

Home Energy Rating Certificate

Final Report

Rating Date: 2025-12-10
 Registry ID: 666014895
 Ekotrope ID: vPVma9QL



HERS® Index Score:

-146

Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

\$4,266

*Relative to an average U.S. home

Home:

235 Hidden Hollow Dr
 Yankton, SD 57078

Builder:

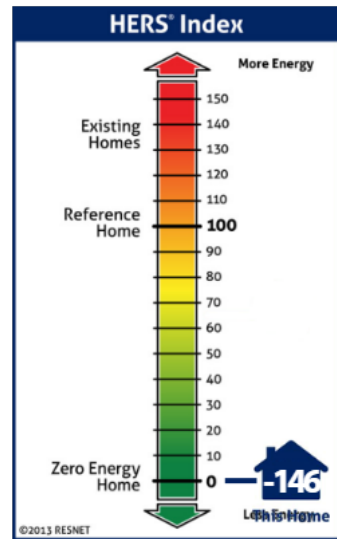
Joslin Construction

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	13.9	\$520
Cooling	0.5	\$19
Hot Water	2.0	\$76
Lights/Appliances	14.3	\$537
Service Charges		\$360
Generation (e.g. Solar)	-171.0	-\$1,152
Total:	-140.2	\$360

This home meets or exceeds the criteria of the following:

- 2018 International Energy Conservation Code
- 2015 International Energy Conservation Code
- 2012 International Energy Conservation Code
- 2009 International Energy Conservation Code
- 2006 International Energy Conservation Code



Home Feature Summary:

Home Type:	Single family detached
Model:	N/A
Community:	Yankton
Conditioned Floor Area:	1,610 ft ²
Number of Bedrooms:	3
Primary Heating System:	Air Source Heat Pump • Electric • 9.1 HSPF2
Primary Cooling System:	Air Source Heat Pump • Electric • 22 SEER2
Primary Water Heating:	Residential Water Heater • Electric • 3.88 Energy Factor
House Tightness:	0.88 ACH50
Ventilation:	None
Duct Leakage to Outside:	16 CFM @ 25Pa (0.99 / 100 ft ²)
Above Grade Walls:	R-33
Ceiling:	Vaulted Roof, R-49
Window Type:	U-Value: 0.29, SHGC: 0.21
Foundation Walls:	N/A
Framed Floor:	N/A

Rating Completed by:

Energy Rater: Larry Emanuel
 RESNET ID: 2305325

Rating Company: Future Energy Dynamics
 11347 S 198th St, Gretna NE 68028
 402 661-9500

Rating Provider: Building Engineering
 300 Margo Lane, Russellville, AR 72802
 479-857-4291

Larry Emanuel, Certified Energy Rater
 Digitally signed: 12/12/25 at 3:48 PM



Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:5.0.2.3764

The Energy Rating Disclosure for this home is available from the Approved Rating Provider.

This report does not constitute any warranty or guarantee.

RESNET HOME ENERGY RATING Standard Disclosure



For home(s) located at: **235 Hidden Hollow Dr, Yankton, SD**

Check the applicable disclosure(s):

- The Rater or the Rater's employer is receiving a fee for providing the rating on this home.
- In addition to the rating, the Rater or the Rater's employer has also provided the following consulting services for this home:

- A. Mechanical system design
- B. Moisture control or indoor air quality consulting
- C. Performance testing and/or commissioning other than required for the rating itself
- D. Training for sales or construction personnel
- E. Other(specify)

The Rater or the Rater's employer is:


- A. The seller of this home or their agent
- B. The mortgagor for some portion of the financed payments on this home
- C. An employee, contractor, or consultant of the electric and/or natural gas utility serving this home

The Rater or Rater's employer is a supplier or installer of products, which may include:

Products	Installed in this home by	OR is in the business of
HVAC systems	<input type="checkbox"/> Rater <input type="checkbox"/> Employer	<input type="checkbox"/> Rater <input type="checkbox"/> Employer
Thermal insulation systems	<input type="checkbox"/> Rater <input type="checkbox"/> Employer	<input type="checkbox"/> Rater <input type="checkbox"/> Employer
Air sealing of envelope or duct systems	<input type="checkbox"/> Rater <input type="checkbox"/> Employer	<input type="checkbox"/> Rater <input type="checkbox"/> Employer
Energy efficient appliances	<input type="checkbox"/> Rater <input type="checkbox"/> Employer	<input type="checkbox"/> Rater <input type="checkbox"/> Employer
Construction (builder, developer, construction contractor, etc)	<input type="checkbox"/> Rater <input type="checkbox"/> Employer	<input type="checkbox"/> Rater <input type="checkbox"/> Employer
Other (specify): <input type="text"/>	<input type="checkbox"/> Rater <input type="checkbox"/> Employer	<input type="checkbox"/> Rater <input type="checkbox"/> Employer

This home has been verified under the provisions of Chapter 6, Section 603 "Technical Requirements for Sampling" of the Mortgage Industry National Home Energy Rating Standard as set forth by the Residential Energy Services Network (RESNET). Rater Certification #: 2305325

Name: Larry Emanuel
Organization: Future Energy Dynamics

Signature: 
Digitally signed: 12/12/25 at 3:48 PM

I attest that the above information is true and correct to the best of my knowledge. As a Rater or Rating Provider I abide by the rating quality control provisions of the Mortgage Industry National Home Energy Rating Standard as set forth by the Residential Energy Services Network(RESNET). The national rating quality control provisions of the rating standard are contained in Chapter One 102.1.4.6 of the standard and are posted at

<https://standards.resnet.us>

The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

IECC 2009 Performance Compliance



Property

235 Hidden Hollow Dr
Yankton, SD 57078
Community: Yankton

Organization

Future Energy Dynamics
Larry Emanuel
402 661-9500

Inspection Status

2025-12-10
Rater ID (RTIN): 2305325
RESNET Registered
(Confirmed)

235 Hidden Hollow Dr - EPS
235 Hidden Hollows Dr

Builder

Joslin Construction

Annual Energy Cost

Design	IECC 2009 Performance	As Designed
Heating	\$857	\$582
Cooling	\$39	\$33
Water Heating	\$66	\$65
SubTotal - Used to determine compliance	\$962	\$680
Lights & Appliances	\$361	\$361
Onsite generation	\$0	\$0
Total	\$1,323	\$1,041

405.3 Source Energy Exception: The proposed home uses 35.3 MBtu LESS source energy than the reference home.


Requirements

✓	405.3	Performance-based compliance passes by 29.3%	The proposed house meets the IECC 2009 Performance reference energy bill requirement by \$281.96 (35.3 MBtu).
✓	R402.4.1.2	Air Leakage Testing	
✓	402.5	Area-weighted average fenestration SHGC	Area-weighted average fenestration SHGC is 0.21. The maximum allowed value is [No Limit].
✓	402.5	Area-weighted average fenestration U-Factor	
✓	403.2.2	Duct Leakage Testing	
✓	Mandatory Checklist	Mandatory code requirements that are not checked by Ekotrope must be met.	2009 IECC Mandatory Checklist must be checked as complete.
✓	405.2	Duct Insulation	All ducts outside the thermal envelope must be insulated to at least R6.0.

Design exceeds requirements for IECC 2009 Performance compliance by 29.3%.

As a 3rd party extension of the code jurisdiction utilizing these reports, I certify that this energy code compliance document has been created in accordance with the requirements of Chapter 4 of the adopted International Energy Conservation Code based on YANKTON County. If rating is Projected, I certify that the building design described herein is consistent with the building plans, specifications, and other calculations submitted with the permit application. If rating is Confirmed, I certify that the address referenced above has been inspected/tested and that the mandatory provisions of the IECC have been installed to meet or exceed the intent of the IECC or will be verified as such by another party.

Name: Larry Emanuel
Organization: Future Energy Dynamics

Signature: 
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Ekotrope RATER - Version 5.0.2.3764

IECC 2009 Performance compliance results calculated using Ekotrope RATER's energy and code compliance algorithm.
Ekotrope RATER is a RESNET Accredited HERS Rating Tool. All results are based on data entered by Ekotrope users.
Ekotrope disclaims all liability for the information shown on this report.

235 Hidden Hollow Dr

Yankton, SD 57078

Builder: Joslin Construction

Community: Yankton

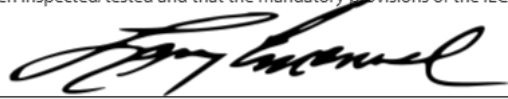
**THIS HOME IS CERTIFIED TO MEET THE
2009 INTERNATIONAL ENERGY CONSERVATION CODE**

Building Features

Ceiling Vaulted Roof, R-49	Duct Supply R-0.0, Return R-0.0
Above Grade Walls R-33	Duct Leakage to Outside 16 CFM @ 25Pa (0.99 / 100 ft ²)
Foundation Walls N/A	Total Duct Leakage 265 CFM @ 25Pa (Post-Construction)
Framed Floor N/A	Heating Air Source Heat Pump • Electric • 9.1 HSPF2
Slab R-0.0 Perimeter, R-10.0 Under	Cooling Air Source Heat Pump • Electric • 22 SEER2
Infiltration 0.88 ACH50	Water Heating Residential Water Heater • Electric • 3.88 Energy Factor
Window U-Value: 0.29, SHGC: 0.21	

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IECC 2009 Label

235 Hidden Hollow Dr

Ekotrope RATER - Version: 5.0.2.3764

HERS® Index Score: -146

Building Envelope Specs

Ceiling: R-49

Above Grade Walls: R-33

Foundation Walls: N/A

Exposed Floor: N/A

Slab: R-10

Infiltration: 0.88 ACH50

Duct Insulation: Supply: R0, Return: R0

Duct Lkg to Outdoors: 16 CFM @ 25Pa (0.99 / 100 ft²)

Window & Door Specs

U-Value: 0.29, SHGC: 0.21

Door: N/A

Mechanical Equipment Specs

Heating: Air Source Heat Pump • Electric • 9.1 HSPF2

Cooling: Air Source Heat Pump • Electric • 22 SEER2

Hot Water: Residential Water Heater • Electric • 3.88

Energy Factor

Average Mechanical Ventilation: 0 CFM

Builder or Design Professional

Signature: _____

Air Leakage Report

Property

235 Hidden Hollow Dr
Yankton, SD 57078
Community: Yankton

Organization

Future Energy Dynamics
Larry Emanuel
402 661-9500

Inspection Status

2025-12-10
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RESNET Registered
(Confirmed)



235 Hidden Hollow Dr - EPS
235 Hidden Hollows Dr

Builder

Joslin Construction

General Information

Conditioned Floor Area [ft ²]	1,610
Infiltration Volume [ft ³]	20,292.71
Number of Bedrooms	3

Air Leakage

Measured Infiltration	0.88 ACH50
ACH50 (Calculated)	0.88
ELA [sq. in.] (Calculated)	16.33
ELA per 100 s.f. Shell Area (Calculated)	0.303
CFM50 (Calculated)	298
CFM50 / s.f. Shell Area (Calculated)	0.055

Duct Leakage

	System 1
Leakage to Outdoors	16 CFM @ 25Pa (0.99 / 100 ft ²)
Total Leakage Test Type	Post-Construction
Total Leakage [CFM @ 25 Pa]	265.0
Total Leakage [CFM25 / 100 s.f.]	16.5
Total Leakage [CFM25 / CFA]	0.165

Mechanical Ventilation

Rate [CFM]	
Hours per day	
Fan Power	
Recovery Efficiency %	
Runs at least once every 3 hrs?	
Average Rate [CFM]	
2010 ASHRAE 62.2 Req. Cont. Ventilation	46.1
2013 ASHRAE 62.2 Req. Cont. Ventilation	67.1
2016 ASHRAE 62.2 Req. Cont. Ventilation	67.1

Emissions Summary



Property

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Emissions by End-Use

Carbon Dioxide Equivalent (CO₂e) [tons/yr]

Heating [Electric]	0.5
Cooling [Electric]	0.0
Hot Water [Electric]	0.1
Lights & Appliances [Electric]	0.6
Emissions Savings from Onsite Generation	-5.0
TOTAL	-3.8

Sulfur Dioxide (SO₂) [lbs/yr]

TOTAL	-38.5
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Nitrogen Oxide (NO_x) [lbs/yr]

TOTAL	-29.9
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Energy Use Intensity (EUI) [kBtu/ft²]

Site EUI	-87.1
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Emissions are calculated using the Emission Factors published in the Table 5.1.2(1) of RESNET MINHERS Addendum 66f by RESNET, in Table Table 5.1.2(1) and in accordance with Section 6.2.

CO₂ equivalent (CO₂e) emissions combine three gasses: carbon dioxide (CO₂), methane (CH₄), and nitrous oxides (N₂O).

According to the MINHERS Addendum 66f, CO₂e Emissions are computed on an hourly basis using the Purchased Energy by fuel type, instead of the annual energy balance.

Fuel Summary

**Property**

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Annual Energy Cost

Electric	\$360
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Annual End-Use Cost

Heating	\$520
Cooling	\$19
Water Heating	\$76
Lights & Appliances	\$537
Onsite Generation	-\$1,152
Service Charges	\$360
Total	\$360

Annual End-Use Consumption

Heating [Electric kWh]	4,061.3
Cooling [Electric kWh]	148.1
Hot Water [Electric kWh]	592.6
Lights & Appliances [Electric kWh]	4,198.5
Total [Electric kWh]	9,000.5
Total Onsite Generation [Electric kWh]	50,091.7

Peak Electric Consumption

Peak Winter kW	2.22
Peak Summer kW	1.07

Utility Rates

Electricity	Bon Homme Yankton 2025 SD
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Building Summary

Property
235 Hidden Hollow Dr
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235 Hidden Hollow Dr - EPS
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Builder
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General Building Information

Number Of Bedrooms: 3	Number Of Floors: 1
Conditioned Floor Area [sq. ft.]: 1,610	Has Electric Vehicle Ready Space: No
Unconditioned, attached garage? Yes	Conditioned Volume [cu. ft.]: 20,292.71
Total Units in Building: 1	Residence Type: Single family detached
Number of Floors in Building: N/A	Floor Number: N/A
Model: N/A	Community: Yankton
RESNET/IECC 2006-2018 Climate Zone: 5A	IECC 2021 Climate Zone: 5A

Envelope Components

Slab

Name	Library Type	Perimeter	Floor Grade	Carpet R	Exposed Masonry Area	Surface Area	Location	Enclosing
Slab	R-10 Rigid Foam Full Slab G1	171	On Grade	1.23	46.4	1,610.0 ft ²	Exposed Exterior	Conditioned Space

Slab Library List

Name	Wall Construction Type	Slab Completely Insulated?	Underslab Insulation Width [ft]	Perimeter Insulation Depth [ft]	Perimeter Insulation R Value	Perimeter Insulation Is Exterior	Thermal Break	Effective R-value
R-10 Rigid Foam Full Slab G1	Wood Frame / Other	Yes	0	0	0	No	No	10.00

Wall

Name	Library Type	Orientation	Surface Color	Solar Absorptance	Surface Area	Location	Effective R-value
Garage SIP R-33	SIP R-33 Cont G1	Unspecified	Medium	0.75	352.9 ft ²	Unconditioned, attached garage	35.92
SIP R-33	SIP R-33 Cont G1	Unspecified	Medium	0.75	1,802.4 ft ²	Exposed Exterior	35.92

Glazing

Name	Library Type	Wall Assignment	Foundation Wall Assignment	Is Operable	Overhang Depth	Overhang Ft To Top	Overhang Ft To Bottom	Orientation	Surface Area
B1.1 6050	Low E .29 / .21	SIP R-33		Yes	3	2	7	North	30.0 ft ²
B1.2 3030	Low E .29 / .21	SIP R-33		Yes	3	3	6	North	9.0 ft ²
B1.3 6068 SGD	Low E .29 / .21	SIP R-33		Yes	3	2	9	North	82.5 ft ²
F1.1 6050 (x2)	Low E .29 / .21	SIP R-33		Yes	3	2	7	South	60.0 ft ²
F1.2 3030	Low E .29 / .21	SIP R-33		Yes	3	3	6	South	9.0 ft ²

Glazing Library List

Name	Shgc	U-factor
Low E .29 / .21	0.21	0.290

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Project & Plan
235 Hidden Hollow Dr - EPS
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Roof Insulation

Name	Library Type	Attic Exterior Area [ft ²]	Clay or Concrete Roof Tiles	Does the Roof have Eaves?	Effective R-Value after eaves	Surface Color	Solar Absorbance	Surface Area	Location
Vaulted SIP Ceiling	SIP R-49 Cont G1	1,615.5	No	No	-	Medium	0.75	1,615.5 ft ²	Vaulted Roof

Roof Insulation Library List

Name	Has Radiant Barrier	Effective R-value
SIP R-49 Cont G1	No	51.96

Whole House Infiltration

Infiltration	Measurement Type	Shelter Class
0.88 ACH at 50 Pa	Blower-door tested	2

Mechanicals, Lights & Water

Lighting

% Interior Fluorescent Lighting	% Interior LED Lighting	% Exterior Fluorescent Lighting	% Exterior LED Lighting	% Garage Fluorescent Lighting	% Garage LED Lighting
0	100	0	100	0	100

Solar Generation

Index	Track Mode	Nameplate Capacity (kWdc)	Derate Factor	Orientation (deg)	Tilt (deg)
1	Fixed	42.0 kW	0.83	180°	5°

Conditioning Equipment

Name	Library Type	Serial Number	Heating Percent Load	Cooling Percent Load	Hot Water Percent Load	Location
ASHP	ASHP Lennox SL25XPV-036-230A** (Coil: CBA38MV-036) Furn SLP99UH070XV36B*		100%	100%	0%	Conditioned Space
Water Heater	WH AO Smith HPTS-80 200		0%	0%	100%	Conditioned Space

Equipment Type: ASHP Lennox SL25XPV-036-230A** (Coil: CBA38MV-036) Furn SLP99UH070XV36B*

Equipment Type	Air Source Heat Pump
Fuel Type	Electric
Distribution Type	Forced Air
Motor Type	ECM (Variable Speed)
Heat Pump System Type	Ducted Split System
Heating Efficiency	9.1 HSPF2
Heating Capacity [kBtu/h]	36
Backup Fuel Type	Electric
Switchover Temperature [°F]	32
Backup Heating Efficiency	1.92 COP
Use default Supplemental Heat	Yes
Cooling Efficiency	22 SEER2
Cooling Capacity [kBtu/h]	33.4

Equipment Type: WH AO Smith HPTS-80 200

Equipment Type	Residential Water Heater
Fuel Type	Electric
Distribution Type	Hydronic Delivery (Radiant)
Hot Water Efficiency	3.88 Energy Factor
Tank Capacity (gal.)	80

Building Summary

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Distribution System

Distribution Type	Forced Air
Heating Equipment	ASHP
Cooling Equipment	ASHP
Sq. Feet Served	1,610
# Return Grilles	4
Supply Duct R Value	0
Return Duct R Value	0
Supply Duct Area [ft²]	434.7
Return Duct Area [ft²]	322
Leakage to Outdoors	16 CFM @ 25Pa (0.99 / 100 ft²)
Total Leakage	265 CFM25
Total Leakage Duct Test Conditions	Post-Construction
Use Default Flow Rate	Yes
Duct 1	
Duct Location	Conditioned Space
Percent Supply Area	20
Percent Return Area	20
Duct 2	
Duct Location	Conditioned Attic (insulated walls and roofdeck)
Percent Supply Area	80
Percent Return Area	80

Water Distribution

Water Fixture Type	Low-flow
Use Default Hot Water Pipe Length	No
Hot Water Pipe Length [ft]	38
At Least R3 Pipe Insulation?	No
Hot Water Recirculation System?	No
Drain Water Heat Recovery?	No

Appliances & Notes

Clothes Dryer

Cef	3.93
Fuel Type	Electric
Field Utilization	Moisture Sensing
Is Outside Conditioned Space	No
Defaults Type	Custom
Is Ventless	No
Is Heat Pump	No
Clothes Dryer Available	Yes

Clothes Washer

Label Energy Rating	152 kWh/Year
Annual Gas Cost	\$12.00
Electric Rate	\$0.12/kWh
Gas Rate	\$1.09/Therm
Capacity	4.2
Imef	2.06
Defaults Type	ENERGY STAR
Load Type	Front-load
Loads Per Week	6
Is Outside Conditioned Space	No
Clothes Washer Available	Yes

Dishwasher

Dishwasher Defaults Type	Custom
Dishwasher Size	Standard
Dishwasher Efficiency	240 kWh
Annual Gas Cost	\$25.00
Electric Rate	\$0.12/kWh
Gas Rate	\$1.09/Therm
Is Outside Conditioned Space	No
Dishwasher Available	Yes

Appliances and Controls

Programmable thermostat?	Yes
Range/Oven Fuel	Electric
Convection Oven?	Yes
Induction Range?	Yes
Range/Oven Outside Conditioned Space?	No
Refrigerator Consumption	707 kWh/Year
Refrigerator Outside Conditioned Space?	No

Notes

HERS 47

Building Summary

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Components Not Found: Foundation Wall, Foundation Wall Library List, Framed Floor, Rim Joist, Skylight, Opaque Door, Mechanical Ventilation, Onsite Generation, Dehumidifier, Whole House Fan, Whole House Fan Library List, HVAC Grading (Not Conducted), Ceiling Fan

Component Loads



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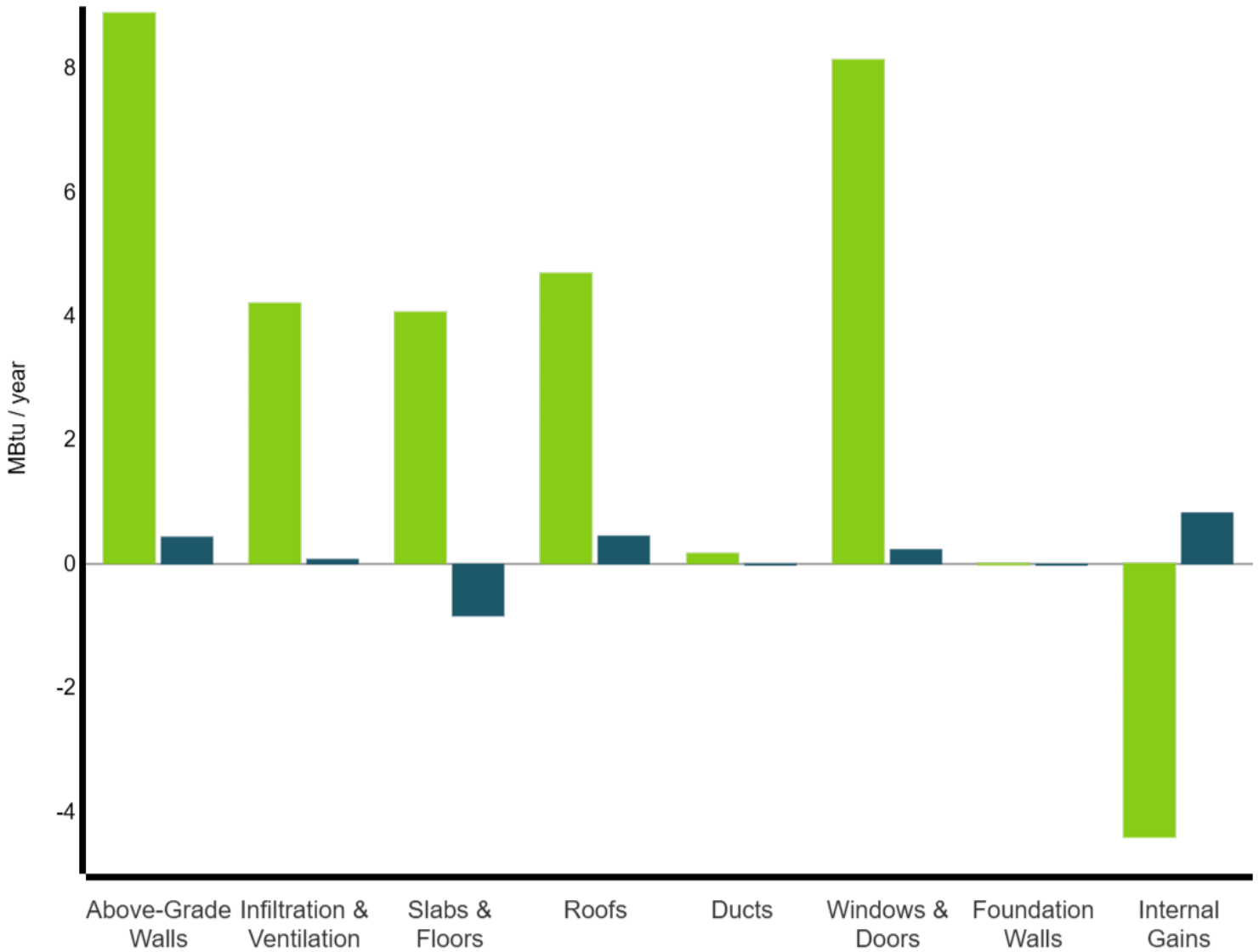
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Heating & Cooling Loads



Heating ■

Cooling ■

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