# IBC Scope/IECC Commercial 2018 IECC [CE] ASHRAE 90.1-2016

# ENERGY CODE COMPLIANCE PATHS

#### Prescriptive

Building Envelope (C402)
Building Mechanical Systems (C403)
Service Water Heating (C404)
Electric Power and Lighting Systems (C405)
Additional Efficiency Package Options (C406)
Commissioning (C408)

## 2018 IECC [CE]

All sections designated as "mandatory"



one of the following options

ASHRAE 90.1-2016

#### Prescriptive with Envelope Tradeoffs

Same as above + envelope tradeoffs in COMcheck
All systems documented in COMcheck

#### Performance

Compliance for all systems using energy modeling per C407 Total Building Performance

#### Above Code Programs

ENERGY STAR certification (residential occupancies only)

#### Prescriptive

Building Envelope (Section 5.1-5.5, 5.7-5.9) HVAC (Section 6) Service Water Heating (Section 7) Power (Section 8) Lighting (Section 9) Other Equipment (Section 10)

## Prescriptive + Envelope Tradeoff

Building Envelope (Section 5.1-5.4, **5.6**-5.9) Env. simulation in COMcheck, Energyplus, DOE-2, etc. Other systems same as above

#### Performance

Compliance for all systems using oftware modeling: Section 11: Energy Cost Budget Method

or

Appendix G: Performance Rating Method

#### Buildings other than:

One- and two-family dwellings and townhouses and

Groups R-2, R-3, and R-4 three stories or less

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# IBC Scope/IECC Residential

2018 IECC [RE]

2018 IECC [RE]

All sections designated as mandatory (below)



one option to the right

#### Mandatory requirements:

Certificate (R401.3)

Air leakage (R402.4) Controls (R403.1)

Duct sealing (R403.3.2)

Duct testing (R403.3.3)

Building cavities (R403.3.5)

Mechanical system pipe insulation (R403.4) Heated water circulation and temperature maintenance systems (R403.5.1)

Mechanical ventilation (R403.6)

Equipment sizing and efficiency rating (R403.7)

Systems serving multiple dwelling units (R403.8)

Snow melt and ice system controls (R403.9)

Pools and permanent spas (R403.10)

Portable spas (R403.11)

Lighting equipment (R404.1)

Prescriptive

Building Thermal Envelope (R402) Systems (R403) Electric Power & Lighting (R404)

Prescriptive with Envelope Tradeoffs

Same as above + Envelope tradeoffs in REScheck

Performance

Simulated Performance Alternative (R405) Software modeling in REM/Rate or Ekotrope

Energy Rating Index

HERS Index ≤ 62

Software modeling in REM/Rate or Ekotrope

Above code programs

ENERGY STAR certified

PECO New Home Rebates approved

One- and two-family dwellings and townhouses four or more stories and Groups R-2, R-3, and R-4 three stories or less

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# IRC Scope Buildings

2015 IECC [RE]

One- and two-family dwellings, townhouses three stories or less

### Prescriptive

Building Thermal Envelope (R402) Systems (R403) Electric Power & Lighting (R404)

#### Prescriptive with Envelope Tradeoffs

Same as above +
Envelope tradeoffs in REScheck

#### Performance

Simulated Performance Alternative (R405) Software modeling in REM/Rate or Ekotrope

#### **Energy Rating Index**

HERS Index ≤ 62
Software modeling in REM/Rate or Ekotrope

#### Above code programs

ENERGY STAR certified or PECO New Home Rebates approved

2015 IECC [RE]

All sections designated as mandatory (below)



one option to the right

#### Mandatory requirements:

Certificate (R401.3)

Air leakage (R402.4)

Controls (R403.1)

Duct sealing (R403.3.2)

Duct testing (R403.3.3)

Mechanical system pipe insulation (R403.4) Heated water circulation and temperature maintenance systems (R403.5.1)

Mechanical ventilation (R403.6)

Equipment sizing and efficiency rating (R403.7)

Systems serving multiple dwelling units (R403.8) Snow melt and ice system controls (R403.9)

Show ment and ice system controls (R403.

Pools and permanent spas (R403.10)

Portable spas (R403.11)

Lighting equipment (R404.1)

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