Testimony of Industrial Energy Consumer Group
to the Joint Standing Committee on Energy, Utilities and Technology

LD 342, An Act to Include Nuclear Power in the State's Renewable Portfolio Standard

LD 343, An Act to Direct the Public Utilities Commission to Seek Informational Bids Regarding Small Modular Nuclear Reactors in the State

LD 601, An Act to Remove State-imposed Referendum Requirements Regarding Nuclear Power

March 13, 2025

Senator Lawrence, Representative Sachs, and members of the Joint Standing Committee on Energy, Utilities and Technology:

For forty years, the Industrial Energy Consumer Group has advocated for prudent energy policies grounded in science and economics, to cost-effectively deliver Maine homes and businesses the power they need to thrive. IECG's climate policy, detailed at getmaineclimateright.com, emphasizes broad participation in cost-effective, climate-oriented measures, the use of a diverse portfolio of energy resources, and equitable cost-sharing. Fundamentally, we believe Maine can reduce greenhouse gas emissions without destructive controversy. The bills before you today provide an opportunity to achieve that goal because nuclear power aligns with key values: reducing emissions, lowering energy costs, promoting domestic production, and improving reliability.

If you are serious about reducing emissions, you cannot afford to rule out nuclear power. As U.S. Secretary of Energy Chris Wright told Department of Energy staff members when he took office, "The rise of nuclear could meaningfully lower the greenhouse gas intensity of our energy production system."

This view is widespread among people who are serious about tackling climate change. As prime minister-designate of Canada Mark Carney has said, "There's no transition that works without nuclear, full stop." Or Bill Gates: "If we don't build 100 reactors, we won't make a significant contribution to climate."

It's not just about reducing emissions. If you are serious about reducing the cost of energy to Maine consumers and promoting domestic production – making things here – you cannot afford to rule out nuclear power. As Secretary Wright testified at his recent confirmation hearing, "To compete globally, we must expand energy production, including commercial nuclear and liquefied natural gas, and cut the cost of energy for Americans."

Likewise, if you are serious about promoting energy security, you can't afford to rule out nuclear power. As U.S. Senator James Risch said, American leadership in nuclear energy "is critical to ensuring the security of energy supplies for ourselves and our allies, global standards for nonproliferation and other national security interests, and economic growth."

Ditto reliability: if you are serious about improving the reliability of the electric grid, you can't rule nuclear power out.

These values are widespread – and yet Maine is suffering from a serious case of cognitive dissonance. Policymakers are willing to spend considerable amounts of money in pursuit of these values for which nuclear power is a good fit – reducing greenhouse gas emissions, reducing the cost of energy, promoting domestic production, and improving reliability – and yet existing law blocks nuclear power in Maine as an option, creating a stark contradiction in our energy policy.

It's not that Maine is unwilling to spend money in pursuit of these same values. Maine has adopted an ever-growing list of policies and programs, many of which impose significant costs on Maine people and businesses. As IECG has previously testified in connection with other bills this session, these costs include over $100 million per year for the Renewable Portfolio Standard, over $148 million for Net Energy Billing in 2024 alone, and over $100 million in additional costs derived from the Regional Greenhouse Gas Initiative.

Maine is also willing to consider other technologies, like battery storage, in pursuit of these values, even though they may be less cost-effective than nuclear power and have their own safety and environmental considerations. And yet the idea of nuclear power production in Maine remains effectively off-limits.

If anyone tells you that nuclear power is impossible or unnecessary, they are ignoring the fact that nuclear power plants in New England produced 26,547 gigawatt-hours of electricity last year, accounting for 23% of New England load. Nuclear power "works".

If anyone tells you that nuclear is outdated, expensive, or unsafe, they are ignoring the considerable technological, regulatory, and commercial advances of the past thirty years.

Prejudice has multiple definitions, including a "preconceived opinion that is not based on reason or actual experience", "an irrational attitude of hostility", and "an unfair and unreasonable opinion or feeling, especially when formed without enough thought or knowledge". What's the opposite of prejudice? Fairness, impartiality, objectivity, open-mindedness, and lack of bias.

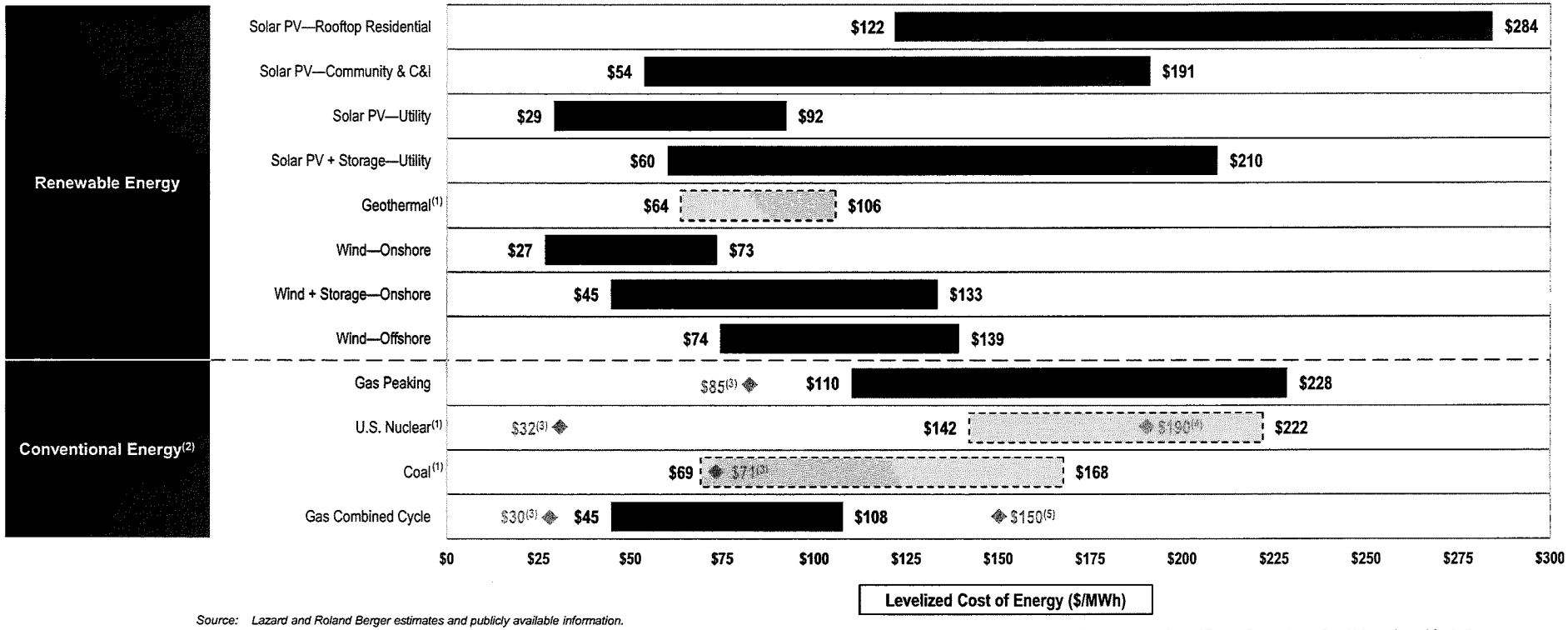
It's well past time for Maine to set aside all prejudice – our unfounded preconceived notions – and to fairly and objectively consider all energy options with an open mind.

The bills before you today offer you an opportunity to fundamentally cut the cost of electricity for Maine consumers, or to explore the role that modern nuclear power could play in Maine. While the bills vary in their details, they share an essential value: the willingness to reduce greenhouse gas emissions and energy costs, and to improve domestic production and reliability, through any reasonable means – specifically including nuclear power.

IECG is serious about getting climate policy right. We trust that you too are serious. That's why we urge you to seriously consider these bills, and other reasonable measures that would enable Maine to explore and ultimately benefit from nuclear power.

Levelized Cost of Energy Comparison—Version 17.0

Selected renewable energy generation technologies remain cost-competitive with conventional generation technologies under certain circumstances



Source: *Lazard and Roland Berger estimates and publicly available information.*

Note: Here and throughout this analysis, unless otherwise indicated, the analysis assumes 60% debt at an 8% interest rate and 40% equity at a 12% cost. See page titled "Levelized Cost of Energy Comparison—Sensitivity to Cost of Capital" for cost of capital sensitivities.

(1) Given the limited public and/or observable data available for new-build geothermal, coal and nuclear projects the LCOE presented herein reflects Lazard's LCOE v14.0 results adjusted for inflation and, for nuclear, are based on then-estimated costs of the Vogtle Plant. Coal LCOE does not include cost of transportation and storage.

(2) The fuel cost assumptions for Lazard's LCOE analysis of gas-fired generation, coal-fired generation and nuclear generation resources are $3.45/MMBTU, $1.47/MMBTU and $0.85/MMBTU respectively, for year-over-year comparison purposes. See page titled "Levelized Cost of Energy Comparison—Sensitivity to Fuel Prices" for fuel price sensitivities.

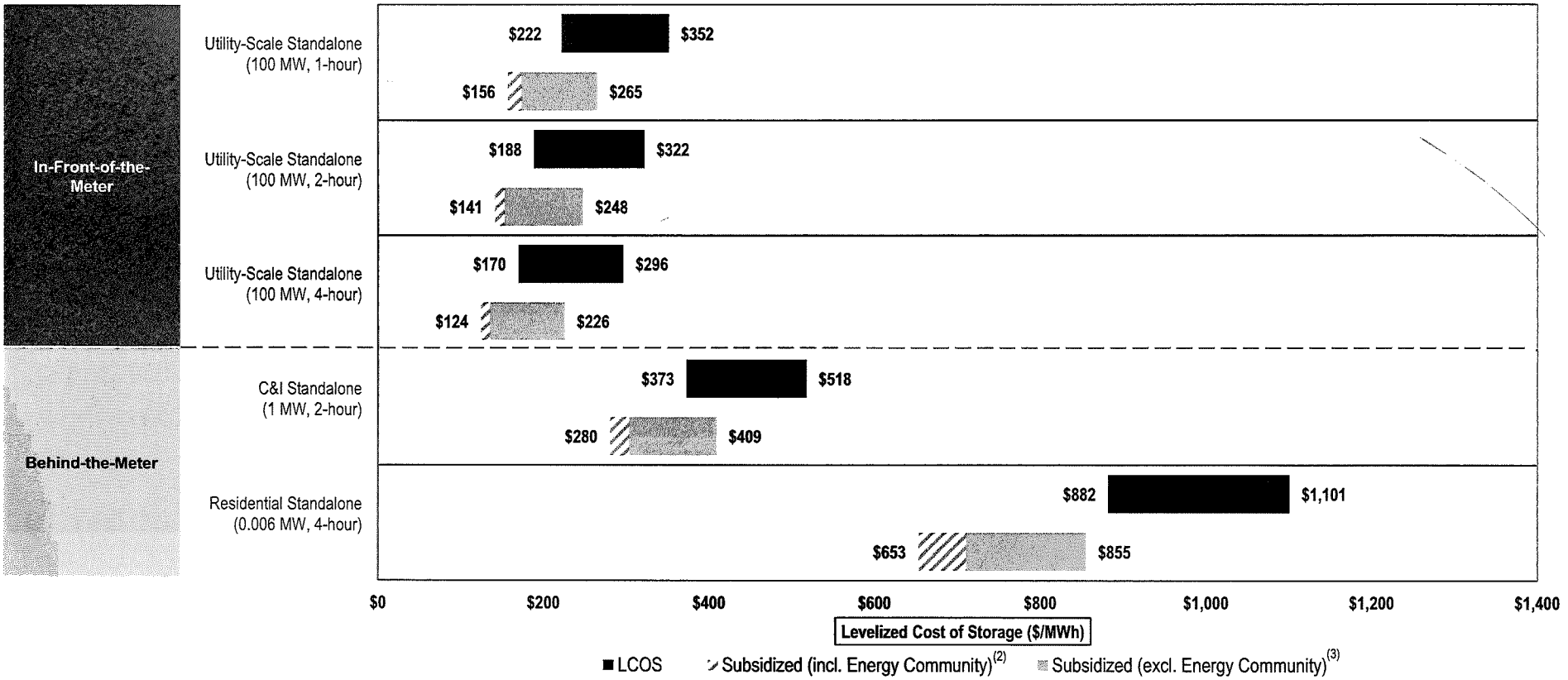
(3) Reflects the average of the high and low LCOE marginal cost of operating fully depreciated gas peaking, gas combined cycle, coal and nuclear facilities, inclusive of decommissioning costs for nuclear facilities. Analysis assumes that the salvage value for a decommissioned gas or coal asset is equivalent to its decommissioning and site restoration costs. Inputs are derived from a benchmark of operating gas, coal and nuclear assets across the U.S. Capacity factors, fuel, variable and fixed operating expenses are based on upper- and lower-quartile estimates derived from Lazard's research. See page titled "Levelized Cost of Energy Comparison—New Build Renewable Energy vs. Marginal Cost of Existing Conventional Generation" for additional details.

(4) Represents the illustrative midpoint LCOE for Vogtle nuclear plant units 3 and 4 based on publicly available estimates. Total operating capacity of ~2.2 GW, total capital cost of ~$31.5 billion, capacity factor of ~97%, operating life of 60 – 80 years and other operating parameters estimated by Lazard's LCOE v14.0 results adjusted for inflation. See Appendix for more details.

(5) Reflects the LCOE of the observed high case gas combined cycle inputs using a 20% blend of green hydrogen by volume (i.e., hydrogen produced from an electrolyzer powered by a mix of wind and solar generation and stored in a nearby salt cavern). No plant modifications are assumed beyond a 2% increase to the plant's heat rate. The corresponding fuel cost is $6.66/MMBTU, assuming ~$5.25/kg for green hydrogen (unsubsidized PEM). See LCOH—Version 4.0 for additional information.

Levelized Cost of Storage Comparison—Version 9.0 ($/MWh)

Lazard's LCOS analysis evaluates standalone energy storage systems on a levelized basis to derive cost metrics across energy storage use cases and configurations[1]



Source: *Lazard and Roland Berger estimates and publicly available information.*

Note: Here and throughout this section, unless otherwise indicated, the analysis assumes 20% debt at an 8% interest rate and 80% equity at a 12% cost, which is a different capital structure than Lazard's LCOE analysis. Capital costs are comprised of the storage module, balance of system and power conversion equipment, collectively referred to as the energy storage system, equipment (where applicable) and EPC costs. Augmentation costs are not included in capital costs in this analysis and vary across use cases due to usage profiles and lifespans. Charging costs are assessed at the weighted average hourly pricing (wholesale energy prices) across an optimized annual charging profile of the asset. See Appendix B for charging cost assumptions and additional details. The projects are assumed to use a 5-year MACRS depreciation schedule.

(1) See Appendix B for a detailed overview of the use cases and operation parameters analyzed in the LCOS.

(2) This sensitivity analysis assumes that projects qualify for the full ITC and have a capital structure that includes sponsor equity, debt and tax equity and also includes a 10% Energy Community adder.

(3) This sensitivity analysis assumes that projects qualify for the full ITC and have a capital structure that includes sponsor equity, debt and tax equity.