Radioisotope Thermoelectric Generators & Nuclear batteries

You cannot possibly be using portable or mammoth sized fuel-powered generators every where, but then, there are chances that you do need electricity almost everywhere. Since these sources of generating electricity aren't everything you must be relying on, there are other alternatives. While there are some age-old tried ways to producing electricity like Bio-gas, windmills and some other organic sources, Atomic energy has evolved to be quite a miracle source of electric energy.

The potential applications for atomic energy are just unfathomable. There is an amazing potential in the focused energy derived out of atomic energy. The kinds of energy and applications you would have only heard about in science fiction. Imagine batteries that would last for years and years together and generators that could be used on satellites which would be up and away in space, far away from planet earth and even far from any kind of solar energy.

For all the breath-taking scope of applications that these RTGs can be used for, they operative principles are very simple. Semi-conductor like materials are used to bring about a differential in the heat and hence cause electricity to flow.

Now, in the nuclear energy production systems, a radio isotope like Plutonium - 238, is used which has a property of decaying and producing immense heat which is captured and electricity is produced from it. Since the decaying process can take years all together, the process is on until then. This energy emanating out of the radio isotope travels like an alpha particle but has a tendency to die too soon creating heat while doing so, this heat is in turn captured by thermocouples and generate electricity. That gives you the almost unimaginable electricity production ranging over years, non-stop, no moving parts and no maintenance.

Nuclear batteries, Radioisotope thermoelectric generators and more of their ilk have been a possibility due to the same technology and have been used previously on space missions. If you can comprehend the effort, time and money saved due to this perpetual energy when it is used with regular appliances like your laptop or cell phone, you would see almost impossible-to-achieve results.

However, these RTGs are way for commercial use. Steadily increasing the heat producing nuclear matter 'stock-pile', it is also possible to bring down the cost of these amazing power generating technology elements. Gradual increase in awareness and technological advances should be able to bring in all such wonderful alternatives into commercial use and be made accessible to everyone.

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About the Author

Jason Uvios writes about "Radioisotope Thermoelectric Generators & Nuclear batteries" to visit: http://www.generators-europe.info, http://www.generators-europe.info and http://www.generator--usa.info