

Significant Changes to the 2015 IECC and 2018 IECC Commercial

December 5, 2018

There is not a significant change in efficiency over the 2015 IECC, but preliminary estimates are for 5% +/- energy savings. There are minor changes to language and some measures. *This is not intended to replace reading the actual code language, but to summarize key changes.*

Significant Changes Between the Commercial Provisions of the 2015 IECC and 2018 IECC				
Topic	2015 IECC		2018 IECC	
Scope (e.g. references and definitions)				
ASHRAE Reference	References ASHRAE 90.1-2013		References ASHRAE 90.1-2016	
Language change	"Capable of"		"Capable of and configured to" or "Configured to". Note applies to HVAC and lighting control requirements.	
Language change	Vertical glazing		Sidelite	
Language change	Skylights		Toplite	
Climate Zones	N/A		Climate zones were updated per ASHRAE (doesn't affect Idaho)	
Building Envelope				
Slab-on-grade insulation	Requires slab edge insulation in Climate Zones 5 and 6 for heated slabs		Requires slab edge insulation and R-5 under slab under slab insulation in Climate Zones 5 and 6 for heated slabs	
SHGC PF < 0.2 0.2 ≤ PF < 0.5 ≥ 0.5	Climate Zone 5		Climate Zone 5	
	SEW	N	SEW	N
	0.40	0.53	0.38	0.51
	0.48	0.58	0.46	0.56
	0.64	0.64	0.61	0.61
Skylight area	Maximum 5% with automatic daylighting controls		Maximum 6% with automatic daylighting controls	
Maximum air leakage for fenestration assemblies Power-operated sliding doors and power operated folding doors	None		1.0 CFM	
Mechanical Systems				
Section reorganization	None		Reorganized Mechanical Chapter based on topics e.g. C403.1: General (Loads) C403.2: System Design C403.3: Equipment Efficiencies & Specs C403.4: HVAC Controls, etc.	

HVAC Equipment Efficiency Requirements	None	Updated a portion of the HVAC equipment efficiency tables based on updated ASHRAE 90.1-2016 equipment efficiency requirements
Vestibule space conditioning	No requirement	Heating systems for vestibules required to shut off with outdoor air temperature is > 45°F Heating systems configured to limit heating to < 60°F Cooling systems configured to limit cooling to > 85°F
Hydronic system part load controls	Systems ≥ 500,000 Btu/h heating must include part load controls	Systems ≥ 300,000 Btu/h heating must include part load controls Systems ≥ 500,000 Btu/h heating must include part load controls
Economizers serving dwelling units	Systems that serve <i>residential</i> spaces where the system capacity is less than five times the requirement listed in Table C403.3(1).	Individual fan systems with cooling capacity greater than or equal to 270,000 Btu/h (79.1 kW) in buildings having a <i>Group R</i> occupancy. The total supply capacity of all fan cooling units not provided with economizers shall not exceed 20 percent of the total supply capacity of all fan cooling units in the building or 1,500,000 Btu/h (440 kW), whichever is greater.
Automatic control of HVAC systems serving guest rooms	No requirements	In Group R-1 buildings with > 50 guestrooms, each guestroom will be provided with controls that: <ul style="list-style-type: none"> Automatically raise cooling setpoint and lower heating setpoint by not less than 4°F from occupant setpoint within 30 minutes after occupants leave (vacant) Automatically raise cooling setpoint to not lower than 80°F and lower heating setpoint to not higher than 60°F when guestroom is unrented and is unoccupied more than 30 minutes (unrented). Automatically turn off ventilation and exhaust fans within 30 minutes of occupants leaving OR Isolation devices provided to each guestroom capable of automatically shutting off supply of outdoor air to and exhaust air from guestroom
Commissioning Report Checklist	None	Commissioning requirement checklist required

Lighting Systems

Allowed Lighting Power Density	No Change		Approximately 10% reduction in ALPD from 2015 IECC LPD levels	
Additional Retail Light Power	500 Watts +		1,000 Watts +	
	Retail Type	LPD	Retail Type	LPD
	1	0.6	1	0.45
	2	0.6	2	0.45
	3	1.4	3	1.05
	4	2.5	4	1.87
Occupancy sensors required	Required spaces where lights are typically left on after the occupant leaves.		Adds breakrooms, enclosed offices and open plan offices	
Occupancy sensor controls for open office plans	No requirement		Requires open plan office spaces to control general lighting in zones no greater than 600 square feet. General lighting in each zone required to be reduced by at least 80% after occupant leaves. Daylighting controls can only activate light after occupant is in the space.	
Exterior Lighting Power Allowance	No Change		Overall reduction in lighting due to LED base lighting assumptions	
LLLC Option Path???				
Options Packages				
Additional efficiency option packages	Included 6 options to select from		Add two options: Enhanced envelope performance <ul style="list-style-type: none"> ● Reduce UA by 15% from prescriptive requirements Reduced air infiltration <ul style="list-style-type: none"> ● 0.30 cfm / ft² 	

If you have questions about these changes, please contact the Idaho Circuit Rider, David Freelove, at energy@idaho.org.