



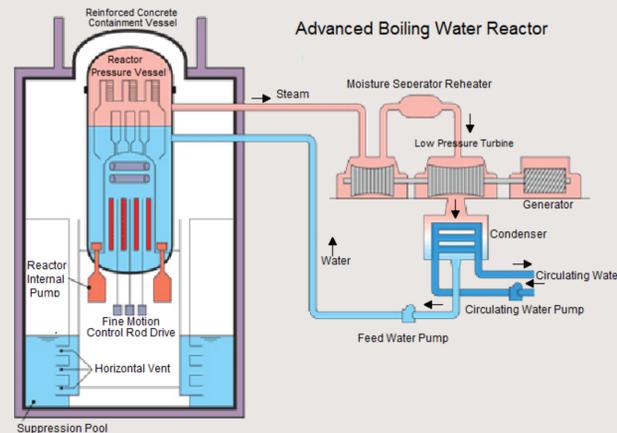
Nuclear Returns

There has been a revival of interest in nuclear energy in the last decade. For the first time in 30 years, the United States is releasing permits for new plants. New reactor technologies help to further increase this nuclear interest, next generation reactors are being designed to operate safely without power in case of emergencies. This surge in interest and new reactor design has led to what is considered a Nuclear Renaissance.

What is it? Nuclear energy is currently created via fission, a process which involves splitting atoms to generate intense heat.

Why should we use it?

Nuclear energy is a cost competitive technology with extremely cheap fuel prices. New reactor designs greatly improve safety and output over old plants.



- Oregon Senate bill **requires** that **25%** of Oregon's electricity comes from **new, renewable energy sources by 2015**.
- Oregon's Shepherds Flat wind farm is projected to be the **world's largest** when completed. The plant is estimated to produce enough power for **235,000** homes.
- The useful world-wide resource of Wave Energy has been estimated at greater than **2 terawatts** which is more than **10%** of the **world's power use**.
- New reactor designs are **safer** and hope to harness waste energy to create **Hydrogen** fuel.
- Some estimates show that there could be as many as **37 million** jobs directly and indirectly created by the renewable energy industry.

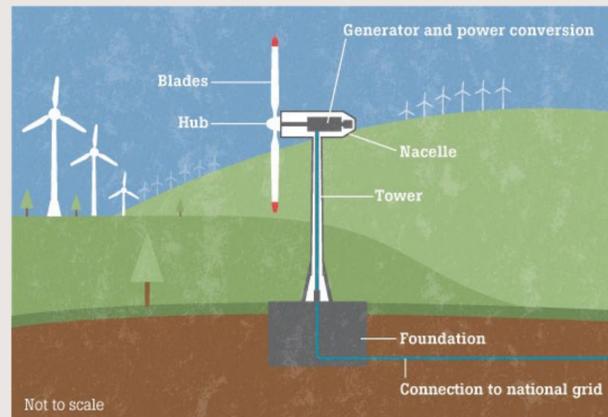
Wind Power

Wind power is positioned to be an excellent supplement to our existing power network. The United States has many locations that receive a significant and sustained winds that would be perfect for wind energy use. Oregon is already beginning to capitalize on the wind power present in the gorge area.

What is it? Wind power is usually obtained via wind turbines. The wind turns the turbines which creates mechanical energy, the mechanical energy is then converted into electrical energy.

Why should we use it?

Wind power is a renewable resource with no fuel costs and a low impact on the environment. It is available around the world and is a well-developed technology.



Quadrupling of jobs in the renewable energy industry 1998-2007



Sources: BMU/AGEE-Stat, ZSW, DiW, BEE. Dated: 03/2008



Wave Power

Wave power is a fairly old technology that has been given more attention after recent technological developments. New buoys such as the Oregon State Sea Beav, developed in part by the Wave Energy team, are utilizing a direct-drive conversion to make energy. Due to our interest and location, Oregon is poised to become a pioneer of wave energy.



What is it? Wave Power is the concentrated energy located in ocean waves. Buoys harvest this energy by utilizing the up and down motion of the oceans surface to create electricity.

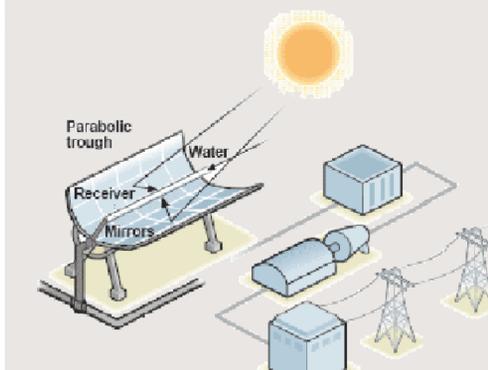
Why should we use it?

Wave Energy is a very abundant energy source with a abundant amount of high energy locations. It is also available in much higher densities and is more predictable than other renewable energies.

Solar Energy

The Sun has always been considered the most abundant source of energy we have access to. It's popularity continues to increase as solar panels drop in price and increase in efficiency. It is not uncommon to see a house with solar panels.

What is It? Most solar energy comes directly from photovoltaic (PV) panels which use semiconductors that generate voltage when exposed to sun light; and indirectly using concentrated solar power (CSP) to redirect sunlight on small areas to create extreme heat and energy.



Why should we use it?

Solar energy is the most abundant form of energy, it is available anywhere the sun shines, renewable, and environmentally friendly.