

justments for the in-lieu-of-tax payments to the States of Arizona and Nevada as provided for in section 2(c) of the Boulder Canyon Project Adjustment Act; (2) the surplus Federal revenues from the portion of the Pacific Northwest-Pacific Southwest intertie located in the States of Nevada and Arizona; and (3) excess revenues (gross revenues less annual operation, maintenance, and replacement costs) of the CAP after the project's reimbursable capital costs have been repaid.

Price guarantee.—H.R. 3300 and similar legislation provide that to the extent the main stream of the Colorado River is augmented to satisfy annual consumptive uses of 2.8 m.a.f. in Arizona, 4.4 m.a.f. in California, and 0.3 m.a.f. in Nevada, the Secretary of the Interior shall make such augmented water available to users of main-stream water in those States at the same costs and on the same terms as would be applicable if main-stream water were otherwise available to supply such consumptive use. This provision was adopted for this report and thus there are no revenues deriving directly from the augmentation works. Some funds would accrue to the Development Fund, however, from increased power generation at Hoover and Parker-Davis and from increased water revenues from the Central Arizona Project after payout.

Dual-purpose nuclear desalting power arrangements.—It is assumed that the Federal Government would obtain only desalted water and project pumping power from the dual-purpose nuclear desalting plants and that non-Federal entities would participate to the extent of financing and marketing the commercial power component. It is anticipated that an arrangement would be made whereby the non-Federal entities would construct and own the electric turbine-generator plant. The United States, through prepayment of an appropriate share of the capital costs, would obtain the rights to the electrical capacity and energy necessary for project purposes. Through such an arrangement, the United States would retain the benefits of Federal financing for the prepaid portion of the electrical plant. The commercial power aspects, however, would be divorced from the Federal plan and handled by non-Federal interests.

It is also assumed that there would be cooperative development of the nuclear reactors which will serve as a joint heat source for the desalting and electric power generation facilities. The portion of the reactor costs associated with commercial power generation would be borne by non-Federal interests.

PROJECT DESCRIPTION

Purpose

This potential project would provide 2 million acre-feet of additional water annually for use in the Colorado River Basin. The principal project plan described below was selected to demonstrate the various factors involved in this concept of augmentation by sea water desalting and for preliminary analysis of its feasibility. The physical works include nuclear reactors, thermal electric power generating facilities, desalting plants, power transmission facilities, and conveyance works to transport desalted sea water from the coast of southern California to Lake Mead on the Colorado River.

Dual-purpose nuclear desalting plant

Location.—The nuclear power generation and desalting facilities would be located on the Pacific coast of southern California. For the purposes of estimating costs, this report assumes the site to be within the boundaries of the Camp Joseph C. Pendleton Naval Reservation about seven miles northwest of Oceanside, California. This site is in Federal ownership, would appear to satisfy current reactor siting criteria, and has excellent access from U.S. Highway 101 and the Santa Fe Railroad.

In detailed studies, consideration would also be given to other potential sites along the coast. Studies indicate that there will be one or more suitable land-based sites along the southern California coast which could be used for large-scale nuclear desalting plants after 1980. This conclusion is based upon geologic information, consideration of waste brine disposal problems, projected population distributions, reactor siting criteria, and the assumption that credit can be taken for engineered safeguards.

Particular attention would be directed to the possibility of siting on an offshore, man-made island. Consideration of offshore siting would increase significantly the number of potential sites.

Nuclear Reactors and Turbine-Generators.—The estimates of costs for the nuclear reactors are based upon information provided by the Atomic Energy Commission. The reactor concept used is based upon a projected level of tech-