
 **XcelEnergy® Submittal Documents for 2018**
Commercial IECC Compliance Paths
Building Codes Support Program

Construction Documents Required for Every Submittal 2018 IECC

1. Insulation materials and their R-values
2. Fenestration U-factors and SHGC
3. Area-weighted U-factors and SHGC calculations (If applicable)
4. Mechanical system design criteria
5. Mechanical and service water heating system and equipment types, sized and efficiencies
6. Economizer description
7. Equipment and system controls
8. Fan motor hp and controls
9. Duct sealing, duct and pipe insulation, and location
10. Lighting fixture schedule with wattage and control narrative
11. Location of daylight zones on floor plans
12. Air sealing details
13. Building thermal envelope depiction



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Commercial – Prescriptive

R-value Based Method

1. Provide roof solar reflectance and emittance for low – sloped roofs that meet the table in Chapter 4
2. Testing results for air leakage that meet the requirements in Chapter 4. Must be tested in accordance with ASTM E779. If testing option is used.
3. Provide vertical fenestration area and skylight area
4. Provide calculation for heating and/or cooling loads
5. Documentation for mechanical ventilation
6. Provide documentation for HVAC equipment performance
 - a. This could be a mechanical COMcheck
7. Provide documentation for service water heating equipment performance
 - a. This could be a mechanical COMcheck
8. Provide interior lighting power and exterior lighting power building method and calculations
 - a. This could be a lighting COMcheck
9. Provide commissioning plan for mechanical, lighting, and service water heating, if applicable. This will include the building operations and maintenance documents. Will need to provide evidence of commissioning and completion of service water heating and mechanical and will also need to provide functional testing of lighting controls.
10. Provide options for additional efficiency packages.
 - a. This can be provided on each COMcheck.




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Assembly U-factor, C-factor, or F-factor Method

1. Provide roof solar reflectance and emittance for low – sloped roofs that meet the table in Chapter 4
2. Testing results for air leakage that meet the requirements in Chapter 4. Must be tested in accordance with ASTM E779. If testing option is used.
3. Provide vertical fenestration area and skylight area
4. Provide calculation for heating and/or cooling loads
5. Documentation for mechanical ventilation
6. Provide documentation for HVAC equipment performance
 - a. This could be a mechanical COMcheck
7. Provide documentation for service water heating equipment performance
 - a. This could be a mechanical COMcheck
8. Provide interior lighting power and exterior lighting power building method and calculations
 - a. This could be a lighting COMcheck
9. Provide commissioning plan for mechanical, lighting, and service water heating, if applicable. This will include the building operations and maintenance documents. Will need to provide evidence of commissioning and completion of service water heating and mechanical and will also need to provide functional testing of lighting controls.
10. Provide options for additional efficiency packages.
 - a. This can be provided on each COMcheck.
11. Provide calculations showing the proposed assembly does not exceed the maximum U-factor in Table C402.1.4




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Component Performance Alternative (COMcheck)

1. The thermal envelope must show the location of insulation. The wall assembly that represents the thermal envelope must meet the requirements of the U-Factor method shown in Chapter 4.
 - a. To calculate the U-factor for the assemblies used for the thermal envelope, provide an envelope COMcheck.
 - b. The COMcheck allows the option to input “other” in assemblies. If you chose “other” you must provide documentation that shows how the assembly meets the U-factor you manually put in the software.
2. Provide roof solar reflectance and emittance for low – sloped roofs that meet the table in Chapter 4
3. Testing results for air leakage that meet the requirements in Chapter 4. If testing option is utilized.
4. Provide vertical fenestration area and skylight area
5. Provide calculation for heating and/or cooling loads
6. Documentation for mechanical ventilation
7. Provide documentation for HVAC equipment performance
 - a. This could be a mechanical COMcheck
8. Provide documentation for service water heating equipment performance
 - a. This could be a mechanical COMcheck
9. Provide interior lighting power and exterior lighting power building method and calculations
 - a. This could be a lighting COMcheck
10. Provide commissioning plan for mechanical, lighting, and service water heating, if applicable. This will include the building operations and maintenance documents. Will need to provide evidence of commissioning and completion of service water heating and mechanical, and will also need to provide functional testing of lighting controls.
11. Provide options for additional efficiency packages.
 - a. This can be provided on each COMcheck.



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Performance Method

1. Provide third party report that shows the building envelope values and fenestration areas are determined by the equation shown in Chapter 4. Will also need to verify that the methods and accuracy of compliance software tools conform to the provisions of the IECC and must be provided to the code official.
 - a. The compliance report must show the address of the building, an inspection checklist, name of individual completing report, and name and version of compliance software tool.
 - b. The code official can require documentation of the building component characteristics of the standard reference design, thermal zoning diagrams of floor plans, input and output reports from the energy analysis simulation program, a certification signed by the builder, and/or documentation of the reduction in energy use associated with on site renewable energy.
2. Testing results for air leakage that meet the requirements in Chapter 4. Must be tested in accordance with ASTM E779. If testing option is used.
3. Provide calculation for heating and/or cooling loads
4. Documentation for mechanical ventilation
 - a. In addition, will need documentation for Demand Control Ventilation, ERV, or HRV.
5. Provide documentation for HVAC equipment performance
6. Provide documentation for service water heating equipment performance
7. Provide interior lighting power and exterior lighting power building method and calculations
8. Provide commissioning plan for mechanical, lighting, and service water heating, if applicable. This will include the building operations and maintenance documents. Will need to provide evidence of commissioning and completion of service water heating and mechanical and will also need to provide functional testing of lighting controls.

