



The IRP Planning Process





IRP Scenarios & Strategies

SCENARIOS	
1	CURRENT OUTLOOK Represents TVA's current forecast for these key uncertainties and reflects modest economic growth offset by increasing efficiencies.
2	ECONOMIC DOWNTURN Prolonged stagnation in the economy, declining demand and delayed expansion of new power generation.
3	VALLEY LOAD GROWTH Economic growth driven by people moving into the Valley, new technologies or even the rise of electric vehicles.
4	DECARBONIZATION Federal regulations that curb carbon emissions.
5	RAPID DISTRIBUTED ENERGY RESOURCE (DER) ADOPTION Growing consumer demand for distributed generation, storage and energy management.
6	NO NUCLEAR EXTENSIONS Regulatory challenges to relicensing of existing and construction of new, large-scale nuclear.

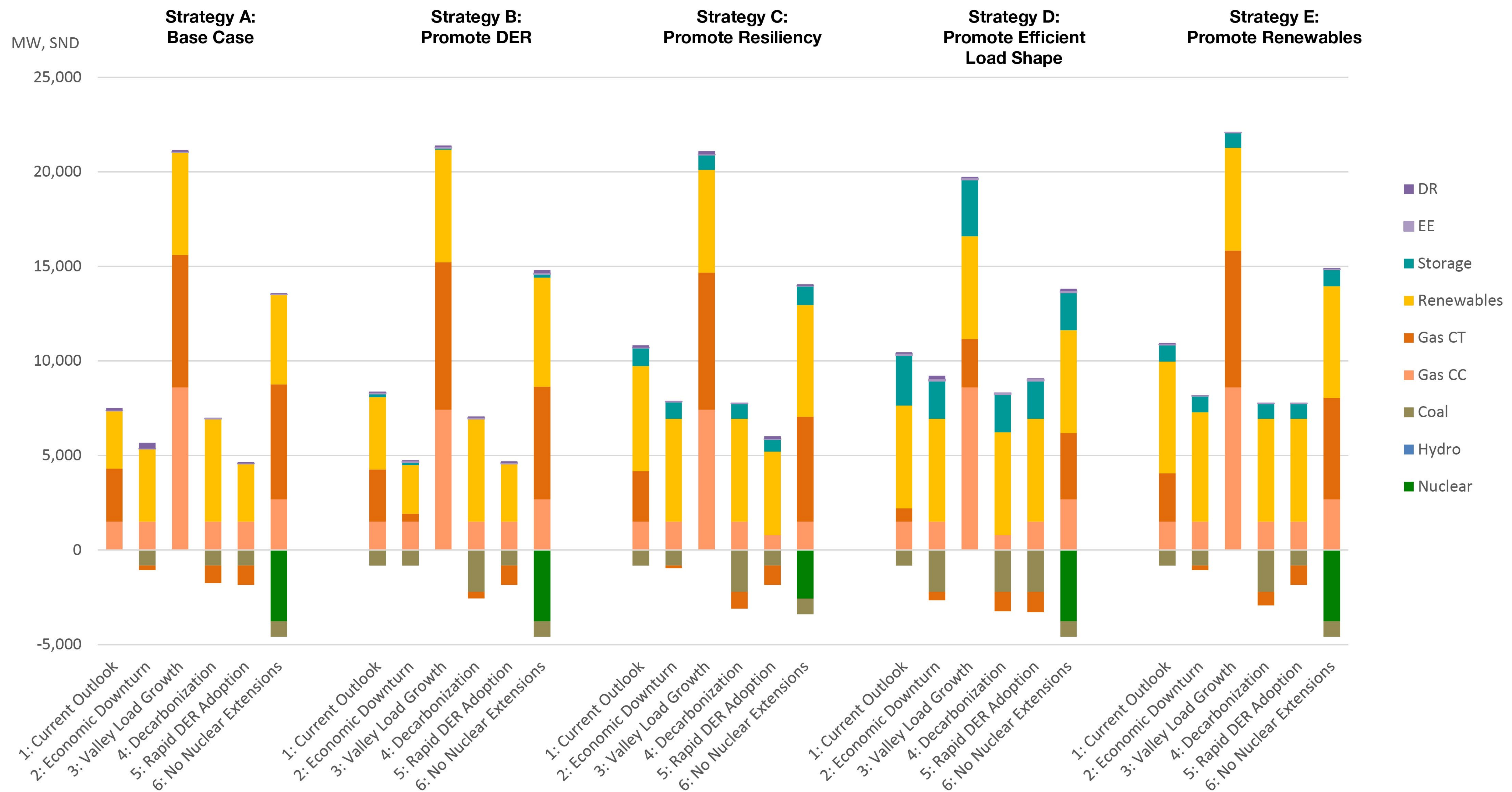
STRATEGIES	
A	BASE CASE Represents TVA's current assumptions about the existing fleet and options for resource expansion.
B	PROMOTE DISTRIBUTED ENERGY RESOURCES Investing in programs that encourage use of distributed resource options such as solar energy, combined heat and power, and battery storage.
C	PROMOTE RESILIENCY Promoting small, agile capacity to maximize system flexibility and promote the ability to respond to short-term power disruptions.
D	PROMOTE EFFICIENT LOAD SHAPE Encouraging efficient energy management to minimize energy intensive actions to our power system (e.g. ramping up and down for changes in demand) while continuing to support energy efficient decisions for all customers.
E	PROMOTE RENEWABLES Meeting consumer demands for increased renewables by investing in renewable energy resources both at large scale, like a wind farm, or at small scale, like rooftop solar.



Draft Capacity Expansion Plans

Incremental capacity by 2038 consists of additions of new energy resources and retirement of existing energy resources for the portfolios associated with each strategy.

Incremental Capacity by 2038

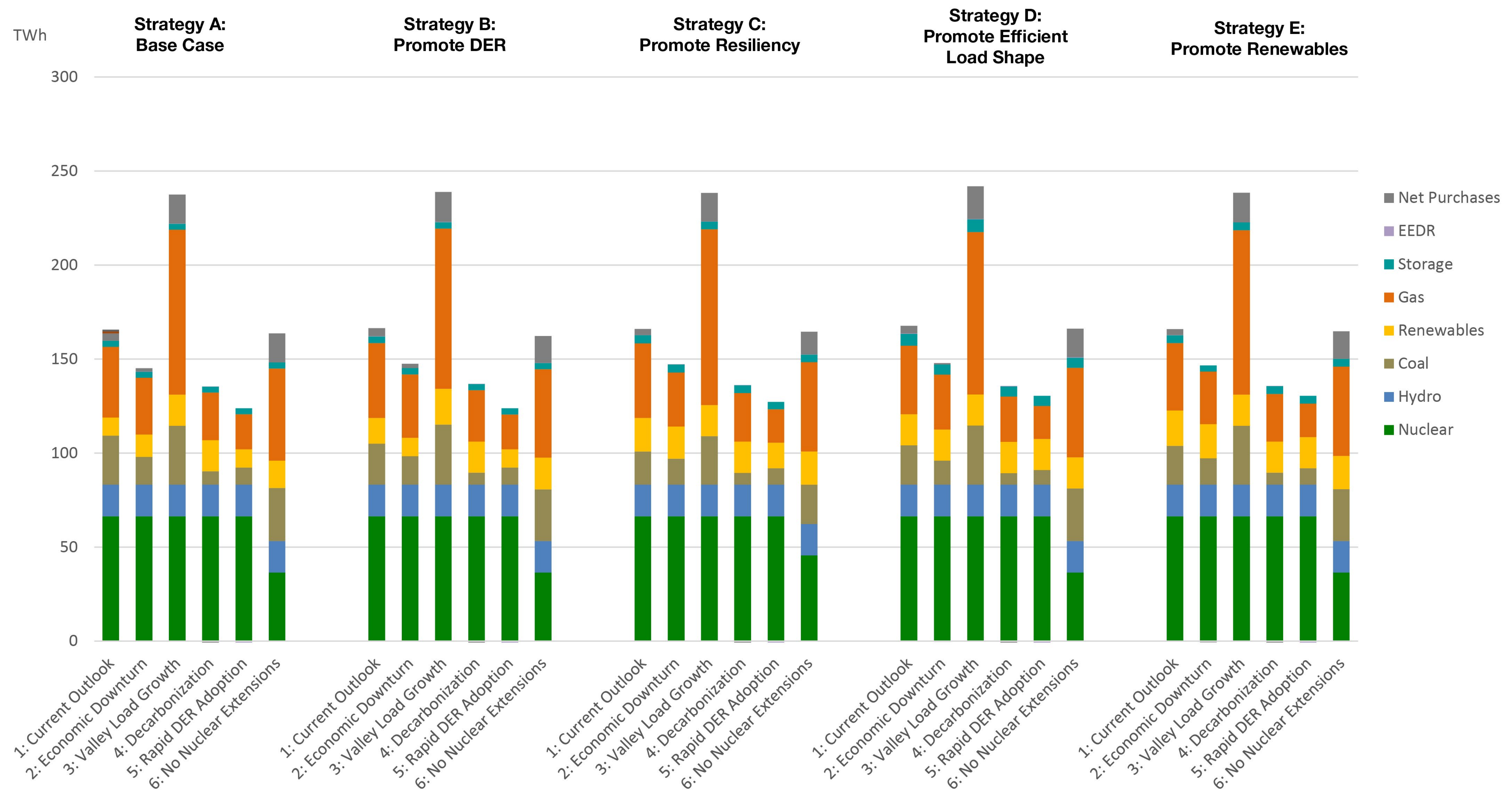




Draft Generation Mix

Total energy in 2038 by resource type in the portfolios associated with each strategy.

Energy in 2038





Strategy Performance

	COST	RISK	ENVIRONMENTAL STEWARDSHIP		OPERATIONAL FLEXIBILITY	VALLEY ECONOMICS
			CO ₂ , Water, Waste	Land Use		
STRATEGY A: BASE CASE						All strategies have similar impacts on the Valley economy as measured by per capita income and employment
STRATEGY B: PROMOTE DER						
STRATEGY C: PROMOTE RESILIENCY						
STRATEGY D: PROMOTE EFFICIENT LOAD SHAPE						
STRATEGY E: PROMOTE RENEWABLES						

Good

Better

Best

