Politics? According to the dictionary, it means “practical wisdom,” or “crafty and unscrupulous,” or “expedient.” What politics usually means in practice is the art and science of distributing the money which accrues to the government from the people’s taxes. Politicians are the people who decide this distribution, who make the decisions as to where and how it is to be used, and thus, as the flow of money controls action, it is by and large the politicians (more than any other group in the community) who control what new projects, whether they be road building or research, are carried out.

This book has explored the vital and basic subject of the energy supply, and the impending energy disaster we are faced with, stressing the probable future of the next generation. It is important to realize that the present generation will see the supply of oil and natural gas running out. This book is about the things which we know to be relevant in making a new and different energy supply for the future, and we have shown that this essentially means getting abundant clean energy from sources such as the sun. The point we have been making is that these new energy sources must be clean, abundant, and inexhaustible.

To attain a new and more hopeful chance for the future energy supply, a radical turnabout in the direction of research and development for energy sources in the major countries of the world is essential. Available energy has been taken for granted in the past, coupled to the reserves of oil, natural gas, and coal. It was erroneously thought that these commodities would last too far into the future to require us to plan for tomorrow’s energy. Research work in energy has gone in the past predominantly into atomic power, and more recently into the gasification of coal. Except for the study of fusion,
little research money was applied in the direction of clean, inexhaustible energy sources before 1975.

**The Direction of Major Research Funding Depends Upon Politicians**

Research scientists get employed by industrial firms, government laboratories, and universities. The type of research they pursue is a matter of concern to all citizens. Is there a sufficient number of people working on the most pressing survival problem of the time: how to make the new machinery of collecting abundant clean energy ready before the fossil fuels exhaust?

Only a small number of scientists, engineers, and technicians employed by government and industry are actually directly involved in research and development work. Most of them do desk work, or continue to pursue and improve old, established ideas. A few do the innovative work which has potential for leading to a better future. Very, very few are allowed to just think.

The point that many people do not understand is that research and development for a new technology needs funding, and the use of tax money is essential for such purposes. The cost of doing fundamental research is two to four times the research worker's salary per person; the costs of the next stage, the development and pilot plant work, are much greater; and the costs of actually building the machinery which has been shown by this research and development to be practical are tremendous.

Given the limited amount of money spent on research, we must make certain that the right fields of research get government funding. Without this funding, nothing will happen in the way of any new technology.*

The decision of which research project of far-reaching significance is to be funded is made by committees of the federal government. The scientist sometimes has an advisory role to these committees, but he does not make the final decisions. Scientists and government laboratories can only do what politicians allow them to do, via funding.

*What about research done by industrial companies? Aren't they meant to produce new technology? They surely are. But the point here is that these firms are owned by people who have bought shares in them for one reason: to make some money. So, they are exceedingly interested in their company's scientists inventing, e.g., a tennis ball which can be used in the rain, or a color TV with better hues, etc. With such short term, consumer-oriented goals, they will see actual profit money in their pockets in 1–5 years after the invention. But what of their attitude to research on something great and wonderful, totally vital, at least ten, probably twenty, and possibly thirty years away in realization? Remember, investors are people. Pay off in twenty years? We may be dead then, and we want to live now.