ECONOMIC ZONE AUTHORITY (CSEZA)	110
14	FACT COCHIN DIVISION	110
15	FACT ,UDYOGAMANDAL	110
16	GARRISON ENGINEER(NS),MES	110
17	GOVERNMENT MEDICAL COLLEGE	110
18	HINDALCO INDUSTRIES LTD	110
19	HINDUSTAN MACHINE TOOLS LTD	66
20	HINDUSTAN NEWS PRINT LTD	110
21	HINDUSTAN ORGANIC CHEMICALS LTD	66
22	INDIAN TELEPHONE INDUSTRIES	66
23	INDSIL HYDRO POWER & MANGANESE LTD	66
24	INFOPARK PHASE-II KAKKANAD	220
25	INFOPARK, CHERTHALA	110
26	INOX AIR PRODUCTS PVT LTD	110
27	KAIRALI STEELS AND ALLOYS PVT LTD	110
28	KERALA MINERALS & METALS LTD.	110
29	KINESCO POWER AND UTILITIES PRIVATE LTD, KALAMASSERY	110
30	KINESCO POWER&UTILITIES PVT LTD (KPUPL)	110
31	KOCHI METRO RAIL LIMITED	110
32	KOCHI METRO RAIL PROJECT	110
33	KOCHI REFINERIES LTD - PUMPING STATION	66
34	MADRAS RUBBER FACTORY LTD(MRF)	110
35	MALABAR CEMENTS, WALAYAR (15/14/1337)	110
36	PARAGON STEELS PVT. LTD.-UNIT II	110
37	PATSPIN INDIA LTD	110
38	PCBL LIMITED	66
39	PRECOT LIMITED	110
40	PRECOT LIMITED (A UNIT)	66
41	PREMIER TYRES LTD	66
42	RUBBER PARK INDIA PVT. LTD,IRAPURAM, ERNAKULAM	110
43	SAINT GOBAIN INDIA (P) LIMITED	110
44	SOUTHER RAILWAY,TRACTION SUB STATION, CHINGAVANAM	110
45	SOUTHERN RAILWAY,TRACTION SUB STATION, PALAKKAD	110
46	SOUTHERN RAILWAY TRACTION UPPALA	110
47	SOUTHERN RAILWAY, TRACTION SUB STATION, KANNUR	110
48	SOUTHERN RAILWAY,PALAKKAD	110
49	SOUTHERN RAILWAY,TRACTION SUB STATION, KAZHAKUTTAM	110
50	SOUTHERN RAILWAY,TRACTION SUB STATION, PUNNAPRA	110
51	SOUTHERN RAILWAY,TRACTION SUB STATION, SHORANUR	110
52	SOUTHERN RAILWAY,TRACTION SUB STATION, KADAVANTHRA	110
53	SOUTHERN RAILWAY,TRACTION SUB STATION, KANJIKODE	110
54	SOUTHERN RAILWAY,TRACTION SUB STATION, PERINAD	110
55	SOUTHERN RAILWAY,TRACTION SUB STATION, CHALAKUDY	110
56	SOUTHERN RAILWAY,TRACTION SUBSTATION, ELATHUR	110
57	STEEL COMPLEX LTD	110
58	TECHNO PARK	110
59	TECHNOCITY	110
60	TECHNOPARK PHASE II&III,THIRUVANANTHAPURAM	110
61	TRANSFORMERS & ELECTRICALS KERALA LTD	66
62	TRAVANCORE COCHIN CHEMICALS LTD(TCC)	110
63	TRAVANCORE TITANIUM PRODUCTS LTD	66
64	TRV(Kerala)INTERNATIONAL AIRPORT LTD.(TIAL)	66
65	VIKRAM SARABHAI SPACE CENTRE,ISRO,THUMBA	110
66	WESTERN INDIA PLYWOOD LTD	110
67	Southern Railway Traction Substation Melathur	140
68	Thrissur Corporation Electricity Department	110

11 KV FAULT LEVEL CALCULATION - A TYPICAL EXAMPLE

(Fault level calculation at 11 KV bus of 110/11KV Substation having 2 X 12.5 MVA Transformers, % impedance 9.88.)

Fault level at 110 KV Bus: 1517 MVA (From KSEB fault study)
Take Base MVA as 100

System % impedance $= \frac{\text{Base MVA x 100}}{\text{Fault MVA}}$

(Source impedance) $= \frac{100 \times 100}{1517} = 6.59\%$

% impedance of the transformers at base MVA $= \frac{9.88 \times 100}{12.5} = 79.04\%$

Effective impedance (Since Transformers are in parallel) $= \frac{79.04}{2} = 39.52\%$

Fault level at 11 KV bus $= \frac{\text{Base MVA x 100}}{\text{(\% Z upto 11 KV bus)}} = \frac{\text{Base MVA x 100}}{(6.59+39.52)}$

$= \frac{100 \times 100}{46.11} = 216.87$ MVA

Fault current on 11 KV side $= \frac{216.87 \times 10^6}{\sqrt{3} \times 11000} = 11.3827$ KA

$A=11.1 \times Is \times \sqrt{t}$

A = area of conductor in sq mm
Is = short circuit current in kA
t = duration of fault current in seconds (1s)

EARTHING

1. Earth Resistance Earth resistance in ohms (max.)

(a)	Large Power Station	≤ 0.5
(b)	Major substations	≤ 1.0
(c)	Small substations	≤ 2.0
(d)	Distribution line	≤ 10.0
(e)	Tower footing resistance	≤ 10.0

2. Size of Copper conductor for Earth

(Max. Earth fault current is caused when a single phase to earth fault occurs)

$$I = \frac{\text{Fault MVA}}{\sqrt{3} \times \text{Voltage}}$$

Cross sectional Area of Copper in mm^2 = $0.054\ I \sqrt{t}$ for rivetted joint

= $0.0044\ I \sqrt{t}$ for braced joint

I- max fault current in Amps(Highest among the current at different Voltage level)
t - Duration of current flow in seconds (3 to 5)

3. Plate Earthing

(a)	Large Power stations and major substations	120 x 120 x 1.25 cm cast iron plates
(b)	Small substations	60 x 60 x 0.94 cm cast iron plates. 60 x 60 x 0.315 cm copper plates 60 x 60 x 0.63 cm steel plates

Plates to be buried vertically in pits and surrounded by finely divided coke, crushed coal or charcoal at least 15 cm all round the plates. Plates should not be less than 8 m apart and should be buried at sufficient depth to ensure that they are always surrounded by moist earth

4. Pipe Earthing

(a)	Large Power stations and major sub stations	Cast iron pipes 15.2 cm dia 3.048 m long and not less than 1.27 cm thick.
(b)	Small sub stations	GI pipes 5.08 cm in dia and 3.048 m long.

Pipes to be placed vertically at intervals of not less than 12.2 m in large stations and 6 m in the case of small stations. The quantity of charcoal and salt is 10 kg. each.

5. Earth connections

(a)	Main and subsidiary earth connections	Cross section not less than 161 mm^2
(b)	Branch connections	Cross section not less than 64.5 mm^2

6. Measuring of Earth resistivity *(Wenner's four electrode method)*

Earth resistivity in ohm meters

$\rho = 2 \pi S R$

S = distance between successive electrode in meters (20 times the depth of burial of the electrode)

R = Earth megger reading ohms.

7. Range of Soil Resistivity

Soil condition	Resistivity in Ω - m
Severely Corrosive	< 25
Moderately Corrosive	25 - 50
Mildly Corrosive	50 - 100
Very Mildly Corrosive	Above 100

8. Maximum permissible current density at an earth electrode

$$Id = \frac{7.57 \times 103}{\sqrt{\rho t}}$$

ρ = Earth resistivity in Ω - m

t = duration of fault current in seconds.

9. Current density

(Bare conductor with no risk of fire 3 second rating)

Copper	-	118 A/mm2
Aluminium	-	73 A/mm2
Steel (GI)	-	46 A / mm2

10. Electrode Resistance

(i) Plate	=	$(\rho/4r)$ or $\rho/4 \sqrt{\pi/A}$
(ii) Pipe or Rod	=	$(100\rho/2\pi l) \log_e (4l/d)$ ohms
(iii) Strip or Conductor	=	$(100\rho/2\pi l) \log_e (2l^2/wt)$ ohms

Where	ρ	=	earth resistivity in Ω m
	r	=	radius of an equivalent circle with area A in m2
	A	=	Area of Plate in m2
	l	=	length in cm
	d	=	dia of Pipe or rod in cm
	w	=	depth of burial of strip electrode in cm
	t = w	=	width of strip or twice the dia of circular conductor in cm

EARTHING STANDARDS

Earthing System: (Reg-41 of CEA Safety read with Reg-81 of CEA Construction)

(i) Regulation 81 of CEA construction Standards: Accordingly, pipe earthing or rod earthing shall be provided for the Distribution Sub Stations (DSS) complying with relevant Indian Standards and Central Electricity Authority (Measures relating to Safety and Electricity Supply) Regulations 2010. According to the construction standard, there shall be three distinct earth pits with three distinct grounding electrodes and the earth connections shall be made as under:

a. To one of the earth electrode: Surge arrestor earthing. One direct connection from the high voltage surge arrester and another direct and separate connection from low voltage surge arrester if low voltage surge arrester is provided.

b. To each of the remaining two electrodes. i. Neutral earthing: Separate connection from the neutral side of the transformer. ii. Transformer body and bonded metallic structure earthing: Transformer body earthing- 1No., one connection from the handle of the 33 kV, 22 kV or 11kV air break switch, and channel earthing and one separate connection from the earthing terminal of the poles.

The transformer neutral earth pit shall be independent and just opposite the surge arrester earth pit.

Note:

1. Surge arresters shall be installed on the high voltage side of the transformer connected to overhead lines. Surge arresters of rating 9 kV on 11 kV, 20 kV on 22 kV and 30 kV on 33 kV outdoor types shall be used for diverting the lightning surges to earth. The earthing lead for any lightning arrestor shall not pass through any iron or steel pipe, but shall be taken as directly as possible from the lightning arrestor without touching any metal part to a separate vertical ground electrode or junction of the earth mat already provided for the sub-station. (Reg- 78 of CEA construction read with Reg-74 of CEA- Safety). Earthing of lightning surge protection should not mi.x with power system earthing.
2. Neutral Earthing: According to Reg-44(2)(v) of CEA Safety, where a transformer or transformers are used, suitable provision shall be made, to guard against the danger of LV circuit becoming accidentally charged above its normal voltage by leakage from or contact with the circuit at the higher voltage; either by connecting with earth, a point of the circuit at the lower voltage or otherwise.

   Regulation 41 of CEA Safety mandates that, neutral conductor of a 3-phase, 4-wire system shall be earthed by not less than two separate and distinct connections, with a minimum of two different earth electrodes or such large number as may be necessary to bring the earth resistance to a satisfactory value. The earth electrodes so provided, shall be inter-connected to reduce earth resistance. Moreover, it is specifically mandated that neutral point of every transformer shall be earthed by connecting it to the earthing system by not less than two separate and distinct connection. Thus, a minimum of two separate and distinct neutral connections to two different earth electrodes is practically necessary for complying the Safety requirement as per CEA safety regulation.
3. Body Earthing: The frame or body of all transformers shall be earthed by two separate and distinct connections with earth. (Regulation 41 of CEA safety)

   As per Code for Earthing Practise (IS – 3043) : In the case of high and extra high voltage, the neutral points shall be earthed by not Less than two separate and distinct connections with earth, each having its own electrode at the generating station or substation and may be earthed at any other point provided 'no interference is caused by such earthing.

   As far as possible, all earth connections shall be visible for inspection. No cut-out, link or switch other than a linked switch arranged to operate simultaneously on the earthed or earthed neutral conductor and the live conductors shall be inserted on any supply System. Water pipes shall not be used as consumer earth electrodes

Earth electrodes, other than the one used for the earthing of the fence itself, should not be installed in proximity to a metal fence to avoid the possibility of the fence becoming live and thus dangerous at points remote from the substation.

The materials used for making connections have to be compatible with the earth rod. In all cases, the connections have to be mechanically strong. IR value of Earth resistance must be less than 10 Ohm for DSS

Distance between two earthing pit must be decided according to the soil resistivity to ensure that the earthing electrodes are electrically independent. General concept is 2 X Length of earthing electrode and in no case less than 2m.

Pipe Earthing Electrode and Pit Excavation

Earthing electrode shall consist of a GI pipe (class B of approved make), not less than 40 mm dia. and 3 meters long.

The electrode shall be cut tapered at the bottom and provided with holes of 12 mm dia. drilled at 75 mm interval up to 2.5-meter length from bottom.

The electrode shall be in one piece and no joints shall be allowed in the electrode.

Size of 1 meter diameter and 3-meter length shall be excavated.

Pipe Electrode shall be in vertical position.

The Pipe shall be installed on 150mm layer of Salt and charcoal power in the bottom. Then alternate layer of 150mm think Salt and charcoal power shall be used up to 2.5 meter.

Min 120kg of charcoal power and 120kg of salt shall be used for each earthing pit.

The pipe electrode, as far as practicable, shall be buried below permanent moisture level but in no case not less than 2.5 M below finished ground level.

General Conditions

1. Minimum fault level at 11 kV side shall be assumed 150 MVA for all earth designs and Number of earth electrodes required shall be calculated for fault current at 11 kV Sides.
2. Duration of fault current shall be taken as 3 sec for earthing design at HT installation and ABC/MCC controlled sub panels may be earthed using conductor of one second rating.
3. Maximum earth resistance at HT premises shall be limited to 1 ohm.
4. Earth mat shall be provided at EHT premises for limiting Step Potential and Touch Potential to tolerable values. Conductor Size and Mesh size may be designed for fault duration of 1.0 Sec and 0.5 Sec respectively.
5. All earth electrodes shall be interconnected using the conductors of largest size in the earthing system.
6. All non-current carrying metal parts of equipments shall be double earthed using conductors of adequate size.
7. Transformer and Generator neutral shall be double earthed. One independent earth electrodes shall be provided for neutral earthing. Links shall also be provided in neutral earthing conductor. Generator neutral earthing shall be earthed at control panel.
8. Lightning arrestor shall be connected to separate earth electrode using No.6 SWG Cu.
9. If fault current exceeds 6kA plate earth electrodes of standard size shall be used.
10. Distance between Plate earth electrodes shall be 8 meter minimum.
11. Distance between Pipe earth electrodes shall be 5 meter minimum.
12. Minimum distance between earth electrodes and adjacent civil structure shall be 1.5 m.

Laying of cables:

(Reg-76 of CEA Safety read with reg-108 of CEA Construction Stds.)

- The underground power cable of voltage exceeding 33 kV shall be laid with a minimum underground depth of 1.2 meters.

- The underground telecommunication cable shall be laid with a minimum separation distance of 0.6 meters to the underground power cable of voltage exceeding 33 kV .
- Underground cables or aerial bunched cables (ABC) of adequate rating can also be used for supplying power.
- PVC cables shall not be used in systems other than LT system
- Direct burying of underground cables shall not be adopted except where cables enter and take off from a trench.
- Laying Cable direct in the Ground: (IS- 1255)

  This method involves digging a trench in the ground and laying cables on a bedding of minimum 75mm riddled soil or sand at the bottom of the trench and covering it with additional riddled soil or sand of minimum 75mm and protecting it by means of tiles or bricks.

  The desired minimum depth of laying from ground surface to the top of cable is as follows

  High Voltage Cables, 3.3kV to 11kV rating – 0.90 M

  High Voltage Cables, 22kV & 33kV rating – 1.05 M

  Low Voltage & Control Cables - 0.75 M

  Cables at road crossings - 1.00 M

ELECTRICAL LAYOUT IN RESIDENTIAL BUILDINGS

IS:4648-1968 (Reaffirmed 1997)

1. Energy meter shall be at such a place which is readily accessible to both consumer and supplier. Energy meter shall not be installed below 1 meter from ground. An Isolation devices shall be placed immediately after the energy meter and should be readily accessible to the consumer.
2. Fuses or other protective devices used shall have adequate breaking capacity.
3. After the main switch there shall be a Distribution Board and there shall be separate circuits for Power and Lighting.
4. There shall be minimum two sub circuits for lighting. Total load on lighting sub circuit shall be 800 watts, the number of points shall not exceed 10.Total load on power sub circuit shall be 3000 Watts and there shall not be more than 2 outlets in a power sub circuit.
5. Insulated conductor connected to live lines shall be either red, yellow, or blue conductor and Neutral shall be black. Earthing conductor may be uninsulated and If insulated the covering shall be finished to show a green colour.
6. All switches shall be on live lines and never on neutral. A switch shall be provided adjacent to normal entrance to any area for controlling the general lighting in that area and two way switching is recommended for halls and staircases. Switch and bell pushes should be self illuminating where they are often operated in dark. In bedroom it is recommended that some lighting be controlled from the bed locations.
7. Local light fittings in kitchen should be so placed that all working surfaces are well illuminated. It is recommended to use ceiling lighting within the switch located outside for bathroom. Water proof lighting shall only be used for outdoor lighting.
8. All socket outlets shall be three pin types. Only three pin 15 A socket outlets shall be used in power circuits. All socket outlets shall be controlled by a switch located adjacent to it. Only shuttered type sockets shall be provided at location accessible to children. For socket outlets of rating more than 15 A, double pole switch shall be provided. No socket outlets shall be provided in bathroom at a height not less than 130cm.
9. All ceiling fans shall be provided with a switch beside its regulator and shall be hung not less than 2.75 cm above floor. Flexible cords shall be used only in the following cases a) For Pendants, b) For wiring of fixtures and c) For connection of transportable and house hold appliances.