**Release and Iteration Plans**

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Release Plan

# Release 1

Delivery date: 19-Sep-2012 Total Story Points:33

This release is to deliver a basic system that can be utilised from a desktop environment, which is able to take inputs from the user and display the expected savings amounts, as well as information about the system in general

## Basic Solar Panel Cost Output

The system will be able to take the raw input from a user and display a basic cost analysis based on the input. This input will be all from the user. This will not give the user any options from the database. They will enter all the costs and kW values. The output what the system can produce, how much the system will cost and how much the system will save the user.

|  |  |  |
| --- | --- | --- |
| **Story ID** | **Story Title** | **Story Points** |
| **36** | Dekstop Application | 1 |
| **1** | Hardware cost input | 1 |
| **3** | System Size input | 1 |
| **5** | Input Panel Distribution | 1 |
| **7** | Input Panel Efficiency data | 1 |
| **9** | Panel lifetime input | 1 |
| **12** | Tariff rate input | 1 |
| **15** | Input inverter efficiency | 1 |
| **19** | Inverter lifetime input | 1 |
| **20** | Monthly power usage input | 1 |
| **29** | Display monthly savings | 4 |
| **34** | System Infrastructure | 2 |
| **35** | CI Services | 2 |
|  | Story Point Sub-Total: | 18 |

## Improve user interface

The system will give the user options from the database so they can create a solution based on existing equipment. This will allow a user to select a more realistic solution with current technology limitations in place. The user will still be able to enter their own values if the desire.

|  |  |  |
| --- | --- | --- |
| **Story ID** | **Story Title** | **Story Points** |
| **2** | Hardware cost fetching | 2 |
| **4** | System Size fetching | 2 |
| **6** | Efficiency loss calculation | 2 |
| **16** | Factoring in inverter cost | 1 |
| **17** | Daily power usage input | 1 |
| **18** | Average daytime hourly power usage | 1 |
| **21** | Auto-fill roof area percentages | 1 |
| **25** | Location input | 4 |
| **30** | Display cumulative annual savings | 1 |
|  | Story Point Sub-Total: | 15 |

# Release 2

Delivery date: 24-Oct-2012 Total Story Points: 39

This release is to further refine the model in which the estimations are made, by including environmental factors, location information. This release will also improve the reporting functions of the product. Release 2 will also include the mobile application for remote usage of the application.

## Model Refinement

The system will be able to give a more accurate cost analysis of the system by taking into account environmental factors and location information. It will allow the user to not only see the lifetime of the panel but the estimated efficiency of the panel over its lifetime as well as being able to see the Tariff rates from different suppliers in their area.

|  |  |  |
| --- | --- | --- |
| **Story ID** | **Story Title** | **Story Points** |
| **8** | Efficiency loss data fetching | 4 |
| **10** | Panel lifetime fetching | 2 |
| **11** | Display estaimted efficiency over life | 4 |
| **13** | Tariff rate fetching | 4 |
| **14** | Display power generation | 4 |
| **27** | Average daylight hours for location | 2 |
|  | Story Point Sub-Total: | 20 |

## Mobile Development

The system will be accessible from the Android mobile platform so users will be able to access this product through a portable system, which will allow for location fetching through GPS, now common on most smart phones. This feature will also include the ability to print reports on the desktop version of the system, for customers who want to take system details with them.

|  |  |  |
| --- | --- | --- |
| **Story ID** | **Story Title** | **Story Points** |
| **22** | Mobile application | 16 |
| **24** | Location fetching | 1 |
| **26** | Printing reports | 2 |
|  | Story Point Sub-Total: | 19 |

# Release 3

Delivery date: 28-Nov-2012 Total Story Points: 36

This release is about expansion of the model and system capabilities, in that estimations can be saved and compared on both desktop and mobile. The model will also be refined to handle commercial setups for large businesses such as factories.

## Solar Panel configuration storage

Short paragraph summarising this feature and its business value.

|  |  |  |
| --- | --- | --- |
| **Story ID** | **Story Title** | **Story Points** |
| **23** | Saving reports | 8 |
| **28** | Compare two configurations | 8 |
| **32** | Efficiency checking | 2 |
| **33** | Display panel output | 2 |
|  | Story Point Sub-Total: | 20 |

## Industrial and Commercial

This will allow the system to handle industrial and commercial setups where multiple panel arrays with multiple inverters, battery systems being present. This will allow the system to be utilised by the SMB sector in addition to home users.

|  |  |  |
| --- | --- | --- |
| **Story ID** | **Story Title** | **Story Points** |
| **31** | Commercial Setups | 16 |
|  | Story Point Sub-Total: | 16 |

# Delivery Schedule

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Week 6  Aug. 28/29 | Week 7  Sep. 4/5 | Week 8  Sep. 11/12 | Week 9  Sep. 18/19 | Mid-Semester Break | Week 10  Oct. 2/3 | Week 11  Oct. 9/10 | Week 12  Oct. 16/17 | Week 13  Oct. 23/24 |
| Iteration 1 | | Iteration 2 | |  | Iteration 3 | | Iteration 4 | |
| Release 1  Sept. 18 / 19 | | | |  | Release 2  Oct. 23 / 24 | | | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |
| Iteration 1 | |  | |  | |  | |
| Release 3, 4, … | | | | | | | |

Estimated velocity is 35 story points per release.

Release 1 = 33 Story Points

Iteration Plan

# Iteration 1

Total Story Points: 18 Total Hours: 52

Current Velocity: 18

## Story 1: Hardware cost input

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Create a simple GUI to input the data | 0.5 hours |  |
| **2** | Create class business layer to hold data | 0.5 hours |  |
|  |  |  |  |
|  | Story Points: 1 Total Hours: | 1 |  |

## Story 3: Input kW information

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Create a simple GUI to input the data | 1 hours |  |
| **2** | Create class business layer to hold data | 1 hours |  |
| **3** | Create unit tests for properties and methods | 1 hours |  |
|  | Story Points: 1 Total Hours: | 3 |  |

## Story 5: Input panel distribution

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Create a simple GUI to input the data | 1 hours |  |
| **2** | Create class business layer to hold data | 1 hours |  |
| **3** | Create unit tests for properties and methods | 1 hours |  |
|  | Story Points: 1 Total Hours: | 3 |  |

## Story 7: Input efficiency data

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Create a simple GUI to input the data | 1 hours |  |
| **2** | Create class business layer to hold data | 1 hours |  |
| **3** | Create unit tests for properties and methods | 1 hours |  |
|  | Story Points: 1 Total Hours: | 3 |  |

## Story 9: Input panel lifetime

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Create a simple GUI to input the data | 1 hours |  |
| **2** | Create class business layer to hold data | 1 hours |  |
| **3** | Create unit tests for properties and methods | 1 hours |  |
|  | Story Points: 1 Total Hours: | 3 |  |

## Story 12: Tariff rate input

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Create a simple GUI to input the data | 1 hours |  |
| **2** | Create class business layer to hold data | 1 hours |  |
| **3** | Create unit tests for properties and methods | 1 hours |  |
|  | Story Points: 1 Total Hours: | 3 |  |

## Story 15: Input inverter efficiency

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Create a simple GUI to input the data | 1 hours |  |
| **2** | Create class business layer to hold data | 1 hours |  |
| **3** | Create unit tests for properties and methods | 1 hours |  |
|  | Story Points: 1 Total Hours: | 3 |  |

## Story 19: Inverter lifetime input

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Create a simple GUI to input the data | 1 hours |  |
| **2** | Create class business layer to hold data | 1 hours |  |
| **3** | Create unit tests for properties and methods | 1 hours |  |
|  | Story Points: 1 Total Hours: | 3 |  |

## Story 20: Monthly power usage input

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Create a simple GUI to input the data | 1 hours |  |
| **2** | Create class business layer to hold data | 1 hours |  |
| **3** | Create unit tests for properties and methods | 1 hours |  |
|  | Story Points: 1 Total Hours: | 3 |  |

## Story 29: Display monthly savings

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Create a GUI component to display the data returned | 2 hours | 2 |
| **2** | Create class business layer to hold data | 2 hours | 2 |
| **3** | Create class for data request to webservice | 1 hour | 1 |
| **4** | Create data processing class that takes the input from the webservice, processes it, and completes information in a class to return to client via webservice | 6 hours | 14 |
| **5** | Create class to hold returned data from webservice | 1 hour | 1 |
| **6** | Create webservice progress dialog boxes for UI | 1 hour | 2 |
|  | Story Points: 4 Total Hours: | 13 | 22 |

## Story 34: System Infrastructure (Developer Story)

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Create a Google App Engine Account to be shared amongst developers | 1 hour |  |
| **2** | Create a GitHub account and repository for developers | 1 hours |  |
| **3** | Create basic Google App Engine application, and upload to GAE and Github | 3 hours |  |
|  | Story Points: 2 Total Hours: | 5 |  |

## Story 35: CI Services (Developer Story)

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Create a virtual appliance to host Hudson CI | 4 hours |  |
| **2** | Install, and configure Hudson for local user access. | 1 hour |  |
|  | Story Points: 2 Total Hours: | 5 |  |

## Story 36: Dekstop Application

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Create a simple GUI application to hold the required input/output components that will make up the applicatons | 3 hours |  |
|  | Story Points: 1 Total Hours: | 3 |  |

# Iteration 2

Total Points: 15 Total Hours:

## Story 2: Hardware Cost Fetching

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Create Link to database to fetch data | 2 hours |  |
|  | Story Points: 2 Total Hours: | 1 |  |

## Story 4: System Size fetching

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Create link to database to fetch data | 2 hours |  |
|  | Story Points: 2 Total Hours: | 2 |  |

## Story 6: Efficiency loss calculation

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Develop Algorithm | 2 hours | 2 |
| **2** | Display output to user | 1 hours | 1 |
|  | Story Points: 2 Total Hours: | 3 | 3 |

## Story 16: Factoring in inverter cost

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Modify relevant algorithm | 1 hours | 1 |
|  | Story Points: 1 Total Hours: | 1 | 1 |

## Story 17: Daily power usage input

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Add new field to gui | 0.5 hours |  |
| **2** | Update algorithm | 0.5 hours |  |
|  | Story Points: 1 Total Hours: | 1 |  |

## Story 18: Average daytime hourly power usage

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Add new field to GUI | 0.5 hours |  |
| **2** | Update algorithm | 0.5 hours |  |
|  | Story Points: 1 Total Hours: | 1 |  |

## Story 21: Auto-fill roof area percentages

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
|  |  |  |  |
|  | Story Points: 1 Total Hours: | 3 |  |

## Story 25: Location input

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Create a simple GUI to input the data | 1 hours |  |
| **2** | Create class business layer to hold data | 1 hours |  |
| **3** | Create unit tests for properties and methods | 1 hours |  |
|  | Story Points: 4 Total Hours: | 3 |  |

## Story 30: Display cumulative annual savings

|  |  |  |  |
| --- | --- | --- | --- |
| **Task ID** | **Task Description** | **Estimate** | **Taken** |
| **1** | Update algorithm to display monthly savings | 1 hours | 1 |
| **2** | Display savings | 1 hours | 1 |
|  | Story Points: 1 Total Hours: | 2 | 2 |

## 