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2010 Housing Innovation Awards

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2019 Housing Innovation Awards

Application Tracker & Required Documents Checklist

Application Tracker

General Information (REQUIRED)

Performance (REQUIRED)

Land, Design & Quality Construction (REQUIRED)

Business, Sales, & Marketing (REQUIRED)

Bonus Options

Affordable (REQUIRED FOR AFFORDABLE ENTRIES ONLY)

Application Portal Required Documentation Checklist

Application Form with ALL required sections completed

DOE ZERH verification form and certificate (PDF).

IAP Certificate

A minimum of **10 photographs** (JPG 0.5 to 10 MB file size)

One High-Res Front Elevation Image in Good Lighting (2400-4800ppi)

Finished elevations (a minimum of 3 photographs)

Finished interiors (a minimum of 3 photographs)

Home under construction showing significant energy-efficiency details (a minimum of 3 photographs)

Other Photographs (optional)

Floor plans (simple drawings as JPGs or PDFs)

Optional (but highly encouraged) – Home Owner Quotes

Optional (but highly encouraged) – video or audio home owner testimony

Optional (but highly encouraged) – utility bills or actual performance data

Optional (but highly encouraged) – links to videos, pdfs of other program certifications and awards, and other attachments I have listed in the narrative.

Have I successfully completed and/or uploaded all required documentation?

ACKNOWLEDGMENT: By submitting this application form and the required documentation, including photographs, I hereby give permission to DOE and its contractors to use the materials for press alerts, case studies, the Tour of Zero Energy Buildings website, the DOE Building America Program and other DOE websites, articles, and promotions.



INCOMPLETE
INCOMPLETE
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OPTIONAL
INCOMPLETE



Not Yet!

*ind floor plans, I
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s appropriate.*

2019 Housing Innovation Awards Application Form

Application Category	
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Project Name	
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Project Location

Street Address	
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City	
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State	
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Zip Code	
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Applicant Information

Company Name	
--------------	--

Contact Name	
--------------	--

City/State	
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Email	
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Phone	
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Website	
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Project Information

ZERH Compliance Path	
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Completion Date	
-----------------	--

Climate Zone	
--------------	--

Local Code Equivalent	
-----------------------	--

Housing Type	
--------------	--

Conditioned Square Feet	
-------------------------	--

# of Bedrooms	
---------------	--

# of Baths	
------------	--

# of Floors Above Grade	
-------------------------	--

Orientation	
-------------	--

Finished Basement (Y/N)	
-------------------------	--

PV System	
-----------	--

Other Certifications

ENERGY STAR	
-------------	--

IBHS Fortified Home	
---------------------	--

ZERH Quality Man. Guidelines	
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PHIUS+	
--------	--

LEED for Homes	
----------------	--

NGBS	
------	--

EPA WaterSense	
----------------	--

Other Local/National Programs Type N/A if none	
---	--

Performance Information		
	Without PV	With PV- Type N/A if none
HERS Index		
Annual Utility Costs		
Energy Cost Savings		
Energy Savings		
Incremental Costs		

Notes:

- 1) Check DOE ZERH Verification report or other ratings
- 2) Projected based on HERS software analysis; check DOE ZERH verification report or other ratings
- 3) Provide in kWh, Therms, MMBtus, Gallons, etc (please specify)
- 4) Only include upgrade costs required to achieve ZERH certification without incentives. This is not the overall cost of the project for non-relevant upgrades (examples: expensive finishes added for design with no required performance characteristics.)
without PV utility costs + cost savings
- 6) To protect privacy, please avoid using owner/occupant name as project name

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Custom Buyer	Custom home built for a specific buyer
Custom Spec	Custom home built on an individual rather than production scale to be sold on speculation rather than pre-ordered by a buyer
Production	Homes intended to be reproduced in large volumes using standard approaches and plans. Note: Builder must have certified at least 15 DOE ZERH since June 2018
Multi-family	A building with more than two units serving multiple homeowners / renter groups. Note: For multi-family projects please include data for at least one representative unit.
Affordable	A home built to an affordable price point that includes income-eligibility requirements for owners and/or occupants

Be sure to answer all questions in this section.	
<u>Application Category</u>	INCOMPLETE
<u>Project Name</u>	INCOMPLETE
<u>Project Location</u>	INCOMPLETE
<u>Applicant Info</u>	INCOMPLETE
<u>Project Info</u>	INCOMPLETE
<u>Other Certifications</u>	INCOMPLETE
<u>Performance Info</u>	INCOMPLETE
*Note: If a specific section does not apply to your project, please type N/A in the answer field.	

in only
in only

Above-Grade Walls

Which best describes the above-grade wall type of this home?

Did you use advanced framing techniques? If so, please check all that apply.

What is the total R-value of this home's above-grade walls? *Enter a value.*

Please describe the wall construction layers from interior to exterior (Example): ___ inch drywall; ___ inch studs at ___ inch on center with ___ inches ___ type of wall cavity insulation or ___ inch ICF or SIP or CMUs etc.; sheathing type, housewrap or other weather-resistant barrier type, ___ inch EPS/XPS/poly iso rigid foam; drainage plane; and siding.

Optional: Please add any other details it would be helpful to know about above-grade walls

Roof

Roof construction?

Roof design?

Cladding type?

Is the roof ENERGY STAR cool roof certified?

Please describe the roof construction layers from the interior to the exterior:

Optional: Please add any other details it would be helpful to know about the roof

Attic

Is this home's attic vented or unvented?

Insulation Type 1

R-Value

Inches Installed

Location
Insulation Type 2
R-Value (If No Selection please type N/A)
Inches Installed (If No Selection please type N/A)
Location (If No Selection please type N/A)
Insulation Type 3
R-Value (If No Selection please type N/A)
Inches Installed (If No Selection please type N/A)
Location (If No Selection please type N/A)
Did you use raised heel energy trusses?
Radiant Barrier included?
<p>Please describe any other details about the attic below. (If applicable, include number of inches for energy trusses.)</p>

Foundation & Below-G

Which best describes this home's type of foundation?
Which best describes this home's below-grade walls?
<p>Please describe the basement or crawlspace wall construction layers from the interior to the exterior, identifying all applicable layers (Example): __ inch drywall; __ inch studs at __ inch on center; __ inches open-cell/closed -cell spray foam; __ inches rigid foam; __ inch ICF, poured concrete, or precast concrete; _____ water proofing; __ inches rigid foam; dimpled plastic drain mat; or SIP or CMUs etc.; sheathing type, housewrap or other weather-resistant barrier type, rigid foam thickness and type, drainage plane, and siding. Total R-value: R-__</p>
<p><i>Optional:</i> Please add any other details it would be helpful to know about the foundation and below-grade walls.</p>

Windows

How many layers of glass do most windows in this home have?
What is the U-value(s) of the windows? _
What is the Solar Heat Gain Coefficient(s) (SHGC) of the windows? _

Does the U-value and/or SHGC value vary depending on what direction the windows are facing?
Do the windows have low emissivity coatings?
Are the windows filled with a gas?
What type of frame was used on most of the windows?
What style are the windows in the home?
Were any shading devices or dynamic glazing included?
<i>Optional:</i> Please add any other details it would be helpful to know about the windows.

Air Sealing

Record the result of the whole-house blower door air leakage test in air changes per hour at 50 Pascals pressure differential (ACH50).
Please describe wall, attic, and floor air sealing strategies in detail for the above-grade walls, below-grade walls, attic floor or ceiling, and foundation.

Ventilation

What type of ventilation system does this home have?
Describe any additional sensors or controls (ex. timers, humidity sensors).
List filter MERV ratings and filter locations.
Provide any additional relevant details.

Hot Water

<i>Please answer the following three questions about</i>	
(1) How many gallons of water does the hot water heater hold? Please enter 0 if the system is tankless or instantaneous.	
(2) What type of water heater?	
(3) What is the efficiency of the unit? Please record units in AFUE, EF, or COP.	
Does this home have a back-up water heater? If so, what kind?	
Does this home have combined heating and domestic hot water?	
Does this home have a solar thermal water heating system?	

Please describe the water heating system in detail. Topics to include: type and efficiency, location

HVAC

What is the **primary** HVAC system in this home?

Which best describes the **primary** heating system of this home?

Please fill in the blanks of the selected choice above for the home's primary heating system.

Does this home have a **secondary** heating system?

Which best describes the **secondary** heating system of this home?

Please fill in the blanks of the selected choice above for the home's **secondary** heating system. *(Type N/A if no selection)*

Does the home make use of passive solar design?

Does this home have air conditioning?

Please fill in the blanks (if applicable) of the selected choice above for the home's AC unit. *(Type N/A if none)*

Which best describes the duct system in this home?

Compact duct design?

Ducts in conditioned space?

Please describe the HVAC, air conditioning unit, duct design, and any passive solar design for the home.

Lighting

What percent of uses the following lighting types? (Please exclude appliance lighting)

LED

CFL

Other, please explain below.

Does any of the lighting have controls?

Does this home incorporate any daylighting strategies?

Please record the details of daylighting strategies here. *Type N/A if none.*

Optional: Please add any other details it would be helpful to know about the windows.

Appliances

List all ENERGY STAR qualifying appliances.

Solar

How many kilowatts (KW) of solar photovoltaics was installed on this home? Enter 0 if no solar was installed.

If no solar photovoltaics were installed, what steps were taken to make this home solar ready?

Does this home have battery storage?

If PV was installed, indicate location.

Please record details about PV and battery. *Type N/A if none.*

What type of PV was installed?

Was solar water heating installed on this home? If yes, what type of system was installed? *Type N/A if no selection.*

Water Conserva

Does this home have low-flow plumbing fixtures?

Does this home have any WaterSense labeled plumbing fixtures?

Please list WaterSense Certified products. *Type N/A if none.*

Is the whole house WaterSense certified?

What type of hot water plumbing design is used?

Please record compact plumbing design pipe type. *Type N/A if none.*

Is there a recirculation pump on any of the plumbing lines?

What water-saving features does your landscaping incorporate?

Does this home have a water recycling system?

Does this home have a rain water collection system?

Does this home incorporate any storm water management practices?

If applicable, please describe water recycling, rain water collection systems, or storm water management practices. *Type N/A if none.*

Energy Manager

If your home has an energy management system, please describe it here (smart thermostats, smart lighting, smart appliances, Wi-Fi connected, PV tracking, etc.)

Other

Does this home have an electric vehicle charging station?

Does this home incorporate any aging-in-place or universal design features?

If yes, please explain them here. *Type N/A if none.*

Please list any low emission products are used in this home (ex. Low-/no-VOC, no formaldehyde). *Type N/A if none.*

Please list other indoor air quality systems and solutions implemented in this home. *Type N/A if none.*

Please list any sustainable or recycled products are used in the home? *Type N/A if none.*

Are there any other energy efficient or sustainable features of the home you would like to mention? *Type N/A if none.*

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<i>the home's primary water heater.</i>

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Tracker

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Land Developm

Describe any site issues addressed to locate a zero energy ready home on this property. Discuss topography and site constraints, solar orientation, landscaping consideration related to energy efficiency, site water runoff issues, and landscaping for water conservation. (Note: all sites have unique characteristics. Even if you are building on a home owner's lot with no choice about site, consider how you dealt with or optimized site-specific conditions.)

Design (R

Describe the home's architectural style (e.g., traditional colonial, modern). Note how the home's design impacted the energy-efficiency and performance of the home. Include discussion of climate-specific design features, regional design factors, natural comfort factors, disaster resistance, sustainable materials, etc. Include ways that you have integrated energy/performance features into aesthetic or architectural design. Discuss considerations in design process to maximize energy efficiency (apart from renewable energy). Discuss considerations in design process for cost-effective achievement of performance goals.

Quality Construc

What quality management practices did you employ to ensure minimum defects and waste while incorporating proven advanced technologies? Examples: Pre-construction team meetings; comprehensive construction documents; quality management plan; training; material waste management; etc. (Note: If you have official quality assurance program)

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Be sure to answer all questions in this section.

Land Development

INCOMPLETE

Design

INCOMPLETE

Quality Construction

INCOMPLETE

**Note: If a specific section does not apply to your project,
please type N/A in the answer field.*

Business Metr

How did you measure the business results of your investment in Zero Energy Ready Homes? Explain your comprehensive business model for Zero Energy Ready Homes. Examples: Incremental cost of construction above code; time-to-sale; number of home buyer visitors; media coverage; customer satisfaction surveys; actual energy billing data. (Note: for affordable or non-profit projects these may be different. Discuss any analysis of cost optimization while achieving performance goals. Consider the metrics that you track to identify success in your programs or that fit within your organization's mission).

Sales, Marketing, and Cons

What marketing and sales solutions did you employ to address the energy efficiency and performance of this home? How do you communicate high performance to your buyers? Give specific examples of how you market the Zero Energy Ready Home brand (Note: for affordable housing this might include creative examples such as training for occupants on how to optimize their home.) If your buyers seek you out, discuss ways that your marketing or messaging creates the demand. Examples: Sales training; displays; warranties; sales data comparisons to standard construction; tours; articles; videos home owner's manuals; marketing techniques; social media. **Note: Attaching examples of marketing materials in the application portal or linking to videos is recommended.**

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ics (REQUIRED)

Be sure to answer all question

[Business Metrics](#)

[Sales, Marketing, and Consumer E](#)

**Note: If a specific section does project, please type N/A in th*

umer Education (REQUIRED)

[cation Tracker](#)

s in this section.

INCOMPLETE

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*not apply to your
the answer field.*

Your Story: This section will help us with details collected from your unique approach is a success. All responses are optional but

How many homes a year do you build?

In what cities/states?

What types of homes do you build (percentage of each is helpful):

custom/production/spec;

single-family detached/duplex/multi-family;

affordable/entry-level/move-up/luxury?

Any gut rehab or remodeling?

When did you start building?

When did you become a partner with the DOE Zero Energy Ready Home Program?

How many DOE ZERH certified homes have you constructed?

How many certified homes do you currently have planned?

Have you made a commitment to certify all of your homes to the DOE ZERH?

If yes, when did you make that commitment?

Have you participated in other certification programs in the past (or do you currently)?

Are you committed to those programs?

Do you teach or participate in any builder, contractor, or home owner education activities?

As a ZERH home builder, how are you using this home and others you build to educate the public/industry?

What do you like about the DOE ZERH program?

Do you have suggestions to improve the DOE ZERH program?

What is your biggest challenge with energy-efficient high-performance construction?

What is the biggest reward?

Home owner (or occupant) Testimony: Has the house been occupied? If so, provide any testimony or quotes from the home owner or occupant about their experience living in a Zero Energy Ready Home. Testimony of occupant experience as it relates to performance (e.g. comfort, health, durability, efficiency) of the home is especially helpful. Feedback on how the home is actually performing, or quotes from occupants can earn you bonus points.

Home Owner Video or Audio testimonial: A quote from an occupant is informative, but hearing from that occupant directly can be a powerful marketing message. Links to home owner testimonial videos or audio testimonials can earn you bonus points.

Actual Utility Bills (or monitored performance data): If the home is occupied, please ask the home owner for utility bills. If you or another organization are monitoring the home's energy use, please provide energy usage data.

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Application Tracker

Affordable Housing (Required only for Affordable Housing Category) **affordability of your project:**

Location Characterization

Please describe any workforce training initiatives included in the project (Partnerships with formal programs to use the project to train local workforce). *Type N/A if none.*

Describe the funding mechanism for this project including any formal program or incentives (Low Income Housing Tax Credits, Qualified Allocation Plans, charitable organizations, donations, volunteer efforts). *Type N/A if none.*

Please describe any income eligibility requirements for purchasing this home (Percent of local household median income; specific income caps; workforce housing requirements, etc.) *Type N/A if none.*

Please describe any other aspects of this project's approach that specifically focus on affordability. Provide examples that clearly demonstrate appropriateness for this category. (List local market conditions such as whether the home is in an area of persistent poverty; discuss mechanisms such as green appraisers or energy efficient mortgage products; if applicable, discuss the use of market rate projects to subsidize affordable project; discuss any development housing affordability requirements related to the project; discuss ways that lower energy costs are leveraged to deliver a better product to the occupant)

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ory): Please answer the following questions relating to the

Be sure to answer

Affordable

ation Tracker

er all questions in this section.

Housing	INCOMPLETE
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Urban

Suburban Rural (note: this could be a drop down or check box)

Compliance Path

Climate Zone

Performance
Prescriptive

1
2
3
4
5
6
7
8

Above Grade Walls	
Wall Type Inputs	Advanced Framing Inputs
2x4, 16" o.c	24" On Center Stud Spacing
2x4, 24" o.c.	Single Top Plates
2x6, 16" o.c.	3-Stud Insulated Corner
2x6, 24" o.c.	2-Stud Corner with Drywall Clips
Double Wall	Open/Insulated Headers
Staggered Stud	Ladder Blocking at Interior Wall Intersections
SIPs	Conventional Framing Only
Insulated Concrete Foam (ICF)	Not Applicable (CMU, AAC, SIPs)
Concrete Masonry Unit (CMU)	Other (Explain Below)
Autoclaved Aerated Concrete (AAC)	No Selection
Concrete Panels	
Post and Beam	
Panelized or Modular	
Other (Explain Below)	
No selection	

Attics	
Attic Venting Inputs	Vented Attic Inputs
Vented Attic	Not applicable
Vented Above Roof Deck	Blown-in Fiberglass
Unvented (Hot Roof)	Blown-in Cellulose
Unvented, Vaulted Ceilings	Batt Fiberglass
Other (Explain Below)	Open-cell spray-foam on attic floor
No Selection	Closed-cell spray-foam on attic floor
	Other (Explain Below)
	No selection
Energy Trusses Inputs	Radiant

Yes, ___ inches (please record inches below)	Yes
No	No
No selection	No selection

Window Pane Inputs		Direction Inputs	
Double-pane		Yes	
Triple-pane		No	
No selection		No selection	
Gas Inputs		Design	
Yes, argon-filled		Fixed	
Yes, krypton-filled		Casement	
Other, please explain below.		Double-Hung	
No		Single-Hung	
No selection		Sliding	
		Tilt-and-Turn	
		Hopper	
		No selection	

Ventilation	
Ventilation System Inputs	
Exhaust-only	
HRV	
ERV	
Controlled central fan with fresh air intake and timered exhaust (Balanced).	
Fresh air intake with exhaust fans not timered to fresh air (Unbalanced).	
Supply Only	
Other (Explain Below)	
No selection	

Type		Backup	
Heat pump		Heat pump	
Ground-source heat pump		Ground-source heat pump	
Electric tank (non-heat-pump)		Electric tank (non-heat-pump)	
Electric tankless		Electric tankless	
Gas tank		Gas tank	
Gas tankless		Gas tankless	
Propane tank		Propane tank	
Propane tankless		Propane tankless	
Wall-hung boiler, gas		Wall-hung boiler, gas	

Wall-hung boiler, propane	Wall-hung boiler, propane
Solar Thermal, type _____ (Record	Solar Thermal, type _____ (Record type below
Other (Explain Below)	Other (Explain Below)
No selection	No backup
	No selection
Solar Thermal Inputs	Backup
Yes, Please explain below	Heat Pump
No	Gas
No selection	Propane
	Electric (Non-Heat Pump)
	Solar Thermal
	No Backup
	No selection

1	HVAC Type Inputs
Heat Pump	Central Air-Source Heat Pump, ___ HSPF, ___ SEER
Gas Furnace	Ductless Mini-Split Heat Pump, ___ HSPF, ___ SEER,
Propane Furnace	Ducted Mini-Split Heat Pump, ___ HSPF, ___ SEER, _
Electric (Non-Heat Pump)	Ground-Source Heat Pump with ___ central air hand
Other (Explain Below)	Air-to-Water Heat Pump with ___ central air handle
Hydronic Radiant Heating	Gas Furnace, ___ AFUE
No Selection	Electric Furnace
	Boiler with ___ hydroil, ___ radiant floor heat, ___ w
Yes	Electric Baseboard
No	Passive Solar Design ___ % of space heating provide
	Other (Explain Below)
	No selection
AC Inputs	Ducts System Inputs
Yes, Air Conditioner Unit, ___ SEER	Rigid metal
Yes, Heat Pump, ___ SEER or ___ EER	Flex duct
Yes, Evaporative Cooling	Fiberboard ducts
Yes, Other (please explain below)	Small-diameter high-velocity
No	No Ducts
	Other (Explain Below)
No selection	No selection

	Lighting
Lighting Controls Inputs	Daylight
Motion Sensors	Sky Lights, please record number below
Daylight Sensors	Solar Tubes, please record number below
Timers	Automated Window Blinds

Lighting controls integrated with home	No
Other, please explain below.	No selection
No selection	

Low-Flow Inputs		WaterSense Fixtures Inputs	
Yes, low-flow fixtures		Showerhead	
Yes, low-flow fixtures that are WaterSense Faucets			
No		Toilets	
No selection		Exterior irrigation	
		No selection	
Recirc. Inputs		Plumbing Type	
No		Central manifold with PEX piping	
Yes, pump activated by button		Metal pipe with trunk and branch	
Yes, Pump activated by a motion sensor		Compact plumbing design, pipe type _____ (Please record pipe type below)	
Yes, Pump uses "smart" programming		Recirculation	
No selection		Other (Explain Below)	
		No Selection	
Water Recycling Inputs		Storm Inputs	
Yes, please explain below.		Yes, please explain below.	
No		No	
No selection		No selection	

Other	
EV Inputs	Aging Inputs
Yes	Yes, please explain below.
No	No
No selection	No selection

Category

Custom Buyer
Custom Spec
Affordable
Multi-family
Production

Code

2006 IECC
2009 IECC
2012 IECC
2015 IECC
Other

Roofs	
	Roof Type Input Truss Rafter SIPs Other (Explain Below) No selection Cladding Input Asphalt, composite, rubber, or architectural shingles Cement tile Metal TPO (for flat roofs) Other (Explain Below) No selection

Foundation and Below Ground	
N/A	Foundation Inputs Insulated Basement Uninsulated Basement Vented Crawlspace Unvented Crawlspace Pier Foundation Slab on grade Other (Explain Below) No selection

Windows

Emissivity Inputs

Yes, low-e

Yes, low-e2 (coated on 2 sides)

Yes, low-e3 (coated on 3 sides)

No

No selection

Frame Inputs

Vinyl

Wood

Aluminum-Clad Wood

Fiberglass

Other

No selection

Hot Water

Combined H&HW Inputs

Yes, Please explain below

No

No selection



Water Conservation

Certified Inputs

Yes, WaterSense Certified

No
No selection

Landscaping Inputs

Drought-resistant landscaping

Moisture sensing irrigation

Drip irrigation

Smart or predictive irrigation

No selection

Water Recycling

Yes, please explain below.

No
No selection

Affordable

Urban
Suburban
Rural

General

Yes

No

EnergyStar **Application Category**

v3.0

Affordable

v3.1

Custom (Buyer)

Custom (Spec)

Production

Multi-Family

Angle of Roof Input

Flat Roof

Gabled Roof

Hip Roof

Shed roof

Other (Explain Below)

No selection

ENERGY STAR input

Yes, ENERGY STAR cool roof certified

No

No selection

Grade Walls

Below-Grade Wall Inputs

Poured concrete

ICF

CMU

Pre-cast concrete (Superior Walls?)

Other (Explain Below)

No selection



Shading

Fixed awnings

Interior motorized blinds

Exterior motorized blinds

Within-window louvers

No shading

No selection

Dyanmic Glazing

PV Location Inputs	PV Type Inputs
Rooftop	Panels
Other, please explain below.	Shingles
No selection	Thin Film

Pole-Mounted Tracking
Roof-Mounted Tracking
Other, please explain below.
No selection

Housing Type

Single-Family Detached
Single-Family Attached (Townhome)
Multi-Family

Orientalio PV

North Owned
South Leased
East N/A
West

Water Recycling Inputs

Yes, please explain below.

No
No selection

Storm InpWater Recycling

Yes,
please explain below. Yes, please explain below.

No No
No selecti No selection