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FUSION ENERGY AND THE FUTURE*

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Today I shall speculate about the future and the role that fusion energy can play in that future. The first part of my talk will illustrate the importance that energy has played throughout man's history and some of the interrelationships that exist among man, energy, and the environment. Then I will project into the future, describe fusion energy, and the chemist's and chemical engineer's part in the future of fusion. Figure 1 shows the history of man and energy. To put this history into perspective the last ten billion years is expanded into the last hundred million, and then into the last million, and then into the last ten thousand and finally into the last one hundred.

The earth was created somewhere about four and one half billion years ago. Its power source was the fusion energy from the sun. That power source created the changes that occurred in the sea and eventually brought about life on land.

During the last hundred million years the dinosaur became extinct. Many anthropologists believed they became extinct because they had become too specialized in their use of food energy. There was a shift in the earth's temperature which altered the earth's vegetation cover and caused those animals to disappear. In the last few million years man-like creatures began to appear. There were probably a number of genera and a number of species, but only one genus, homo, and only one species,

* From transcribed tape of speech