



San Diego Gas & Electric®

Residential New Construction

Advanced Home Program

2009

Participant Handbook

Policies and Procedures

For more information or questions, please contact a Utility representative at:
NewHomes@sdge.com or 1-866-631-1744

Table of Contents

| | | |
|---|--|--------|
| 1 | Introduction | - 3 - |
| 2 | General Requirements and Eligibility | - 3 - |
| | 2.1 Standards Compliance..... | - 3 - |
| | 2.2 Required Documents..... | - 4 - |
| | 2.3 Electronic Construction Plan Submission | - 4 - |
| | 2.4 Dwelling Unit Descriptions | - 5 - |
| | 2.4.1 Single-Family Project Building Design Type | - 5 - |
| | 2.4.2 Multi-Family Project Building Design Type | - 5 - |
| | 2.4.3 Non Qualifying Facilities | - 5 - |
| | 2.5 Project Viability | - 5 - |
| | 2.6 Program Processes | - 6 - |
| 3 | California ENERGY STAR® New Homes Program | - 6 - |
| | 3.1 Verification and Documentation | - 6 - |
| | 3.2 Financial Incentives | - 6 - |
| 4 | High-Rise, Multi-Family Program | - 7 - |
| | 4.1 Verification and Documentation | - 7 - |
| | 4.2 Financial Incentives | - 7 - |
| 5 | High-Performing New Homes Tier I - 15% Better Than Title 24 | - 7 - |
| | 5.1 Verification and Documentation | - 8 - |
| | 5.2 Financial Incentives | - 8 - |
| 6 | High-Performing New Homes Tier II - 35% Better Than Title 24 | - 8 - |
| | 6.1 Verification and Documentation | - 8 - |
| | 6.2 Financial Incentives | - 8 - |
| | 6.3 Program Overview..... | - 9 - |
| 7 | New Solar Homes Partnership..... | - 10 - |
| 8 | For More Information | - 10 - |

For more information or questions, please contact a Utility representative at:
NewHomes@sdge.com or 1-866-631-1744

1 Introduction

The *Advanced Home Program (Program)*, offered by San Diego Gas & Electric (SDG&E®), promotes a comprehensive residential new construction concept with a cross-cutting focus on sustainable design and construction, green building practices, energy efficiency and emerging technologies. Through a combination of education, design assistance and financial support, the *Program* works with building and related industries to exceed compliance with the *California Code of Regulations, Title 24, Part 6, 2005 Building Energy Efficiency Standards for Residential and Nonresidential Buildings (Standards)*, to prepare builders for changes to the Standards and to create future pathways beyond compliance and traditional energy savings objectives. The Advanced Home Program is offered through a diverse portfolio of programs by the utility (*Utility*). Participation is open to single-family, low- and high-rise multi-family residential new construction.

The *Program* offers three methods of participation, all with a performance-based approach:

1. California ENERGY STAR® New Homes Program

ENERGY STAR® is a national, voluntary program sponsored and developed by the United States Environmental Protection Agency (EPA) that promotes energy-efficient products, including homes. Homes that have earned the ENERGY STAR label meet the EPA's performance guidelines for energy efficiency following third party verification from an accredited organization. Further information can be reviewed at the EPA ENERGY STAR internet site, www.energystar.gov.

2. High-Rise Multi-Family Program

Participation in this program increases the overall energy efficiency of the project to 15% or greater than compliance as detailed in the compliance models.

3. High-Performing New Homes Program

Tier I - At least 15% better than Title 24 as detailed in the compliance models.

Tier II - At least 35% better than Title 24 and space cooling 40% better as detailed in the compliance models.

2 General Requirements and Eligibility

To qualify for the *Advanced Home Program*, the project must be residential new construction receiving electric distribution and/or natural gas distribution service from the Utility and on Utility residential rates. Projects can only participate in one performance-based method. The project cannot receive energy-efficiency funding from any other publicly funded source. Funding is limited and available on a first-come, first-served basis. Note: Incentives will not be paid until all necessary documentation has been submitted.

The Utility reserves the right to modify or discontinue this *Program* without prior notice, either at its discretion or by order of the California Public Utilities Commission (CPUC).

2.1 Standards Compliance

Compliance with the *Standards* must be demonstrated through the performance method utilizing approved California Energy Commission (CEC) compliance software. Compliance must be demonstrated for the building as a whole and may not group unrelated or detached buildings together.

2.2 Required Documents

The following documents are required for Program participation. Note: Incentives will not be paid until all necessary documentation has been submitted.

- Completed and signed *Advanced Home Program Agreement* - incentive payments are available only to applicants that are owners or builders/developers of the project.
- Construction drawings for each plan type - these drawings should contain the floor plans, elevation and sections of the architectural design as well as the mechanical, electrical and plumbing plans if applicable. Plans may be submitted either through traditional means or electronically.
 - The applicant must notify the Utility of any changes to the plans that will affect the total energy use of the structure, such as added or relocated windows, addition of bonus rooms or other areas not shown on the compliance documentation, changes in proposed heating, cooling or water heating equipment, and/or changes to the building shell. In cases where equipment and/or construction elements vary from default or minimum efficiency values, the Utility may require supporting documentation such as mechanical equipment specification sheets
- Title 24 energy compliance computer run (CF-1R) created by a Certified Energy Plans Examiner (CEPE). The CEPE must be currently certified with the California Association of Building Energy Consultants (CABEC).
- Title 24 input files for all energy compliance documents submitted to the building department for a construction permit from the computer performance method. Accepted electronic files are MP7 and BLD.
- Site/Plot maps for custom homes or multi-family projects - site plans for custom homes must include orientation.
- Site plans for multi-family projects must designate the building plan type.
- Sequence or phasing documents for all construction type with the exception of projects that will not be phased construction.
- Tract map for all subdivided projects - tract maps should be final as recorded if available.
- Address lists - address lists should include the lot, plan type building number and/or addresses of the dwelling units.
- Applicants participating in the California ENERGY STAR New Homes Program must also complete the EPA ENERGY STAR Partnership Agreement. The Agreement must be sent to the EPA in order to be recognized as an ENERGY STAR participant. A copy of the Agreement must be also sent to the Utility. Applicants will receive marketing materials and access to the ENERGY STAR logos directly from the EPA.

2.3 Electronic Construction Plan Submission

Each project will require a full set of construction plans to be submitted to the Utility to participate in the Programs. In an effort to reduce the amount of materials and resources required to produce a traditional set of plans, the Utility will provide a financial incentive to the *Program* applicant to submit plans electronically.

Electronic plan files submitted will be reviewed for applicability of the files to the submitted project. Currently accepted formats are Adobe® Acrobat® and AutoCAD® files. The Utility will accept these files via an email or other digital formats including USB drives and compact disks. In order to preclude firewall issues from preventing incomplete file transfers, contact the Utility before sending files via email.

The Electronic Construction Plan incentive will be paid following Utility project plan review, approval and project completion. Incentives will be paid based upon the project and not for each plan type. Projects submitted for subsequent Agreements using the same construction plans are not eligible for an additional incentive.

Table 1. Electronic Construction Plan Incentive

| Electronic Plan Submission | Construction Type | Incentive | Incentive Unit |
|----------------------------|-------------------|-----------|----------------|
| Electronic Plan Files | All Construction | \$100.00 | Per Project |

2.4 Dwelling Unit Descriptions

The following defines the dwelling unit types that are Program participants:

2.4.1 Single-Family Project Building Design Type

Detached: A single- or multiple-story structure consisting of one unit not attached to another building (except a garage or casitas). This may be either a custom home or part of a larger project consisting of multiple units/lots. Dwelling structures detached from the primary residence, such as casitas, that are residential living areas must also meet all *Program* criteria but are not eligible for a separate incentive.

Duplex: A single-story structure that consisting of two dwelling units. The duplex can be a single structure or part of a larger project consisting of multiple structures and units.

Townhome (less than 3 units): A multiple-story structure consisting of two dwelling units. The townhome can be a single structure or part of a larger project consisting of multiple structures and units.

Manufactured Housing: A home manufactured off-site and assembled on-site. The following criteria must be met: the home must sit on a permanent foundation, have a building permit, must provide Title 24 documentation described in Section 2.2, and must provide necessary documentation showing options in the home (window, insulation, HVAC, etc.) that affect energy use.

2.4.2 Multi-Family Project Building Design Type

Townhome (3 or more units): A multiple-story structure consisting of three or more dwelling units where the dwelling units are multiple-story. The townhome can be a single structure or part of a larger project consisting of multiple structures and units. The dwellings may be owned by the occupant or rented.

Condominium: A single- or multiple-story structure consisting of three or more dwelling units. The dwelling units are owned by the occupants.

Apartment: A single or multiple story structure consisting of three or more dwelling units. The dwelling units are not owned by the occupants.

2.4.3 Non Qualifying Facilities

The following facilities do not qualify for participation: remodels, additions, mobile homes, residential care facilities, hotels, motels and dormitories. Community facilities qualify only if they contain at least one dwelling unit. The Utility offers a broad portfolio of other *Programs* that may provide support to these facilities.

2.5 Project Viability

Applicants may be required to demonstrate the viability of the project they are submitting. Following Utility approval of the *Agreement* the applicant may be asked to supply documents that reflect a commitment

to timely construction. Documents required may be: grading permit, building permit, construction schedules, financing and/or other pertinent documents. If, after a review of these documents, the Utility determines that the project is not progressing, the Utility reserves the right to cancel the Advanced Home Program Agreement. If these documents are not available, the applicant must demonstrate that the project is in the process of obtaining construction permits. If the Agreement is cancelled, the applicant may reapply at a later date.

2.6 Program Processes

Following a review of the *Agreement* and related documents, funds will be reserved for the project and the applicant will receive a letter of acceptance. The Utility retains final authority to determine program compliance and eligibility for incentives. Prior to payment of incentives, the Utility will review all inspection documents to ensure *Program* compliance. Incentives will be paid at either the completion of the project through verification or at the completion of construction phases, whichever is more appropriate.

3 California ENERGY STAR® New Homes Program

The *California ENERGY STAR New Homes Program* is a statewide program offered by Pacific Gas and Electric, San Diego Gas & Electric, Southern California Edison and Southern California Gas Company. In order to apply for the *Program*, projects must be permitted under the *2005 Building Energy Efficiency Standards for Residential and Nonresidential Buildings (Standards)* and exceed compliance with the *Standards* by a minimum of 15% in the CEC climate zone in which the project is situated. The 15% margin is based upon the Time Dependent Valuation (TDV) results generated by the CEC approved compliance software. The margin is calculated from the energy use of the building in kBtu/sf-yr and the percentile relationship between the compliance margin and the standard design. The following equation is used.

$$[(\text{Standard Design} - \text{Proposed Design})/\text{Standard Design}]*100\%.$$

To qualify for the *California ENERGY STAR New Homes Program* and *EPA ENERGY STAR Qualified New Homes Program*, the *Thermal Bypass Inspection Checklist* must be completed. The Checklist requires visual inspection of framing areas where air barriers are commonly missed and inspection of insulation installation to ensure proper alignment with air barriers. Verification is documented by site inspection by an approved and certified Home Energy Rating System (HERS) rater. Compliance with this procedure fulfills the requirements for the *Standard's* compliance credit specified in the *Residential Alternative Calculation Method (ACM) Approval Manual, Appendix RH*, and earns credit towards meeting the *California ENERGY STAR New Homes* participation criteria.

3.1 Verification and Documentation

The Utility and the EPA will require a certified HERS rater to perform field verification of ENERGY STAR elements defined in the final compliance document prior to incentive payment for all *California ENERGY STAR New Homes Program* participants. It is the responsibility of the applicant to obtain these services and provide HERS rater information to the Utility at the time the project is submitted to the *Program*. The HERS rater will be responsible for reporting all verifications for enrolled projects in the Utility created project located in the registry of their certified HERS provider.

3.2 Financial Incentives

Incentives for the *California ENERGY STAR New Homes Program* are based upon the CEC climate zone in which the project is constructed. A calculator for the incentives is provided in the *Agreement*.

Table 2. California ENERGY STAR New Homes Program Incentives

| Performance Program | Construction Type | Incentive | Incentive Unit |
|---|-------------------|-----------|----------------|
| California Energy Star New Homes, Climate Zone 1-7 | Single-Family | \$400.00 | Dwelling |
| | Multi-Family | \$150.00 | Dwelling |
| California Energy Star New Homes, Climate Zone 8-16 | Single-Family | \$500.00 | Dwelling |
| | Multi-Family | \$200.00 | Dwelling |

4 High-Rise Multi-Family Program

The *High-Rise Multi-Family Program* is offered by the Utility to support builders in this market sector. The Program is performance-based and requires each project to be permitted under the *2005 Building Energy Efficiency Standards for Residential and Nonresidential Buildings (Standards)* and exceed compliance by 15%. The same calculation for performance applies with the exception that the lighting, receptacle and process load's standard and proposed budgets are ignored in the calculation. The Program is open to all projects with structures of four or more habitable stories. Structures of four or more habitable stories are not eligible for the ENERGY STAR label. The requirement for the *Thermal Bypass Checklist* does not apply to the *High-Rise Multi-Family Program*.

4.1 Verification and Documentation

The Utility will require a HERS rater to perform field verification and documentation of installation of specified elements defined in the final compliance document prior to payment of incentives. It will be the responsibility of the applicant to obtain these services and provide HERS rater information to the Utility at the time the project is submitted to the Program. The HERS rater will be responsible for reporting all verifications for enrolled projects in the Utility created project located in the registry of their certified HERS provider.

4.2 Financial Incentives

Incentives for the *High-Rise Multi-Family Program* are based upon the CEC climate zone in which the project is constructed. A calculator for the incentives is provided in the *Agreement*.

Table 3. High Rise Multifamily Program Incentives

| Performance Program | Construction Type | Incentive | Incentive Unit |
|---|-------------------|-----------|----------------|
| High-Rise Multi-Family, Climate Zone 1-7 | Multi-Family | \$150.00 | Dwelling |
| High-Rise Multi-Family, Climate Zone 8-16 | Multi-Family | \$200.00 | Dwelling |

5 High-Performing New Homes Tier I - 15% Better Than Title 24

In order to apply for the Tier I Program, projects must be permitted under the *2005 Building Energy Efficiency Standards for Residential and Nonresidential Buildings Standards*. Projects must also exceed compliance with the Standards by a minimum of 15%, calculated using the same methodology as the ENERGY STAR New Homes program described in Section 3, in the CEC climate zone in which the project is situated.

5.1 Verification and Documentation

If the project requires HERS verification of measures taken for compliance, the applicant must engage a HERS rater for those measures. It will be the responsibility of the applicant to obtain these services and provide HERS rater information to the Utility at the time the project is submitted to the *Program*. The HERS rater will be responsible for reporting all verifications for enrolled projects in the Utility created project located in the registry of their certified HERS provider.

5.2 Financial Incentives

Incentives for the *Tier I Program* are based upon the construction type and number of units. A calculator for the incentives is provided in the *Agreement*.

Table 4. Performance Program Incentives

| Performance Program | Construction Type | Incentive | Incentive Unit |
|--|-------------------|-----------|----------------|
| High-Performing New Homes Tier I - 15% Better Than Title 24 Climate Zone 1-7 | Single-Family | \$400.00 | Dwelling |
| | Multi-Family | \$150.00 | Dwelling |
| High-Performing New Homes Tier I - 15% Better Than Title 24 Climate Zone 8-16 | Single-Family | \$500.00 | Dwelling |
| | Multi-Family | \$200.00 | Dwelling |

6 High-Performing New Homes Tier II - 35% Better Than Title 24

In order to apply for the *Tier II Program*, projects must be permitted under the *2005 Building Energy Efficiency Standards for Residential and Nonresidential Buildings (Standards)*. Projects must be single-family dwellings, and exceed compliance with the *Standards* by a minimum of 35%, calculated using the same methodology as described in Section 3, in the CEC climate zone in which the project is situated. Projects must have an air conditioning system installed, show a reduction of 40% in the cooling budget and builder supplied appliances must have the ENERGY STAR label.

6.1 Verification and Documentation

If the project requires HERS verification of measures taken for compliance, the applicant must engage a HERS rater for those measures. It will be the responsibility of the applicant to obtain these services and provide HERS rater information to the Utility at the time the project is submitted to the *Program*. The HERS rater will be responsible for reporting all verifications for enrolled projects in the Utility created project located in the registry of their certified HERS provider.

6.2 Financial Incentives

Incentives for the *Tier II Program* are based upon the construction type and number of units. Tier II has no climate zone provisions. A calculator for the incentives is provided in the *Agreement*.

Table 5. Performance Program Incentives

| Performance Program | Construction Type | Incentive | Incentive Unit |
|---|-------------------|------------|----------------|
| High-Performing New Homes Tier II - 35% Better Than Title 24 Climate Zone 1-16 | Single-Family | \$2,000.00 | Dwelling |

Table 6. Program Overview

| Housing Type | Performance Program | Requirements of Program Beyond Code | | | | Incentive per Dwelling | |
|---------------|-----------------------------------|-------------------------------------|--------------------------|--------------------------------------|-----------------------|------------------------|---------------------|
| | | 15% Better Than Title 24 | 35% Better Than Title 24 | Energy Star Thermal Bypass Checklist | 40% Cooling Reduction | Climate Zone 1 - 7 | Climate Zone 8 - 16 |
| Single-Family | California Energy Star | X | | X | | \$400 | \$500 |
| | High-Performing New Homes Tier I | X | | | | \$400 | \$500 |
| | High-Performing New Homes Tier II | | X | | X | \$2,000 | |

| | | | | | | | |
|--|----------------------------------|---|--|--|---|-------|-------|
| Low-Rise Multi-Family (≤ 3 Stories) | California Energy Star | X | | | X | \$150 | \$200 |
| | High-Performing New Homes Tier I | X | | | | \$150 | \$200 |

| | | | | | | | |
|---|--------------------------------|---|--|--|--|-------|-------|
| High-Rise Multi-Family (≥ 4 Stories) | High-Rise Multi-Family Program | X | | | | \$150 | \$200 |
|---|--------------------------------|---|--|--|--|-------|-------|

7 New Solar Homes Partnership

San Diego Gas & Electric's *New Solar Homes Partnership (NSHP)* is part of the comprehensive statewide solar program, known as the California Solar Initiative. The NSHP provides financial incentives and other support to home builders, encouraging the construction of new, energy efficient solar homes that save homeowners money on their electric bills and protect the environment.

To qualify as a partner in the NSHP program and receive incentives from San Diego Gas & Electric, builders must meet these basic requirements:

- **Location:** First make sure the location of the development will receive electric service from SDG&E. If your development is in another electric utility's region, or if you're unsure of the utility in your project area, please check the Utilities Database.
- **Energy Efficiency:** The new homes must exceed Title 24 energy efficiency requirements by 15 percent, and are encouraged to reach Tier 2 (35% better than Title 24 and 40% improvement space cooling budget).
- **Solar PV Roof:** Include a solar PV roof either as a standard feature or as an available option in your development. Note: financial incentive levels and marketing support are higher for developments that feature solar PV as a standard feature.
- **New Solar Homes Partnership Guidebook:** Download an [NSHP Guidebook](#) from the California Energy Commission for complete information about the program and how to apply for your incentive with the appropriate forms. Download the NSHP Guidebook and Forms from the documents page.

Projects are encouraged to participate in both the Advanced Home Program and the New Solar Homes Partnership.

For further information please contact us at:

San Diego Gas & Electric
New Solar Homes Partnership
8335 Century Park Court, CP12G
San Diego, CA 92123

Toll Free Phone: 866-631-1744

Local Phone: 858-650-4140

Fax: 866-666-4104

Email: newsolarhomes@sdge.com

8 For More Information

Further information regarding the *Advanced Home Program* and participation can be obtained from a Utility representative. The representative can work with the design team to determine which *Program* path is best suited to the project and how to optimize its energy efficiency. Additionally, the Utility offers design assistance for project review and training classes. For more information on these services and other Utility *Programs*, contact a Utility representative or review the company's website at www.sdge.com/construction, email us at NewHomes@sdge.com or call 1-866-631-1744.