

Specification

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0.1 User Story Template

Template As a <type of user>, I want/need <some goal> so that <some reason>

0.2 User Stories

1. As a user, I need to create a wind turbine in the simulation so that I can calculate the potential energy output.
2. As a user, I need to create a photovoltaic panel in the simulation so that I can calculate the potential energy output.
3. As a user, I need to create a battery in the simulation so that I can **visualize** the impact of the energy storage on the grid.
4. As a user, I need to create a home on the demand side in the simulation so that I can calculate the energy demand of the home.
5. As a user, I need to create a commercial building on the demand side in the simulation so that I can calculate the energy demand of the commercial building.
6. As a user, I need to get continuously calculate dynamic prices per kWh from the simulation so that I can determine if I want to sell my produced energy or store it for later use or selling.
7. As a user, I need to use wetter data in the simulation so that the simulation gets more precise.
8. As a user, I need to be able to use already saved wetter data in the simulation so that the dependency on the availability of the wetter service is reduced.
9. As a user, I need to use the simulation to generate a forecast for energy generation and demand so that I can make informed decisions.
10. As a user, I want to add customizable supplier modules to the simulation so that ...

11. As a user, I want to add customizable consumer modules to the simulation so that ...
12. As a user, I need to run the simulation in an island mode which does not contain a connection to the main power grid so that I'm independent of the main power grid and its failures.
13. As a user, I need to get a visual notification if the supply is smaller than the demand so that I know that I have to add more energy supplier.
14. As a user, I need that the battery is used if the supply is smaller than the demand and it has enough charge so that ...
15. As a user, I need that the battery is recharged if the demand is greater than the supply so that ...
16. As a user, I need that the battery is recharged if the demand is greater than the supply so that ...
17. As a user, I need that the main power is used to manage peak demands if the microgrid has a connection to the main power so that ...
18. As a user, I need that the demand side simulation features standard loads like lighting so that...
19. As a user, I need that the demand side consumers feature different load scenarios like home users and commercial users (constant load, occasionally peak loads) so that ...
20. As a user, I need to use the system with my webbrowser so that I can use different platforms to view it.
21. As a user, I need to visualize different metrics so that ...
22. As a user, I need to view the current electric demand of the grid so that...
23. As a user, I need to view the electric consumption of the grid so that...
24. As a user, I want to adjust the demand by postponing the use of devices during peak hours so that...
25. As a user, I need that the simulation adapts the demand based the price per kWh so that...

Todo:

1. Replace ... with content
2. check spelling and grammar
3. price per min and price of the next day
4. user stories for visualization