The Economic Benefits and Costs of State and Local Incentives for Clean Energy Projects

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Based on our estimates for incentives for 50 of the largest clean energy projects, our bottom line:

- Over 2/3rds of 50 projects have benefits for state residents that exceed costs.
- Incentive policy can increase these projects' net benefits by better targeting and design, & by complementary housing policies.
- Better targeting: Target distressed places, and projects with higher jobs multipliers.
- Better design: avoid excessive incentives per job; shift mix of incentives away from tax incentives, and towards customized job training & infrastructure; enforce clawbacks if projects are canceled or downsized
- Complement incentives with housing policies that accommodate growth.

Our methodology:

- Selected 50 projects out of 100 largest recent clean energy investments, based solely on one criterion: Could we get good information on state and local incentives?.
- 50 projects in 22 states. 27/50 in South. 30 in EVs/batteries, 20 in alternative fuels.
- Total jobs: 96K. Total incentives: $29 billion. Median incentives per job around $385K.
- Incentives include tax incentives, grants, and customized job training/infrastructure.
- Benefits evaluated by a regional model, and are effects via job creation on state residents' income per capita. Does not look at environmental and energy cost effects.
- Benefits & costs are present values over 20 years for state residents. Evaluated as of project status in late 2025.

Summary of results

- 35 out of the 50 projects had benefits>costs. (Income per capita of state residents went up more than what the incentives cost).
- Median project had benefit-cost ratio of 1.47, income went up by 47%>costs.
- 13 projects had benefit-cost ratio > 3. Seven projects had benefit-cost ratio <0.5.

Economic benefits outweigh state and local incentive costs for most clean energy projects surveyed

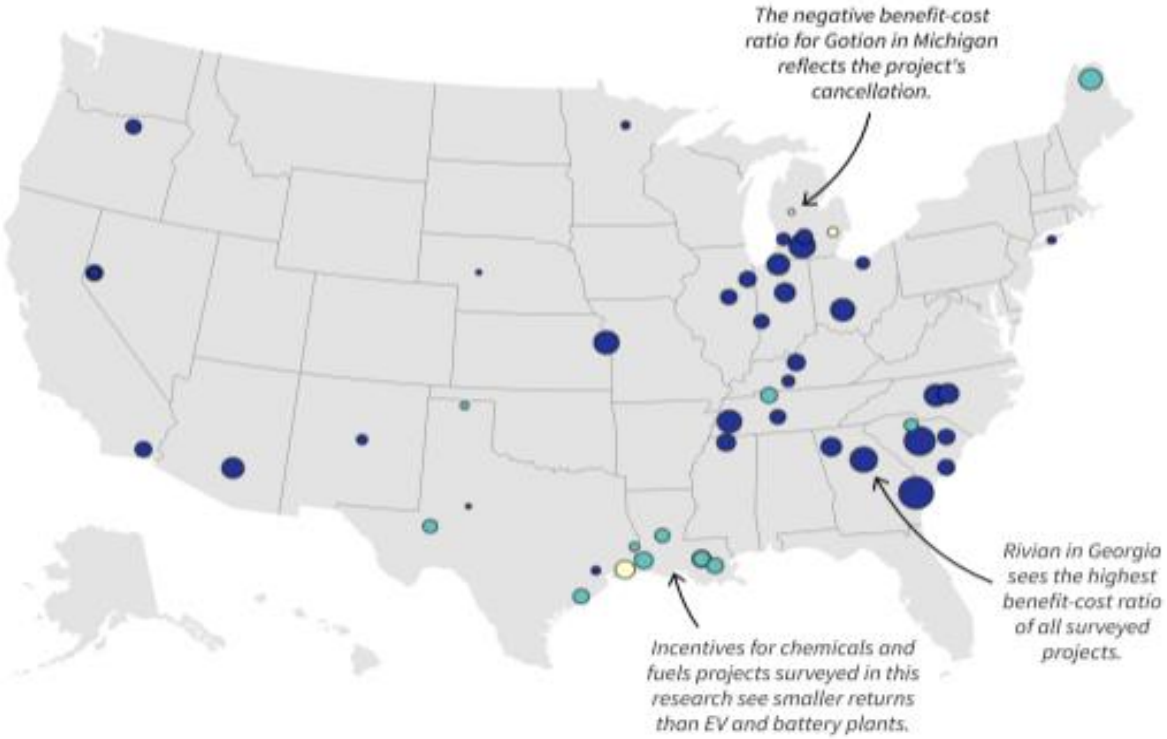
Benefit-cost ratio captures the boost to state per capita income resulting from a project over 20 years, relative to project subsidy costs. Projects are considered to generate positive returns if the benefit-cost ratio exceeds 1.

Baseline benefit-cost ratio

< 0 | 0–1 | ≥ 1

Present value of actual incentive costs over 20 years ($)

200M | 800M | 2B



Top and bottom projects

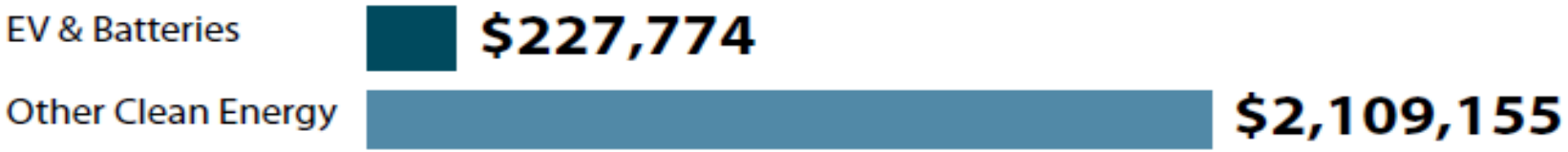
Top Performing Projects	State	B/C Ratio
1. Rivian Auto Plant	GA	6.28
2. Avina Clean Hydrogen	TX	6.11
3. Ford Blue Oval City	TN	5.19
4. General Motors and LGES Ultium Cells Facility	TN	5.02
5. Toyota Battery Manufacturing Plant	NC	4.01

Bottom Performing Projects	State	B/C Ratio
46. HIF Global's eMethanol facility	TX	0.10
47. CF Industries Blue Point Complex	LA	0.06
48. One Next Energy (ONE) Battery Project	MI	–0.34
49. Linde Clean Hydrogen Project	TX	–0.35
50. Gotion Battery Manufacturing Plant	MI	–1.40

EV & batteries: higher B/C, due to more jobs vs. incentives.

	EV & Batteries	Other Clean Energy
Total Projects	30	20
Total Incentives (billions)	$21.6	$7.3
Total Planned Jobs	90,829	4,959
Median Benefit-Cost Ratio	2.34	0.83

Median Incentives Per Planned Job



B/C ratios higher in South. Why: lower employment rates & lower housing price effects

	South	West	Northeast/ Midwest
Total Projects	27	6	17
Total Incentives (billions)	$17.2	$2.5	$9.1
Total Planned Jobs	59,555	9,400	26,833
Median Benefit-Cost Ratio	2.00	1.44	1.43

How targeting affects benefits/costs

- If employment rate is lower by 5 percentage points, benefit/cost ratio increases by >50%. Leads to more hiring of non-employed, less in-migration, which can also be accomplished via other policies.
- If jobs multiplier is 1/3rd greater – 4 rather than 3 – benefit/cost ratio increases by 1/3rd or more. Targeting can help, as can coordinated economic development strategy.

How incentive design affects benefits/costs

- The 12 projects with highest ratios of incentives to jobs all have B<C. Diminishing returns to higher incentives.
- Per $, customized services (training, infrastructure) is 50% more effective than cash incentives.
- Clawbacks of upfront incentives can reduce net losses from canceled/down-sized projects.

How housing policy affects incentive B/C ratios

- Housing response to 1% pop growth varies from 1.3% (SF, LA) to 0.3% (some southern cities).
- Housing price response lower by 0.5% increases B/C ratio by over 40%.
- Higher housing prices increase property value gains, but this is more than offset by higher local prices for residents whose income (e.g., Social Security) not tied to local prices.
- Higher housing prices increases overall local costs, which discourages other job growth.

Conclusion

- Glass is two-thirds full: 70% of these 50 projects have B>C, even though median project has high incentives >$380K per job.
- Why? Job creation is valuable, particularly in distressed places, where jobs go to non-employed. Persistently increases earnings per capita, & reduces social costs of substance abuse, crime, family break-ups.
- But very high incentives per job don't work, as paying for incentives also destroys jobs.
- Incentive reforms can better target & design incentives at high-multiplier projects in distressed places, incorporate clawbacks, & have accommodative housing policies.