

Nuclear Technology Not Only for Nuclear Power Plants

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YOGYAKARTA - Research and development of nuclear technology in Indonesia have been conducted for a long time, but the application of the use of nuclear electric energy power plants is always delayed. Therefore, the consistency of government programs and support from various groups are needed. This emerged in the *Seminar on Nuclear-Based Technology: Another Side of Massive Energy* at Faculty of Mathematics and Natural Sciences, Saturday (21/5). The seminar organized by Chemistry Students Association of UGM presented nuclear chemistry researcher, Drs. Roto, M. Eng., Ph.D., activist of WALHI Yogyakarta, Suparlan, S. Sos., and researcher of BATAN Yogyakarta, Prof. Ir. Syarif.

Syarif said that nuclear power plant has benefit potential that is as big as its danger such as the nuclear accident that occurred in Fukushima, Japan, Chernobyl, and Three Mile Island. "Not to mention the concerns over nuclear waste and misuse of nuclear materials," he said. Learning from the accidents in nuclear energy applications in several countries is expected to improve the safety of nuclear power plants in the future.

Conversely, Suparlan, rejected the establishment of nuclear power plants. He said that nuclear energy is not the only alternative energy, let alone Indonesia has other alternative energy sources. "Nuclear energy is only one of several energy alternatives, such as geothermal, solar, wind and micro-hydro power and biomass," he said.

However, the development and utilization as well as alternative energy research besides nuclear energy get less attention from the government. Therefore, the utilization of alternative energy for society is lacking.

Suparlan also assessed that the information to the public about the idea and the real impact of nuclear power plant is still minimal. Meanwhile, the threat is very high, either because of human error or disaster. Furthermore, the impact if the reactor is leaking, long-time waste management,

and big amount of financing for operations and land acquisition process becomes concerns.

On the other hand, Roto said that nuclear technology in addition to be utilized in the form of electrical energy has also been used in the medical area, especially in the diagnosis of neurological diseases, tumor detection, and orthopedics. "There are already 100 kinds of medical treatments with nuclear technology that have been used," he said. The lecturer of Faculty of Mathematics and Natural Sciences UGM added that the use of nuclear technology in the medical field mostly is to identify the information about the function and structure of organs in the body.

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