

SCIENCE ILLUSTRATED
330 West 42nd Street
New York, N. Y.
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FOR IMMEDIATE RELEASE

NEW YORK, July 23, 1947--David Lilienthal, chairman of the Atomic Energy Commission, thinks the essential facts of atomic energy are no more complicated than a baseball box-score.

It can be easily understood by the general public, including children in our schools, says Mr. Lilienthal in an article titled: "Report for Year 3, Atomic Age," in the August issue of SCIENCE ILLUSTRATED.

"I disagree," says Mr. Lilienthal, "with the proposition that the facts and knowledge about the forces in the nucleus of the atom and the human implications of that discovery are matters beyond the understanding of the general public of the United States, including the children in our schools.

"I do not say that it is easy. But there is nothing more complicated about the essential facts than about dozens of scientific, technical, and governmental matters that have become a part of everyday thinking and public discussion around every cracker barrel and every soda fountain, and in every school and pressroom in this country.

"As a matter of fact, to keep the box score of a baseball game or to figure out batting averages seems to me a formidable undertaking compared with acquiring an understanding of the essential facts that the public needs about atomic energy."

Summarizing the Atomic Energy Act passed by Congress August 1, 1946, Mr. Lilienthal points out that our policy dictates that "...the development and utilization of atomic energy shall...be directed toward improving the public welfare, increasing the standard of living, strengthening free competition in private enterprise, and promoting world peace."

Stressing the dangers as well as the opportunities inherent in our policy, he declares that whether it will be a golden opportunity or catastrophe largely depends upon the premise that the public is kept fully informed. The path we choose ultimately rests with the public, he says.

"If we are too stupid, we may not have to worry about the ridicule of our descendants. We may have none. But neither should we a few centuries hence appear to be those stupid people of the mid-twentieth century who, after making a great discovery, didn't have enough sense to realize what it could mean to mankind, nor the wit to use it to promote human welfare."

The facts about atomic energy which should be fully understood by the public are pointed out by Mr. Lilienthal.

"It must become general knowledge, too, that the scientific basis of nuclear energy release is not an American monopoly. It is part of the basic store of knowledge that is world-wide, and other nations, including Russia, will inevitably in time have learned on their own what we know today.

"There are still those who think that what we have is the kind of scientific secret that can be put in an envelope and locked in a vault. It is not that kind of secret. Furthermore, this is an everchanging field and what we have today in the way of plants, research, and development may be obsolete tomorrow.

"The public should have the fullest understanding of the identity, or virtual identity, of research and production for military uses, an identity that reaches a parting of the ways only at the very end of the course."

Atomic Energy in Everyday Life

"And there should be a clear understanding of the possible ways in which future nuclear science can contribute to the everyday life, health, and prosperity of our people - a fascinating story. These things lie ahead. The country should know that they can be brought to fruition if we continue with good, solid, imaginative work in research as well as development.

"There is no precedent for the present situation. Never before has a government taken the initiative and established a new major industry. Atomic energy, however, is far more than a new industry. It is a new field of knowledge. It is a new field of enterprise and development. What kind of a world will emerge with building blocks of protons, neutrons, electrons, mesons, positrons and neutrinos?"

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NEW YORK, July 23, 1947--Don't worry about our vanishing gasoline supply because there will always be plenty of motor fuel for American drivers, according to SCIENCE ILLUSTRATED for August.

Motorists needn't worry. The known underground supply in the United States will last at least 10 years and more will be discovered, says S.I. This short reprieve will allow us time to bolster our motor fuel imports and produce our own gasoline from natural gas and coal.

Our present need for imports to balance our trade makes it desirable to augment our supplies in that manner. We now produce two thirds of the world's oil although the rest of the world has twice our oil reserves. South America is sending us enormous quantities now and the Middle East looms as a promising source.

The use of our natural gas resources will pay off in satisfying volume.
Says SCIENCE ILLUSTRATED:

"Our natural-gas supply is colossal. There are no less than 160 trillion cubic feet underground. We are using 4 trillion cubic feet of gas a year, but the Federal Power Commission estimates that at least 2 billion cubic feet more are wasted each day--or about another trillion feet a year. That wastage alone would give about 50 million barrels of gasoline a year.

"But a good deal more is available for conversion to oil--at least 30 percent of all the gas underground. This would give us 4 billion barrels of oil, a full two years' supply. Even if this were converted and used over a 10-year period, it would amount to 400 million barrels a year, a fifth of our requirement of oil."

(MORE)

The industry is now set to tap this vast resource. Plans have been completed for a plant in the Hugoton gas field in southwestern Kansas. This is the largest gas field in the United States. Estimates put its underground content at 23 trillion cubic feet. At this plant 100 million cubic feet of natural gas will be used per day to produce 6,000 barrels of high-quality gasoline, plus another 1,000 barrels of other oil fuels.

At Brownsville, Texas, on the Mexican border, there is to be erected another plant of the same size to tap the South Texas gas fields. Other oil companies are experimenting with conversion methods, according to the magazine.

The article describes the techniques for making Diesel fuel and high-octane gasoline from natural gas. The products result from making big molecules from small ones, says S.I. The production of gasoline from coal, which was devised by the Germans, was made commercially possible by American know-how.

In this process the coal must first be converted into a gas. This can be done by firing a coal vein and feeding air or oxygen into the mine, thus producing carbon monoxide. When steam is passed over the red hot coals the gas combines with pure hydrogen. The result is a mixture from which motor fuel can be produced.

By the end of 1947 a pilot plant will be in operation at Library, Pennsylvania, where coal will be converted into gasoline. It is planned that by 1950 a full scale plant, producing 3 million barrels of gasoline a year, will be ready for operation on a site near Pittsburgh. Twenty thousand tons of coal will be consumed by the plant each day, according to SCIENCE ILLUSTRATED.