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SESCO CONNECTION CHARGES GUIDELINES 1/2003

A. GENERAL

This is the 2nd Edition of the Guidelines on Connection Charge, first published in 1998, and it contains the new policy in connection charges approved by the SESCO Board of Directors on 19th March 2003.

In line with the State Government's aspirations to encourage economic growth and industrialisation while caring for the lower income group, SESCO has made the necessary adjustments taking into account the changing environment and needs of customers.

The main features of this 2nd Edition of the Guidelines are:

1. Lower unit rates charging for residential and shophouse developments.
2. Increased quantum of supply allowable under the unit rates.
3. No System Development Charge for supply upto 33kV.
4. 50% discount on connection charge for new individual residential customer from existing Low Cost Housing, Resettlement Scheme and Rural Electrification Scheme areas.
5. Connection charge is predictable and transparent and variability is minimised.
6. Guidelines is easy to comprehend and simple to use.

This Edition also incorporates the feedback and suggestions from our valued customers. It is aimed at improving the ease, consistency and transparency in the calculation of connection charges. While efforts have been made to make this Edition as comprehensive as possible, SESCO recognises that there will be situations which warrant special attention. For these, SESCO will be pleased to receive any enquiry and provide further assistance.

B. DEFINITIONS

"Actual cost" means the cost incurred by SESCO in implementing the work.

'Commercial Complex" means large multi-storey building, other than commercial shophouses, with multiple business entities primarily built for commercial purposes i.e. to house departmental stores, supermarkets and offices. It can also contain residential premises or hotels.

"Connection" means the electrical connection between SESCO's existing power system and SESCO's meter point at customer's premise. For all connection of supply, SESCO has the sole discretion to decide on the point of connection and whether to use overhead or underground network systems.

"Connection charge" means the amount required to be paid by customer who requires new connection or increased supply of electricity.

"Capacity cost" means the partial cost of a transformer which a customer has to pay when he is connected to an existing substation which does not require any up-rating work.

"Customer" means any applicant including developer, consultant, contractor and any other person who has the interest to obtain electricity supply from SESCO.

"LT" means low tension voltage at 415 volt (V).

"HT" means high tension voltage at 11 kilovolt (kV).

"Housing Development" means residential housing project consisting of ≥ 10 units of houses or having a load demand of ≥ 100kVA whichever is the higher.

"Industrial Premise" means single fenced-in industrial complex whose load demand is > 1,000 kVA.

"O/H, U/G" mean overhead, underground respectively.

"kV, kVA" mean kilovolt, kilovolt-ampere respectively.

"Premise" means any conventional house, building or other erection and the land legally occupied or used in connection therewith, being under one ownership, occupation or management.

"Pro-rata transformer cost" means the proportioning of total cost of the transformer in the ratio of the transformer capacity to be used by the customer to the total available transformer capacity.

"RES" means Rural Electrification Scheme funded by the Federal Government.

"Single-phase supply" means supply provided by one live and one neutral wires with a voltage level of 240V.

"Three phase supply" means supply provided by three live and one neutral wires with a voltage level of 415V.

"Turnkey project" means project undertaken by the customer at his own cost for all the installation work, designed or aproved by SESCO, necessary for the connection of his load to SESCO's supply system at a point decided by SESCO.

C. CONNECTION CHARGE

All SESCO's new customers will be classified under 4 different categories according to the types of usage of electricity and their load intensity.

Listed below are the standard rates for the charging of supply connection charge for Categories A, B and C customers. The rates are applicable only to projects to be undertaken by SESCO.

1.0 Category A Customer - Housing Development

1.1 The standard connection charges for single phase service line supply up to the metering point for various types of houses are as follows:

Type Of House	Connection Charge For Single Phase Supply (Per House)
Detached House	RM 2,240
Semi-Detached House	RM 2,000
Terrace House	RM 1,600

1.2 If three phase supply is required the following **additional** charge will be applicable:

Type Of Service	Additional Charge For Three Phase Supply
Overhead Service Line	RM 60 per house
Underground Service Cable*	RM 48 per metre

Note : * The service cable will be of size 16 sq. mm 4 core Copper.

1.3 For housing estates with centralized metering system, 35 sq. mm 4 core copper underground cable will be laid from the nearest suitable LT supply point to the metering cabinet. The cost of this cable will be charged based on actual cost in addition to the rates in Clauses1.1 and 1.2 above.

1.4 The maximum load allowable for each type of house, based on the above rates 1.1 and 1.2, is 10 kVA. Additional load per house will be charged at the rate of RM120 per kVA.

2.0 Category B Customer - Shophouse Development

2.1 Each unit-floor will be charged at RM2,000 regardless of single phase or three phase supply application.

2.2 The maximum load allowable for each unit-floor, based on the rate in Clause 2.1, is 10 kVA. Additional load per unit-floor will be charged at the rate of RM120 per kVA

3.0 Category C Customer - Commercial Complex, Industrial Premise And Conversion Of Shophouse To Single Business Entity

For LT and/or HT supply, each kVA of load applied for will be charged at RM300. For customer who applies for conversion of shop house to single business entity, the original kVA allocated as in Clause 2.2 above will be deducted from the applied load if the latter is larger than the former.

For supply involving HT construction, the customer may opt for actual cost in lieu of unit rate of RM300 per kVA.

4.0 Additional Amenities And High Tension Mains For Categories A, B And C Customers

4.1 Street Lighting

The customer may request for street lighting to be included in the connection charge amount. For such case, street lighting point and the associated control box will be charged based on the following rates:

Type Of Installation	Unit Rate
Bracket-mounted 70 watt SON lamp fitting inclusive of cost of switchwire	RM 600 per point
Single phase control box	RM 1,200 per unit
Three phase control box	RM 2,400 per unit

However, street lighting points using columns and underground cables shall be separately estimated, based on actual cost, on a project-to-project basis.

Similarly, separate estimate, based on actual cost, will also be made if the customer requests for street lighting requirement as a separate application from the supply to the development.

4.2 High Tension Mains

The costs of developing/up-rating the local substation(s) and the associated 415V distribution network to supply the development is deemed to be included in the basic unit rates as per Clauses 1.0, 2.0 and 3.0.

The cost of bringing in HT supply to the substation within the development is to be assessed by determining the distance, between the nearest existing suitable HT distribution supply point and the development's intake substation, as measured along official road reserve boundary where the underground cable or overhead line is to be run.

4.2.1 No "additional HT mains charge" will be levied for the **first 500 meters** of HT cable length in the case of an underground cable spur circuit or the **first 2 x 250 meters** of HT cable length in the case of an underground cable ring circuit.

4.2.2 No "additional HT mains charge" will be levied for the **first 10 pole spans** of HT overhead lines.

4.2.3 Where short length of HT underground cables are required for connection to/from the new HT overhead line extension (road crossing and towards substation) installed under Clause 4.2.2 no "additional HT mains charge" is levied if the total length of HT underground cables used does not exceed 100 meters.

4.2.4 For each additional meter of HT underground cable or pole span of HT overhead line over and above the limits set in Clauses 4.2.1 to 4.2.3, the following rates will be chargeable:

Type Of Network	Additional Charge
HT Underground Cable	RM 160 per meter
HT Overhead Line	RM 3,200 per pole span

4.2.5 When considering "additional HT mains charge", **only one** of the 2 Clauses 4.2.1 and 4.2.2 will be applicable for each application for supply.

4.3 Provision of Substation Site

A substation site must be provided by the customer for the connection of supply if the applied load is ≥ 150kVA or the project site requiring the supply is located at a distance ≥ 500 meters, as measured along official road reserve boundary where the underground cable or overhead line is to be run.

For application for supply which requires the provision of a substation site, which will be alienated to SESCO free of all cost, the rate of charge as in Clauses 1.0, 2.0 and 3.0 for Categories A, B and C customers respectively will be reduced as follows:

Category Of Customer	Reduction In Rate	Maximum Reduction
Category A	RM 50 per house	RM 5,000
Category B	RM 50 per unit-floor	RM 5,000
Category C	RM 15 per kVA	RM 5,000

This rule does not apply if the substation site/space is "subleased" to SESCO e.g. in commercial complexes or factories etc.

In either case, as part of SESCO's statutory function to secure electricity supply to all its customers in the most economical manner possible, SESCO has the full right to make use of the land, site or space so provided for electricity supply in and around the area.

5.0 Category D Customer - Exceptions To Categories A, B Or C

Those customers who are not classified under Categories A, B or C will fall under this Category D.

The unit rates as described in Clauses 1.0 to 3.0 **are not** applicable to the following types of customers:

5.1 Individual houses in urban or rural areas, Low Cost Housing project, Resettlement Scheme.

5.2 Community and religious premises.

5.3 Large mansion or villa whose load requires service cable of size exceeding 16 sq. mm 4 Core Copper.

5.4 Single-premise customer other than those under Clause 3.0.

5.5 Large public premises, multi-storey office buildings, multi-storey residential buildings.

5.6 All industrial estates implemented by the State Government and subsequent applicants within the estate.

5.7 Application for supply involving 33kV construction.

5.8 Application for upgrading of existing supply.

For such cases, the calculation of connection charge will be based on case-by-case basis. Connection charges, inclusive of capacity cost or pro-rata transformer cost, shall be calculated based on the actual cost for all the minimum necessary installation work required for supply connection with reasonable reliability or enhanced reliability as specified by the customer.

For community and religious premises (Clause 5.2), capacity cost or pro-rata transformer cost will be waived for the first 10kVA of the applied load.

Some examples of Single-premise customer (Clause 5.4) and Large public premise customer (Clause 5.5) are given in Appendix II for clarity purpose.

6.0 Discount And Subsidy

Individual residential customers from **existing** Low Cost Housing, Resettlement Scheme or RES areas who applies for supply within a period of 5 years, after the commissioning of supply to that areas, will have their connection charge reduced by 50%.

The maximum amount of SESCO subsidy to cover the difference between project cost and connection charge, if any, will be capped at 100% of the connection charge calculated. This rule applies to Categories A, B, C and D customers.

7.0 Meter Fees

Meter fees may be included in the connection charge or billed separately. Cost of various types of single phase and three phase meters and other necessary equipment, if included, will be charged at the following rates:

Item	Description	Unit Rate (RM)
1	Single phase whole current kWh meter for RES, Resettlement Scheme and Low-Cost Housing customers	70
2	Single phase whole current kWh meter	150
3	Three phase whole current kWh meter	500
4	CT-operated kWh/kVarh meter for normal low voltage applications	1,570
5	PT/CT-operated kWh/kVarh + MD meter for normal high voltage applications and/or applications requiring summation function	2,060
6	Low voltage current transformers (CTs) with available ratios : 200/5, 400/5, 800/5, 1600/5 & 2000/5 (set of 3)	300
7	Test terminal block for CT & PT/CT installations, complete with voltage fuse carriers	300
8	Metal meter cabinet – for single phase meter	180
9	Metal meter cabinet – for three phase meter	220
10	60A Service Cutout	36
11	100A Service Cutout	38
12	Neutral Link	5

7.1 All unit rates in the above table do not include installation costs. These will be charged separately if applicable.

7.2 Metal meter cabinets are required for all new installations, except for RES, Resettlement Scheme and Low Cost Housing Development projects.

D. TURNKEY PROJECTS

For project involving both HT and LT installation, the customer has a choice to carry out the project on turnkey basis, in which case he shall bear the full cost of the works required to connect his load to the existing network at a point to be determined by SESCO. Meter fees will be payable to SESCO as in Clause 7.0 above.

The calculation of the total load demand for the purpose of sizing the transformer will be based on the applied loads as submitted by the customer or the minimum load demand as assigned to the various types of houses and shophouse's unit-floors as listed below, whichever is the higher.

Type of House or Unit-Floor	Minimum Assigned Load
Detached House	5 kVA
Semi-Detached House	4 kVA
Terrace House	3 kVA
Commercial Unit-Floor	5 kVA
Residential Unit-Floor	3 kVA

For LT project located less than 500 meters from the existing network, as measured along official road reserve boundary where the underground cable or overhead line is to be run, no turnkey project is allowed.

As part of SESCO's statutory function to secure electricity supply to all its customers in the most economical manner possible, SESCO has the full right to make use of the land, site or space if so provided under turnkey projects, for electricity supply in and around the area.

E. GUIDELINES ON IMPLEMENTATION

Upon receipt of the application for supply from the customer, he shall be classified under the appropriate Category of Customer according to the type of usage of electricity and the load intensity. The Connection Charge for Categories A, B or C customer shall be then computed using the "Standard Connection Charge Worksheet" as per Appendix I attached.

Where local substation site(s) is/are provided for the development, the distance from the nearest existing suitable HT supply point shall be ascertained by

SESCO. The design of the scheme of supply (eg. whether the local substation(s) will be in a ring or spur circuit) and the associated LT distribution system shall be at the discretion of SESCO.

APPENDIX I

STANDARD CONNECTION CHARGE WORK SHEET

NO.	DESCRIPTION	UNIT RATE (RM)	QTY	AMOUNT (RM)
1	Detached House (per house)	2,240		
2	Semi-Detached House (per house)	2,000		
3	Terrace House (per house)	1,600		
4	Shop house (per unit-floor)	2,000		
5	Commercial complex, industrial premise and conversion of shophouse to single business entity (per kVA)	300		
6	Street-lighting a. 70 watt SON lamp bracket-mounted type (per point) b. 1-phase control box (per unit) c. 3-phase control box (per unit)	 600 1,200 2,400		
7	Additional HT Mains a. HT U/G Cable (per meter) b. HT O/H Line (per pole span)	 160 3,200		
8	Upgrading to 3-phase (for housing) a. O/H Service Line (per house) b. U/G Service Cable (per meter)	 60 48		
9	Excess kVA charges (per kVA)	120		
10	Meter Costs a. 3-phase meter (each) b. 1-phase meter (each) c. Metal meter cabinet for 3-phase (each) d. Metal meter cabinet for 1-phase (each) e. 60A Service Cutout (each) f. 100A Service Cutout (each) g. Neutral Link (each)	 500 150 220 180 36 38 5		
11	Others			

APPENDIX II

Examples Of Category D Customers (Clauses 5.4 & 5.5)

Listed below are some examples of Single-Premise customer (Clause 5.4) and Large Public Premise customer (Clause 5.5) to illustrate the types of customers which will be classified under this 2 Clauses:

Single-Premise Customers (non-shophouse type)

1. Agricultural farm
2. Bakery
3. Car dealer
4. Carpentry workshop
5. Cineplex
6. Club House
7. Cold Storage
8. Factory with loading ≤ 1,000 kVA
9. Garage workshop
10. Government building, office, quarters, workshop, etc.
11. Highway/Trunk Road Rest Station
12. Mini supermarket
13. Multi-storey carpark
14. Petrol station
15. Restaurant
16. Ricemill
17. Sawmill
18. Showroom
19. Site office
20. Store/warehouse
21. Transmitting station
22. Water work

Large Public Premise

1. Convention Center
2. Exhibition Hall/Multipurpose Hall
3. Hospital
4. Library
5. Market under Local Council's administration
6. Museum
7. Park
8. School
9. Sport Complex

The above lists only provide some illustrative examples and are by no mean exhaustive.