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CITY PLANNING & DEVELOPMENT

Energy Compliance Statement - Commercial
Information Bulletin No. 171-CE

Purpose

This is to provide guidance for permitting and construction compliance with the [2021 International Energy Conservation Code](#) (IECC), as amended by the Kansas City Building and Rehabilitation Code (KCBRC), for commercial buildings as defined by the IECC. IRC and IBC Group R-2, R-3, and R-4 buildings three stories or less, see residential provisions in the 2021 IECC and see [IB 171-RE](#). For mixed uses, please see 2021 IECC §101.4.1.

This document is written primarily for new construction (including additions), however existing buildings undergoing renovations may have provisions and exceptions found in IECC [Chapter 5](#) for alterations and additions – see Special Notes for Renovations and Alterations later in the document.

Required Documentation - Energy Code Analysis (ECA) Sheets

All required information in the 2021 IECC and as listed below, must be on the plan sheet(s) labeled as “ECA.” This applies to plans for all new buildings, alterations, and additions to existing buildings.

General Standards for All Commercial Plans

All ECA sheets shall include, but are not limited to:

1. Indicate which compliance path is being used to comply with the 2021 IECC [C401.2](#).
 - a. Prescriptive Compliance
 - b. Total Building Performance
 - c. ASHRAE 90.1 (and specify Compliance Path)
2. Provide a thermal envelope certificate, filled out, on the plans to verify the final certificate values per [C401.3](#).
3. Provide details and/or notes on construction documents to include, but not limited to:
 - a. How compliance of the thermal envelope will be maintained, including penetrations through the assemblies.
 - b. Plan and elevation views showing the thermal envelope bounds.
 - c. Section view(s) showing foundation, wall, and roof thermal envelope boundary and insulation R-values to be installed. Show for each different assembly configuration.
 - d. Details showing methods to meet the mechanical requirements of [C403](#). This can be a tabular matrix or written narrative.
 - e. Details showing methods to meet the service water heating requirements of [C404](#). This can be a tabular matrix or written narrative.
 - f. Details showing methods to meet the electrical requirements of [C405](#). This can be tabular matrix or written narrative.
 - g. Details showing methods to meet the Additional Efficiency requirements of [C406](#). This can be a tabular or written narrative.
4. Note on plans that a 2-inch conduit run up to the attic and a 2-inch conduit run into the parking areas for future electric vehicle charging stations will be provided – KCBRC amendment (for new buildings only).
5. Where software is being used to calculate energy compliance, e.g., [COMcheck](#), a nationally recognized software may submit and must be referenced on the plans. The software submission does not exempt the plans from

providing the details required in item 3 above, such as the thermal envelope depiction and section view with R-values.

6. For mechanical equipment sizing and efficiency ratings, calculations shall be submitted as a separate document to the plan case.

Special Notes for Renovations and Alterations

Plans must have an ECA on sheet(s) labeled as "ECA" detailing what areas in the thermal envelope must meet the Alteration requirements of [C503.1](#). Plans must list insulation values that will be used to meet this requirement. If not applicable, state as such in the ECA and the items in the above list may be exempt from being shown on plans. ECA must also address mechanical, electrical, and plumbing work in accordance with §C503 and its referenced sections.

Commissioning Methodology

Details shall be provided on construction documents showing how compliance with [C408](#) will be obtained and how Commissioning will be performed. This can be a tabular matrix or written narrative. See example IECC Commissioning Compliance Checklist on the following page. At a minimum, the design professional shall detail the following and Commissioning shall be performed by an approved 3rd party:

- a. How Mechanical Commissioning needs to be performed [C408.2.1](#).
- b. How Electrical Commissioning needs to be performed [C408.3.2.1](#) and [C408.3.2.2](#).
- c. How Air Barrier Compliance shall be performed [C402.5.1.2](#).

General Standards for Commercial Inspection

All outside or 3rd party inspections/reports must be received at least 5 business days prior to any Final Inspection or Final Inspection will not be scheduled.

Prescriptive Path (IECC or ASHRAE)

1. Insulation inspections by the city, prior to concealment
 - a. Wall and floor insulation to be verified after framing is approved and before concealment, this includes attic baffles. Exterior insulation must be verified prior to concealment.
 - b. Attic insulation will be verified prior to final but after sheetrock is installed.
2. Duct Leakage Testing, if required, to be completed and submitted by 3rd party inspector or approved agency prior to occupancy per the approved commissioning plan.
3. Whole Building leakage test, if required, to be completed and submitted by 3rd party inspector or approved agency prior to occupancy per the approved commissioning plan.
4. Energy Certificate to be installed per code and verified on final.
5. Final report from the registered design professional or approved agency verifying air barrier compliance, if applicable, prior to Certificate of Occupancy.
6. Final report from the registered design professional or approved agency verifying compliance with the design for Mechanical Commissioning prior to Certificate of Occupancy.
7. Final report from the registered design professional or approved agency verifying compliance with the design for Electrical Commissioning prior to Certificate of Occupancy.

Total Building Performance Path (IECC or other ASHRAE that is not prescriptive)

1. Insulation inspections by 3rd party inspector per the design documents (since this method is not prescriptive, 3rd party inspection is required.)
2. Duct Leakage Testing, if required, to be completed and submitted by 3rd party inspector or approved agency prior to occupancy per the approved commissioning plan/
3. Whole Building Leakage test, if applicable, to be completed and submitted by 3rd party inspector or approved agency prior to occupancy per the approved commissioning plan.

4. Final report from the registered design professional or approved agency verifying air barrier compliance, if applicable, prior to Certificate of Occupancy.
5. Energy Certificate to be installed per code and verified on final.
6. Final report from 3rd party inspector or agency verifying compliance with the design for Mechanical Commissioning prior to Certificate of Occupancy.
7. Final report from 3rd party inspector or approved agency verifying compliance with the design for Electrical Commissioning prior to Certificate of Occupancy.

EXAMPLE

The following is to provide a guideline. This format is not a required format.

IECC Commissioning Compliance Checklist

Permit Number: _____ Date: _____

Project Name: _____

Project Address: _____

Commissioning Authority: _____

Commissioning Plan (Section C408.2.1)

- Commissioning Plan was used during constructing and includes all items required by §C408.2.1.
- Systems Adjusting and Balancing has been completed.
- HVAC Equipment Functional Testing has been executed. If applicable, deferred and follow-up testing is scheduled to be provided on _____.
- HVAC Controls Functional Testing has been executed. If applicable, deferred and follow-up testing is scheduled to be provided on _____.
- Economizer Functional Testing has been executed. If applicable, deferred and follow-up testing is scheduled to be provided on _____.
- Lighting Controls Functional Testing has been executed. If applicable, deferred and follow-up testing is scheduled to be provided on _____.
- Service Water Heater System Functional Testing has been executed. If applicable, deferred and follow-up testing is scheduled to be provided on _____.
- Manual, record documents and training have been completed and scheduled.
- Preliminary Commissioning Report submitted to owner and report includes all items required by §C408.2.4.

I hereby certify the commissioning provider has provided me with evidence of mechanical, service water heating, and lighting systems commissioning, where applicable, in accordance with the current adopted International Energy Conservation Code.

Signature of Building Owner or Owner’s Representative

Date