

**Response of
Interstate Power and Light Company
to
OFFICE OF CONSUMER ADVOCATE
Data Request No. 102**

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Response Due: July 17, 2008
Information Requested By: Jennifer Easler
Date Responded: July 17, 2008
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Subject: New Home Construction
Reference: Interstate Proposed Energy Efficiency Plan, Section 4.6.4, page 73

Data Request No. 102

Please provide the specific standards and requirements for each of the measures in Section 4.6.4.

Response

The New Home Construction program offers two participation options for single-family homes: Option 1 is a prescriptive (measure-based) approach and Option 2 is a performance-based (ENERGY STAR qualified home) approach.

The standards and requirements for each of the measures under Option 1 are subject to change based on ongoing utility collaboration. See the attached document, DR No. 102 Attachment A PRELIMINARY New Home Construction Measures, for the preliminary list of measures.

Participation in Option 2 (open to single-family and multifamily homes) is performance based; therefore a specific set of measures does not apply.

2009 PRELIMINARY New Home Construction Measures¹
Option 1, Builder Option Package

Measure	Equipment	Qualification
Cooling	Right-sized	Properly sized, recommend using ACCA Manual J or equivalent calculation
	Electric, forced-air, central air conditioners	14 SEER or greater
	Electric, forced-air, air-source heat pump	14 SEER or greater
	Electric, ground-source heat pump (closed loop)	14.1 EER or greater
	Electric, ground-source heat pump (open loop)	16.2 EER or greater
Ductwork	Sheet metal ducts	R-8 or greater insulation in unconditioned spaces
	Sheet metal joints	Duct sealing at each joint mastic and/or UL 181 approved tapes, such as metal-backed tap
	All low-pressure supply and return ducts	Duct sealing at each joint using mastic and/or UL approved tapes, such as metal-backed tape
	Leakage	6 percent or less to unconditioned spaces
Heating	Right-sized	Properly sized, recommend using ACCA Manual J or equivalent calculation
	Natural gas, forced-air furnace	92 AFUE or greater
	Natural gas, boiler	90 AFUE or greater
	Electric, forced-air, air-source heat pump	8.5 HSPF or greater
	Electric, ground-source heat pump (closed loop)	3.3 COP or greater
	Electric, ground-source heat pump (open loop)	3.6 CIP or greater
Thermostat	Clock-programmable thermostat	Setback with two or more temperature settings Must be ENERGY STAR [®] rated
Infiltration	Natural air exchanges per hour (NACH)	0.45 or less NACH
	Mechanical ventilation	Strongly recommended if NACH is 0.31 or less
	Heat recovery ventilation (HRV)	Optional
Insulation	Ceiling, insulation only	R-49 or greater
	Wood frame wall	R-19 or greater, or R-13 + 5
	Mass frame wall	R-15
	Floor, above unheated space	R-30 or greater
	Basement wall, insulation covering entire basement walls	R-10/13 or greater, basement does not need to be finished
	Basement, band/rim joist	R-19 or greater

¹ Measures, equipment and qualifications are subject to change based on ongoing collaborations with other utilities.

Insulation	Slab	R-10 or greater under edge, back 4 feet
	Crawl space	R-10 or greater – R-13 or greater cavity
Windows	ENERGY STAR qualified windows or better for the northern climate zone	.35 U-Factor or less
	Windows rated by the National Fenestration Rating Council (NFRC)	Must have NFRC window stickers
	Maximum window area	18 percent or less of conditioned floor area
Doors		R-5 or greater or .35 U-Factor or less
Water Heaters	Natural gas, up to 60 gallons	0.62 EF or greater
	Natural gas, 60 – 80 gallons	0.85 EF or greater
	Electric	0.93 EF or greater
ENERGY STAR PRODUCTS	ENERGY STAR qualified appliances, hardwired light fixtures, ceiling fans equipped with lighting fixtures, and/or ventilation fans (not including heating and cooling or windows)	Must have five installed ENERGY STAR fixtures or appliances and supply documentation for each.

PRELIMINARY Optional Bonus Rebates

Equipment	Qualification	Rebate
Air-source heat pump	16.0 SEER, 8.6 HSPF or greater	\$350
Boiler (natural gas)	92 percent AFUE or greater	\$225
Central air conditioner	16.0 SEER or greater	\$225
Clothes Washer	ENERGY STAR qualified, max. 2	\$100
Furnace (natural gas)	94 percent AFUE or greater	\$225
Lighting (fluorescent)	ENERGY STAR qualified	\$2 per screw-in CFL \$10 per hardwired CFL fixture \$10 per linear fluorescent fixture
Refrigerator	ENERGY STAR qualified, max. 2	\$50