

2022 IRP: Retirement and Replacement Analysis


AES Indiana’s IRP team has calculated portfolio cost (known as PVRR or Present Value Revenue Requirement) for six different generation portfolio strategies in four scenarios to analyze retirement and replacement options.

PORTFOLIO MATRIX

Strategies	SCENARIOS			
	No Environmental Action	Current Trends (Reference Case)	Aggressive Environmental	Decarbonized Economy
No Early Retirement	\$7,111	\$9,572	\$11,349	\$9,917
Pete Refuel to 100% Gas (est. 2025)	\$6,621	\$9,330	\$11,181	\$9,546
One Pete Unit Retires (2026)	\$7,462	\$9,773	\$11,470	\$9,955
Both Pete Units Retire (2026 & 2028)	\$7,425	\$9,618	\$11,145	\$9,923
Clean Energy Strategy	\$9,211	\$9,711	\$11,184	\$9,690
Encompass Optimization	\$6,610	\$9,262	\$10,994	\$9,572

20-Year PVRR (2023\$MM, 2023-2042)

LEAST COST



HIGHEST COST

All identified resource transitions in the IRP are subject to change based on future analyses and regulatory approval.

GENERATION STRATEGIES

PORTFOLIO STRATEGY	DETAILS
No Early Retirement	<ul style="list-style-type: none"> > Status quo > Units remain in service through useful life of 2042
Pete Refuel to 100% Gas (est. 2025)	<ul style="list-style-type: none"> > Petersburg Units 3 and 4 refueled to natural gas in 2025 > Strategy serves as possible bridge to 100% renewable portfolio > Coal-free portfolio starting in 2025
One Pete Unit Retires (2026)	<ul style="list-style-type: none"> > One unit retired early in 2026 > One unit remains in service through useful life of 2042 > Replacement capacity starting in 2026
Both Pete Units Retire (2026 & 2028)	<ul style="list-style-type: none"> > One unit retired early in 2026 > One unit retired early in 2028 > Coal-free portfolio starting in 2028
Clean Energy Strategy	<ul style="list-style-type: none"> > Both Petersburg Units retire and replaced with wind, solar and storage in 2026 and 2028 > Coal-free portfolio starting in 2028
Encompass Optimization	<ul style="list-style-type: none"> > Optimized for results by scenario without predefined strategy > In No Environmental Action, refuels Petersburg Units 3 and 4 in 2025 > In Current Trends and Decarbonized Economy, refuels Petersburg Unit 3 in 2025 and Unit 4 in 2027 > In Aggressive Environmental, refuels Petersburg Unit 4 in 2027

SCENARIOS

NO ENVIRONMENTAL ACTION (NOENV)

This future is defined by relaxed environmental regulations, expanded fracking and low demand with low electrification. Inflation persists driving low Gross Domestic Product (GDP) and customer growth.

CURRENT TRENDS – REFERENCE CASE (REF)

In this future, congressional gridlock persists with stalled progress on passing sweeping environmental legislation. The Investment Tax Credit (ITC) and Renewable Electricity Production Tax Credit (PTC) are given ten-year extensions reflecting recent updates from the Inflation Reduction Act of 2022. This scenario assumes modest price for carbon starting in the late 2020s.

AGGRESSIVE ENVIRONMENTAL (AGGENV)

In this future, Congress passes sweeping environmental legislation that includes carbon tax. ITC and PTC extensions are consistent with the Inflation Reduction Act of 2022. This scenario includes high demand scenario with high electric vehicle and solar forecasts.

DECARBONIZED ECONOMY (DECARB)

In this future, Congress passes aggressive decarbonization mandate on power sector with explicit renewable energy targets. High ITC/PTC runs through the planning horizon. Carbon targets are achieved through a Renewable Portfolio Standard that targets Net Zero; not a market mechanism like a carbon tax or cap and trade. This scenario assumes high load driven by electrification.

DRIVING ASSUMPTIONS

Scenario	Load	EV	Dist. Solar	Power	Gas	Coal	CO2
No Environmental Action	Low	Low	Low	Horizon Fundamental Forecast	Low	Base	Non
Current Trends (Reference Case)	Base	Base	Base	Horizon Fundamental Forecast	Base	Base	Low
Aggressive Environmental	High	High	High	Horizon Fundamental Forecast	High	Base	High
Decarbonized Economy	High	Very High	High	Horizon Fundamental Forecast	Base	Base	None*

*Carbon targets will be modeled through a National Renewable Portfolio Standard