

INFLATION REDUCTION ACT HOME ENERGY REBATES: PROGRAM GUIDANCE FOR STATE ENERGY OFFICES

FEATURED CASE STUDIES AND RESOURCES

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ENERGY INNOVATION





PROGRAM DESIGN PRINCIPLES for Effective Residential Energy Efficiency & Electrification Retrofits



Utilize data to inform program design and implementation strategies



Set clear program objectives and key results; adopt metrics to track progress



Adopt strategic marketing and outreach strategies to reach target audiences



Provide hands-on support to consumers and contractors



Make it economically beneficial to adopt efficient, all-electric technologies (and insulate financially vulnerable customers from bill increases)



Incorporate measurable customer experience and quality assurance protocols



Support durable market momentum and business model evolution with workforce and industry engagement

Inflation Reduction Act Home Energy Rebates: Program Guidance for State Energy Offices

Featured Case Studies and Resources

These case studies and resources provide examples of the program design principles featured in the full report. These real-world examples can help State Energy Offices (SEOs) design and implement IRA Home Energy Rebate programs. Additional examples are within the report.



- Greenlink Analytics Equity Maps and Reports
- Inclusive Economics Workforce and Employment Analyses



- Set clear program objectives and key results; adopt metrics to track progress
- **Urban Sustainability Directors Network –** <u>Equity and Buildings: A Practical Framework for Local Government Decision Makers</u>



- Adopt strategic marketing and outreach strategies to reach target audiences
- Beneficial Electrification League of Colorado <u>Love Electric</u>
- Building Decarbonization Coalition The Switch Is On



- Provide hands-on support to consumers and contractors
- BAYREN Home Energy Advisor Program
- Energy Coordinating Agency Neighborhood Energy Centers
- Massachusetts Heat Pump Coaches Community Coaching Programs



- Make it economically beneficial to adopt efficient, all-electric technologies (and insulate financially vulnerable customers from bill increases)
- ACEEE Empowering Electrification Through Building Envelope Improvements
- Efficiency Maine Heat Pump Support



- Incorporate measurable customer experience and quality assurance protocols
- Rocky Mountain Power Wattsmart Trade Ally Program



- Support durable market momentum and business model evolution with workforce and industry engagement
- NYSERDA Clean Heat Connect

GREENLINK ANALYTICS - Equity Maps and Reports

Notable Features:

- Maps localized data on energy burdens, health impacts, housing characteristics, and other details for select communities across the U.S.
- Quantifies equity challenges and intersectional issues, including socioeconomic and racial disparities.
- Illustrates geographic areas of opportunity for targeted energy programs and other funding to improve energy affordability, comfort, and health.

IRA HOME REBATE PROGRAM RELEVANCE: Collecting and mapping holistic data helps program administrators identify interrelated demographic, income, and equity challenges and support targeted outreach and investments, especially for low-income and historically underinvested communities.

Resource Link: https://www.equitymap.org/publications



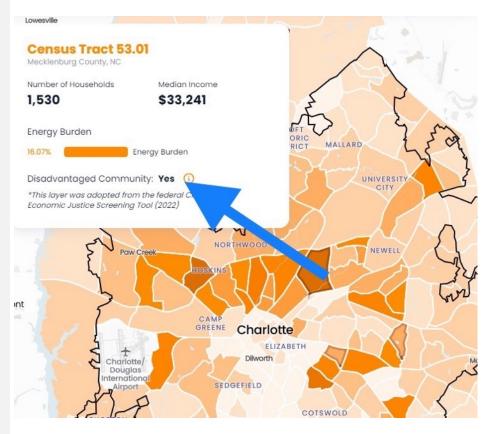


Image source/credit: Greenlink, Disadvantaged Communities Tool, https://www.greenlinkanalytics.org/post/now-on-gem-disadvantaged-communities

INCLUSIVE ECONOMICS - Workforce and Employment Analyses

Notable Features:

- Features economic impact reports reflecting current and future workforce conditions based on decarbonization trends and policies.
- Defines climate policy benefits related to workforce with examples on state, regional, and local levels.
- Highlights important workforce principles, such as familysustaining wages and long-term career pathways, to incorporate into related program efforts.

IRA HOME REBATE PROGRAM RELEVANCE: Evaluating the current state of the residential energy retrofit workforce at the outset can help identify gaps and needs for rebate program design and implementation.

Resource Link: https://inclusiveecon.com/research-2



Utilize data to inform program design and implementation strategies

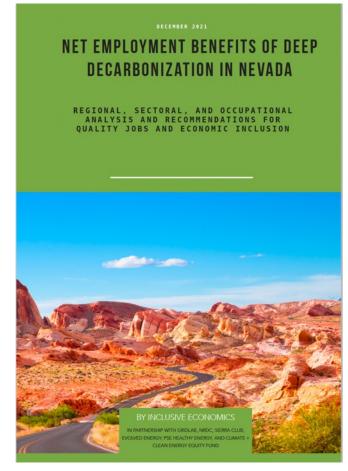


Image source/credit: Inclusive Economics, December 2021, https://inclusiveecon.com/research-2/

URBAN SUSTAINABILITY DIRECTORS NETWORK - Equity and Buildings: A Practical Framework for Local Government Decision Makers

Notable Features:

- Provides guidance on equity issues related to energy and housing and offers strategies to address equity through effective program and policy design.
- Supports goal development with case study examples and guiding questions to center equity issues while setting program objectives.
- Offers strategies for community engagement and government interdepartmental coordination to ensure building and housing programs and policies are inclusive and address priority community needs.

IRA HOME REBATE PROGRAM RELEVANCE: SEOs can leverage this framework to identify social equity nexus points and incorporate related solutions into energy program design and implementation.

Resource Link: https://www.usdn.org/projects/equity-in-buildings-framework.html



Set clear program objectives and key results; adopt metrics to track progress

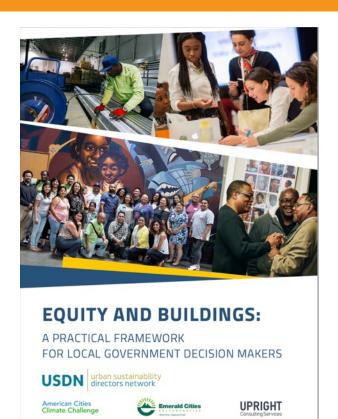


Image source/credit: Urban Sustainability Directors Network, June 2021, <a href="https://www.usdn.org/uploads/cms/documents/

JUNE 2021

BENEFICIAL ELECTRIFICATION LEAGUE OF COLORADO - Love Electric

Notable Features:

- Increases awareness and understanding of home electrification technologies among households and contractors with a state-level campaign.
- Provides a "One-Stop Shop" resource with case studies, step-by-step guides, FAQs and other resources to help people electrify their home heating and cooling, water heating, and cooking.
- Simplifies and streamlines the process to identify locally available incentives, connect with certified contractors, and evaluate financing options.

IRA HOME REBATE PROGRAM RELEVANCE: Developing comprehensive online resources for households and contractors will help simplify the process, address common questions, and support rebate program participation.

Resource Link: https://loveelectric.org





Why Love Elec

Get Plugged

New Hon

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ites



Home - Get Started

Love Electric: Begin a Relationship

Are you curious about how to make your home more efficient, healthy, and sustainable? We can start with providing some basic information about the efficient electric technologies involved. The three major areas to consider "loving electric" are:

- + Heating & Coolin
- + Hot Water
- + Cookin

in addition to these three, you snow consider adding solar PY to your nome, which reduces you electricity costs, making the new electric technologies more economical, while also reducing your home's carbon emissions. In the case of heating and cooling, it is important to start with making sure your home is well-insulated and sealed, and we provide some resources for making these basic efficiency improvements if needed.



How to Get Started

STEP 1: Determine What You Need

Image source/credit: Love Electric website, https://loveelectric.org/get-started/

BUILDING DECARBONIZATION COALITION - The Switch Is On

Notable Features:

- Demonstrates benefits of efficient home electrification, including improved indoor air quality, lower utility bills, and reduced carbon pollution.
- Provides a "One-Stop Shop" and multilingual resource with information on available incentives, a list of trained contractors, and the ability to connect with experts and ambassadors to discuss specific electrification questions.
- Assists renters and multifamily buildings with identifying income-qualifying programs throughout California.

IRA HOME REBATE PROGRAM RELEVANCE: Creating a statewide campaign and online resource help participants navigate program eligibility and enrollment, while also facilitating easy connections with experts and qualified contractors.

Resource Link: https://switchison.org



Adopt strategic marketing and outreach strategies to reach target audiences



Image source/credit: The Switch is On website, https://switchison.org/cooking/renters/

BAYREN - <u>Home Energy Advisor</u> <u>Program</u>

Notable Features:

- Offers free consultation services to help Bay Area residents take advantage of available rebates and answer home retrofit project questions.
- Provides referrals to other programs for California households, multifamily property owners, and businesses.
- Leverages a Home Energy Score, provided by a professional, to identify current energy performance and high-value retrofit opportunities.

IRA HOME REBATE PROGRAM RELEVANCE: Investing in administrative support services will help households and contractors address questions before and during their projects, while streamlining enrollment in programs.

Resource Link: https://www.bayren.org/energy-advisor













Free Consult With a Home Energy Advisor



Image Source/Credit: Top: Bayren website, https://www.bayren.org/energy-advisor; Bottom: winnievinzence from Noun Project, CC BY-NC-ND 2.0

ENERGY COORDINATING AGENCY - Neighborhood Energy Centers

Notable Features:

- Provides a "One-Stop Shop" resource on available energy service programs available to Philadelphia residents, including home energy retrofit incentives and utility bill assistance, as well as guidance for "DIY" energy upgrades.
- Invests in trusted neighborhood advisors and resource centers that connect with households to help navigate program eligibility and enrollment processes.
- Overcomes barriers to participation, such as language barriers and limited access to internet, to support equitable program enrollment.

IRA HOME REBATE PROGRAM RELEVANCE: Incorporating people-centered support models into program design can improve user experiences and support Justice 40 equity outcomes

Resource Link: https://www.ecasavesenergy.org/community-programs







Image source/credit: Energy Coordinating Agency website, https://www.ecasavesenergy.org/community-programs

MASSACHUSETTS HEAT PUMP COACHES - Community Coaching Programs

Notable Features:

- Supports heat pump adoption in Massachusetts with locally trained energy coaches, on an as-available basis, that help people electrify home space and water heating.
- Empowers community members to lead on electrification to support local and state decarbonization efforts.
- Scales impact using a replicable model, leveraging published training guides and resources to support communities seeking to train additional energy coaches.

IRA HOME REBATE PROGRAM RELEVANCE: Harnessing the power of peer-to-peer connections can accelerate program marketing and reduce barriers to technology adoption.

Resource Links: https://concordma.gov/2777/HeatingCooling-Coaches





We reviewed all options with our coach. He was fabulous at explaining the different options, comparing the proposal costs, and suggesting questions to ask the installers. He is the wonder energy coach.









Image Source/Credit: Top: HeatSmart Alliance website, https://heatsmartalliance.org/coaching/#CoachingCommunities; Bottom: Town of Concord Massachusetts website, https://concordma.gov/2777/HeatingCooling-Coaches

American Council for an Energy-Efficient Economy - <u>Empowering Electrification</u> <u>Through Building Envelope Improvements</u>

Notable Features:

- Emphasizes weatherization as an energy retrofit strategy to maximize the economic, grid, and environmental benefits of home electrification
- Quantifies energy and monetary savings for single-family and multifamily properties in select cold climates across the U.S.
- Cross-references studies that detail numerous aspects of weatherization including air sealing, insulation, highefficiency windows, and other measures

IRA HOME REBATE PROGRAM RELEVANCE: Program design should consider the interplay between weatherization and HVAC retrofits, supporting an optimized approach reflective of local economics and climate conditions.

Resource Link: https://www.aceee.org/topic-brief/2023/07/empowering-electrification-through-building-envelope-improvements



Make it economically beneficial to adopt efficient, all-electric technologies (and insulate financially vulnerable customers from bill increases)



Image Source/Credit: Nick Nguyen, Creative Commons, CC BY-SA 2.0

EFFICIENCY MAINE - Heat Pump Support

Notable Features:

- Increases consumer understanding of heat pumps via a user-friendly website with installation guidance, contractor listings, case studies, and FAQs tailored to Maine households.
- Addresses economic impacts with a home heating calculator that empowers households and contractors to estimate energy costs pre- and post-heat pump installation.
- Dispels myths about home electrification with resources on cold climate heat pump performance, operational considerations, and other common concerns.

IRA HOME REBATE PROGRAM RELEVANCE: Programs that provide comprehensive economic information, calculators, and other tools support informed consumer decision-making.

Resource Link: https://www.efficiencymaine.com/about-heat-pumps



Make it economically beneficial to adopt efficient, all-electric technologies (and insulate financially vulnerable customers from bill increases)



AT HOME AT WORK GREEN BANK RESOURCES ABOUT

Compare Home Heating Costs

Use this tool to estimate what your annual heating costs would be using different heating

- . Find the row that best describes your home's heating system configuration
- Update fuel cost and other relevant assumptions (efficiency rating is under "show destile?")
- Click "Calculate"
- 4. Press Increase/Decrease until Annual Cost matches your

Increase	Decrease	Reset Calculate		
Fuel Type (Units)	Cost per Unit Delivered	Heating System	Show Details	Annual Cost
Electric (kWh)	\$0.23	Geothermal Heat Pump		\$ 1,681
Firewood (cord)	\$350	Wood Stove		\$ 1,717
Electric (kWh)	\$0.23	Heat Pump (ductless)		\$ 2,297
Natural Gas (therm)	\$2.07	Natural Gas Boiler		\$ 2,300
Natural Gas (therm)	\$2.07	Natural Gas Room Heater		\$ 2,351
Wood pellets (ton)	\$312	Pellet Stove		\$ 2,392
Natural Gas (therm)	\$2.07	Natural Gas Furnace		\$ 2,560
Wood pellets (ton)	\$312	Pellet Boiler		\$ 2,808
Electric (kWh)	\$0.23	Heat Pump (ducted)		\$ 2,871
Oil (gallon)	\$3.54	Oil Boiler		\$ 2,992
Oil (gallon)	\$3.54	Oil Furnace		\$ 3,328
Propane (LP) (gallon)	\$2.98	Propane Boiler		\$ 3,580
Kerosene (gallon)	\$4.59	Kerosene Room Heater		\$ 3,595
Propane (LP) (gallon)	\$2.98	Propane Room Heater		\$ 3,699

Image Source/Credit: Efficiency Maine website, https://www.efficiencymaine.com/at-home/heating-cost-comparison/

ROCKY MOUNTAIN POWER - Wattsmart Trade Ally Program

Notable Features:

- Offers a searchable database of certified contractors, along with resources to support contractor co-branding for marketing to support the utility incentive programs.
- Provides online training for contractors with courses related to energy efficiency, heat pumps, and customer service.
- Certifies contractors through a trade ally enrollment process that streamlines understanding of utility rebate programs and installation requirements.

IRA HOME REBATE PROGRAM RELEVANCE: A dedicated contractor training and certification process, ideally in partnership with utilities, can support high-quality installations and provide ongoing opportunities for workforce engagement for program success.

Resource Link: https://wattsmarthomes.com/trade-allies





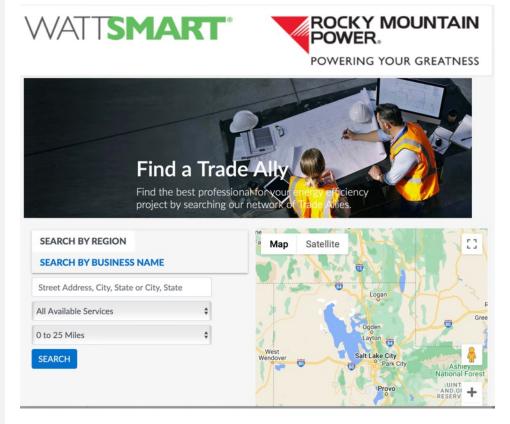


Image Source/Credit: Rocky Mountain Power Wattsmart website, https://wattsmarthomes.capturesportal.com/Public/tradeallysearch/findatradeally

NYSERDA - Clean Heat Connect

Notable Features:

- Builds connections to heat pump distributors and manufacturers to align business interests to support statewide adoption of heat pumps.
- Offers robust tools and trainings to contractors including installer reference materials, marketing and sales resources, and a hiring support guide.
- Incorporates in-person events to maximize networking benefits and catalyze business opportunities for installers, distributors, and manufacturers.

IRA HOME REBATE PROGRAM RELEVANCE: Addressing opportunities across the entire heat pump supply chain, including installers, distributors, and manufacturers, can support long-term market transformation and support for electrification and energy efficiency.

Resource Link: https://cleanheatconnect.ny.gov



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Support durable market momentum and business model evolution with workforce and industry engagement



Image Source/Credit: NYSERDA Clean Heat Connect website, https://cleanheatconnect.ny.gov/assets/pdf/hiring-supportguide.pdf





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