that such units can be used to deinfest large amounts of wheat and other grains.

Extending the shelf life of perishable foods by irradiation pasteurization is also a technique that should aid us in the better distribution of certain food.

There are myriads of other ways in which nuclear energy can directly and indirectly help agriculture; these range from studies of weather cycles and rainfall employing radioisotopes on earth and in space satellites to the use of nuclear generated electricity to tap vast underground reservoirs of water and the application of underground nuclear explosions to create storage cavities for water. Rather than go into detail on these, I will move from the farm back to the city and to industry to see what the atom might do to help solve some of our urban problems.

As I pointed out before, there is a significant relation between the decreasing cost of energy that larger and newer reactors will allow and the way we will be able to use our resources. If energy can be made cheap enough and if other technologies, such as our chemical engineering, become sophisticated enough—as they seem to be doing—our industrial production and much of the way we live can become, in a sense, a whole new ball game.

Just as an exercise in positive thinking, let us look ahead a few decades and imagine we have reached an era when the cost of nuclear electric power is substantially below the cost of electric power today, when we have developed a new alchemy in dealing with our resources and our wastes, and when we have finally reached the enlightened stage socially and politically to put all this knowledge and power to good use. How might our industry be operating under these conditions?

Imagine a vast industrial center whose energy heart would be a group of large breeder reactors in the multimillion kilowatt range with their own fuel recycling facilities. Into this complex would pour, via cargo transport and pipelines, a variety of new raw materials and old waste. The waste would be of the same variety we have today, but we would no longer be burdened with the job of trying to store it and stack it until we could burn it, bury it, or dump it into our waterways. This waste would be sorted and separated into basic materials and then routed with the new raw materials into the proper manufacturing plants to become new products. Whatever could not be reused might be