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How the Inflation Reduction Act (IRA) Changes the Game for State-Level DER Program Design

Overview

Since the passage of the Inflation Reduction Act (IRA) in August 2022, Sustainable Energy Advantage (SEA) has assisted a mix of public and private entities in the design process of current and future DER programs in California, Maine, Rhode Island and Illinois. ***For more information about these projects, see the bright pink-colored table at the bottom right corner of this poster.***

Methodology

To aid in the design of these programs, SEA used a variety of methods for our clients, including combinations of:

- Paired solar PV and energy storage cost analysis using the Cost of Renewable Energy Spreadsheet Tool (CREST), developed by SEA for the National Renewable Energy Laboratory (NREL);
- A customized, in-house benefit-cost analysis model; and
- Qualitative policy analysis methods, including comparisons of programs in similar states and with similar cost- or value-based designs.

Selected Key Findings

1. **Impact of Energy Storage Credit on Economics of Paired PV+ESS is Profound** As a result of the 30% ITC for energy storage projects, the net cost of pairing PV with storage has been substantially reduced**.** This greatly magnifies the already-substantial net benefits of such projects to ratepayers and society.
2. **Most State Program Planners/Designers Have Shifted Focus to Low/Moderate Income (LMI) Sectors for Lion's Share of Future Shared Solar Projects** Ongoing cost shift concerns, significant bonus credits for (and additional funding for) LMI-focused projects, and advocacy from representatives of disadvantaged/marginalized communities are increasing the pressure on state agencies to limit future shared solar eligibility to projects serving LMI populations.
3. **There are Financing Cost Consequences to Bonus Credit Stacking** High ITCs from bonus credit stacking requires increasing levels of equity in the capital stack. This can increase financing costs.
4. **There is a Hierarchy of Net Value/Benefits for Bonus Credits** Bonus credits requiring low/no incremental costs (e.g., "energy communities" with high fossil fuel employment/closed fossil fuel facility, brownfields without added remediation costs) provide greater value to ratepayers/society than those with higher incremental costs (e.g., brownfields with substantial remediation costs, domestic content, low-income economic benefit).
5. **Certain Program Designs Require Adjustment to Avoid "Double-Dipping"** Incentives that do not account for the wide array of tax credits (and other near-future Greenhouse Gas Reduction Fund (GGRF) funding could allow developers to double-dip on revenue. This could result in inefficient use of available incentive budgets.
6. **Direct Pay-Enabled Distributed-Scale Projects Likely to Be Limited** Given the limitation of direct pay to nonprofit or other tax-exempt entities and requirement for such projects meet minimum domestic content thresholds, it is unlikely that such tax-exempt entity-owned projects will proliferate at the distributed scale without:
   - A specific project category for such projects in a DER program; or
   - A clear pipeline of such tax-exempt entity-owned projects.

Selected Best Practices

- To enhance benefits to ratepayers and society, DER program planners should **consider requiring (or strongly incenting) solar PV projects to include paired, co-located storage.**
- Program designers looking to reduce ratepayer cost (and enhance societal benefits) of shared solar projects and target them towards LMI populations should **consider using GGRF "Solar for All"/other monies on upfront incentives and/or interest rate buydown programs (to minimize costs/added costs of stacking Bonus Credits).**
- Program designers should **aim that all programmatic requirements/definitions align with IRA requirements.**
- ***(For Cost-Based Compensation Approaches)*** Program designers can use various tools to ensure DER projects are not over-compensated relative to typical market-rate returns by:
  - **Using tools such as as NREL's CREST model** to ensure compensation accounts for all available incentives
  - **Requiring project owners to sign attestations** that a project is (or is not) not utilizing bonus credits for their financing (with incentive clawback required if the attestation is false).
- ***(For Value-Based Compensation Approaches)*** Designers should also **undertake rigorous analysis using appropriate modeling tools** to ensure various distributed resource valuation categories provide **sufficient financeable revenue to ensure that the higher cost of serving LMI customers is accounted for.**

LOOKING FOR MORE? Selected SEA Market & Policy Analyses in Support of Post-IRA Program Design Proposals

- **California:** Direct, rebuttal and surrebuttal expert testimony before the California Public Utilities Commission (CPUC) on behalf of Coalition for Community Solar Access (CCSA) in CPUC Docket A.22-05-022
- **Maine:** Joint SEA/Synapse Energy Economics report to the Maine Governor's Energy Office attached as Appendix to the Final Report of the Maine Distributed Generation Stakeholder Group
- **Rhode Island:** Evaluation of Rhode Island Distributed Generation Policies, Development of 2024-(?) Program Year Ceiling Prices (Rhode Island Office of Energy Resources)
- **Illinois:** Independent Review of Illinois Shines and Illinois Solar for All Renewable Energy Credit Pricing Approach (Illinois Power Agency)