海 外 에 너 지 短 信

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◇ 韓国, 2천년에 核電 43개 稼動

11/11 內外 WP紙 보도

한국은 폭발적에너지수요에 대비, 기존의 야심적 核계획규모를 2배확대, 서기 2천년까지 7백억달러를 들여 43개의 원자력발전소를 가동시키기로 잠정결정 했다고 워싱턴 포스트지가 1면기사로 크게 보도했다.

신문은 「韓国, 원자력발전 倍加」제하기사에서 이같은 야심적계획이 실현될경우 한국은 현재 미국에서 가동중인 全원자력발전소의 총가동량과 거의 맞먹는 원자력발전능력을 보유하게될 것이라고 덧붙였다.

최근 한국을 방문한 밀튼.밴자민기자가 주요개발도상국에 있어서의 核발전 계획실태에 관해 쓴 WP지의 이 특별기사는 또 「석유자원이 全無한 한국의 경우 이미 수력발전 잠재력을 대부분 개발해버렸기때문에 정부는 급속도로 공업화되고있는 이나라의 전력수요의 반을 금세기말까지 核발전에 의지하려는것」이라고 설명했다

◇ 日.中共間 科学技術 센터 設置

中共은 日本과의 科学 및 技術교류를 위해 日.中共委員会를 設立하고 東京과 北京에 센터를 設置하기로 동의 했다고 11월 9일 新華社通信이 報導했다.

原子力庁長의 解任으로 인해 原発建設計劃이 予定대로 推進되기는 어려울 것으로 予想된다. (原産新聞 946号)

◇ 印度 今世紀末 7,000 MW의 核発電能力保有

印度는 1979년까지 総発電量中 原子力発電의 점유율이 2.8%가 될것이고 1983년이나 1984년까지는 4%에 이를 것으로 보며 또 한편 1990년대 초까지 在来式 原子力発電을 高速増殖炉로 代替키 위한 実験이 進行中이며 2,000년대에는 増植炉가 原子力発電의 核心을 이룰것으로 予見하고 있고 印度는 自国内 풍부한 토리움을 活用, 増殖炉의 開発을 서두르고 있다.

◇ 대만전력, CHINSAN 2号機建設工期短縮

대만전력은 原発2号機 建設計劃을 3個月 앞당겨 686 MW (Gross) 容量의 CHINSAN 2号機 (BWR)을 11月中 稼動시킬 予定이다.

Kuosheng 1号機는 약 55%, 2号機는 약 34%의 建設進陟을 보이고 있고 950 MW급 PWR_S인 대만 전력 원자력 5,6호기도 建設이 開始되었다.

◇ BWR파이프 균열사고

NRC는 日本, 西独으로 부터 비등수로 (BWR)의 파이프가 부

식 (Stress Corrosion) 으로 인해 균열이 생겼다는 보고를 받았다.

이는 1975년에 22機의 美国원자로의 Shutdown을 일으켰던 균열사고와는 달리 24 dia의 대형 pipe에 発生한 것이다.

NRC관계자들은 早期措置의 必要性은 느끼지 않지만 大型 pipe에 초음파 시험 (Ultra - sonic testing) 을 수시로 実施하는 것에서 부터 pipe交換에 이르는 一連의 行動을 취할 것을 권유하고 있다.

◇ 中共과 France間의 原子力 関係 去来量은 1980年代에 約 60億弗線에 이를 것으로 보인다.

Framatome은 原子炉 技術을 協議하기 위해 中共에 常駐 技術陣을 유지하고 있으나 正式 発注까지는 時日이 걸릴듯하다.

France 재무장관은 中共과의 貿易協定을 推進하고 있는데 最近의 日, 中共 貿易協定과 같은 類型의 것이다.

◇ 멕시코, 大油田発見

멕시코 동부지역에서 새로이 1천억베럴의 石油매장지대가 발견됨으로서 멕시코의 총석유매장량은 2천억베럴을 능가하게 됐고 세계産油国대열에서 멕시코의 위치가 크게 강화될것으로 보인다.

◇USSR's Nuclear Capacity To Reach 20,000 MW in 1980

The fourth and last 1000 MW light-water-cooled, graphite-moderated reactor unit of the RBMK class is now being assembled at the Soviet Union's biggest nuclear power station, located at Sosnoviy Bor, near Leningrad. The plant's third 1000 MW unit should be operational before year's end.

Meanwhile, assembly work has started on the first 1000 MW RBMK reactor unit at the Smolensk nuclear power plant (actually located on the Desna River bank, 80-km away from Smolensk).

The final 4000 MW capacity of the Sosnoviy Bor station, together with that of other nuclear plants being constructed throughout the USSR, shall increase the country's total nuclear-generating capacity to 20,000 MW by end-1980.
(MN Information, Moscow, No.23/October 1978; Selskaya Zhizn, Moscow, October 21, 1978)

◇ 'Cleanset Town Of The Leningrad District' Title Awarded To Sosnoviy Bor, Hosting 2000 MW Nuclear Power Station

As a result of a 'clean environment' contest organized by the public health authorities of the Leningrad district, the

town of Sosnoviy Bor, in whose immediate neighborhood is located the Soviet Union's biggest nuclear power plant, the 2000 MW 'V.I. Lenin' facility, has received the official title of 'cleanest town of the Leningrad district'. According to the district, without the slightest trace of radioactivity around the nuclear plant's site.

Also according to UNESCO standards, the city of Leningrad is one of the world's industrial agglomerations with the cleanest environment. (Pravda Bratislava, October 12, 1978)

◇ Not' So Brilliant Performance Of The Kursk-I And Chernobyl-1 1000 MW RBMKs, 2nd Blocks In Startup Phase

The latest total production figures have just been published for the first 1000 MW units of the two USSR nuclear power plants at Kursk (22) and Chernobyl (23), each equipped with a light-water-cooled, graphite-moderated reactor of the RBMK type.

The Kursk power station, which was connected to the grid in December 1976, had produced over eight billion kWh of electricity by October 15, 1978.

The Chernobyl plant in the Ukraine started electricity

production on September 26, 1977, and had generated 3.4 billion kWh by end-September this year. Its total output for 1978 should reach 5.5 billion kWh.

Both stations will soon have more reactors of the same type and size. The second unit for Kursk is presently undergoing pre-startup tests and should become operational before year's end. Chernobyl's second reactor unit is also scheduled for startup at the same time.
(Kommunist Tadzhikistana, Dushanbe, October 10, 1978; Sotsyalisticheskaya Industrya, Moscow, October 11, 1978; Sovietskaya Estonia, Tallin, October 12, 1978; Izvestia, Moscow, October 15, 1978).

◇Atommash's First Pressure Vessel For A 1000 MW PWR Will Go To Kalinin; Next 4 To New Nuclear Plant At Tsimlyanski

Despite the enormous technical and supply difficulties encountered by 'Atommash's' designers and construction personnel, the huge heavy nuclear components factory will soon be fully operational. The first reactor vessel for a 1000 MW PWR of the VVER class is now being assembled; upon completion, it will be delivered to the construction site of the 4000 MW Kalinin

nuclear power plant.

The next four similar reactor vessels to be manufactured by 'Atommash' are earmarked for the 4000 MW nuclear power plant of Tsimlyanski (24), near the Tsimlyansk reservoir lake, about halfway between Rostov-on-the-Don and Volgograd. (Vilaggazdasag, Budapest, September 28, 1978; Nepszabadsag, Budapest, October 11, 1978).

◇ CSSR Signs Contract With USSR For 1760 MW Nuclear Plant At Dukovany

The Soviet Union will build a nuclear power plant in Czechoslovakia, under a contract signed between the Czecho FTO 'Skodaexport' and 'Atomenergoexport' of Moscow.

The new plant is to be sited at Dukovany (25) and will be equipped with four 440 MW PWR units of the VVER type and will thus attain a total capacity of 1760 MW. Identical units are under construction for the nuclear stations 'V1' and 'V2' in Jaslovske Bohunice (26), with Soviet assistance.

Together with the 410 MW pumped storage plant at nearby Celesice, the Dukovany nuclear plant will form an important power-generating complex for the CSSR. (Pravda, Bratislava,

September 28, 1978)

◇ 40% of Nuclear Electricity For CSSR; 1000 MW PWRs For All CMEA Countries

In a recent interview for leading Soviet and Czechoslovak newspapers, K. Barabas, president of Czechoslovakia's atomic energy commission, and I.G. Morozov, first deputy chairman of the USSR's State Committee for the peaceful use of atomic energy, made a few interesting statements concerning the development of nuclear power in CMEA countries and Czechoslovakia in particular.

It thus appears that Czechoslovakia intends to have, at th the turn of the century, 40% of all its electricity generated by nuclear power plants. By the end of the '80s, the country's installed nuclear-generating capacity alone will equal the whole of its 1970 electricity-generating capacity. Moreover, beginning with the next Five-Year-Plan period (1981-85), Czechoslovakia will start working on 1000 MW PWRs of the VVER class, while continuing the regular assembly of 440 MW VVER units.

Mr. Morozov stressed the fact that much closer cooperation

between CMEA countries is absolutely imperative if they wish to cope successfully with the multitude of complex technological problems arising from the rapid and massive introduction of nuclear power. To reach CMEA's goal of 37,000 MW of nuclear capacity by 1990, it will be necessary to install a large number of 1000 MW reactor units throughout its member countries. (Komsomolskaya Pravda, Moscow, and Mlada Fronta, Prague, both of October 11, 1978; Ekonomicheskaya Gazeta, Moscow, No.40/ October 2-8, 1978).

◇Bulgaria Needs More Coal And Nuclear - Excellent Performance By 1st Nuclear Station

Although Bulgarian power plants will be generating 38-39 billion kWh of electricity annually by end 1980, which is 13-14 billion kWh above the 1975 production level, electricity consumption by that time will also jump by at least 40% over the 1975 figure.

Forecasts for 1990 show that electricity consumption will more than double the 1980 demand level. Therefore, Bulgarian energy planners are aiming to raise electricity output to between 62 and 66 billion kWh per annum by 1990. However, to

avoid increased use of oil and natural gas as fuel for the power plants, the Bulgarians will have to rely more heavily than ever on coal-fired and nuclear power stations to generate their electricity (see ECPE, Vol.2, No.17, p.4). In 1990, electricity of nuclear origin will account for 35% of the country's total electricity output, which means that its nuclear-generating capacity will then stand at about 4400 MW. This could be achieved, for instance, with eight 440 MW PWR units of the VVER class and one 1000 MW VVER block.

Meanwhile, Bulgaria's nuclear power plant at Kozloduj (27), equipped with two 440 MW VVER units, produced 15.35 billion kWh of electricity between January 1, 1976, and September 30, 1978. (Nouvelles de Bulgarie, Sofia, No.8/1978; Sovietskaya Kirgizia, Frunze, October 11, 1978).

> Optimistic Prophecies For Hungary's Nuclear Future

According to a recent delcaration by Szabo Ferenc, director of the Institute for Physics R&D, which belongs to Hungary's Academy of Sciences, the country will develop its nuclear power-generating capacity at a very quick pace. By 1990, nuclear will account for 25 to 30% of all the electricity

generated; this proportion will even climb to 50% by the turn of the century.

Hungary's first nuclear power plant, a 1760 MW station equipped with four 440 MW PWR units of the VVER class and located at Paks (28) on the Danube River, is slated to reach its full capacity by 1985; its first 440 MW block is due to come on-line in 1981. (Magyar Nemzet, Budapest, October 18, 1978).

Technical Exchange On Fast Breeders

The 13th session of CMEA's committee for fast breeder reactors, that took place from April 18 to 21 at Keszthely (29) in Hungary, was dedicated to various technical and scientific problems concerning the design and construction of large fast breeder reactor (FBR) power plants.

Polish and Czechoslovak specialists presented papers on the sodium-cooling circuit of the FBR and on the core's thermal and hydrodynamic problems, while the Soviets gave talks outlining certain aspects of the design for the 1600 MW FBR project, designated BN-1600. The Russian experts also presented reports on the operating experience with the BOR-60 and BN-350 FBR plants.

(Atomnaya Energya, Moscow, Vol.45, No.3/September 1978).

◇ USSR Exports Radioisotopes To 44 Countries

During recent celebrations honoring the 30th anniversary of radioisotope production in the Soviet Union, A. Kruglov, director of the technical and scientific division of the USSR's State Committee for the peaceful use of atomic energy, declared that the Soviet Union now exports over 3500 radioisotope compounds to 44 countries. Within the USSR itself, over 10000 industrial, agricultural, medical and educational institutions are now regularly using radioisotopes for a wide variety of applications. (Izvestia, Moscow, and Pravda, Moscow, both of October 11, 1978; Sovietskaya Rossiya, Moscow, October 1, 1978)

◇ Turkey Wants To Barter Wheat For Oil With USSR And China; Imports Electricity From Bulgaria

Turkey would like to barter its wheat for oil from China and the USSR. It wishes to obtains 3 million tons of oil annually from the Soviet Union in exchange for wheat and mineral salts. Due to its excellent last grain harvest, the

idea now seems feasible, but what if the next crop should be less bountiful? The country's hard-currency reserves could hardly take on an additional load.

Turkish authorities are also negotiating with the USSR for assistance in developing their hydroelectric-generating capacity and in prospecting for hydrocarbon fuels. Besides, Turkey would also like to import electricity from the Soviet Union.

Meanwhile, it is importing electricity from Bulgaria at continually growing rate. During the first five monthsoof 1978, Turkey thus acquired 288.4 million kWh of Bulgarian electricity, making 27.5% more than during the same 1977-period. By end-1978, Turkish electricity imports from Bulgaria will total 605 million kWh. (Vilaggazdasag, Budapest, September 15 and October 12, 1978).