

(NSGPU) and generating public utility (GPU) loads using standard econometric techniques. Regional NSGPU and GPU loads are forecasted as a function of average retail electricity prices, weather-related variables, and nonagricultural employment. The regional load forecasts then are adjusted to account for factors such as effects from proposed wholesale tiered rate implementation and conservation programs to derive a projection of NSGPU and GPU purchases from BPA. The IOU load forecast was produced by updating the economic assumptions from the 1991 joint BPA/Northwest Power Planning Council (NPPC) forecast.

Forecasts of aluminum DSI purchases from BPA are prepared by analyzing smelter production costs relative to aluminum prices, and by considering other factors affecting smelter loads, including BPA's proposed tiered rate implementation. Forecasted non-aluminum DSI purchases from BPA are prepared by analyzing historical and technical plant information and forecasted market conditions. Adjustments also are made to incorporate the effects of BPA's tiered rate implementation.

BPA's resource acquisition plans are based on work by BPA and the NPPC staff and reflect extensive input and review by the general public and the region's utilities. The specific resource acquisitions and associated costs included in this proposal are based on BPA's 1994 Draft Strategic Business Plan. Besides emphasizing a diverse resource portfolio, including both conservation and generating resources, BPA is committed to moving toward a blend of acquisition methods, including BPA-designed, utility-designed, and developer-initiated programs. This combination of resource diversity and acquisition approaches allows BPA to better deal with varying circumstances and uncertainties.

The load/resource balance determines BPA's obligation to serve firm loads during the test years under 1930 water conditions. It also contributes to the determination of the supply of surplus firm power in the region and on the Federal system. A related hydro regulation study incorporates the operation of thermal plants, exports and imports of power, projected resource acquisitions, and system constraints such as the Columbia River flow augmentation project, "spill," and the water budget for fish migration. For this preliminary proposal, a 50-year hydro study was completed, which includes assumptions regarding the Columbia River flow augmentation. The hydro study starts in August 1995. The 50-year

study determines nonfirm energy availability for the region.

### 2. Revenue Requirement Study

The Bonneville Project Act, the Flood Control Act of 1944, the Transmission System Act, and the Northwest Power Act require BPA to set rates that are projected to collect revenues sufficient to recover the cost of acquiring, conserving, and transmitting the electric power that BPA markets, including amortization of the Federal investment in the FCRPS over a reasonable period, and to recover BPA's other costs and expenses. The Revenue Requirement Study includes a demonstration as to whether current rates will produce enough revenues to recover all BPA costs and expenses, including BPA's repayment requirements to the U.S. Treasury. Revenue requirements are the major factor in determining the overall level of BPA's proposed power and transmission rates.

The Transmission System Act and the Northwest Power Act require that transmission rates be based on an equitable allocation of the costs of the Federal transmission system between Federal and non-Federal power using the system. In compliance with a FERC order dated January 27, 1984, 26 FERC ¶ 61,096, the Revenue Requirement Study incorporates the results of separate repayment studies for the generation and transmission components of the FCRPS. The repayment studies for generation and transmission demonstrate the adequacy of the projected revenues to recover all of the Federal investment in the FCRPS over the allowable repayment period. Separate generation and transmission revenue requirements are developed in the Revenue Requirement Study. The adequacy of projected revenues to recover test period revenue requirements and to meet repayment period recovery of the Federal investment is tested and demonstrated separately for the generation and transmission functions.

The Revenue Requirement Study for the 1995 preliminary rate proposal is based on cost and revenue estimates for FY 1996 and FY 1997. BPA's Revenue Requirement Study reflects actual amortization and interest payments paid through September 30, 1994. In addition, it reflects all FCRPS obligations incurred pursuant to the Northwest Power Act, including residential exchange costs.

### 3. Segmentation Study

BPA operates and maintains the Federal Columbia River Transmission System (FCRTS) to provide transmission

services throughout the region. Because most services do not require the use of the entire system, the FCRTS is divided into nine segments, each providing a distinct type of service. The nine segments are: integrated network; Pacific Northwest-Pacific Southwest (Southern) Intertie; Northern Intertie; Eastern Intertie; generation integration; fringe area; and delivery segments for public agency, DSI, and IOU customers.

The Segmentation Study categorizes the facilities of the FCRTS according to the types of services it provides. This provides the basis for segmenting the projected transmission revenue requirements used in BPA's rate proposals. The results of the Study include the historical investment and the average of the last three years' operations and maintenance expenses. In addition, the facilities of the integrated network similarly are divided among distinct services. This division of the FCRTS into segments provides the basis for the equitable allocation of transmission costs between Federal and non-Federal customers based on their usage of the segments.

### 4. Marginal Cost Analysis

The Marginal Cost Analysis (MCA) estimates the marginal cost that BPA incurs to supply energy on a seasonal, daily, and hourly basis to meet customers' loads.

The conditions and terms under which BPA supplies energy necessitate that BPA take actions that impose a cost. The MCA measures the costs that BPA incurs in taking actions to provide energy under different terms. BPA proposes to measure the marginal costs of actions it takes to (1) guarantee availability of energy, (2) provide energy at guaranteed prices, and (3) actually deliver energy. The results of the MCA are used to develop wholesale power rates that promote efficient development and operation of generation and conservation resources.

BPA proposes to measure marginal costs based on the supply and demand conditions BPA faces in the interconnected West Coast wholesale power market. Estimated marginal costs are based on the results from a model that was developed to simulate future wholesale market transactions to aid in BPA's long-term power marketing and resource strategy decisions—the Power Marketing Decision Analysis Model (PMDAM). PMDAM projects the opportunity costs that BPA will face when taking actions to serve its Pacific Northwest customers, at the least cost, under conditions of uncertainty. PMDAM uses information on the costs associated with acquiring and operating