Frequently Asked Questions About Nuclear Power

Q1 – Isn't the use of nuclear energy the most dangerous way possible to generate electricity?
There has never been a nuclear accident in the United States that has endangered the health or welfare of the public. The most serious American accident, in 1979 at the Three Mile Island nuclear plant in Pennsylvania, injured no one.

Q2 – Didn't the tragic 1986 accident at the Chernobyl nuclear plant in Ukraine prove the danger of nuclear generation?
The Chernobyl accident was caused primarily by two circumstances not present in the U.S. nuclear program, then or now – a seriously flawed reactor design and inadequate personnel training. The first generations of U.S. nuclear generation engineering and plant operation have proven highly successful. The next generation now being developed will be even safer.

Q3 – Don't nuclear plants represent one of our nation's greatest vulnerabilities to terrorist attack?
U.S. nuclear plants are among the nation's most hardened facilities against attack. No public infrastructure system is better protected.

Q4 – I've heard radioactive waste from nuclear power plants poses a serious safety problem for which there could be no practical solution. Is that true?
Used or "spent" nuclear fuel is currently being stored without incident using a secure on-site system called dry cask storage. This process is licensed for 20 years and can be renewed. Meanwhile, the U.S. Department of Energy continues developing plans for a safe, permanent, national storage site. Additionally, some countries, such as Britain, France, Japan, India, Russia, and China, have developed technologies for safely recycling used fuel, a process that extracts even more energy from the fuel.

Q5 – Isn't nuclear power much more expensive than other forms of generation because of the cost of plant construction?
Nuclear power plants typically cost more to construct than their non-nuclear counterparts. However, the best way to measure the cost of nuclear power is by analyzing the charge to the end user, the utility customer. Here, nuclear generation is very competitively priced.

SCE '07 Generation Costs

	c/kWh
Market	(varies)
Renewables & QF avg.	9.04
Natural Gas, peakers	7.99
Natural Gas, CCGT	4.89
Coal	1.53
Nuclear	0.50
Hydro	0.20
Average	4.03

Q6 – Nuclear generation proponents claim nuclear plants emit no greenhouse gases. But doesn't the process used to mine uranium and other aspects of nuclear generation create greenhouse gas emissions?
When all factors are considered, nuclear generation produces an equivalent amount of greenhouse gases to the renewable energy industry where indirect emissions sources also can be found.

Q7 – Why do utilities continue to insist on building large, traditional power plants? Couldn't smaller renewable power projects meet all of our needs with no danger and no greenhouse gases?
Southern California Edison (SCE) purchases more renewable energy generation than any U.S. utility. So you will get no argument from us about the importance and value of wind, solar, geothermal, biomass, and hydro generation. However, some renewable sources are intermittent, meaning they are not absolutely predictable. And others represent emerging technologies that are not yet proven. In contrast, nuclear generation already provides 20 percent of the U.S. power supply and nuclear plants can provide "baseload" supplies – serving utility customer power needs day or night, regardless of weather conditions. U.S. nuclear plants are available to supply power approximately 90 percent of the time.

Q8 – Where do nuclear plants such as SCE's purchase uranium to fuel their plants?
North America has abundant supplies of secure, domestic uranium. Additionally, stable international markets are available including suppliers such as Canada and Australia. As a result, nuclear generation provides an important means of making the U.S. electricity supply less dependent on fuels from less stable parts of the world. SCE works to maintain a reliable, low-cost nuclear fuel supply from a diverse mixture of suppliers, including Canada, Australia and South Africa.

Q9 – If nuclear generation has so many benefits, why is there such vocal opposition to its use and expansion?
Much of the opposition is based on misunderstanding. An analogy would be the fear some experience when thinking of flying. Some do not realize U.S. freeways are more dangerous than our airways. Nuclear energy and every other fuel used to create energy produce risks that must be carefully managed. However, the record of U.S. power production is unquestionable – correctly managed nuclear energy is one of our safest, most beneficial options.

Q10 – Does the same negative attitude toward nuclear energy prevail throughout the world?
No. For example, half of the power used by some European countries is generated domestically using nuclear energy. And studies indicate that the attitude of Americans is shifting to a more positive view of nuclear energy as its contribution to the campaign to reduce greenhouse gases is more widely understood.

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