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| --- | --- |
| Module Number | Project |
|  |  |
| Module Name | Description |
|  |  |
| Prepared By | Date |
|  |  |
|  | High Level Design Reference |
|  |  |

### COVER SHEET

|  |  |
| --- | --- |
| Detail Design Actual Hours | Detail Design Budgeted Hours |
|  |  |
| Explanation for variance between Actual and Budgeted Hours (if needed) | |
|  | |
| Assigned To | Estimated Hours for Code and Test |
|  |  |

### CHECKLIST

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| --- | --- | --- |
| **Included** | **Item Name** | **Attachments** |
|  | Module Definition |  |
|  | Process Overview |  |
|  | Elements Affected |  |
|  | Program Flow Diagram |  |
|  | Code Changes | Attached Code Listing |
|  | Report Layouts | Attached Modified Report |
|  | Screen Layouts | Attached Modified Screen |
|  | Potential Test Conditions |  |
|  | Assumptions |  |
|  | Open Design Points |  |
|  | Change Log |  |
|  | Construction Estimate |  |
|  | Peer Review |  |

### SIGN OFF

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|  | Business Owner |  |  |
|  |  |  |  |
|  | Name | Signature | Date |
|  | IT Lead |  |  |
|  |  |  |  |
|  | Name | Signature | Date |
|  | CSS Technical Lead |  |  |
|  |  |  |  |
|  | Name | Signature | Date |
|  | Project Manager |  |  |
|  | Sendil |  |  |
|  | Name | Signature | Date |

## Process Overview

**Requirement**:

## The goal of the Benchmarking & Energy Efficiency Portal is to create a single point of entry for our customers that allows them to benchmark their properties. The current process for benchmarking requires a release form to be provide to the call center and then the data is gathered manually through queries out of our data warehouse. This portal will allow users to get aggregate usage on properties that are defined by the individual building owners and export that data to Energy Star Portfolio Manager.

## Energy Star Portfolio Manager is a tool that is provided by the EPA that allows building owners or managers to benchmark their properties against similar buildings. Energy Star provides scoring based on proprietary metrics and requires a user to input their water and gas service information in addition to the electric service. They offer web service and API calls that will allow Ameren to interact with the individual customer accounts, buildings, and meter level data. This will allow Ameren to update user's accounts with usage information and retrieve metrics and data provided by Energy Star Portfolio Manager.

## With the implementation of Release 2, the portal will represent a single place that a user will be able to view their scores and other information defined by our Energy Efficiency group. This data will be stored by Ameren so that it is usable by the Energy Efficiency group to leverage in sales and marketing campaigns. We also will have an automated update that updates the customer's usage data monthly.

## Elements Affected

|  |
| --- |
| Delete different Element tables that are not needed. If you have more than one type of the same Element then copy the appropriate table for each one. |

## Program Flow Diagram (if required)

|  |
| --- |
| PLACE YOUR VISIO DIAGRAM HERE (Copy drawing to clipboard in VISIO, hen in WORD, choose Edit, Paste Special, choose Paste Link so changes to VISIO diagram will be reflected in all documents). This diagram should decompose the modification into individual modules and data stores. |

## Code Changes

|  |  |
| --- | --- |
| Name | Is Code Attached Separately? |
| Misc. Front End Pages | No |
| Description | |
| Homepage, Contact Us, FAQ, Dashboard | |
| 1. Homepage 2. Contact Us 3. FAQ 4. Dashboard 5. Header    1. Public (Logged out)    2. Private (Logged in) | |
|  | |
|  | |

|  |  |
| --- | --- |
| Name | Is Code Attached Separately? |
| Registration | No |
| Description | |
|  | |
| 1. Initial Page     2. Confirmation Page    3. User will be require to check email and verify their email with the link send       1. Link will direct user to login page and enter new credentials to continue registration       2. Must login from with page from link first 2. Secondary Page     2. Benchmarking (With Existing Energy Star Account)    3. Benchmarking (Without Existing EnergyStar Account) 3. EPM Page     2. Is Energy Star Partner    3. Not Energy Star Partner 4. Add Building    1. Create New    2. Add Existing    3. If an existing Energy Star ID was provided during registration, user will not be prompted to add building if account was populated with shared buildings from Energy Star | |
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| --- | --- |
| Name | Is Code Attached Separately? |
| Manage Buildings | No |
| Description | |
| View and Edit Building Details | |
| 1. Building List 2. Add Building    1. Create New    2. Add Existing 3. Building Details 4. Edit Building 5. Manage Locations     2. Add Locations    3. User will be prompted to provide an account number if attempting to change number of locations to only one for a building | |
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| --- | --- |
| Name | Is Code Attached Separately? |
| Export to EnergyStar and View/Download Usages | No |
| Description | |
|  | |
| 1. User navigate to page from Building Detail page     2. Non-benchmarking and Admin users will only be able to access the Download Page.    3. Benchmarking users will have access to both pages 2. Export Building Data to Energy Star    1. Energy Star user tied to existing EPM    2. Energy Star user generate from BEEP Portal       1. cid:image004.png@01D4E30C.73D61670 3. View/Download Benchmarking Data | |
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| --- | --- |
| Name | Is Code Attached Separately? |
| Manage Profile | No |
| Description | |
| User can change their account Name, Password, Security Question, Email, View EnergyStar Enrollment Status | |
| 1. Main Page 2. Password 3. Security Question 4. Name 5. Email Address 6. EnergyStar Portfolio Manager Status    1. Enrolled    2. Not Enrolled | |
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| --- | --- |
| Name | Is Code Attached Separately? |
| User Roles | No |
| Description | |
| Admin, Benchmarking, and Non-benchmarking | |
| The following roles will only be allow the following access.   1. Non-benchmarking    1. Will have access to all pages except for Export to Energy Star    2. No changes made to buildings will be sent to Energy Star 2. Benchmarking    1. Will have access to all pages.    2. Any changes made to buildings will also be made to Energy Star Account 3. Admin    1. Will have access to all pages except for Export to Energy Star    2. Will have read-only access. Edit and Manage Building features on pages are disabled.    3. Will have full list of building tied to Ameren       1. Will include exclusive search functionality to filter buildings    4. Building Details screen will include additional information | |
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## Screen Layout

## Report Layout

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| Show a detailed layout of the report to be created by this module. For modifications to existing reports, paste in a copy of old and proposed reports and describe changes in the report fields section.  For new reports, use the existing layout and modify it accordingly.  For modifications, paste the report layout in the report box. When a report is pasted in, it may not be the right font, so select this “box” in the table and change the font to Courier and the point size to 8. Before you do any of this, remove the existing report layout from the box.  If you have multiple reports, make a copy of this layout and paste it as many times as you need to. |

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| Report Name |
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## Report Fields

**Field Significance**

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| Field | Description |
| Place Text Here | Place Text Here |
| Field | Description |
| Place Text Here | Place Text Here |
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| Describe the significance of each **new/changed** field presented on the report.  **Example:**  Meter Number: numerical id assigned to meter by manufacturer.  Meter Code: numerical id assigned to meter by Union  Electric. |

## Potential Test Conditions

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| **Item** | **Point** | **Potential Test Condition** |
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| List all potential test conditions here. This is not a comprehensive test plan but can be used to ensure that test conditions that may not be obvious to a programmer are logged here. |

## Assumptions

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| **Num** | **Date** | **Assumption** |
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## Open Design Points

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| **Num** | **Date** | **Status** | **Point** |
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| List all open design points here. These may be issues that have not yet been resolved from another module that impact this change item. By the time programming has begun all design points must be closed. |

## Change Log

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| **Item** | **Change** | **Reason** |
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| List all changes that have occurred since the High Level Design. These may be changes because of technical reasons budget reasons ect. Accompany the change with a reason why the change was made. |

## Construction Estimate

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| Enter the estimate in hours for each section below. To add other “Items” not mentioned, copy and paste additional rows in the table. The “Total Hours” will calculate automatically. To do this, click on the number in the “Total Hours” box. Click the right mouse button. You will see an option called “Update Field”. Press this option and it is done. |

**Time Estimates Approach 1**

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| --- | --- | --- |
| **Number** | **Item Name** | **Estimate (Hours)** |
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| **Number** | **Item Name** | **Estimate (Hours)** |
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|  | **Total Hours** |  |

**Estimate Assumption**

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| --- | --- |
| **Number** | **Assumption** |
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## Peer Review