

Release Notes Energy Islands

These release notes contain basic information on the functionalities of the Energy Island's software and references to the code base.

First version: 15 November 2017

What does the software do?

The software is divided into different parts:

- 1) Reading data from battery meters
- 2) Matching logic – devices selling energy to each other
- 3) Deal registration and payment on Blockchain
- 4) User interface – consumers being able to see the actual households, devices and transactions
- 5) Predictive Module – based on historical behaviour predict and manage the energy balance accordingly

The main Github address for all code is https://github.com/rhythimashinde/H4C_EB_Island

The complete directory description can be found on the readme.md:

https://github.com/rhythimashinde/H4C_EB_Island/blob/master/README.md

1 - Reading data from battery meters

On the battery meter software runs which provides an http server which can be queried for the power flow.

Link to the software code:

https://github.com/rhythimashinde/H4C_EB_Island/blob/master/pwrreport/report.sh

2 – Matching logic

The matching logic uses the output of the battery meters and the cost in order to match energy demand and supply. The matching logic can switch off a consuming device when demand exceeds supply.

Link to the software code:

https://github.com/rhythimashinde/H4C_EB_Island/blob/master/trading/Trading_logic.py

3 - Deal registration and payment on Blockchain

The output of the Matching logic is input for the Blockchain part, where the deals are registered and paid for.

Link to the software code:

https://github.com/rhythimashinde/H4C_EB_Island/tree/master/SmartContract

4 - User interface – consumers being able to see the actual households, devices and transactions

The user can indicate the criteria to base the deals on, have insight into the structure of the energy island and see the actual deals via a website.

Link to the website: <http://energy.2.mk>

Link to the software code:

https://github.com/rhythimashinde/H4C_EB_Island/tree/master/HTML

5 - Predictive Module – based on historical behaviour predict and manage the energy balance accordingly

This module will use historical behaviour of the energy consumption to predict future consumption. Based on this prediction supply side can be controlled [Only outlined, not fully working]

Link to software code:

https://github.com/rhythimashinde/H4C_EB_Island/blob/master/trading/predictive.py