

NUCLEAR AND RENEWABLE ENERGY

Eshmanova Zulxumor Muradovna

Teacher of physics subject in secondary school
Secondary school 8, Akkorgan district, Tashkent region
eshmanovazulxumor8@gmail.com

Tusmatov Shokhrukh Rasuljon ugli

Teacher of foreign language in medicine
CAMU, Central Asian Medical University
shoxruxtusmatov4@gmail.com

ABSTRACT

Since the mid-1980s, nuclear power has been a major source of electricity in the United States, second only to coal. Yet the future of nuclear power in the US and the rest of the world is uncertain. Although the US has the most nuclear capacity of any nation, the U.S. Department of Energy predicts that the use of nuclear fuel will have dropped dramatically by 2030, by which time more than 40% of capacity will have been retired. The Bush Administration has supported nuclear expansion, emphasizing its importance in maintaining a diverse energy supply, but currently the US has no plans to build additional reactors on its soil. Many fear nuclear energy, fueled by accidents such as those at Chernobyl and Three Mile Island and concern about disposal of nuclear fuel.

Keywords: Energy, nuclear power, solar power, capacity, Chernobyl, fossil fuels, source of electricity.

ЯДЕРНАЯ И ВОЗОБНОВЛЯЕМАЯ ЭНЕРГИЯ

Эшманова Зулхумор Мурадовна

Учитель физики в средней школе.
Средняя школа 8 Аккорганского района Ташкентской области.
eshmanovazulxumor8@gmail.com

Тусматов Шохрух Расулжон угли

Учитель иностранного языка в медицине
САМУ, Центрально-Азиатский медицинский университет
shoxruxtusmatov4@gmail.com

АННОТАЦИЯ

С середины 1980-х годов ядерная энергетика стала основным источником электроэнергии в США, уступая только углю. Однако будущее ядерной энергетике в США и остальном мире остается неопределенным. Хотя США обладают наибольшим ядерным потенциалом среди всех стран, Министерство энергетики США прогнозирует, что использование ядерного топлива резко сократится к 2030 году, и к этому времени более 40% мощностей будет выведено из эксплуатации. Администрация Буша поддержала ядерную экспансию, подчеркивая ее важность в поддержании диверсифицированного энергоснабжения, но в настоящее время у США нет планов строить дополнительные реакторы на своей территории. Многие опасаются ядерной энергетике, вызванной авариями, такими как Чернобыль и Три-Майл-Айленд, и обеспокоены утилизацией ядерного топлива.

Ключевые слова: Энергетика, атомная энергетика, солнечная энергия, мощность, Чернобыль, ископаемое топливо, источник электроэнергии.

Estimates of how long fossil fuel resources will last have remained unchanged for the last few decades. Predicting when these fuels will be depleted is virtually impossible because new deposits may be discovered and because the rate of use cannot be predicted accurately. In addition some experts estimate that the world has 350 years of natural gas. We have no current need to search for a new power source. Money spent on such exploration would be better spent on creating technology to clean the output from power stations.

Even apart from the safety issues, nuclear power presents a number of problems. First, it is expensive and relatively inefficient. The cost of building reactors is enormous and the price of subsequently decommissioning them is also huge. Then there is the problem of waste. Nuclear waste can remain radioactive for thousands of years. It must be stored for this time away from water (into which it can dissolve) and far from any tectonic activity. Such storage is virtually impossible and serious concerns have arisen over the state of waste discarded even a few decades ago.

The nuclear industry has a shameful safety record. At Three Mile Island we were minutes away from a meltdown, and at Chernobyl the unthinkable actually happened. The effects on the local people and the environment were devastating. The fallout from

Chernobyl can still be detected in our atmosphere. True, modern nuclear reactors are safer, but they are not perfectly safe. Disaster is always possible. Nuclear power stations have had a number of “minor” accidents. The industry has told us that these problems will not happen again, but time and time again they recur. We have to conclude that the industry is too dominated by the profit motive to really care about safety and too shrouded in secrecy to be accountable. In addition, the nuclear industry has had a terrible impact on those living around power plants. The rate of occurrence of certain types of cancer, such as leukemia, is much higher in the population around nuclear plants.

Although alternative energy is not efficient enough to serve the energy needs of the world’s population today, it could, with investment in all these methods, be made efficient enough to serve humankind. We are not advocating a blanket solution to every problem. Many dam projects could have been replaced by solar power had the technology been available. In addition, most countries usually have at least one renewable resource that they can use: tides for islands, the sun for equatorial countries, hot rocks for volcanic regions, etc. Consequently, any country can, in principle, become energy self-sufficient with renewable energy. The global distribution of uranium is hugely uneven (much more so than for fossil fuels); accordingly, the use of nuclear power gives countries with uranium deposits disproportionate economic power. Uranium could conceivably become subject to the same kind of monopoly that the Organization of Petroleum Exporting Countries has for oil. This prevents countries from achieving self-sufficiency in energy production.

Suggesting that nuclear power is the only employment provider is completely fatuous. Energy production will always provide roughly the same number of jobs. If spending on the nuclear industry were redirected to renewable energy, then jobs would simply move from the one to the other.

REFERENCES

1. Caldicott, Helen. *Nuclear Power Is Not the Answer*. New Press, 2016.
2. Hopley, George W., and Alan M. Herbst. *Nuclear Energy Now: Why the Time Has Come for the World's Most Misunderstood Energy Source*. Wiley, 2017.
3. Sweet, William. *Kicking the Carbon Habit: Global Warming and the Case for Renewable and Nuclear Energy*. Columbia University Press, 2016.
4. Greenpeace Nuclear Campaign. <http://www.greenpeace.org>
5. University of Michigan. <http://www.umich.edu> Overview of several issues surrounding nuclear energy, including waste, weapons, and environment.
6. World Nuclear Association. <http://www.worldnuclear.org>