



National Association of State Energy Officials
RFI - Implementation Options for Home Energy
Performance-Based Whole-House Rebate Program
and High-Efficiency Electric Home Rebate Program

DNV's Comprehensive Program Design for HEEHR Programs

May 19, 2023



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Maddie Koewler
Senior Program Manager
National Association of State Energy Officials
1300 North 17th St., Suite 1275
Arlington, VA 22209

RE: RFI - Implementation Options for Home Energy Performance-Based Whole-House Rebate Program (HOMES) and High-Efficiency Electric Home Rebate Program (HEEHR)

Dear Ms. Koewler:

DNV Energy Services USA Inc. (DNV) is pleased to respond to NASEO's RFI for implementation options for HOMES and HEEHR programs.

We have the expertise and ability to deliver on both program types but have focused our response on HEEHR programs. We offer ideas for implementation to support state energy offices exploring these high-efficiency programs in Category 1: Comprehensive Program Design. In Category 3, we provide an overview of our company that indicates our strong vendor interest in working with state energy offices. DNV has been a leader in the design, evaluation and implementation of energy efficiency programs for more than 45 years and we look forward to working with NASEO's members to meet the challenges of the changing energy landscape.

No proprietary or confidential information is included in our response and it is suitable for public dissemination by NASEO. DNV Energy Services USA Inc. authorizes NASEO to publish and distribute this response to the NASEO RFI on its website and through other means to the states and general public. We have included no confidential or proprietary information in our response.



With kind regards,
for DNV Energy Services USA Inc.,

A handwritten signature in blue ink, appearing to read "Brady McNall".

Brady McNall
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TABLE OF CONTENTS

1	CATEGORY 1: COMPREHENSIVE PROGRAM DESIGN.....	2
1.1	Company Characteristics	2
1.2	Program Goals	2
1.3	Market Conditions	4
1.4	Implementation Proposal.....	4
1.5	Types of Implementation Partners.....	6
2	CATEGORY 2: PROGRAM ELEMENTS.....	7
3	CATEGORY 3: INDICATION OF VENDOR INTEREST	7
3.1	Company Characteristics	7
3.2	Company Summary.....	8



1 CATEGORY 1: COMPREHENSIVE PROGRAM DESIGN

1.1 Company Characteristics

Contact information

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Approach to equity, diversity, inclusion and accessibility (DEIA)

DNV Energy Services runs a dedicated DEI initiative supported by multiple staff committees. Activities include writing job descriptions to encourage diverse staff; career mentoring for diverse staff; annual performance goals with career development plans; and tracking and growing the portion of project spend with diverse subcontractors, partners and vendors. Through our program implementation work across the country, we have developed a robust list of diverse business partners who support our programs and act as a catalyst in the local economy to maximize the impact of our programs.

Description of contracted programming for planning, administration and field delivery

DNV offers a full suite of clean energy programs on behalf of utilities and local governments for commercial and residential sectors including:

- Prescriptive savings, small business, custom savings and multifamily-focused energy efficiency programs
- Home energy audits and behavioral savings programs
- Midstream programs for various technologies (lighting, HVAC, food service, water heating, etc.)
- Pilot program management and implementation
- Energy management programs (e.g., traditional re-commissioning, strategic energy management)
- Electric vehicle programs, electrification programs and distributed generation programs

We provide three examples of current program implementation with links and brief highlights.

The California Statewide Midstream Water Heating Program. DNV designed the program and recommended incentives for the qualifying equipment, including heat pump water heaters, tankless water heaters, tank heaters and boilers for domestic hot water. This program has achieved its goals in targeting low-to-moderate income underserved areas and exceeded its disadvantaged community targets in collaboration with two diverse business enterprises.

The Iowa Statewide Midstream Program on behalf of [Alliant Energy](#) and [MidAmerican Energy](#). In November 2022, we launched the Iowa Statewide Midstream Pilot Program for Alliant Energy and MidAmerican Energy. DNV is now helping to design the expansion of these programs in 2024 to include equity components.

Residential USB Audit Program, Commercial Lighting, NorthWestern Energy. For 32 years, DNV has provided NorthWestern Energy with full-scale, residential turnkey services including energy audits and rebate processing, outreach events and materials giveaways, complete low-income fuel switch reports, and direct install of Wi-Fi thermostats, insulation, load control devices and other measures.

1.2 Program Goals

Program goals for HEEHR programs

DNV's program design focuses on delivering HEEHR incentives at the point of sale, usually through a distributor or manufacturer. A midstream channel strategy can reach untapped market segments quickly and efficiently because it removes the application process burden from customers. DNV's midstream programs achieve that



potential by developing a network of skilled product distributors and engaged contractors who incorporate incentives into their business model to provide better solutions to their customers at a comparative price. DNV can deliver a rapid program launch by capitalizing on existing manufacturer and distributor relationships nationally, thus providing households with program benefits more quickly than other delivery approaches. A midstream program also accomplishes the following goals:

- A seamless customer experience with no application or burdensome documentation
- A simple and uniform program design across the state
- Overcome contractor objections because it can be easily incorporated into their business model
- Alignment with existing (i.e., utility) programs, allowing for transparent incentive stacking so that households receive the maximum benefit
- Geotargeted bonus incentives for customers located in census tracts defined as disadvantaged
- Reach other HEEHR program goals, such as workforce development, greenhouse gas mitigation, air quality improvements and household cost savings

Market transformation

DNV's program design aims to transform the market by accelerating the cost-effective adoption of efficient electrification equipment within a state. We have found that midstream programs promote wider adoption of efficient electrification equipment at lower costs than downstream prescriptive programs. Another benefit of the midstream program channel is that it gives the program near real-time feedback from the market on program performance by gathering sales data from distributors. This market intelligence can be used to make proactive changes to the program to address customer concerns about specific requirements, technology limitations, etc. Our clients are increasingly using this delivery channel in their demand side management (DSM) portfolios due to its transformative potential.

Specific building types

Our program design addresses single family and multifamily applications, if the resident's space and water heating equipment is located in the unit. These decentralized systems are common in duplexes, triplexes, fourplexes and townhomes. Multifamily buildings with centralized systems, such as large boilers, are better served by commercial programs. Centralized systems are most common in high-rise buildings.

Targeting and reaching particular income levels

DNV's HEEHR design would be applicable to households at or below 150% of area median incomes. DNV uses publicly available data from the recently released [EJ40 map](#) to identify the median household income as a percent of area median home income at the census tract level. Then we can target marketing and outreach to communities with higher proportions of eligible customers and track progress toward environmental justice goals.

DNV's program design addresses HEEHR

Our program design addresses HEEHR. As a program that is intended to deliver "point-of-sale" consumer discounts for qualified efficient electrification equipment, HEEHR is well suited to a midstream delivery. DNV works with certification bodies like ENERGY STAR® to create qualified product lists that automate the backend processes and provide customers with a streamlined, frictionless experience.

Efficiency and electrification technology

DNV's midstream program design focuses on engaging distributors to accelerate the introduction and sale of more efficient electrification products to a larger customer base than traditional programs can reach. The design identifies measures that are appropriate for a point-of-sale purchase process and align with the measures included in the HEEHR program. The design includes a market engagement plan that builds a solid network of trained, educated and motivated distributors while engaging contractors and educating customers; and implements a proven customer eligibility validation process that distributors can access during the sale.



This program design addresses any efficiency and electrification technology that is sold by a distributor and installed by a contractor. DNV will follow DOE guidelines to determine which technologies are eligible for rebates. Initial guidance for HEEHR indicates that the rebates are applicable only to ENERGY STAR-certified appliances (where such categories exist), including heat pumps, heat pump water heaters, heat pump clothes dryers and weatherization products.

1.3 Market Conditions

Market conditions, policies, relationships – and how to create them

One benefit of a midstream delivery of HEEHR rebates is that the necessary market conditions already exist. Distributors are already selling limited quantities of efficient electrification equipment and contractors are installing them in homes. DNV would leverage these market conditions to deliver federal rebates to offset the cost of more efficient equipment to accelerate and expand consumer adoption. The policies necessary would flow from DOE guidance to state energy offices. We would then optimize program delivery around policy goals.

While market conditions are already optimal for delivery on this program design, the most important policy to support HEEHR rebates is a policy that authorizes the delivery of those rebates. Some states with limited energy policy staffing will need support to develop regulations for HEEHR rebates and states that choose not to develop policy for HEEHR rebates may need federal regulations instead. The next critical policy is to allow HEEHR rebates to be stacked with state and locally funded rebates for the same products. Federal incentives must supplement rather than supplant state and local incentives in order to achieve the desired market transformation.

We have found that point-of-sale programs work best with a single administrator and implementer across the entire state. High volume, broad reach and consistent rules are crucial for encouraging distributors and national retailers to enroll in programs and deliver point-of-sale discounts. The point-of-sale HEEHR program would work best using a midstream model, especially when incentives may be stacked on top of any existing programs (e.g., utility demand side management programs) administered separately. The midstream model achieves economies of scale by applying the same rules state-wide, regardless of which utility serves the customer—and market transformation is more likely to happen with economies of scale. The existing programs could keep their implementation plans and application procedures relatively intact. The regulatory filing requirements for delivering the new federally funded programs could be less onerous, especially if existing programs already have provisions for stacking incentives.

The utility is a critical participant in this space. DNV has existing relationships with many utilities and already implements statewide midstream programs under utility demand side management programs. DNV would leverage these program models to deliver HEEHR rebates, promote rebate layers to maximize the benefit to end-use customers and integrate reporting among the two program types to promote transparency and limit fraud. Contractors are equally important to the success of a midstream program as they serve as a prime conduit to customers. Contractor engagement and education are key to ensuring that equipment is installed according to DOE guidance, which is forthcoming. Utility programs often have trade ally networks, or at least lists of contractors who apply for program incentives, which DNV would also leverage.

The impact of building permits and inspections

HVAC, plumbing and weatherization contractors are best suited to address permitting issues, as they are well versed in their respective markets and understand what projects need permits. Building permits and inspections would not be impacted and would follow the normal existing building permit and inspections processes.

1.4 Implementation Proposal

Program concept

A typical midstream program makes participation as simple as possible by offering point-of-sale discounts on energy-saving products. Instead of completing an application, a contractor or a customer merely shows up, shops, buys a pre-qualified product, and leaves. DNV and our distributor partners handle all the backend data collection and reporting. The distributor can act as an educator, providing one-on-one counsel and advice



during the purchase process. This makes participation more personal and customer-centric than ever. In the case of HEEHR rebates, the recipient also needs to be income-qualified at a maximum of 150% of area median incomes, which we facilitate through a variety of options for proxy benefit documents, like federal health insurance or low-income utility rate class, as well as the direct option of tax returns. DNV has developed core processes that maximize midstream program potential benefits.

- We leverage existing relationships with national and regional distributors who already understand and trust the process to expedite program launch and jump-start market transformation.
- Our team creates marketing materials to help distributors learn the value of the midstream program.
- We provide distributors with one-on-one training on the program's requirements, customer benefits, operations and procedures, incentive and pricing strategy, and selling techniques.
- All invoices, promotions, bonuses and other customer-facing documents (fliers, stickers, etc.) would clearly state that the product "Markdown is provided by [HEEHR and/or State Energy Office]."
- New distributors will be recruited and vetted and DNV will also emphasize the expansion of the distributor network into disadvantaged communities.
- The distributors sign Participation Agreements, which outline rules and regulations that they agree to participate in the program. This then leads to a comprehensive training and management process.

DNV also offers a comprehensive webtool for data analytics and reporting that minimizes administrative costs for participating distributors. Distributors can check product and customer eligibility, submit their transaction reports, track the transaction review process through payment, and produce reports on their own customer's activities. The tool also makes it easy for DNV to collect information required for evaluation and program performance analytics and reporting. This program design also uses a webtool to deliver the following tasks:

- Customer eligibility: There are multiple ways to validate customer eligibility, including a Google Maps interface. We give customers, distributors and retailers a variety of ways to verify income eligibility so that they can select the easiest path.
- Quality control: Automated QC is backed by manual QC tailored to the program's requirements.
- Data integration: Management of different data requirements from different technologies, programs and utilities is seamless.

To complement the webtool's automated data validations, our team members will perform targeted quality control reviews to validate the accuracy of the data entered. For example, with the customer lookup feature, we can confirm that the specified customer received the equipment and that the purchaser is a contractor or customer and not a retailer. We can also validate that the invoice displayed the incentive accurately and that the installed product replaced inefficient existing equipment, as appropriate, based on the program's policy objectives and evaluation requirements.

The efficient electrification technologies that qualify for HEEHR incentives are defined by the legislation as ENERGY STAR-certified appliances (where such categories exist), including heat pumps, heat pump water heaters, heat pump clothes dryers and weatherization products. DNV will maintain a Qualified Product List (QPL) of qualifying products. This is a searchable database that lists offered measures by category and subgroup, and their identifiers: name, manufacturer, model number, savings, incentives and any other metrics that might be required. Our QPL foundation is based on ENERGY STAR and Air Conditioning, Heating and Refrigeration Institute (AHRI) industry-established lists. DNV has evolved the QPL to directly access these lists for additions upon the equipment being qualified and invests in automation to keep these lists current, as new products are added over time. DNV has also designed the program to have a payment process that is robust and seamless. We recommend maximizing the leverage of HEEHR incentives by allowing them to be stacked with state and local rebates, as well as applicable tax incentives. Appliance recycling can be part of program design.



Participant journey

Positive customer experience is a priority for DNV's program implementation. We raise contractor and customer awareness of the HEEHR incentives with a marketing campaign that may include traditional media buys, social media and marketing collateral. The customer submits income verification and receives a coupon. The contractor or customer presents the coupon to the distributor or retailer and receives the point-of-sale discount. Time spent during the customer journey ranges from less than a day for small lamp replacements to several weeks for made-to-order HVAC equipment. Our outreach and call center staff support customers by providing program information and assisting with application development.

Roles and responsibilities of all involved parties

The state energy office plays the role of program administrator in this process. The program administrator collects reporting and disburses incentive funds to the program implementer. Funding for the rebates will flow through state energy offices. The program administrator also reports up to the regulatory authority, which would be the Department of Energy for HEEHR programs.

Benefits and comparative advantages of program concept Benefits of this program design include state-wide coverage, seamless customer experience, quick program launch, lower administration costs, market transformation and a model that leverages customer relationships with contractors.

Secondary market implications

A secondary market for pre-owned home appliances does exist, so some degree of QA/QC would be needed to ensure the equipment was installed in the expected location. Additionally, the market also corrects for this: If equipment is available with a point-of-sale rebate, selling it without the rebate on the secondary market is unlikely to attract buyers.

1.5 Types of Implementation Partners

Partners, businesses and other entities necessary for program implementation

The equipment distributor is an important implementation partner, but other market actors would be engaged to promote program awareness such as contractors, aggregators, manufacturers, and, if appropriate, ESCOs. The HEEHR program is targeted toward moderate- and low-income households, which often benefit from LIHEAP and WAP. DNV would work with state energy offices to promote HEEHR among households that were already known to participate in other utility and state programs aimed at this demographic.

DNV will build relationships with networks in hard-to-reach communities by reaching out to community action agencies and community-based organizations. We will partner with contractors serving disadvantaged and underserved communities and introduce them to the program. These strategies successfully diversified the existing network of participants in the ComEd midstream program we manage: In Q1 2021, more than 25% of the 130 distributors in the program had diverse-business enterprise status.

From a community standpoint, we will identify, promote and manage engagement and participation in disadvantaged and underserved communities. The team will provide awareness/education, value propositions and technical resources to address common participation barriers. DNV works with diverse partners to establish a framework to reach underserved communities that addresses the needs of disadvantaged communities in a way that is relevant, comprehensive and accepted by the communities.

From a geographic standpoint, we will assess performance and participation levels by mapping across identified disadvantaged communities and comparing pilot performance to existing historical performance. We will closely track key metrics to determine the effectiveness of our approach in encouraging hard-to-reach participation. We have experience with rural populations in the Midwest and beyond. We engage digitally but also have outreach people in the field so that we can still engage one-on-one, which may be especially important in hard-to-reach communities.



2 CATEGORY 2: PROGRAM ELEMENTS

DNV provides a complete program design in Category 1 instead of program elements in this section.

3 CATEGORY 3: INDICATION OF VENDOR INTEREST

3.1 Company Characteristics

Contact information

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Through our program implementation work across the country, we have developed a robust list of diverse business partners who support our programs and act as a catalyst in the local economy to maximize the impact of our programs.

Description of contracted programming for planning, administration and field delivery

DNV has been working with utilities and local governments across the U.S. for more than 45 years to help them meet the challenges of providing energy to their customers while adapting to the changing energy landscape. We currently implement 20+ successful clean energy programs, guided by our expertise in program design, trade ally support, marketing and customer education. 2022 savings results and total for incentives paid for the programs we manage are shown in the graphic below.

DNV CLEAN ENERGY PROGRAM SAVINGS RESULTS 2022



DNV currently manages nine midstream programs that are integrated into our broader energy efficiency portfolios. We provide all design and delivery services, including marketing and outreach; distributor recruitment, training and performance management; measure mix management and incentive recommendations; transaction processing and distributor incentive payments; KPI reporting; and complete IT and data analytics support.

We provide three examples of current program implementation with links and brief highlights.

The California Statewide Midstream Water Heating Program. DNV designed the program and recommended incentives for the qualifying equipment, including heat pump water heaters, tankless water heaters, tank heaters and boilers for domestic hot water. This program has achieved its goals in targeting low-to-moderate income underserved areas and exceeded its disadvantaged community targets in collaboration with two diverse business enterprises.



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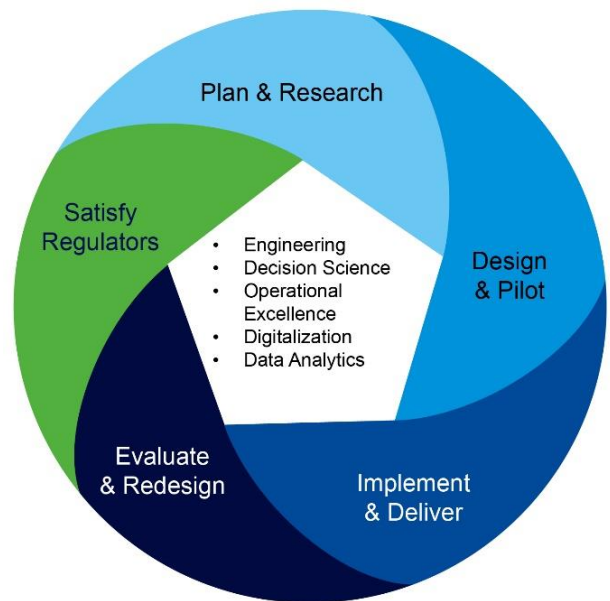
3.2 Company Summary

Services DNV could provide to a State Energy Office to execute HEEHR programs

During four decades of energy efficiency and clean energy research and delivery, DNV has developed and integrated innovative solutions into utility systems across North America that have become international industry standards. We operate in all stages of the energy efficiency lifecycle, as shown in the graphic, including pre-program market and technical research, program design and pilots; program implementation and operation; and post-program and contemporaneous evaluation and re-design.

Our project experience encompasses state and utility-run programs and the transition between the two. Our experience and expertise in regulatory filings (both pre- and post-program) support our clients' plans to reach clean energy goals and customer satisfaction objectives.

DNV's program designs stand up to regulatory and evaluation scrutiny and have successfully achieved regulatory approval for new program designs at major utilities nationwide. We build continuous improvement into our program designs, leveraging industry best practices, design improvements and innovation to manage the change to an increasingly rigorous policy environment. To tailor our plans, we mine existing program data, augmented by external and DNV-specific data, to provide a clearer picture of the landscape and existing pockets of underserved market segments and geographies. In this way, we will apply fresh yet proven approaches to overlay upon your customer base and specific remaining opportunities for savings.



To win regulatory approval to deliver programs within each state's changing regulatory environment, DNV demonstrates through the program design and detailed implementation plans that 1) we have a sound plan for creating organizational and contractual structures that build on existing market and customer engagement; 2) the program designs offer best-in-class performance in energy savings, GHG emissions reductions, cost-effectiveness and customer satisfaction; and 3) program designs are founded upon an extensive body of proven program implementation designs, process flow charts and contractual documents as documentary evidence to support their readiness to launch.

We have comprehensive program controls to set incentive levels optimally, forecast future performance and then track real-time activities against that forecast. Additionally, our ISO 9001-certified quality management systems reduce project risk and variance and our ISO 27001-certified information security standards ensure data and information security.