

Scenarios and Strategies

TVA and a diverse group of stakeholders, called the IRP Working Group, have spent months evaluating forecasts and other information to identify five scenarios, or futures, TVA could find itself operating in through 2050. Together, they also identified five business strategies TVA could use in each possible future. Computer modeling will generate 25 potential resource plans, or portfolios – one for each scenario and strategy combination. Each portfolio will address how TVA could meet the demand for power in that given scenario. Ultimately, TVA will identify a preferred portfolio direction, which will serve as a compass for TVA in the years to come.

SCENARIOS

1	REFERENCE CASE Represents TVA's current forecast that reflects employment, population, and industrial growth, weather-normal trends, growing electric vehicle use, and increasing efficiencies.
2	HIGHER GROWTH ECONOMY Reflects a technology-driven increase in U.S. productivity growth that stimulates the national and regional economies, resulting in substantially higher demand for electricity.
3	STAGNANT ECONOMY Reflects rising debt and inflation that stifle consumer demand and business investment, resulting in weaker than expected economic growth and essentially flat electricity demand.
4	CARBON REGULATION Reflects the impact of proposed greenhouse gas rules targeting significant reductions in electric utility CO ₂ emissions beginning in 2030 and potential future regulations striving for net zero by 2050.
5	CARBON REGULATION PLUS GROWTH Reflects the impact of proposed and potential future regulations along with substantial advancements in clean energy technologies, spurring economic growth and extensive electrification.

STRATEGIES

A	BASELINE UTILITY PLANNING Represents TVA's current outlook based on least-cost planning, incorporating existing programs and a planning reserve margin target. This reserve margin target applies in all strategies.
B	CARBON-FREE INNOVATION FOCUS Emphasizes and promotes emerging, firm and dispatchable carbon-free technologies through innovation, continued research and development, and strategic partnerships.
C	CARBON-FREE COMMERCIAL READY FOCUS Emphasizes proven renewable technologies such as wind, solar, battery and long-duration storage, at both utility-scale and through customer partnerships, along with strategic transmission investment.
D	DISTRIBUTED AND DEMAND-SIDE FOCUS Emphasizes existing and potentially expanded customer partnerships and programmatic solutions to reduce reliance on central station generation and promote virtual power plants.
E	RESILIENCY FOCUS Emphasizes smaller units and the promotion of storage, coupled with strategic transmission investment, to drive wider geographic distribution of resources and additional resiliency across the system.