

The Future of Nuclear Power

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Nuclear Energy is an important component in the global energy mix, providing 1/6th of the world's electricity. In the United States, 104 nuclear reactors generate 20% of national electricity. Nuclear power has a high capacity factor, which offsets the high cost of building a power plant. The efficiency of nuclear power is effective in creating low energy costs. Two new nuclear reactors are currently being built in Georgia, and many more new sites are being considered. Nuclear energy is becoming a more widespread method of energy production.

The development of new nuclear technology is an on-going field, and improved reactor designs, including Small/Medium Reactors, Generation IV Reactors, LSCR's, and Hybrid Energy systems are built to overcome obstacles concerning waste disposal, fuel options, and safety. New designs are much more efficient, and have been effective in reducing the amount of waste produced. Nuclear power is nonrenewable, and the new technology has also been focused on increasing efficiency and recycling waste. Finally, safety is another large issue that new nuclear technology is aimed at addressing, especially in light of the recent incident at Fukushima. By being more efficient, the new technology makes the system less complex, and thus, safer. There has also been a larger emphasis on smaller-scale power plants, which would also decrease the chance for a nuclear accident. All these new technological advancements in the field of nuclear power help to sustain the world's growing dependence on this form of electricity generation.

Nuclear energy is considered to be more sustainable than the use of fossil fuels because there is less land use, less green house gas emissions, and much higher energy efficiency. Nuclear energy will continue to be an important factor in worldwide energy production.