Unit 1 - Worksheet 8

Extra Practice with Systems and Energy

1. A wind turbine is powering an electric motor that is lifting a cup of water. For this scenario:
2. Sketch a System Schema:

1. List all the ways energy is stored in your system:
2. Complete an Energy Pie Chart and State Diagram analysis, showing how the energy storage of the system changes over time.
3. I place an egg in a measuring cup of water, put them into a microwave oven and set it for 6 minutes at full power. By about minute 3, I see that the water is boiling briskly and the egg is bouncing around inside the cup of boiling water. At 6 minutes I remove the egg from the microwave and crack it open. It is almost fully hardboiled.
4. Sketch a System Schema for this scenario.

1. List all the ways energy is stored in your system:
2. Complete an Energy Pie Chart analysis, showing how the energy storage of the system changes over time.
3. You are flying a drone outside when a curious eagle swoops down on to the drone, grabs the drone with her talons, and carries it back safely to rest in her nest.
4. Sketch a System Schema for this scenario.

1. List all the ways energy is stored in your system:
2. Complete an Energy Pie Chart and State Diagram analysis, showing how the energy storage of the system changes over time. (Hint: you will need multiple pies and state diagrams to do the job thoroughly).