of the land in private ownership has substantially different physical and geologic characteristics than some of the Federal lands, and if the proposed program were a promising one which could not be pursued on the private land, the need for Federal lands could be established.

These proposals which offer the greatest protection to the environment would, in our view, be more favorably received than those which do not.

The extent to which applicants have available alternative sources of supply of the minerals that they propose to recover from the oil shale would be taken into account. However, these considerations would not be administered arbitrarily. The purpose would be simply to select proposals most likely to enhance the basic objectives of the program—to develop oil shale technology, to prevent waste, to conserve resources, to encourage competition, to prevent speculation, and to avoid windfalls.

One of the most difficult tasks was to devise a suitable royalty system for the proposed regulations. I particularly direct the committee to this as an extremely difficult task. As I mentioned earlier, one of the purposes of the program would be to develop a body of information on which a royalty system for competitive bidding could be based. For the research and development lessees, great care must be taken to insure that even on the limited acreage involved in the research and development phase there would be no possibility of windfall. Care also must be taken to insure that the royalty system would not operate to preclude sound ventures from successful operation.

We considered the royalty system now in use on leased Federal oil lands, which is a percentage of the value of production—one-sixth of the value on the outer Continental Shelf; one-eighth for noncompetitive leases under the Mineral Leasing Act—while this system has worked where the costs of production were known, it might be an impediment to oil shale production if it were followed without modification. I underscore that word "impediment." A royalty on production is an expense of doing business. It is payable irrespective of whether the product can be marketed competitively with other sources of the same product. It is possible therefore that one-sixth or one-eighth royalty on production might make shale oil noncompetitive with conventional oil, depending upon the costs, as yet unknown, of producing the shale oil.

We therefore devised an alternative which would not be imposed as a cost of doing business, but would permit the public to share in any profits of the venture. A percentage system based on net income has this characteristic. If production costs of shale oil turn out to be high, and the margin between cost and market price is low, no additional expense of doing business would have been imposed to render the venture unprofitable. The net income percentage therefore would operate in the same manner as a percentage income tax operates. If the venture were profitable, there would be a tax on the percentage of income. If the venture were unprofitable, there is no tax.

My people took considerable pride in this part of the proposed regulation, and I would certainly welcome the most incisive comments