Renewable Sources of energy that can be used in the future:

* Space based solar energy farms:

This technology was first proposed by an aerospace engineer by the name of Peter Glaser in 1968. People also consider him to be the “the father of the solar-powered satellite.” This technology was first proposed by an aerospace engineer by the name of Peter Glaser in 1968. People also consider him to be the “the father of the solar-powered satellite.”

However, they have never fully realized it. This model of harnessing energy is based upon the fact that sunlight in space is largely uninterrupted. [Current solar technology](https://ecavo.com/solar-energy-pros-cons/) is at the mercy of weather conditions. It can only produce energy during daylight hours.

Space-based solar farms overcome these obstacles by eliminating nighttime blackouts and inclement weather. Additionally, sunlight found outside Earth’s atmosphere is **30% more intense** than the sunlight we receive on Earth’s surface.

The biggest challenge is getting the harnessed energy back down to Earth. The energy these solar farms produce can be sent down in the form of microwaves or with a powerful laser. The issue with this is that the cost of the entire process currently outweighs the benefit of the increased power production it provides.

With the rise of private space companies, some have predicted that this technology could be commercially viable within 30 years. China currently has plans to construct a space-based solar farm. They claim to already be testing the technology and aim to have a functioning space-based solar farm before **2050**.

Advantages of Space Bases Solar Energy farms:

* Can deliver energy anywhere on Earth
* Circumvents current [drawbacks of traditional solar energy](https://ecavo.com/solar-energy-disadvantages/) production

May be commercially viable within the next 30 years

* Human Energy:

Humans gather calories through the consumption of food, which our bodies then **convert into usable energy**. We use this energy for vital functions, such as keeping our hearts beating or powering our brains.

However, much of the energy our bodies produce is also used in the forms of heat and kinetic energy through movement. Much of this is goes to waste and remains unclaimed by humans.

At rest, the average person’s body produces around 100 watts of power. Production is much higher when performing vigorous activities. For example, cycling can generate **400 watts of power** per hour. However, top-performing cyclists have been recorded generating up to 1800 watts. That was during short bursts of exertion.

If you consider the average amount heat and kinetic energy being produced by humans in a single city (energy that is not being harnessed) you can begin to see why scientists are taking notice of this promising renewable energy source.

There are **two big issues** with the harnessing of human energy.

The first is that current energy harvesting strategies are *not very efficient*. However, this is set to change in the future. Scientists are developing technologies that harness this energy at enhanced efficiencies and at a lower cost.

The second problem holding back human power as a viable renewable energy source is that of **modern battery technology**. The battery systems currently available to us are too large, heavy and bulky to make this sort of technology viable. However, recent breakthroughs in energy-storing technology may soon be on the horizon.

In the **Human Power Plant project**, the University of Utrecht based in the Netherlands plans to create a dormitory. It is fully powered by the students who live within it.

These 750 students will power the 22-story building with human mechanical energy alone.