Objective:

1. Reactor preference
   1. Molten- salt reactor ( MSR)
2. Advantages
   1. Passive Safety
   2. Possibility of refuelling and reprocessing while operating
   3. Higher temps than traditional
   4. Low pressure (additional safety)
3. Disadvantages
   1. Size
   2. Materials necessary (corrosion risks)
   3. Plutonium production
4. Other possible reactors
   1. Boiling water reactor (BWR)
   2. Pressurized water reactors (PWR)
   3. Advanced light water reactor (LWR)
   4. SMR
   5. Fluoride-salt cooled high temperature reactor (FHR)
   6. Gas cooled fast reactor
5. Possible solutions for grid integration/load following
   1. Create some sort of secondary product (may consider the following)
      1. The product should be able to be created at sporadic intervals times (in case of electricity saturation on the grid)
      2. Due to unpredictability, it may be beneficial to have the process/product be generated through an automated process
      3. Can generate useful products (hydrogen, bio fuels) or energy storage (batteries)
   2. Provide some sort of continuous service whose production can be ramped up and down
      1. One may consider having the plant do continuous waste treatment and allow for greater amounts of waste to be treated when energy is in abundance (maybe flow is controlled by excess energy/number of valves open)

inorganic minerals concentration and drying, or for distiller grain drying and for distillation in corn-ethanol plants. Other less apparent industrial uses might include paper pulp operations (~10-20 MWt is typical), food processing plants (~5-20 MWt is typical), and chemical plants (e.g. methanol distillation), with a typical plant using 100 MWe and 90 MWt).23

produce hydrogen by steam electrolysis when demand for electricity falls below the capacity of the system