Planning to Capture the Transformative Potential of Government Investment

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ABSTRACT

Government investment in clean energy programs operates outside of ratepayer-sponsored programs and can spur investment in projects and equipment that create lasting changes in the structure or function of associated markets. These transformative impacts are difficult to discern after the fact, as it can be too late to establish baseline conditions or defend logical linkages to outcomes that were not identified before program launch.

The Inflation Reduction Act is a perfect example of large-scale government investment in clean energy projects. IRA will invest $8.8 billion over eight years to improve the performance of residential buildings and provide resources to support electrification. The US Department of Energy created a new State and Community Energy Program (SCEP) office to provide guidance and oversight to states ramping up to deliver services. The first set of applications for program funding were received in early 2024. Ultimately, estimates of market effects and market transformation resulting from these investments will be informed by a logic model and market transformation evaluation plan reflecting the sustained, structural change in market behavior likely to result from the investment of IRA dollars.

This paper describes work that occurred in 2023 to develop a logic model, indicators, and a market effects framework to inform evaluation planning over the eight-year implementation period. This framework will guide efforts to establish national baselines and estimate market changes, informed by a series of workshops to identify outcomes expected from IRA investment, key performance and process outputs, and outcomes that should be incorporated into national evaluation efforts. The authors provide guidelines for others seeking to use the tools of market transformation to capture the incremental, but sustained, influence of public investment.

Introduction

Background

The Inflation Reduction Act (IRA) authorized roughly $35 billion in clean energy investments managed through the US Department of Energy (DOE). As part of that authorization, the IRA established two programs designed to improve the overall efficiency of U.S. homes through Home Efficiency Rebates (HOMES, Section 50121) and Home Electrification and Appliance Rebate (HEAR, Section 50122)[1]. HOMES is focused on completing energy efficiency upgrades such as insulation, air sealing, and efficient equipment. HOMES rebate amounts depend on savings estimates that are either measured or modeled. HEAR Rebates enable upgrades that replace existing combustion equipment (natural gas or

[1] Home Energy Rebates Programs | Department of Energy

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delivered fuels) with efficient electric equipment. Rebates are provided to households that meet income qualifications and document eligible equipment installation.[2]

Combined, these programs are expected to invest approximately $8 billion over eight years through state-level program delivery to reach underserved communities and encourage widespread investment in efficiency and electrification. While the IRA funding is substantial, it is still small relative to the overall home retrofit market. A market transformation framework will help policy makers understand the effectiveness of this investment for the direct participants and trades people involved and capture more subtle but profound effects that could occur in the market for efficient products, services, and homes.

This paper describes some of the challenges associated with planning to capture transformative market effects of large-scale investments like IRA. The authors contrast this with process with other notable examples of market transformation program planning, including the newly formed California Market Transformation Administrator (CalMTA[3]), the efforts of the New York State Energy Research and Development Authority (NYSERDA), and the Northwest Energy Efficiency Alliance (NEEA). These organizations all operate with different geographical restrictions and policy frameworks reflected in their measurement and reporting expectations that differ among them and from those envisioned for IRA. Nevertheless, we incorporate elements of their planning and evaluation frameworks whenever possible in this discussion.

Establishing a market transformation framework to capture sustained impacts.

Since the 1996 Scoping Study (Eto, Prahl, et al.) laid out the concepts of market transformation, energy programs designed to create long-term change in market behavior or adoption of efficiency have evolved to incorporate a variety of evaluation techniques that use market research and energy program expertise to ensure market transformation programs deliver reliable energy savings.

This paper relies on a few key concepts related to market transformation and market effects. Below we provide discussion of three core concepts:

- **Market Barriers.** Market barriers prevent adoption of energy efficiency, even when the benefits should outweigh the cost. There are many types of market barriers, all of which represent market functions that contribute to the gap between the current market and a maximally energy efficient one. Information asymmetry, lack of awareness, high first costs, and standard practice are among the most common barriers encountered by efficiency programs. (For a full discussion of classic market barriers to efficiency, see Eto, Prahl et al. 1996)
- **Market Effect.** Market effects are ***observed changes in a market structure or behavior*** that reflect increased adoption of energy efficient products or services, attributable to a market intervention. These changes can be short-term or long-term and are often the result of multiple programmatic efforts and investments. The key difference between a program market effect and a market transformation objective is the program's design intent and program theory. Standard energy efficiency programs may not be designed to change market behavior and thus require an initial scoping study or baseline research to

[2] These programs have a range of requirements and income-based incentives. The details of both programs are documented at https://www.energy.gov/scep/home-energy-rebates-programs. This paper is focused on the process of planning for transformation, not the details of these program opportunities.

[3] CPUC Decision 19-12-021 authorized funding for and creation of a statewide Market Transformation Administrator.

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confirm pre-intervention practice and capture changes associated with program efforts. (A full market effects protocol is provided in the California Evaluation Protocols, (TecMarket Works, 2004) and discussed in the California Evaluation Framework (Sebold et. al. 2001)

- **Market Transformation.** A reduction in market barriers (or increase in market adoption), evidenced by market effects, that ***remains*** after the intervention. Market transformation can be ambiguous and require substantial initial funding, which has limited its use as a utility-sponsored energy efficiency program model. (York, Nadel & Subramanian, 2022)

These largely economic concepts occur within complex markets that create inherent challenges for assessing the effectiveness of interventions. To address some of these challenges, market transformation programs have typically required a series of foundational research and documentation tasks that include many tools of theory-based evaluation (TBE). TBE requires establishing a theoretical hypothesis for change as documented in a logic model that captures the linkages between activities, the outputs of those activities, and the eventual outcomes. Equally important for those seeking to evaluate these initiatives is identifying a series of indicators that will confirm or disconfirm if the expected market effects are occurring, and if or how those effects are attributable to the intervention. Market effects research can be deployed to assess the effect of program intervention on aspects of the market even when a program was not designed specifically to achieve transformation.

Planning for Potential Transformation

The market transformation literature is consistent that these programs can be long-term, complex efforts, requiring baseline and market research, market-level tracking, and sustained funding. (ACEEE 2018, CalMTA 2023, NYSERDA 2023, Moran et. al 2020) Market transformation initiatives generally require a similar set of activities:

1. To support measurement of progress over the long term, market transformation requires **robust, defensible baselines of key market practices**. These can include the share of sales for efficient products, standard practice for tradespeople involved in equipment design and installation, product development and manufacturing plans, or codes and standards that drive decision-making. For example, the CalMTA is planning to forecast baseline market adoption, which will then become the best estimate of counterfactual adoption, or what would have happened without investment by energy program administrators.
2. To allocate attention and resources towards the most impactful outcomes, market transformation requires a **logic model development process**. Logic models provide a graphical depiction of the logical linkages between activities and desired outcomes.
3. Identification of **indicators mapped to each outcome and potential data sources** for indicator measurement. For example, NYSERDA's framework relies on measurement of indirect benefits as a primary tool for evaluating market transformation programs. NYSERDA's guidance document acknowledges that the methods deployed to estimate direct energy savings impacts from standard efficiency

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programs are well-established while the literature guiding market transformation impact evaluation is less understood. In counting benefits accruing from its programs, NYSERDA distinguishes direct benefits from indirect benefits. Direct benefits are linked to direct program engagement, for example through project support or subsidy. Indirect benefits reflect market change occurring outside of program engagement, but associated with programmatic activity. (NYSERDA 2023).

The importance of baselines.

A critical task for estimating savings from market transformation is establishing baseline forecasts for key indicators.

NYSERDA, NEEA, and the CalMTA all discuss the importance of accurate baseline estimation and challenges associated with doing so. There are five primary strategies for developing baseline forecasts.

1. Industry forecasts. Using published forecasts from industry organizations or manufacturers. These estimates are extremely helpful when available, but may not exist for many measures, or for complex scenarios like existing home retrofits, especially because these projects involve the selection and installation of numerous products with different adoption curves.
2. Sales data analysis. Analyzing existing sales and shipments can provide robust evidence of sales share and support long-term tracking. These data may not be available, especially if the program is also seeking qualitative outcomes like project quality.
3. Primary and secondary market research. Primary data collection can be expensive but is often required to fill in gaps in market understanding. Secondary market research involves acquiring data from syndicated market research firms, reviewing sources for cost, quality, and coverage and tracking key metrics over time.
4. Structured expert judgement via Delphi Panel or similar method. This approach engages subject matter experts through a series of questions that reveal expectations and insights for a given market.
5. Econometric modeling. Using statistical estimation and economic hypotheses, econometric modeling can forecast trends and assess the effects of policies and programs. These models require high quality data, often obtained from the activities discussed above. Regression or bass diffusion models inform the results.

SCEP's Challenge

Instead of starting with market characterization and barrier analysis, the IRA legislation provided specific programmatic elements that the states need to incorporate. The SCEP team is tethered to this legislative direction, which reflects decades of research into barriers and opportunities associated with improving the efficiency of existing residential homes. Upfront costs, lack of information or awareness, complexity and decision fatigue, and uncertainty about performance or long-term occupancy have all created challenges for efforts that sought to encourage residential retrofits at the scale needed to achieve climate and efficiency goals. These

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barriers are aggravated for low-to-moderate income households or those in disadvantaged communities.

In addition to the directives set by legislation, the SCEP team and Biden Administration identified key market barriers and opportunities for program goals and priorities. These were integrated into the program requirements for states (for example, recognizing the need to grow and sustain a qualified workforce). While the SCEP team is removed from the day-to-day program implementation and nuanced program design decisions that each state will make to reflect the opportunities and needs of their populations, there remains an opportunity to aggregate benefits and estimate market effects or transformation of legislation and additional program priorities. To support this effort and guide investments in research over the implementation period, the authors worked with the SCEP team to develop a logic model that visualizes the short- medium- and long-term outcomes expected from effective program deployment.

Logic models include several typical components:

- **Activities.** The events, interventions, or actions implemented as part of a program. For programs designed to achieve market transformation activities should be logically mapped to overcome specific barriers. For standard programs, activities typically reflect actions expected to achieve energy savings targets or address other program goals (equity, greenhouse gas reductions, housing stock preservation).
- **Outputs:** The direct results achieved through program activities. These are typically counts, often pulled from program records. Program tracking systems should be designed to capture outputs of planned activities—to document progress and support invoicing and program analysis.
- **Outcomes:** The changes or benefits that result from the program. Outcomes can occur in the short- mid- and long-term.
- **Indicators:** The observable, measurable characteristics that demonstrate progress toward an outcome. For market transformation programs, multiple indicators are often required to support analysis and triangulation on hard-to-measure market shifts. For standard efficiency programs, a baseline or scoping study may be needed to verify that market effects indicators are viable and defensible.

A bit about the difference between outputs and outcomes: outputs should be directly countable from specific activities. “Number of impressions” for example would be an output of an activity like “marketing and outreach.” Outcomes, on the other hand, generally require measurement (assessing distribution of funds relative to energy burdened communities, for example). When evaluation or analysis will likely be required to understand impact and progress, we consider these outcomes.

The Process

Developing Activities and Outcomes

The process for developing the Home Rebates logic model began with interviews with members of the SCEP team. These conversations informed a preliminary list of potential long-term outcomes that might occur, were the overall effort completely successful. The facilitators combined similar ideas and simplified language to assist the team in prioritization and reduce

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time spent on wordsmithing. We then organized and hosted a series of working sessions with SCEP team members to review the potential outcomes developed from the interviews, identify expected activities, and establish logical linkages between the two. The workshop process was designed to:

- Help the team align on a common understanding of the highest priority goals (nominated for long-term outcomes).
- Identify the barriers and opportunities that hinder or support the attainment of those outcomes.
- Identify the short- and mid-term outcomes that will provide evidence that the IRA rebate programs are contributing to the desired long-term outcomes.

Creating the Visual Structure

Logic models are typically displayed graphically to show linkages between activities, outputs, and expected outcomes, however, they can become overwhelming if all detailed activities and associated outputs are listed directly on the diagram. To streamline the diagram and facilitate stakeholder understanding of overall program focus and objectives, facilitators can use activity "clusters" on the diagram. Clusters represent a broad set of related activities associated with program effort.[4]

An added complexity for the SCEP-specific logic model is that many of market-level or program-driven outcomes will be tied directly to state-level implementation activities supported by IRA funds. SCEP team activities should enable and support effective state-level activities, which provide a logical linkage to potential market effects outcomes. The team identified several options for graphically representing this dynamic. For example, the team could develop two diagrams: one depicting SCEP team activities, outputs, and outcomes and another depicting state-level activities, outputs and outcomes. Because of the assumptions that would be required to depict state-level activities, the facilitators decided to include two layers of activities in a single diagram and remove outputs from the graphic.

Government funding should focus primarily on ***outcomes***, or the changes observable in the market or among participants associated with effective execution of activities over time. This reduces the likelihood of the process bogging down by efforts to catalog and map myriad distinct activities and outputs occurring in multiple jurisdictions. While these distinct activities can be important for local program effectiveness, public investment at the scale of the IRA Rebate programs requires focusing on market-level and national outcomes. See Figure 1for a full logic model diagram. Outcomes are listed below the red line.

[4] For example, a local retrofit program might have a set of activities broadly called "marketing and outreach," that encompass a cluster of sub-activities including collateral development, email campaigns, event attendance, or outreach to community-based organizations. To ensure these sub-activities do not get lost in a high-level logic diagram, the SCEP-focused diagram does not include the myriad activities that states will potentially deploy related to marketing and outreach. However, because marketing and outreach outputs are typically tracked to support contracting and invoicing, DOE expects state level activities will be aggregated and summarized. These can then be used to characterize the volume of activities occurring.

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Given the scope and potential scale of the IRA programs, the core elements of the logic model include two domains of activities: one set associated with the SCEP team; and a second level occurring at the state level.

Table 1: Activity Domains for SCEP and State Level Activities

Activity Domain	**SCEP/DOE Activities**	**State Activities**
Program implementation	• Provide programmatic and technical support	• Contractor engagement • Marketing education and outreach • Compliant, effective program delivery
Monitoring	• Track progress and enable continuous improvement	• Monitoring, reporting and evaluation; continuous improvement
Market engagement	• Provide information and technical assistance: • To support policy development and grid planning • To private industry and national market actors to encourage investment	• Use experience with IRA and information provided by DOE to establish new policies and support local jurisdictions. • Engage with local finance, construction, and others to encourage innovation and investment

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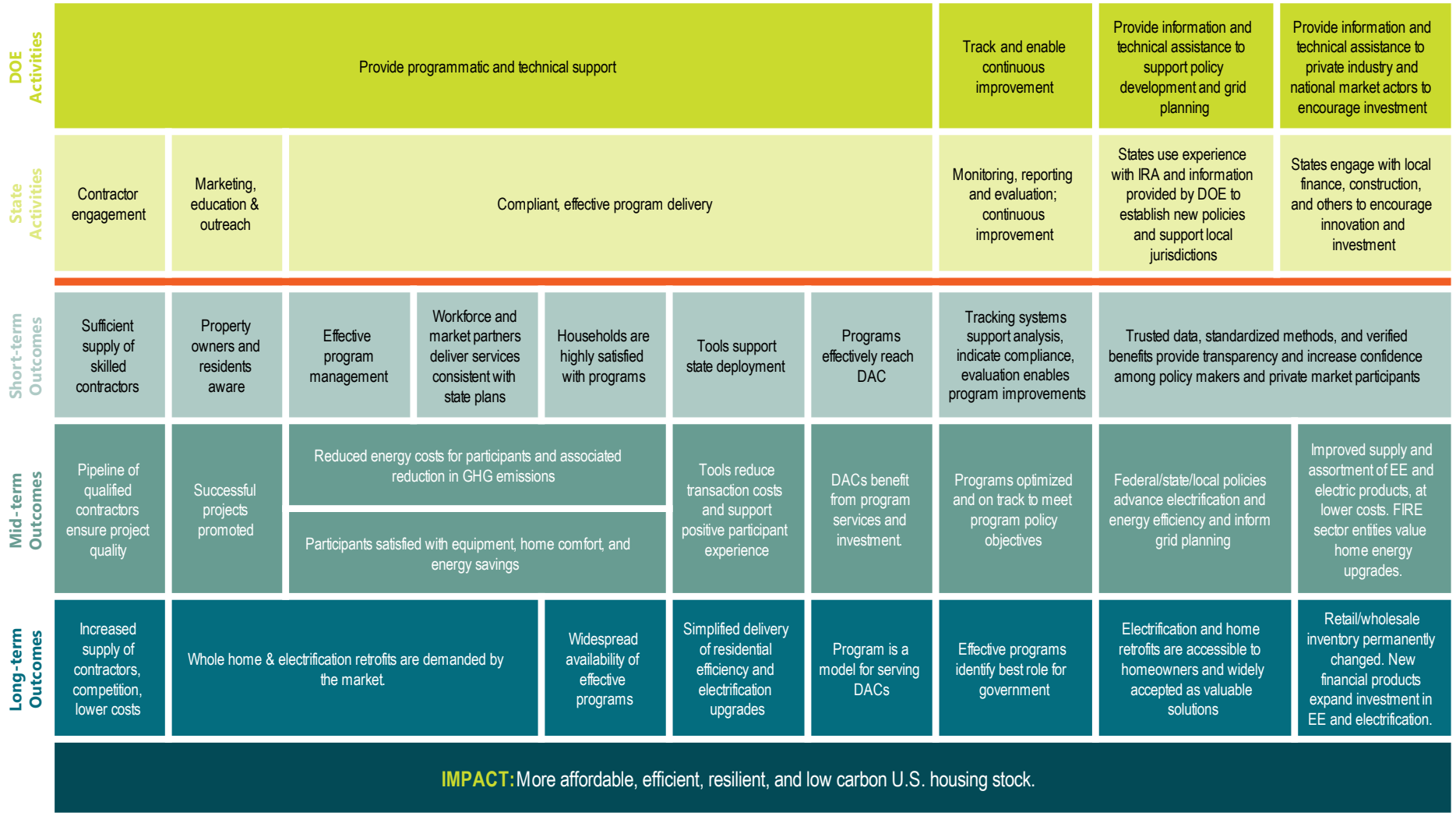
Figure 1: Home Energy Rebate Program Logic Model



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Establishing and Prioritizing Indicators

Each set of linked outcomes needs a final set of indicators through which evaluators can measure progress. Given the numerous goals and outcomes of the program, an extensive list of indicators was identified. The limited budget available to DOE means it will be necessary to 1) understand what data can be gathered directly from state programs and other federal sources and 2) prioritize the indicators that will most cost effectively capture key program outcomes associated with sustained market change. This prioritization process is underway in summer of 2024 and is expected to result in a list of high priority indicators for market effects analysis. These indicators will be associated with demand for whole-home and electrification retrofits and policy and market adjustments as described in the far-right columns on the diagram and in Table 6 below.

On the diagram, the first column of outcomes is expected to flow from contractor engagement. These outcomes are presented in Table 2.[5]

Table 2: Contractor Engagement Outcomes and Potential Indicators

Contractor Engagement Outcomes	**Potential Indicators**
Short-term (1-3 years)	
Sufficient supply of skilled contractors	• Increased union membership
	• Increased apprenticeship program participation
	• DACs have equal access to skilled contractors
Mid-term (3-6 years)	
Pipeline of qualified contractors ensure project quality	• Increased trades with credentials/experience consistent with program requirements
	• Program data confirm project quality
Long-term (5+ years)	
Increased supply of contractors, competition, lower costs	• Level of contractor-driven promotion
	• Homeowners can easily find contractors in their area

The next set of outcomes is associated with marketing, education, and outreach.

Table 3: Marketing Education and Outreach Outcomes and Potential Indicators

ME&O Outcomes	**Potential Indicators**
Short-term (1-3 years)	
Property owners and residents aware	Level of target market awareness of: 1) program opportunities, 2) benefits of EE or electrification, and

[5] Note that all indicators presented in this document are preliminary and will be refined/updated as appropriate via baseline research and planning expected in 2024-2025.

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	3) how to proceed.
Mid-term (3-6 years)	
Successful projects promoted	• Recall of messaging (general population).
	• Knowledge of successful project.
	• Promotional activities effectively reach DACs.
	• Level of contractor-driven promotion.
	• Level of state or local promotional activity.
Long-term (5 + years)	
Whole home & electrification retrofits are demanded by the market	• Number of businesses or contractors with dedicated business lines.
	• Homeowner reported intention (general population).
	• Total market size for electrification or home energy retrofit (# of projects, savings, and spending), by region.
	• Customer-driven requests for retrofits by DAC.
	• Growth in businesses or contractors with dedicated business lines, (include analysis by DAC).
	• DACs report increased interest in or intention to complete energy retrofit or electrification.
	• Increase in web/social media messaging and positive sentiment.

The bulk of expected outcomes flow directly from compliant, effective program delivery. This is understandable as the program funding and activities are primarily focused on this domain. Readers will note the presence of process and impact evaluation results as indicator sources for several key program delivery outcomes. Evaluation planning is underway at SCEP and DOE expects to leverage and complement evaluation occurring at the state level. DOE's evaluation resources will focus on national-level results, calculating objective, retrospective estimates of impacts and supporting process evaluation where needed to understand program approaches and the experiences of participants and program partners. (See 2024 Summer Study paper in Panel 2, (Walker D. et. al. 2024) for a more extensive discussion of DOE's plans for process, impact, and market effects evaluation.) Because states are expected to conduct a variety of impact and/or process evaluation activities, several of the expected outcomes associated with successful program delivery will be estimated based on evaluation results.

Table 4: Program Delivery Outcomes and Potential Indicators

Direct Program Delivery Outcomes	**Potential Indicators**
Short-term (1-3 years)	
Effective program management	Portion of states with funded, operational programs. Participation levels.
	Process evaluation results reported by states.

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Workforce and market partners delivery services consistent with state plans	Process evaluation results reported by states or obtained from DOE-sponsored research.
	Workforce and market partner engagement levels.
Households are highly satisfied with programs	Satisfaction levels among participants.
Tools support state deployment	State reported use of tools.
Programs effectively reach DACs	Process evaluation results.
	Analyses of state project distribution indicates program efforts are reaching DACs.
Mid-term (3-5 years)	
Reduced energy costs for participants, and associated reduction in GHG emissions	Impact evaluation results as reported by states or obtained from DOE-sponsored evaluation research.
	Average and national bill savings and associated GHG impacts.
Participants satisfied with equipment, home comfort, and energy savings	Process evaluation results.
	Participant satisfaction with equipment, home comfort, and energy savings (~1 year post installation).
Tools reduce transaction costs and support positive participant experience	Process evaluation results.
	Reported use of tools to streamline projects (State level).
	Contractors/trades use tools to simplify bidding or project execution.
DACs benefit from program services and investment	Interviews or surveys with participants in DAC areas indicate benefit.
	Additional benefits as reported by participants or CBOs in DAC
Long-term (5+ years)	
Whole home & electrification retrofits are demanded by the market	Number of businesses or contractors with dedicated business lines.
	Homeowner reported intention (general population).
	Total market size for electrification or home energy retrofit (# of projects, savings and spending), by region.
	Customer-driven requests for retrofits, by DAC.
	Growth in businesses or contractors with dedicated business lines, (include analysis by DAC).
	DACs report increased interest in or intention to complete energy retrofit or electrification.
	Increase in web/social media messaging and positive sentiment.

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Widespread availability of effective programs	Programs continued, or expanded, via Federal, state, community, utility, or private market financing.
Simplified delivery of residential efficiency and electrification upgrades	Market actors report using tools or processes to screen, audit, or QC nonprogram projects.
Program is a model for serving DACs	Electrification and home rebate programs more successful at reaching DACs.
	Strategies to reach and serve DACs are leveraged by other programs.

In the logic diagram there is a column of outcomes expected to flow from monitoring and continuous improvement activities undertaken by DOE and the states. Most of these outcomes and indicators will be observable directly by SCEP team members engaging with states and are not expected to require additional research efforts.

The two columns on the far-right side of the diagram reflect expected activities and outcomes associated with changes to market structure. These activities and their associated outcomes were refined during a working session in December 2023 in which the SCEP team reviewed prior drafts and used a series of discussion questions to identify more specific and logically linked outcomes. These columns reflect two main paths towards transformative market change. In the first, DOE and the States are influenced by the data obtained from program execution. These data support a variety of policy advancement and encourage a sustained shift in how energy efficiency and electrification are approached. Data improves confidence among key players and informs grid planning. Better understanding of benefits normalizes electrification and home energy retrofits. In the second path, the information and technical assistance provided to key market participants (think construction, real estate, financing, and the trades) increases confidence in the benefits and profitability of energy efficiency and electrification. This confidence encourages increased investment and changes to standard practice in retail, construction, and financing. These changes expand access to products and services that support energy efficiency and electrification. These changes are sustained over time and reflect on-going valuation of benefits for efficient, electrified homes. Table 5 provides the market-focused outcomes and lists potential indicators that could be used to assess progress towards these outcomes.

Table 5: Market Structure Outcomes and Potential Indicators

Topic	**Potential Indicators**
Short-term (1-3 years)	
Verified benefits and infrastructure provide transparency and data to market and increase confidence among policy makers and private market participants.	Policy makers report using data from Rebate programs to inform priorities and decisions.
	Policy documents refer to data from Rebate programs.
	Private market investment (retail, trades, financing, construction, and similar) report being influenced by program data or experience.
	Market studies indicate that national or regional investments in new products, services, or business lines reflect experience with the Rebate program funding.

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Mid-term (3-5 years)	
Federal/state/local policies advance electrification and energy efficiency and inform grid planning.	Federal standards incorporate data from Rebate program implementation.
	Codes or local incentives encourage efficient, electric construction and retrofits.
	Utilities report integrating information from Rebate program implementation into grid planning efforts.
Improved supply and assortment of ee and electric products, at lower costs. Home energy performance accessible to real estate market.	Retail/wholesale product lines indicate the average efficiency of retrofit equipment is improving.
	Sales data indicate expanded supply of efficient or electrification products.
	Pricing data indicate that efficient products are increasingly affordable.
	Local real estate platforms include disclosure of energy features.
	Energy performance incorporated into home value (by real estate sector or by homebuyers).
Long-term (5+ years)	
Electrification and home retrofits are considered common solutions.	State and local policy encourage sustained attention on efficiency of housing stock.
	Homeowners understand the value of efficient or electric investment in their homes and report increased levels of intention to pursue.
Retail assortment permanently changed.	Sales data indicate an expanded supply of efficient or electrification products.
	Pricing data indicate that products are increasingly affordable.
Financial products increasingly incorporate home performance	Jurisdictions adopting home energy scores.
	Data support appraisal incorporation of energy performance.

State Market Transformation Plans

In addition to the work described in this paper, program guidance requires states to prepare several plans, including a Community Benefits Plan, a Marketing and Outreach Plan, a Consumer Protection Plan, and a Market Transformation Plan. States can develop their own approach to market transformation and are encouraged to consider a range of potentially transforming interventions. According to the October 2023 Guidance Document (https://www.energy.gov/sites/default/files/2023-10/home-energy-rebate-programs-requirements-and-application-instructions_10-13-2023.pdf) state Market Transformation Plans must:[6]

- Describe how the State program will enable the market to recognize the value of homes that have been upgraded. The plan must include a strategy for aggregating home data

[6] Minimum requirements for state Market Transformation Plans, per guidance documents posted October 13, 2023.

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from the home assessment and/or home certification and making such data available to real estate stakeholders.

- Describe how the state's program will support the following goals throughout the program as well as after depletion of the Home Efficiency Rebates funds:
    - Cost sharing, braiding, and/or coordinated financing with potential funders and financiers of home energy upgrades, including homeowners, lenders of home upgrade loans, mortgage brokers, utilities, and philanthropies.
    - Utilize rebate programs to enable new business models in partnership with private capital to monetize grid benefits through vehicles such as Federal Energy Regulatory Commission (FERC) order 2222, demand management, and virtual power plants.
    - Consider sustainable business models of home energy contractors.

The items above are the minimum requirements and are consistent with many of the broad market structure outcomes identified in the current logic model. The SCEP team also provided a list of program activities or design principles consistent with the long-term outcomes identified through the logic model exercise. These recommendations encourage states to produce post-installation Home Energy Score™ Reports to support market valuation of efficient homes, identify packaged solutions or expedited approaches to installation that reduce transaction costs for contractors, and support market innovations and collaborations that reduce project costs and build project value. (Department of Energy, 2023) Ideally, the state market transformation plans will reflect some alignment with the outcomes displayed on the logic model.

Conclusions

The process described in this paper represents an initial step towards capturing potential market effects from large-scale national investment in residential energy efficiency and electrification upgrades. The draft logic model presented here could be modified and updated to reflect more specific outcomes or activities as states submit applications and implementation blueprints. The logic model, outcomes and indicators may also be revised as SCEP better understands the costs of research and budget limitations. In addition to the work of the SCEP team, the authors expect that state-level innovation and commitment to transformative outcomes will result in emergent successes that could be shared broadly and further adjust the schedule of expected outcomes. SCEP's ability to convene and amplify state research efforts, results and successes will provide a platform for collaboration and shared learning.

Over the next 24 months, the SCEP team is expected to use the logic model and indicator refinement process to support baseline research to support subsequent market effects evaluation work. This process will confirm that data are sufficient to support baseline documentation and establish a replicable framework for periodic monitoring over the funding period. The team also expects to crosswalk state market transformation plans with the SCEP logic model, which should confirm market data expected from states and ensure those data are leveraged to efficiently support a national assessment of market effects.

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