

# Federal, State and Utility Incentives for High Performance Homes in Nevada

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High Performance / Net-Zero Energy Homes  
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## Overview

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- Incentive types
- Federal and state tax credits
- Utility incentives
  - Homebuilders
  - Homeowners
- Examples
  - High Performance Home
  - Zero-Energy Home
- Summary

## Incentive Types

### Federal and State Tax Credits

- Homebuilder
  - New Homebuilder tax credit (\$2,000)
- Homeowner
  - Solar PV tax credit (\$2,000)
  - Solar thermal tax credit (\$2,000)
  - State Property tax exemption for renewable energy systems

### Utility rebates and rate design

- Cooling, lighting incentives
- Solar PV buydown
- Net metering with time of use rates

## Federal and State Tax Credits

	Tax Credit To / Amount	
	Builder	Homeowner
<i>Federal Tax Credits</i> (expire 12/31/08)		
Energy efficient new homes	<b>\$2,000</b>	
Solar PV systems		<b>\$2,000</b>
Solar thermal systems		<b>\$2,000</b>
<i>State Tax Credits / Exemptions</i>		
Property Tax Exemption – solar systems		RE systems not included in assessment values

## Utility Programs and Incentives Energy Efficiency

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- Energy Efficiency
  - **AC Rebates for Builders and Contractors**
    - **\$60 to \$235 per ton for builders**
      - Example (split system)
        - 5 Ton Air Conditioning Unit X \$235 per Ton (Tier 3) = \$1,175.00 rebate to homebuilder
    - **Contractor rebates**
      - Refrigerant Charge Air Flow Service: \$20 per ton
      - Duct Testing and Sealing Service: \$45 per ton
    - **New ENERGY STAR 'Plus' Incentive**
  - **Renewable energy**
    - PV: \$2.50/watt (grid connected)
      - 2 kW system = \$5,000 rebate (approx. 33% of cost)
    - Net metering tariff with carry-forward and TOU rates

## High Performance Home Example

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- 30-40% energy savings versus 2006 IECC from EE measures
- Builder incentives
  - Incremental cost: \$3,500 - \$4,000
  - Federal tax credit (\$2,000)
  - Utility rebate (Tier 3 HVAC) (\$1,175)
  - Net incremental cost: **\$325 - \$825**
- Annual savings versus a typical home
  - Grid electricity: 9,300 kWh (47% reduction)
  - Peak electricity demand reduced by 50%
  - Natural gas: 370 therms (56% reduction)
  - Annual energy cost savings: \$1,600

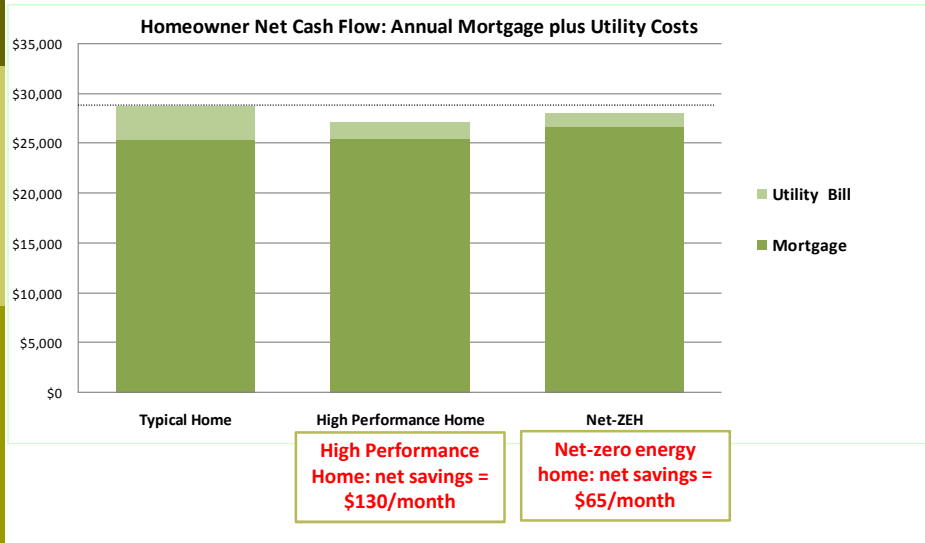
## Zero-Energy Home Example

- 50% or greater energy savings versus 2006 IECC
  - EE measures plus 2 kW PV
- Incremental cost to builder
  - Incremental cost: \$19,000 - \$20,000
  - Federal tax credit (\$2,000)
  - Utility rebates – EE (Tier 3 HVAC) (\$1,175)
  - Net incremental cost (builder): **~\$16,000 – 17,000**
- Annual savings versus a typical home
  - Grid electricity: 12,100 kWh (61% reduction)
  - Peak electricity demand reduced by 70%
  - Natural gas: 370 therms (56% reduction)
  - Annual energy cost savings: \$1,700
  - Value of PV generation: \$300 per year

## Summary: incentives and cash flow

	High Performance Home (EE only)	Zero Energy Home (EE and RE)
Incremental cost to builder	\$4,000	\$20,000
Federal EE tax credit	\$2,000	\$2,000
Utility incentives	\$1,175	\$1,175
Total incentives	\$3,175	\$3,175
<b>Net cost to builder</b>	<b>\$825</b>	<b>\$16,825</b>
Homeowner tax credits (federal)		\$4,000
Annual energy savings, homeowner	\$1,675	\$2,000
Net savings, homeowner (mortgage + utilities)	<b>\$130 / month</b>	<b>\$50 / month</b>

## Homeowner cash flow



## Summary

- Federal, state and utility incentives are available for high performance homes
  - Designed to help overcome market barriers
  - High performance / net-zero energy homes will help Nevada homeowners reduce their monthly energy costs w/ net savings
  - EE is most cost-effective, but ZEH achieves greater peak, kWh savings
- What the homebuilding industry can do
  - Utilize incentives to build more efficient homes and advance new design practices/technologies within the industry
  - Educate homebuyers about why high performance is a better value, and their incentive options
  - Encourage federal and state policymakers to continue incentives and increase funding levels

## For More Information

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- Federal tax credits
  - [www.energytaxincentives.org](http://www.energytaxincentives.org)
  - [www.dsireusa.org](http://www.dsireusa.org)
- State tax credits
  - [energy.state.nv.us/renewable/incentives.htm](http://energy.state.nv.us/renewable/incentives.htm)
- Utility incentives
  - Nevada Power  
[nevadapower.com/conservation/home/home\\_rebates/](http://nevadapower.com/conservation/home/home_rebates/)
  - Sierra Pacific Power  
[www.sierrapacific.com/conservation/home/home\\_rebates/](http://www.sierrapacific.com/conservation/home/home_rebates/)
  - Solar PV systems  
[www.solargenerations.com](http://www.solargenerations.com)

## **SWEEP:**

*Dedicated to More Efficient Energy Use in the Southwest*

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### **For More Information**

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Southwest Energy Efficiency Project (SWEEP)

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