**Release and Iteration Plans**

**MGSD Technology**

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Release Plan

# Release 1

Delivery date: 18/9/2012 Total Story Points: 23

This release will involve populating a database and setting up a basic user interface that can communicate with the database. Basic calculations will be implemented and their results displayed in meaningful formats. The client should have a useable application by the end of this release.

## Basic Interface

This feature will involve a basic user interface to begin testing and get feedback from the client as to the design of the interface and directions in which to take the application. This will give the client plenty of time to shape the application and its interface(s) to their liking.

|  |  |  |
| --- | --- | --- |
| Story ID | Story Title | Story Points |
| 1 | System Location | 2 |
| 3 | System Cost | 1 |
| 4 | System Size | 2 |
| 5 | Panels and Orientations | 2 |
| 9 | Hours of Sunlight | 1 |
| 11 | Electricity Usage | 1 |
| 14 | Electricity Tariffs | 1 |
| 27 | Input Validation | 2 |
|  | Story Point Sub-Total: | 12 |

## Basic Calculations

This feature will involve the implementation of basic calculations and the output of their results to continue testing and get feedback from the client as to the accuracy of the calculations being made and their presentation. This will give the client a working application on which to build on.

|  |  |  |
| --- | --- | --- |
| Story ID | Story Title | Story Points |
| 17 | Electricity Tariff Increase | 1 |
| 19 | Daily Solar Generation | 1 |
| 20 | Daily Solar Used | 1 |
| 22 | Daily Savings | 1 |
| 23 | Annual Solar Generation | 1 |
| 24 | Annual Savings | 1 |
| 25 | Cumulative Savings | 1 |
| 28 | Simple Output | 2 |
| 29 | Advanced Output | 1 |
| 30 | Assumptions Made | 1 |
| 36 | Break Even Point | 1 |
| 37 | Expected Solar Generation | 1 |
|  | Story Point Sub-Total: | 11 |

# Release 2

Delivery date: 23/10/2012 Total Story Points: 27

This release will involve making the application’s calculations as accurate as possible by adding additional fields and prefilling data based on the user’s location. Advanced functionality like the ability to compare multiple run-throughs will also be implemented. This will ensure the client’s application is much more sophisticated than other available applications.

## Advanced Interface

This feature will involve extending the user interface and prefilling data based on the user’s location. This will make the application more accurate and easier to use.

|  |  |  |
| --- | --- | --- |
| Story ID | Story Title | Story Points |
| 2 | System Location Detection | 2 |
| 6 | Panel Efficiency Loss | 1 |
| 7 | Inverter Efficiency | 1 |
| 10 | Hours of Sunlight Detection | 2 |
| 12 | Electricity Usage Detection | 2 |
| 15 | Electricity Tariffs Detection | 2 |
| 16 | Service Fees | 2 |
| 18 | Feed-in Tariff | 2 |
|  | Story Point Sub-Total: | 14 |

## Advanced Calculations

This feature will involve providing for more advanced calculations and means of outputting results. This will make the application a more valuable tool and broaden its appeal.

|  |  |  |
| --- | --- | --- |
| Story ID | Story Title | Story Points |
| 8 | Replacement Inverters | 1 |
| 21 | Daily Solar Exported | 1 |
| 40 | Ideal Potential Return | 1 |
| 41 | Rising Electricity Costs | 2 |
|  | Story Point Sub-Total: | 5 |

## Basic Comparisons

This feature will involve allowing for comparisons to be made including detailed and specific output. This will also make the application a more valuable tool and broaden its appeal.

|  |  |  |
| --- | --- | --- |
| Story ID | Story Title | Story Points |
| 26 | Investment Return Rate | 2 |
| 33 | Multiple Run-throughs | 2 |
| 38 | Actual Solar Generation | 4 |
|  | Story Point Sub-Total: | 8 |

# Release 3

Delivery date: n/a Total Story Points: 14

This release will involve focusing on advanced functionality that isn’t supported by other similar applications, such as user accounts, information about solar panel systems installed locally, and support for calculations involving off-grid systems. This will ensure the application is head and shoulders above its competitors to give the client a distinct advantage.

## Advanced Comparisons

This feature will involve adding the ability to access past run-throughs from different devices via an accounts system, as well as accessing more general but no less useful information about local solar panel systems. This will give the client more obvious selling points for the application.

|  |  |  |
| --- | --- | --- |
| Story ID | Story Title | Story Points |
| 34 | User Accounts | 2 |
| 39 | Panel Maintenance | 2 |
| 43 | Systems Installed | 2 |
|  | Story Point Sub-Total: | 6 |

## Optional Extras

This feature will involve extending the application to support specific solar panel model information and calculations for off-grid systems. This will also give the client very distinct selling points.

|  |  |  |
| --- | --- | --- |
| Story ID | Story Title | Story Points |
| 35 | Panel Model Efficiency Loss | 4 |
| 32 | Off-grid System | 4 |
|  | Story Point Sub-Total: | 8 |

# Delivery Schedule

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

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

Estimated Velocity: 1-2 story points per day, where 1 story point = 4 hours

Iteration Plan

# Iteration 1

Total Story Points: 12 Total Hours: 48

## 1: System Location

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 1 |  |
| 2 | Add fields for system location | 0.5 |  |
| 3 | Add relevant data to database | 2 |  |
| 4 | Implement geocoding and/or reverse geocoding | 2 |  |
| 5 | Add input validation | 2 |  |
| 6 | Run tests | 0.5 |  |
|  | Story Points: 2 Total Hours: | 8 |  |

## 3: System Cost

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 1 |  |
| 2 | Add field for system cost | 0.5 |  |
| 3 | Add input validation | 2 |  |
| 4 | Run tests | 0.5 |  |
|  | Story Points: 1 Total Hours: | 4 |  |

## 4: System Size

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 2 |  |
| 2 | Add drop-down list for system size | 1 |  |
| 3 | Add relevant data to database | 2 |  |
| 4 | Add input validation | 2 |  |
| 5 | Run tests | 1 |  |
|  | Story Points: 2 Total Hours: | 8 |  |

## 5: Panels and Orientations

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 2 |  |
| 2 | Add fields for number of panels | 0.5 |  |
| 3 | Add drop-down lists for orientations | 1 |  |
| 4 | Add relevant data to database | 2 |  |
| 5 | Add input validation | 2 |  |
| 6 | Run tests | 0.5 |  |
|  | Story Points: 2 Total Hours: | 8 |  |

## 9: Hours of Sunlight

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 1 |  |
| 2 | Add field for hours of sunlight | 0.5 |  |
| 3 | Add input validation | 2 |  |
| 4 | Run tests | 0.5 |  |
|  | Story Points: 1 Total Hours: | 4 |  |

## 11: Electricity Usage

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 1 |  |
| 2 | Add field for electricity usage | 0.5 |  |
| 3 | Add input validation | 2 |  |
| 4 | Run tests | 0.5 |  |
|  | Story Points: 1 Total Hours: | 4 |  |

## 14: Electricity Tariffs

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 1 |  |
| 2 | Add fields for electricity tariffs | 0.5 |  |
| 3 | Add input validation | 2 |  |
| 4 | Run tests | 0.5 |  |
|  | Story Points: 1 Total Hours: | 4 |  |

## 27: Input Validation

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 1.5 |  |
| 2 | Add local input validation | 3 |  |
| 3 | Add server-side input validation | 3 |  |
| 4 | Run tests | 0.5 |  |
|  | Story Points: 2 Total Hours: | 8 |  |

# Iteration 2

Total Story Points: 13 Total Hours: 52

## 17: Electricity Tariff Increase

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 1 |  |
| 2 | Add field for electricity tariff increase | 2 |  |
| 3 | Add input validation | 0.5 |  |
| 4 | Run tests | 0.5 |  |
|  | Story Points: 1 Total Hours: | 4 |  |

## 19: Daily Solar Generation

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 1 |  |
| 2 | Implement calculations | 1.5 |  |
| 3 | Format output | 1 |  |
| 4 | Run tests | 0.5 |  |
|  | Story Points: 1 Total Hours: | 4 |  |

## 20: Daily Solar Used

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 1 |  |
| 2 | Implement calculations | 1.5 |  |
| 3 | Format output | 1 |  |
| 4 | Run tests | 0.5 |  |
|  | Story Points: 1 Total Hours: | 4 |  |

## 22: Daily Savings

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 1 |  |
| 2 | Implement calculations | 1.5 |  |
| 3 | Format output | 1 |  |
| 4 | Run tests | 0.5 |  |
|  | Story Points: 1 Total Hours: | 4 |  |

## 23: Annual Solar Generation

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 1 |  |
| 2 | Implement calculations | 1.5 |  |
| 3 | Format output | 1 |  |
| 4 | Run tests | 0.5 |  |
|  | Story Points: 1 Total Hours: | 4 |  |

## 24: Annual Savings

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 1 |  |
| 2 | Implement calculations | 1.5 |  |
| 3 | Format output | 1 |  |
| 4 | Run tests | 0.5 |  |
|  | Story Points: 1 Total Hours: | 4 |  |

## 25: Cumulative Savings

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 1 |  |
| 2 | Implement calculations | 1.5 |  |
| 3 | Format output | 1 |  |
| 4 | Run tests | 0.5 |  |
|  | Story Points: 1 Total Hours: | 4 |  |

## 28: Simple Output

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 1 |  |
| 2 | Separate simple output from advanced output | 6.5 |  |
| 4 | Run tests | 0.5 |  |
|  | Story Points: 2 Total Hours: | 8 |  |

## 29: Advanced Output

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 1 |  |
| 2 | Make all relevant information visible | 2.5 |  |
| 3 | Run tests | 0.5 |  |
|  | Story Points: 1 Total Hours: | 4 |  |

## 30: Assumptions Made

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 1 |  |
| 2 | Add assumptions where applicable | 2.5 |  |
| 3 | Run tests | 0.5 |  |
|  | Story Points: 1 Total Hours: | 4 |  |

## 36: Break Even Point

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 1 |  |
| 2 | Implement calculations | 1.5 |  |
| 3 | Format output | 1 |  |
| 4 | Run tests | 0.5 |  |
|  | Story Points: 1 Total Hours: | 4 |  |

## 37: Expected Solar Generation

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Write tests | 1 |  |
| 2 | Format output accordingly | 2.5 |  |
| 3 | Run tests | 0.5 |  |
|  | Story Points: 1 Total Hours: | 4 |  |

# Iteration 3

Total Story Points: 12 Total Hours: 42

## 21: Daily Solar Exported

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Unit tests | 1 |  |
| 2 | Add method to calculation class | 2 |  |
| 3 | Format output including javascript | 1 |  |
| 4 | Other tests (e.g. user acceptance tests) | 0.5 |  |
|  | Story Points: 1 Total Hours: | 4.5 |  |

## 22: Daily Savings

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Unit tests | 1 |  |
| 2 | Add method to calculation class | 2 |  |
| 3 | Format output including javascript | 1 |  |
| 4 | Other tests (e.g. user acceptance tests) | 0.5 |  |
|  | Story Points: 1 Total Hours: | 4.5 |  |

## 24: Annual Savings

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Unit tests | 1 |  |
| 2 | Add method to calculation class | 1 |  |
| 3 | Format output including javascript | 1 |  |
| 4 | Other tests (e.g. user acceptance tests) | 0.5 |  |
|  | Story Points: 1 Total Hours: | 3.5 |  |

## 25: Cumulative Savings

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Unit tests | 1 |  |
| 2 | Add method to calculation class | 1 |  |
| 3 | Format output including javascript | 1 |  |
| 4 | Other tests (e.g. user acceptance tests) | 0.5 |  |
|  | Story Points: 1 Total Hours: | 3.5 |  |

## 26: Investment Return Rate

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Unit tests | 1 |  |
| 2 | Add interface elements | 2 |  |
| 3 | Add method to calculation class | 2 |  |
| 4 | Format output including javascript | 2 |  |
| 5 | Other tests (e.g. user acceptance tests) | 1 |  |
|  | Story Points: 2 Total Hours: | 8 |  |

## 29: Advanced Output

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Unit tests | 1 |  |
| 2 | Add interface elements | 1 |  |
| 3 | Add method to calculation class and/or servlets | 2 |  |
| 4 | Format output including javascript | 1 |  |
| 5 | Other tests (e.g. user acceptance tests) | 0.5 |  |
|  | Story Points: 1 Total Hours: | 5.5 |  |

## 36: Break Even Point

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Unit tests | 1 |  |
| 2 | Add method to calculation class | 1 |  |
| 3 | Format output including javascript | 1 |  |
| 4 | Other tests (e.g. user acceptance tests) | 0.5 |  |
|  | Story Points: 1 Total Hours: | 3.5 |  |

## 37: Expected Solar Generation

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Format output including javascript | 1 |  |
| 2 | Other tests (e.g. user acceptance tests) | 0.5 |  |
|  | Story Points: 1 Total Hours: | 1.5 |  |

## 40: Ideal Potential Return

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Add interface elements | 1 |  |
| 2 | Format output including javascript | 1 |  |
| 3 | Other tests (e.g. user acceptance tests) | 0.5 |  |
|  | Story Points: 1 Total Hours: | 2.5 |  |

## 41: Rising Electricity Costs

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Add interface elements | 2 |  |
| 2 | Format output including javascript | 3 |  |
| 3 | Other tests (e.g. user acceptance tests) | 0.5 |  |
|  | Story Points: 2 Total Hours: | 5.5 |  |

# Iteration 4

Total Story Points: 12 Total Hours: 53

## 2: System Location Detection

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Unit tests | 1 |  |
| 2 | Add methods | 2 |  |
| 3 | Add interface elements | 2 |  |
| 4 | Format output including javascript | 2 |  |
| 5 | Other tests (e.g. user acceptance tests) | 1 |  |
|  | Story Points: 2 Total Hours: | 8 |  |

## 10: Hours of Sunlight Detection

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Source information | 1 |  |
| 2 | Unit tests | 1 |  |
| 3 | Add methods | 2 |  |
| 4 | Add interface elements | 2 |  |
| 5 | Format output including javascript | 2 |  |
| 6 | Other tests (e.g. user acceptance tests) | 1 |  |
|  | Story Points: 2 Total Hours: | 9 |  |

## 12: Electricity Usage Detection

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Unit tests | 1 |  |
| 2 | Add methods | 2 |  |
| 3 | Add interface elements | 2 |  |
| 4 | Format output including javascript | 2 |  |
| 5 | Other tests (e.g. user acceptance tests) | 1 |  |
|  | Story Points: 2 Total Hours: | 8 |  |

## 15: Electricity Tariffs Detection

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Source information | 1 |  |
| 2 | Unit tests | 1 |  |
| 3 | Add methods | 2 |  |
| 4 | Add interface elements | 2 |  |
| 5 | Format output including javascript | 2 |  |
| 6 | Other tests (e.g. user acceptance tests) | 1 |  |
|  | Story Points: 2 Total Hours: | 9 |  |

## 31: Downloadable Report

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Add methods | 2 |  |
| 2 | Add interface elements | 2 |  |
| 3 | Format output including javascript | 2 |  |
| 4 | Other tests (e.g. user acceptance tests) | 1 |  |
|  | Story Points: 2 Total Hours: | 7 |  |

## 33: Multiple Run-throughs

|  |  |  |  |
| --- | --- | --- | --- |
| Task ID | Task Description | Estimate | Taken |
| 1 | Unit tests | 2 |  |
| 2 | Add methods | 4 |  |
| 3 | Add interface elements | 2 |  |
| 4 | Format output including javascript | 2 |  |
| 5 | Other tests (e.g. user acceptance tests) | 2 |  |
|  | Story Points: 2 Total Hours: | 12 |  |