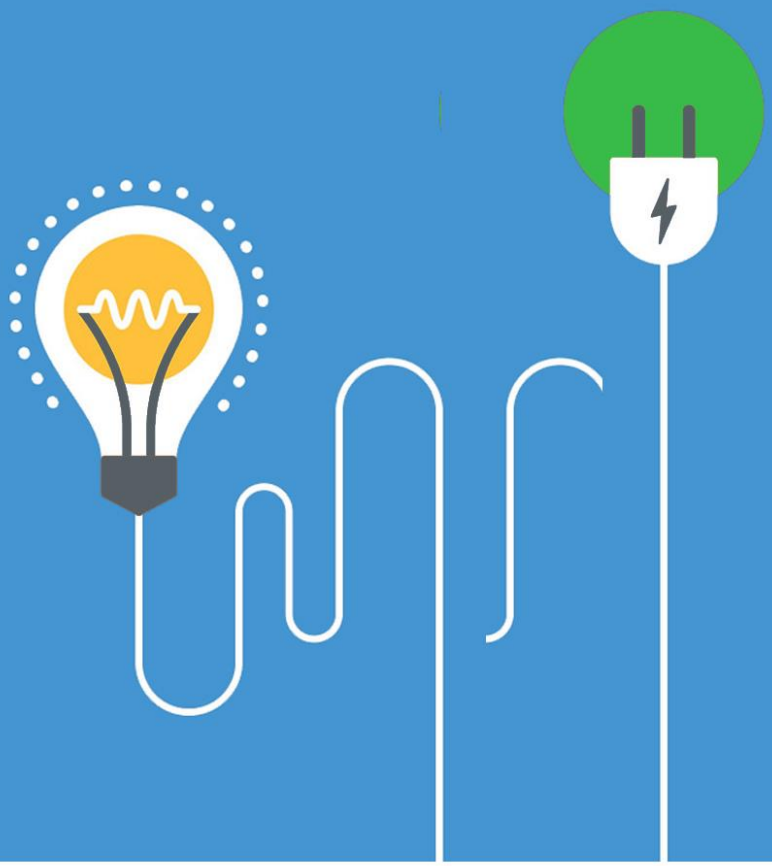
SYARIKAT SESCO BERHAD (SESCO)
CONNECTION CHARGES GUIDELINES 2019

This guideline provides connection charging Methodology and the Schedule of Rates which will be incurred by the applicant for new or altered connection to obtain supply from Syarikat SESCO Berhad, a subsidiary of Sarawak Energy Berhad.

Any revision of this Connection Charges Guidelines 2019 is subject to the approval of the Minister.

sarawak energy

Connection Charges Guidelines 2019



GENERAL

Syarikat SESCO Berhad (SESCO) is an electricity utility licensee responsible for the generation, transmission, distribution and retail of electricity in Sarawak. SESCO is wholly-owned by Sarawak Energy Berhad (SEB).

This document provides guidelines for customers to apply for electricity and the appropriate charges under which customers may obtain new or altered connection from the Grid System. It contains the Connection Charging Methodology and the Schedule of Rates and may be revised subject to the approval of the Minister.

This document has been prepared in accordance with the requirements of the License issued under the Electricity Ordinance 2007 and any subsequent amendments and additions thereof.

This Connection Charges Guidelines 2019 supersedes all earlier Connection Charges Guidelines.

CUSTOMER COMPLAINTS FOR SUPPLY CONNECTION

Complaints related to the supply connections and the charges and handling of electricity supply application are to be referred to SESCO office where the application is made i.e. Divisional, Regional or Departmental Office. If the complaints were not resolved to the complainant's satisfaction, the customer may refer the complaints to the Connection Policy Ombudsman either:

i. by writing to:

Connection Policy Ombudsman
CEO's Office (Syarikat SESCO Berhad)
Menara Sarawak Energy
No. 1, The Isthmus
93050 Kuching, Sarawak
MALAYSIA
Telephone No.: 082-388388

or

ii. by e-mail to:

ombudsman@sarawakenergy.com.my

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1. DEFINITIONS

"33kV Asset" means 33/11kV Distribution Zone Substation and 33kV distribution backbone line or cable (otherwise referred to as sub-transmission 33kV)

"Active Power" means the real or actual power to perform useful work by the equipment and. Active power is measured in kilowatt (kW), megawatt (MW) etc.

"Apparent Power" means the voltage on an alternating current system multiplied by all the current that flows in it. Apparent power is measured in volt-ampere (VA), kilo volt-amperes (kVA) etc.

"Applied Load" means the Maximum Demand in unit of kVA as declared by the customer during supply application

"Assigned Load" means demand in unit of kVA of an individual premise for the types as listed in Section 5

"Company" means Syarikat SESCO Berhad

"Connection" means the electrical connection between SESCO existing power system and meter point at Customer's premises. For all connection of supply, the connection point will be decided by SESCO based on the least cost technical design (LCTD) and in compliance with the State Grid Code and any other requirements imposed upon SESCO by other Authorities such as Local Councils.

"Connection Charge" means the amount required to be paid by customer who requires new connection or alter (increase or reduce) supply of electricity

"Customer" means an individual, developer, Consultant, Contractor and/ or any other person who applies for electricity supply

"Demand" means the apparent power demand in unit of kilo volt-ampere (kVA), unless otherwise stated, at any particular time or during a time period. See also "Apparent Power" and "Maximum Demand"

"Distribution Substation" means a substation that provides the final of voltage transformation from High Voltage to lower voltage, up to the level to be used by. This includes 33/.240kV, 11/.240kV, 33/.433kV, 11/.433kV and small 33/11kV substations (typically single transformer of capacity lower than 5MVA)

"Distribution System" means the electrical system voltage of 33kV and lower

"Distribution Zone Substation" means major 33/11kV substation (typically of two or more transformers of capacity 5MVA or higher)

"Electric Power" is the rate at which electric energy is transferred. Also referred to as "Wattage"

"High Tension" refers to conductors, equipment or structures subjected to carrying, or capable of operating at a high voltage

"High Voltage" means distribution network nominal voltage at 11kV and 33kV

"Load" means electrical load in unit of kVA

"Low Tension" refers to conductors, equipment or structures subjected to carrying, or capable of operating at low voltage

"Low Voltage" means distribution nominal voltage at 240V and 415V.

"Maximum Demand" means the maximum value of apparent power demand in unit of kilo volt-ampere (kVA), unless otherwise stated, at any particular time or during a time period.

"Overhead line" means a structure which consists of aerial conductors, suspended by poles or towers, to transmit and distribute electrical energy.

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

"Reactive Power" means the power that magnetic equipment (transformer, motor and relay) needs to produce the magnetizing flux. Reactive power is measured in kilo volt ampere reactive (kVAR)

"RES" means Rural Electrification Scheme funded by the Government

"Total Connected Load" means the electrical load in unit of kVA, unless otherwise stated, that is or to be connected to the supply source.

"Underground cable" means a single or multiple conductor cables laid below earth surface, either directly buried or in conduit for the purpose of transmitting and distributing electrical energy. Underground cable may be installed above ground, typically for connections to equipment and poles.

"Voltage" refers to the potential difference in charge between two points in an electrical field. Voltage is measured in Volt (V), kilovolt (kV) etc.

2. SUPPLY VOLTAGES AND CATEGORIES

2.1. SUPPLY VOLTAGE FROM DISTRIBUTION SYSTEM

Customer may apply service connection at the following supply voltages:

a. Low Voltage (Single phase) 240V (+5% and -10%);
b. Low Voltage (Three phase) 415V (+5% and -10%);
c. High Voltage 11kV (±5%); and
d. High Voltage 33kV (±5%).

2.2. CATEGORIES

Connection Charging Methodology are based on types of premises, which are classified into four (4) categories. Category 1, 2 and 3 are for permanent supply while Category 4 is for temporary supply.

Category 1 – Individual (Residential)

This category refers to:

a. individual houses and longhouses in urban or rural areas;
b. individual houses and longhouses under Government-assisted program; and
c. residential development of less than five (5) units of houses with loading less than 2kVA.

Government-owned residential premises are excluded under this category.

Category 2 – Housing and Shophouse Developments

This category refers to housing and shophouse development as follows:

a. A development consisting of 5 or more residential landed house units (detached, semi-detached, terrace and/ or quadrant houses) not exceeding three (3) storey high.
b. A development consisting of 5 or more of low-cost or low-cost plus flats/apartments.
c. A development consisting of 5 or more of shophouse units not exceeding four (4) storey high.

Category 3 – Other Individual and Development

This category refers to:

a. individual application for commercial and industrial premises;
b. conversion of shophouse units into single entity business which requires new supply source;
c. Development of multi-tenanted buildings such as apartment, condominium, town house and small office home office (SOHO);
d. Community halls and religious premises and they are eligible for SESCO's contribution subject to prevailing Sarawak Energy's policy;
e. Government houses or premises and projects such as street lighting, industrial estates and resettlement areas;
f. Agricultural and farming area; and
g. Structures such as telecommunication tower, billboard and private compound lighting.

Any other individual or development premises that are not in Category 1 and 2 will be considered in this category.

Category 4 - Temporary Supply

This category refers to premises or sites requiring temporary supply, typically site office, temporary plant or structure, which is needed by customer at the construction project site. Temporary supply connection shall be for an initial period of maximum three (3) years, and may be extended subject to relevant approval, if necessary, from other authorities. Substation equipment, lines and cables that are erected to provide temporary supply may be removed after disconnection of the supply.

3. CONNECTION CHARGING METHODOLOGY

3.1. COMMON CONNECTION CHARGING METHODOLOGY

3.1.1. Normal Project and Turnkey Project

Connection projects may be undertaken by SESCO**,** or alternatively by the Company on a Turnkey basis. "Normal Project" refers to installations and works fully undertaken by SESCO for supply connection. "Turnkey Project" refers to installations and works undertaken by the customer for supply connection at the customer's own cost and designed by a Professional Engineer/ Contractor and approved by SESCO. The connection for the installation to the distribution system to supply the load will be at the connection point to be determined by SESCO.

3.1.2. Least Cost Technical Design (LCTD) Scheme and Enhanced Scheme

Least Cost Technical Design (LCTD) Scheme

The LCTD is the minimum scheme with the lowest overall capital cost, necessary to meet the capacity of the customer. The LCTD will be subject to:

a) requirements of Electricity Ordinance, Electricity Rules, utility and/ or current industry practices and standards;
b) the status and configuration of the relevant distribution network;
c) the standard sizes and types of equipment currently in use by SESCO for the distribution system;
d) the level of supply reliability to critical loads e.g. hospital, water treatment plant and water pumping station;
e) the design and construction standards used by SESCO in the distribution system; and
f) shall be consistent with statutory and license obligations including the requirement to develop, maintain and operate an efficient, coordinated and economical electricity Distribution System.

Enhanced Scheme

Enhanced Scheme has additional features or designs resulting in cost increase from the LCTD, which includes, but not limited to the following:

a) additional assets not required as part of the LCTD;
b) assets of larger capacity than required by the LCTD; and
c) assets of a different specification than required by the LCTD.

For Normal Project:

Where the customer and/ or local authorities requires and/ or requests implementation of Enhanced Scheme, then the customer will be charged based on the Enhanced Scheme.

Where SESCO requires implementation of the Enhanced Scheme, the customer will bear the full cost of LCTD scheme only and SESCO will bear the cost in excess of the LCTD Scheme.

For Turnkey Project:
Where Enhanced Scheme needs to be implemented as required by any other party (customer, local or other authorities), the Enhanced Scheme implemented under the Turnkey Project, shall be borne by the customer. This Enhanced Scheme shall be accepted and approved by SESCO prior to implementation.

In the case where any Enhanced Scheme are at SESCO's request after the acceptance and approval of the design, SESCO will bear the cost in access of the original approved design scheme.

Technical information or connection data on SESCO's system which is necessary shall be provided by SESCO for the design scheme under turnkey.

3.1.3. Dedicated and Shared Distribution Substation

A dedicated distribution substation is constructed for utilisation by one customer.
A distribution substation is considered dedicated if:

a) The customer is taking a direct supply from the transformer low voltage terminal;
b) The substation is the within customer's premise.

A shared distribution substation is constructed for utilization by more than one customer.

3.1.4. Schedule of Rates

This Guideline provides a list of standardised rates ("Schedule of Rates") which includes SESCO's rates for common materials and standard installation works required for connection projects.

When a connection project requires materials and/ or services that are not listed in the Schedule but are chargeable to the customer, the cost shall be based on the prevailing rates. SESCO shall specify such materials and/ or services, which may vary from project to project, and such rates shall be timely provided by SESCO.

3.1.5. Meter Fee

Meter fee covers the cost of providing the meter for the purpose of measuring the consumption of electricity supply by a customer.

3.1.6. Low Tension Cost

Low Tension Cost refers to the cost of installing low tension overhead lines, underground cables, equipment and devices, for the purpose of electricity distribution at low voltage level.

3.1.7. High Tension Cost

High Tension Cost refers to the cost of installing high tension overhead lines, underground cables, equipment and devices, for the purpose of electricity distribution at high voltage level.

3.1.8. Substation Cost

Substation Cost refers to the cost for installing distribution substation, which consists of equipment such as transformer, switchgear, distribution pillar, connection cables and other ancillary equipment.

3.1.9. Capacity Charges

Substation Capacity Charge is the proportionate cost of a distribution substation which a customer has to pay when he is connected to a shared substation.

Line Capacity Charge is the proportionate cost of high tension line/ cable which a customer has to pay when he is to be connected to an existing high tension or low tension line/ cable. Line Capacity Charge will not be charged to customer whose supply scheme involves installation of a new high tension line/ cable connected directly from Distribution Zone Substation.

Refer to Section 5.2 for calculation of Capacity Charges.

3.1.10. Per House Fee

Per House Fee is applicable exclusively for Category 2. It is the cost for supplying a unit house within a development. The fee covers low tension, substation capacity charges, and extension of high tension up to 1km circuit length.

Per House Fee is based on the LCTD scheme. Any additional features are charged separately and the requesting party i.e. either the customer or SESCO will bear the additional charges. Where such additional features are imposed by Local Councils or any other authorities, or are required due to site specific conditions, such cost will be borne by the customer. Examples of additional features are street lighting, horizontal directional drilling for underground cable road crossing, constructions of special trenches or facilities for cable laying, etc.

Customer paying for the relevant Per House Fee will be supplied using the following low voltage schemes:

a) low cost residential landed houses using service line scheme.
b) low cost plus residential landed houses using mini pillar/ centralised metering cabinet scheme and service line.
c) low cost and low cost plus flats/apartment houses using either service line or service cable to the blocks.
d) other types of residential landed houses using mini pillar/ centralised metering cabinet scheme.
e) shophouses using underground cable to service intake.

3.1.11. Administration Fee

Administrative Fee is charged to cover SESCO's cost of carrying out site inspection works, witness installation testing, supply commissioning, shutdown notices, wayleave processing fees to local authorities, salary, transport and other relevant expenses incurred for the duration of a Turnkey Project implementation. Administrative Fee is charged based on the Turnkey Project Scope of Work.

3.1.12. Testing Fee

Where the customer requested for SESCO to carry out the testing of the installation which is undertaken on Turnkey Project basis, the testing fees will be charged based on the listed standard installation testing.

3.1.13. Controlled Items

Controlled items refer to materials that must be supplied by SESCO for Turnkey Project and such materials will be released within the stipulated time period agreed between both parties.

Unless stated otherwise, the controlled items are standard padlock, low voltage current transformer meter cabinet, Freestanding Outdoor Metering Unit (FOMU) for HT Metering, cut-out and neutral link.

3.1.14. Engineering Fee

An Engineering Fee of RM3,000 is charged if a customer opts for Turnkey Project after SESCO has released the Connection Charges in the case where SESCO has been appointed in writing to undertake the installations and works as Normal Project which includes design of the installation.

Upon payment, SESCO shall provide the customer with the design, drawings and other information related to the release of the Normal Project Connection Charge.

3.1.15. Value of Removed Transformer

Refund value of removed transformer is applicable for Turnkey Project involving replacement of an existing transformer with a new transformer of a higher capacity rating (upgrading of substation capacity), and refund shall only be given after commissioning of the Turnkey installation. The refund shall be based on the type and capacity of transformer of which the amount shall be based on the Schedule of Rates.

3.1.16. Refunds Value of Removed Equipment for Temporary Supply

Where a temporary supply is connected on a Normal Project basis, the dismantling of substation equipment (transformer, switchgears and distribution pillar) from the site not exceeding three (3) years shall be considered for refund at the prevailing value of the materials returned. No refund shall be allowed after three (3) years from date of commissioning of temporary supply.

3.1.17. SESCO Contribution

a. Capacity Charges for residential houses, longhouses, residential houses built under relevant Government assisted scheme, low cost and low cost plus housing units, and Resettlement Scheme area, with applied load that does not exceed 2kVA per unit.
b. Category 1 applicants for work scope involving single phase service line with/without belian riser only, where built up area not exceeding 755sq-ft (based on the size of Spektra Medium or any such requirements as declared by the Authorities) and with load not exceeding 2kVA per unit.
c. Discounted single-phase meter fee applies to the same customers as in (a).
d. Community halls and religious premises and they are eligible for SESCO's contribution subject to prevailing Sarawak Energy's policy.

3.1.18. Connection Charges Information

The design scheme, description and breakdown of the connection charges are to be provided to the customer. Any additional features and/ or enhancement requiring the customer to bear the cost shall be clearly indicated and specified.

3.2. CONNECTION CHARGING METHODOLOGY BY CATEGORY

Category 1 – Individual (Residential)

SCOPE OF WORK	CONNECTION CHARGES (NORMAL)	CONNECTION CHARGES (TURNKEY)
Low Tension Only	Low Tension Cost + Substation Capacity Charge + Line Capacity Charge + Meter Fee	Administration Fee + Testing Fee + Substation Capacity Charge + Line Capacity Charge + Controlled Items + Meter Fee
Low Tension with Upgrading of Existing Substation and/or HT Line	Low Tension Cost + Substation Capacity Charge + Line Capacity Charge + Meter Fee	Administration Fee + Testing Fee + Line Capacity Charge + Controlled Items + Meter Fee
Low Tension with New Substation and/or Extension HT Line	Low Tension Cost + [1]Substation Capacity Charge + [2]Line Capacity Charge + 50% High Tension Extension Cost + Meter Fee	Administration Fee + Testing Fee + [2]Line Capacity Charge + Controlled Items + Meter Fee
High Tension only	Not Applicable	Not Applicable

Category 2 – Housing & Shophouse Developments

SCOPE OF WORK	CONNECTION CHARGES (NORMAL)	CONNECTION CHARGES (TURNKEY)
Low Tension Only	Per House Fee + Low Tension Cost for Street Lighting (where applicable) + Line Capacity Charge + Meter Fee	Administration Fee + Testing Fee + Substation Capacity Charge + Line Capacity Charge + Controlled Items + Meter Fee
Low Tension with Upgrading of Existing Substation and/or HV Line	Per House Fee + Low Tension Cost for Street Lighting (where applicable) + Line Capacity Charge + Meter Fee	Administration Fee + Testing Fee + Line Capacity Charge + Controlled Items + Meter Fee
Low Tension with New Substation and/or Extension HT Line	Extension existing HV Line within 1000m Per House Fee + Low Tension Cost for Street Lighting (where applicable) + [2]Line Capacity Charge + Meter Fee Extension existing HV Line beyond 1000m Per House Fee + Low Tension Cost for Street Lighting (where applicable) + [2]Line Capacity Charge + High Tension Cost in excess of 1000m + Meter Fee	Administration Fee + Testing Fee + [2]Line Capacity Charge + Controlled Items + Meter Fee
High Tension only	Not Applicable	Not Applicable

Category 3 – Other Individual and Development

SCOPE OF WORK	CONNECTION CHARGES (NORMAL)	CONNECTION CHARGES (TURNKEY)
Low Tension Only	Low Tension Cost + Substation Capacity Charge + Line Capacity Charge + Meter Fee	Administration Fee + Testing Fee + Substation Capacity Charge + Line Capacity Charge + Controlled Items + Meter Fee
Low Tension with Upgrading of Existing Substation and/or HT Line	Low Tension Cost + Substation Capacity Charge + Line Capacity Charge + Meter Fee	Administration Fee + Testing Fee + Line Capacity Charge + Controlled Items + Meter Fee
Low Tension with New Substation and/or Extension HT Line	Low Tension Cost + Substation Cost + [2]Line Capacity Charge + High Tension Extension Cost + Meter Fee	Administration Fee + Testing Fee + [2]Line Capacity Charge + Controlled Items + Meter Fee

High Tension only	High Tension Extension Cost + Substation Cost (where applicable) + [2]Line Capacity Charge + Meter Fee	Administration Fee + Testing Fee + [2]Line Capacity Charge + Controlled Items + Meter Fee

Category 4 – Temporary

SCOPE OF WORK	CONNECTION CHARGES (NORMAL)	CONNECTION CHARGES (TURNKEY)
Low Tension Only, taking supply from existing Substation and Line	Low Tension Cost + Meter Fee	Administration Fee + Testing Fee + Controlled Items + Meter Fee
Low Tension with Upgrading of Existing Substation and/or HT Line	Low Tension Cost + Substation Cost + Meter Fee	Administration Fee + Testing Fee + Controlled Items + Meter Fee
Low Tension with New Substation and/or Extension HT Line	Low Tension Cost + Substation Cost + HT Extension Cost + Meter Fee	Administration Fee + Testing Fee + Controlled Items + Meter Fee
High Tension only	High Tension Extension Cost + Substation Cost (where applicable) + Meter Fee	Administration Fee + Testing Fee + Controlled Items + Meter Fee

[1] If new substation is dedicated, full Substation Cost is charged instead of Substation Capacity Charge.

[2] If new high tension line is constructed from Zone Substation, Line Capacity Charge is not applicable.

3.3. 33KV ASSET DEVELOPMENTS

Construction of 33kV asset may become necessary to supply large-scale development or bulk load.
If 33kV Asset is dedicated, the customer will provide land for the 33kV Zone Substation without cost to SESCO and the customer will bear the construction cost of the 33kV Asset in full.
This includes 33kV Asset built for infrastructure development in area (e.g. industrial area, resettlement area), where supply is to be made available but there is no specific customer identified yet.

If 33kV Asset is shared, the cost of land and construction shall be borne by either party as follows:

(a) If the development is in-sequence with SESCO System Development Plan:
The customer will provide the land for 33kV Zone Substation and the cost of the land may be borne by SESCO. The construction cost of 33kV Assets is to be borne by SESCO.

(b) If the development is out-of-sequence:
The customer will provide land for the 33kV Zone Substation. The construction cost of 33kV Assets is to be equally shared between customer and SESCO.
If the utilisation of substation capacity reaches 50% within 5 years from the supply made available, SESCO shall refund 50% of the amount paid by the customer.

4. SCHEDULE OF RATES

This Guideline provides a list of standardised rates ("Schedule of Rates") which includes rates for common materials and standard installation works provided by SESCO. When a connection project requires materials, assets and/ or services that are not listed in the Schedule but are chargeable to the customer, the cost shall be based on the prevailing rates. SESCO shall specify such materials, assets and/ or services, which may vary from project to project, and such rates shall be provided by SESCO.

Under specific site conditions, enhanced features and/ or works beyond standard installation may become necessary, customer shall be informed in writing on the specific conditions requiring the enhanced features and/ or works beyond the standard installation and such additional cost shall be borne by the customer. Examples are additional piling for installation substation on soft ground, excavation of rocky ground for pole installation and others.

Where such additional features are imposed by Local Councils or any other authorities, such cost will be borne by the customer.

The rates shown are **exclusive** of Service Tax and are subject to review.

Table 4.1 Meter Fees

METER AND ANCILLARIES	UNIT	RATES (RM)
Single Phase whole current kWh meter (Normal)	each	150.00
Single Phase whole current kWh meter (Discounted)	each	70.00
Three Phase whole current kWh meter	each	500.00
Three Phase CT-operated kWh/kVarh meter for low voltage applications	each	1,570.00
Three Phase PT/CT-operated kWh/kVarh + Maximum Demand meter (Class 0.5s) for high voltage abd/or applications requiring summation function where the applied load in <5,000kVA	each	2,060.00
Three Phase PT/CT-operated kWh/kVarh + Maximum Demand meter (Class 0.5s) for high voltage and/or applications requiring summation function where the applied load in =>5,000kVA	each	8,000.00
Low Voltage current transformers (CTs) : 200/5, 400/5, 800/5, 1200/5, 1600/5 & 2000/5 (set of 3)	set	300.00
Test terminal block for CT & PT/CT installation, complete with voltage fuse carriers	each	300.00

Table 4.2 per House Fee

TYPE OF HOUSE	UNIT	RATES (RM)
Detached House (1-phase supply)	each	11,100.00
Semi-Detached House (1-phase supply)	each	8,800.00
Terrace/Quadrant House (1-phase Supply)	each	6,700.00
Detached House (3-phase Supply)	each	14,500.00
Semi-Detached House (3-phase Supply)	each	11,900.00
Terrace/Quadrant House (3-phase Supply)	each	9,700.00
Low Cost Plus Housing Terrace/Quadrant/Semi-Detached/Detached (1-phase supply, Service Cable Scheme)	each	5,300.00
Low Cost Plus Walk-Up Flat for based design of centralised metering (1-phase supply)	each	700.00
Low Cost / Low Cost Plus Housing Terrace/Quadrant/Semi-Detached/Detached (1-phase supply, Service Line Scheme)	each	1,500.00
Low Cost Walk-Up Flat for based design of centralised metering (1-phase supply)	each	600.00
Shophouse Unit 1 storey or 2-storey (1-phase or 3-phase supply)	each	8,000.00
Shophouse Unit 3 storey or 4-storey (1-phase or 3-phase supply)	each	12,500.00

Table 4.3 Low Tension Cost (Part 1)

LOW TENSION INSTALLATION	UNIT	RATES (RM)
Low Voltage CT Metering Cabinet (400A)	each	5,400.00
Low Voltage CT Metering Cabinet (800A)	each	5,700.00
Low Voltage CT Metering Cabinet (2000A)	each	9,400.00
1-phase service line	each	1,350.00
1-phase service line Twin-twisted	each	1,000.00
3-phase service line	each	2,100.00
Uprate service line from 1-phase/2-phase to 3-phase	each	900.00
Belian riser and steel bracket for service line	each	430.00
1-phase service cable 2C 25mmsq Al, 2C 16mmsq Cu (first 30m)	each	2,500.00
1-phase service cable 2C 25mmsq Al, 2C 16mmsq Cu (per m beyond 30m)	meter	75.00
3-phase service cable 4C 25mmsq Al, 16mmsq Cu (first 30m)	each	4,800.00
3-phase service cable 4C 25mmsq Al, 16mmsq Cu (per m beyond 30m)	meter	130.00
3-phase service cable 4C 70mmsq Al or 4C 35mmsq Cu	meter (circuit length)	150.00
3-phase service cable 4C 150mmsq Al	meter (circuit length)	170.00
3-phase service cable 4C 300mmsq Al	meter (circuit length)	185.00
3-phase service cable 4 x 1C 500mmsq Al	meter (circuit length)	330.00
3-phase service cable 7 x 1C 500mmsq Al	meter (circuit length)	565.00
3-phase service cable 11 x 1C 500mmsq Al	meter (circuit length)	895.00
3-phase overhead line + switch wire (5-wire) pole span	per span with pole	3,805.00
3-phase overhead line + switch wire (5-wire) span	per span without pole	2,385.00
3-phase overhead line (4-wire) pole span	per span with pole	3,480.00
3-phase overhead line (4-wire) span	per span without pole	2,060.00
1-phase overhead line (2-wire) pole span	per span with pole	2,570.00
1-phase overhead line (2-wire) span	per span without pole	1,140.00
Additional 1-wire overhead line	per span without pole	820.00
1-phase overhead line (Twin-Twisted) pole span	per span with pole	2,530.00
1-phase overhead line (Twin-Twisted) span	per span without pole	1,130.00
Low Tension Single Pole only	each	2,100.00
Low Tension H-Pole only	each	3,800.00
3-phase underground cable 4C 70mmsq Al or 4C 35mmsq Cu	meter	150.00
3-phase underground cable 4C 150mmsq Al	meter	170.00
3-phase underground cable 4C 300mmsq Al	meter	185.00
Category 1 applicants for work scope involving single phase service line with/without belian riser only, where built up area not exceeding 755sq-ft (based on the size of Spektra Medium or any such requirements as declared by the Authorities) and with load not exceeding 2kVA per unit	per house	500.00

Table 4.3 Low Tension Cost (Part 2)

LOW TENSION INSTALLATION	UNIT	RATES (RM)
Distribution Pillar 7W6F	each	12,600.00
Mini Pillar 4-Way	each	5,420.00
Service Intake 250A	each	2,820.00
Service Intake 400A	each	3,350.00
6-Way Centralised Metering Cabinet (CMC)	each	5,100.00
9-Way Centralised Metering Cabinet (CMC)	each	6,750.00
Street Lighting Control Box (1-phase & 3-phase) - Wall mounted or Pole mounted	each	1,135.00
Street Lighting Control Box (1-phase & 3-phase) - Ground mounted	each	1,500.00
Bracket Street Lighting wall mounted (100W) with wiring	each	1,100.00
Bracket Street Lighting wall mounted (150W) with wiring	each	1,397.00

Bracket Street Lighting on pole (100W) with wiring	each	500.00
Bracket Street Lighting on pole (150W) with wiring	each	680.00
Single lamp column street lighting (150W) with underground cable	each	3,000.00
Twin/Double lamp column street lighting (150W) with underground cable	each	7,400.00
Single lamp column street lighting (250W) with underground cable	each	3,100.00
Twin/Double lamp column street lighting (250W) with underground cable	each	7,550.00

Table 4.4 High Tension Cost

HIGH TENSION INSTALLATION	UNIT	RATES (RM)
11kV Overhead Lines with Single Pole span	per span with pole	8,700.00
11kV Overhead Lines with H-Pole span	per span with pole	11,700.00
11kV Overhead Lines span	per span without pole	4,300.00
33kV Overhead Lines with Single Pole span	per span with pole	12,250.00
33kV Overhead Lines with H-pole span	per span with pole	16,800.00
33kV Overhead Lines	per span without pole	6,200.00
11kV Single Pole only	each	4,600.00
11kV H-Pole only	each	7,550.00
33kV Single Pole	each	6,700.00
33kV H-Pole	each	11,800.00
11kV Air Break Isolator (ABI) exclude pole	each	18,700.00
33kV Air Break Isolator (ABI) exclude pole	each	22,280.00
11kV underground cable 3C 185mmsq AL	meter	260.00
33kV underground cable 3 x 1C 630mmsq Cu	meter (circuit length)	900.00
33kV underground cable 3 x 1C 630mmsq Al	meter (circuit length)	500.00
33kV underground cable 3C 240mmsq Al	meter	350.00
33kV underground cable 3C 95mmsq Al	meter	320.00
Shutdown Notice (advertisement through local newspapers)	each	3,000.00

Table 4.5 Substation Cost

SUBSTATION AND OTHER INSTALLATION	UNIT	RATES (RM)
11kV or 33kV Switching Pole with 1 set Air Break Fused Isolator (ABFI)	each	17,040.00
11kV Switching Sub with 1 no. RMU	each	39,710.00
Substation 11/.433kV 50kVA (Pole mount)	each	36,590.00
Substation 11/.433kV 50kVA (Platform mount)	each	40,550.00
Substation 11/.433kV 160kVA (Platform mount)	each	60,690.00
Substation 11/.433kV 160kVA (Ground mount / Suspended)	each	90,890.00
Substation 11/.433kV 300kVA (Ground mount / Suspended)	each	106,410.00
Substation 11/.433kV 500kVA (Ground mount / Suspended)	each	127,860.00
Substation 11/.433kV 1000kVA (Ground mount / Suspended)	each	188,060.00
Substation 11/.433kV 1500kVA (Ground mount / Suspended)	each	214,770.00
Substation 33/.433kV 50kVA (Pole / Platform mount)	each	41,210.00
Substation 33/.433kV 160kVA (Platform mount)	each	64,130.00
Substation 33/.433kV 160kVA (Ground mount / Suspended)	each	81,120.00
Substation 33/.433kV 300kVA (Ground mount / Suspended)	each	113,990.00
Substation 33/.433kV 500kVA (Ground mount / Suspended)	each	144,680.00
Substation 33/.433kV 1000kVA (Ground mount / Suspended)	each	177,120.00
Substation 33/11kV 1000kVA (Platform Mount)	each	198,880.00
Pad Mount Substation 11/.433kV 300kVA	each	190,580.00
Pad Mount Substation 11/.433kV 500kVA	each	211,320.00
Brickwall Fencing for Double Transformer Substation (Ground mount only)*	each	36,180.00
Brickwall Fencing for Single Transformer Substation (Ground mount only)*	each	29,870.0
Chainlink Fencing for Double Transformer Substation	each	11,480.00

Chainlink Fencing for Single Transformer Substation	each	9,700.00
Belian Platform for Single Transformer	each	9,230.00
11kV Auto Recloser	each	80,410.00
33kV Auto Recloser	each	101,360.00

**Site specific conditions requiring substation on suspended floor with brickwall fencing shall use prevailing rates.*

Table 4.6 Controlled Items

	UNIT	RATES (RM)
Standard Padlocks (33kV, 11kV, LV)	each	50.00
Low Voltage CT Metering Cabinet (400A) exclude installation	each	5,000.00
Low Voltage CT Metering Cabinet (800A) exclude installation	each	5,300.00
Low Voltage CT Metering Cabinet (2000A) exclude installation	each	8,800.00
100A Service Cutout	each	38.00
60A Service Cutout	each	36.00
Neutral Link	each	10.00
Meter Cabinet (1-phase)	each	180.00
Meter Cabinet (3-phase)	each	220.00

Table 4.7 Capacity Charge

CAPACITY CHARGE	UNIT	RATES (RM)
Substation Capacity Charge	RM/kVA	445.00
Line Capacity Charge	RM/kVA	30.00

Table 4.8 Administration Fee

SCOPE OF WORK	UNIT	RATES (RM)
Substation Civil Works	Per Substation	1,500.00
Substation Electrical Works	Per Substation	1,000.00
High Voltage Cables/Lines with equipment	Per 1km circuit	500.00
Low Voltage Cables/Lines with equipment	Per 500m circuit	200.00

Table 4.9 Testing Fee

TEST	UNIT	RATE (RM)
LT Overhead Lines/Underground Cables commissioning test	Per feeder/cct length	700.00
HV Circuit Breakers (with Relays and Metering) commissioning test	Per Panel	1,500.00
Ring Main Units commissioning test	Per Unit	500.00
Isolation Switches and Fused Switches commissioning test	Per Unit	500.00
Distribution Transformer commissioning test	Per Unit	500.00
HT Overhead Lines/Underground/Submarine Cables (without HV pressure test)	Per km	1,500.00
HT Overhead Lines/Underground/Submarine Cables (with HV pressure test)	Per feeder/length	3,500.00

5. DEMAND ESTIMATES AND CALCULATION OF CAPACITY CHARGES

5.1. MINIMUM ASSIGNED LOAD

Customer's applied load will indicate the required supply voltage and scheme for connection of supply. Table 5.1 shows the minimum assigned loads by type of premises.

Table 5.1 Minimum Assigned Load

TYPE OF PREMISE	MINIMUM ASSIGNED LOAD (KVA)
[1] Small Residential House	2kVA
[2] Residential House built under relevant Government assisted scheme	1.5kVA
Longhouse Double Storey Unit/Bilik	2kVA
Longhouse Single Storey Unit/Bilik	1.5kVA
Low Cost Plus House or Flat	2kVA
Low Cost House or Flat	1.5kVA
Detached House up to 3-Storey	5kVA
Semi-Detached House up to 3-Storey	4kVA
Terrace or Quadrant House up to 3-Storey	3kVA
Apartment or Condominium Unit > 1000ft^2 (92.9m^2)	5kVA
Apartment or Condominium Unit < 1000ft^2 (92.9m^2)	4kVA
Light Industry Unit	10kVA
Shophouse Unit Floor (Commercial)	5kVA
Shophouse Unit Floor (Residential)	3kVA

[1] Small Residential House refers to a house with total floor area not exceeding 755ft^2 (70.1m^2) (based on the size of Spektra Medium or any such requirements as declared by the Authorities) and with load not exceeding 2kVA per unit

[2] Houses applied load (maximum demand) not exceeding 2kVA. Examples of Government assisted scheme are Program Bantuan Rumah, Rumah Mesra Rakyat, Rumah Mampu Milik, Rancangan Perumahan Rakyat, Spektra Light and Spektra Medium.

For both [1] and [2]; If customer's applied maximum demand exceeds single phase 2kVA or three-phase supply, the premise shall be classified as Detached, Semi-Detached or Terrace/ Quadrant House.

5.2. CALCULATION OF SUBSTATION CAPACITY CHARGE AND LINE CAPACITY CHARGE

5.2.1. Customer Applying for Single Phase Supply

a) For premises listed in Table 5.1 (except Light Industry Unit and Shophouse Unit, which at minimum requires three phase supply)
   Substation Capacity Charge* = RM445/kVA x Minimum Assigned Load (kVA)
   Line Capacity Charge = RM30/kVA x Minimum Assigned Load (kVA)
   ** Specific to Category 2, Substation Capacity Charge is inclusive in the Per House Fee*

b) For premises not listed in Table 5.1
   Substation Capacity Charge = RM445/kVA x Applied Load (kVA)
   Line Capacity Charge = RM30/kVA x Applied Load (kVA)

5.2.2. Customer Applying for Three Phase Supply

a) For **residential premises** listed in Table 5.1
   Substation Capacity Charge = RM445/kVA x 10kVA
   Line Capacity Charge = RM30/kVA x 10kVA

b) For all **non-residential premises**
   Substation Capacity Charge = RM445/kVA x Applied Load or 10kVA, whichever is higher
   Line Capacity Charge = RM30/kVA x Applied Load or 10kVA, whichever is higher

5.2.3. Customer Applying for Supply Upgrading

The customer shall be charged the differences between the old and new capacity requirement.
The customer shall bear the incremental cost of capacity.

6. PROVISION OF SUBSTATION SITE

New connection to the supply system may require the construction of new Distribution Substation(s). A customer shall consult SESCO regarding substation site requirement prior to submission of his development's subdivision plan for approval by Land and Survey Department.

A distribution substation site may be required under any of the following conditions:

a) The load is located at a distance of not less than 800m (residential) or not less than 200m (non-residential) from the nearest available substation* as measured along official road reserve boundary and within the customer's land, where the low voltage underground cable or overhead line is to be run.

   * *Available substation means a substation which can be upgraded to a higher capacity to sufficiently cater for the new load, or a substation which is not dedicated to a particular customer.*

b) The applied load is not less than 45kVA.

Customers of large-scale development or with substantial demand may also require construction of a new Distribution Zone Substation(s).

The final decision on type, number and location of Substation will be based on the system study.

The requirement of substations for various demand levels of single customer or Development (more than 1 customer), total maximum demand including all phases/ parcels in the development shall be in compliance with the requirement in SESCO's Electricity Supply Application Handbook.

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