



Blue Light

Singapore EMA Electrical Installation Licence Platform

User Manual

Version 2.0

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Blue Light Pte Ltd

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1. Introduction

1.1 About Blue Light

Blue Light is a web-based platform for applying and managing Electrical Installation Licences under Singapore's Energy Market Authority (EMA). It streamlines the entire licence lifecycle — from application submission, document management, and LEW review to LOA signing, payment processing, and licence issuance.

Key capabilities include:

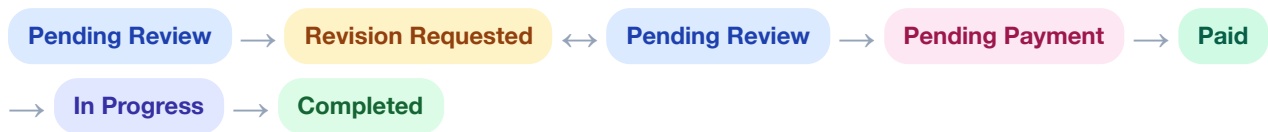
- **Online Application** — Step-by-step guided form for New Licence and Licence Renewal
- **Document Management** — Upload SLD, Letter of Appointment, Main Breaker Box Photos, and other required files
- **LOA Generation & Digital Signing** — Automated LOA PDF generation with electronic signature
- **SLD Request Workflow** — Request LEW to prepare Single Line Diagrams on your behalf
- **Real-time Status Tracking** — Visual progress tracker from submission to licence issuance
- **Configurable Pricing** — Dynamic kVA-based price tiers with batch management

1.2 User Roles

| Role | Description | Access |
|--|---|---|
| Applicant (Building Owner) | Property owners or representatives who apply for electrical installation licences. Can submit applications, upload documents, sign LOA, and track progress. | Dashboard, My Applications, New Application, My Profile |
| LEW (Licensed Electrical Worker) | EMA-licensed electrical professionals who review applications, prepare SLD documents, and generate LOA. Requires admin approval after registration. | Admin Dashboard, Applications (view & review), LOA generation, SLD upload |
| Admin (Administrator) | Platform administrators who manage the entire application lifecycle, users, pricing, and system settings. | Full access: Dashboard, Applications, Users, System Settings |

1.3 Application Status Flow

Every licence application progresses through the following statuses:



| Status | Description | Applicant Action | Admin / LEW Action |
|---------------------------|--|-----------------------------------|--|
| Pending Review | Application submitted, awaiting LEW review | Upload documents, Sign LOA | Assign LEW, Generate LOA, Review → Approve or Request Revision |
| Revision Requested | Revisions needed based on LEW review | Edit & Resubmit | Wait for resubmission |
| Pending Payment | Application approved, payment required | View payment info & make payment | Confirm Payment |
| Paid | Payment confirmed | Wait | Start Processing |
| In Progress | Licence being processed | Upload additional files if needed | Upload Licence PDF, Complete & Issue Licence |
| Completed | Licence issued with licence number and expiry date | View & download licence | — |
| Expired | Payment not received within deadline | — | — |

2. Getting Started

2.1 Creating an Account

2.1.1 Applicant (Building Owner) Registration

- 1 Click "**Create account**" on the login page, or navigate directly to the Sign Up page.

Blue Light
Singapore EMA Licence Platform

Create your account

Full Name *
John Doe

Email *
you@example.com

Phone
+65-XXXX-XXXX

Optional

Business Information (Optional — can be added later in Profile)

Company Name
e.g., BLUE LIGHT PTE LTD

Will be printed on your installation licence

UEN
e.g., 202407291M
Business registration number

Designation
e.g., Director

Account Type *

☒ Building Owner (Applicant)

☐ Building Owner (Licence Holder)

Figure 2.1 — Sign Up Page (Applicant)

- 2 Fill in the required fields:
 - **Full Name** (required)
 - **Email** (required — this will be your login ID)
 - **Phone** (optional)
 - **Business Information** (optional at registration — Company Name, UEN, Designation. Can be added later in Profile.)
- 3 Select **Account Type** as "**Building Owner (Applicant)**".

The screenshot displays a registration form for Blue Light. At the top, there is a phone number field with the placeholder '+65-XXXX-XXXX'. Below it is an 'Optional' section for 'Business Information (Optional — can be added later in Profile)'. This section includes a 'Company Name' field with the example 'e.g., BLUE LIGHT PTE LTD', a note 'Will be printed on your installation licence', and two fields: 'UEN' (example: 'e.g., 202407291M') and 'Designation' (example: 'e.g., Director'). Below the business information is the 'Account Type' section with two radio buttons: 'Building Owner Applicant' (selected) and 'LEW Licensed Electrical Worker'. This is followed by a 'Password' field (placeholder: '8-20 characters') and a 'Confirm Password' field (placeholder: 'Re-enter your password'). A checkbox for 'I agree to the Privacy Policy and Disclaimer. I consent to the collection and use of my personal data as described.' is present. At the bottom is a 'Create Account' button and a link 'Already have an account? Sign in'. The footer contains links for 'Disclaimer' and 'Privacy Policy'.

Figure 2.2 — Account Type Selection & PDPA Consent

- 4 Set your **Password** (8–20 characters), confirm it, agree to the **Privacy Policy & Disclaimer**, and click "**Create Account**".

⚠ Business Information Required for LOA: Company Name, UEN, Designation, and Correspondence Address are required for the Letter of Appointment (LOA). If these are not completed in your Profile, the LOA cannot be generated automatically. Please update them as early as possible to avoid delays.

2.1.2 LEW (Licensed Electrical Worker) Registration

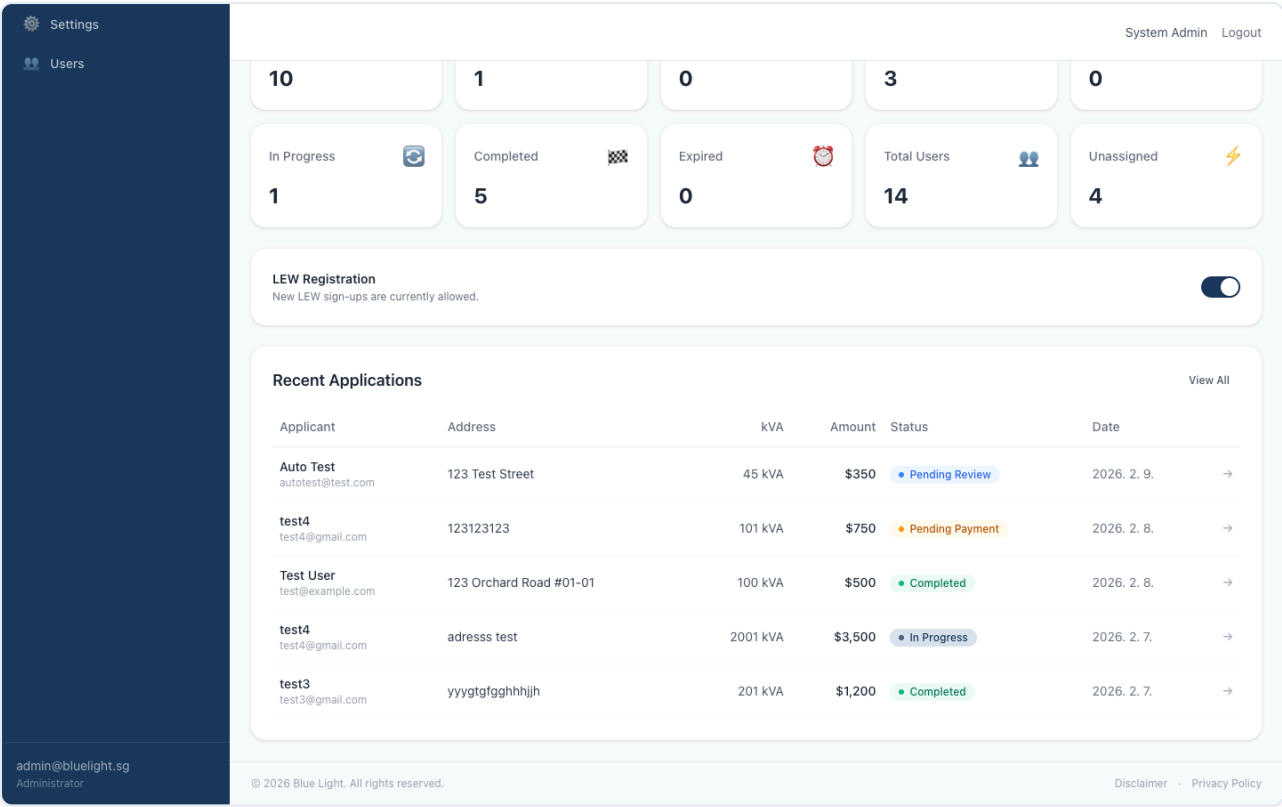


Figure 2.3 — LEW Registration (additional fields)

When registering as a LEW, two additional fields are required:

- **LEW Licence Number** — Your EMA-issued licence number (e.g., LEW-2026-XXXXX)
- **LEW Grade** — Select your grade:
 - **Grade 7:** ≤ 45 kVA
 - **Grade 8:** ≤ 500 kVA
 - **Grade 9:** ≤ 400 kV

⚠ LEW Approval Required: After registration, your account will be in "Pending" status. An Administrator must approve your account before you can access the platform. You will see a waiting page until approved. Once approved, **log out and log in again** to activate your access.

2.2 Signing In

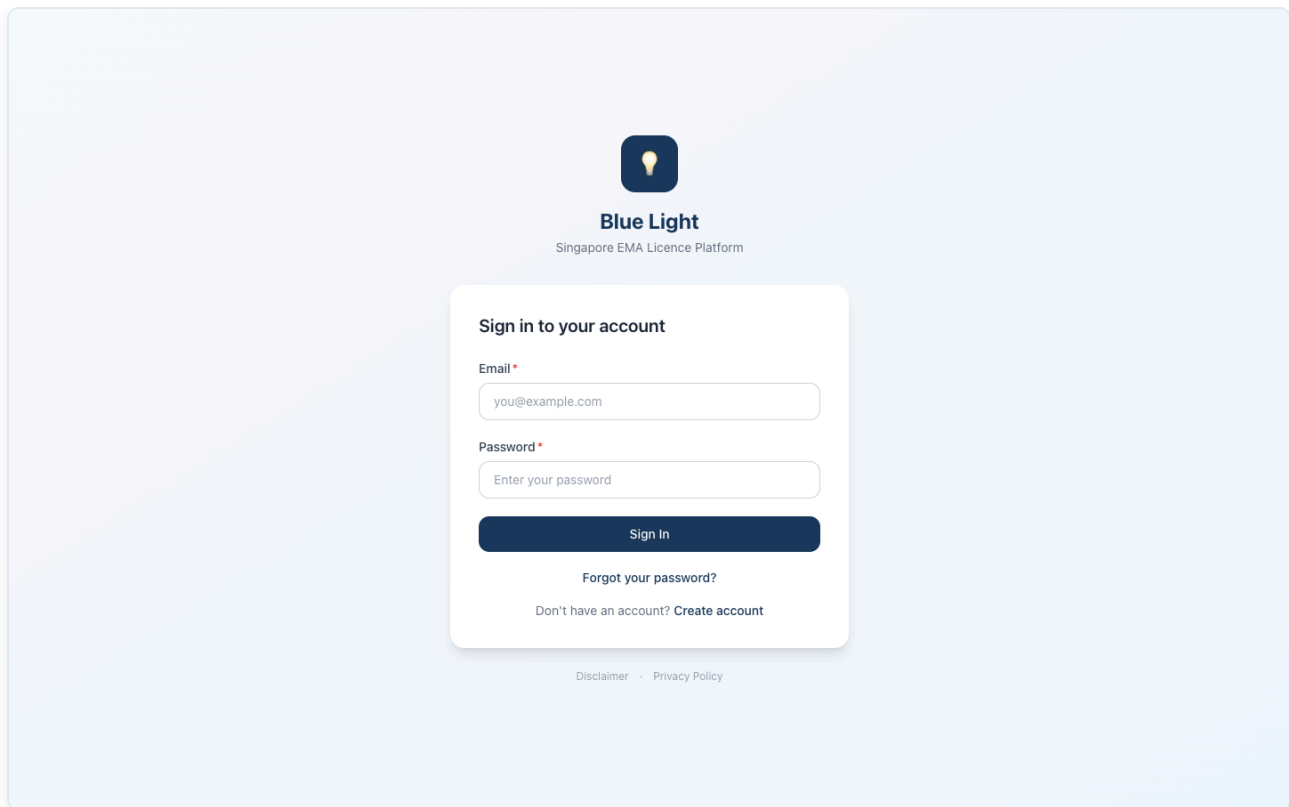
The image shows the login page for the Blue Light Singapore EMA Licence Platform. At the top center is a logo consisting of a yellow lightbulb inside a dark blue circle, with the text "Blue Light" and "Singapore EMA Licence Platform" below it. The main content is a white card with a dark blue border. The card has a title "Sign in to your account". Below the title are two input fields: "Email" with a red asterisk and a placeholder "you@example.com", and "Password" with a red asterisk and a placeholder "Enter your password". Below these fields is a dark blue button labeled "Sign In". Under the button are two links: "Forgot your password?" and "Don't have an account? Create account". At the bottom of the card are links for "Disclaimer" and "Privacy Policy".

Figure 2.4 — Login Page

- 1 Enter your registered **Email** and **Password**.
- 2 Click "**Sign In**".
- 3 You will be redirected to the appropriate dashboard based on your role:
 - **Applicant** → Applicant Dashboard (/dashboard)
 - **LEW (Approved)** → Admin Dashboard (/admin/dashboard)
 - **Admin** → Admin Dashboard (/admin/dashboard)

i Login Attempt Limit: For security, the system limits login attempts to **5 per 15 minutes**. If exceeded, you will need to wait before trying again.

2.3 Forgot Password

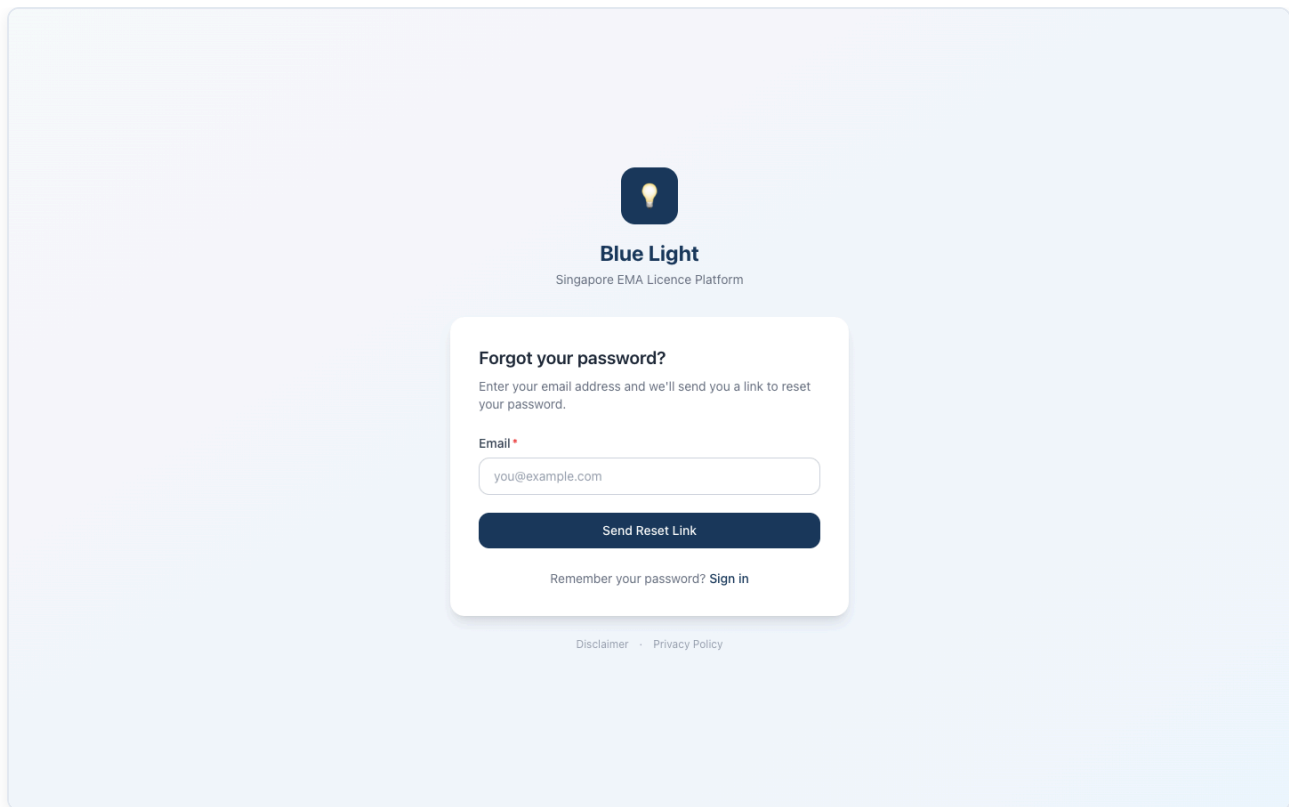


Figure 2.5 — Forgot Password Page


- 1 Click **"Forgot your password?"** on the login page.
- 2 Enter your registered email address and click **"Send Reset Link"**.
- 3 Check your email for the reset link (valid for **1 hour**).
- 4 Click the link, set a new password (minimum 8 characters), and sign in.

2.4 Email Verification (If Enabled)

When the administrator has enabled Email Verification in System Settings, new users must verify their email before accessing the platform:

- 1 After signing up, you will be redirected to the **Email Verification Pending** page.
- 2 Check your registered email inbox for the verification link.
- 3 Click the link in the email. You will see a **"Email Verified!"** confirmation page.
- 4 Click **"Sign In"** to proceed to the login page.

 **Didn't receive the email?** Click the "**Resend Verification Email**" button on the pending page. If the problem persists, contact the administrator.

 **Note:** Email Verification is controlled by the administrator and is disabled by default. If disabled, you can sign in immediately after registration without email verification.

3. Applicant Guide

3.1 Dashboard

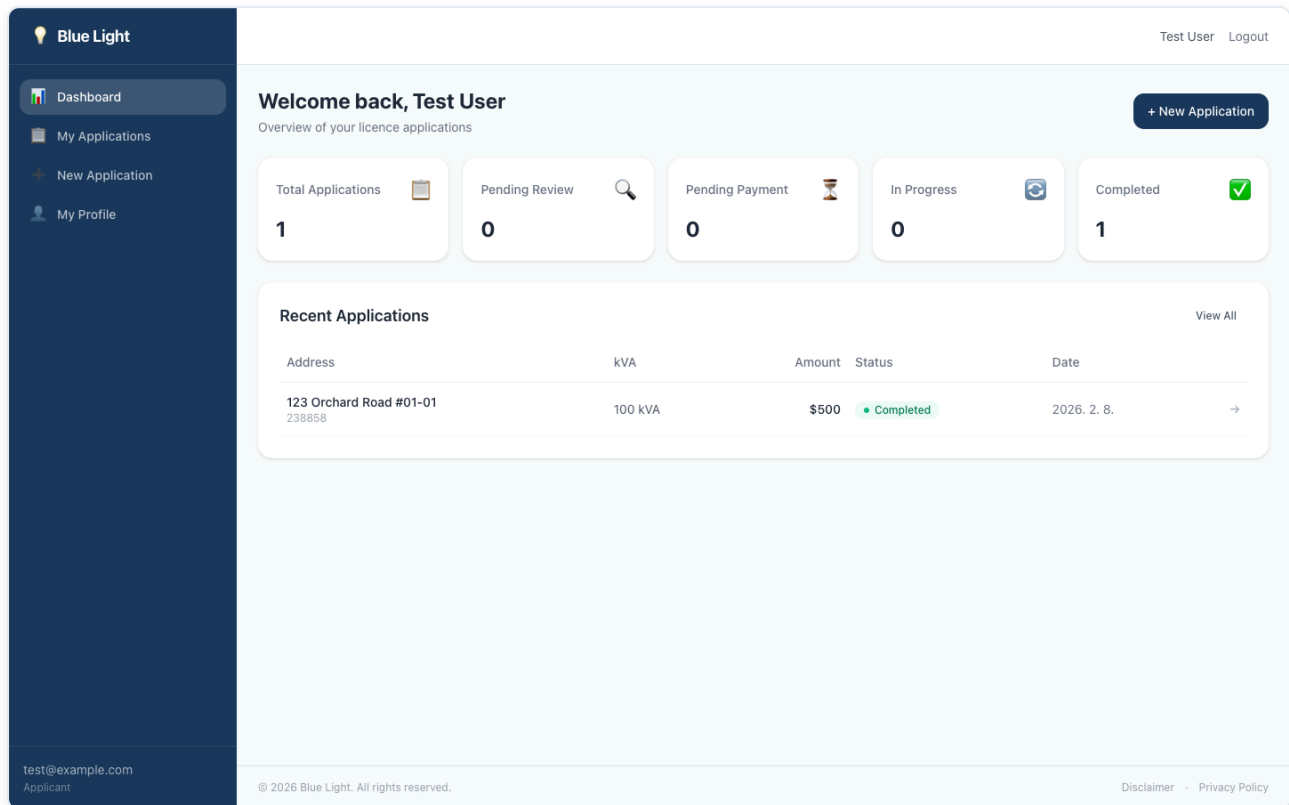


Figure 3.1 — Applicant Dashboard

The Dashboard provides an at-a-glance overview of your applications:

- **Summary Cards** — Total Applications, Pending Review, Pending Payment, In Progress, Completed
- **Recent Applications** — Your latest 5 applications with status, kVA, and amount
- **" + New Application "** button to start a new licence application

3.2 Creating a New Application

The application form is a **4-step wizard** with a progress tracker at the top:

| Step | Title | Description |
|------|-------------|--|
| 1 | Type | Application type, SP account, licence period, SLD option, file uploads |
| 2 | Address | Installation address, postal code, building type |
| 3 | kVA & Price | Select capacity and review pricing |
| 4 | Review | Confirm all details and submit |

3.2.1 Before You Begin

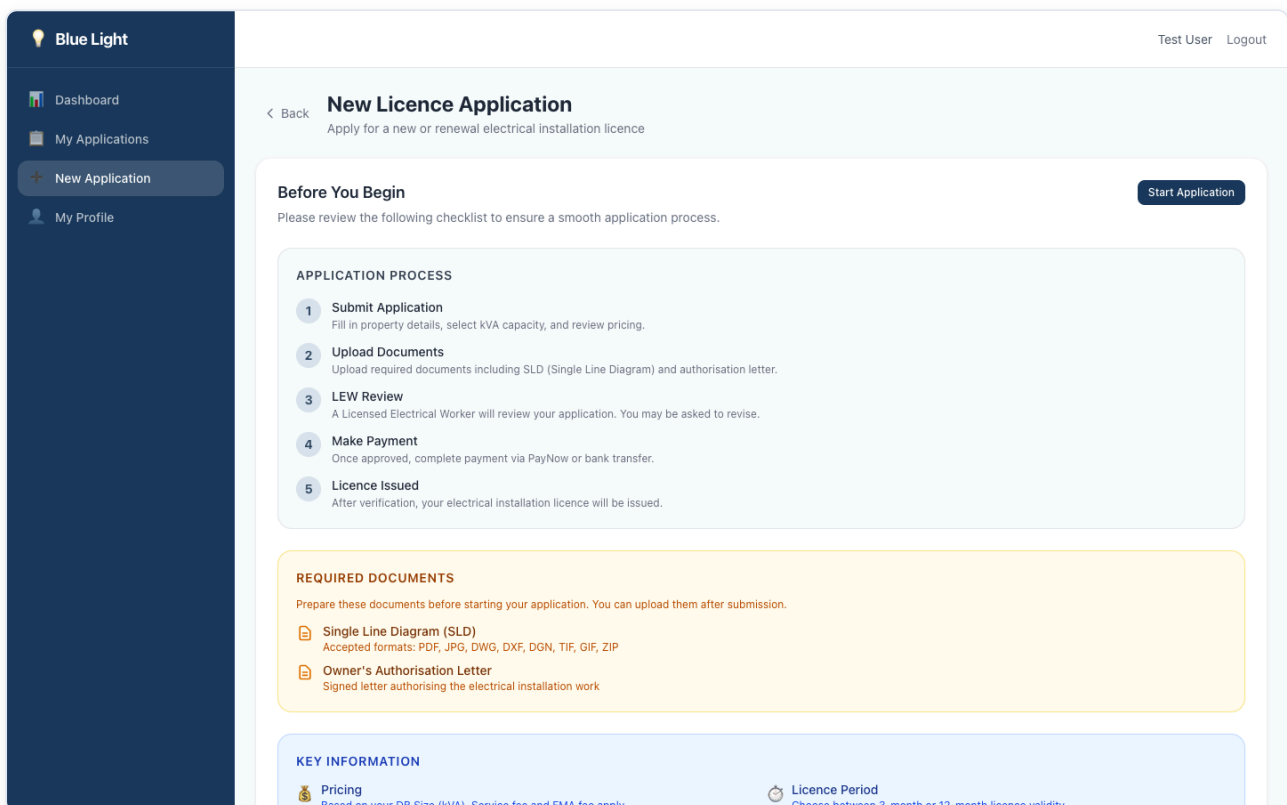


Figure 3.2 — Before You Begin Guide

Before starting the form, you will see a guide page with three information sections:


Application Process (5 Steps)

- 1. Submit Application** — Fill in property details, select kVA capacity, and review pricing. For New Licence applications, an SP Group account is required.
- 2. Upload Documents** — Upload required documents including SLD and Letter of Appointment.
- 3. LEW Review** — A Licensed Electrical Worker will review your application. You may be asked to revise.
- 4. Make Payment** — Once approved, complete payment via PayNow or bank transfer.

5. **Licence Issued** — After verification, your electrical installation licence will be issued.

Required Documents Checklist

| Document | Description |
|----------------------------------|---|
| Single Line Diagram (SLD) | Accepted formats: PDF, JPG, DWG, DXF, DGN, TIF, GIF, ZIP |
| Letter of Appointment | Signed letter appointing the Licensed Electrical Worker |
| Main Breaker Box Photo | Photo of the main breaker box at the installation site (JPG, PNG) |

 **Tip:** All documents can be uploaded after submission from the Application Detail page. However, having them ready beforehand speeds up the process.

Key Information

- **Pricing** — Based on your Electric Box (kVA). Service fee and EMA fee apply.
- **Licence Period** — Choose between 3-month or 12-month licence validity.
- **SP Group Account** — An SP Group utilities account is required for New Licence applications.
- **EMA Submission** — Files for ELISE submission must be under 2 MB each.

Click "**Start Application**" to proceed to the form, or "**Cancel**" to return to the dashboard.

3.2.2 Step 1: Application Type & Options

This step configures the core details of your application. It contains multiple sections:

A. SP Group Account Number

Enter your SP Group utilities account number (optional). A notice explains this is needed for New Licence applications.

B. Application Type

Blue Light

Dashboard

My Applications

New Application

My Profile

Test UserLogout

New Licence Application

Apply for a new or renewal electrical installation licence

1Type

2Address

3kVA & Price

4Review

SP Group Account Required

Before applying for an electrical installation licence, you need an SP Group utilities account. If you don't have one yet, please open an account first.

[Open SP Group Account](#)

SP Account Number

e.g., 1234567890

Optional. Enter your SP Group account number if available.

Application Type

Choose the type of licence application

New Licence

Apply for a brand new electrical installation licence

Licence Renewal

Renew an existing electrical installation licence

Supply Installation

Apply for a temporary electricity supply licence

Licence Period

Select the duration for your electrical installation licence

12 Months

3 Months

Figure 3.3 — Application Type Selection

Select one of two application types:

| Type | Description | Additional Fields |
|-----------------|---|---|
| New Licence | Brand new electrical installation licence | None |
| Licence Renewal | Renew an existing licence | Existing Licence No., Expiry Date, Renewal Reference No. (optional) |

i

Renewal Auto-Fill: When selecting Licence Renewal, the system checks for your previously completed applications. If found, they are displayed as selectable cards showing licence number, address, kVA, and expiry date. Selecting one auto-fills all relevant fields (address, postal code, building type, kVA, licence number, and expiry date). Alternatively, click **"Or enter details manually"** to type in the information yourself.

C. LOA Email Screenshot (Optional)

If you have received an LOA-related email from EMA, you can upload a screenshot here. This is uploaded as a supporting document. Accepted formats: JPG, JPEG, PNG, PDF (max 10 MB). You can also upload this later from the Application Detail page.

file:///Users/ringo/Projects/blue-light/doc/manual/user-manual.html

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D. Licence Period

test@example.com
Applicant

Test UserLogout

Optional. Enter your SP Group account number if available.

Application Type

Choose the type of licence application

New Licence
Apply for a brand new electrical installation licence

Licence Renewal
Renew an existing electrical installation licence

Supply Installation
Apply for a temporary electricity supply licence

Licence Period *

Select the duration for your electrical installation licence

12 Months
EMA Fee: SGD \$100

3 Months
EMA Fee: SGD \$50

Single Line Diagram (SLD) *

An SLD is required for your application. Choose how you'd like to provide it.

Upload Myself
I have an SLD ready and will upload it after submission

Request LEW to Prepare
A Licensed Electrical Worker will prepare the SLD for you
Additional fee may apply (to be determined)

Back to Guide

Continue

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DisclaimerPrivacy Policy

Figure 3.4 — Licence Period, Breaker Box Photo & SLD Options

Select the licence validity period (required):

| Duration | EMA Fee | Notes |
|-----------|-----------|-------------------------|
| 12 Months | SGD \$100 | Standard licence period |
| 3 Months | SGD \$50 | Short-term licence |

EMA Fee: The EMA fee is paid directly to EMA and is **not included** in the platform's total amount. It is displayed separately for your reference.

E. Main Breaker Box Photo (Optional)

Upload a photo of the main breaker box at the installation site. This helps verify the electrical capacity (kVA). Accepted formats: JPG, JPEG, PNG, HEIC, HEIF (max 10 MB). You can also upload this later.

1

Click **"Choose photo file"** in the upload area (camera icon).

2

Select a photo from your device. The file name and size will be displayed.

file:///Users/tingo/Projects/blue-light/doc/manual/user-manual.html


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- 3 To remove the photo, click the **X** button next to the file name.

F. Single Line Diagram (SLD) Option

Choose how to provide the SLD (required selection):


| Option | Description | What Happens |
|-------------------------------|---|---|
| Upload Myself | You have an SLD ready or will prepare one | An optional file upload area appears to attach the SLD now. You can also upload later. Accepted formats: PDF, JPG, PNG, DWG, DXF, DGN, TIF, GIF, ZIP (max 10 MB). |
| Request LEW to Prepare | A Licensed Electrical Worker will prepare the SLD for you | An SLD request will be automatically sent to the assigned LEW after submission. Additional fee may apply. |

 **Tip:** If you choose "Upload Myself" but don't have the SLD ready, you can skip the upload now and add it later from the Application Detail page.

3.2.3 Step 2: Installation Address

Enter the property details:

- **Installation Address** (required) — Full street address of the electrical installation
- **Postal Code** (required) — 6-digit Singapore postal code
- **Building Type** (optional) — Select from: Residential, Commercial, Industrial, Hotel, Healthcare, Education, Government, Mixed Use, or Other

 **Renewal Auto-Fill:** If you selected a previous application during Licence Renewal, these fields will be pre-filled. You can still edit them if needed.

3.2.4 Step 3: kVA & Pricing


Select the Electric Box kVA capacity for your installation:

- 1 Choose the **kVA capacity** from the dropdown list. Available options are based on the active price tiers configured by the administrator.

2 The system automatically calculates and displays the pricing breakdown:

- **kVA Tier Price** — Based on the kVA range selected
- **Service Fee** — Fixed fee set by the administrator
- **Total Amount Due** — kVA Tier Price + Service Fee

3 A reference price table is displayed below for transparency, showing all available tiers and their prices.

 **Note:** The EMA licence fee (SGD \$50 or \$100, depending on licence period) is payable separately and directly to EMA. It is noted on the pricing summary but **not included** in the total amount shown.

3.2.5 Step 4: Review & Submit

The Review step displays a comprehensive summary of your application:


- **Application Type Badge** — "New Licence" (blue) or "Licence Renewal" (orange)
- **SP Group Account** — If provided
- **LOA Email Screenshot** — If attached, shows file name and size
- **Main Breaker Box Photo** — If attached, shows file name and size
- **Licence Period** — Duration and EMA fee
- **Renewal Details** — Existing licence number, expiry date, renewal reference (for Renewal type)
- **SLD Option** — "Upload Myself" with attached file, or "LEW will prepare the SLD for you"
- **Property Details** — Address, Postal Code, Building Type
- **Capacity & Pricing** — kVA, Tier, Price breakdown, Total Amount

Click "**Submit Application**" at the bottom. A confirmation dialog will appear:

1 Confirm by clicking "**Submit**" in the dialog.

2 The system creates the application and automatically uploads any attached files (SLD, LOA email screenshot, breaker box photo).

3 You will be redirected to the Application Detail page with a success message.

 **Navigation Warning:** If you attempt to leave the form without submitting, a confirmation dialog appears to prevent accidental data loss.

⚠ **File Upload Failures:** If the application is created successfully but a file upload fails, you will receive a warning notification and be redirected to the Application Detail page where you can retry the upload.

3.3 My Applications

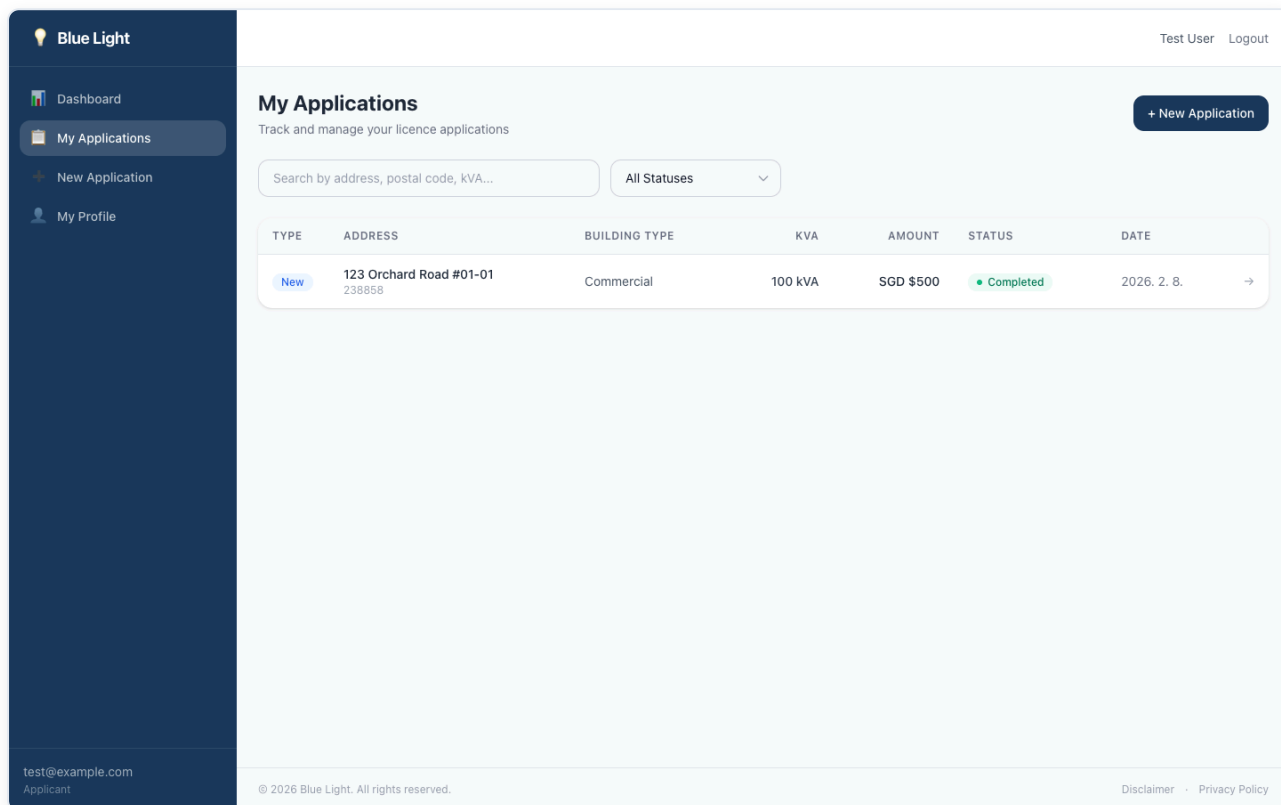


Figure 3.5 — My Applications List

View and manage all your submitted applications:

- **Search** — Filter by address, postal code, building type, kVA, or licence number
- **Status Filter** — Dropdown to filter by status (All, Pending Review, Completed, etc.)
- **Columns** — Type (New/Renewal badge), Address, Building Type, kVA, Amount, Status, Date
- **Pagination** — Browse through multiple pages of applications
- Click any row to view the application detail

3.4 Application Detail

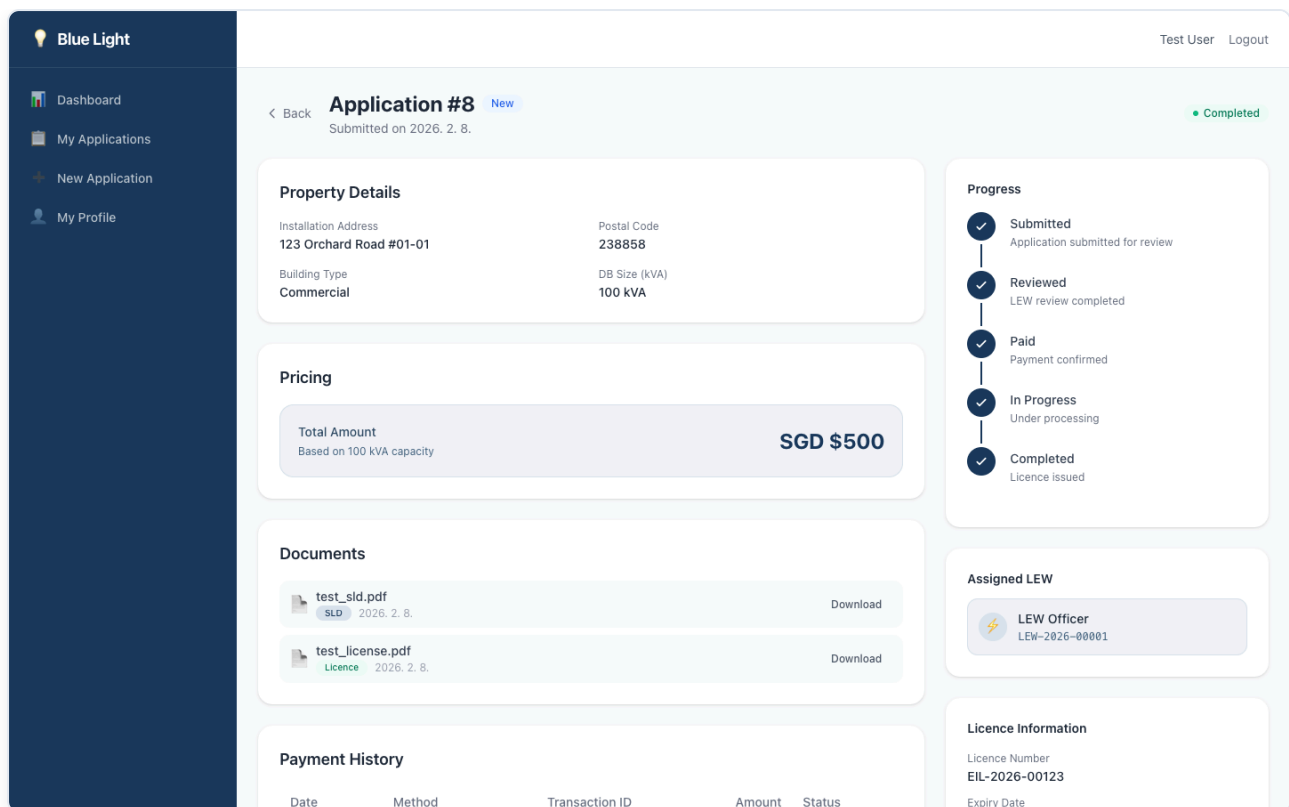


Figure 3.6 — Application Detail Page

The detail page has a **two-column layout**:

- **Main Content (left, 2/3 width)** — Application info, LOA section, Documents, Payment
- **Sidebar (right, 1/3 width)** — Progress tracker, Assigned LEW, Licence Information, Quick Info

3.4.1 Application Information


Displays all property details, pricing, and application-specific information:


- **Status Banners** — Context-specific banners (e.g., "Under Review" for Pending Review, revision comments for Revision Requested)
- **Property Details** — Address, Postal Code, Building Type, Electric Box (kVA), SP Account No.
- **Licence Period** — Duration and EMA fee breakdown
- **Renewal Details** — Existing licence number and expiry date (for Renewal type only)
- **Pricing** — kVA Tier Price, Service Fee, Total Amount

3.4.2 Letter of Appointment (LOA)

The LOA section manages the official Letter of Appointment document. It has three states:

| State | What You See | Your Action |
|-----------------------------|--|--|
| Not Generated | "Pending" badge. Message explains the LOA will be generated once a LEW is assigned and your profile is complete. | Ensure your Profile has Company Name, UEN, Designation, and Correspondence Address filled in. |
| Generated (Unsigned) | "Signature Required" badge. Download button to review the LOA PDF. Signature pad (drawing canvas) displayed. | <ol style="list-style-type: none"> 1. Click "Review LOA Document" to download and review the generated PDF. 2. Draw your signature on the signature pad. 3. Click "Sign LOA". 4. Confirm in the dialog (this action is irreversible). |
| Signed | "Signed" badge with green success banner showing the signed date and time. | Click " Download Signed LOA " to get the final PDF with your embedded signature. |

 **Signature is Irreversible:** Once you sign the LOA, it cannot be modified. Please review the LOA document carefully before signing.

 **Renewal Applications:** For licence renewals, you may also upload the LOA manually via the Documents section if you already have a signed copy.

3.4.3 Documents & SLD Requests

SLD Drawing Request Status


If you selected "**Request LEW to Prepare**" for the SLD, a dedicated status card appears:

| Status | Display | Description |
|------------------|--------------------|---|
| Requested | Blue info card | "Your SLD drawing request has been sent to the assigned LEW." Shows your note (if any) and request date. |
| Uploaded | Green success card | "The LEW has uploaded the SLD drawing. It is pending confirmation." Shows LEW note and a " Download SLD " button. |
| Confirmed | Gray card | "The SLD drawing has been confirmed and is included in your application." |

Document Upload & Management

When the application status allows uploads, the Documents section shows:

- 1 Document Type dropdown** — Select the type of document:
 - Single Line Diagram (SLD)
 - Letter of Appointment
 - Main Breaker Box Photo
- 2 File Upload area** — Drag & drop or click to browse. Max 10 MB per file.
- 3** Uploaded files are listed with type badge, file name, size, upload date, and a **Download** button.

 **ELISE File Size Limit:** Files for ELISE submission to EMA should be under **2 MB**. If a file exceeds 2 MB, a warning message will appear suggesting you resize it.

3.4.4 Payment Information

When the application reaches "**Pending Payment**" status, the Payment section displays:

- **Amount Due** — Total payment required (kVA price + service fee)
- **PayNow Details** — UEN number and recipient name
- **Bank Transfer Details** — Bank name, account number, and account holder name
- **Payment History** — Record of confirmed payments with date, method, and transaction ID

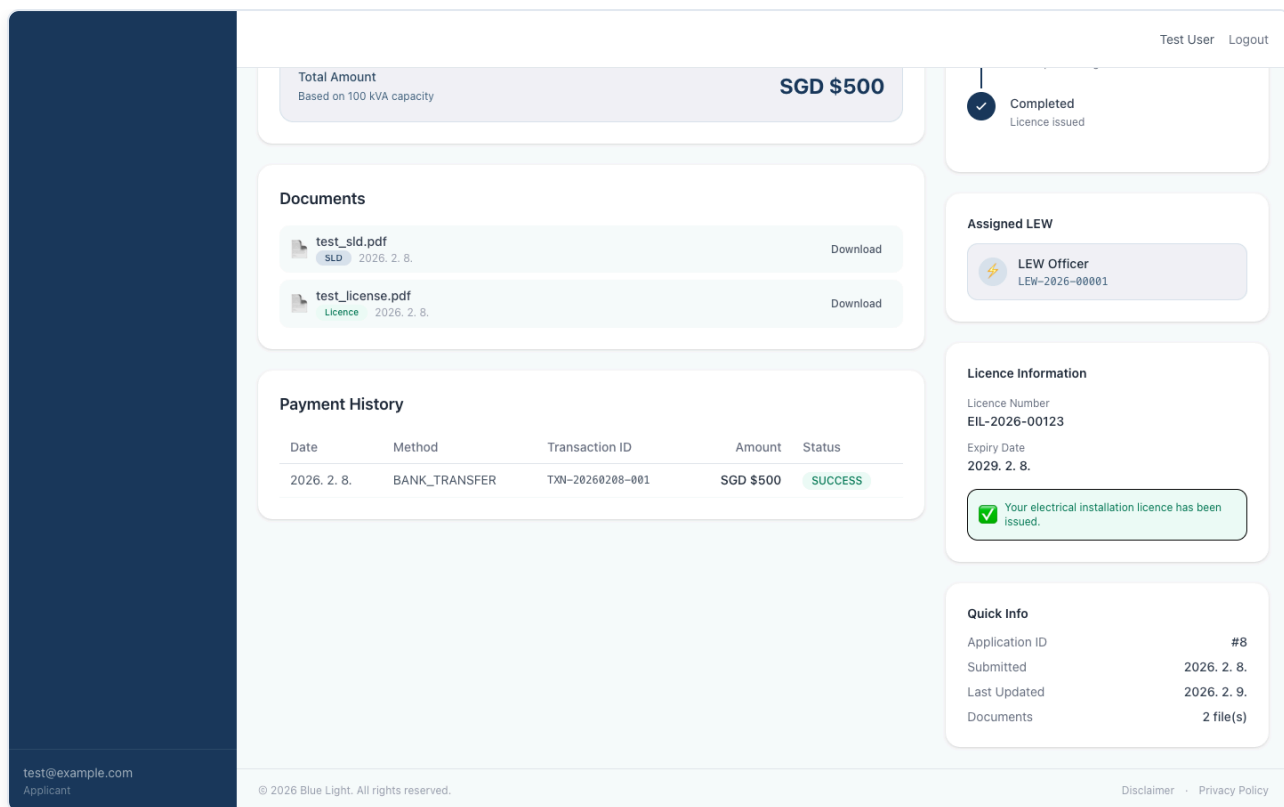


Figure 3.7 — Documents, Payment & Sidebar


3.5 Responding to Revision Requests

When an Admin or LEW requests revisions:

- 1 The status changes to **"Revision Requested"**. A yellow banner displays the reviewer's comments explaining what needs to be changed.
- 2 Click **"Edit & Resubmit"** to enter edit mode.
- 3 In edit mode, you can modify:
 - **Installation Address**
 - **Postal Code**
 - **Building Type**
 - **kVA Capacity** (with live price recalculation)

You can also upload new or updated documents.


- 4 Click **"Resubmit"** to send the updated application. The status returns to **"Pending Review"**.


 **Tip:** Click **"Cancel Edit"** at any time to discard changes and return to view mode.

3.6 Making Payment

When your application is approved and set to **"Pending Payment"**:

- 1 Open the application detail page. Scroll to the **Payment Information** section.
- 2 Choose a payment method and make payment externally:
 - **PayNow** — Use the UEN number provided. Include the application reference number.
 - **Bank Transfer** — Transfer to the bank account shown (Bank Name, Account Number, Account Holder Name).
- 3 Wait for the Admin to confirm receipt. The status will change to **"Paid"**.

 **Payment Deadline:** Applications that remain unpaid beyond the deadline will be automatically marked as **"Expired"**. Please make payment promptly.

 **EMA Fee:** Remember that the EMA licence fee (SGD \$50 or \$100) is paid separately and directly to EMA. It is not included in the platform payment amount.

3.7 My Profile

The screenshot shows the 'My Profile' page of the Blue Light system. The left sidebar contains navigation links: Dashboard, My Applications, New Application, and My Profile (selected). The main content area is titled 'My Profile' with the subtitle 'Manage your account information'. It features a user profile card for 'Test User' (test@example.com, APPLICANT). Below this are two sections: 'Profile Information' (Update your personal and business details) and 'Business Information' (Company details required for EMA licence application (Letter of Appointment)). The 'Profile Information' section includes fields for Full Name (Test User), Email (test@example.com, read-only), and Phone (+65-1234-5678). The 'Business Information' section includes a Company Name field (e.g., BLUE LIGHT PTE LTD) and a note that this name will be printed on the installation licence. At the bottom, there are fields for UEN (Unique Entity Number) and Designation.

Figure 3.8 — My Profile Page

Manage your personal and business information:

Personal Information

- **Full Name** — Your display name
- **Email** — Read-only (used for login)
- **Phone** — Contact number

Business Information

- **Company Name** — Your registered company name
- **UEN** — Unique Entity Number (9-character Singapore business registration)
- **Designation** — Your role/title within the company

Correspondence Address

- **Address** — Mailing address for EMA notifications
- **Postal Code** — 6-digit Singapore postal code

Change Password

- Enter your **Current Password**, then set a **New Password** (8–20 characters) and confirm it.

The screenshot displays a user profile page with a dark blue sidebar on the left. The main content area is divided into two sections. The top section, titled 'Business Information', contains fields for 'Phone' (+65-1234-5678), 'Company Name' (e.g., BLUE LIGHT PTE LTD), 'UEN (Unique Entity Number)' (e.g., 202407291M), 'Designation' (e.g., Director, Manager), 'Correspondence Address' (e.g., 105 Sims Ave, #07-08, Chancery Lodge Complex), and 'Correspondence Postal Code' (e.g., 387429). A 'Save Changes' button is located below these fields. The bottom section, titled 'Change Password', includes a 'Current Password' field with a red asterisk indicating it is required. The top right corner of the page shows 'Test User' and a 'Logout' link. A small note at the top left of the main content area states 'Email cannot be changed'.

Figure 3.9 — Business Information & Password Change

⚠ Required for LOA Generation: Company Name, UEN, Designation, and Correspondence Address are all required for the automated Letter of Appointment (LOA) generation. If any of these fields are missing, the LEW/Admin will not be able to generate the LOA for your application. Please ensure these are completed early.

4. LEW (Licensed Electrical Worker) Guide

4.1 LEW Registration & Approval

- 1 Register as a LEW on the Sign Up page (see Section 2.1.2) with your **LEW Licence Number** and **Grade**.
- 2 After registration, you will see the **LEW Pending Approval** page. You must wait for an Administrator to approve your account.
- 3 Use the "**Check Status**" button to verify if your account has been approved.
- 4 Once approved, **log out and log in again** to activate your LEW access.

 **LEW Grade and kVA:** Your LEW Grade determines which applications you can be assigned to:

- Grade 7: Applications \leq 45 kVA
- Grade 8: Applications \leq 500 kVA
- Grade 9: All applications (\leq 400 kV)

4.2 LEW Dashboard

Approved LEWs share the same Admin Dashboard view (without the Users and Settings menus). The dashboard shows:

- Application statistics (Total, Pending Review, In Progress, Completed, etc.)
- Recent Applications list with quick access links

4.3 Reviewing Applications

LEWs can view all applications assigned to them (or unassigned) via the **Applications** menu:

- Search and filter applications by status, address, or applicant name
- Click on an application to view its full details
- Review applicant information, property details, uploaded documents, and applicant business profile

- Available actions: **Request Revision** (with comments) or **Approve & Request Payment**

4.4 Managing SLD Requests


When an applicant selects "**Request LEW to Prepare**" for the SLD:

- 1 Navigate to the application detail page. The **SLD Drawing Request** section shows the request with status "**Requested**" and any applicant notes.
- 2 Prepare the SLD document based on the installation details.
- 3 Click "**Upload SLD**" to upload the file. Optionally, add a **LEW note** for the applicant (e.g., revision notes, specifications used).
- 4 After upload, the status changes to "**Uploaded**". Click "**Confirm SLD**" to finalize it. The applicant can then download the SLD.

4.5 LOA Generation

LEWs (and Admins) can generate the Letter of Appointment (LOA) PDF for applications:

- 1 Navigate to the application detail page. Ensure a LEW is assigned to the application.
- 2 Check that the applicant's profile is complete (Company Name, UEN, Designation, Correspondence Address). If incomplete, a warning lists the missing fields.
- 3 Click "**Generate LOA**". The system automatically creates a PDF using EMA's official LOA form template, populated with:
 - LEW name and licence number
 - Installation address
 - Applicant company name, designation, and name
 - Correspondence address, UEN, postal code
 - Contact details (email, phone)
 - For renewals: existing licence number, expiry date, renewal reference
- 4 Once generated, you can **download the LOA** for review, or click "**Regenerate LOA**" if profile information has been updated.
- 5 Wait for the applicant to review and digitally sign the LOA. The status will update to "**Signed**" once completed.

 **Regeneration:** You can regenerate the LOA as many times as needed **before the applicant signs it**. Once signed, the LOA is locked and cannot be regenerated.

5. Administrator Guide

5.1 Admin Dashboard

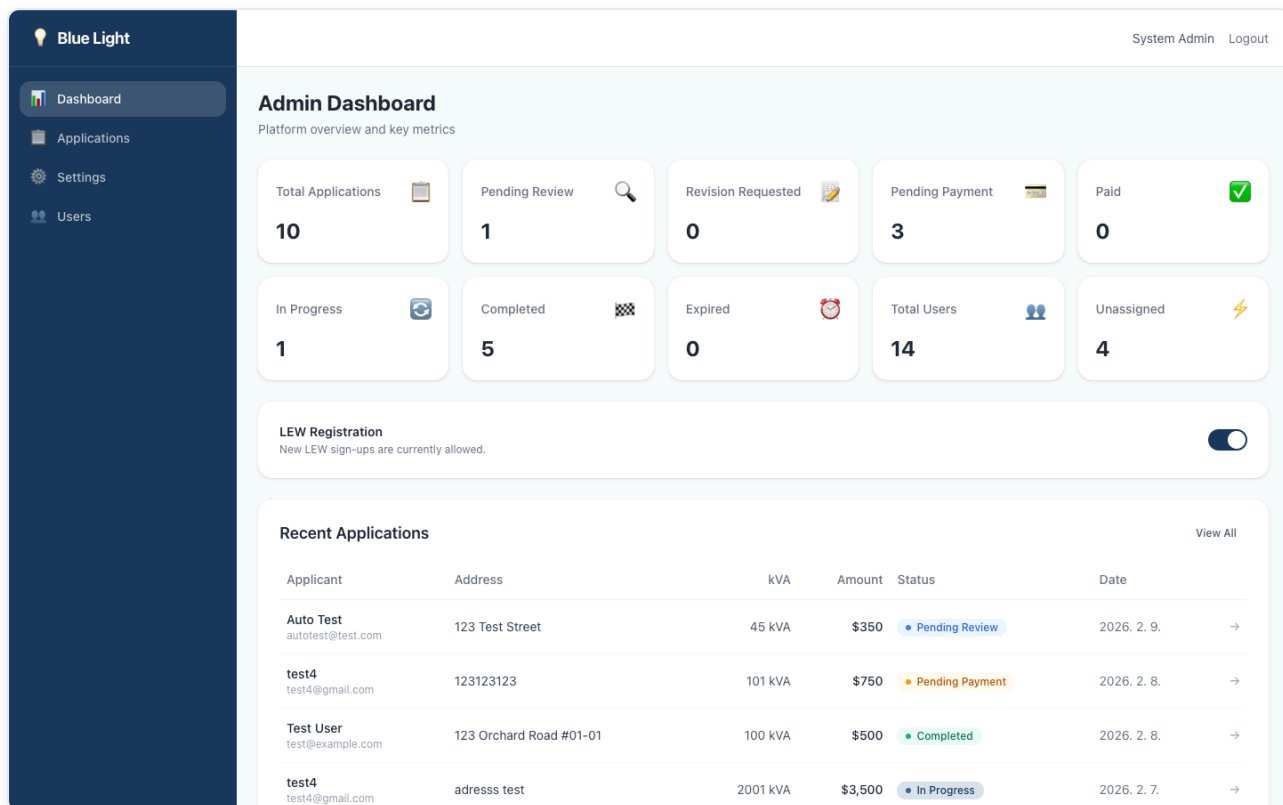


Figure 5.1 — Admin Dashboard

The Admin Dashboard provides a comprehensive platform overview:

- **10 Status Cards** — Total Applications, Pending Review, Revision Requested, Pending Payment, Paid, In Progress, Completed, Expired, Total Users, Unassigned (click any card to filter applications)
- **LEW Registration Toggle** — Enable/disable new LEW sign-ups system-wide
- **Recent Applications** — Latest 5 applications with applicant, address, status, and quick links

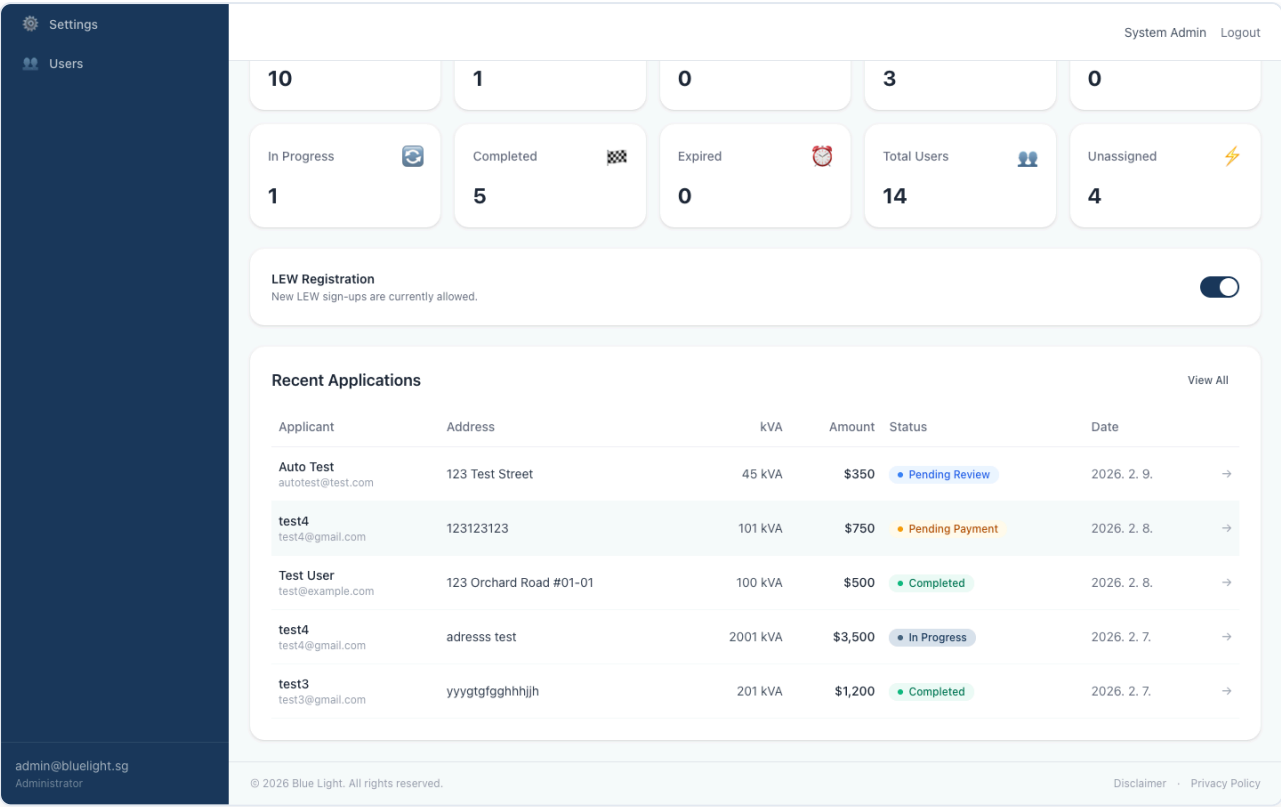


Figure 5.2 — LEW Registration Toggle & Recent Applications

5.2 Application Management

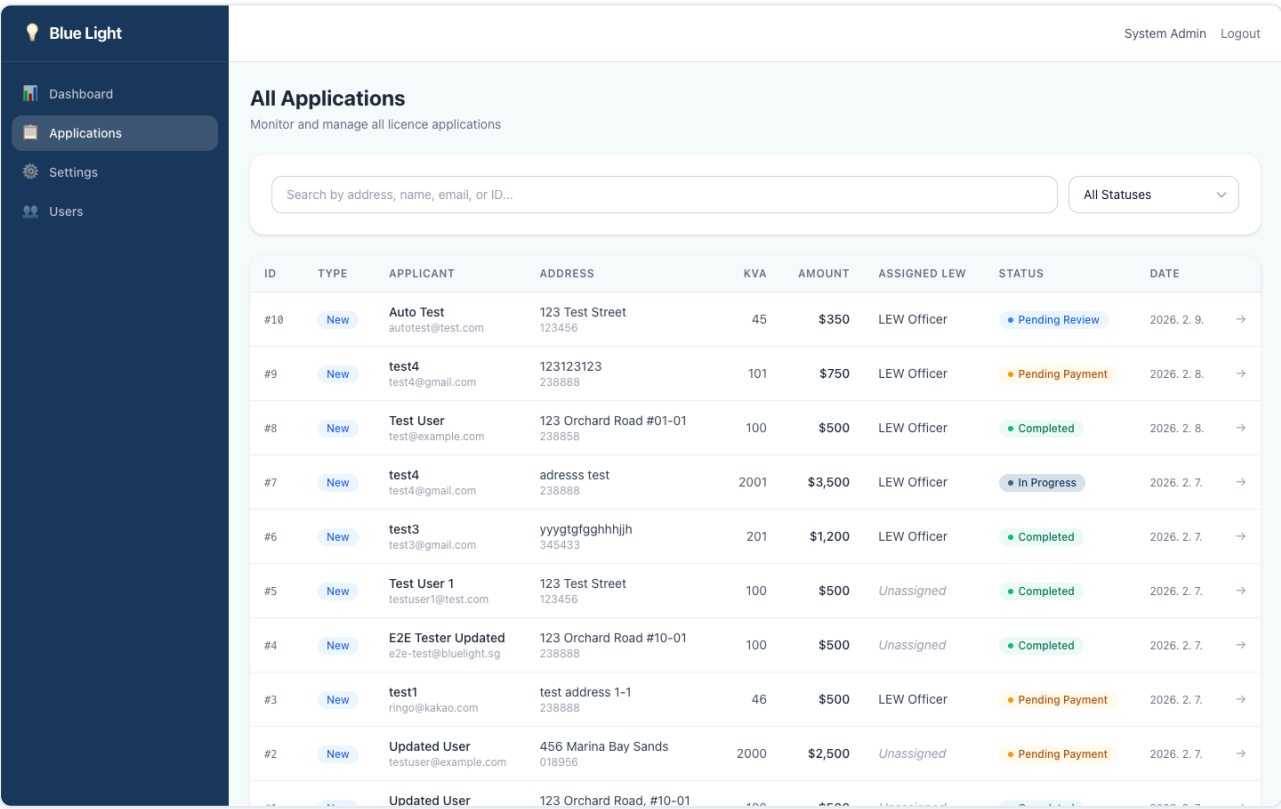


Figure 5.3 — All Applications List

The Applications page shows all submitted applications with:

- **Search** — Filter by address, applicant name, email, or application ID
- **Status Filter** — Dropdown to filter by status
- **Pagination** — 15 applications per page
- **Columns** — ID, Type (New/Renewal badge), Applicant, Address, kVA, Amount, Assigned LEW, Status, Date
- Click any row to open the application detail page

5.3 Processing Applications (Step-by-Step)

The screenshot displays the 'Application #10' detail page in the Blue Light system. The page is divided into several sections:

- Header:** 'Blue Light' logo, 'System Admin', and 'Logout' link.
- Left Sidebar:** Navigation menu with 'Dashboard', 'Applications', 'Settings', and 'Users'.
- Application Header:** '< Back', 'Application #10' (with a 'New' badge), and 'Admin view — manage status and payments'. A 'Pending Review' status indicator is shown on the right.
- Applicant Information:**
 - Name: Auto Test, Email: autotest@test.com
 - Phone: Not provided, Designation: —
- Business Details (Required for Letter of Appointment):**
 - Company Name: —, UEN: —
- Correspondence Address (EMA notification delivery):**
 - Address: —, Postal Code: —
- Incomplete Applicant Profile:** A yellow warning box states: 'The following are required for Letter of Appointment: Company Name, UEN, Designation, Correspondence Address. Please ask the applicant to update their profile.'
- Property Details:**
 - Installation Address: 123 Test Street, Postal Code: 123456
 - Building Type: Commercial, DB Size (kVA): 45 kVA
- Progress:** A vertical timeline showing 5 steps:
 - 1 Submitted: Application submitted for review
 - 2 Reviewed: LEW review completed
 - 3 Paid: Payment confirmed
 - 4 In Progress: Under processing
 - 5 Completed: Licence issued
- Admin Actions:**
 - Request Revision (disabled)
 - Approve & Request Payment (active)
- Assigned LEW:** LEW Officer, lew@bluelight.sg, LEW-2026-00001

Figure 5.4 — Admin Application Detail

The Admin Application Detail page includes all applicant and property information, along with **Admin Actions** in the sidebar that change based on the current status.

5.3.1 Review & Approve (Pending Review → Approved or Revision Requested)

When an application is in **Pending Review**:

| Action | Description | Required Input |
|--------------------------------------|--|---|
| Request Revision | Send the application back to the applicant with feedback | Review comments (required) — visible to the applicant |
| Approve & Request Payment | Approve the application and move to Pending Payment status | Confirmation dialog |

⚠ Incomplete Profile Warning: If the applicant has not completed their Business Details (Company Name, UEN, Designation, Correspondence Address), a yellow warning banner will appear on the detail page. Consider asking the applicant to update their profile before approving.

5.3.2 Payment Confirmation (Pending Payment → Paid)

| Action | Description | Required Input |
|------------------------|---------------------------------------|---|
| Confirm Payment | Verify that payment has been received | Transaction ID (optional), Payment Method (PayNow, Bank Transfer, etc.) |

5.3.3 Processing & Licence Issuance (Paid → In Progress → Completed)

| Action | Description | Required Input |
|-------------------------------------|---|---|
| Start Processing | Begin licence processing (Paid → In Progress) | Confirmation dialog |
| Complete & Issue Licence | Issue the electrical installation licence (In Progress → Completed) | Licence Number (required), Licence Expiry Date (required) |

i Admin File Upload: When the application is in **In Progress** or **Completed** status, administrators can upload additional documents (Licence PDF, Report PDF) that become accessible to the applicant.

The screenshot displays the 'Property Details' page in the Blue Light system. The interface includes a dark blue sidebar on the left with the user's email 'admin@bluelight.sg' and role 'Administrator'. The main content area is divided into several sections:

- System Admin / Logout** (top right)
- Incomplete Applicant Profile** (yellow warning box): The following are required for Letter of Appointment: Company Name, UEN, Designation, Correspondence Address. Please ask the applicant to update their profile.
- Property Details** (table):

| | |
|----------------------|---------------|
| Installation Address | Postal Code |
| 123 Test Street | 123456 |
| Building Type | DB Size (kVA) |
| Commercial | 45 kVA |
- Pricing** (table):

| | |
|--------------------------|-----------|
| Total Amount | SGD \$350 |
| Based on 45 kVA capacity | |
- Documents** (text): No documents uploaded.
- Payment History** (text): No payments recorded.
- Admin Actions** (buttons):
 - Request Revision
 - Approve & Request Payment
- Assigned LEW** (card):
 - LEW Officer**: lew@bluelight.sg, LEW-2026-00001, G9 (≤400kV)
 - Buttons: Change, Remove
- Quick Info** (table):

| | |
|----------------|-------------|
| Application ID | #10 |
| Submitted | 2026. 2. 9. |
| Last Updated | 2026. 2. 9. |
| Documents | 0 file(s) |
| Payments | 0 record(s) |

Footer: © 2026 Blue Light. All rights reserved. Disclaimer · Privacy Policy

Figure 5.5 — Property Details, Pricing, LOA & Documents

5.4 LEW Assignment

Administrators can assign a LEW to each application:

- 1 Open the application detail page.
- 2 In the **"Assigned LEW"** section (sidebar), click **"Assign LEW"**.
- 3 Select a LEW from the list. Only LEWs with a sufficient grade for the application's kVA are shown.
- 4 To change or remove the assigned LEW, use the **"Change"** or **"Remove"** buttons.

Automatic Filtering: The system automatically filters available LEWs based on the application's kVA capacity. For example, a 100 kVA application will only show Grade 8 and Grade 9 LEWs.

LOA Dependency: A LEW must be assigned before the LOA can be generated, as the LEW's name and licence number are included in the LOA document.

5.5 LOA Management

The **Letter of Appointment** section in the Admin Application Detail page manages the LOA lifecycle:

| State | Display | Admin Action |
|-----------------------------|---|---|
| No LEW Assigned | "LEW Assignment Required" info message | Assign a LEW first (see Section 5.4) |
| Profile Incomplete | Warning listing missing fields (Company Name, UEN, Designation, Correspondence Address) | Contact applicant to complete their profile |
| Ready to Generate | "Generate LOA" button | Click to auto-generate the LOA PDF from the EMA official template |
| Generated (Unsigned) | Download link, "Waiting for applicant signature" status, "Regenerate LOA" button | Download to review, regenerate if applicant info changes |
| Signed | "Signed" badge with date/time, download button | Download the signed LOA PDF with embedded signature |

i LOA Contents: The auto-generated LOA includes LEW details, installation address, applicant company information, UEN (character-by-character in boxes), correspondence address, and contact details. For Renewal type, it also includes existing licence number, expiry date, and renewal reference.

5.6 SLD Request Management

When an applicant has requested LEW to prepare the SLD, the **SLD Drawing Request** section appears in the application detail:

- 1 View Request** — See the applicant's note and request date.
- 2 Upload SLD** — Upload the prepared SLD file with an optional LEW note.
- 3 Confirm SLD** — Finalize the SLD. The applicant will see it as "Confirmed" and it becomes part of the application documents.

5.7 User Management

User Management
View and manage registered users

Search by name, email, All Roles ▾

| ID | NAME | EMAIL | PHONE | ROLE | APPROVAL | GRADE | LICENCE NO. | REGISTERED |
|-----|--------------------|-----------------------|---------------|------------------|-------------|-------|----------------|-------------|
| #16 | Auto Test | autotest@test.com | - | APPLICANT Change | - | - | - | 2026. 2. 9. |
| #15 | lew1 | lew1@gmail.com | - | LEW Change | N/A Approve | - | - | 2026. 2. 8. |
| #14 | LEW Officer | lew@bluelight.sg | +65-0000-0001 | LEW Change | APPROVED | - | LEW-2026-00001 | 2026. 2. 8. |
| #13 | test4 | test4@gmail.com | - | APPLICANT Change | - | - | - | 2026. 2. 7. |
| #12 | test3 | test3@gmail.com | - | APPLICANT Change | - | - | - | 2026. 2. 7. |
| #10 | Test User 1 | testuser1@test.com | 91234567 | APPLICANT Change | - | - | - | 2026. 2. 7. |
| #11 | Test User 2 | testuser2@test.com | 91234568 | APPLICANT Change | - | - | - | 2026. 2. 7. |
| #9 | E2E Tester Updated | e2e-test@bluelight.sg | 98765432 | APPLICANT Change | - | - | - | 2026. 2. 7. |
| #8 | Updated User | testuser@example.com | +65-9999-8888 | APPLICANT Change | - | - | - | 2026. 2. 7. |
| #7 | test1 | ringo@kakao.com | - | APPLICANT Change | - | - | - | 2026. 2. 6. |
| #6 | CORS Test | cors-test@example.com | - | APPLICANT Change | - | - | - | 2026. 2. 6. |

Figure 5.6 — User Management Page

The User Management page (Admin only) allows:

Search & Filter

- **Search** — By name, email, company name, or UEN
- **Role Filter** — All Roles, Applicant, LEW, Admin
- **Pagination** — 20 users per page

Role Management

- Click "**Change**" next to a user's role to switch between **APPLICANT** ↔ **LEW**
- Admin roles cannot be changed from this interface
- A confirmation dialog appears before any role change

LEW Approval

- New LEW registrations appear with status "**PENDING**"
- Click "**Approve**" to grant platform access (the LEW must re-login to activate)
- Click "**Reject**" to deny access

5.8 System Settings

The System Settings page consolidates all platform configuration into one page with four sections:

5.8.1 Email Verification

The screenshot shows the 'System Settings' page for 'Blue Light'. The left sidebar contains links to 'Dashboard', 'Applications', 'Settings' (selected), and 'Users'. The top right shows 'System Admin' and 'Logout'. The main content area is titled 'System Settings' with a subtitle 'Manage email verification, pricing, service fees, and payment information'. It contains three sections: 1. 'Email Verification' with a toggle switch set to 'Disabled' and a 'Save' button. A yellow warning message states: 'Email verification is currently disabled. New users can sign up without verifying their email.' 2. 'Service Fee (SGD)' with a text input field containing '50' and a 'Save Fee' button. A note below says: 'This fee is added to the kVA tier price for every application quote.' 3. 'Payment Information' with a note: 'These details are displayed to applicants when making payment. Update to reflect your actual receiving accounts.' It has two tabs: 'PayNow' (selected) and 'Bank Transfer'. Under 'PayNow', there are fields for 'UEN Number' (202401234A) and 'Recipient Name' (Blue Light Pte Ltd). Under 'Bank Transfer', there are fields for 'Bank Name' (DBS Bank), 'Account Number' (012-345678-9), and 'Account Holder Name' (Blue Light Pte Ltd).

Figure 5.7 — System Settings (Email, Service Fee, Payment)

- **Toggle Switch** — Enable or disable email verification for new user registration
- **Enabled** — New users must verify their email via a verification link before accessing the platform
- **Disabled** (default) — Users can sign in immediately after registration

An "Unsaved changes" indicator appears when the setting is modified. Click **"Save"** to apply.

⚠ When disabled: An amber warning note reminds you that "New users can sign up without verifying their email."

5.8.2 Service Fee

- **Service Fee (SGD)** — Numeric input field for the fee added to every application's kVA tier price
- Accepts decimal values (e.g., \$50.00)
- Click **"Save Fee"** to apply changes

5.8.3 Payment Information

Configure the payment details displayed to applicants when making payment:

| PayNow Fields | Bank Transfer Fields |
|--|--|
| <ul style="list-style-type: none"> • UEN Number • Recipient Name | <ul style="list-style-type: none"> • Bank Name • Account Number • Account Holder Name |

Click **"Save Payment Info"** to apply changes.

5.8.4 Price Tier Management

System Admin

Logout

202401234A

DBS Bank

Recipient Name

Blue Light Pte Ltd

Account Number

012-345678-9

Account Holder Name

Blue Light Pte Ltd

Save Payment Info

| # | DESCRIPTION | KVA RANGE | PRICE (SGD) | STATUS | UPDATED | |
|----|--------------------|-------------------|-------------|--------|-------------|------|
| #1 | 45 kVA | 45 – 45 kVA | \$350.00 | Active | 2026. 2. 6. | Edit |
| #2 | 46 - 100 kVA | 46 – 100 kVA | \$500.00 | Active | 2026. 2. 6. | Edit |
| #3 | 101 - 200 kVA | 101 – 200 kVA | \$750.00 | Active | 2026. 2. 6. | Edit |
| #4 | 201 - 500 kVA | 201 – 500 kVA | \$1,200.00 | Active | 2026. 2. 6. | Edit |
| #5 | 501 - 1000 kVA | 501 – 1,000 kVA | \$1,800.00 | Active | 2026. 2. 6. | Edit |
| #6 | 1001 - 2000 kVA | 1,001 – 2,000 kVA | \$2,500.00 | Active | 2026. 2. 6. | Edit |
| #7 | 2001 kVA and above | 2,001 – 9,999 kVA | \$3,500.00 | Active | 2026. 2. 6. | Edit |

7 price tiers

Active: 7 Inactive: 0

admin@bluelight.sg
Administrator

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Figure 5.8 — kVA Price Tiers (Inline Editing)

The Price Tiers section uses an **inline editable table** for managing kVA pricing. All changes are batched and saved together.

Viewing & Editing Tiers

Each tier row displays editable fields:

| Field | Description | Validation |
|--------------------|---|---|
| Description | Display name (e.g., "45 kVA", "46-100 kVA") | Max 50 characters |
| kVA Min | Minimum kVA for this tier | Must be ≥ 1 |
| kVA Max | Maximum kVA for this tier | Must be \geq kVA Min |
| Price (SGD) | Price for applications within this range | Must be ≥ 0 |
| Active | Toggle switch — inactive tiers are hidden from applicants | — |
| Delete | Trash icon button to remove the tier | Existing tiers show confirmation dialog |

Adding a New Tier

- 1 Click the **" + Add Tier "** button at the bottom of the tier list.
- 2 A new empty row appears. Fill in Description, kVA Min, kVA Max, and Price.
- 3 The new tier is marked with "(New)" and is active by default.

Deleting a Tier

- 1 Click the **trash icon** on the row you want to delete.
- 2 For existing tiers, a confirmation dialog appears: "This change will take effect when you click 'Save All'." New (unsaved) tiers are removed immediately.

Saving Changes

- 1 When you modify any tier, an **"Unsaved changes"** indicator appears in the header.
- 2 Click **"Save All"** to submit all changes as a single batch.
- 3 The system validates all tiers before saving (see validation below).


- 4 On success, a confirmation toast appears and data is refreshed from the server.


To undo all changes, click "**Discard**" to restore the original values.


Validation Rules

The system performs both **per-tier** and **cross-tier** validation:

| Type | Rule | Error Display |
|-------------------|---|---|
| Per-Tier | kVA Min and kVA Max must be ≥ 1 | Inline error on the field |
| Per-Tier | kVA Max must be \geq kVA Min | Inline error on the field |
| Per-Tier | Price must be ≥ 0 | Inline error on the field |
| Cross-Tier | No overlapping kVA ranges (e.g., tier 1 max 100 and tier 2 min 100 = overlap) | Red error banner at the top: "kVA range overlap detected" |
| Cross-Tier | No gaps between consecutive tiers (tier 1 max + 1 must equal tier 2 min) | Red error banner at the top: "Gap detected between tiers" |

 **How Batch Save Works:** All changes (additions, modifications, deletions) are sent to the server in a single request. The server performs the same validation and processes all changes atomically — either all succeed or none do. This ensures data integrity.

 **Summary Footer:** A summary at the bottom shows the total number of price tiers (e.g., "7 price tiers") and the active/inactive breakdown for quick reference.

 **Responsive Design:** On desktop, tiers are displayed in a compact table grid. On mobile devices, each tier is displayed as a stacked card for easier editing.

Appendix

A. kVA Price Tiers (Default)

| # | Description | kVA Range | Price (SGD) |
|---|---------------------|-------------------|-------------|
| 1 | 45 kVA | 45 – 45 kVA | \$350 |
| 2 | 46 – 100 kVA | 46 – 100 kVA | \$500 |
| 3 | 101 – 200 kVA | 101 – 200 kVA | \$750 |
| 4 | 201 – 500 kVA | 201 – 500 kVA | \$1,200 |
| 5 | 501 – 1,000 kVA | 501 – 1,000 kVA | \$1,800 |
| 6 | 1,001 – 2,000 kVA | 1,001 – 2,000 kVA | \$2,500 |
| 7 | 2,001 kVA and above | 2,001 – 9,999 kVA | \$3,500 |

Note: Prices shown are default values. Administrators can add, modify, or remove tiers through the System Settings page. A Service Fee (default SGD \$50) is added to each application. kVA ranges must be contiguous with no gaps or overlaps.

B. Supported File Formats

| Document Type | File Type Code | Accepted Formats | Max Size |
|---------------------------|-------------------|---|----------|
| Single Line Diagram (SLD) | DRAWING_SLD | PDF, JPG, PNG, DWG, DXF, DGN, TIF, GIF, ZIP | 10 MB |
| Letter of Appointment | OWNER_AUTH_LETTER | PDF, JPG, PNG, GIF | 10 MB |
| Main Breaker Box Photo | SITE_PHOTO | JPG, JPEG, PNG, HEIC, HEIF | 10 MB |
| Licence Document (Admin) | LICENSE_PDF | PDF | 10 MB |
| Report Document (Admin) | REPORT_PDF | PDF | 10 MB |
| LOA PDF (Auto-generated) | OWNER_AUTH_LETTER | PDF (system-generated) | — |

⚠ ELISE Submission: Files intended for ELISE submission to EMA should be under **2 MB**. The platform will display a warning for files exceeding this threshold, but will still allow the upload.

C. EMA Fees

| Licence Period | EMA Fee (SGD) | Notes |
|----------------|---------------|-------------------------|
| 12 Months | \$100 | Standard licence period |
| 3 Months | \$50 | Short-term licence |

EMA fees are paid directly to EMA and are **not included** in the platform's total amount. They are displayed separately on the application form and detail page for reference.

D. Additional Notes

Login Attempt Limit

For security, the system limits login attempts to **5 per 15 minutes**. If exceeded, you will need to wait before trying again.

Form Navigation Guard

When filling out the New Application form, if you attempt to navigate away or close the page with unsaved data, a confirmation dialog will appear asking if you wish to leave. This prevents accidental data loss.

Real-time Price Calculation

On the kVA & Pricing step, selecting a kVA capacity triggers a real-time price calculation that returns the tier description, base price, service fee, and total amount. The pricing updates instantly as you change the selection.

LOA Digital Signature

The LOA signing feature uses an HTML5 canvas-based signature pad. Your signature is captured as a PNG image and embedded into the official LOA PDF at the designated signature area. The signed date is automatically added. This process is irreversible — once signed, the LOA cannot be modified.

Responsive Design

The platform is fully responsive and works on desktop and mobile devices. Key responsive behaviors include:

- **Application Detail** — Two-column layout on desktop, single-column on mobile with progress tracker shown as a separate card
- **Price Tier Management** — Table grid on desktop, stacked cards on mobile
- **Application Form** — Card-based layout that adapts to screen width

Legal Pages

The platform includes the following legal pages accessible from the footer:

- **Disclaimer** — Service limitations, EMA ELISE submission notice, and liability disclaimers
- **Privacy Policy** — Personal data protection (PDPA) compliance details, data collection and usage policies

LEW Profile Fields

LEW users see additional fields in their Profile page: **LEW Licence Number** and **LEW Grade**, which can be updated as needed.

— End of Manual —

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