As science and technology develop, the need for energy grows. In the long period, the tradition carbon burning will finally come to an end. One of the most popular and mature eco-friendly energy resources is solar energy. Then the question arises that what energy storage system and batteries should a house apply. This is what we aim at in the essay.

In our models, attributes that describe the house’s features are Area, Number of Residents and the Distance from grid. In order to evaluate the energy storage systems, we develop functions whose arguments are its Constantaneous Power Rating and Instantaneous Power Rating. Those for batteries are Capacity, Reliability, and Price Lifespan Rate.

In recent decades arises a new kind of batteries whose material is cement, which can be employed in the energy storage system. We analyze its pros and cons, apply it to our models, and compare it with other existing battery types.

As the current used energy resource is non-renewable, replacing it with new and eco-friendly ones can not be avoided. We need to transfer to reliable new energy resources as soon as possible.