



Q3 2026

July 2026



With Support From  **Halcyon**

Table of Contents

- 1) Executive Summary
- 2) Introduction to E3 and RECOST
- 3) Levelized Costs: Concepts and (Mis-)Applications
- 4) Forecast Assumptions: Q3 2026
- 5) Forecast Results: Q3 2026

Executive Summary

RECAST Q3 2026

What Goes Up, Must Float Down? Gas Plant Cost Trends

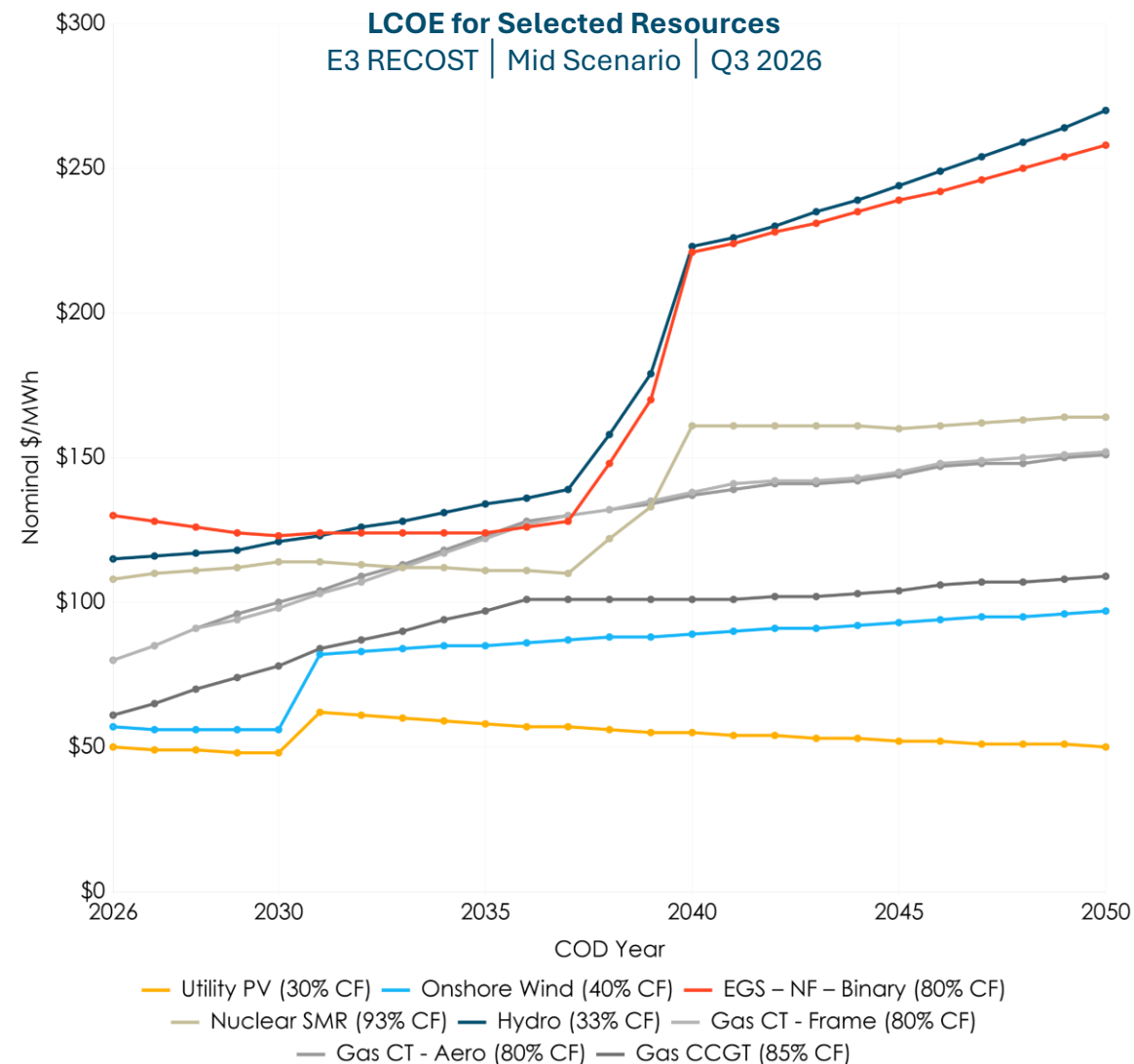
Natural gas plant costs remain significantly elevated, with no sign of abatement in capital costs during this decade. However, uncertainty around how long demand (primarily from large load customers) and supply (primarily manufacturing capacity) pressures will persist continues to linger. Based on our review of the latest data from our partner Halcyon, as well as our continued engagement with market stakeholders, we have revised our natural gas capital cost forecasts to reflect significant moderation of these costs in the 2030s, varied across scenario.

Import Tariffs: The Supreme Court Strikes Back

On February 20, 2026, the Supreme Court struck down the International Emergency Economic Powers Act (IEEPA) tariffs. As a result, E3 has lowered its default tariff rates in RECAST. However, several tariffs remain in effect, and multiple duties can stack on the same imported component. To account for market uncertainties in the current environment, E3 provides a range of low-mid-high tariff rates in RECAST.

New to RECAST Functionality: Increasing Flexibility Across Inputs and Outputs in an Uncertain World

- + RECAST calculations for natural gas LCOE now link the state in which the project is sited to the nearest natural gas pricing hub, which we combine with a delivery adder for a more realistic delivered gas price input that can be applied across the U.S.
- + E3 now offers a fully interactive dashboard with all RECAST results that can be requested (see later slide for details), and which allows much greater customization for different contexts.

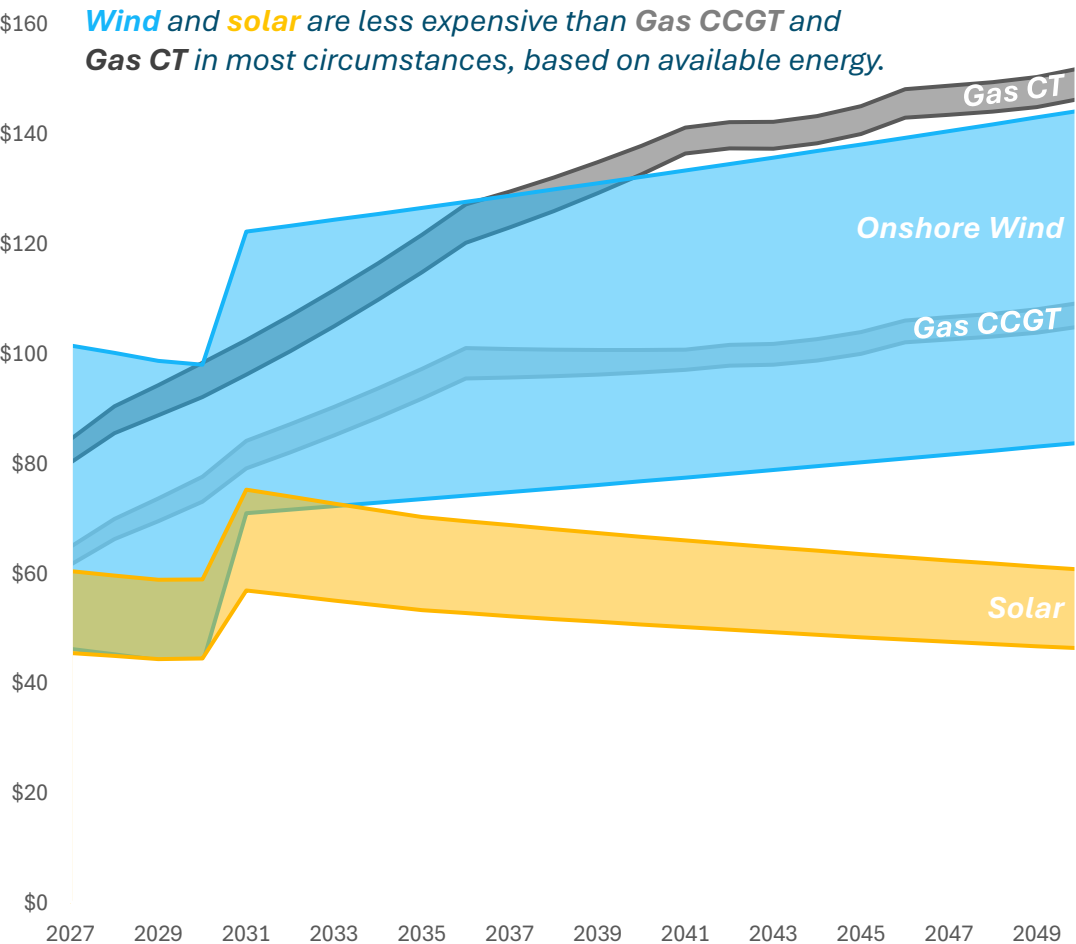


LCOE and LCOC

RECOST Forecasts: Q3 2026

E3 LCOE Forecast

Nominal \$/MWh of Available Energy, Mid Cost Forecast

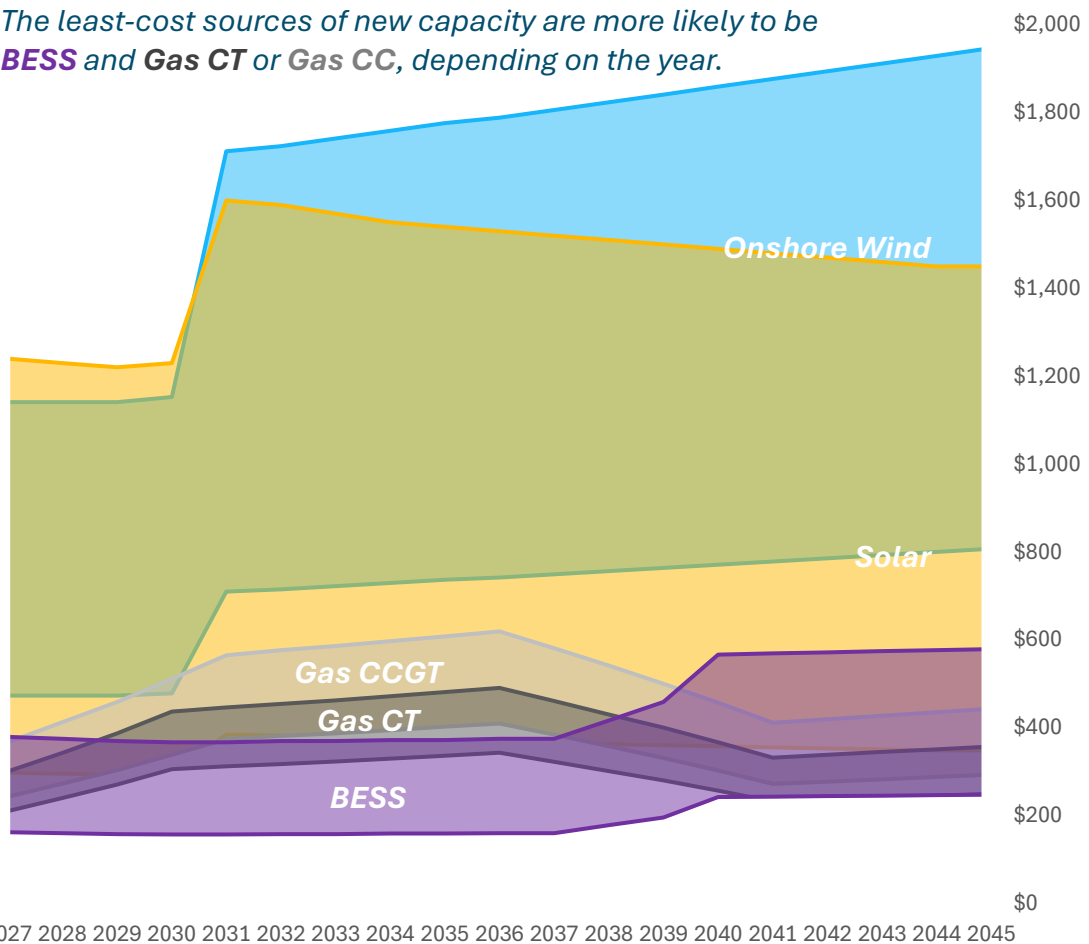


Note: Available energy denotes technical potential output of a project, without congestion or curtailment.

LCOC Forecast

Nominal \$/kW-yr of Levelized Capacity, Mid Cost Forecast

The least-cost sources of new capacity are more likely to be BESS and Gas CT or Gas CC, depending on the year.



Note: LCOC excludes energy revenues. Ranges shown here reflect potential capacity accreditation adjustments.

Introduction

RECOST: Q3 2026 Update



Energy+Environmental Economics

Who is E3?

Technical and Strategic Consulting Firm

~150 full-time consultants

30 years of deep expertise

Engineering, Economics, Mathematics,
Public Policy.....



San Francisco



New York



Boston



Chicago



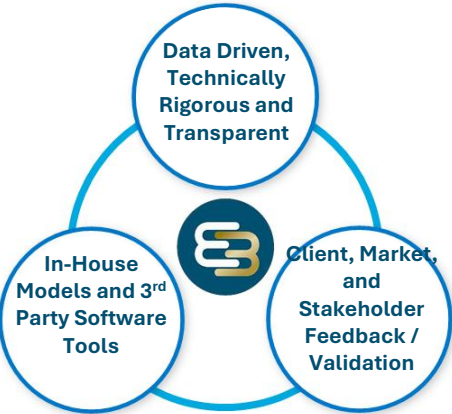
Calgary



Denver

E3 is Project and Expertise Driven with a Diverse Client Base

400+ projects per year for over 150+clients

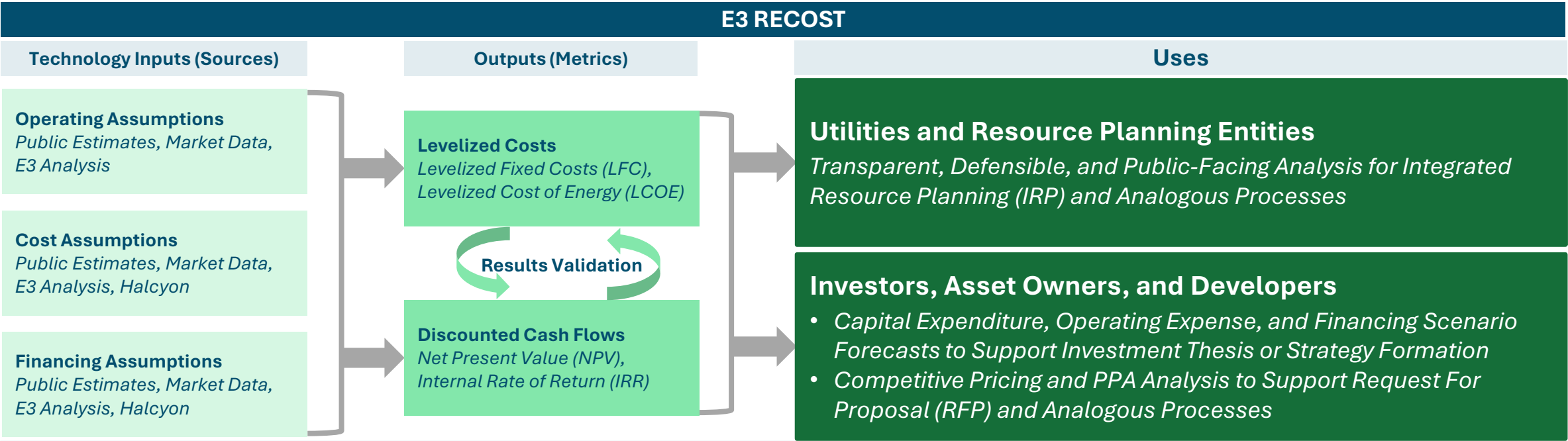


	Public & Non-Profit Sector	• Planning agencies and non-profits • Regulators and commissions
	Utilities & System Operators	• Investor and publicly owned utilities • ISOs/RTOs and other system operators
	Investors & Project Developers / Owners	• Asset owners and project developers • Investors and financiers

What is E3 RECAST?

Overview of Model and Use(s)

- + **RECAST** is E3’s in-house discounted cash flow model used to calculate levelized fixed costs and levelized cost of electricity for mature and emerging technology resources, inclusive of financing costs
 - + **RECAST** is optimized for two goals:
 - 1) Evaluate the fundamental economic costs of building new resources to inform energy system modeling, validate investment theses, and shape resource strategy for public and private sector stakeholders
 - 2) Estimate the expected cost to contract these resources under Power Purchase Agreements (PPAs), and support the calculation of Levelized Cost of Capacity (LCOC) using each resource’s Effective Load Carrying Capability (ELCC)
- RECAST is built to inform the ongoing debate around how to finance and build the resources necessary for the energy transition by leveraging E3’s expertise on this topic in a transparent and rigorous model***



What is E3 RECAST?

Technologies Evaluated in RECAST

RECAST currently evaluates the following technologies, with the ability to modify any cost or operating parameter as appropriate:

Natural Gas*	1) Natural gas combustion turbines (CT), Frame and Aero 2) Combined cycle gas turbines (CCGT) 3) Reciprocating internal combustion engines (RICE)	Biomass	Dedicated Biopower
Nuclear*	1) Small modular reactor (SMR) units 2) Large reactor units	Energy Storage*	1) Utility-scale lithium-ion battery storage 2) BTM lithium-ion battery storage 3) Pumped storage hydro (PSH) 4) Long-duration energy storage (LDES) technologies*
Solar	1) Utility-scale solar photovoltaic (PV) systems 2) Commercial behind-the-meter (BTM) solar PV 3) Residential behind-the-meter (BTM) solar PV 4) Solar thermal systems	Geothermal	1) Hydrothermal (Flash, Binary) 2) Enhanced (Flash, Binary)*
Wind*	1) Onshore wind 2) Offshore wind (fixed-bottom) 3) Offshore wind (floating)	Hydropower	1) New Non-Powered Dams (NPD) 2) Existing Non-Powered Dams
Carbon Capture and Storage (CCS) Applications	1) CCGT new build and retrofit units equipped with CCS* 2) Coal new build with CCS or IGCC	Hydrogen*	1) Production (electrolysis) 2) Storage 3) Transport 4) Conversion and combustion, including CCGTs, CTs, and fuel cells*

What is E3 RECAST?

How RECAST Completes the Cost Picture, Flexibly

Commonly referenced public analysis and reporting on current and forecasted generation resource costs can be inconsistent and inflexible; RECAST fills this gap by being a transparent, deeply researched, and customizable model to support a diverse set of use cases

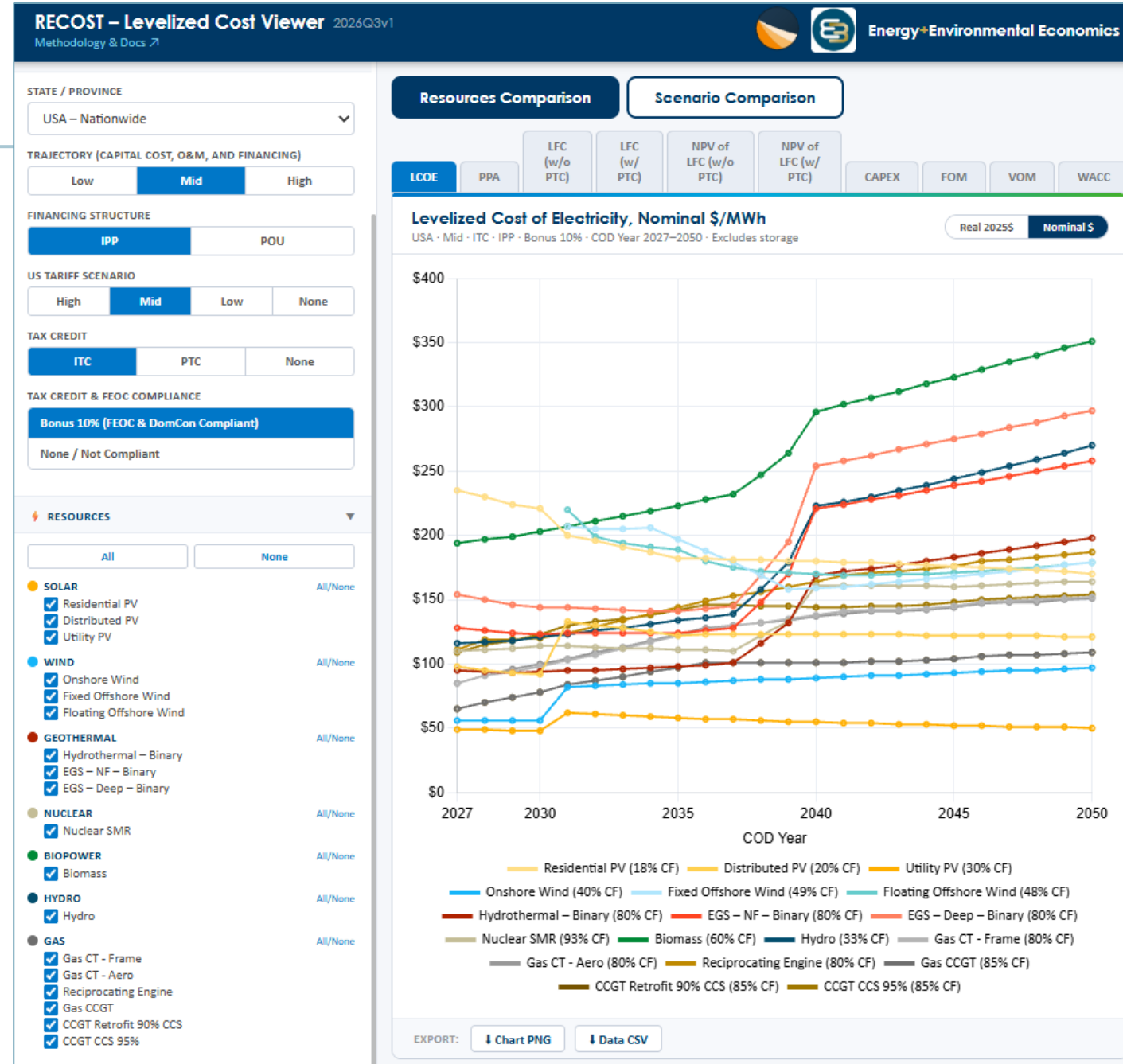
	 E3 RECAST	Other Sources	
		ATB (NLR)	LCOE+ (Lazard)
Policy	Reflects tax credit policy (incl. FEOC, safe harbor) and import tariffs as of July 2026, through 2060	Transparent, but can lag the market and may be scenario-limited	Snapshot only, with prescribed sensitivities
Gas Plant Costs	Deep empirical data foundation for current cost levels (Halcyon), trended to E3 low/mid/high forecasts	Literature review, potential lagging basis	Snapshot only, mix of public and confidential assumptions
Geography	Capital cost and O&M vary state-by-state; gas fuel costs vary by nearest pricing hub	No explicit geographic variation within the U.S.	
Contracting	PPA term, cost recovery, and capital structure all customizable from E3 default view	Applies standardized contract assumptions	
Financing	Empirical market data used to inform cost of debt, cost of equity, D/E ratio, and impact of tax equity	Scenario-limited	Single standard financing assumption, with prescribed sensitivities
Time Horizon	Annual forecast for 2027 - 2060	Annual forecast through 2050	Snapshot only
Technologies	Gas (CT, CC, CCS), Coal, Nuclear (incl. SMR), Solar, Wind, Storage, Hydropower, Geothermal, Biomass, Hydrogen	No LDES beyond PSH, no hydrogen	No CCS, no SMR, no hydropower, no biomass, no hydrogen
Outputs	LCOE, LCOS, PPA pricing, LFC, LCOC (all based on DCF analysis tied to NPV and IRR outputs)	LCOE	LCOE, LCOS
Customization	Fully customizable, with interactive dashboard for easy comparison of results	Not customizable off-the-shelf	
Bottom Line	RECAST is a unique blend of depth and breadth, fully customizable beyond our deeply researched market views, and suitable for both benchmarking and forecasting needs that is continually being used, updated, tested, and iterated as part of E3’s broad consulting work.		

Making RECost Interactive:

New Dashboard

- + To make our analysis more accessible and customizable, E3 is now releasing an interactive web-based dashboard of the latest RECost forecasts with each update
- + This dashboard allows the user customize and compare resource cost forecasts based on geography, financing structure, import tariff expectations and federal tax credit qualification

Reach out to kushal.patel@ethree.com and gregory.gangelhoff@ethree.com to request the full results dashboard for Q3 2026



Levelized Costs: Concepts and (Mis-)Applications



Energy+Environmental Economics

Calculation of Levelized Costs

RECOST Model Outputs and Metrics

- + **Levelized Fixed Cost (LFC) (\$/kW-yr)**: the levelized payment that a system would need every operating year over its useful life to cover fixed costs, including amortized capital costs (capex), fixed operations and maintenance (O&M) costs, property taxes, and investment tax credits (if applicable), divided by **nameplate capacity**
- + **Levelized Cost of Electricity (LCOE) (\$/MWh)**: the levelized payments that a system would need for every operating hour over its useful life to cover all costs, including fixed cost components as well as fuel costs, variable O&M, and the federal production tax credit (if applicable), divided by **available energy**
- + **Levelized Cost of Capacity (LCOC) (\$/kW-yr)**: the levelized payment that a system would need every operating year over its useful life to cover fixed costs, including amortized capital costs (capex), fixed operations and maintenance (O&M) costs, property taxes, and investment tax credits (if applicable), divided by **qualified capacity**

$$\text{LFC} = \frac{\text{NPV}(\text{Fixed Costs, \$})}{\text{NPV}(\text{Capacity, kW})}$$

Fixed Costs =

- + Capital Expenditures and Interconnection Costs
- + Investment Tax Credit
- + Fixed O&M
- + Property Taxes
- + Warranty
- + Repowering & Augmentation

$$\text{LCOE} = \frac{\text{NPV}(\text{Total Costs, \$})}{\text{NPV}(\text{AE, MWh})}$$

Total Costs =

- + LFC
- + Variable O&M
- + Fuel
- + Production Tax Credit

AE = Available Energy =
Nameplate Capacity * Available Hours

$$\text{LCOC} = \frac{\text{NPV}(\text{LFC, \$})}{\text{NPV}(\text{QC, kW})}$$

QC = Qualified Capacity as
determined by the relevant authority
(market operator or planning authority)

Capacity Value Concepts:

Gross and Net Cost of New Entry (CONE)

- + In the context of calculating capacity value, the Levelized Fixed Cost (LFC) estimates shown in this report are only the gross Cost of New Entry (CONE) for installed capacity (ICAP) basis, representing the annualized fixed revenue requirement that a merchant developer would need to recover in order to justify investment in a new generating resource
- + Gross CONE may not reflect the capacity value of a resource for a given system; this requires adjusting for ELCC
 - ELCC reflects the capacity mix of the system to which the new resource is added as well as the load characteristics of the system, both of which will vary from market to market; ELCC is also a function of administrative rules governing the resource adequacy accreditation framework
- + Furthermore, the capacity revenue that any project can earn will be shaped by the ELCC or equivalent metric
- + For the purpose of estimating the capacity cost of an asset, the metric of net effective CONE is commonly used
 - The “net” in this term refers to the netting out of levelized energy revenues from a resource’s levelized cost of capacity
 - Net CONE should reflect the portion of a resource’s installed capacity that is expected to be reliably available to meet the needs of a specific system during periods of highest risk
 - As a result, CONE values on an effective capacity basis more directly align with resource adequacy requirements and potential capacity market procurement targets, where a formal capacity market exists
- + While tolling or capacity contracts are often stated in dollars per kilowatt-month, or dollars per megawatt-day, these prices are typically paired with the requirement that prices are adjusted to reflect changes in the market accreditation of capacity

For an energy storage resource where:

Levelized Fixed Cost (RECOST Output) = \$150/kW-yr

Levelized Energy and Ancillary Services Revenues (Energy Arbitrage and AS Revenue) = \$60/kW-yr

Resource- and Market-Specific ELCC = 80%

$$\text{Effective Net CONE} = (\$150/\text{kWyr} - \$60/\text{kWyr}) / 80\% = \mathbf{112.50 \$/\text{kW-yr}}$$

Note: Calculation above is simplified and excludes adjustments for additional terms.

What's in a Definition: LCOE and LFC

RECost forecasts the fundamental economic costs of a given resource, anywhere in North America; the value of this resource to a given system may vary significantly across geographies

- + While the Levelized Cost of Energy (LCOE) is often defined for dispatchable resources based on a specified capacity factor, this is technically incorrect: the economics of a resource are defined by its *available* energy**
 - For renewable generation resources like wind and solar, available energy is similar to the common understanding of capacity factor and would only be adjusted slightly to reflect available energy (for resource availability and curtailment, for example)
 - For dispatchable resources, however, the difference between available energy and actual output can be dramatic: a gas combustion turbine facility may be able to operate for more than 80% of hours in a given year (and hence be available for that amount of time), but may only be dispatched for 10% of hours based on hourly market price signals
 - In this report, LCOE should be interpreted as the levelized cost of a resource's available energy; we do not take a view in this analysis on actual capacity factors we would expect, and project-level contract pricing can vary materially as a result of this distinction

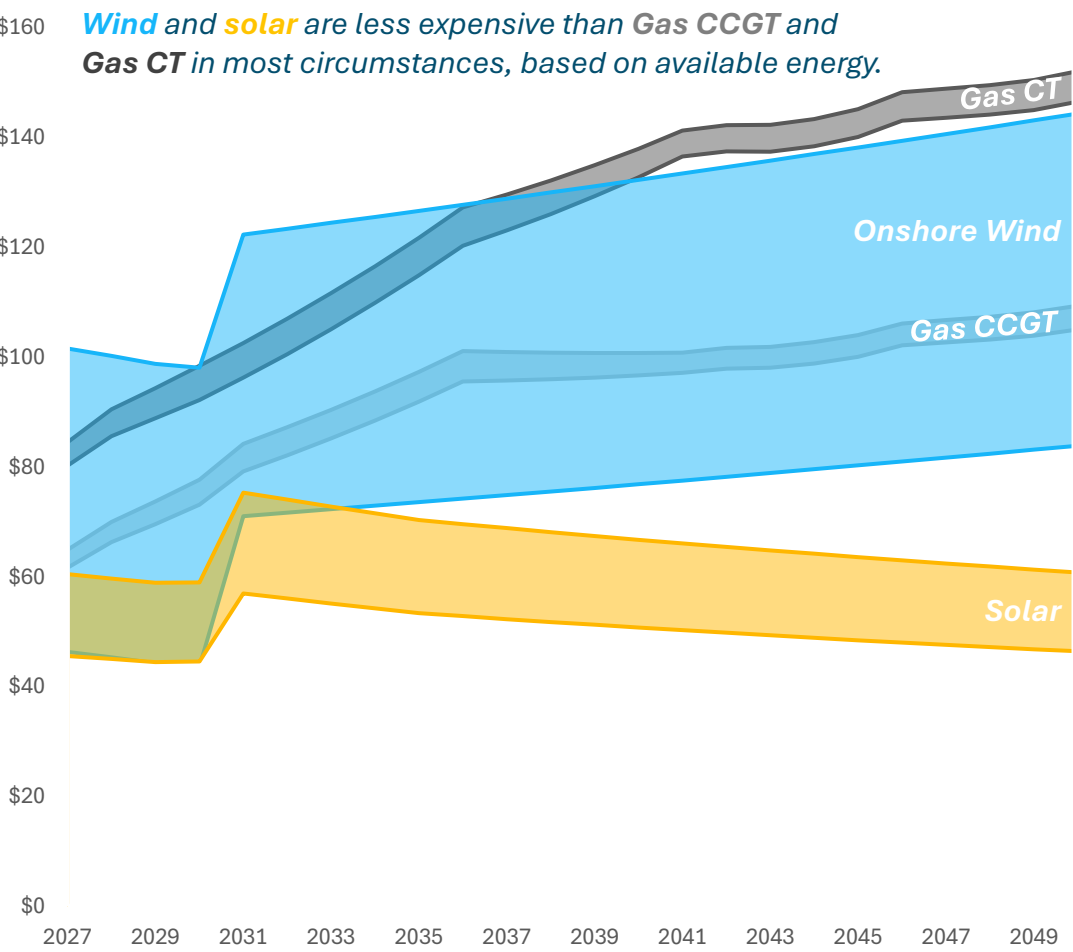
- + E3 estimates the Levelized Fixed Costs (LFC) for different resources in this report and using RECost as well; for planning purposes, the appropriate metric for evaluating the cost of new capacity should account for some form of capacity accreditation specific to a given market; a common term for this is Levelized Cost of Capacity (LCOC)**
 - While different markets define capacity accreditation metrics differently, these can include various concepts that are technically distinct, such as ELCC, EFOR'd, and others
 - In this report, we show LFC without any adjustment, but our default reporting metric moving forward will be Levelized Cost of Capacity (LCOC) that reflects simple but directionally appropriate adjustments for the purpose of showing the cost of capacity available to a given system
 - In the context of calculating capacity value, the Levelized Fixed Cost (LFC) estimates shown in this report are only the gross Cost of New Entry (CONE) for installed capacity (ICAP) basis, representing the annualized fixed revenue requirement that a merchant developer would need to recover in order to justify investment in a new generating resource; this may not reflect the contribution of the resource to the reliability of a given system

LCOE and LCOC

RECOST Forecasts: Q3 2026

E3 LCOE Forecast

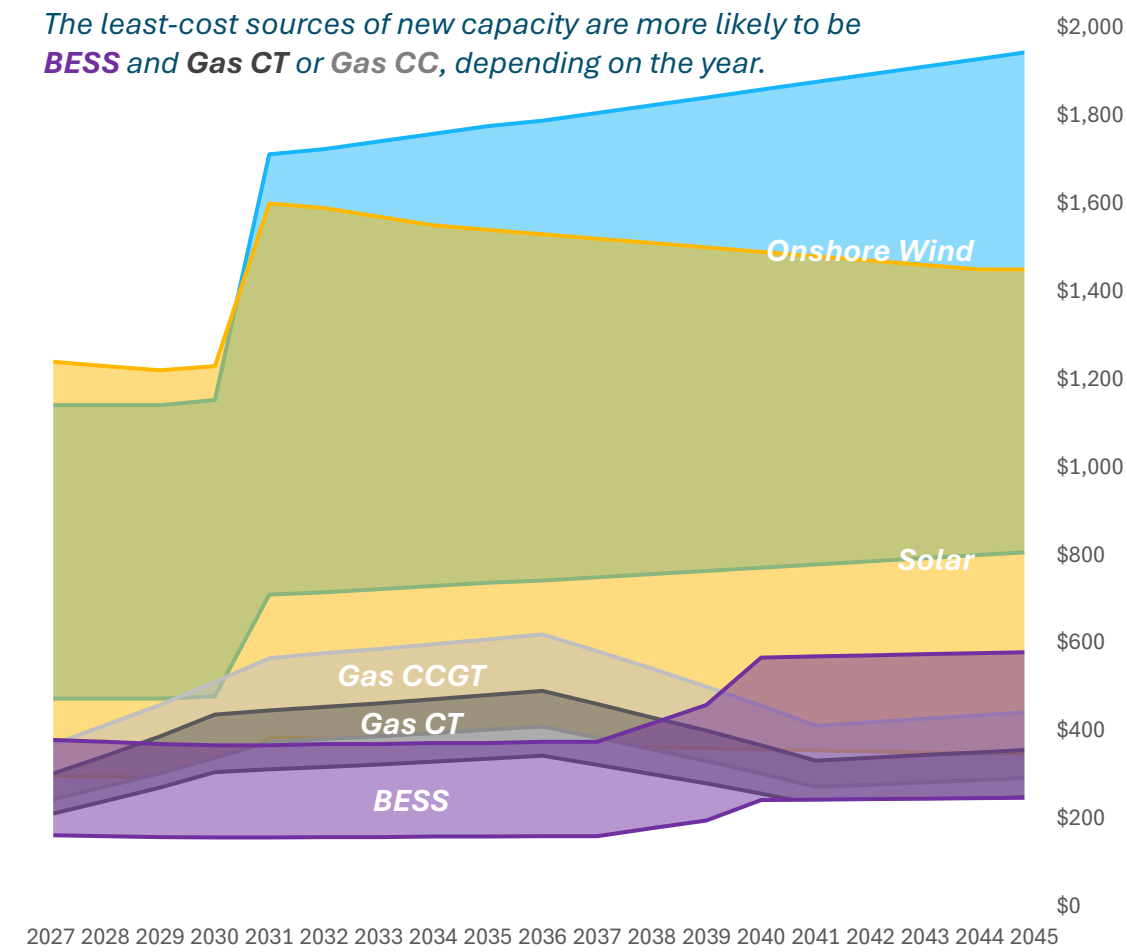
Nominal \$/MWh of Available Energy, Mid Cost Forecast



Note: Available energy denotes technical potential output of a project, without congestion or curtailment.

LCOC Forecast

Nominal \$/kW-yr of Levelized Capacity, Mid Cost Forecast



Note: LCOC excludes energy revenues. Ranges shown here reflect potential capacity accreditation adjustments.

What's in a Contract?

Levelized Costs Versus PPAs

- + RECost calculates the recovery of all project costs over the technical life of the project, discounted by a specified cost of capital and levelized over total project output (or capacity, for LFC)**
 - By default, IPP financing assumptions are used to calculate the cost of capital, but regulated utility financing options are available
 - Term (years) used for debt is always matched to PPA term, even though costs post-PPA are still captured in the final LCOE or LFC output
- + It may not always be appropriate to compare levelized costs to PPA price offers, for a variety of reasons:**
 - 1) Market evidence is overwhelming that PPA term tends to fall below operating life over which levelized costs are calculated; LevelTen Energy estimates the average term length for solar and wind PPA offers in Q3 2024 at ~15 years
 - 2) PPAs typically recover less than 100% of project costs; the term for debt used to finance the project will not exceed the PPA term
 - 3) PPAs may be priced as an initial value that escalates over time, or as a flat nominal price for the contract term
 - 4) In any given year, for any given technology, a PPA will reflect the degree to which buyers versus sellers have greater pricing power, which are shaped in large part by factors exogenous to this analysis
 - 1) Supply chain cost shocks or improvements are typically not foreseeable in terms of exact timing
 - 2) Macroeconomic shocks such as inflation, and ensuing changes in the Federal Funds rate can lift or depress pricing dynamics
 - 3) Credit rating upgrades or downgrades can impact leverage potential and associated PPA pricing for reasons specific to the developer
- + Even if we were to assume that economic life is equal to technical life, and the PPA will recover 100% of project costs, this does not mean that LCOE or LFC are equivalent to a PPA price: the quantity of energy or capacity guaranteed by a PPA does not need to be equal to technical (available) generation or capacity**
 - PPAs are often signed for a portion of plant output, either to facilitate multi-party contracting arrangements or because a developer is being conservative in their guarantees (or is forced into being conservative), inclusive of potential curtailment adjustments or risk that may be shared between the buyer and seller of power

Forecast Assumptions

RECOST: Q3 2026



Energy+Environmental Economics

Federal Policy Cost Impacts by Technology

Relative to the Baseline of Policy on January 19, 2025

▼ : Cost Decline

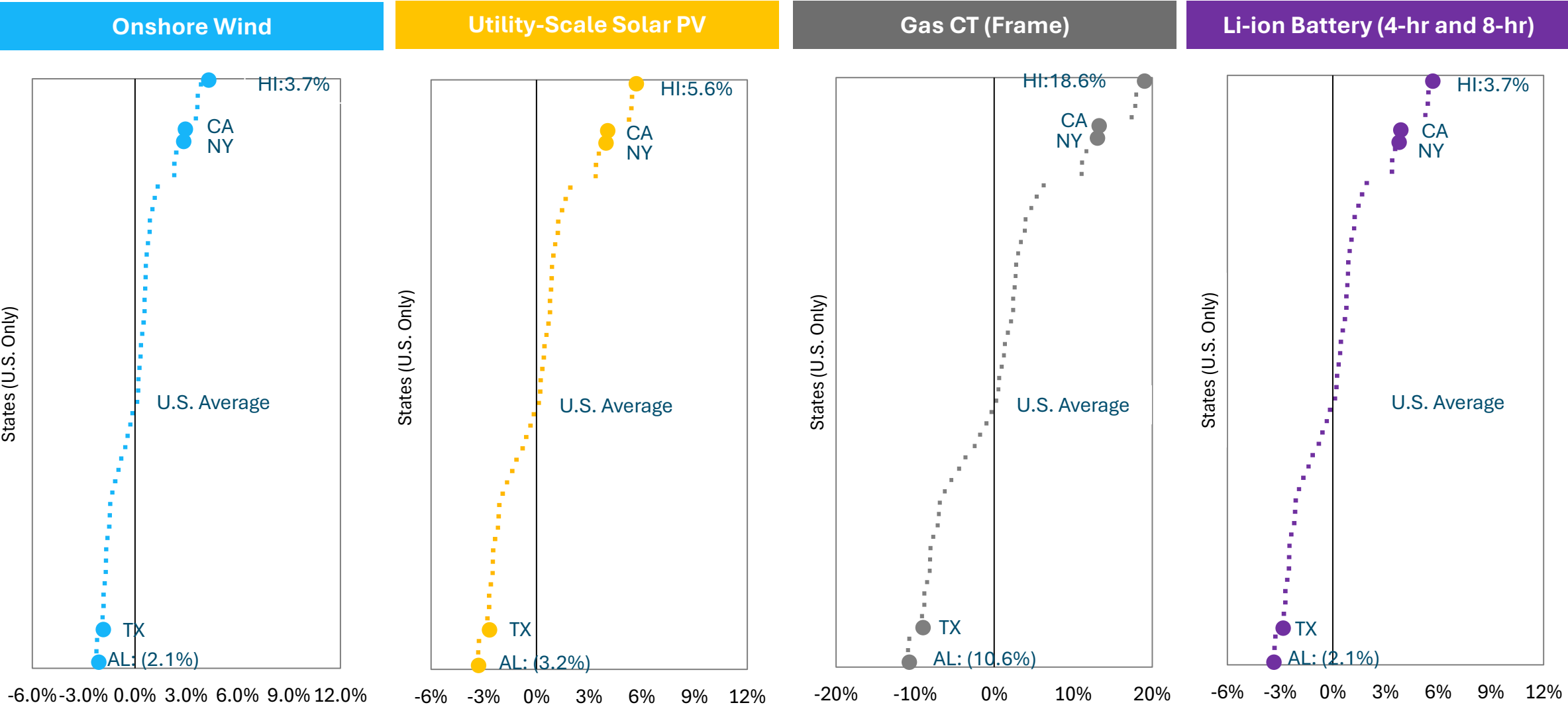
▲ : Cost Increase

↔ : Impact Unclear /No Change

	Description	Solar	Wind	Li-ion Batteries
Tax Credits	Federal Tax Credit, no potential extension under OBBBA	ITC and PTC available for projects that begin construction by July 2026 ▲		Full eligibility through 2032 with phase down to 75%, 50%, and 0% through 2035 ▲
Safe Harbor Provisions	Allow developers to lock in federal tax credits based on construction qualifications and timelines	Safe harbor is permitted for federal tax credits, but 5% cost test was removed to ensure physical work test	▲ is necessary to comply	
FEOC Impact	Eligibility for federal tax credits is based on equipment sourcing from Foreign Entities of Concern (FEOC) (i.e., China, Russia, Iran, North Korea)	Compliance and cost impacts will vary by project based on dependence on imports, but novelty and severity of FEOC guidelines imposes near-term risk and uncertainty	▲	
Depreciation	Allows acceleration of tax deductions, which allows for faster cost recovery	100% bonus depreciation restored and extended indefinitely	▼	
Tariffs	Charges on imported equipment and commodities	Medium-high impact, high certainty ▲	Low impact, high certainty ▲	Medium impact, high certainty ▲

State-Specific Capital Cost Adjustments – Selected Technologies

RECOST Adjustments for Construction Labor Differences by State: Q3 2026



Gas Plant Costs



Sorting Signal From Noise in Gas Plant Costs

E3 Partnership With Halcyon

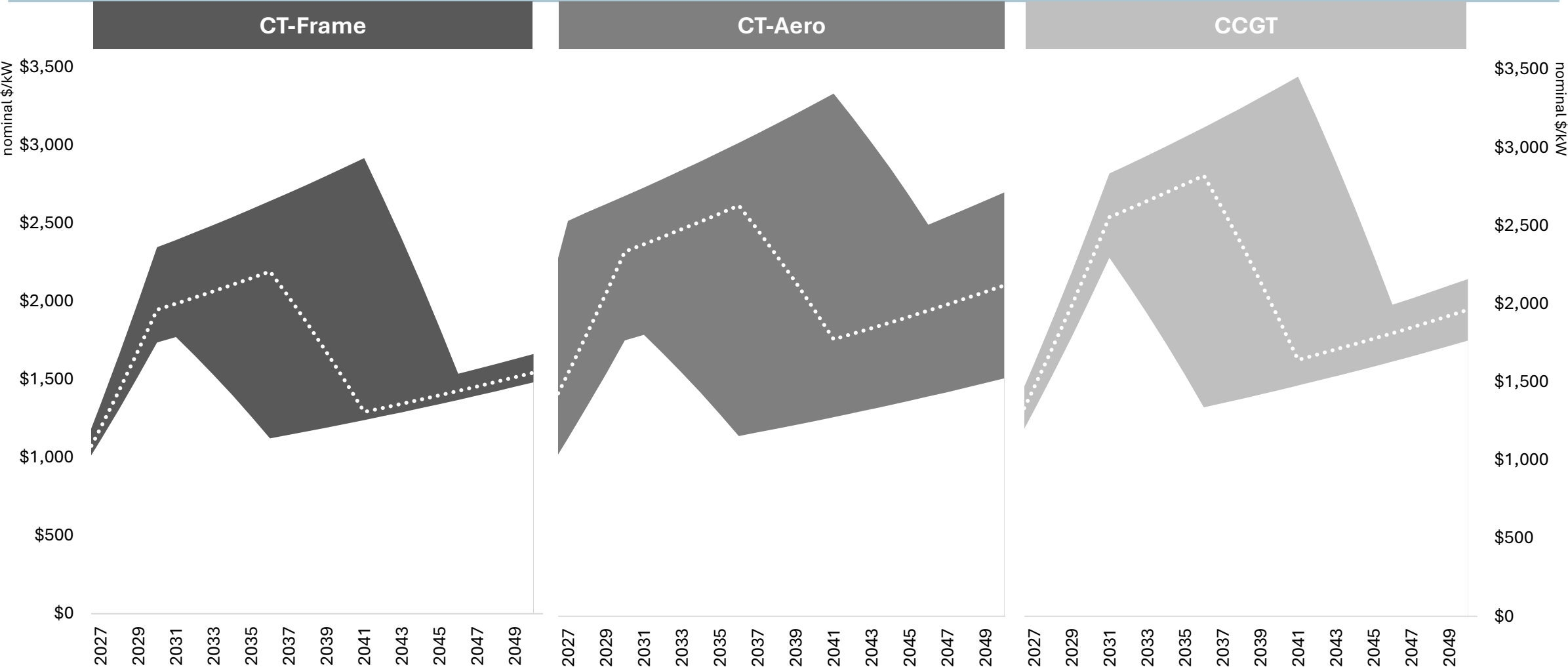


- + **There has been significant disruption in the cost of building new gas power plants since 2020**
- + **Cost shocks have impacted plants currently in development and plants in the planning stage**
 - Plants in development have been subject to commodity and labor cost increases, including costs associated with finding the necessary workers to build and operate gas power plants as competitive pressure has intensified
 - Plants in the planning stage have faced the same pressures as plants in development, but have also been subject to the incremental and significant costs associated with procuring new gas combustion turbines from OEMs
- + **Based on research and discussions with developers and utilities, E3 has concluded that purely “bottom-up” or fundamentals-based estimates of new gas plant costs are not appropriate for setting near-term cost expectations (i.e., expectations for new plants reaching COD between 2026 and 2030)**
- + **To improve the accuracy and robustness of near-term resource cost forecasts for gas plants, E3 has partnered with Halcyon to leverage Halcyon’s Gas Power Plant Tracker in RECOST⁽¹⁾**
 - Halcyon's Gas Power Plant Tracker compiles comprehensive information on newly proposed and in-development natural gas power plants across the United States
 - Drawing from state public utility commission (PUC) dockets, environmental filings, and the U.S. Energy Information Administration (EIA) datasets, the Tracker consolidates key project details into a structured, research-ready dataset
- + **After 2030, E3 assumes reduced demand will moderate the cost of building new gas plants**
 - We assume the near-term shock of materially higher demand from data centers and other large loads will be absorbed by suppliers, and that longer-term compute needs will not incite equivalent shocks in the 2030s
 - Combined with near-term increases in supply capacity, this results in a return to lower cost levels in the 2030s, with rates of decline calibrated by scenario

(1) <https://halcyon.io/gas-power-plant-tracker>

Upfront Capex Forecasts for Natural Gas Plants

RECOST Assumptions: Q3 2026



Across technologies, expected costs increase for resources reaching COD through the empirical estimate period; utilities expect moderation of cost increases to begin thereafter, and E3 assumes that real costs will decline after 2030

Resource Cost Forecast Results

RECost: Q3 2026



Energy+Environmental Economics

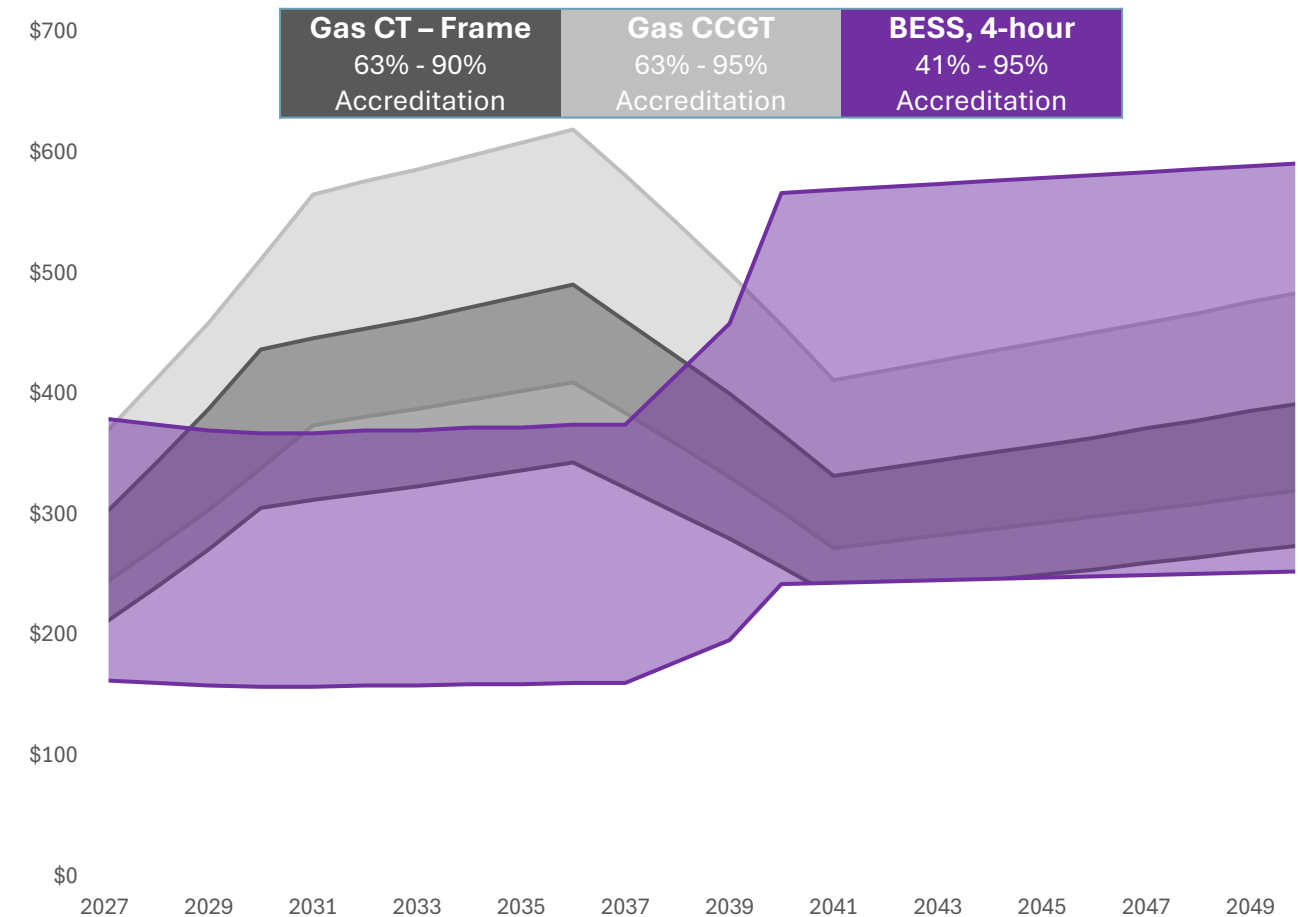
Levelized Cost of Capacity (LCOC)

RECAST Forecasts: Q3 2026

- + LFC remains a common metric for cost comparison and is a core output of RECAST
- + However, the Levelized Cost of Capacity (LCOC) is a more appropriate metric for comparison of the cost of *equivalent* capacity additions for a given specific system
- + The shape of the BESS cost curve is driven by tax credits for BESS, which we assume to extend through 2032, with phase-out and safe-harbor assumptions extending eligibility through 2039 on a COD basis
- + In the E3 mid-cost scenario, gas plant capital costs are assumed to return gradually to pre-2025 levels in the late 2030s

E3 LCOC, Generic U.S. Location, by COD Year

Nominal \$/kW-yr



Note: All projections shown in this analysis are an estimate of future resource costs. Results for LCOC do not constitute market price forecasts for a given technology or region.

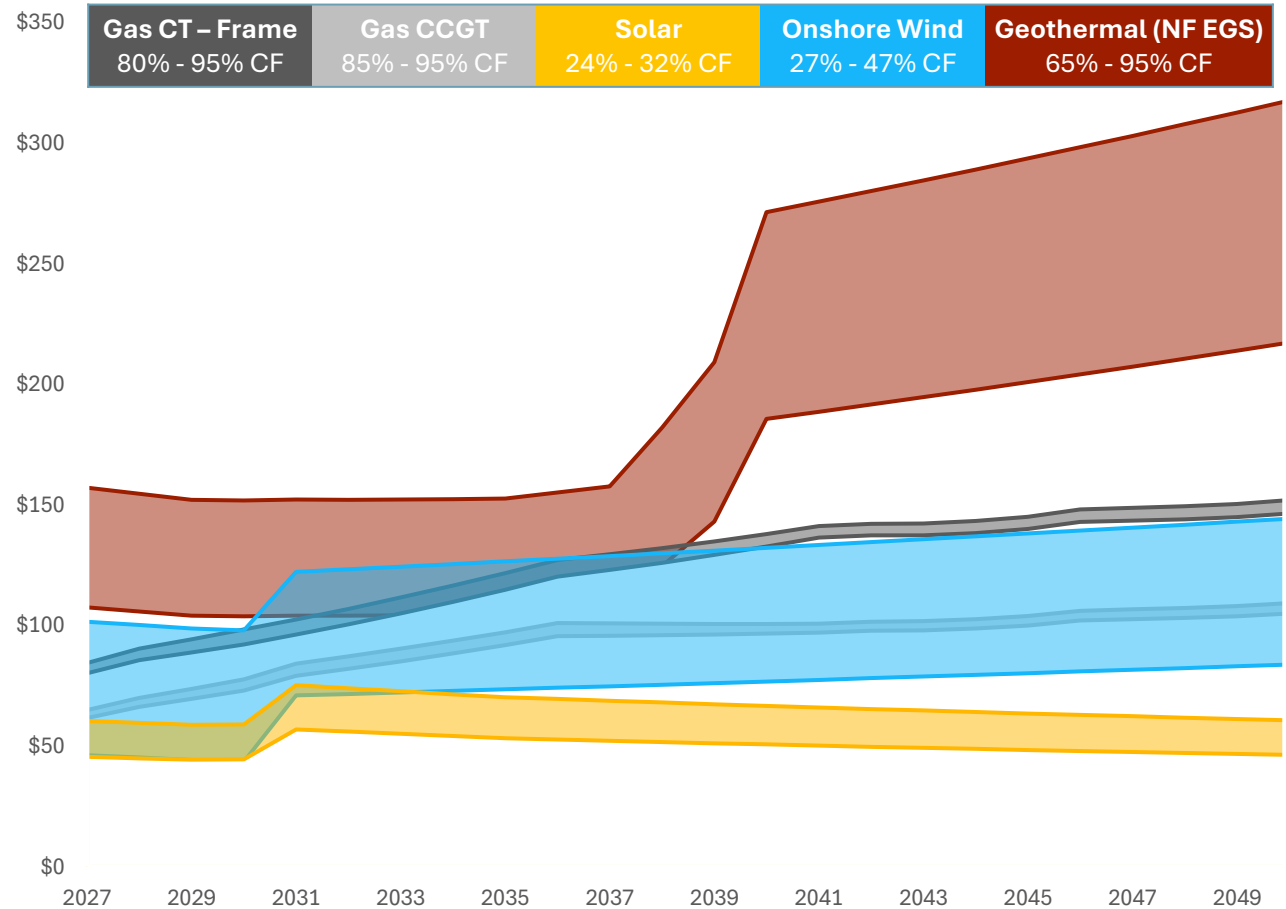
Levelized Cost of Electricity (LCOE)

RECOST Forecasts: Q3 2026

- + Solar and onshore wind resources are uniquely restricted in their ability to claim tax credits under the OBBBA; E3 assumes that the last year solar and wind resources will reach COD while claiming tax credits is 2030 as a result
 - Solar and onshore wind costs through 2030 assume compliance with FEOC and domestic content requirements for claiming tax credits
- + The time horizon for claiming tax credits for geothermal aligns with E3's assumptions for BESS (see previous slide)
- + Tariff impacts are assumed through 2060 in this edition, for consistent reflection of current policy

E3 LCOE Forecast, Generic U.S. Location, by COD Year

Nominal \$/MWh of Available Energy



Note: LCOE calculated assuming available energy.

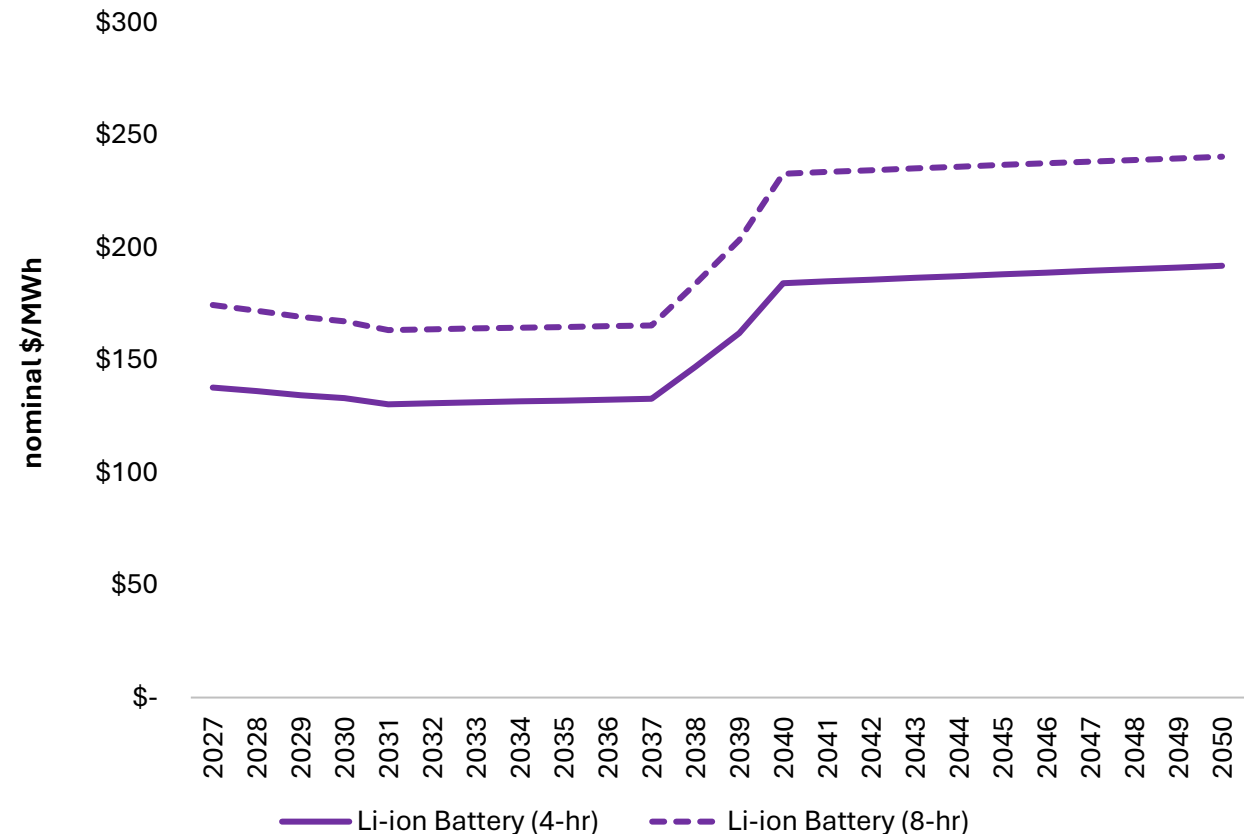
Note: All projections shown in this analysis are an estimate of future resource costs. Results for LFC or LCOE do not constitute market price forecasts for a given technology or region.

Levelized Cost of Storage (LCOS)

RECOST Forecasts: Q3 2026

- + Battery storage costs moving forward will be shaped by multiple factors, including but not limited to commodity input costs and supply chain dynamics, both of which are shaped in part by trade policy
- + E3 expects battery development to continue to concentrate on Energy Community jurisdictions after passage of the IRA, taking advantage of siting flexibility, as this potential bonus credit was not removed by the FY25 Budget Reconciliation Bill²

E3 LCOS Forecast, Mid Scenario, Generic U.S. Location, by COD Nominal \$/MWh¹



¹ Levelized Cost of Storage is LFC normalized by the annual storage discharge (hours); assumes 250 cycles per year, 90% depth of discharge, and 85% round-trip efficiency for 8-hr Li-ion battery; and 365 cycles per year, 90% depth of discharge, and 85% round-trip efficiency for 4-hr Li-ion battery; excludes charging cost

² <https://www.ethree.com/energy-community-adder/>

Thank You

marketprices@ethree.com

