P.S. to the NEWS

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FUSION POWER IN OUR FUTURE

Is the world of tomorrow one of unlimited energy -- or a world in which our prime task will be to allocate equitable shares of rapidly shrinking resources? Are we running out of energy -- OF have we barely scratched the surface of the treasure trove of energy awaiting man's,resourcefulness and ingenuity? .Will the watchword of the 21st century be growth or conservation?

Last month's success in fusion power at the Princeton Plasma Physics Laboratory excites the imagination of all those who dream of a future of grow h and unlimited energy. The Princeton Large Torus set a new temperature reco d for a tokamak device (a hydrogen container), producing a temperature of 60 million degrees centigrade. A sustained release of fusion energy requires 44 million degrees. The PLT's record temperature was four times hotter than the 15 million degrees centigrade of the sun's interior.

The recent success was only the first of many that will be necessary to develop hydrogen-based fuel. The entire experiment lasted only a half second; density was kept low and confinement time was only one-tenth of a second. Still, it was enough to demonstrate feasibility.

Also, it beats the Russians, who had been leading in fusion research, at·their own game. Tokamak is a Russian acronym.

When conmercially feasible fusion power comes, it may be in a very small package. Scientists calculate that the minimum si.ze for a power-producing fusion reactor may be no more than two or three times the size of the PLT, which has a radius of only 18 inches.

No sooner did news of the recent Princeton success hit the fan than various vested interests closed in to play down its importance and to predict that its commercial utility would be years beyond present lifetimes. Reporters referred to the Energy Department's reaction as one of "confusion." Secretary James Schlesinger

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explained that he just "difot want to hype it up."

Unfortunately, there are several pressure groups that have a vested interest in discouraging unlimited energy. Unlimited energy is anathema to all those who profit from having the power to allocate shortages. Their personal power and prestige grow in correlation to the machinery of government regulation.

Unlimited energy would depri-ve demagogues of their ready-made boogeyman so useful to their objective of amassing more political power. Unlimited energy would shatter the illusions of the environmentalists who feed on the premise that people and production, jobs and joys, should all be curtailed in order to conserve the diminishing supplies of the good things we already have.

Unlimited energy, combined with native American efficie cy and can-do resource fulness, would make sure that the United States would always lead the world in technology and manufacturing. Unlimited energy would invade the sanctuaries of the elitists and enable the conman folk to enjoy a higher and higher standard of living.

Of course there is a long way to go. But the Princeton experiment can be compared to the first self-sustaining nuclear chain reaction, conducted by Enrico Fermi in 1942 under the grandstand. of the football field at the University of Chicago. That famous experiment proved that nuclear energy could be harnessed into an atomic bomb.

Splitting atoms, called nuclear fission, is used to generate electricity in nuclear power plants. However, the process uses uranium, which is in short supply, must be mined, and causes a disposal pr.oblem. Nuclear fusion would use hydrogen, our most plentiful element, and does not have a disposal problem. Fusion is the source of energy in hydrogen bombs and in the sun.

Fusion power may not be convnercially marketable before the end of this century. But that timing would be just about right, because some think we will then be running out of oil. And the very idea that the engines of industry can be fueled by hydro-' gen, which the world enjoys in an unlimited supply, is enough to fortify the belief that there is plenty of energy-¥' America's future.

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