

CLEAN FUEL PROGRAMS

Projected vs. Actual Costs


LCF Programs Cost Less and Perform Better Than Expected.

Costs



Actual costs were consistently below forecasts

Program Benefits



Increased clean fuel supply and reduced carbon intensity of transportation fuels

Innovation



Technology developments lowered the cost of compliance

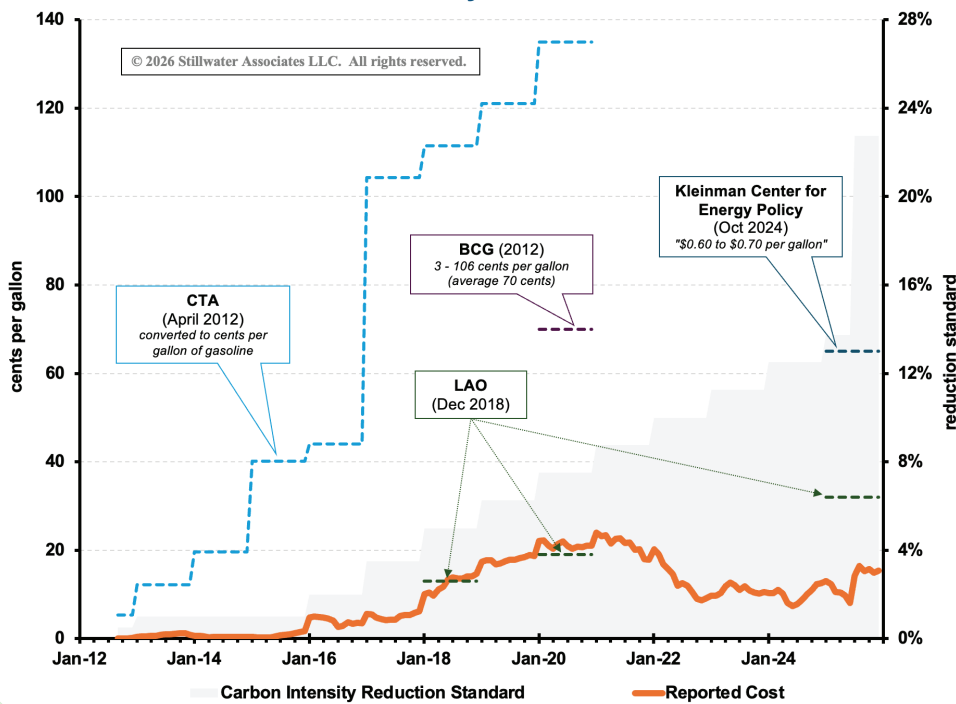
California: Forecasts Overshot Actual Costs

- Forecasts (CTA, BCG, LAO, Kleinman) predicted 20-100+ cents per gallon, but actual costs fell below most forecasts
- Innovations in RD and RNG significantly lowered costs
- Multiple policy adjustments were made to reflect actual market conditions

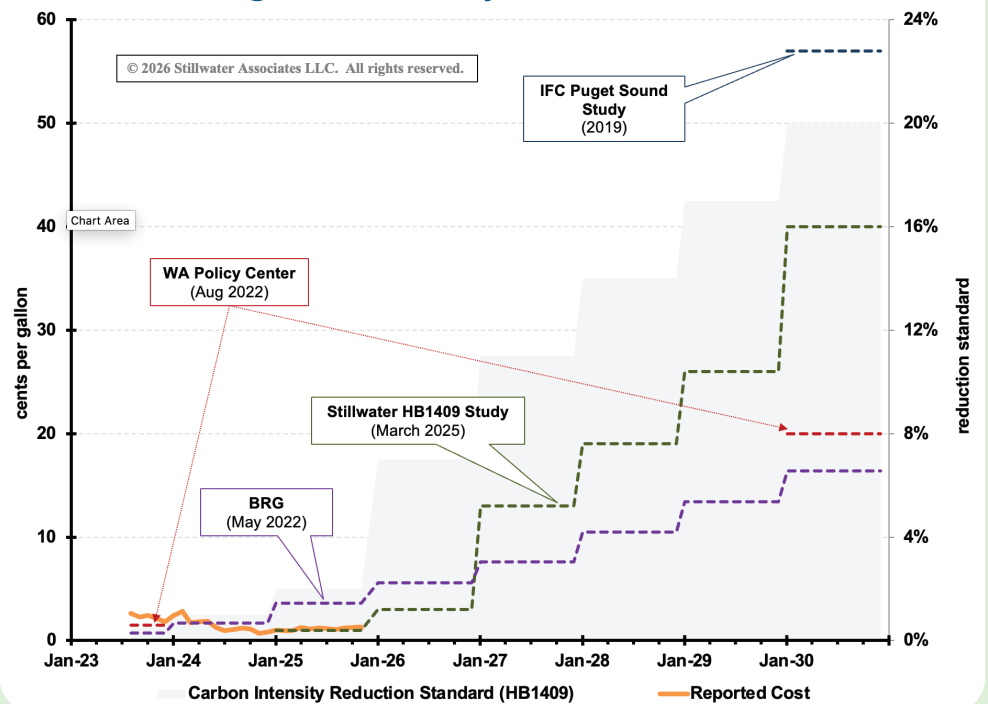
Washington: Early Costs Lower Than Predicted

- Early credit prices fell as the market matured
- Cap & Invest program helped offset compliance costs
- Most forecasts overestimated long-term price growth

California LCFS - Projected vs. Actual Costs

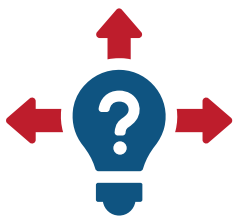


Washington CFS - Projected vs. Actual Costs



Why Forecasts Missed the Mark

Innovation Surprises



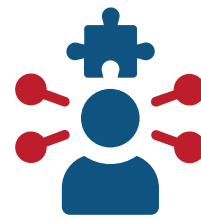
RD & RNG advanced faster than expected; cellulosic ethanol did not

Policy Interactions Ignored



Complementary programs (e.g., Cap & Invest) weren't considered

Evolving Program Design



All programs were updated to reflect actual market conditions

Incomplete Accounting



Forecasts ignored that adding clean fuel options would bring down the overall cost of fuels



Read the full analysis.

Reality Check:
LCF programs delivered cleaner fuels at a lower cost than predicted.



Clean Fuels
ALLIANCE AMERICA

Stillwater Associates