tory, outlined some effects of the reduced costs of nuclear power, particularly how decreasing power costs affect our use of raw materials. For example, at a cost of about 4 mills per kilowatt hour it is economical to produce aluminum via nuclear electric power; at about 2.5 mills per kilowatt hour for nuclear generated electricity, the direct reduction of iron ore through electrolytic hydrogen becomes economical; nuclear electric power at 2 mills per kilowatt hour would make it possible to produce magnesium metal at today's cost of aluminum (and, since there is a vast amount of magnesium in the world's oceans, this might make magnesium one of the major metals of the future); a price of 1 mill per kilowatt hour for nuclear electric power—if indeed such a low cost could be reached—would make it worthwhile to produce pipeline gas from coal; and nuclear power at a cost somewhere below 1 mill could give us economic general purpose heat and even make it possible to produce gasoline from coal at a price competitive with current petroleum processing.

However, long before we reach this point we will see nuclear power being used in connection with one of our most common and vital commodities—water. Current nuclear reactor technology will some day be applied to the desalting of large amounts of seawater and brackish water. This would be highly significant in a world where sufficient water often means the difference between life and death.

But there is a significance to nuclear desalting beyond its use to bring water to large population centers. We are already seriously examining the possibility of building multipurpose nuclear centers in coastal desert areas where certain conditions exist that are conducive to agricultural production but others are lacking. The existing conditions are the right temperature range and sunlight for long growing seasons, the proper terrain and acceptable soil, and location at the seacoast. The conditions that are lacking, but which can be supplied through the nuclear center, are fresh water and fertilizer, which the nuclear plant could help to produce in abundance.

I will not go into detail on what these nuclear powered agricultural centers might produce other than to point out that our studies to date indicate that such centers, using the products of reactors operating in the multimillion kilowatt range to support highly scientific farms, each in the few-hundred-thousand acre range, could supply billions of pounds of specially developed grain annually and a large additional amount of fertilizer for off-site export. It is estimated that a billion pounds of this grain could supply about 2.5 million people a basic diet