



2021 IECC Residential Energy Efficiency Selection Form

All new residential one and two family dwellings and additions to one and two family dwellings must comply with the residential provisions of the 2021 IECC unless the building is considered a "Low Energy Building" as defined in Section R402.1. Applicants must select one compliance path option from page 1, along with selecting applicable additional energy feature from tables on Page 2. Additional compliance documentation must be submitted with this form for the Total UA Alternative, Total Building Performance or Energy Rating Index Compliance Alternative path options. This document shall become part of the official permit record.

<input type="checkbox"/>	Prescriptive Compliance Option — R402.1	Table R402.1.2 Maximum Assembly U Factors and Fenestration Requirements (2021 IECC)																												
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Must select Additional Energy Feature(s) to equal or exceed 6% from Table 2.																																

<input type="checkbox"/>	Total UA Alternative R402.1.5	Select Additional Energy Feature from Table 1.	Additional compliance report required.
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<input type="checkbox"/>	Total Building Performance R405	Must Select option from Table 3.	Additional compliance report required.
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<input type="checkbox"/>	Energy Rating Index Compliance Alternative R406	Energy Rating Index Value must be 5% less than the Energy Rating Index Target	Additional compliance report required.
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Table 1	
Select only 1 option. R402.1, R402.1.3 or R402.1.5	
Option 1.	Enhanced Envelope Performance.
Option 2A.	More Efficient HVAC Equipment Performance. Greater than or equal to 95 AFUE natural gas furnace and 16 SEER air conditioner.
Option 2B.	More Efficient HVAC Equipment Performance. Greater than or equal to 10 HSPF/16 SEER air source heat pump.
Option 2C.	More Efficient HVAC Equipment Performance. Greater than or equal to 3.5 COP ground source heat pump.
Option 3A.	Reduced energy use in service water-heating. Greater than or equal to 0.82 EF fossil fuel service water-heating system.
Option 3B.	Reduced energy use in service water-heating. Greater than or equal to 2.0 EF electric service water-heating system.
Option 3C.	Reduced energy use in service water-heating. Greater than or equal to 0.4 solar fraction solar water-heating system.
Option 4A.	More efficient duct thermal distribution system option. 100 percent of ducts and air handlers located entirely within the building thermal envelope.
Option 4B.	More efficient duct thermal distribution system option. 100 percent of ductless thermal distribution system or hydronic thermal distribution system located completely inside the building thermal envelope.
Option 4C.	More efficient duct thermal distribution system option. 100 percent of duct thermal distribution system located in conditioned space as defined by Section R403.3.2.
Option 5.	Improved air sealing and Efficient Ventilation System option.

Table 2		
MD Alternative Additional Packages—Must select one or more options to meet or exceed 6%. R402.1.3		
1	≥ 2.5% reduction in total UA	1%
2	≥ 5% reduction in total UA	2%
3	> 7.5% reduction in total UA	2%
4	0.22 U-factor windows	3%
5	High performance cooling system (Greater than or equal to 18 SEER and 14 EER air conditioner)	3%
6	High performance cooling system (Greater than or equal to 16 SEER and 12 EER air conditioner)	3%
7	High performance gas furnace (Greater than or equal to 96 AFUE natural gas furnace)	5%
8	High performance gas furnace (Greater than or equal to 92 AFUE natural gas furnace)	4%
9	High performance heat pump system (Greater than or equal to 10 HSPF/18 SEER air source heat pump.)	6%
10	High performance heat pump system (Greater than or equal to 9 HSPF/16 SEER air source heat pump.)	5%
11	Ground source heat pump (Greater than or equal to 3.5 COP ground source heat pump.)	6%
12	Fossil fuel service water heating system (Greater than or equal to 82 EF fossil fuel service water-heating system.)	3%
13	High performance heat pump water heating system option (Greater than or equal to 2.9 UEF electric service water-heating system.)	8%
14	High performance heat pump water heating system. (Greater than or equal to 3.2 UEF electric service water-heating system.)	8%
15	Solar hot water heating system (Greater than or equal to 0.4 solar fraction solar water-heating system.)	6%
16	More efficient HVAC distribution system. (100 percent of ductless thermal distribution system or hydronic thermal distribution system located completely inside the building thermal envelope.)	10%
17	100% of ducts in conditioned space. (100 percent of duct thermal distribution system located in conditioned space as defined by Section R403.3.2.)	12%
18	Reduced total duct leakage. (When ducts are located outside conditioned space, the total leakage of the ducts, measured in accordance with R403.3.5, shall be in accordance with one of the following: a. Where air handler is installed at the time of testing, 2.0 cubic feet per minute per 100 square feet of conditioned floor area. b. Where air handler is not installed at the time of testing, 1.75 cubic feet per minute per 100 square feet Of conditioned floor area.)	1%
19	2 ACH50 air leakage rate with ERV or HRV installed. (Less than or equal to 2.0 ACH50, with either an Energy Recovery Ventilator (ERV) or Heat Recovery Ventilator (HRV) installed.)	10%
20	2 ACH50 air leakage rate with balanced ventilation. (Less than or equal to 2.0 ACH50, with balanced ventilation as defined in Section 202 of the 2021 International Mechanical Code.)	4%
21	1.5 ACH50 air leakage rate with ERV or HRV installed. (Less than or equal to 1.5 ACH50, with either an ERV or HRV installed.)	12%
22	1 ACH50 air leakage rate with ERV or HRV installed. (Less than equal to 1.0 ACH50, with either an ERV or HRV installed.)	14%
23	Energy Efficient Appliances (Minimum 3 appliances not to exceed 1 form each type with follow efficiencies. Refrigerator - Energy Star Program Requirements, Product Specification for Consumer Refrigeration Products, Version 5.1 (08/05/2021), Dishwasher - Energy Star Program Requirements for Residential Dishwashers, Version 6.0 (01/29/2016), Clothes Dryer - Energy Star Program Requirements, Product Specification for Clothes Dryers, Version 1.1 (05/05/2017) and Clothes Washer - Energy Star Program Requirements, Product Specification for Clothes Washers, Version 8.1 (02/05/2018)	7%
24	Renewable Energy Measure. (See Footnote 4 of Table R408.3—capacity to produce a minimum of 1.0 watt of on-site renewable energy per square foot of conditioned floor area.)	11%

Table 3	
Select Only 1 Option R405	
Option 1.	One of the additional efficiency package options in Table 1 shall be selected without including such measures in the proposed design under Section R405.
Option 2 .	The proposed design of the building under Section R405.3 shall have an annual energy cost that is less than or equal to 95 percent of the annual energy cost of the standard reference design.

Acceptable Signatures: Maryland Licensed Design Professional, Maryland Licensed Contractor, or Owner.

Project Address: _____

Signature: _____ Date: _____

Printed Name: _____

Permit Number: _____

Additional Documentation Submitted: