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Debate on nuclear energy heats up

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Published: Tuesday, April 19, 2011

The powerful explosion that hit Fukushima's nuclear power station in Japan as a result of the devastating earthquake and tsunami March 11 sparked a debate over the safety of nuclear energy.

According to the World Nuclear Association, the United States has 104 nuclear power reactors in 31 states, operated by 30 different power companies.

The majority of nuclear energy is used to create electricity. Nuclear energy originates from the splitting of uranium atoms in a process called fission.

"A nuclear power plant can be dangerous, but also a regular coal plant is dangerous," said Jorge Lopez, UTEP physics professor. "Nuclear energy is much safer than anything else we have."

Lopez said the number of nuclear plants in the U.S. have not grown in recent years.

According to the U.S. Department of Energy, coal power in the U.S. accounts for 45 percent of the country's electricity production, followed by natural gas with 24 percent and nuclear energy at 19 percent.

Lopez also said that nuclear energy does not pollute like a coal plant.

"Nuclear energy doesn't pollute the energy that you get out of a single atom," Lopez said. "One single atom is 100 million times the energy that you get out of one atom of coal."

Various students are skeptical about the usage of nuclear energy in the United States and believe there are other forms of energy that can be used.

"I think for me it's not about being a dangerous technology, it is to some extent but the main point is that it is an extremely expensive technology," said Jorge Gomez, president of Global Zero, member of the UTEP Environmental Advocates, and English and American literature graduate student. "The cost is in the billions and that kind of investment can be more wisely spent in cleaner, safer and renewable energy like solar power, wind power and geothermal power."

Gomez believes that nuclear energy does emit pollution in its various stages, but agrees with Lopez that nuclear energy will not expand in the future.

"Because of the Fukushima disaster, I don't think there will be as much of a push for nuclear technology, also because of the recession that we're in and the cost is very high," Gomez said.

According to the U.S. Department of Energy, when all costs are factored in, nuclear power costs an estimated \$59.30 per megawatt hour. The use of nuclear energy is more expensive when compared to other means of generating electricity. For example, clean wind power is \$55.60/MWH; coal \$53.10/MWH; and natural gas \$52.50/MWH.

Lopez said another advantage in nuclear energy is that there is no air pollution. Nuclear energy does not involve burning fossil fuels, and therefore does not in any way contribute to greenhouse gas emissions. In this respect, it is as clean as solar, wind, geothermal and hydropower.

In contrast, a disadvantage of nuclear power is the radioactive waste produce as a byproduct of the energy. Spent fuels from a nuclear power plant are radioactive and highly toxic.

Lopez believes people react to quickly to what the see and read in the media and get scared very easily.

"Nobody fears medical physics, such as the machines in the hospitals, those things have killed more people than the nuclear plants," Lopez said. "But nobody is against those things, there are more of those machines than nuclear plants and most of the plants are isolated."

According to the U.S. Department of Energy, a nuclear power plant has not been built in the U.S. since 1977.

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UTEP President Diana Natalicio delivers the opening proclamation for Earth Week April 18 on the Geology Lawn.