February 15, 2024

HB682 – Energy Generation Projects - Labor and Minority Business Enterprise Requirements

Testimony of LiUNA

Before House Economic Matters Committee

Position – Favorable

Thank you Chair Wilson and members of the House Economic Matters Committee for the opportunity to offer written testimony in support of HB682.

My name is Steve Lanning. I am the Business Manager of Laborers' Local 11, an affiliate of the Laborers' International Union of North America, or LiUNA for short. The Local 11 represents more than 3,500 members across Maryland, Virginia, and the District of Columbia. Our members are proudly employed on many infrastructure construction projects across the region. More than half of our members are Maryland residents.

LiUNA supports HB682 and its establishment of prevailing wage on energy generation projects. As the state of Maryland shifts to a green economy and away from fossil fuels, it is essential that the jobs created by the transition are quality jobs with benefits. Prevailing wage standards are especially important because energy developers and construction contractors sometimes engage in business practices that do not promote quality jobs for local residents or opportunities for local businesses. These practices include: use of a traveling workforce, effectively boxing out opportunities for local employment; reliance on temporary staffing agencies whose workers are paid wages so low they receive federal food assistance and Medicaid benefits; and misclassification of workers as 1099 independent contractors to avoid payroll taxes.

Moreover, extending the state's prevailing wage to energy generation aligns with the General Assembly's goal to create quality infrastructure jobs. Economic analysis of the legislation reveals that labor costs are only 5% of the total cost of energy development projects. Those costs are capitalized over the useful life of the project. Consequently, this legislation will have no impact on retail energy rates. Attached to my testimony is a brief summary of a cost analysis prepared by Pinnacle Economics supporting the de minimis impact of prevailing wage on the costs of renewable energy projects.

If HB682 becomes law, Maryland would be joining other states like Illinois, Connecticut, New Jersey, Oregon, Washington, Minnesota, and New York that have already passed laws to establish prevailing wages on energy projects. Finally, HB682 aligns with President Biden's goals in the Inflation Reduction Act of 2022, which provides enhanced tax benefits for a range of clean energy projects that pay prevailing wage.

LiUNA urges the committee to vote favorably on HB682.

The Impacts of Prevailing Wages on the Total Costs of Maryland Renewable Energy Projects

Executive Summary

Introduction

The Baltimore-DC Building Trades ("BDCBT") retained Pinnacle Economics, Inc., ("Pinnacle") to evaluate how a prevailing wage requirement for construction trades working on renewable energy projects in Maryland would affect total project costs on the following types of renewable energy projects: 1) utility-scale and commercial solar, 2) land-based wind, 3) geothermal, and 4) energy storage (batteries).

To provide maximum context and avoid any confirmation bias, this analysis includes a broad array of renewable energy technologies, regardless of whether they will be covered by labor standards or, in the case of offshore wind power, already are included or covered by labor standards.

Key Findings

The additional costs to ratepayers of extending Maryland's prevailing wage law to non-residential solar, land-based wind, geothermal, and energy storage projects that are 2 MW or greater is negligible.

This is due, primarily, to the cost structure of renewable energy projects, where total project costs are most heavily influenced by equipment costs, including electrical and structural balance of system ("BOS") costs,[1] and less influenced by install labor costs which generally represent 10 percent or less of total project costs. As shown in the first section (shaded in dark gray) of Table ES1, for example, install labor costs represent 3.02 percent of total project costs for a 50 MW geothermal binary plant and 10.89 percent of total project costs for a utility-scale solar (photovoltaic or "PV") facility using one-axis solar technology. These cost estimates are derived using detailed, objective, industry-derived cost data from the National Renewable Energy Laboratory ("NREL") and other government or industry sources.

The second section (shaded in light gray) of Table ES1 reports how changes in install labor costs affect total project costs. For example, install labor costs represent 6.21 percent of total project costs for utility-scale, land-based wind. Thus, every one percent increase in install labor costs translates into a 0.06 percent increase in total project costs. Based on a prevailing wage

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1 For example, for utility-based solar, modules, inverters, and BOS account for between 55-65 percent of total project costs, depending on the type of solar technology. For land-based wind, equipment costs (rotor, nacelle, and tower) account for 69 percent of total project costs.

2 A hypothetical 30 percent increase in construction wages due to prevailing wage likely is a conservative estimate: 1) a November 2020 study entitled *Potential Impacts of Prevailing Wage on Solar Costs in Illinois* found that prevailing wage could increase solar labor rates from an average of 23 to 41 percent when accounting for total compensation packages including healthcare, pension and worker training contributions (see https://drive.google.com/file/d/13ZWw7rOiIomG_mURNcmD0cw1p934FBSX/view); and 2) the Maryland General Assembly's Department of Legislative Services has found that prevailing wages tend to be higher than non-prevailing wages, but that it is reasonable to expect that the prevailing wage requirement adds at most between 2% and 5% to

law that results in a hypothetical 30 percent increase[2] in construction wages, Pinnacle estimates that total project costs would increase, depending on the size of the system, between:

- 2.90 and 3.19 percent for utility-scale, fixed-tilt solar
- 2.91 and 3.27 percent for utility-scale, one-axis solar
- 2.09 and 3.03 percent for commercial rooftop solar
- 2.58 and 2.75 percent for commercial ground-mount solar
- 1.86 percent for land-based wind
- 1.70 percent for energy storage

Table ES1: Install Labor Costs and Changes in Total Project Costs Attributed to Hypothetical Changes in Install Labor Costs, by Type of Renewable Energy (2019)

Resource / Technology	Install Labor Costs as % of Total Capital Costs	Percent % in Project Costs Associated with the Following % Changes in Labor Costs			
		1%	10%	20%	30%
Solar: Utility-Scale Fixed-Tilt (Low - 5 MW)	9.68%	0.10%	0.97%	1.94%	2.90%
Solar: Utility-Scale Fixed-Tilt (High - 100 MW)	10.64%	0.11%	1.06%	2.13%	3.19%
Solar: Utility-Scale One-Axis (Low - 5 MW)	9.70%	0.10%	0.97%	1.94%	2.91%
Solar: Utility-Scale One-Axis Solar (High - 100 MW)	10.89%	0.11%	1.09%	2.18%	3.27%
Solar: Commercial Rooftop (2 MW)	6.96%	0.07%	0.70%	1.39%	2.09%
Solar: Commercial Ground (2MW)	9.15%	0.09%	0.92%	1.83%	2.75%
Wind: Land-Based (2.6 MW Turbines)	6.21%	0.06%	0.62%	1.24%	1.86%
Wind: Fixed-Bottom Offshore (6.1 MW Turbines)	9.34%	0.09%	0.93%	1.87%	2.80%
Wind: Floating Offshore (6.1 MW Turbines)	10.32%	0.10%	1.03%	2.06%	3.09%
Battery Storage: Utility-Scale 60 MW Lithium-ion	5.67%	0.06%	0.57%	1.13%	1.70%
Geothermal: 50 MW Flash Plant (bottom exhaust)	8.03%	NA	NA	NA	NA
Geothermal: 40 MW Flash Plant (top exhaust)	7.58%	NA	NA	NA	NA
Geothermal: 50 MW Binary Plant	3.02%	NA	NA	NA	NA

Note: Changes in total project costs for geothermal projects not estimated because install labor costs are based on union workers receiving prevailing wages and benefits. Offshore wind energy included for context.
Sources: Pinnacle Economics using detailed NREL and EPRI project cost data.

These estimates are likely conservative given that:

1) Install labor costs can include equipment, as well as occupations that are not directly affected by prevailing wages,

2) Economies of scale for some technologies that reduce average labor costs more than average total costs, thus reducing install labor's percentage of total costs,

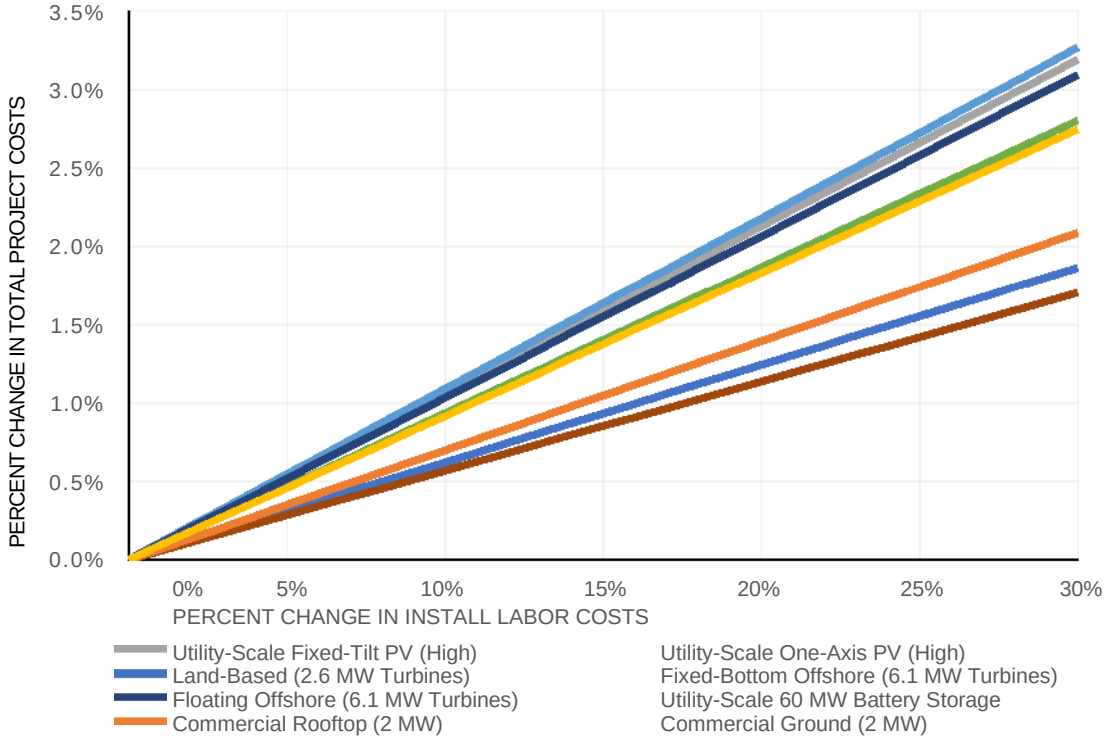
2 A hypothetical 30 percent increase in construction wages due to prevailing wage likely is a conservative estimate: 1) a November 2020 study entitled *Potential Impacts of Prevailing Wage on Solar Costs in Illinois* found that prevailing wage could increase solar labor rates from an average of 23 to 41 percent when accounting for total compensation packages including healthcare, pension and worker training contributions (see https://drive.google.com/file/d/13ZWw7rOiIomG_mURNcmD0cw1p934FBSX/view); and 2) the Maryland General Assembly's Department of Legislative Services has found that prevailing wages tend to be higher than non-prevailing wages, but that it is reasonable to expect that the prevailing wage requirement adds at most between 2% and 5% to the cost of a public works project (see https://mgaleg.maryland.gov/2021RS/fnotes/bil_0005/sb0095.pdf).

3) NREL's benchmark costs are based on national averages, where California is overweighted and where that state's high cost of labor biases labor costs upward (labor costs in Maryland on commercial solar, for example, are 16 percent lower than the national average), and

4) This analysis does not include increases in worker productivity that linked to a higher prevailing wage, such as: lower worker turnover, better and more prevalent apprenticeship training programs, improved workplace safety, and more.

Lastly, these *de minimus* changes in total project costs should be viewed within the context that total install costs of renewable energy have fallen dramatically over the last ten years, and that costs are forecast to continue to decline over the next 30 years. Figure ES1 shows the sensitivity of total project costs to changes in install labor costs for the renewable energy projects considered in this analysis.

Figure ES1: Sensitivity of Total Project Costs to Changes in Install Labor Costs, by Type of Renewable Energy Project



Sources: Pinnacle Economics using detailed NREL and EPRI project cost data.