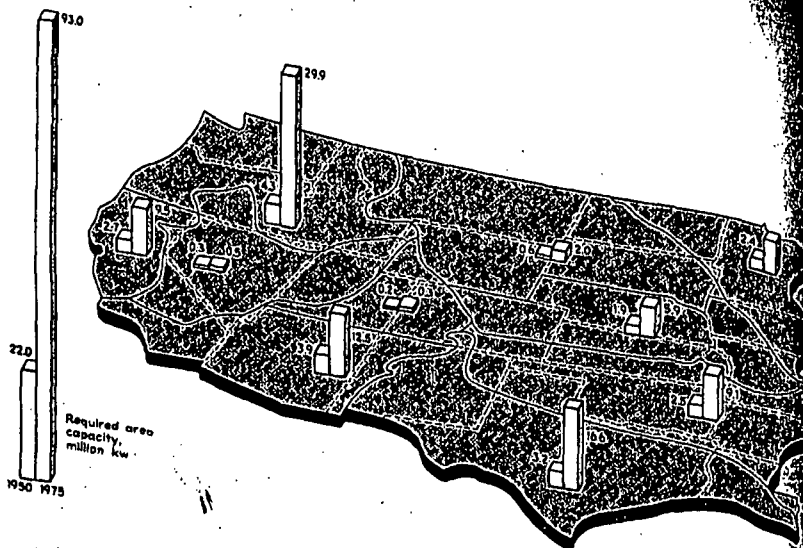
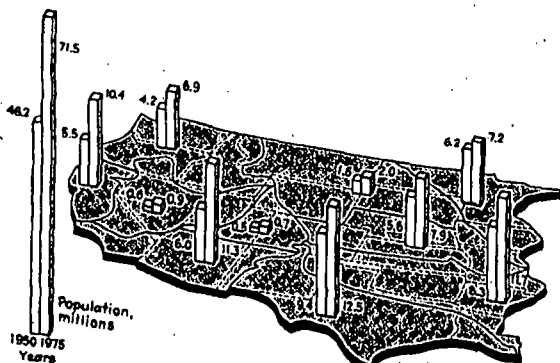




1 Bureau of Reclamation of U.S. Department of the Interior sees all watershed areas in western states experiencing zooming needs for electric capacity from 1950 to 1975. Capacity needed may be supplied through transmission lines.

Reclamation Bureau Looks At West's Power Future



2 Estimate of increased power demands by 1975 rests on expected population growth and increased industrialization. Western population grows faster than nation's.

Population growth trends show huge potential for increased power demands. 22 states west of Mississippi River. Hydro capacity, despite fourfold expansion anticipated by 1975, will not meet half total demand. So transmission must make up the difference and carry major part of the load.

► UNOFFICIAL ESTIMATES of U.S. Bureau of Census place national population in 1975 between 160 and 220 million people compared with 151 million in 1950. Percentage-wise, the 22 western states have grown consistently faster than the nation as a whole. From 1950 to 1975, these states increased by 37% for Washington, 39.6% for Oregon, 37% for California, 35.3% for Nevada, and 33.3% for Idaho. In 1950, the 22 western

states had about 48,200,000 people. Estimated 1975 reaches about 71.5 million.

Electricity Use. Annual energy consumption per capita has jumped from 2,888 kwhr in 1924 to 2888 kwhr in 1951. Bureau of Reclamation estimates that by 1975 this will reach at least 7500 kwhr. In the western states with their heavy industrial development this consumption may well be 8500 kwhr per capita. Total western annual energy requirements are estimated at about 550 billion kwhr, Fig. 3. This will need generating capacity of about 93 million kw.

Industrial Needs. Electrometallurgical and electrochemical industries form an important part of the West's industrial activity. Their products have enormous properties for electrical energy. General manufacturing methods turn more to electricity—for example, welding and heating. In 1950, the average industrial worker used 13,000 kwhr per year. This could very well double by 1975. Combined effect of increased utilization and increased work force is expected to increase industrial consumption in the West as shown in Fig. 3, according to Reclamation Bureau estimates.

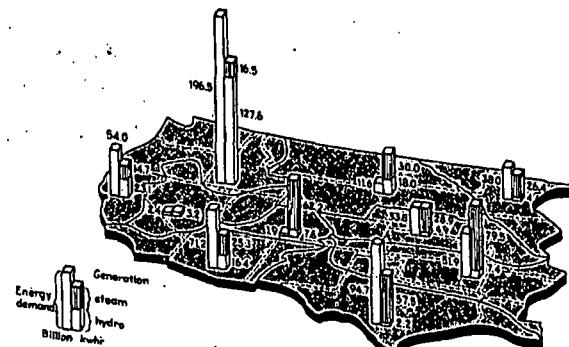
Domestic Use. In 1950, the average home used 1830 kwhr per year. But as electrical utilization in the home grows, (from saturated we can expect tremendous increases in electrical application.) For instance, a St. Louis demonstration home in 1952 used 24,000 kwhr annually, including 13,980 kwhr for heat pump heating. By assuming the 1952 average western home would use only 35% of this amount the Reclamation Bureau figures an annual demand of 140 billion kwhr, Fig. 6.

Other Uses. An increased number of commercial establishments and greater air conditioning, electric heating, motor-operated equipment and higher living levels will probably send commercial needs up to 85 billion kwhr by 1975, Fig. 6.

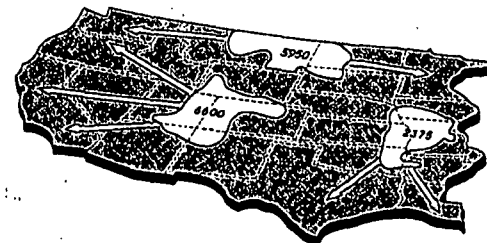
Rural and farm homes represent about the biggest percentage growth for potential electrical uses. These homes have great need for refrigeration, pumps, heaters and labor-saving machinery. By 1975, this type of load could easily use 50 billion kwhr annually, Fig. 6.

Miscellaneous uses, like railroads, street lighting, railless trolleys, air conditioning, military establishments, all will need greater amounts of electric energy. These will contribute to the increased demand for the western states, Fig. 6.

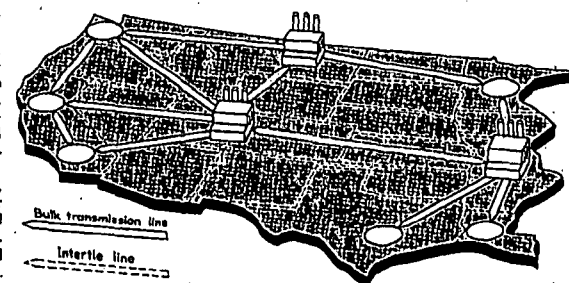
Power sources. The Bureau estimates that the U.S. has total ultimate hydro power of 100 million kw, with 80 million



3 Pacific and southern watershed areas in 1975, expected to need more energy than they generate, could be supplied from coal-rich interior states by transmission.



4 Energy in recoverable reserves of coal and lignite can be sent by rail or transmission lines to energy-hungry areas. Energy figures are million billion Btu's.



5 Reclamation Bureau study anticipates high-voltage transmission network as most economical method of transporting bulk energy over distances up to 660 miles.