



**ELECTRICITY APPLICATION PROCEDURES & GUIDELINE
(Multi-Tenanted Building)**

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Definitions

This section defines the term being used in this book and unless otherwise specifically stated, the following terms shall have the meanings: -

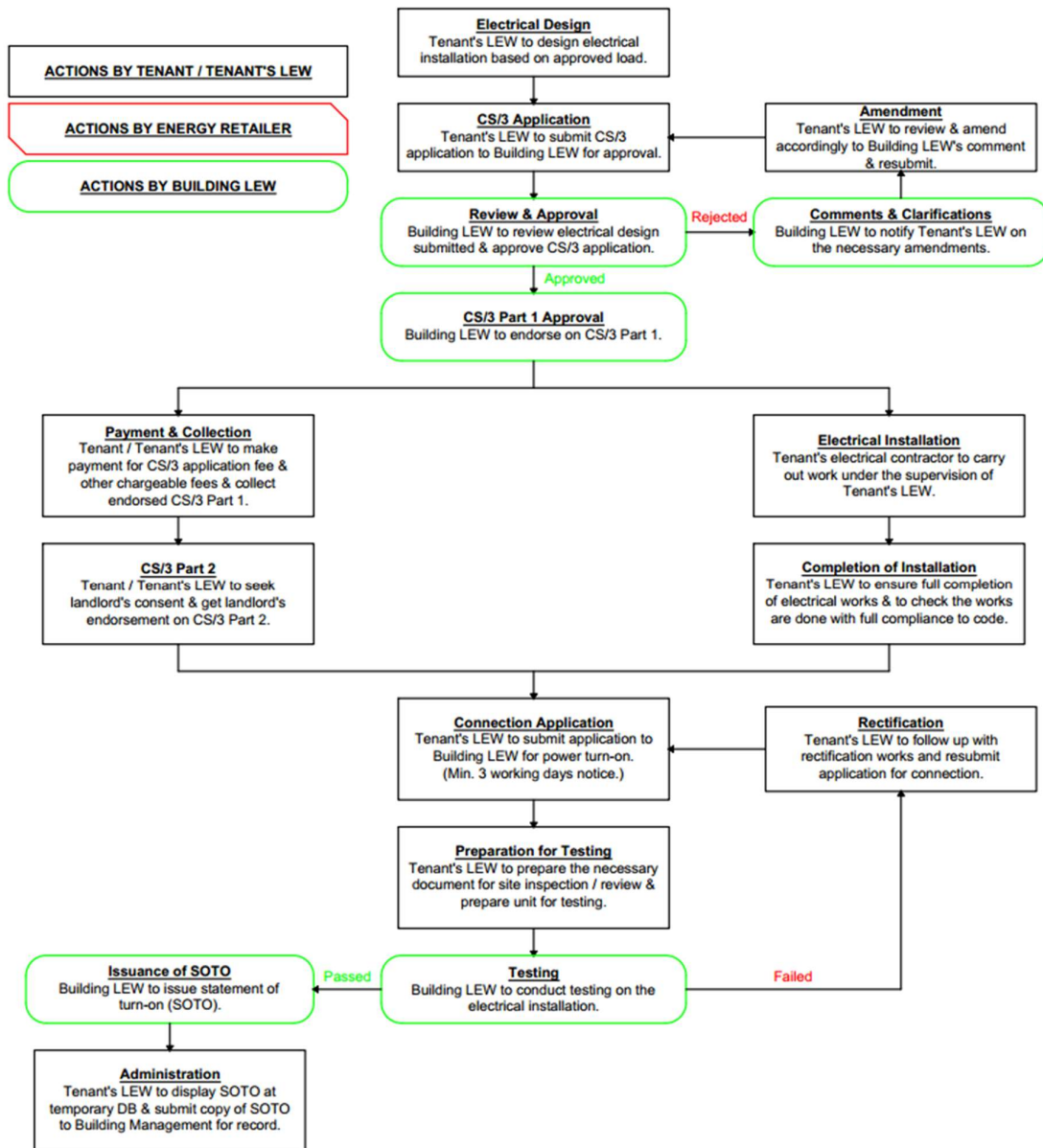
LEW 7	<p>Licensed Electrical Worker (Grade 7 / Electrician) Entitles holder of the license to:</p> <ul style="list-style-type: none"> - Design, install, repair, maintain, operate, inspect and test an electrical / supply installation where the operating voltage of such installation does not exceed 1000V and the approved load of such installation does not exceed 45kVA. - Install, repair, maintain and operate, under the supervision of an electrical technician, an electrical / supply installation where the operating voltage of such installation does not exceed 1000V and the approved load of such installation is more than 45kVA but does not exceed 500kVA. - Carry out any work as instructed by or under the supervision of an authorized high voltage switching engineer.
LEW 8	<p>Licensed Electrical Worker (Grade 8 / Electrical Technician) Entitles holder of the license to:</p> <ul style="list-style-type: none"> - Install, repair, maintain, operate, inspect and test an electrical installation where the operating voltage of such installation does not exceed 1000V and the approved load of such installation does not exceed 500kVA. - Design and submit plans and drawings of an electrical installation where the operating voltage of such installation does not exceed 1000V and the approved load of such installation does not exceed 150kVA, except that the limitation of 1000V shall not apply in the case of an Electric Discharge Lighting Circuit. - Carry out any work or switching operation as instructed by or under the supervision of an authorized high voltage switching engineer.
LEW 9	<p>Licensed Electrical Worker (Grade 9 / Electrical Engineer) Entitles holder of the license to:</p> <ul style="list-style-type: none"> - Design, install, repair, maintain, operate, inspect, test and take full charge and responsibility for any electrical installation up to his/her license's limit. - An electrical engineer's license has a range of operation voltage restrictions. They are as follows: - <ol style="list-style-type: none"> 1. Up to 1000V. 2. Up to 22kV. 3. Up to 66kV. 4. Up to 230kV.

Building LEW	Building Licensed Electrical Worker (LEW) Appointed LEW in-charge of the building's electrical installation.
Tenant LEW	Tenant Licensed Electrical Worker (LEW) Appointed LEW to represent tenant.
COC	Certificate of Compliance
EI License	Energy Market Authority Electrical Installation License
EMA	Energy Market Authority
SLD	Single Line Diagram
SOTO	Statement of Turn-On
SP	Singapore Power
ACB	Air Circuit Breaker
DTL	Definite Time Lag
EFR	Earth Fault Relay
ELR	Earth Leakage Relay
IDMTL	Inverse Definite Minimum Time Lag
MCB	Miniature Circuit Breaker
MCCB	Moulded Case Circuit Breaker
RCCB	Residual Circuit Breaker

For Contestable Consumer Installation

Temporary Power Application (Procedures)

This section will explain the procedures for the application of temporary power for contestable consumer installation.



Temporary Power Application (Guidelines)

This section will explain the guidelines for the application of temporary power for contestable consumer installation.

Roles & Responsibility
<p>Tenant</p> <p>Tenant shall engage a Licensed Electrical Worker (LEW) of the appropriate grade to submit for this application. Should the installation project be appointed to an M&E contractor, the Tenant shall ensure that the M&E contractor has engage his / her own LEW of the appropriate grade to submit this application.</p>
<p>Tenant / Contractor's Licensed Electrical Worker</p> <p>The Tenant / Contractor's LEW shall:</p> <ol style="list-style-type: none">1. Ensure that all documents / drawings comply with guidelines stated in this handbook before making the submission to Building LEW.2. Submit all necessary documents / drawings to Building LEW on behalf of Tenant / Contractor.3. Liaise with Building LEW.4. Supervise the electrical installation works and ensure compliance with relevant Code of Practice.5. Carry out testing & commissioning in the presence of the Building LEW.

Documents & Drawings Required
<p>CS/3 Application</p> <ol style="list-style-type: none">1. Single Line Diagram (SLD).2. Certificate of Compliance (COC).3. Electrical Installation Test Reports.4. Payment Receipt for CS/3 Application.

Documents & Drawings Required (Cont')

Connection Application

1. CS/3 with Part 1 & 2 Endorsed.
2. Payment Receipt for Connection Application (Fees for Testing & Turn-On).

Testing (To bring to Site)

1. Single Line Diagram (SLD).
2. Certificate of Compliance (COC).
3. Electrical Installation Test Reports.
4. Other Necessary Document Requested by Building LEW.

General & Technical Requirements

Supply Tapping Point / Location

1. Supply tapping point / location shall be approved by Building LEW.

Electrical Installation

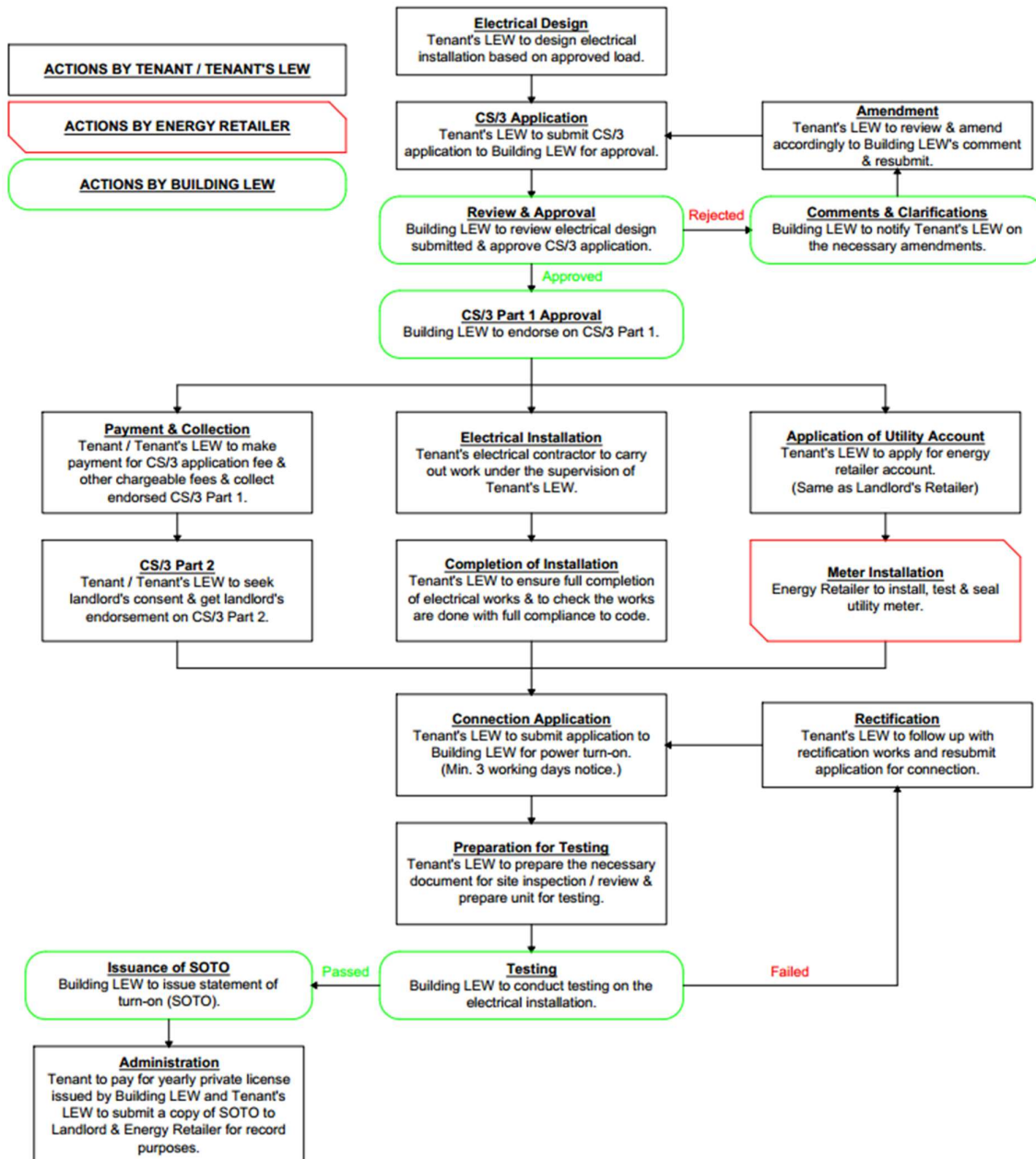
1. Electrical installation shall comply with all relevant Code of Practice.
2. Electrical installation shall be balanced if connection supply is 3-phase.
3. Private kWh meter must be installed if utility charges are not based on fixed rates.

Testing

1. Tenant / Contractor's LEW shall be present. Should the LEW be unavailable due to unforeseen circumstances, the Tenant / Contractor shall find a stand-in LEW. Stand-in letter to be submitted to the Building LEW.

Permanent Power Application (Procedures)

This section will explain the procedures for the application of permanent power for contestable consumer installation.



Permanent Power Application (Guidelines)

This section will explain the guidelines for the application of permanent power for contestable consumer installation.

Roles & Responsibility
<p>Tenant</p> <p>Tenant shall engage a Licensed Electrical Worker (LEW) of the appropriate grade to submit for this application. Should the installation project be appointed to an M&E contractor, the Tenant shall ensure that the M&E contractor has engage his / her own LEW of the appropriate grade to submit this application.</p>
<p>Tenant / Contractor's Licensed Electrical Worker</p> <p>The Tenant / Contractor's LEW shall:</p> <ol style="list-style-type: none">1. Ensure that all documents / drawings comply with guidelines stated in this handbook before making the submission to Building LEW.2. Submit all necessary documents / drawings to Building LEW on behalf of Tenant / Contractor.3. Liaise with Building LEW.4. Supervise the electrical installation works and ensure compliance with relevant Code of Practice.5. Carry out testing & commissioning in the presence of the Building LEW.

Documents & Drawings Required

CS/3 Application

1. Single Line Diagram (SLD).
2. Electrical Layout (Power & Lighting)
3. Certificate of Compliance (COC).
4. Electrical Installation Test Reports.
5. Payment Receipt for CS/3 Application.

Connection Application

1. CS/3 with Part 1 & 2 Endorsed.
2. Payment Receipt for Connection Application (Fees for Testing & Turn-On).
3. Statement of kWh Meter Installation from Energy Retailer.

Testing (To bring to Site)

1. Single Line Diagram (SLD).
2. Electrical Layout (Power & Lighting)
3. Certificate of Compliance (COC).
4. Electrical Installation Test Reports.
5. Other Necessary Document Requested by Building LEW.

General & Technical Requirements

Supply Tapping Point / Location

1. Supply tapping point / location shall be approved by Building LEW.

Electrical Installation

1. Electrical installation shall comply with all relevant Code of Practice.
2. Electrical installation shall be balanced if connection supply is 3-phase.
3. Protective devices' setting shall be subjected to change if deemed necessary by Building LEW to ensure discrimination of protection between tenant's electrical installation and the building's electrical installation.
4. The Tenant's LEW shall conduct a power logging & submit the report with the measurements to justify that the building has sufficient power for his / her unit's installation if required by the Building LEW and the Tenant shall agree to reduce the approval load on demand by Building LEW / Landlord should the approved load not be fully utilized.

Testing

1. Tenant / Contractor's LEW shall be present. Should the LEW be unavailable due to unforeseen circumstances, the Tenant / Contractor shall find a stand-in LEW. Stand-in letter to be submitted to the Building LEW.

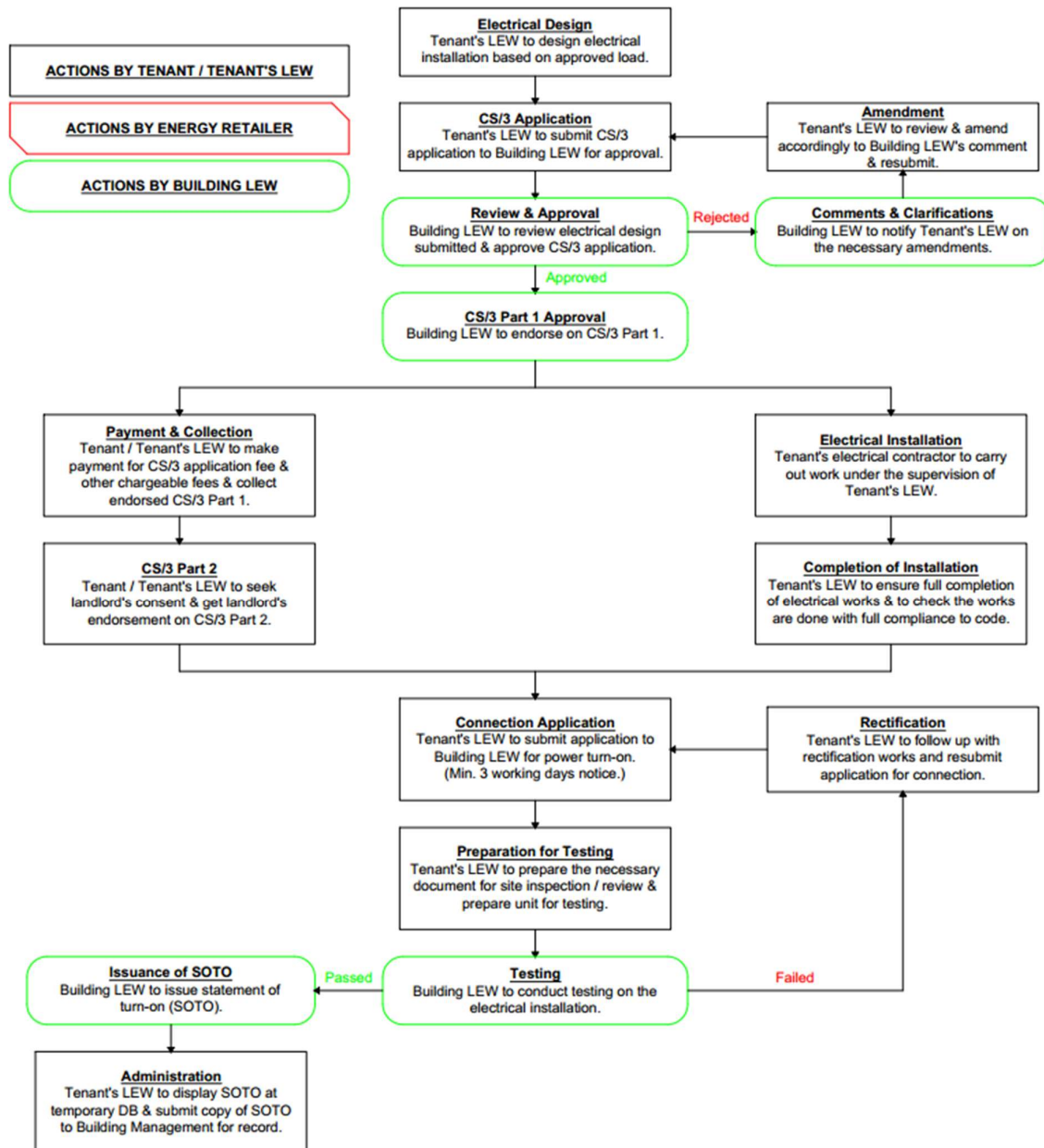
Hand-Over

1. Tenant of a contestable building shall not get a separate Electrical Installation License from EMA as the electrical installation will fall under the building's main Electrical Installation License. The Tenant shall maintain their electrical installation & apply for a private certification (Certificate of Fitness) by the Building LEW (chargeable) to certify that the electrical installation is safe for operation.
2. Tenant's LEW to submit updated endorsed as-built drawings to Building LEW.

For Non-Contestable Consumer Installation

Temporary Power Application (Procedures)

This section will explain the procedures for the application of temporary power for non-contestable consumer installation.



Temporary Power Application (Guidelines)

This section will explain the guidelines for the application of temporary power for non-contestable consumer installation.

Roles & Responsibility
<p>Tenant</p> <p>Tenant shall engage a Licensed Electrical Worker (LEW) of the appropriate grade to submit for this application. Should the installation project be appointed to an M&E contractor, the Tenant shall ensure that the M&E contractor has engage his / her own LEW of the appropriate grade to submit this application.</p>
<p>Tenant / Contractor's Licensed Electrical Worker</p> <p>The Tenant / Contractor's LEW shall:</p> <ol style="list-style-type: none">1. Ensure that all documents / drawings comply with guidelines stated in this handbook before making the submission to Building LEW.2. Submit all necessary documents / drawings to Building LEW on behalf of Tenant / Contractor.3. Liaise with Building LEW.4. Supervise the electrical installation works and ensure compliance with relevant Code of Practice.5. Carry out testing & commissioning in the presence of the Building LEW.

Documents & Drawings Required
<p>CS/3 Application</p> <ol style="list-style-type: none">1. Single Line Diagram (SLD).2. Certificate of Compliance (COC).3. Electrical Installation Test Reports.4. Payment Receipt for CS/3 Application.

Documents & Drawings Required (Cont')

Connection Application

1. CS/3 with Part 1 & 2 Endorsed.
2. Payment Receipt for Connection Application (Fees for Testing & Turn-On).

Testing (To bring to Site)

1. Single Line Diagram (SLD).
2. Certificate of Compliance (COC).
3. Electrical Installation Test Reports.
4. Other Necessary Document Requested by Building LEW.

General & Technical Requirements

Supply Tapping Point / Location

1. Supply tapping point / location shall be approved by Building LEW.

Electrical Installation

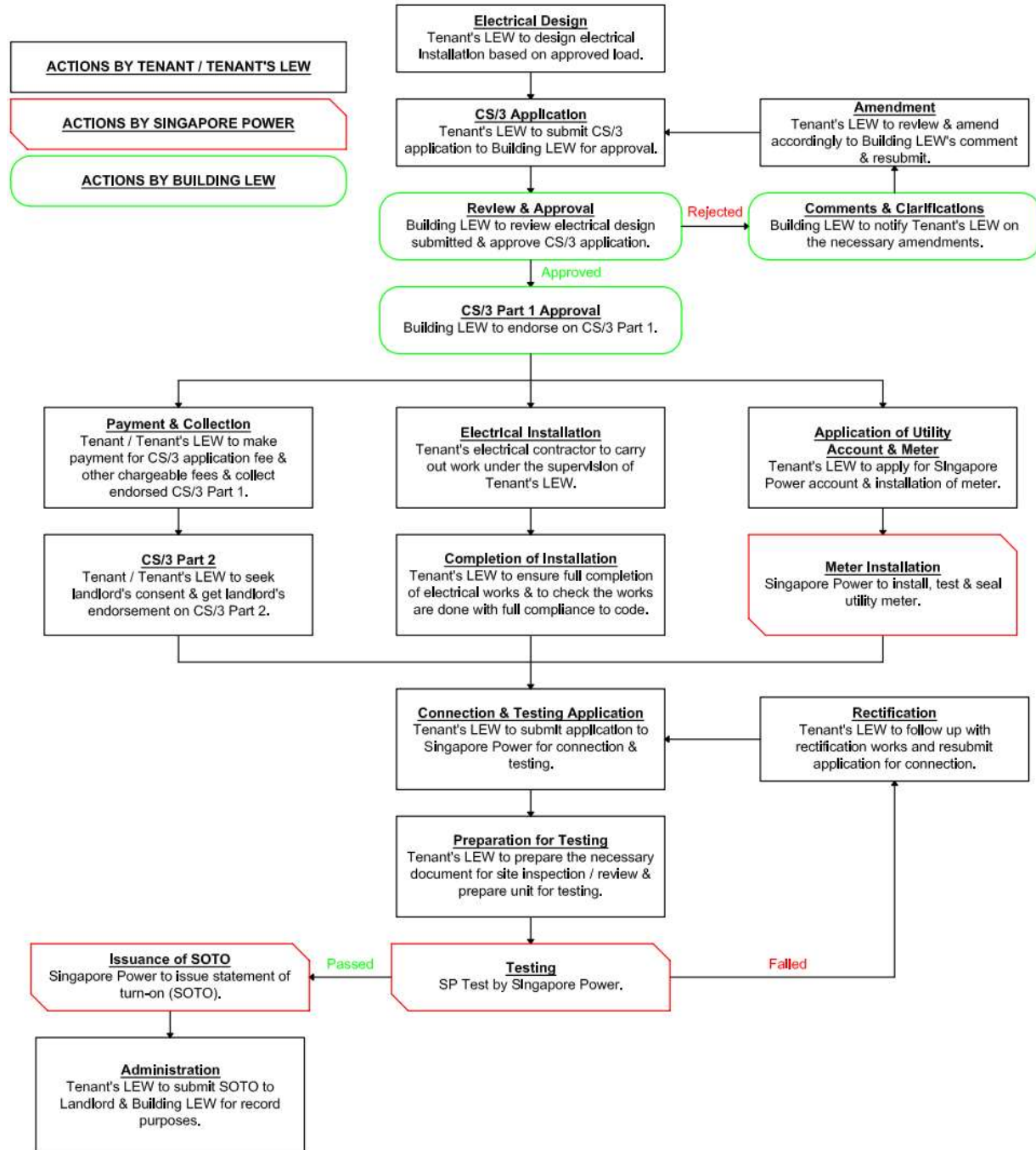
1. Electrical installation shall comply with all relevant Code of Practice.
2. Electrical installation shall be balanced if connection supply is 3-phase.
3. Private kWh meter must be installed if utility charges are not based on fixed rates.
4. Electrical installation shall not be used in hazardous trades, otherwise tenant / contractor's LEW will be required to apply for his / her own electrical installation license from EMA.

Testing

1. Tenant / Contractor's LEW shall be present. Should the LEW be unavailable due to unforeseen circumstances, the Tenant / Contractor shall find a stand-in LEW. Stand-in letter to be submitted to the Building LEW.

Permanent Power Application [≤45kVA] (Procedures)

This section will explain the procedures for the application of permanent power with load below 45kVA for non-contestable consumer installation.



Permanent Power Application [$\leq 45\text{kVA}$] (Guidelines)

This section will explain the guidelines for the application of permanent power with load below 45kVA for non-contestable consumer installation.

Roles & Responsibility
<p>Tenant</p> <p>Tenant shall engage a Licensed Electrical Worker (LEW) of the appropriate grade to submit for this application. Should the installation project be appointed to an M&E contractor, the Tenant shall ensure that the M&E contractor has engage his / her own LEW of the appropriate grade to submit this application.</p>
<p>Tenant / Contractor's Licensed Electrical Worker</p> <p>The Tenant / Contractor's LEW shall:</p> <ol style="list-style-type: none">1. Ensure that all documents / drawings comply with guidelines stated in this handbook before making the submission to Building LEW & Singapore Power.2. Submit all necessary documents / drawings to Building LEW & Singapore Power on behalf of Tenant / Contractor.3. Liaise with Building LEW & Singapore Power.4. Supervise the electrical installation works and ensure compliance with relevant Code of Practice.5. Carry out testing & commissioning in the presence of the Singapore Power.

Documents & Drawings Required

CS/3 Application

1. Single Line Diagram (SLD).
2. Electrical Layout (Power & Lighting)
3. Certificate of Compliance (COC).
4. Electrical Installation Test Reports.
5. Payment Receipt for CS/3 Application.

Connection Application

1. Documents & Drawings Required by Singapore Power.

Testing (To bring to Site)

1. Documents & Drawings Required by Singapore Power.

General & Technical Requirements

Supply Tapping Point / Location

1. Supply tapping point / location shall be approved by Building LEW.

Electrical Installation

1. Electrical installation shall comply with all relevant Code of Practice.
2. Electrical installation shall be balanced if connection supply is 3-phase.
3. Protective devices' setting shall be subjected to change if deemed necessary by Building LEW to ensure discrimination of protection between tenant's electrical installation and the building's electrical installation.
4. The Tenant's LEW shall conduct a power logging & write a report with the measurements to justify that the building has sufficient power for him/her if required by Building LEW and the Tenant shall agree to reduce the approval load on demand by Building LEW / Landlord should the approved load not be fully utilized.

Testing

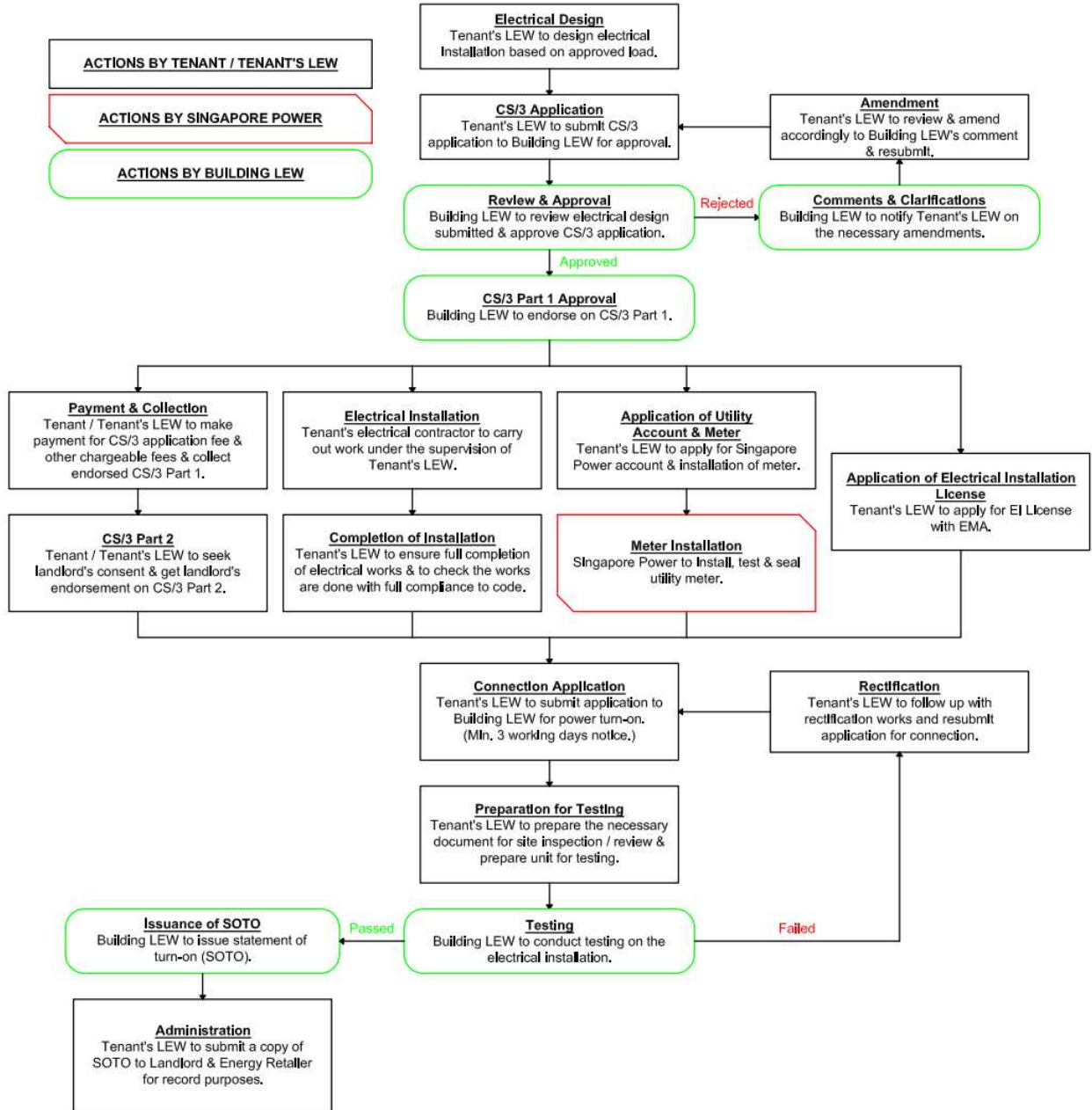
1. Tenant / Contractor's LEW shall be present. Should the LEW be unavailable due to unforeseen circumstances, the Tenant / Contractor shall find a stand-in LEW. Stand-in letter to be submitted to Singapore Power.

Hand-Over

1. Tenant's LEW to submit updated endorsed as-built drawings & SP's test report to Building LEW.

Permanent Power Application [≥45kVA] (Guidelines)

This section will explain the guidelines for the application of permanent power with load above 45kVA for non-contestable consumer installation.



Permanent Power Application (Guidelines)

This section will explain the guidelines for the application of permanent power with load above 45kVA for non-contestable consumer installation.

Roles & Responsibility
<p>Tenant</p> <p>Tenant shall engage a Licensed Electrical Worker (LEW) of the appropriate grade to submit for this application. Should the installation project be appointed to an M&E contractor, the Tenant shall ensure that the M&E contractor has engage his / her own LEW of the appropriate grade to submit this application.</p>
<p>Tenant / Contractor's Licensed Electrical Worker</p> <p>The Tenant / Contractor's LEW shall:</p> <ol style="list-style-type: none">1. Ensure that all documents / drawings comply with guidelines stated in this handbook before making the submission to Building LEW, Singapore Power & EMA.2. Submit all necessary documents / drawings to Building LEW, Singapore Power & EMA on behalf of Tenant / Contractor.3. Liaise with Building LEW, Singapore Power & EMA.4. Supervise the electrical installation works and ensure compliance with relevant Code of Practice.5. Carry out testing & commissioning in the presence of the Building LEW.

Documents & Drawings Required

CS/3 Application

1. Single Line Diagram (SLD).
2. Electrical Layout (Power & Lighting)
3. Certificate of Compliance (COC).
4. Electrical Installation Test Reports.
5. Payment Receipt for CS/3 Application.

Connection Application

1. CS/3 with Part 1 & 2 Endorsed.
2. Payment Receipt for Connection Application (Fees for Testing & Turn-On).
3. Statement of kWh Meter Installation from Singapore Power.
4. Electrical Installation License.

Testing (To bring to Site)

1. Single Line Diagram (SLD).
2. Electrical Layout (Power & Lighting)
3. Certificate of Compliance (COC).
4. Electrical Installation Test Reports.
5. Electrical Installation License.
6. Other Necessary Document Requested by Building LEW.

General & Technical Requirements

Supply Tapping Point / Location

1. Supply tapping point / location shall be approved by Building LEW.

Electrical Installation

1. Electrical installation shall comply with all relevant Code of Practice.
2. Electrical installation shall be balanced if connection supply is 3-phase.
3. Protective devices' setting shall be subjected to change if deemed necessary by Building LEW to ensure discrimination of protection between tenant's electrical installation and the building's electrical installation.
4. The Tenant's LEW shall conduct a power logging & write a report with the measurements to justify that the building has sufficient power for him/her if required by Building LEW and the Tenant shall agree to reduce the approval load on demand by Building LEW / Landlord should the approved load not be fully utilized.

Testing

1. Tenant / Contractor's LEW shall be present. Should the LEW be unavailable due to unforeseen circumstances, the Tenant / Contractor shall find a stand-in LEW. Stand-in letter to be submitted to the Building LEW.

Hand-Over

1. Tenant's LEW to display electrical installation license at the distribution board, take charge of electrical installation & renew the electrical installation license with EMA before license expire.
2. Tenant's LEW to submit updated endorsed as-built drawings to Building LEW.