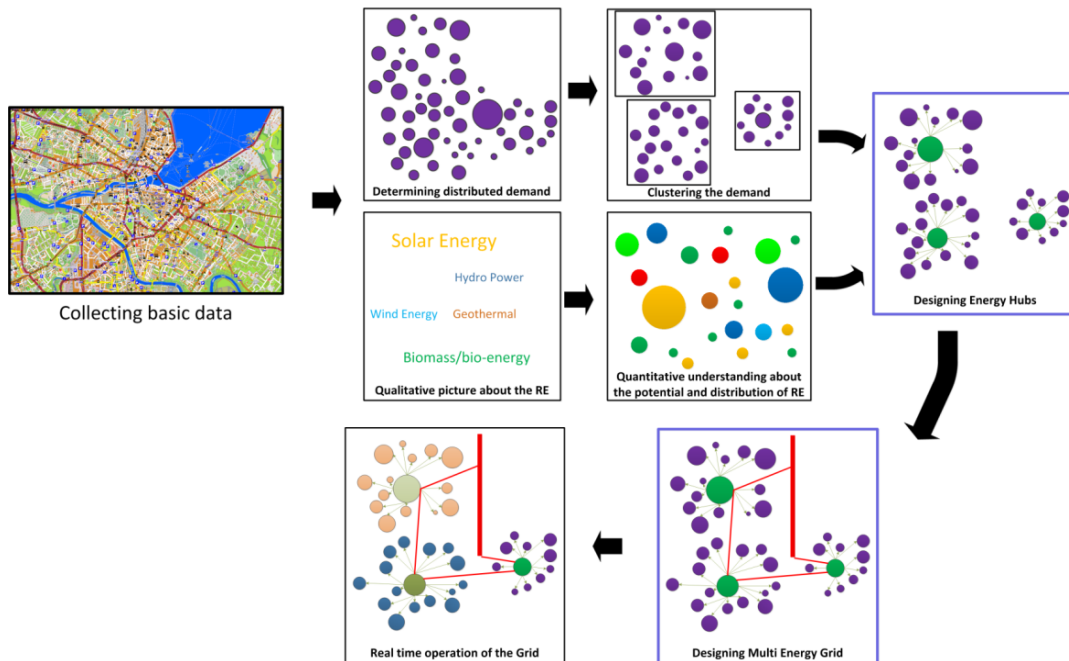


Performance assessment of multi energy hubs in building and neighborhood scale

Background

Distributed energy hubs combining different renewable energy technologies such as solar PV, hydro power, biomass and geo-thermal energy with energy storage and multi energy grids (i.e. electricity grid, thermal grid, gas grid) are getting popular. Techno-economic and environmental assessment of such energy systems supports the renewable energy integration process and, help to make buildings and neighborhoods more sustainable.



Objectives

- Develop simple model to simulate the performance of multi-energy hubs
- Combine the energy hub model with building simulation models (already developed in LESO)
- Assess the performance of energy hub at building scale and neighborhood scale using demand models (already developed in LESO) for different climatic conditions and building retrofitting scenarios

Profile looking for

We are seeking a motivated master student having a background in mechanical/civil/electrical engineering, mathematics or a related field. Basic background understanding of energy system modeling is preferred. Good understanding about basic software such as Matlab, EES, Trnsys, Energyplus are expected although not mandatory.

LESO-PB EPFL is an exciting group of researchers working on broader spectrum of topics related to building physics to solar energy from urban to Nano scale.

If you are interested send your curriculum vitae with your grades to **Mr. Dasun Perera, dasun.perera@epfl.ch**