Quantity and cost of conservation

After extensive analyses discussions with the Bonneville Power Administration, utilities, and public comment, the Council decided that 5,300 megawatts of conservation in the high forecast at an average cost of 1.8 cents per kilowatt-hour was appropriate. The Council has also chosen very high penetration rates for conservation programs (85-90 percent). The Northwest Power Act provided that incentives, regulations, and surcharges can be used to achieve conservation. These measures, used as appropriate, should allow the Council to achieve its planned high penetration rates over the next 20 years.

Quantity and cost of new hydropower

The Council selected hydropower projects that are expected to be low-cost, that generate most of their energy in the fall and winter when needed, and that would not have adverse effects on fish and wildlife on the environment. This resulted in a target of 1,236 megawatts of new hydro in the high case.

Quantity of combustion turbines

The Council selected combustion turbines as insurance against uncertain rapid increases in the demand for electricity. Combustion turbines have short lead times and can be built at very low cost. After discussion and analysis, the Council selected 1,050 megawatts of combustion turbines in the high case as appropriate insurance to be able to meet high energy growth.

Cost-effectiveness of WPPSS 4 and 5

The Council faced the issue of whether WPPSS 4 and 5 or new coal plants would be a cheaper way to provide power to meet the high load growth case. Preliminary analysis indicates that coal plants are cheaper than nuclear power plants. It also appears that coal plants work better with the hydroelectric system because substantial fuel costs can be saved by shutting coal plants down to take advantage of good water years. Coal plants also appear to pose fewer risks because they have a shorter construction lead time and they can be built in smaller units.

How to deal with the surplus

The region's current electricity surplus is expected to last from 6 to 20 years, depending on electrical demand growth. The Council has determined that energy-efficient building codes for new buildings should be implemented immediately so that long-term savings are not lost. BPA should develop delivery systems for other conservation programs so that they can be implemented when needed. The Council encourages the possibility of an out-of-region electricity sale and will revise its resource portfolio schedule if an agreement is reached on a sale.