

USEFULLNESS OF UNDER CONTROLLED POWERS

M.Oktay ALNIAK*
oalniak@bahcesehir.edu.tr

İbrahim GÜNEŞ**
gunesi@istanbul.edu.tr

Güneş KURŞUN***
gunes.kursun@bahcesehir.edu.tr

* Bahçeşehir University, Faculty of Engineering, İstanbul-TURKEY

** Istanbul University , Faculty of Engineering, İstanbul-TURKEY

***Bahçeşehir University, Faculty of Engineering, İstanbul-TURKEY

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1. INTRODUCTION

According to nuclear energy specialists; “Nuclear energy plays an important role to reduce greenhouse gas emissions and meets the growing energy need, working conditions’ security has been provided in nuclear energy production and usage, supply security for nuclear energy and energy cost stability can be provided for a long term, nuclear energy can be used as the cleanest energy” has been given voice to.

On the other hand, whatever the reason is, it can be seen that an important part of the society in the world and in Turkey have come together against nuclear plants.

2. EXPLANATION

It is known that there were 443 nuclear plants in operating conditions in the middle of 2005 and, 24 nuclear plants were in installation progress in the same year. It is stated that in the year 2004, approximately 2600 billion kWh of electric energy production has been provided with nuclear power and this number represents 16% of world’s total energy production. According to International Atom Energy Agency reports, until the year 2010 approximately 2800 billion kWh energy, until the year 2020 approximately 3500 billion kWh energy, until the year 2030 approximately 3200 to 4750 billion kWh energy production from nuclear plants has been planned. [1]

In a special report about emission scenarios concerning about ecological balance and climate changes, nuclear capacity will be 5 times greater than today’s capacity with the same increasing rate of today until the year 2050. [2]

Nuclear power's greatest advantage is said to be that, environmental problems don't arise from nuclear energy as they do from fossil fuels, coal, and oil and gas fuels. It is known that unless alternative clean energy sources are put into service, fossil fuel problems may affect human activities in a negative way. The fact is that a few °C of global warming which may cause climates to change, acid rains that can harm the forests, and air pollution which may cause the death of a lot of people is threatening humankind.

Moreover, long lasting nuclear wastes which are produced from nuclear plants being a potential threat and the Chernobyl nuclear accident which happened in 26 April 1986 have affected the society in a negative way. We see that petrol sources are limited and they are located in Middle East and their political future is doubtful and dangerous. There are a lot of suggestions connected to the thought that the competition for petrol is increasing, but in fact there is no such image! In a world with only one super power, things are done in the way the super economy wishes. The use of alternative clean energy sources instead of electrical energy and petroleum used for heating, similar to that, the use of hydrogen in transportation and energy applications are suggested as an alternative to fossil fuels and nuclear energy.

Nuclear power can be more advantageous compared to fossil energy in meeting the world's energy need. The most important solution to eliminate the energy competition and the use of nuclear energy in a harmful way is to use nuclear energy which has 10^8 times more energy compared to chemical fuels. [3] To use this energy safely, in a beneficial way, requires education, technology, vision and determination.

Nuclear energy is an alternative to the environmental effects and pollution of fossil fuels in a lot of applications. It can be assumed that nuclear energy will decrease pollution caused from the current energy sources. In meeting the world's continuous energy need, surplus of energy can be created compared to today.

While 30 countries across the world are using nuclear energy, it's like a choice made for Turkey to accept to live in the middle ages by hesitating to use this technology. 50 specialists are graduated from nuclear energy institutes every year. Since 1970, 1800 specialists have graduated, and it can be thought as these specialists' efforts and the investment of the government are gone for nothing.

T.R. Governments are losing ground in this area by trying to build nuclear energy stations once in every decade.

A society without energy lives in darkness. [4] There is a little or none of chemical and fossil energy sources. To produce energy from coal is difficult. Hydraulic energy is not sufficient. 44% of the energy production is from natural gas and from abroad. Aren't the

capital, science and intelligence level of some countries enough to work with hydrogen, thorium, nuclear energy and advanced technologies? Power should be produced and used as much as it can be controlled. You can use power only if you have it. You can't use power if you don't have it. Uncontrolled power can't be used. It is a strategic obstacle on a country's way not to use or not to be able to use controllable power. Today hydrogen energy is looked in a sympathetic way. Actually, nuclear energy should be approached more sympathetically.

Coal stove, petrol, hydrogen and nuclear energy all might cause danger unless controlled. For instance, it is too difficult to keep and use liquid hydrogen under 500-700 bar.

The solution of controlling power is to have the brain power and scientific methodology, in addition to that to have the technology to control this power and later to produce this energy under control and finally to dominate it. To jump from wood to coal and from coal to petrol or imported coal and to stay at that level is like failing in the civilization race. Countries can be civilized as much as they work and deserve.

3. SURVEY TO KOREAN NUCLEAR ENERGY PLATFORMS

A Turkish team visited Korea between November 19 and 22, 2006. Brief information about Korea's Organizations on Nuclear Production is as follows.

KEPCO: KEPCO is responsible for electric production.

KHNP: Korea Hydro & Nuclear Power is expert on Nuclear Power Plants.

They have become the owner of the world's fourth largest nuclear power plant and they are operating that plant.

They have 20 nuclear power plants and 27 Hydro-Electric Power Unit.

KHNP owned 35% of the Korea's electric production, and gives consulting services and education in CHC and Romania having 7000 employees and 5.6 Billion USD sales.

NSSS, Doosan Heavy Industry & Construction Co.

Doosan built the first and second nuclear power plants in 1976, and then totally 13 were built. Also 4 more nuclear power plants are under construction. They have high tech construction projects for CHC and USA. They have 4800 employees and 3.29 Billion USD sales.

KOPEC: Korea Power Engineering Company deals with Plant Design & Engineering. KOPEC designed a total of 28 nuclear power plant units with an aggregate capacity of 26.6 MW. KOPEC designed a total of 90 fossil fueled and hydro electric power plant units with an aggregate capacity of 30.900 MW. They have projects in overseas like Taiwan and Philippine, having 1800 employees and 269 Million USD sales.

KNFC: Korea Nuclear Fuel Co. Ltd. provides all types of nuclear fuel and services with advanced technology. Main Interest Field: UO₂ Powder Production Produce and design nuclear fuel facilities.

Core design and security analysis Fuel Services Nuclear fuel development

They have 609 employees and 109 Million USD sales.

We are not representatives of KEPCO or other companies. Just as a foreign eyes' sincere appreciation. Korea must be appreciated and merits because they have established 22 plants and 4 plants are on the way. This country does not see dark in night, in daylight gives confidence to its industry and to its people. Korea has reached sustainable level of energy production, exceeds itself in electronic and automobile industries. Korea can establish nuclear power plants to any country on the world, gives education and services in this field, has more than 20.000 USD per capita net income. They have 26.000 employees in nuclear sector. 10.000 of these are engineers and have a Ph.D. or master degree. We congratulate them.

Busan to Seoul is approximately 700 km and to drive that highway while observing outside is very beautiful. Seeing hundreds of new and modern built cities in Korea generate satisfaction on people. All Koreans work. They are gentle and respectful society.

On road there are several Korean brands and some types of cars. Like Hyundai, Kia sedans and jeeps which were produced in Korea.

Doosan's steel industry overwhelms people. Ship shafts, turbine shafts, turbine wings and nuclear power plants are produced in Doosan.

In this country, they also produce steel with electricity. Coals do not dust, smoke or slack. Wrought facilities, rustproof exchanger and steam facilities, sea water distillation facilities, sea petroleum platform designs and establishing, A to Z turnkey nuclear power plant designs, construction preparing and establishing is a product of a hard-working society. Because of the last 30 year's product while congratulating Korea we have to keep in mind that everybody gets what they deserve and telling congratulations to the prosperous is delivering the right. [5]

4. RESULTS

1. The countries which don't have controllable deterrent power are as innocent and hopeless as people who are right but repressed in the society.
2. Scientific and technological deterrence against global sanction can only be acquired by controllable power.

3. Everyday lots of explanations are made by literates in developing countries. More than necessary symposiums about renewable energy cut down the interest about the topic.
4. Nuclear plant attempts which will solve developing countries' energy problems. A mechanism is needed to encourage governors and bureaucrats in making strategic decisions.
5. It is important to conclude nuclear energy plant projects in time and to discuss controllable power in and above politics.
6. Developed countries should encourage developing countries to build nuclear power plants for economical and technological contribution to meet their energy needs in order to have a cleaner world. It may be considered to start the construction of 10 – 12 nuclear power plants in 2 – 3 different locations in Turkey.
7. The need for corporations which support science, technology, scientists, good people who work for their country increases everyday. Unfortunately the team which had the sufficient education about nuclear energy production has retired before succeeding their mission.

Developing countries have everything but why don't they have electricity? Let's think a little!

5. REFERENCES

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