

Energy Management Information System (EMIS)

Registered Electrical Energy Manager (REEM)-User Manual

Version 1.9



Important Notes

1. User only can key in 3 times wrong password before the account being blocked by the system. If your account being blocked by the system, please contact the System Administrator for further assistance.
2. Please check in the junk email folder in your email if the verification email does not go into the inbox
3. Please refer to the “Guide on Selecting Subsectors and Product Types” when selecting the subsector. If predefined subsector different from the actual subsector, please change it and ensure that the product type produce by the installation is within the subsector (for Industry sector only). If there is no predefined subsector set, please select the subsector based on the Guide on Selecting Subsectors and Product Types. If you think your subsector is not in the Guide on Selecting Subsectors and Product Types, please contact System Administrator.
4. If the installation falls under the **industry sector**, please refer to the “Guide on Selecting Subsectors and Product Types” first when choosing the product type. The product type must be related to the subsector (product type must be in the subsector’s group) defined in the EMIS as in the guideline.
5. If the desired product type as well as Unit of Measure (UOM) for that product are not in the dropdown list, please contact EC Administrator. We will review the request and add the product type or UOM in the registry if necessary.
6. The Efficient Electrical Energy Management Policy, Committee and Objective is compulsory to have as this is mentioned in the Regulations 6 (1) of Efficient Management of Electrical Energy Regulations 2008 (EMEER 2008). Failure to comply with this subregulation means the installation commits an offence under EMEER 2008.
7. For **Commercial & Government sector**, in the variables tab there is already **pre-defined variables** which are **cooling degree days and occupancy**. If the user thinks that these variables does not related to the installation they may deleted it and defined other variables.
8. When fill in the report, for the Energy Saving Measures (ESM) part (List, Summary of Implemented ESM & Proposed ESM) please only include those ESM for that period reported only.
9. PDF report generated from EMIS does not need to be sent to EC. Only signed Form A and Form B is sent to EC (hardcopy).
10. Baseline year is only available to be selected in PDF Report and Charts if all data for that year is complete one year. For example, year that the data is only from July – December will not be available to be selected as baseline year. The data must be completed 12 months then only the year will appear in the selection.
11. Regression analysis can only be considered if the R² (Coefficient of Determination) value is equal or greater than 0.75.
12. It is responsibility of Installation and REEM user to ensure timely submission of report.

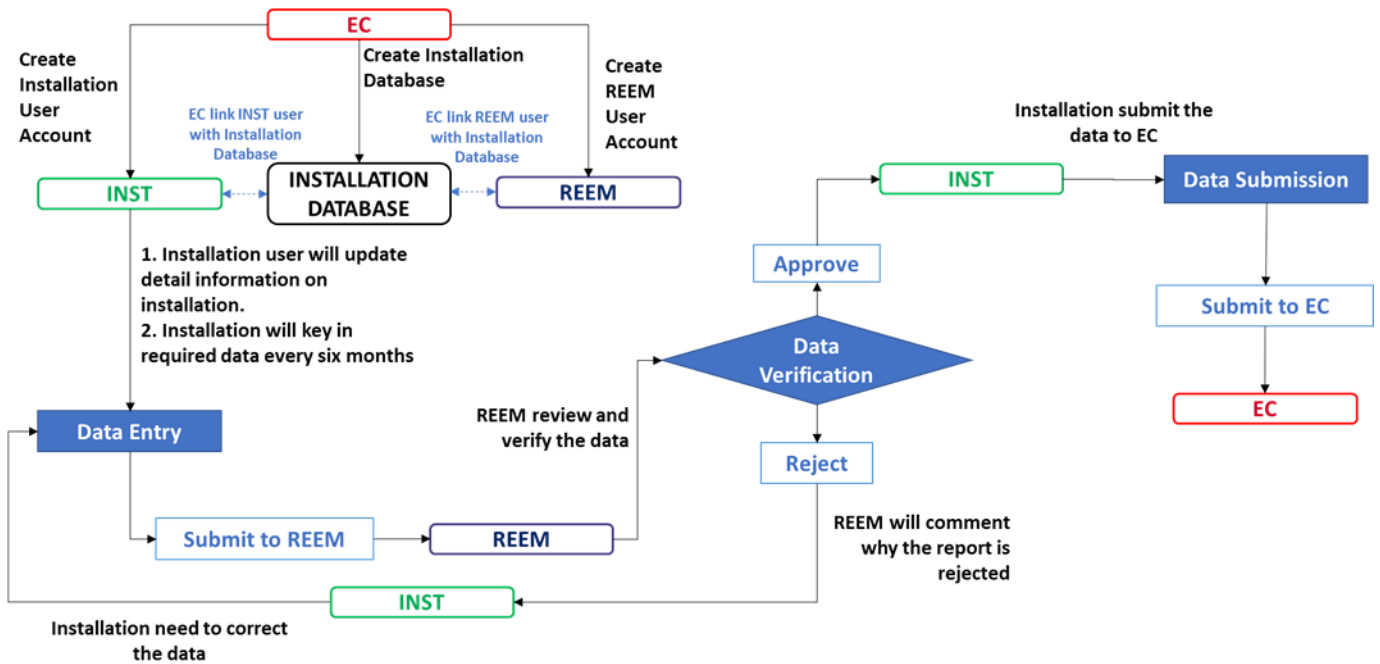
Table of Contents

| | |
|---|----|
| 1. Introduction..... | 4 |
| 1.1 Reporting Flow | 4 |
| 1.2 Privileges for REEM User | 4 |
| 2. Accessing the System | 5 |
| 2.1 Login | 6 |
| 2.2 Changing Password..... | 7 |
| 2.3 Email Verification..... | 8 |
| 2.4 Forgot Password | 10 |
| 3. Homepage..... | 13 |
| 3.1 Overview | 13 |
| 3.2 User's Setting | 14 |
| 4. Installation | 16 |
| 4.1 Overview | 16 |
| 4.2 Creating Labels | 17 |
| 4.3 Viewing Installation's Data..... | 20 |
| 4.3.1 Viewing Installation's Details..... | 21 |
| 4.3.2 Viewing Installation's Electricity Account Number | 24 |
| 4.3.3 Viewing Installation's Variables..... | 25 |
| 4.3.4 Viewing Installation's Fuels (if applicable)..... | 26 |
| 4.3.5 Viewing Installation's Products (for Industry Sector only)..... | 27 |
| 4.4 Viewing Report Submission | 29 |
| 4.4.1 Reports Grid Overview | 29 |
| 4.4.2 Reports Table..... | 30 |
| 5. Reports..... | 31 |
| 5.1 Overview | 31 |
| 5.2 Generate Form A and Form B | 32 |
| 5.3 Generate PDF Report..... | 34 |
| 6. Reports for Verification | 37 |
| 6.1 Overview | 37 |
| 6.2 Approving the Report..... | 38 |
| 6.3 Rejecting the Report..... | 41 |
| 7. Charts..... | 44 |
| 7.1 Overview | 44 |
| 7.2 Analysis | 45 |

| | |
|-------------------------------------|----|
| 8. Alerts | 50 |
| 8.1 Overview | 50 |
| 9. Messaging | 52 |
| 9.1 Overview | 52 |
| 9.2 Create New Message Thread | 53 |
| 10. Contact Us | 56 |

1. Introduction

1.1 Reporting Flow



Note:

EC: Energy Commission

INST: Installation

REEM: Registered Electrical Energy Manager

1.2 Privileges for REEM User

- i. Viewing analysis for assigned installations
- ii. Viewing assigned installations
- iii. Viewing registries
- iv. Viewing reports for assigned installations
- v. EMIS messaging
- vi. Changing personal settings
 - a. Password
 - b. Name, telephone
 - c. E-mail
- vii. Turning EMIS messages to email on and off

2. Accessing the System

1. To access the login page, please type **emis.st.gov.my** in the URL.
2. Energy Commission (EC) Administrator will provide the Registered Electrical Energy Manager (REEM) with the username and temporary password through the official letter. Only REEM that have been appointed by the installation as their REEM as well as having a valid certificate will be grant an access to the system.

ABOUT FAQ CONTACT MANUALS ▾

Suruhanjaya Tenaga
Energy Commission

UNDP
Empowering
Professionals

**ENERGY MANAGEMENT INFORMATION SYSTEM
(EMIS)**

Username :

Password :

[Forgot password](#)

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Note:

- i. About Menu – Gives an overview of the EMIS.
- ii. FAQ Menu – Gives a list of Frequently Asked Question related to EMIS.
- iii. Contact Menu – Gives a contact details of EC Administrator.
- iv. Manuals Menu – Contain manuals for:
 - a. Installation user
 - b. Registered Electrical Energy Manager user
 - c. Guide on selecting subsectors and product types

2.1 Login

ABOUT FAQ CONTACT MANUALS

Suruhanjaya Tenaga
Energy Commission

UNDP
Engineering,
Reliability,
Innovation.

ENERGY MANAGEMENT INFORMATION SYSTEM (EMIS)

Username : 1
Password : 1
 2
[Forgot password](#)

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1. Insert the username and temporary password provided by EC Administrator.
2. Click Login.

Note:

- Maximum number of attempts to log in is three times.** If the user enters a wrong password more than three times, the user will get blocked. The user then need to contact EC Administrator to gain access back to the system. EC Administrator will unblock the user.

2.2 Changing Password

⊘ Hello, Demo REEM [demo.reem]! You have to change your initial password

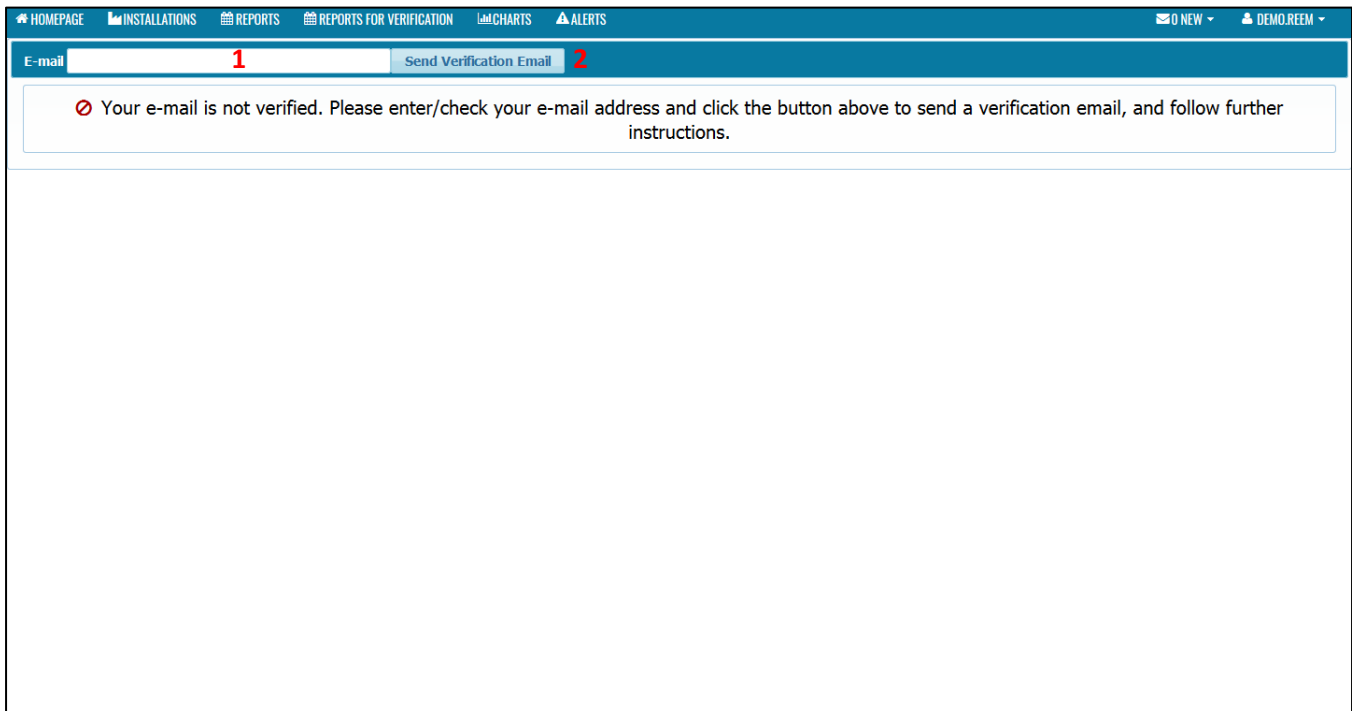
| Change Password | |
|--|----------------------|
| Old Password | <input type="text"/> |
| 1 New Password | <input type="text"/> |
| New Password (again) | <input type="text"/> |
| <input type="button" value="Change Password"/> | |

1. For the first log-in, a user is required to change the initial password. Please key in the old password and the new desired password.

Note:

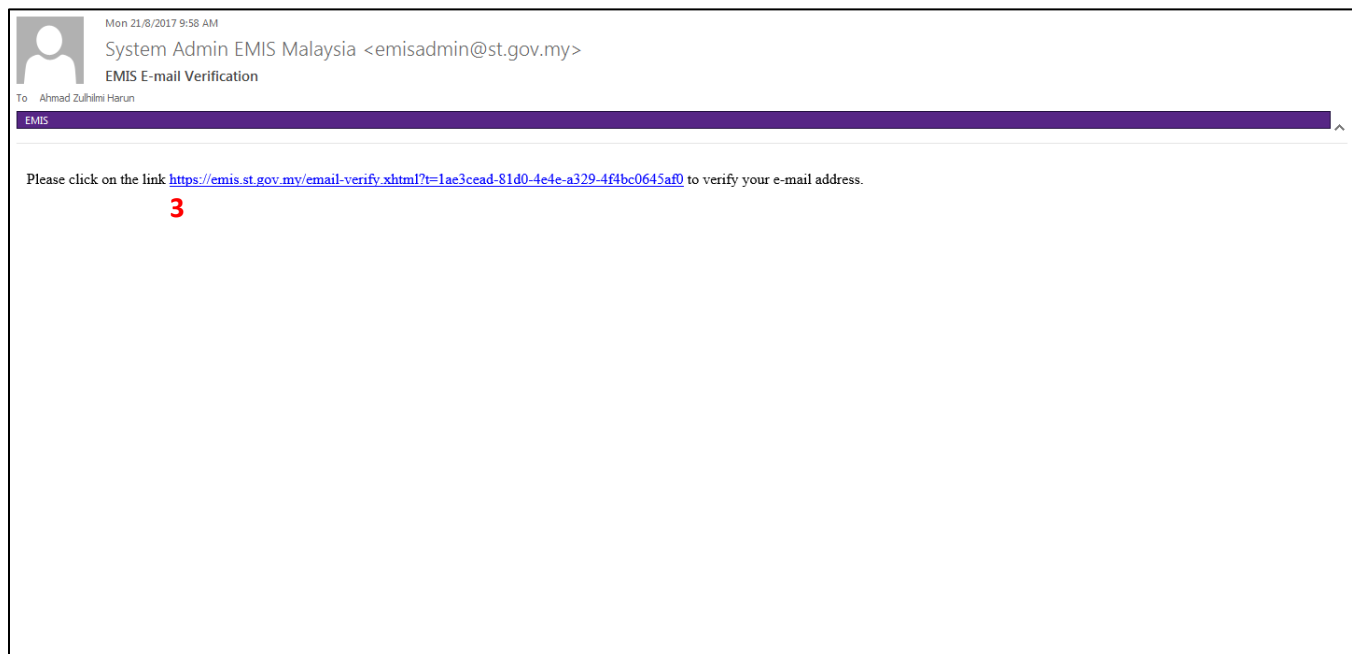
- i. Password must meet the required complexity criteria:
 - a. Minimum 8 characters
 - b. Characters have to be from at least 2 of the following types
 - Lowercase letters
 - Digits

2.3 Email Verification

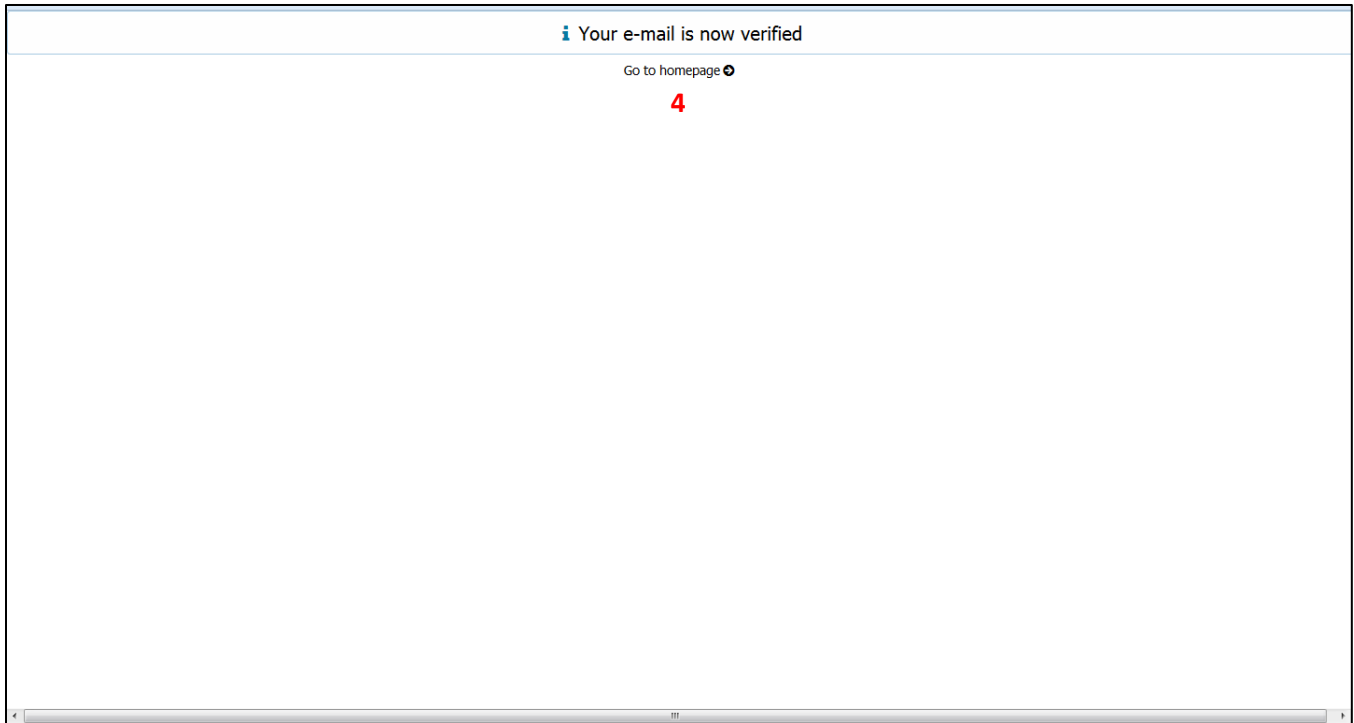


The screenshot shows a web application interface with a navigation bar at the top containing links for HOME PAGE, INSTALLATIONS, REPORTS, REPORTS FOR VERIFICATION, CHARTS, and ALERTS. On the right side of the navigation bar, there are indicators for 0 NEW and a user profile labeled DEMO.REEM. Below the navigation bar, there is an input field for an email address, marked with a red '1', and a button labeled 'Send Verification Email' marked with a red '2'. A message box below the input field contains a red error icon and the text: 'Your e-mail is not verified. Please enter/check your e-mail address and click the button above to send a verification email, and follow further instructions.'

1. Please enter your email address.
2. Click on Send Verification Email.



3. Check your inbox and opened the email. Click on the link in the email.



4. Your email is now verified. Click Go to Homepage

Note:

- i. All menus will be blocked until the verification is completed
- ii. Please check in the junk email folder in your email if the verification email does not go into the inbox.
- iii. Please note that whenever the email address is changed, the new address must be verified.

2.4 Forgot Password

ABOUT FAQ CONTACT MANUALS -

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Energy Commission

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Empowered lives.
Resilient nations.

ENERGY MANAGEMENT INFORMATION SYSTEM (EMIS)

Username :

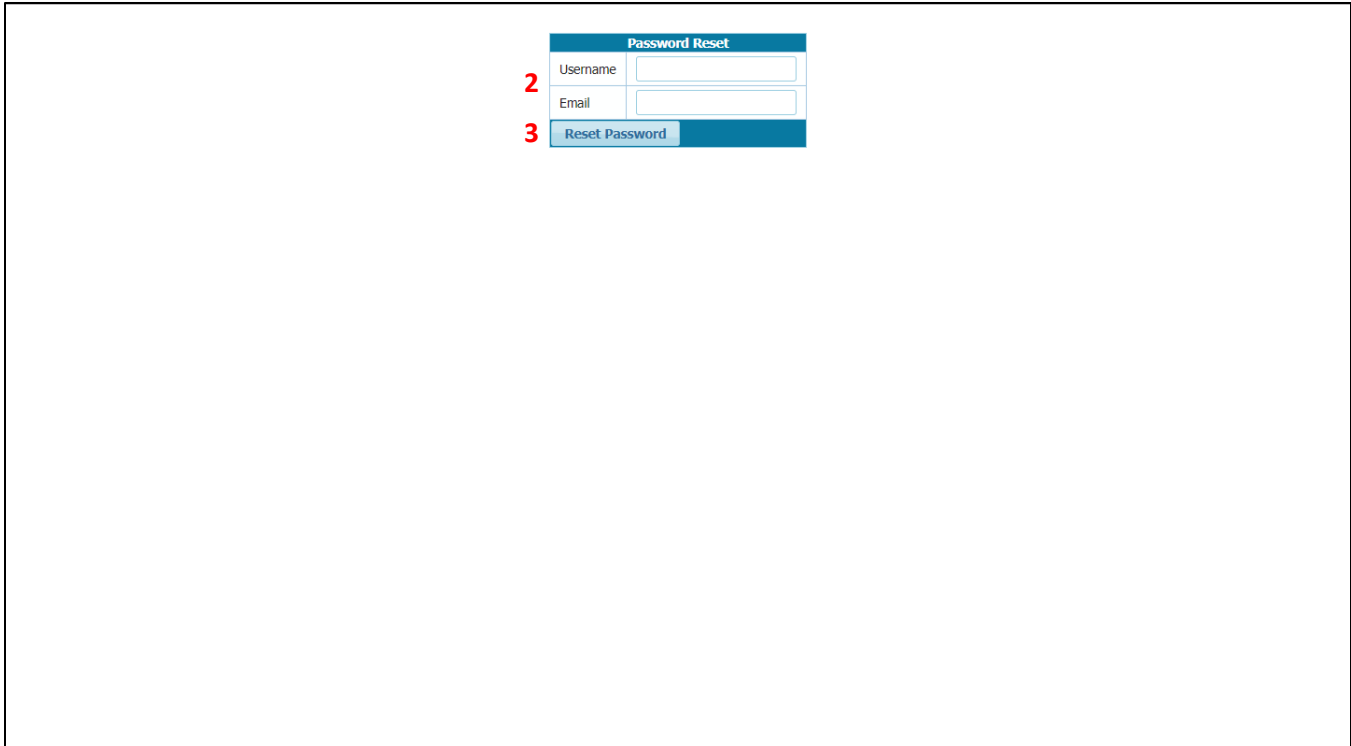
Password :

Login

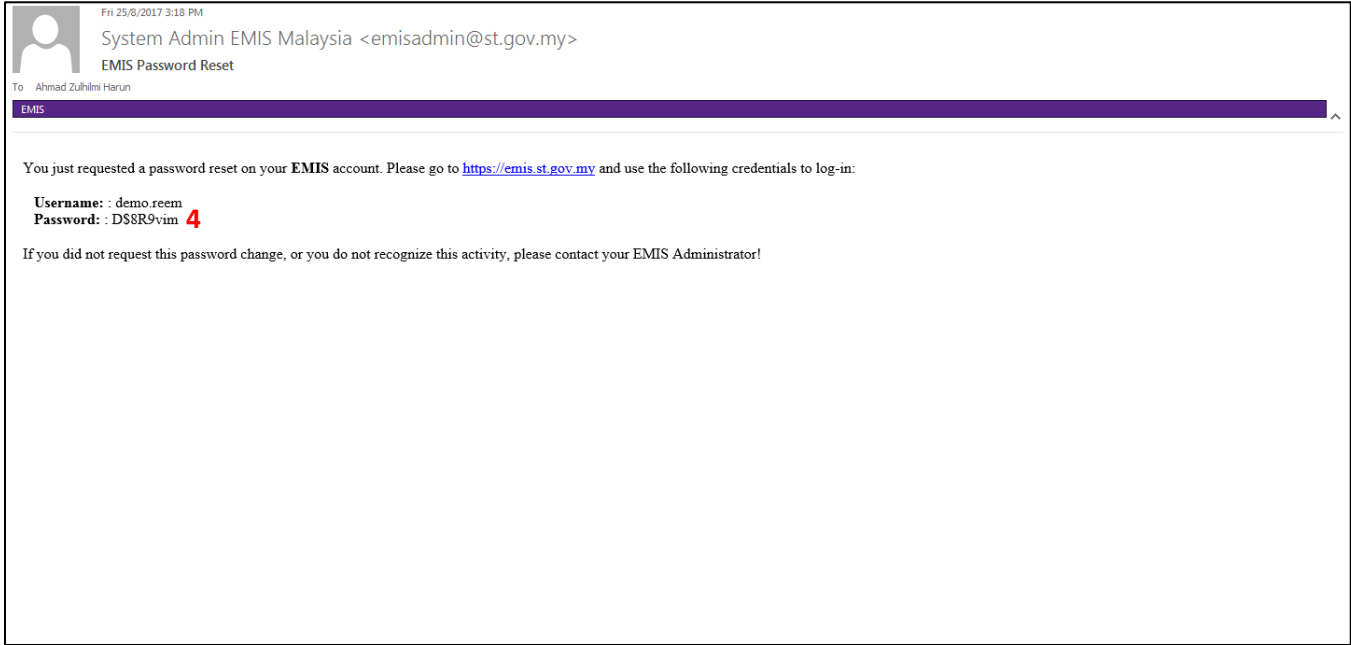
[Forgot password](#)

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1. At the login page, click on the Forgot Password.



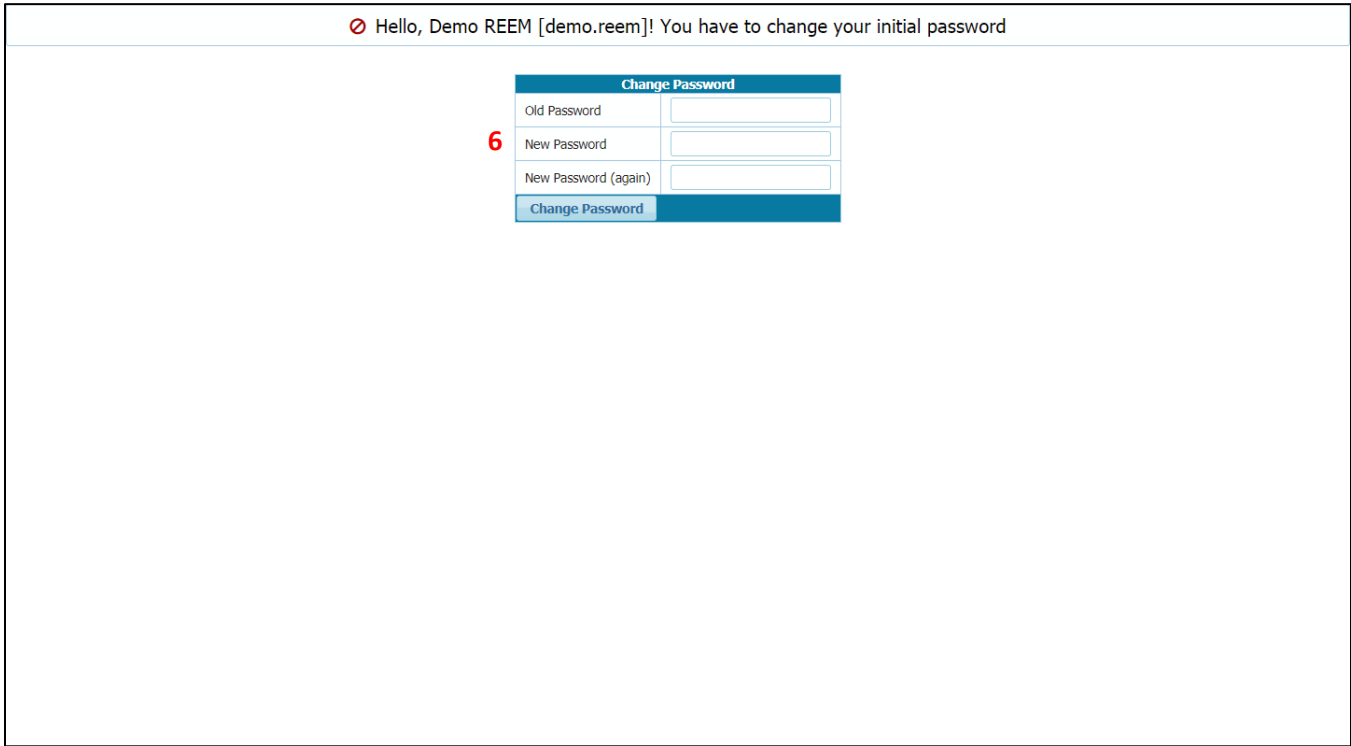
2. Enter the Username and Email Address (email that has been verified with EMIS).
3. Click on the Reset Password. An email will be sent to you which contain the temporary password.



4. Open the email and please find the temporary password in the email.



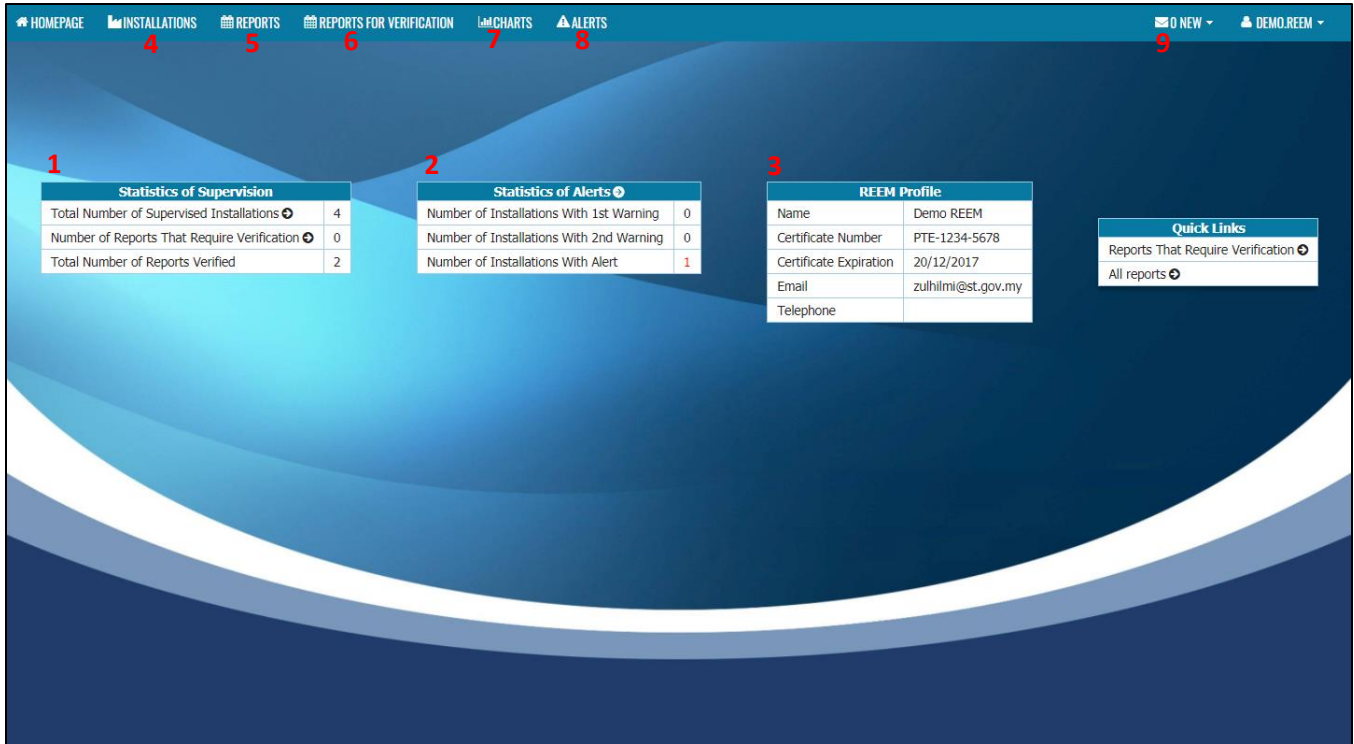
5. Login into EMIS using the temporary password provided in the email.



6. User is required to change the temporary password. Please key in the temporary password and the new desired password (as per section 2.2).

3. Homepage

3.1 Overview



1. Statistics of Supervision gives an overview of the installation supervised by REEM as well as report submitted by the installation user.
2. Statistics of Alerts gives an overview of installation supervised by REEM that received reminder and alerts on submission of report.
3. REEM Profile gives an information about the REEM.
4. Installation tab will direct the user to their list of supervised installation.
5. Reports tab will direct the user to the list of report submitted by their supervised installation.
6. Reports for Verification tab will direct the user to the list of report that require their verification.
7. Charts tab will direct the user to the analysis section.
8. Alerts tab will direct the user to the alerts received.
9. Messages tab will direct the user to the messaging functionality.

3.2 User's Setting

The screenshot displays a web dashboard with a dark blue background and white text. At the top, there is a navigation bar with links: HOME PAGE, INSTALLATIONS, REPORTS, REPORTS FOR VERIFICATION, CHARTS, and ALERTS. On the right side of the navigation bar, there is a notification icon with '0 NEW' and a user profile icon labeled 'DEMO.REEM' with a red '1' next to it. Below the navigation bar, there are three main sections: 'Statistics of Supervision', 'Statistics of Alerts', and 'REEM Profile'. The 'Statistics of Supervision' section contains a table with three rows. The 'Statistics of Alerts' section contains a table with three rows. The 'REEM Profile' section contains a table with four rows. On the right side, there is a 'Quick Links' section with two links. At the bottom left, there is a browser address bar showing 'https://emis.st.gov.my/mal/index.xhtml#'. A 'My Settings' button with a red '2' is located in the top right corner of the dashboard area.

| Statistics of Supervision | |
|---|---|
| Total Number of Supervised Installations | 4 |
| Number of Reports That Require Verification | 0 |
| Total Number of Reports Verified | 2 |

| Statistics of Alerts | |
|--|---|
| Number of Installations With 1st Warning | 0 |
| Number of Installations With 2nd Warning | 0 |
| Number of Installations With Alert | 1 |

| REEM Profile | |
|------------------------|--------------------|
| Name | Demo REEM |
| Certificate Number | PTE-1234-5678 |
| Certificate Expiration | 20/12/2017 |
| Email | zulhildi@st.gov.my |
| Telephone | |

| Quick Links | |
|-----------------------------------|--|
| Reports That Require Verification | |
| All reports | |

My Settings 2
Logout

DEMO.REEM 1

https://emis.st.gov.my/mal/index.xhtml#

1. Go to the user's profile tab.
2. Click My Settings.

[HOME PAGE](#)
[INSTALLATIONS](#)
[REPORTS](#)
[REPORTS FOR VERIFICATION](#)
[CHARTS](#)
[ALERTS](#)

[0 NEW](#)
[DEMO REEM](#)

Change Password

| | |
|--|----------------------|
| Old Password | <input type="text"/> |
| New Password | <input type="text"/> |
| New Password (again) | <input type="text"/> |
| <input type="button" value="Change Password"/> | |

General data R:MAL_REEM - REEM

| | |
|-------------------------------------|--|
| Full Name | <input type="text" value="Demo REEM"/> |
| Telephone | <input type="text"/> |
| Mobile Phone | <input type="text"/> |
| Fax | <input type="text"/> |
| E-Mail | <input type="text" value="emisadmin@st.gov.my"/> |
| Send Messages to e-mail | <input checked="" type="checkbox"/> |
| <input type="button" value="Save"/> | |

Use this data when reporting a problem with application:

| | |
|--|---------------------|
| Logged in user | demo.reem |
| Application Server Current Date and Time | 25/08/2017 15:36:08 |
| Database Server Current Date and Time | 25/08/2017 15:36:08 |

3. User can change their password in this page (if required).

4. User need to update their:
- a. Telephone number
 - b. Mobile Phone number
 - c. Fax number

Note:

- i. If the user changes their email address, the user need to update their email address in this section.
- ii. If the Send Messages to e-mail is ticked, user will receive a notification email whenever a message is received by the user.
- iii. If the REEM's certificate expiry date at the homepage does not updated after renewal, please inform EC Administrator to update the latest expiry date. The certificate expiry date cannot be updated in this section. Only EC Administrator can update the REEM's certificate expiry date.

4. Installation

4.1 Overview

| File number | Installation Name | Licencee Supply | Accounts | Installation Label | Address | City/Municipality | ZIP | County name / G | Project Name | Sector | Subsector | Contact Person | Co |
|-------------|---------------------|--------------------|------------|--------------------|--------------------|-------------------|-------|-----------------|--------------|------------|--------------------|------------------|--------|
| demo | Demo Installation | Tenaga Nasional Be | 123456789 | | 123 Jalan Kecekapa | WP Putrajaya | 62100 | Putrajaya | Demo | Industry | Manufacture of Non | Ahmad bin Mohame | Electr |
| demo 2 | Demo Installation 2 | Tenaga Nasional Be | 1234567890 | | | | | | Demo | Commercial | Office Building | | |

1. This section will show list of installation supervised by REEM.
2. Export button allows the user to export the table to Excel or CSV format.
3. Labels button allows the user to label any installation to specific label/tag.
4. Refresh button allows user to refresh the data in the table.
5. Reset Table allows user to reset the table to its original state.

Note:

i. Working with tables:

The screenshot shows a software interface with a table. Callouts point to various features: 'Search by field criteria' points to the search dropdowns; 'Sort Ascending / Descending' points to the sort icon; 'Load additional 1000 entries' points to the refresh icon; 'Search typical fields' points to the 'Global Search' input; 'Open' points to the expand icon; and 'Options' points to the menu icon.

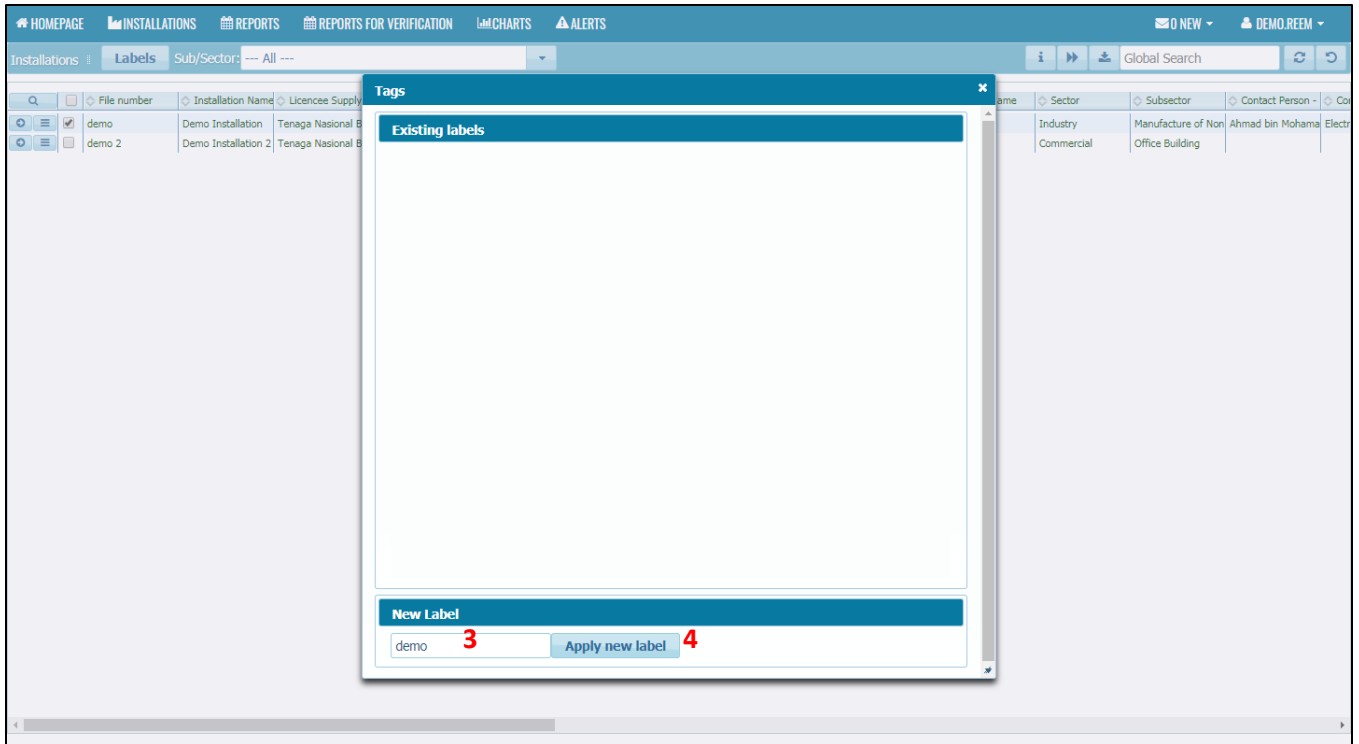
| File number | Installation Name | Licencee Supply | Accounts | Installation Label | Address | City/Municipality | ZIP | County name / G | Project Name | Sector | Subsector | Contact Person | Co |
|-------------|---------------------|--------------------|-----------|--------------------|--------------------|-------------------|-------|-----------------|--------------|------------|--------------------|------------------|--------|
| demo | Demo Installation | Tenaga Nasional Be | 123456789 | | 123 Jalan Kecekapa | WP Putrajaya | 62100 | Putrajaya | Demo | Industry | Manufacture of Non | Ahmad bin Mohama | Electr |
| demo 2 | Demo Installation 2 | Tenaga Nasional Be | | | | | | | Demo | Commercial | Office Building | | |

4.2 Creating Labels

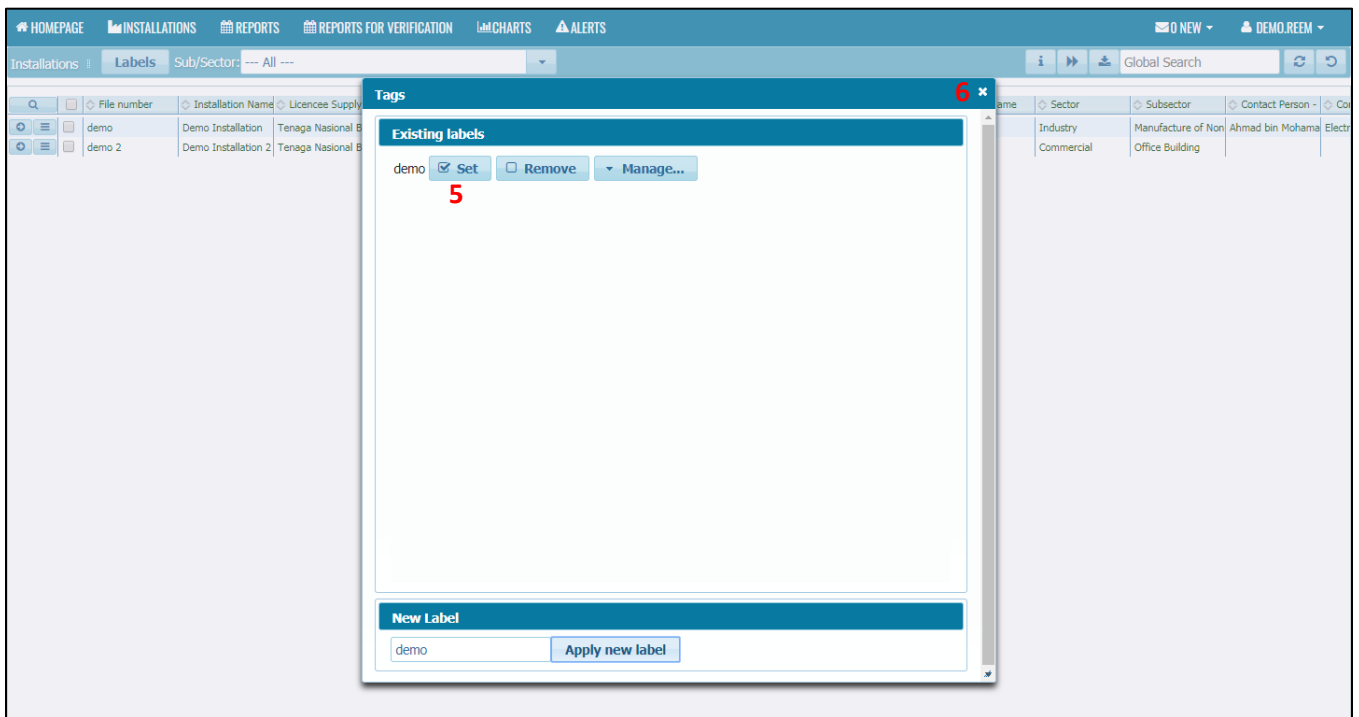
The screenshot shows the software interface with the 'Labels' button highlighted in red. A red arrow points to the checkbox in the first row of the table, which is checked.

| File number | Installation Name | Licencee Supply | Accounts | Installation Label | Address | City/Municipality | ZIP | County name / G | Project Name | Sector | Subsector | Contact Person | Co |
|--|---------------------|--------------------|------------|--------------------|--------------------|-------------------|-------|-----------------|--------------|------------|--------------------|------------------|--------|
| <input checked="" type="checkbox"/> demo | Demo Installation | Tenaga Nasional Be | 123456789 | | 123 Jalan Kecekapa | WP Putrajaya | 62100 | Putrajaya | Demo | Industry | Manufacture of Non | Ahmad bin Mohama | Electr |
| <input type="checkbox"/> demo 2 | Demo Installation 2 | Tenaga Nasional Be | 1234567890 | | | | | | Demo | Commercial | Office Building | | |

1. Tick the box for which you want to label the installation
2. Click on Labels button.



3. Enter the desired label.
4. Click apply new label.



5. Click set to assign the label to the installation.
6. Click the close button.

| File number | Installation Name | Licencee Supply | Accounts | Installation Label | Address | City/Municipality | ZIP | County name / G | Project Name | Sector | Subsector | Contact Person | Co |
|-------------|---------------------|--------------------|------------|--------------------|--------------------|-------------------|-------|-----------------|--------------|------------|--------------------|------------------|--------|
| demo | Demo Installation | Tenaga Nasional Be | 123456789 | demo | 123 Jalan Kecekapa | WP Putrajaya | 62100 | Putrajaya | Demo | Industry | Manufacture of Non | Ahmad bin Mohama | Electr |
| demo 2 | Demo Installation 2 | Tenaga Nasional Be | 1234567890 | | | | | | Demo | Commercial | Office Building | | |

7. Installation is now labelled.

Note:

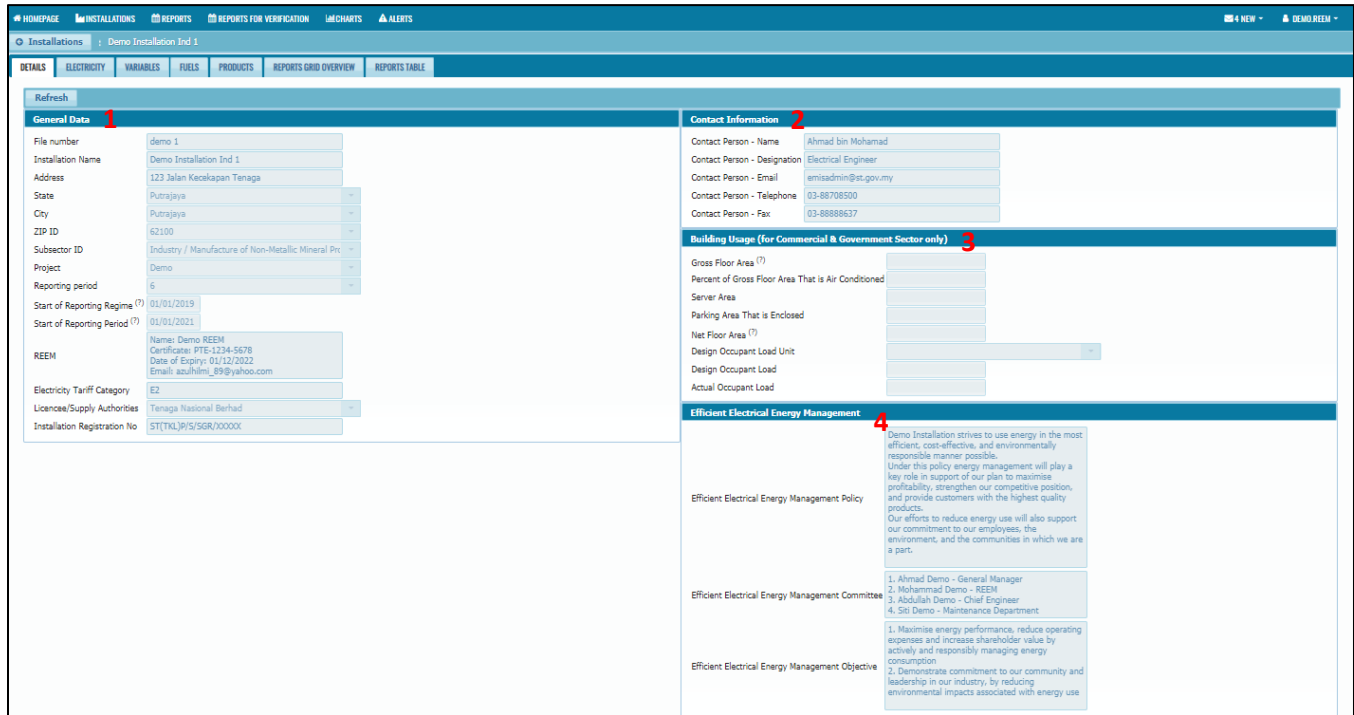
- i. To remove the label from the selected installation, click button.
- ii. To rename the label, click button and select Rename.
- iii. To delete the label, click button and select Delete.

4.3 Viewing Installation's Data

| File number | Installation Name | Licencee Supply | Accounts | Installation Label | Address | City/Municipality | ZIP | County name / G | Project Name | Sector | Subsector | Contact Person | Co |
|-------------|---------------------|--------------------|------------|--------------------|--------------------|-------------------|-------|-----------------|--------------|------------|--------------------|-------------------|--------|
| demo | Demo Installation | Tenaga Nasional Be | 123456789 | | 123 Jalan Kecekapa | WP Putrajaya | 62100 | Putrajaya | Demo | Industry | Manufacture of Non | Ahmad bin Mohamad | Electr |
| demo 2 | Demo Installation 2 | Tenaga Nasional Be | 1234567890 | | | | | | Demo | Commercial | Office Building | | |

1. Access the installation either by clicking on the button or button and click Open. User also can access the installation by double click on the installation's row.

4.3.1 Viewing Installation's Details



1. In the General Data section, REEM user is advised to review the following:

- a. Installation Name
- b. Address
- c. Subsector (Installation user is required to refer to the **“Guide on Selecting Subsectors and Product Types”** when checking the subsector. If predefined subsector different from the actual subsector, please change it and ensure that the product type produce by the installation is within the subsector. If there is no predefined subsector set, please select the subsector based on the guideline mentioned before.)
- d. Predefined Start of Reporting Regime and Start of Reporting Period.
- e. REEM for the installation (if there is a change in appointed REEM, please inform EC Administrator as soon as possible either through email (emisadmin@st.gov.my), EMIS Messaging (to EC Administrator user) or official letter to Energy Commission (attention to: Energy Efficiency & Conservation Unit))
- f. Electricity Tariff Category
- g. Licensee/Supply Authorities Installation Registration No. (example is ST(TKL)P/S/SGR/XXXXX. If you have more than one number, please put comma (,) after each number. If you are unsure what is your installation registration number, please contact Energy Commission Regional Office.)

Note:

- i. If the installation falls under the industry sector, Installation user is required to refer to the **“Guide on Selecting Subsectors and Product Types”** and select **carefully** the **subsector** based on the **product types** produce by the installation as this product types will be defined in the Products Tab.
2. In the Contact Information section, REEM user is advised to review the following:
 - a. Name of the contact person
 - b. Designation of the contact person
 - c. Email of the contact person
 - d. Telephone number of the contact person
 - e. Fax number of the contact person
3. In the Building Usage section, this section is **only for installation that falls under Commercial and Government sector**. For installation that falls under both of this sector, REEM user is advised to review the following:
 - a. Gross Floor Area
 - b. Percent of Gross Floor Area That is Air Conditioned
 - c. Server Area
 - d. Parking Area That is Enclosed
 - e. Net Floor Area
 - f. Design Occupant Load Unit (please contact EC Administrator if the desired Unit of Measure (UOM) is not in the list)
 - g. Design Occupant Load
 - h. Actual Occupant Load

Note:

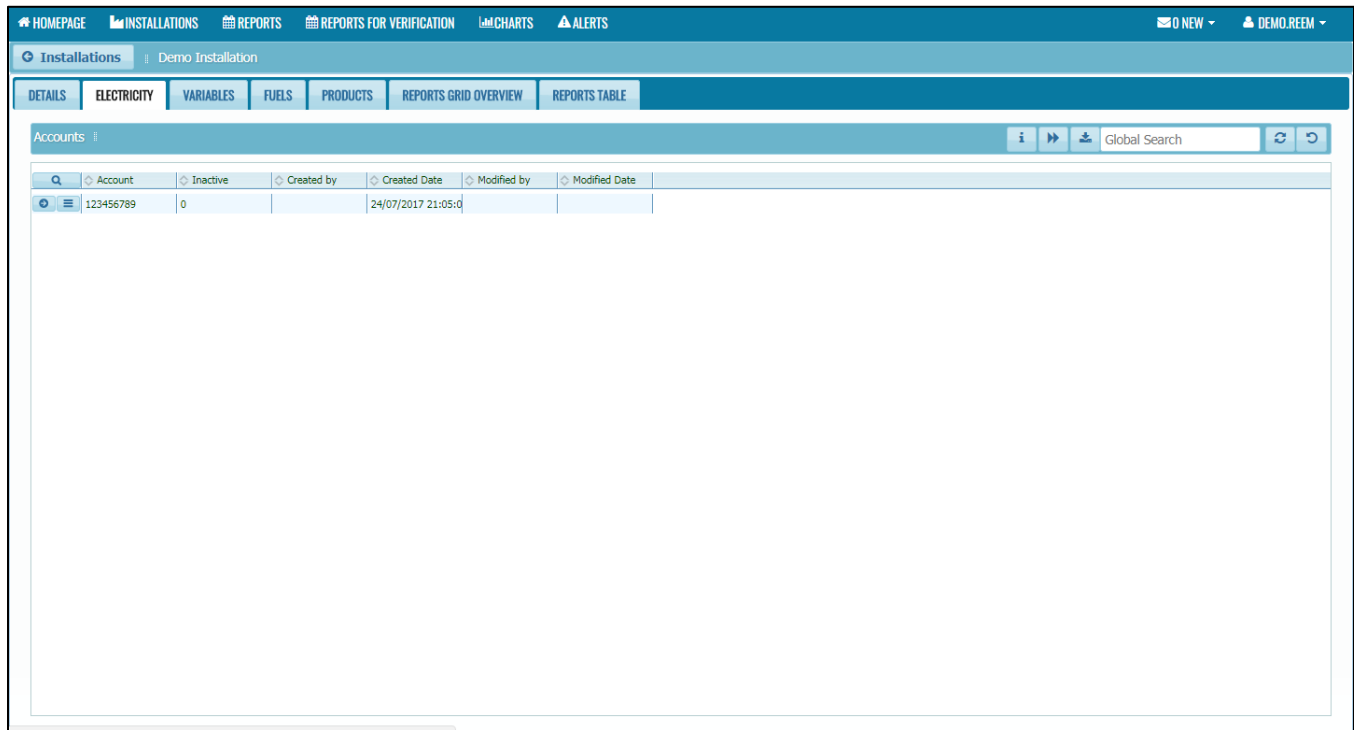
- i. The Gross Floor Area is defined as the floor area of a building covering the entire built-up floor area of the building.
- ii. The Net Floor Area is defined as the floor area of a building covering the entire built-up floor area of the building exclude the parking space and the outer corridor.

4. In the Efficient Electrical Energy Management section, REEM user is advised to review the following:
 - a. Efficient Electrical Energy Management Policy
 - b. Efficient Electrical Energy Management Committee
 - c. Efficient Electrical Energy Management Objective

Note:

- i. The Efficient Electrical Energy Management Policy, Committee and Objective is mentioned in the Regulations 6 (1) of Efficient Management of Electrical Energy Regulations 2008 (EMEER 2008). Failure to comply with this subregulation means the installation commits an offence under EMEER 2008.

4.3.2 Viewing Installation's Electricity Account Number

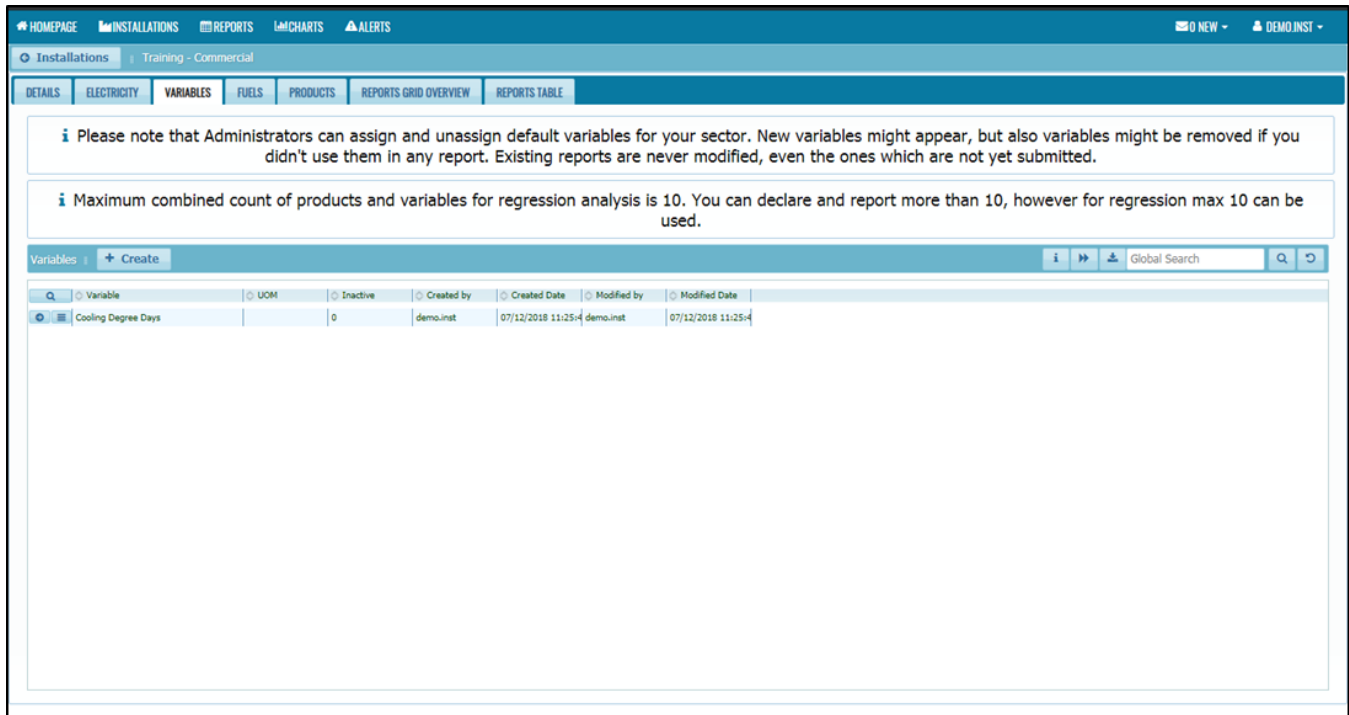


1. In the Electricity tab, REEM user can view the Installation's Electricity Account Number.

Note:

- i. Some installation may have more than one Licencee/Supply Authorities account number. Installation can only add the account that belong to the same complexes, do not add account that is in the different places.
- ii. Installation user only need to tick the inactive box if the account number is no longer in use or when the installation change to a new Licencee/Supply Authorities account number.
- iii. When creating a report for accounts, only the active ones will be available for entering new data on report. If an account should not be on a report (because it is permanently or temporarily inactive), it should be marked as inactive (it can be reactivated at any time by unchecking the box). All historical data, on already accepted reports will always be available for analysis, even if account is marked as inactive.
- iv. If an account was previously referenced in a report, its number cannot be changed.

4.3.3 Viewing Installation's Variables



1. In the Variables tab, REEM user can view the Installation's Variables. REEM user is advised to review the variables defined by the installation user.

Note:

- i. If the desired variables (as well as Unit of Measure (UOM) for that variables) are not in the dropdown list, please contact EC Administrator and we will add it in the registry.
- ii. Installation user is advised to consult and discuss with their REEM to determine the suitable variables which affecting the electricity usage at the installation.
- iii. Installation may have more than one variables.
- iv. Only tick the inactive box if the variables are no longer applicable.
- v. When creating a report for variables, only the active ones will be available for entering new data on report. If a variable should not be on a report (because it is permanently or temporarily inactive), it should be marked as inactive (it can be reactivated at any time by un-checking the box). All historical data, on already accepted reports will always be available for analysis, even if variable is marked as inactive.
- vi. If a variable was previously referenced in a report, it cannot be deleted from this list, it can only be marked as inactive (and can be reactivated at any time).

- vii. EC Administrators can assign and unassigned default variables for specific sector. New variables might appear, but also variables might be removed if you didn't use them in any report. Existing reports are never modified, even the ones which are not yet submitted.
- viii. Maximum combined count of products and variables for regression analysis is 10. You can declare and report more than 10, however for regression max 10 can be used.
- ix. For **Commercial & Government sector**, in the variables tab there is already pre-defined variables which are **cooling degree days and occupancy**. If the user thinks that these variables does not related to the installation they may deleted it and defined other variables.

4.3.4 Viewing Installation's Fuels (if applicable)

| Fuel | UOM | Inactive | Created by | Created Date | Modified by | Modified Date |
|-------------|----------------|----------|------------|--------------------|-------------|--------------------|
| Natural Gas | m ³ | 0 | | 14/06/2017 18:45:2 | | 23/08/2017 19:14:4 |

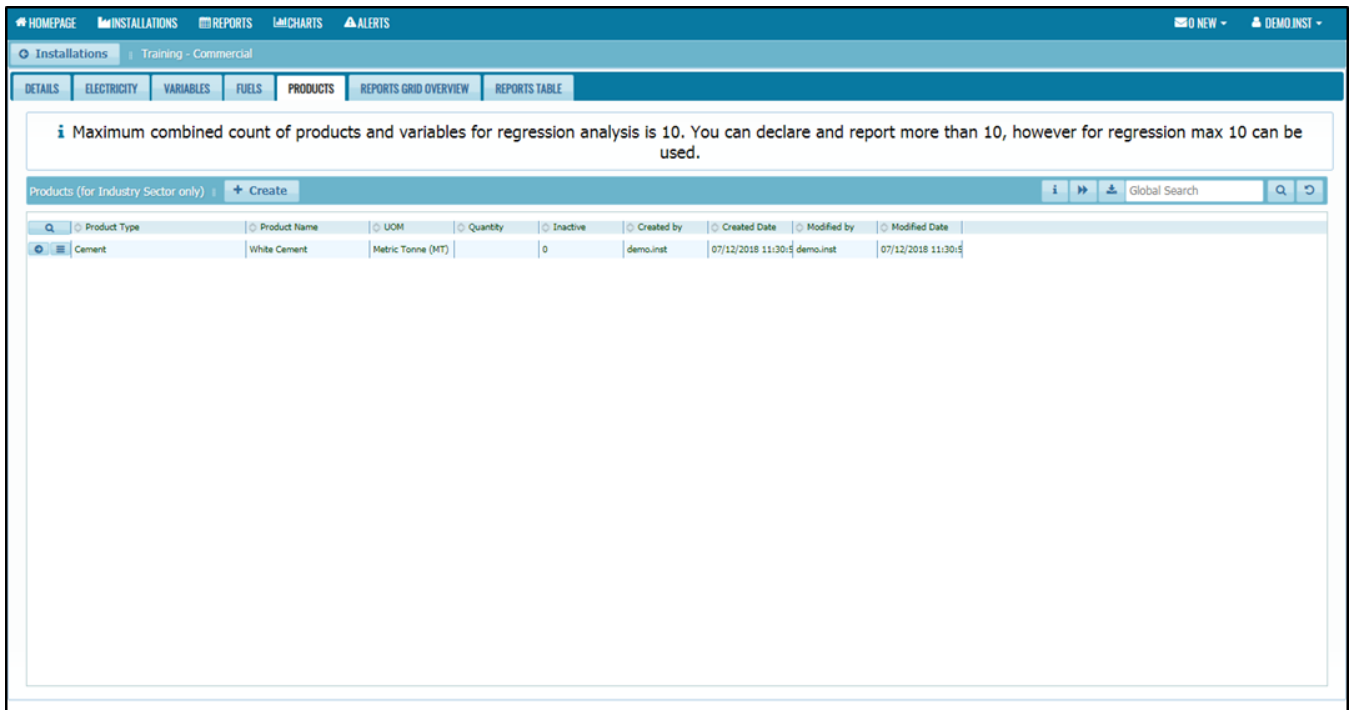
1. In the Fuels tab, REEM user can view the Installation's Fuels.

Note:

- i. Installation user is required to update this section if they are using fuel to produce electricity. If not, just leave it blank.
- ii. If the desired fuels (as well as Unit of Measure (UOM) for that fuels) are not in the dropdown list, please contact EC Administrator and we will add it in the registry.

- iii. Installation may have more than one fuels.
- iv. Only tick the inactive box if the fuels are no longer applicable.
- v. When creating a report for fuel, only the active ones will be available for entering new data on report. If a fuel should not be on a report (because it is permanently or temporarily inactive), it should be marked as inactive (it can be reactivated at any time by un-checking the box). All historical data, on already accepted reports will always be available for analysis, even if fuel is marked as inactive.
- vi. If a fuel was previously referenced in a report, it cannot be deleted, it can only be marked as inactive (and can be reactivated at any time)

4.3.5 Viewing Installation’s Products (for Industry Sector only)



1. In the Products tab, REEM user can view the Installation’s Products. REEM user is advised to review the product type defined by the installation user.

Note:

- i. This section is **only for Industry Sector**. For Commercial and Government sector, leave this section blank.
- ii. Installation user is required to refer to the “**Guide on Selecting Subsectors and Product Types**” first when choosing the product type. The **product type** must be **related** to the **subsector** (product type must be in the subsector’s group) defined in the EMIS as in the guideline.
- iii. If the desired product type as well as Unit of Measure (UOM) for that product are not in the dropdown list, please contact EC Administrator. We will review the request and add the product type or UOM in the registry if necessary.
- iv. Installation may have more than one product.
- v. Only tick the inactive box if the product is no longer applicable.
- vi. When creating a report for products, only the active ones will be available for entering new data on report. If a product should not be on a report (because it was not produced in current reporting period), it should be marked as inactive (it can be reactivated at any time by unchecking the box). All historical data, on already accepted reports will always be available for analysis, even if product is marked as inactive.
- vii. If a product was previously referenced in a report, its name and UOM cannot be changed. If UOM needs to be changed a new product with the same name and different UOM should be created, and the old one should be marked as inactive. Product can be deleted if it doesn’t exist on any report.
- viii. Maximum combined count of products and variables for regression analysis is 10. You can declare and report more than 10, however for regression max 10 can be used.


4.4 Viewing Report Submission

4.4.1 Reports Grid Overview

The screenshot displays the 'Reports Grid Overview' tab in a software interface. At the top, there is a navigation bar with options like 'HOME PAGE', 'INSTALLATIONS', 'REPORTS', 'REPORTS FOR VERIFICATION', 'CHARTS', and 'ALERTS'. Below this, a sub-header shows 'Installations' and 'Demo Installation'. The main content area is divided into two sections.

The first section, titled 'Reports for Current Installation', contains a table with columns for 'Year' and months 1 through 12. The data shows reports for 2016 (submitted 01/2016 and 07/2016) and 2017 (submitted 01/2017). A legend on the right indicates report statuses: Draft (white), Submitted to REEM (yellow), Approved by REEM (green), Rejected by REEM (red), Submitted to EC (dark green), and Rejected by EC (dark red).

The second section, titled 'ACCOUNT', shows a detailed table for account '123456789 [kWh]'. It has columns for 'Year', '1' through '12', and 'FUEL'. The data for 2016 and 2017 is color-coded based on a legend: Green for minimal values, Yellow for average values, and Red for maximal values. A color gradient legend explains that the color represents a proportional value between the minimal, average, and maximal values in the table. A note at the bottom of the legend states: 'Average, min and max are calculated for each table individually using only report values. Baseline values are not included.'

1. In the Reports Grid Overview tab, REEM user can view the report submitted by the installation user as well as the status of the report.
2. Click on the report  to view the report.

4.4.2 Reports Table

| File number | Installation Name | Report type | Start Date | Report duration | Reporting period | Report Status | Comment | Created by | Created Date | Modified by | Modified Date | Report ID |
|-------------|-------------------|-------------|------------|-----------------|-------------------|-----------------|---------|------------|--------------------|-------------|--------------------|-----------|
| demo | Demo Installation | Baseline | 01/01/2016 | 6 | 01/2016 - 06/2016 | SUBMITTED_TO_EC | | | 23/08/2017 15:37:1 | | 23/08/2017 15:44:0 | 165 |
| demo | Demo Installation | Report | 01/01/2018 | 6 | 01/2018 - 06/2018 | SUBMITTED_TO_EC | | | 28/09/2017 11:00:1 | | 28/09/2017 11:05:5 | 221 |
| demo | Demo Installation | Report | 01/07/2018 | 6 | 07/2018 - 12/2018 | SUBMITTED_TO_EC | | | 28/09/2017 11:06:0 | | 28/09/2017 11:12:2 | 222 |
| demo | Demo Installation | Report | 01/01/2019 | 6 | 01/2019 - 06/2019 | SUBMITTED_TO_EC | | | 28/09/2017 11:12:4 | | 28/09/2017 11:30:1 | 223 |
| demo | Demo Installation | Report | 01/07/2019 | 6 | 07/2019 - 12/2019 | SUBMITTED_TO_EC | | | 28/09/2017 11:30:2 | | 28/09/2017 11:33:1 | 224 |
| demo | Demo Installation | Report | 01/01/2017 | 6 | 01/2017 - 06/2017 | SUBMITTED_TO_EC | | | 23/08/2017 12:19:2 | | 23/08/2017 14:28:3 | 164 |
| demo | Demo Installation | Report | 01/07/2017 | 6 | 07/2017 - 12/2017 | SUBMITTED_TO_EC | | | 19/09/2017 11:24:1 | | 28/09/2017 10:59:0 | 201 |
| demo | Demo Installation | Report | 01/01/2020 | 6 | 01/2020 - 06/2020 | SUBMITTED_TO_EC | | | 05/10/2017 16:06:2 | | 05/10/2017 16:15:0 | 241 |
| demo | Demo Installation | Baseline | 01/07/2016 | 6 | 07/2016 - 12/2016 | SUBMITTED_TO_EC | | | 23/08/2017 11:37:3 | | 23/08/2017 12:10:4 | 163 |

1. Reports Table section contain list of report with its status for the installation.

5. Reports

5.1 Overview

| File number | Installation Name | Report type | Start Date | Report duration | Reporting period | Report Status | Comment | Created by | Created Date | Modified by | Modified Date | Report ID |
|-------------|-------------------|-------------|------------|-----------------|-------------------|-----------------|---------|------------|--------------------|-------------|--------------------|-----------|
| demo | Demo Installation | Baseline | 01/01/2016 | 6 | 01/2016 - 06/2016 | SUBMITTED_TO_EC | | | 23/08/2017 15:37:1 | | 23/08/2017 15:44:0 | 165 |
| demo | Demo Installation | Report | 01/01/2018 | 6 | 01/2018 - 06/2018 | SUBMITTED_TO_EC | | | 28/09/2017 11:00:1 | | 28/09/2017 11:05:5 | 221 |
| demo | Demo Installation | Report | 01/07/2018 | 6 | 07/2018 - 12/2018 | SUBMITTED_TO_EC | | | 28/09/2017 11:06:0 | | 28/09/2017 11:12:2 | 222 |
| demo | Demo Installation | Report | 01/01/2019 | 6 | 01/2019 - 06/2019 | SUBMITTED_TO_EC | | | 28/09/2017 11:12:4 | | 28/09/2017 11:30:1 | 223 |
| demo | Demo Installation | Report | 01/07/2019 | 6 | 07/2019 - 12/2019 | SUBMITTED_TO_EC | | | 28/09/2017 11:30:2 | | 28/09/2017 11:33:1 | 224 |
| demo | Demo Installation | Report | 01/01/2017 | 6 | 01/2017 - 06/2017 | SUBMITTED_TO_EC | | | 23/08/2017 12:19:2 | | 23/08/2017 14:28:3 | 164 |
| demo | Demo Installation | Report | 01/07/2017 | 6 | 07/2017 - 12/2017 | SUBMITTED_TO_EC | | | 19/09/2017 11:24:1 | | 28/09/2017 10:59:0 | 201 |
| demo | Demo Installation | Report | 01/01/2020 | 6 | 01/2020 - 06/2020 | SUBMITTED_TO_EC | | | 05/10/2017 16:06:2 | | 05/10/2017 16:15:0 | 241 |
| demo | Demo Installation | Baseline | 01/07/2016 | 6 | 07/2016 - 12/2016 | SUBMITTED_TO_EC | | | 23/08/2017 11:37:3 | | 23/08/2017 12:10:4 | 163 |

1. This section will show list of report for the installation.
2. Export button allows the user to export the table to Excel or CSV format.
3. Refresh button allows user to refresh the data in the table.
4. Reset Table allows user to reset the table to its original state.

5.2 Generate Form A and Form B

The screenshot displays a web application interface with a navigation bar at the top containing 'HOME PAGE', 'INSTALLATIONS', 'REPORTS', 'REPORTS FOR VERIFICATION', 'CHARTS', and 'ALERTS'. Below the navigation bar, there are tabs for 'PDF Form A', 'PDF Form B', and 'PDF Report'. The main content area is divided into several sections:

- Report Details:** A table showing Report ID (164), Installation (Demo Installation), Type (Report), Start Date (01/01/2017), Reporting duration (6 months), Reporting period (01/2017 - 06/2017), Status (Submitted to EC), and Comment (Submitted to EC).
- Status History:** A table with columns Date, Status, User, and Comment. It shows three entries: 'Submitted to REEM' (23/08/2017 12:42:02), 'Approved by REEM' (23/08/2017 14:21:33), and 'Submitted to EC' (23/08/2017 14:28:37).
- Quick Links:** A box containing 'Installation: Demo Installation' and 'Reports overview for the installation'.
- Electricity Account:** A table with columns Year, Month, and Account (123456789 [kWh], Total [kWh]). It shows data for months 1 through 6 of 2017, with a total of 3,250,000 kWh.
- Products and Specific Energy Consumption (SEC):** A table with columns Year, Month, Product (Cement - White Cement, Cement - Coloured Cement), and SEC (Cement - White Cement [kWh/MT], Cement - Coloured Cement [kWh/MT]). It shows data for months 1 through 6 of 2017.

1. Opened the report that has been submitted to EC. Click on the PDF Form A button.

The screenshot shows a PDF document titled 'SECOND SCHEDULE FORM A' from the Energy Commission. The document is titled 'REPORT ON EFFICIENT MANAGEMENT OF ELECTRICAL ENERGY FOR THE YEAR 2017' and is intended for paragraph 6(1)(d). It includes the following information:

- Name of Private Installation Licensee/Consumer:** Demo Installation
- Address of Private Installation Licensee/Consumer:** 123 Jalan Kecokapan Tenaga, 62100, WP Putrajaya, Putrajaya
- Telephone No.:** _____
- Fax No.:** _____
- Email Address:** _____
- Installation Registration No.:** _____
- Total consumption of electrical energy/ total net generation of electrical energy* for six consecutive months in the period reported 01/2017 - 06/2017 :** 3,250,000 kWh.
- Total consumption of electrical energy/ total net generation of electrical energy* for six consecutive months in the previous period reported null :** kWh.
- Efficient management of electrical energy improvement measures implemented in the period reported:**
 - Change to LED light
- Efficient management of electrical energy improvement measures proposed but not implemented together with reasons for not implementing them:** _____

2. Form A will be generated.

HOME PAGE INSTALLATIONS REPORTS REPORTS FOR VERIFICATION CHARTS ALERTS NEW DEMO REEM

PDF Form A PDF Form B PDF Report

Report ID: 164
 Installation: Demo Installation
 Type: Report
 Start Date: 01/01/2017
 Reporting duration [months]: 6
 Reporting period: 01/2017 - 06/2017
 Status: Submitted to EC
 Comment:

Quick Links
 Installation: Demo Installation
 Reports overview for the installation

| Status History | | | | |
|---------------------|-------------------|------------------------------|---|--|
| Date | Status | User | Comment | |
| 23/08/2017 12:42:02 | Submitted to REEM | Demo Installation [MAL_INST] | Please verify and approve | |
| 23/08/2017 14:21:33 | Approved by REEM | Demo REEM [MAL_REEM] | Ok | |
| 23/08/2017 14:28:37 | Submitted to EC | Demo Installation [MAL_INST] | Report submission for 01/2017 - 06/2017 | |

Electricity

| Year | Month | Account | |
|--------------|-------|------------------|------------------|
| | | 123456789 [kWh] | Total [kWh] |
| 2017 | 1 | 500,000 | 500,000 |
| 2017 | 2 | 570,000 | 570,000 |
| 2017 | 3 | 560,000 | 560,000 |
| 2017 | 4 | 540,000 | 540,000 |
| 2017 | 5 | 550,000 | 550,000 |
| 2017 | 6 | 530,000 | 530,000 |
| Total | | 3,250,000 | 3,250,000 |


Export

Products and Specific Energy Consumption (SEC)

| Year | Month | Product | | | | SEC | |
|------|-------|-----------------------|---------------|--------------------------|---------------|--------------------------------|-----------------------------------|
| | | Cement - White Cement | | Cement - Coloured Cement | | Cement - White Cement [kWh/MT] | Cement - Coloured Cement [kWh/MT] |
| | | MT | Weightage [%] | MT | Weightage [%] | | |
| 2017 | 1 | 250,000 | 50 | 260,000 | 50 | 1 | 0.96153846 |
| 2017 | 2 | 240,000 | 40 | 270,000 | 60 | 0.95 | 1.26666667 |
| 2017 | 3 | 250,000 | 60 | 240,000 | 40 | 1.344 | 0.93333333 |
| 2017 | 4 | 220,000 | 50 | 230,000 | 50 | 1.22727273 | 1.17391304 |
| 2017 | 5 | 240,000 | 60 | 230,000 | 40 | 1.375 | 0.95652174 |
| 2017 | 6 | 260,000 | 70 | 200,000 | 30 | 1.42692308 | 0.795 |

3. Click on the PDF Form B button.

4


 FORM B
 ELECTRICITY SUPPLY ACT 1990
 EFFICIENT MANAGEMENT OF ELECTRICAL ENERGY REGULATIONS 2008
 DECLARATION BY
 REGISTERED ELECTRICAL ENERGY MANAGER
 [subregulation 6(2)]

I, **Demo REEM**, the registered electrical energy manager of the private installation licensee/consumer* **Demo Installation**, hereby declare and confirm that:

- I have been given sufficient access to the records of the private installation licensee/consumer* to enable me to confirm the report in Form A of the Second Schedule;
- To the best of my knowledge and belief, the report in Form A of the Second Schedule was well prepared based on the actual implementation of efficient management of electrical energy improvement measures at the installation for the reported period;
- I have evaluated the efficient management of electrical energy performance and costs at the installation; and
-
(any other information deemed suitable)

Date: **23/08/2017**

Signed by: _____
 Name: **Demo REEM**
 Registration No.: **PTE-1234-5678**

Note:
 1 If the space is insufficient to provide the information or particulars, please attach annexes. Every annex shall be initialed by the above signatory.
 2 * Delete whichever is not applicable.

4. Form B will be generated.

Note:

- i. Form A is signed by the installation.
- ii. Form B is signed by the REEM.
- iii. **Both signed Form A and Form B must be submitted to EC** to the following address:
*Energy Efficiency & Conservation Unit,
 Industry Operations Department,
 Energy Commission,
 12, Jalan Tun Hussein, Precinct 2, 62100 Putrajaya*

5.3 Generate PDF Report

The screenshot displays a web application interface for generating a PDF report. The top navigation bar includes 'HOME PAGE', 'INSTALLATIONS', 'REPORTS', 'REPORTS FOR VERIFICATION', 'CHARTS', and 'ALERTS'. The current page is 'PDF Report' for Report ID 164.

Report Summary:

| | |
|-----------------------------|-------------------|
| Report ID | 164 |
| Installation | Demo Installation |
| Type | Report |
| Start Date | 01/01/2017 |
| Reporting duration [months] | 6 |
| Reporting period | 01/2017 - 06/2017 |
| Status | Submitted to EC |
| Comment | |

Status History:

| Date | Status | User | Comment |
|---------------------|-------------------|------------------------------|---|
| 23/08/2017 12:42:02 | Submitted to REEM | Demo Installation [MAL_INST] | Please verify and approve |
| 23/08/2017 14:21:33 | Approved by REEM | Demo REEM [MAL_REEM] | Ok |
| 23/08/2017 14:28:37 | Submitted to EC | Demo Installation [MAL_INST] | Report submission for 01/2017 - 06/2017 |

Electricity Consumption:

| Year | Month | Account | |
|--------------|-------|------------------|------------------|
| | | 123456789 [kWh] | Total [kWh] |
| 2017 | 1 | 500,000 | 500,000 |
| 2017 | 2 | 570,000 | 570,000 |
| 2017 | 3 | 560,000 | 560,000 |
| 2017 | 4 | 540,000 | 540,000 |
| 2017 | 5 | 550,000 | 550,000 |
| 2017 | 6 | 530,000 | 530,000 |
| Total | | 3,250,000 | 3,250,000 |

Products and Specific Energy Consumption (SEC):

| Year | Month | Product | | | | SEC | |
|------|-------|-----------------------|---------------|--------------------------|---------------|--------------------------------|-----------------------------------|
| | | Cement - White Cement | | Cement - Coloured Cement | | Cement - White Cement [kWh/MT] | Cement - Coloured Cement [kWh/MT] |
| | | MT | Weightage [%] | MT | Weightage [%] | | |
| 2017 | 1 | 250,000 | 50 | 260,000 | 50 | 1 | 0.96153846 |
| 2017 | 2 | 240,000 | 40 | 270,000 | 60 | 0.95 | 1.26666667 |
| 2017 | 3 | 250,000 | 60 | 240,000 | 40 | 1.344 | 0.93333333 |
| 2017 | 4 | 220,000 | 50 | 230,000 | 50 | 1.22727273 | 1.17391304 |
| 2017 | 5 | 240,000 | 60 | 230,000 | 40 | 1.375 | 0.95652174 |
| 2017 | 6 | 260,000 | 70 | 200,000 | 30 | 1.42692308 | 0.795 |

1. Opened the report that has been submitted to EC. Click on the PDF Report button.

HOME PAGE INSTALLATIONS REPORTS REPORTS FOR VERIFICATION CHARTS ALERTS NEW DEMO REEM

PDF Form A PDF Form B PDF Report

Report ID: 164
 Installation: Demo Installation
 Type: Report
 Start Date: 01/01/2017
 Reporting duration [months]: 6
 Reporting period: 01/2017 - 06/2017
 Status: Submitted to EC
 Comment:

Quick Links
 Installation: Demo Installation
 Reports overview for the installation

| Status History | | | | |
|---------------------|-------------------|------------------------------|---|--|
| Date | Status | User | Comment | |
| 23/08/2017 12:42:02 | Submitted to REEM | Demo Installation [MAL_INST] | Please verify and approve | |
| 23/08/2017 14:21:33 | Approved by REEM | Demo REEM [MAL_REEM] | Ok | |
| 23/08/2017 14:28:37 | Submitted to EC | Demo Installation [MAL_INST] | Report submission for 01/2017 - 06/2017 | |

Electricity

| Year | Month | Account | |
|-------|-------|-----------------|-------------|
| | | 123456789 [kWh] | Total [kWh] |
| 2017 | 1 | 500,000 | 500,000 |
| 2017 | 2 | 570,000 | 570,000 |
| 2017 | 3 | 560,000 | 560,000 |
| 2017 | 4 | 540,000 | 540,000 |
| 2017 | 5 | 550,000 | 550,000 |
| 2017 | 6 | 530,000 | 530,000 |
| Total | | 3,250,000 | 3,250,000 |

Report parameters

Baseline year: [Automatic] 2
 Regression variables: Regression variables 3
 Generate report PDF 4

Export

Products and Specific Energy Consumption (SEC)

| Year | Month | Product | | | | SEC | |
|------|-------|-----------------------|---------------|--------------------------|---------------|--------------------------------|-----------------------------------|
| | | Cement - White Cement | | Cement - Coloured Cement | | Cement - White Cement [kWh/MT] | Cement - Coloured Cement [kWh/MT] |
| | | MT | Weightage [%] | MT | Weightage [%] | | |
| 2017 | 1 | 250,000 | 50 | 260,000 | 50 | 1 | 0.96153846 |
| 2017 | 2 | 240,000 | 40 | 270,000 | 60 | 0.95 | 1.26666667 |
| 2017 | 3 | 250,000 | 60 | 240,000 | 40 | 1.344 | 0.93333333 |
| 2017 | 4 | 220,000 | 50 | 230,000 | 50 | 1.22727273 | 1.17391304 |
| 2017 | 5 | 240,000 | 60 | 230,000 | 40 | 1.375 | 0.95652174 |
| 2017 | 6 | 260,000 | 70 | 200,000 | 30 | 1.42692308 | 0.795 |

2. Select baseline year.
3. Select regression variables.
4. Click on the Generate PDF report.

Note:

- i. Baseline year is only available to be selected if all data for that year is complete one year. For example, year that the data is only from July – December will not be available to be selected as baseline year. The data must be completed 12 months then only the year will appear in the selection.

| COMPANY PROFILE | |
|---|---|
| Installation Name | Demo Installation Ind 1 |
| Address | 123 Jalan Kecekapan Tenaga 62100, Putrajaya, Putrajaya |
| Licensee/Supply Authority | |
| Licensee/Supply Authority Account Number | 123456789 |
| Installation Registration No | ST(TKL)PIS/SGR/XXXX |
| Person(s) in-charge | |
| Name: | Ahmad bin Mohamad |
| Designation: | Electrical Engineer |
| Telephone: | 03-88708500 |
| Fax: | 03-88888637 |
| Email: | emisadmin@st.gov.my |
| Registered Electrical Energy Manager (REEM) | |
| Name: | Demo REEM |
| Certificate: | PTE-1234-5678 |
| Telephone: | |
| Email: | azuhielmi_89@yahoo.com |
| Sector | Industry |
| Subsector | Manufacture of Non-Metallic Mineral Products |
| Electricity tariff category | E2 |
| Date of Report | 26/01/2021 |

| COMPANY INFORMATION | | |
|--------------------------|-----|-------------|
| Product | UOM | Quantity |
| Cement - Coloured Cement | MT | 50,000,000 |
| Cement - White Cement | MT | 100,000,000 |

EFFICIENT ELECTRICAL ENERGY MANAGEMENT POLICY

Demo Installation strives to use energy in the most efficient, cost-effective, and environmentally responsible manner possible. Under this policy energy management will play a key role in support of our plan to maximise profitability, strengthen our competitive position, and provide customers with the highest quality products. Our efforts to reduce energy use will also support our commitment to our employees, the environment, and

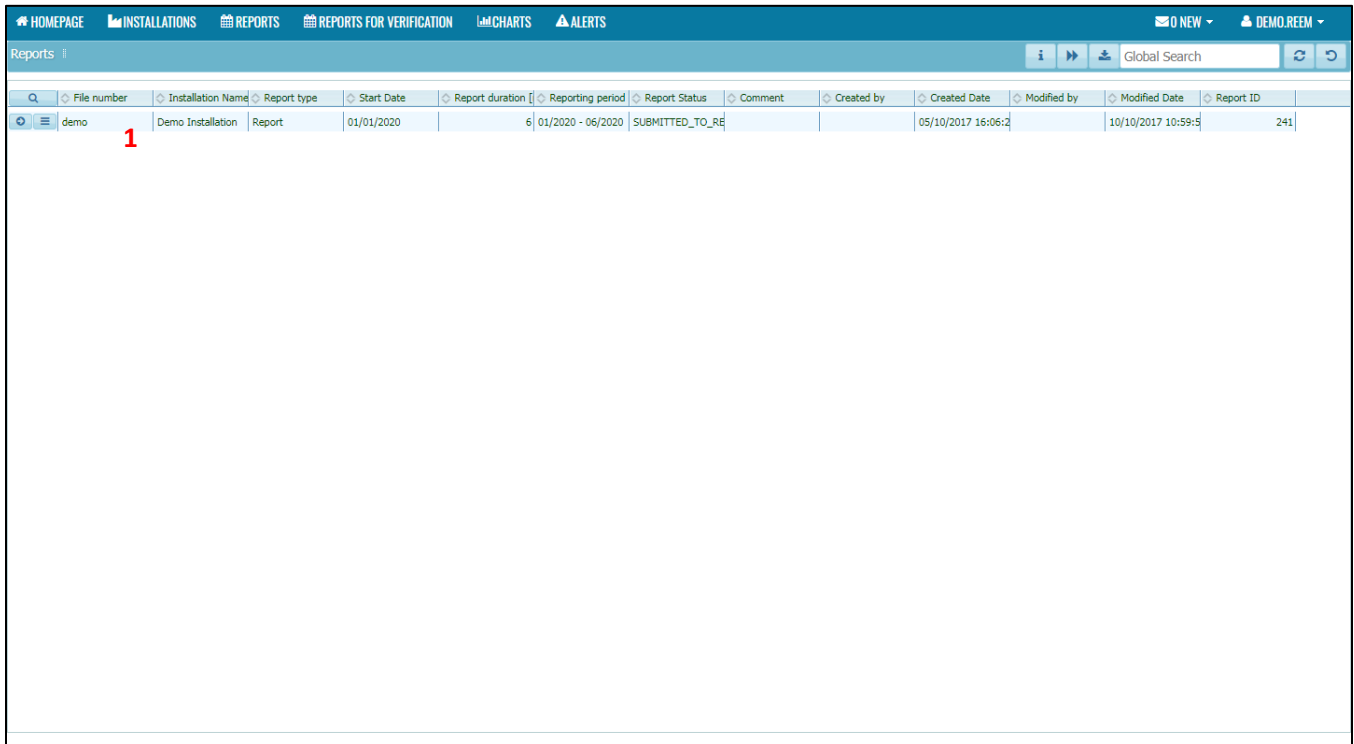
5. PDF report will be generated.

Note:



- i. This **PDF report does not need to be sent to EC**. Only Signed Form A and Form B is sent to EC.

6. Reports for Verification

6.1 Overview



| File number | Installation Name | Report type | Start Date | Report duration | Reporting period | Report Status | Comment | Created by | Created Date | Modified by | Modified Date | Report ID |
|-------------|-------------------|-------------|------------|-----------------|-------------------|-----------------|---------|------------|--------------------|-------------|--------------------|-----------|
| demo | Demo Installation | Report | 01/01/2020 | 6 | 01/2020 - 06/2020 | SUBMITTED_TO_RE | | | 05/10/2017 16:06:2 | | 10/10/2017 10:59:5 | 241 |

1. This section will show list of report submitted by the installation to REEM which require REEM to verify the report.
2. Access the report either by clicking on the  button or  button and click Open. User also can access the report by double click on the installation's row.

Note:

- i. If your REEM Certificate has expired, you are not allowed to Approve or Reject any report.

6.2 Approving the Report

Report Details:

| | |
|-----------------------------|-------------------|
| Report ID | 164 |
| Installation | Demo Installation |
| Type | Report |
| Start Date | 01/01/2017 |
| Reporting duration [months] | 6 |
| Reporting period | 01/2017 - 06/2017 |
| Status | Submitted to REEM |
| Comment | |

Status History:

| Date | Status | User | Comment |
|---------------------|-------------------|------------------------------|---------------------------|
| 23/08/2017 12:42:02 | Submitted to REEM | Demo Installation [MAL_INST] | Please verify and approve |

Electricity Consumption Data Table:

| Year | Month | Account | |
|--------------|-------|------------------|------------------|
| | | 123456789 [kWh] | Total [kWh] |
| 2017 | 1 | 500,000 | 500,000 |
| 2017 | 2 | 570,000 | 570,000 |
| 2017 | 3 | 560,000 | 560,000 |
| 2017 | 4 | 540,000 | 540,000 |
| 2017 | 5 | 550,000 | 550,000 |
| 2017 | 6 | 530,000 | 530,000 |
| Total | | 3,250,000 | 3,250,000 |

Products and Specific Energy Consumption (SEC) Table:

| Year | Month | Product | | | | SEC | |
|------|-------|-----------------------|---------------|--------------------------|---------------|--------------------------------|-----------------------------------|
| | | Cement - White Cement | | Cement - Coloured Cement | | Cement - White Cement [kWh/MT] | Cement - Coloured Cement [kWh/MT] |
| | | MT | Weightage [%] | MT | Weightage [%] | | |
| 2017 | 1 | 250,000 | 50 | 260,000 | 50 | 1 | 0.96153846 |
| 2017 | 2 | 240,000 | 40 | 270,000 | 60 | 0.95 | 1.26666667 |
| 2017 | 3 | 250,000 | 60 | 240,000 | 40 | 1.244 | 0.93333333 |

1. REEM user is required to review the report submitted by the installation user and verify the data is correct.
2. REEM need to ensure the following data is accurate:
 - a. Electricity Consumption Data Table
 - b. Production Data Table – For Industry sector
 - c. Net Floor Area (m²) – For Commercial and Government sector
 - d. Variable Data Table
 - e. Fuel Data Table (if applicable)
 - f. Energy Saving Data Table:
 - g. List Table – This is the list of all ESM in the period reported (In progress, Completed, Rejected, Under Study / Approved by Management). If there is an ESM already completed, click the Copy completed to Summary button after filling in the data of the ESM.

- h. Summary of Implemented ESM Table – This table is only for ESM that already **completed during the period of reporting**. When fill in the Yearly Savings (kWh) and Yearly Savings Cost (MYR), you can estimate it for one year if the data for one year savings is not available (example, you measure the savings for one month, and then times the savings with 12 to get estimated savings for one year). Completed ESM is only required to be reported only once, if the Completed ESM already reported in the previous report, please do not put it again to avoid double counting in the analysis chart. **Month Completed** must be in 1-12 format (example month January please write 1) while **Year Completed** must be in YYYY format (example 2017 please write 2017 not 17).
 - i. Proposed Table – This table is for the ESM planned in the future
3. If everything is correct, click on the Approve button to approve the report.

The screenshot shows a software interface with a navigation bar at the top containing 'HOME PAGE', 'INSTALLATIONS', 'REPORTS', 'REPORTS FOR VERIFICATION', 'CHARTS', and 'ALERTS'. On the right, there are 'NEW' and 'DEMO REEM' buttons. Below the navigation bar, there are 'Approve' and 'Reject' buttons. The main content area displays report details for Report ID 164, including Installation (Demo Installation), Type (Report), Start Date (01/01/2017), Reporting duration (6 months), Reporting period (01/2017 - 06/2017), Status (Submitted to REEM), and Comment. A 'Status History' table shows a single entry: Date 23/08/2017 12:42:02, Status Submitted to REEM, User Demo Installation [MAL_INST], and Comment Please verify and approve. Below this is the 'Electricity' table with columns for Year, Month, Account (123456789 [kWh], Total [kWh]), and an 'Export' button. A modal dialog box is open over the Electricity table, titled 'Confirm status change of this report to: "Approved by REEM"'. It has a 'Comment' field with 'Ok' entered and 'Confirm' and 'Cancel' buttons. A red number '4' is placed to the left of the dialog box. Below the Electricity table is the 'Products and Specific Energy Consumption (SEC)' table with columns for Year, Month, Product (Cement - White Cement, Cement - Coloured Cement), and SEC (Cement - White Cement [kWh/MT], Cement - Coloured Cement [kWh/MT]).

- 4. Enter any comment if necessary and click the Confirm button.

HOME PAGE INSTALLATIONS REPORTS REPORTS FOR VERIFICATION CHARTS ALERTS NEW DEMO REEM

| | |
|-----------------------------|-------------------|
| Report ID | 164 |
| Installation | Demo Installation |
| Type | Report |
| Start Date | 01/01/2017 |
| Reporting duration [months] | 6 |
| Reporting period | 01/2017 - 06/2017 |
| Status | Approved by REEM |
| Comment | |

Quick Links

- Installation: Demo Installation
- Reports overview for the installation

| Status History | | | |
|---------------------|-------------------|------------------------------|---------|
| Date | Status | User | Comment |
| 23/08/2017 11:48:55 | Submitted to REEM | Demo Installation [MAL_INST] | |
| 23/08/2017 12:00:23 | Approved by REEM | Demo REEM [MAL_REEM] | Ok |

Electricity

| Year | Month | Account | |
|-------|-------|-----------------|-------------|
| | | 123456789 [kWh] | Total [kWh] |
| 2017 | 1 | 500,000 | 500,000 |
| 2017 | 2 | 570,000 | 570,000 |
| 2017 | 3 | 560,000 | 560,000 |
| 2017 | 4 | 540,000 | 540,000 |
| 2017 | 5 | 550,000 | 550,000 |
| 2017 | 6 | 530,000 | 530,000 |
| Total | | 3,250,000 | 3,250,000 |

Export

Products and Specific Energy Consumption (SEC)

| Year | Month | Product | | | | SEC | |
|------|-------|-----------------------|---------------|--------------------------|---------------|--------------------------------|-----------------------------------|
| | | Cement - White Cement | | Cement - Coloured Cement | | Cement - White Cement [kWh/MT] | Cement - Coloured Cement [kWh/MT] |
| | | MT | Weightage [%] | MT | Weightage [%] | | |
| 2017 | 1 | 250,000 | 50 | 260,000 | 50 | 1 | 0.96153846 |
| 2017 | 2 | 240,000 | 40 | 270,000 | 60 | 0.95 | 1.26666667 |
| 2017 | 3 | 250,000 | 60 | 240,000 | 40 | 1.244 | 0.93333333 |

5. Report is now verified and Installation user is required to submit the report to EC.

6.3 Rejecting the Report

[HOME PAGE](#)
[INSTALLATIONS](#)
[REPORTS](#)
[REPORTS FOR VERIFICATION](#)
[CHARTS](#)
[ALERTS](#)
NEW - DEMO REEM -

[Approve](#)
[Reject 1](#)

| | |
|-----------------------------|-------------------|
| Report ID | 164 |
| Installation | Demo Installation |
| Type | Report |
| Start Date | 01/01/2017 |
| Reporting duration [months] | 6 |
| Reporting period | 01/2017 - 06/2017 |
| Status | Submitted to REEM |
| Comment | |

Quick Links
[Installation: Demo Installation](#)
[Reports overview for the installation](#)

| Status History | | | | |
|---------------------|-------------------|------------------------------|---------------------------|--|
| Date | Status | User | Comment | |
| 23/08/2017 12:42:02 | Submitted to REEM | Demo Installation [MAL_INST] | Please verify and approve | |

Electricity

| Year | Month | Account | |
|--------------|-------|------------------|------------------|
| | | 123456789 [kWh] | Total [kWh] |
| 2017 | 1 | 500,000 | 500,000 |
| 2017 | 2 | 570,000 | 570,000 |
| 2017 | 3 | 560,000 | 560,000 |
| 2017 | 4 | 540,000 | 540,000 |
| 2017 | 5 | 550,000 | 550,000 |
| 2017 | 6 | 530,000 | 530,000 |
| Total | | 3,250,000 | 3,250,000 |

[Export](#)

Products and Specific Energy Consumption (SEC)

| Year | Month | Product | | | | SEC | |
|------|-------|-----------------------|---------------|--------------------------|---------------|--------------------------------|-----------------------------------|
| | | Cement - White Cement | | Cement - Coloured Cement | | Cement - White Cement [kWh/MT] | Cement - Coloured Cement [kWh/MT] |
| | | MT | Weightage [%] | MT | Weightage [%] | | |
| 2017 | 1 | 250,000 | 50 | 260,000 | 50 | 1 | 0.96153846 |
| 2017 | 2 | 240,000 | 40 | 270,000 | 60 | 0.95 | 1.26666667 |
| 2017 | 3 | 250,000 | 60 | 240,000 | 40 | 1.244 | 0.93333333 |

1. If there is a data that need to be corrected, click on the Reject button to reject the report.

[HOME PAGE](#)
[INSTALLATIONS](#)
[REPORTS](#)
[REPORTS FOR VERIFICATION](#)
[CHARTS](#)
[ALERTS](#)
NEW DEMO REEM

[Approve](#)
[Reject](#)

| | |
|-----------------------------|-------------------|
| Report ID | 164 |
| Installation | Demo Installation |
| Type | Report |
| Start Date | 01/01/2017 |
| Reporting duration [months] | 6 |
| Reporting period | 01/2017 - 06/2017 |
| Status | Submitted to REEM |
| Comment | |

Quick Links
[Installation: Demo Installation](#)
[Reports overview for the installation](#)

| Status History | | | |
|---------------------|-------------------|------------------------------|---------------------------|
| Date | Status | User | Comment |
| 23/08/2017 12:42:02 | Submitted to REEM | Demo Installation [MAL_INST] | Please verify and approve |

Electricity

| Year | Month | Account | |
|--------------|-------|------------------|------------------|
| | | 123456789 [kWh] | Total [kWh] |
| 2017 | 1 | 500,000 | 500,000 |
| 2017 | 2 | 570,000 | 570,000 |
| 2017 | 3 | 560,000 | 560,000 |
| 2017 | 4 | 540,000 | 540,000 |
| 2017 | 5 | 550,000 | 550,000 |
| 2017 | 6 | 530,000 | 530,000 |
| Total | | 3,250,000 | 3,250,000 |

Confirm status change of this report to: "Rejected by REEM"

2

Comment
 Please correct the Yearly Savings for Lighting Project

Confirm
Cancel

[Export](#)

Products and Specific Energy Consumption (SEC)

| Year | Month | Product | | | | SEC | |
|------|-------|-----------------------|---------------|--------------------------|---------------|--------------------------------|-----------------------------------|
| | | Cement - White Cement | | Cement - Coloured Cement | | Cement - White Cement [kWh/MT] | Cement - Coloured Cement [kWh/MT] |
| | | MT | Weightage [%] | MT | Weightage [%] | | |
| 2017 | 1 | 250,000 | 50 | 260,000 | 50 | 1 | 0.96153846 |
| 2017 | 2 | 240,000 | 40 | 270,000 | 60 | 0.95 | 1.26666667 |
| 2017 | 3 | 250,000 | 60 | 240,000 | 40 | 1.244 | 0.93333333 |

2. REEM user is required to enter comment on why the report is rejected and what are the data that need to be corrected. Click the Confirm button.

Note:

- i. It is **compulsory** to enter the comment if REEM **reject** the report.

[HOME PAGE](#)
[INSTALLATIONS](#)
[REPORTS](#)
[REPORTS FOR VERIFICATION](#)
[CHARTS](#)
[ALERTS](#)

[NEW](#)
[DEMO REEM](#)

| | |
|-----------------------------|-------------------|
| Report ID | 164 |
| Installation | Demo Installation |
| Type | Report |
| Start Date | 01/01/2017 |
| Reporting duration [months] | 6 |
| Reporting period | 01/2017 - 06/2017 |
| Status | Rejected by REEM |
| Comment | |

| Status History | | | |
|---------------------|-------------------|------------------------------|-------------------|
| Date | Status | User | Comment |
| 23/08/2017 11:48:55 | Submitted to REEM | Demo Installation [MAL_INST] | |
| 23/08/2017 12:00:23 | Rejected by REEM | Demo REEM [MAL_REEM] | Please correct .. |

| Quick Links | |
|---------------------------------------|--|
| Installation: Demo Installation | |
| Reports overview for the installation | |

Electricity

| Year | Month | Account | |
|-------|-------|-----------------|-------------|
| | | 123456789 [kWh] | Total [kWh] |
| 2017 | 1 | 500,000 | 500,000 |
| 2017 | 2 | 570,000 | 570,000 |
| 2017 | 3 | 560,000 | 560,000 |
| 2017 | 4 | 540,000 | 540,000 |
| 2017 | 5 | 550,000 | 550,000 |
| 2017 | 6 | 530,000 | 530,000 |
| Total | | 3,250,000 | 3,250,000 |

[Export](#)

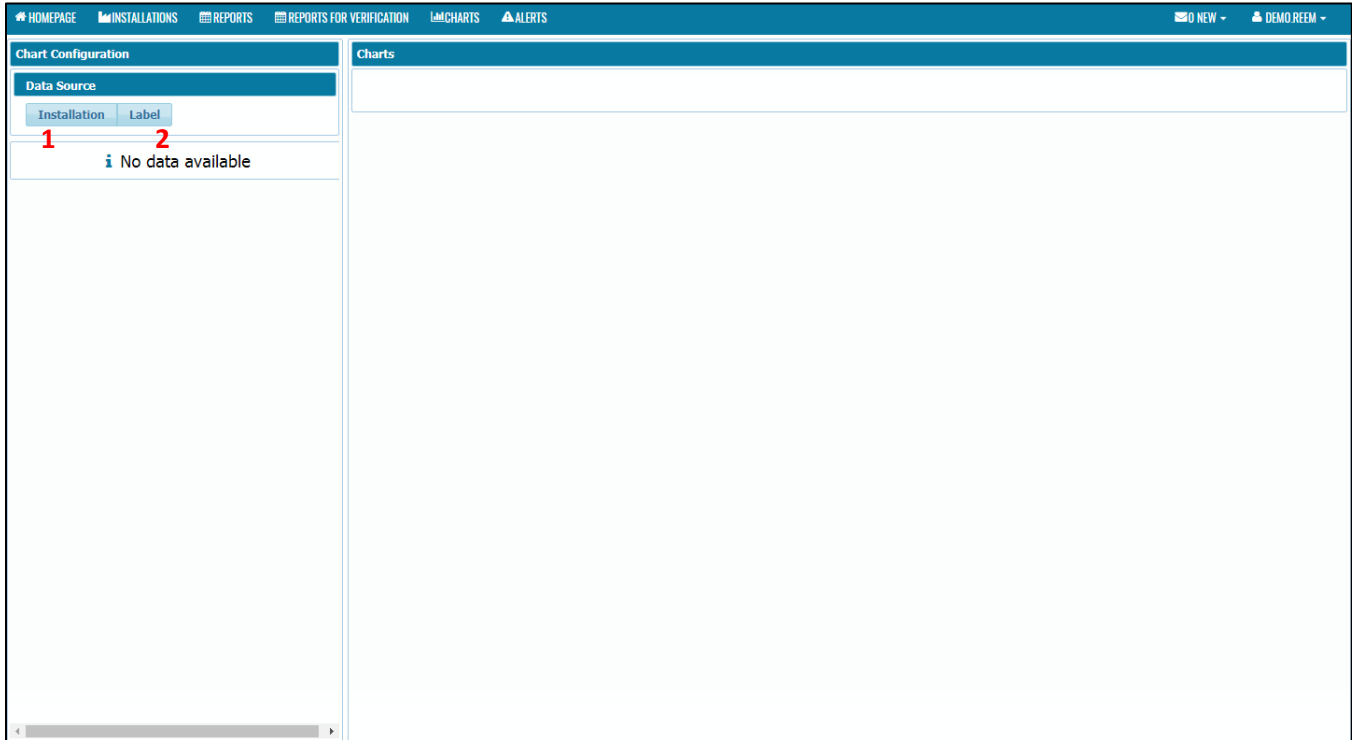
Products and Specific Energy Consumption (SEC)

| Year | Month | Product | | | | SEC | |
|------|-------|-----------------------|---------------|--------------------------|---------------|--------------------------------|-----------------------------------|
| | | Cement - White Cement | | Cement - Coloured Cement | | Cement - White Cement [kWh/MT] | Cement - Coloured Cement [kWh/MT] |
| | | MT | Weightage [%] | MT | Weightage [%] | | |
| 2017 | 1 | 250,000 | 50 | 260,000 | 50 | 1 | 0.96153846 |
| 2017 | 2 | 240,000 | 40 | 270,000 | 60 | 0.95 | 1.26666667 |
| 2017 | 3 | 250,000 | 60 | 240,000 | 40 | 1.244 | 0.93333333 |

- Report is now rejected and Installation user is required to correct the data and resubmit the report to REEM for approval.

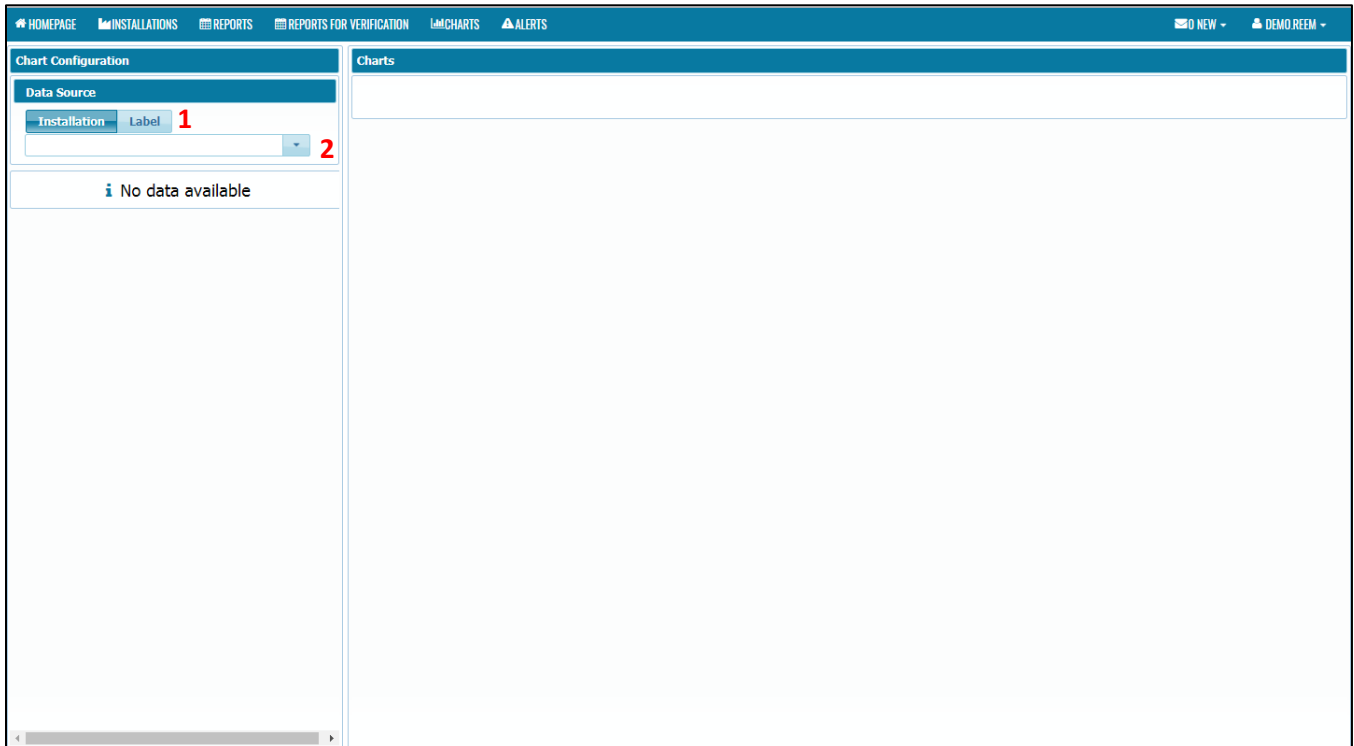
7. Charts

7.1 Overview

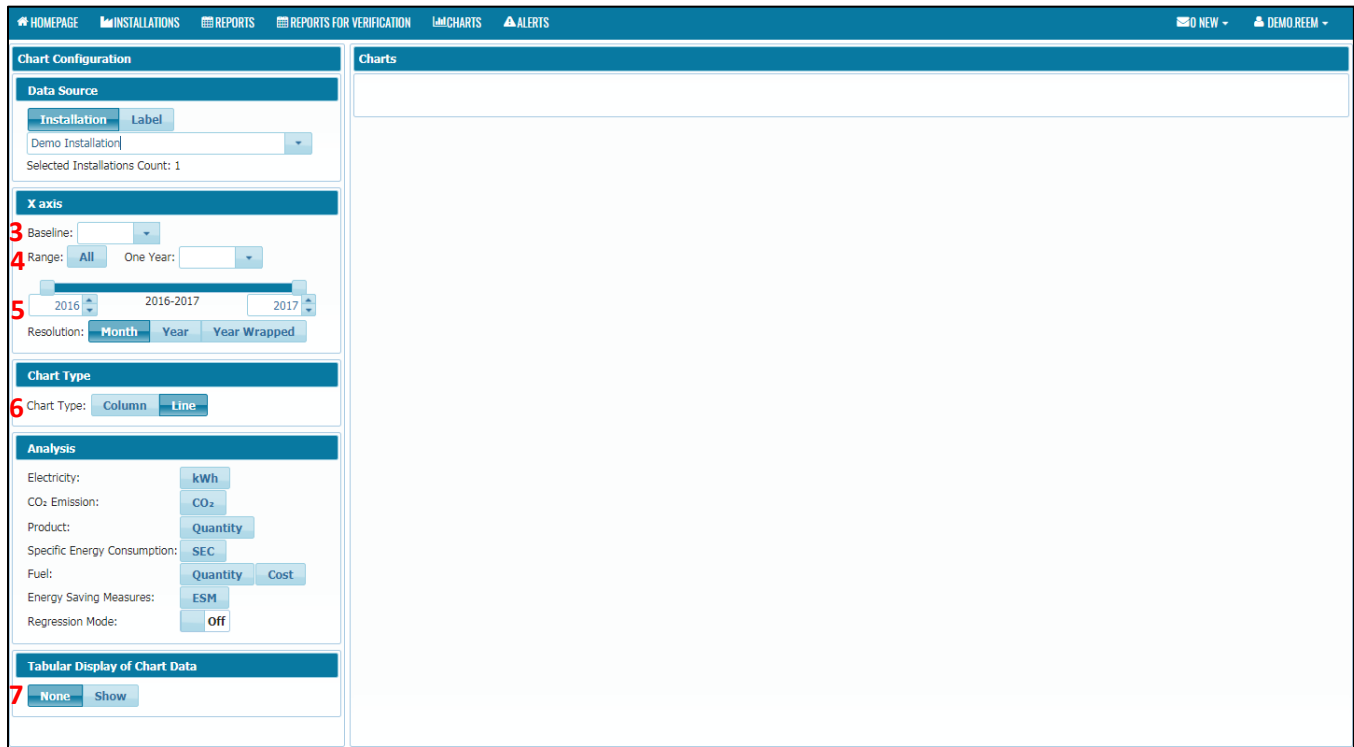


1. Installation button – Analysis for installation.
2. Label button – Analysis for installation with label.

7.2 Analysis



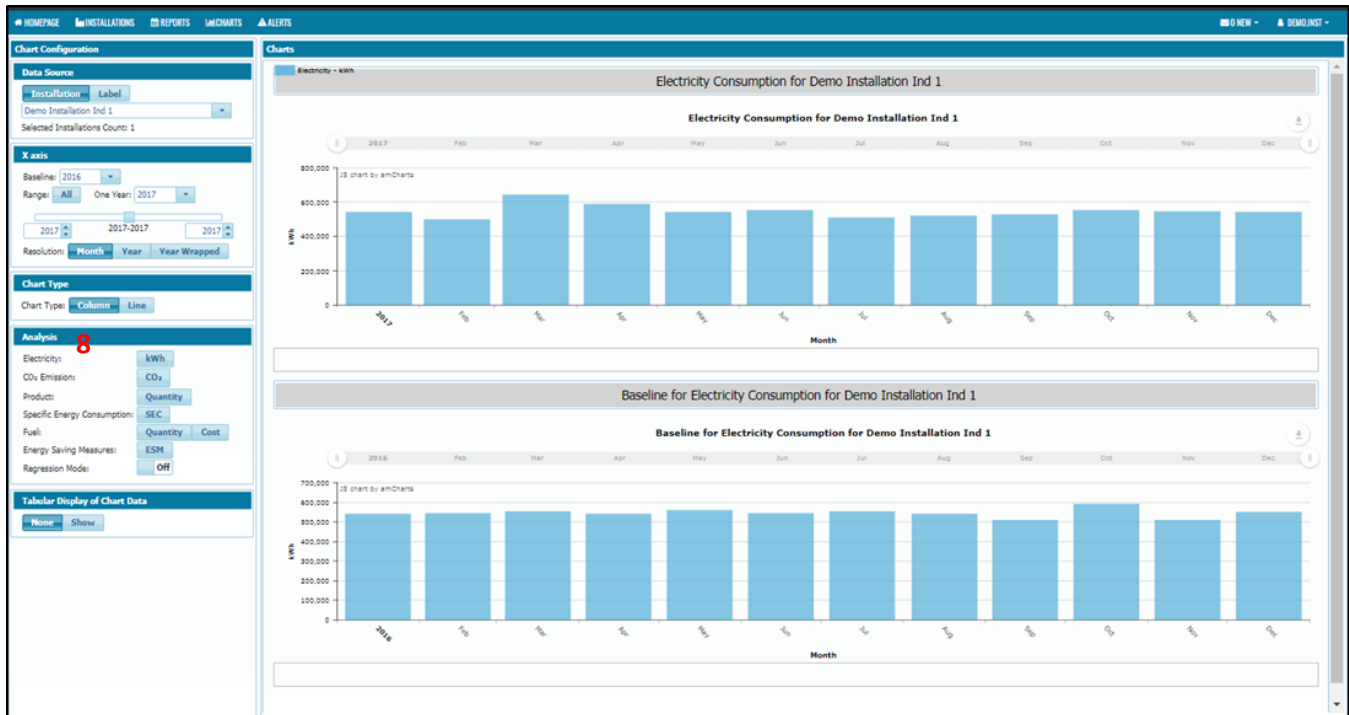
1. Select analysis by installation or label.
2. Select the installation (if analysis by installation) or label (if analysis by label)



3. Select Baseline Year.
4. Select Range type (All, One Year or Range of Years)
5. Select Resolution (Month, Year or Year Wrapped)
6. Choose chart type (Column or Line)
7. Choose whether to show data table below chart or not.

Note:

- i. Baseline year is only available to be selected if all data for that year is complete one year. For example, year that the data is only from July – December will not be available to be selected as baseline year. The data must be completed 12 months then only the year will appear in the selection.



8. Select type of analysis.

Note:

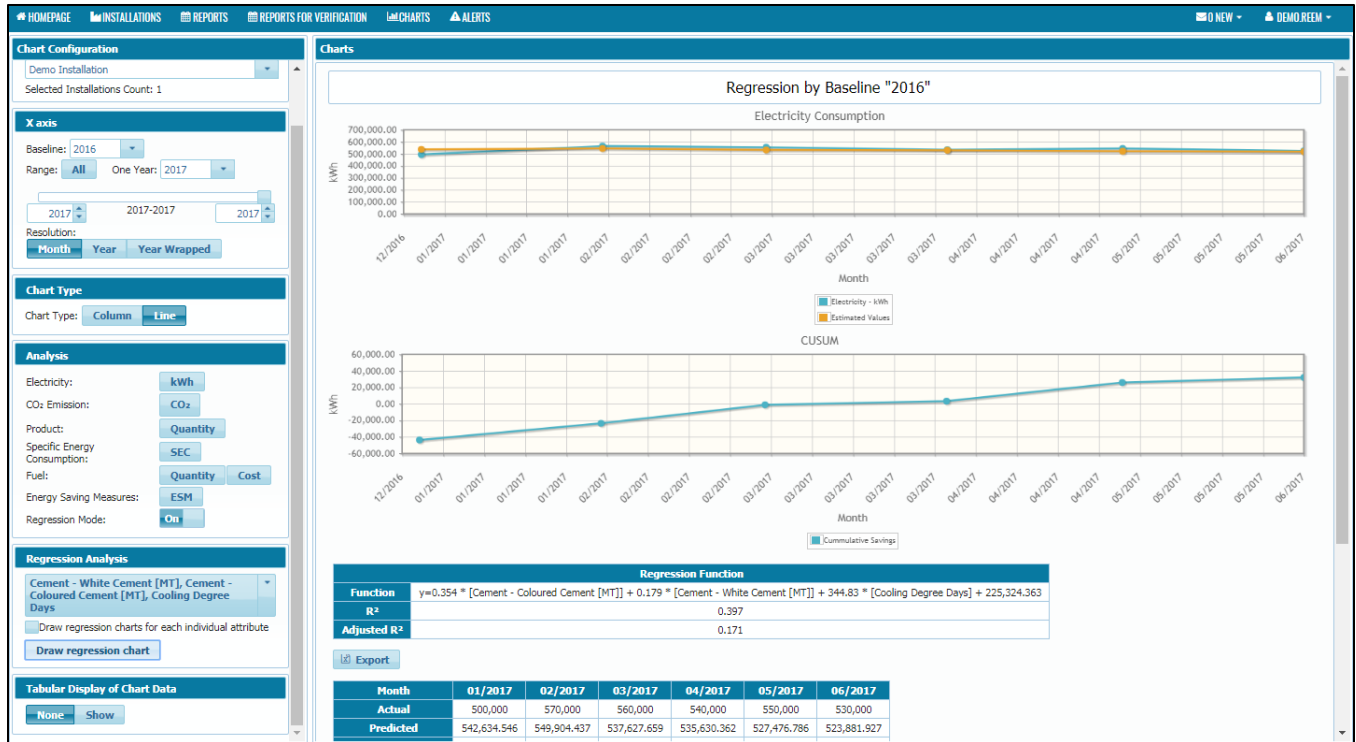
- i. For **Industry Sector**, type of analysis available is Electricity, CO₂ Emission, Product, Specific Energy Consumption, Fuel (if defined by the installation), Energy Saving Measures and Regression (need to turn on first).
- ii. For **Commercial and Government Sector**, type of analysis available is Electricity, CO₂ Emission, Building Energy Intensity, Fuel (if defined by the installation), Energy Saving Measures and Regression (need to turn on first).
- iii. To show table below the chart:
 - a) Under the Tabular Display of Chart Data, click Show.
- iv. To zoom in / out the chart:
 - a. Drag the slider above the chart
- v. To hide any series in the chart
 - a. Click on the legend of the chart.

The screenshot shows a web application interface for configuring charts. The interface is divided into a 'Chart Configuration' sidebar on the left and a 'Charts' main area on the right. The sidebar contains several sections:

- Data Source:** Includes a dropdown for 'Installation' (set to 'Demo Installation') and a 'Label' field. Below it, it says 'Selected Installations Count: 1'.
- X axis:** Includes a 'Baseline' dropdown (set to '2016'), a 'Range' section with 'All' and 'One Year: 2017' buttons, and a 'Resolution' section with 'Month', 'Year', and 'Year Wrapped' buttons.
- Chart Type:** Includes a 'Chart Type' dropdown with 'Column' and 'Line' options.
- Analysis:** Includes several variables with checkboxes: Electricity (kWh), CO₂ Emission (CO₂), Product (Quantity), Specific Energy Consumption (SEC), Fuel (Quantity and Cost), Energy Saving Measures (ESM), and Regression Mode (On). A red '9' is next to the 'On' button.
- Regression Analysis:** Includes a dropdown menu for 'Select independent variables' (set to '10'), a checkbox for '11 regression charts for each individual attribute' (checked), and a 'Draw regression chart' button with a red '12' next to it.
- Tabular Display of Chart Data:** A button at the bottom of the sidebar.

The 'Charts' area on the right is currently empty.

9. To use the regression, turn on the regression mode first.
10. Select the independent variables for the regression.
11. If you would like to draw regression charts for each individual attribute, check the box.
12. Click the draw regression chart button.



Note:

- i. To perform regression, baseline year must be before starting year.
- ii. Regression can only be performed if the variables (product and variables) in selected baseline year is the same as year selected.
- iii. R² and Adjusted R² value should be a minimum of 0.75 as per international practices according to International Performance Measurement and Verification Protocol (IPMVP).

8. Alerts

8.1 Overview

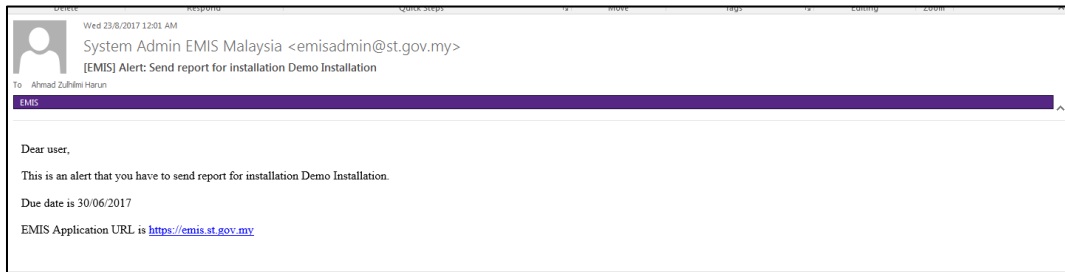
| End Of Reporting | Reporting Days | Mail Sent to | Mail Not (Yet) Sent | Reporting Overdue | Start of Reporting | Reporting period | File number | Installation Name | Installation Label | Address | City/Municipality | ZIP | Co |
|------------------|----------------|--------------|---------------------|----------------------------|--------------------|------------------|-------------|---------------------|--------------------|---------|-------------------|-----|----|
| 30/06/2017 | 72 | | | Alert: Demo Installa Alert | 01/01/2017 | | 6 demo 2 | Demo Installation 2 | | | | | |

1. This section will show list of reminders and alerts received by the installation on report submission.
2. Export button allows the user to export the table to Excel or CSV format.
3. Labels button allows the user to label any installation to specific label/tag.
4. Refresh button allows user to refresh the data in the table.
5. Reset Table allows user to reset the table to its original state.

Note:

- i. Reminders about end of reporting period:
 - a. The day after the reporting period expires – 1st warning
 - b. 15 days after the reporting period expires – 2nd warning
 - c. 30 days after the reporting period expires – Alert

- ii. User will be notified on the reminders and alerts through:
 - a. E-mail to Installation and REEM



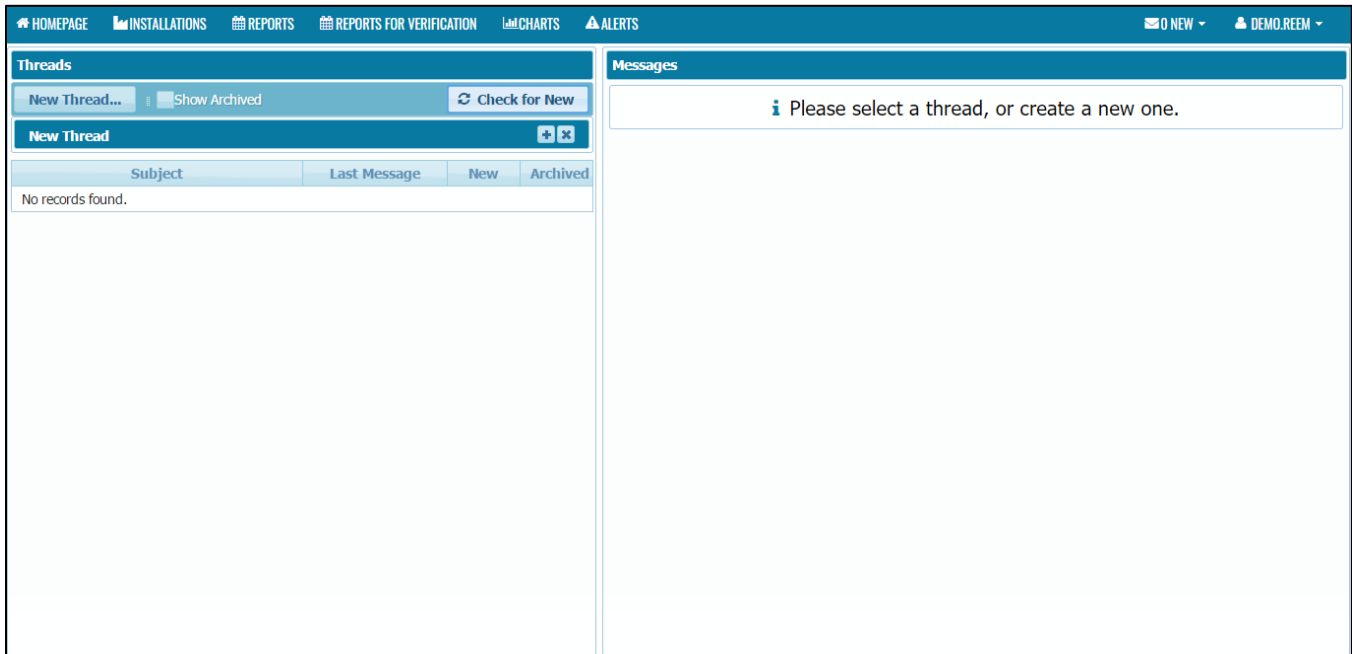
- b. Displayed on REEM Homepage

| Statistics of Alerts | |
|--|---|
| Number of Installations With 1st Warning | 0 |
| Number of Installations With 2nd Warning | 0 |
| Number of Installations With Alert | 0 |

- iii. It is responsibility of Installation and REEM user to ensure timely submission of report.

9. Messaging

9.1 Overview



1. A forum-like messaging system for communication between EMIS users
2. Messages do NOT appear instantly – click “Check for New” to see new messages
3. Only included participants can see a thread
4. A count of all new messages is displayed in the menu bar

9.2 Create New Message Thread

The screenshot shows a web application interface for creating a new message thread. The interface is divided into two main panels: "Threads" on the left and "Messages" on the right. The "Threads" panel has a "New Thread..." button (1), a "Show Archived" checkbox, and a "Check for New" button. Below this is a "New Thread" form with a "Subject" field (2), a "Recipients" field (3), and a "Create" button (4). At the bottom of the "Threads" panel is a table with columns "Subject", "Last Message", "New", and "Archived", and a message "No records found." The "Messages" panel contains a message: "Please select a thread, or create a new one." The top navigation bar includes links for "HOMEPAGE", "INSTALLATIONS", "REPORTS", "REPORTS FOR VERIFICATION", "CHARTS", and "ALERTS", along with a notification for "0 NEW" and a user profile for "DEMO.REEM".

1. Click on New Thread button.
2. Enter the subject.
3. Find the recipient.
4. Click Create button

The screenshot shows a web application interface with a dark blue header containing navigation links: HOME PAGE, INSTALLATIONS, REPORTS, REPORTS FOR VERIFICATION, CHARTS, and ALERTS. On the right side of the header, there are notification icons for '0 NEW' and 'DEMO.REEM'. The main content area is divided into three vertical panes:

- Threads:** Contains a 'New Thread...' button, a 'Show Archived' checkbox, and a 'Check for New' button. Below is a 'New Thread' form with fields for 'Subject' and 'Recipients', and a 'Create' button. At the bottom is a table:

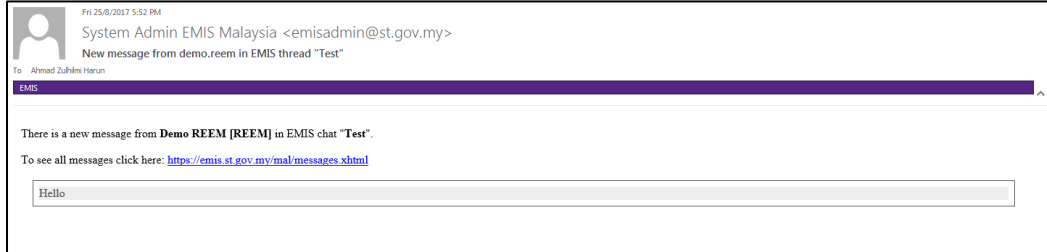
| Subject | Last Message | New | Archived |
|------------------------|---------------------|-----|--------------------------|
| Demo Messages 5 | 04/09/2017 22:13:04 | 0 | <input type="checkbox"/> |
- Messages:** Shows a 'Send' button with a red '6' next to it. Below is a list of messages:
 - Demo Installation [Installation]** (04/09/2017 22:13:04): Test
 - Demo Installation [Installation]** (23/08/2017 17:36:26): Follow up
 - Demo Installation [Installation]** (23/08/2017 16:58:20): Hi, report for January 2017 - Jun 2017 has been submitted. Please review and approve ASAP
- Thread:** Shows the selected message content: 'Demo Messages'. Below is an 'Active Participants' section with two tabs: 'Demo REEM [REEM]' and 'Demo Installation [Installation]'. The 'Demo REEM [REEM]' tab is active.

5. Click on the message thread.
6. Enter the Message in the message field.
7. Click Send button.

This screenshot shows the same web application interface, but the 'Messages' pane now displays the selected message: 'Demo REEM [REEM]' (04/09/2017 22:30:14) with the text 'ck'. The 'Send' button is highlighted with a red '7'. The 'Threads' and 'Thread' panes remain the same as in the previous screenshot.

Note:

- i. An e-mail notification can be sent for each new message received.
 - a. Can be enabled/disabled in My Settings >> Send Messages to e-mail



- ii. A thread can be archived by ticking the archived check box.

| Subject | Last Message | New | Archived |
|-------------------------------|---------------------|-----|--------------------------|
| Demo Messages | 23/08/2017 17:36:26 | 0 | <input type="checkbox"/> |

10. Contact Us

For any problem related to EMIS, please email to emisadmin@st.gov.my or you can contact us at:

**Energy Efficiency and Conservation Department
Suruhanjaya Tenaga (Energy Commission)
No. 12, Jalan Tun Hussein
Precinct 2,
62100, Putrajaya.**

Tel No: 03-8870 8680/8693/8762

