

Council Memo

Department Source: Community Development

To: City Council

From: City Manager & Staff

Council Meeting Date: August 3, 2026

Re: Adoption of 2024 International Code Council Family of Codes

Impacted Ward: Citywide

Executive Summary

The Building Construction Codes Commission (BCCC) has completed its review of the 2024 International Code Council (ICC) Family of Codes and the 2023 National Electric Code for adoption by the City. This code cycle includes a number of significant code changes in addition to clarification and reformatting. Code change include provisions for energy storage systems, expanded special inspection items under the International Building Code (IBC) requirements, surge protection and expanded location requirements for ground fault circuit protection, and the addition of several fire codes related to lithium battery storage and use.

During the review process, the BCCC held a total of 46 review meetings across the full list of code books. This included review of the International Energy Conservation Code (IECC), which focuses on energy-efficient residential and commercial building construction. The BCCC has jointly reviewed the IECC codes alongside members of the Climate and Energy Conservation Commission (CEC) over the past two code cycles. Following all the reviews, the BCCC held several public hearings to provide the public and representatives from the development community an opportunity to provide comments and concerns. During these hearings, new provisions within the IECC that affect commercial and residential development received a substantial amount of attention from the commission as well as the public. Following the public hearings and public comment period, the BCCC voted to recommend adoption of the entire 2024 International Code Council Family of Codes with the exception of the 2024 IECC, generally due to concerns with feasibility and construction cost increases associated with its adoption.

Discussion

The City of Columbia routinely evaluates and adopts newer versions of the ICC codes, which are a comprehensive set of model regulations for construction and safety that are released typically every three years. The City most recently adopted the 2018 ICC codes, with amendments; however, due partially to the COVID pandemic and its associated impacts on the construction industry, the adoption of the 2021 ICC codes was deferred.

The BCCC is an appointed commission that consists of individuals that have experience in the building and construction fields, including trade contractors, architects, engineers and laypersons, and have particular insight into the application of building codes. The BCCC is

authorized by Chapter 6 of the City Municipal Code to “review the Building and other codes periodically for updating and recommending changes.” Council granted the authorization to review the 2024 codes on October 21, 2024, and the BCCC and its various sub-committees met frequently from November 2024 to April 2025 to evaluate the 2024 ICC codes and to prepare recommendations for specific amendments to each group of codes. The BCCC review meetings were open to the public and advertised throughout the period of review.

Along with BCCC members, representatives of the Building and Site Development Division of the Community Development Department, the Fire Department, Neighborhood Services, Inspections Division of Boone County Resource Management, and a liaison from the Climate and Energy Commission participated in the review process. The attached ordinances include the amendments to the particular set of codes that were recommended by the BCCC as well. Below is a short list of notable changes to the code that are included in the 2024 codes:

1. Each existing local amendment was thoroughly re-evaluated to align with the structural reorganization of the 2024 International Family of Codes. This included changes in location within the codes, and the elimination of amendments that were duplicative due to the new code sections and the alignment of the code language with the amendments previously put in place. These changes and re-organization resulted in a significant amount of changes to the existing amendments.
2. The National Electric Code (NEC) review included over 200 changes that were reviewed and discussed during the process. Significant time was spent reviewing the changes to Ground Fault Circuit Interrupters (GFCI) and Arc Fault Circuit Interrupters (AFCI) devices. The recommendations to move forward with GFCI requirements and hold firm on current AFCI requirements is reflected in the amendments recommended forward in section 6-33. These continue to provide added protection to occupants in areas of homes where water and electrical circuits are in proximity to each other.
3. The other major discussion with the National Electric Code included the requirement for Exterior Disconnects and Emergency Disconnects on all residential one- and two-family buildings (NEC 230.85). With the advancement of the smart meter technology coming and the ability to quickly shut down electrical services with the utilities in our jurisdiction, the BCCC has voted to amend out the requirement and not require this added component on one- and two-family dwellings.
4. The International Property Maintenance Code has seen several clarifications within the last two code cycles. Therefore, as part of the 2024 adoption, several

amendments were able to be eliminated and align our existing ordinances with the 2024 edition of the IPMC. Some of these changes include clarification on use of space heaters in homes for heating purposes not being a sole source of heat, smoke alarm placement and clarification, and emergency power for hallway lighting in apartment buildings.

5. The 2024 International Family of Codes has also seen changes surrounding ADA compliance and the various applications of these requirements with the IBC chapter 11, ANSI A117.2017, and the International Plumbing code.
6. The International Fire Code underwent a significant review in which the BCCC and the CFD Fire Marshall's office spent time drafting amendments to conform to current practice and clearing up when permits are required, when inspections are needed, and also studying the new sections that impact the built environment. This included lithium battery sprinkler requirements (Chapter 9), tents and temporary structures (Chapter 31), energy systems (Chapter 12), and storage of distilled spirits and wines (Chapter 40).
7. The 2024 International Energy Conservation Code (IECC) received a significant number of updates during the last code development cycle. Some of the specific sections reviewed, debated, and voted upon by the BCCC are detailed in a more comprehensive breakdown below.

2024 International Energy Conservation Code – Commercial Provisions

C405.2.10 and C405.3.3: Section 405 Electrical Power and Lighting Systems saw significant requirements added to require certain commercial use buildings to include controls for lighting and switched receptacles in sleeping and dwelling units.

C405.13: Expanded the requirements for energy monitoring to be included with non-electrical end uses and also applied to buildings larger than 10,000 square feet. This section will have a significant impact on schools, factories, and other large warehouse spaces.

Section C405.15: This section was a very contentious topic amongst the reviewers and the public input groups, partially due to the **requirement that all commercial buildings include renewable energy sources on site as a part of the building systems**. Within this section, there are options for buildings that do not have readily accessible renewable sources, which includes the option to secure off-site resources, among others. These options were discussed with City Electric Utility and determined that the City of Columbia is **not prepared to meet every aspect of this code requirement** at the current time, and they estimate that they may be 2-3 years or more from being prepared to meet these standards (see further analysis later in this memo).

Section C406: Buildings over 5,000 square feet are required to add additional renewable and load management credits to their buildings. This section was revised - as well as expanded - to breakdown the qualified options based on the building type and the building use group. This has increased the complexity of design and review of building planning as a result.

International Energy Conservation Code – Residential Provisions.

The following components were increased to a level that impacts how homes would be built in our community:

Section R402: This section increased the requirement in exterior walls to a level equivalent to U-factor of 0.045. To achieve this design, local builders would likely have to either 1) add 2" of rigid foam to the exterior of the home, or 2) increase the thickness of the wall cavity from a standard 2x4 construction to a 2x6 or 2x8 equivalent construction method. Also, the U-Factor requirements for windows has been tightened up and will require a more efficient window. The changes will also have an impact on siding and windows and door casings.

Section R403: Increased requirements for mechanical systems of a residence, including testing of the duct systems and more strict air sealing base standards. These will have an impact on the design and requirements associated with the HVAC system and its components to be able to balance fresh air and air leakage in order to manage moisture and contaminants.

Section R404: High efficiency lighting requirement is being extended to include exterior lights, and increased the requirement for interior lighting to 100%, up from 90% in 2018.

Section R405: Simulated Building Performance is the most common construction method in the 2018 code used by builders in Columbia. This pathway was modified and designed to impact building compliance depending on the type of appliance used - gas appliances would now have additional requirements to meet as compared to an all-electric designed home.

Given the code development changes in the 2024 IECC, the review committees determined that there would be significant changes related to the following aspects of one- and two-family dwellings built within City of Columbia, such as: Framing and amount of lumber used, windows and doors designed for homes, siding applied to homes, insulation installed within homes, the mechanical systems designed and installed in homes, as well as the management of moisture built up within homes due to air tightness requirements.

Additional Public Input

Following the BCCC's review of the 2024 codes, staff received additional feedback highlighting concerns regarding the potential costs and feasibility associated with new provisions within the IECC specifically. In response, and in conjunction with the BCCC, staff

coordinated additional opportunities for the public to review the 2024 codes, ask questions of staff and BCCC members, and provide testimony on the potential impacts.

Below is a summary of the recent opportunities for the public to provide input and testimony on the proposed building code adoption:

- **90-day Public Comment Period by Resolution (November 17, 2025 thru February 17, 2026):** Required public review period for adoption new building codes. This coincided with the launch of the *BeHeard* engagement page.
- **BeHeard Engagement:** [BeHeard website](#) provided community feedback opportunity, education, and stakeholder inclusion. Included links to the new Community Development [Building Code Adoption Project webpage](#) with proposed amendments, and links to ICC page for each specific code. Open from November 25, 2025 to February 29, 2026. City responded to and/or acknowledged all comments.
 - 7 total comments posted to site
 - 1- Supporting adoption of IECC
 - 2 - Stating to hold off adoption indefinitely citing affordability
 - 1 - Referencing house inspections failing and insulation issues with mold
 - 2 - Requesting more information & access to code books; links were provided.
 - 1 - Seeking City of Columbia to listen to builders.
- **Public Commission Meetings:** All Building Construction Codes Commission (BCCC) review meetings were open to the public and advertised throughout the entire review period. Below is a list of the meetings held during the subsequent public comment period, with minutes attached
 - December 17, 2025 – Open forum with BCCC and staff
 - February 23, 2026 – Regular meeting of Building Construction Codes Commission
 - April 27, 2026 – Regular meeting of Building Construction Codes Commission
- **Technical Presentations:**
 - **January 2025:** Hosted Matt Belcher (International Code Council Regional Representative) to present anticipated residential updates within the IECC.
 - **November 2025:** Partnered with the Office of Sustainability and the CEC to bring the Midwest Energy Efficiency Alliance (MEEA) to the City for a presentation to City Council during a work session.

This process provided a vital platform for constituents, designers, and developers to weigh the potential benefits against the practical challenges of adoption of the 2024 codes.

Key Considerations and Impacts.

While the adjustments in the 2024 IECC offer clear paths to long-term energy savings, the Commission identified significant economic and infrastructural challenges:

- **Escalating Construction Costs:** Adopting the 2024 IECC without amendments is projected to increase commercial construction costs by **20–30% (primarily due to the renewable energy requirement)** and residential costs by **5–10%** relative to baseline construction costs. Following conversations with other jurisdictions, design professionals, and a basic review of the costs associated with renewable energy sources, staff received comments surrounding the commercial construction costs from design stage to final occupancy that totaled with the range of 20-30%. Staff completed an informal analysis on the potential cost increase to a single-family home based on the increase in materials necessary, such as framing and insulation, and estimated an increase in approximately \$8,000 and \$12,000 per home (this results in 5-10% based on the average sales price of an average size home in Columbia, MO). During the presentation by MEEA, they estimated that the cost increases for a house was variable, but generally between \$3,000-4,200. Given the variable pathways to compliance, the cost impacts of the IECC are more likely to be in a range than a fixed additional amount.
- **Grid and Infrastructure Limitations:** Current infrastructure poses challenges for meeting and enforcing the code's renewable energy provisions—a limitation echoed by the Boone Electric Cooperative. Electric Utilities estimates that they could possibly achieve the requirements within a 2-3-year time frame. Notably, both the City of Columbia and Boone Electric Cooperative already source renewable energy at levels exceeding the 2024 IECC minimum mandates.
- **Development Restrictions:** The BCCC determined that requiring developers to comply with a code that lacks local utility capacity to support its alternative compliance paths acts as a hindrance. This was a principal concern cited during deliberation, and the Commission felt that adoption should not be considered until the local utilities are fully prepared to accommodate these alternative design options.
- **Baseline vs. Voluntary Standards:** The 2024 updates focus primarily on energy efficiency rather than immediate life-safety or structural building longevity. Retaining the 2018 baseline ensures an accessible standard while still allowing progressive developers to voluntarily build to higher energy-efficient standards if they choose.

Electric Utility Evaluation of C405.15.

Detailed information is provided below for subsection 405.15 within the IECC, but in summary the City's Electric Utility cannot provide all of the off-site renewable options in the 2024 IECC code at this time. A 2 to 3-year implementation timeline would be required, and not all options may even be available in that timeframe. If these options are to be further evaluated and considered, discussions will be needed to discuss a feasibility analysis.

C405.15.1: Onsite renewable energy systems

This would fall under the existing net metering program that the utility offers to all customers who install distributed generation (solar, wind, etc.) on their properties to help offset their electrical usage. These systems are connected onsite on the customer side before the utility meter, therefore they are all tied to a single meter and to a single utility account.

C405.15.2.1: Off-site procurement

There are 6 options to meet this section as listed in the ICC Energy Code. These options are: physical renewable energy power purchase agreement, financial renewable energy power purchase agreement, community renewable energy facility, off-site renewable energy system owned by the building property owner (aka virtual net metering and/or virtual net billing), renewable energy investment fund, and green retail tariff. **None of these options are currently available through the utility and it would be a 2 to 3-year implementation timeline for the utility to make any of these available.** Based on our initial review, we believe that the green retail tariff option may be the quickest and potentially easiest to implement, but it would have to be evaluated as part of a cost of service study, which the utility is not looking at doing until 2027 or 2028.

C405.15.2.2: Off-site Contract

This is a purchase power agreement. The customer would have to go through the utility for this and therefore this would be subject to the same restrictions as in C405.15.2.1.

C405.15.2.3: Renewable Energy Certificate (REC) Documentation

This is the option for off-site renewables that could be implemented without utility involvement. However, it should be noted that the Columbia Water & Light Advisory Board (WLAB), the Climate & Environment Commission (CEC), and City of Columbia Utilities staff recommended to the City Council that the utility not buy RECs to comply with the City's renewable energy ordinance. The City has a renewable energy ordinance which states that the utility must meet certain renewable energy thresholds. Due to delays outside of the utility's control on the construction of renewable energy projects, the utility has not met the renewable energy standard over the last couple of years. In prior years, if the utility did not meet this standard, the utility would purchase RECs; however, in the last couple of years the WLAB, CEC, and staff agreed on the recommendation to City Council to not purchase RECs, as this is a transaction for power that was already put on the electrical grid and therefore does not provide additional renewable energy.

Additionally, it should be noted that Columbia Water & Light does have renewable energy as a non-insignificant portion of the electricity that is provided to all customers. In the 2025 Renewable Energy Plan from the utility, 22.82% of the electricity provided to all customers was from renewables.

Conclusion.

The BCCC met on February 23, 2026 to discuss the feedback that they had received during the comment periods and during the public forum, and to receive additional testimony from the public regarding the adoption of the 2024 codes. Generally, there was concern with the potential for significant cost increases that would affect both residential and commercial development. Another principal concern was the inability of the local utilities to provide the alternatives to the renewable energy requirement that are listed in C405.15 of the IECC.

There are additional impacts to construction that were considered by the Building Construction Codes Commission, before deciding to recommend staying in the 2018 IECC. These impacts included:

1. **Extended Planning Timelines:** Increased project design durations and higher upfront architectural/engineering fees.
2. **Cost-Benefit Imbalance:** High initial construction premiums relative to the short- and long-term energy savings return. The International Code Council has been cited stating that the target improvement for the 2024 IECC was 5-10% less energy use annually compared to 2018 Code designed buildings. This was across the board for commercial and residential buildings.
3. **Prolonged Construction Schedules:** Delays driven by additional building requirements, specialized construction methods, and stringent testing/verification timelines.
4. **Enforcement Capacity:** Administrative limitations in verifying and supporting alternative compliance options across diverse building types.
5. **Municipal Administrative Costs:** Increased financial burden on the City of Columbia for staff training, plan reviews, and inspection knowledge required to enforce the new code.
6. **Permitting Bottlenecks:** Anticipated delays in permitting timelines due to a more complex, prolonged plan review process.

At the conclusion of discussion, a motion to approve the adoption of the **2024 ICC Family of Codes** with local amendments, with the explicit exclusion of the 2024 International Energy Conservation Code (IECC) was **passed (9-2)** by the Building Construction Codes Commission.

If Council accepts this recommendation, the City would be under the following codes:

- 2024 International Building Code
- 2024 International Residential Code for One- and Two-Family Dwellings
- 2024 International Fire Code
- 2024 International Plumbing Code
- 2024 International Mechanical Code
- 2024 International Fuel Gas Code
- 2018 International Energy Conservation Code
- 2024 International Existing Building Code

- 2024 International Property Maintenance Code
- NFPA 70 2023 National Electric Code

At their June 23, 2026 meeting, staff presented the BCCC recommendation to the CEC. Following that meeting, the CEC voted to recommend adoption of the IECC, and submitted a memo to that effect, which is attached.

Attachments: BCCC Minutes February 23, 2026 & April 27, 2026; Public Forum Summary and Minutes; BeHeard Public Comment; CEC Memo

Fiscal Impact

Short-Term Impact: NA
Long-Term Impact: NA

Strategic & Comprehensive Plan Impact

Strategic Plan Impacts:

Primary Impact: Safe Community, Secondary Impact: Resilient Economy, Tertiary Impact: Reliable and Sustainable Infrastructure

Comprehensive Plan Impacts:

Primary Impact: Livable & Sustainable Communities, Secondary Impact: Environmental Management, Tertiary Impact: Economic Development

Legislative History

Date	Action
11/17/2025	Placing on file for public use, inspection and examination for a period of ninety (90) days certain uniform codes (R161-25)
10/21/2024	Council authorizes the Building and Construction Codes Commission to begin review of the 2024 International Codes (REP 65-24)

Suggested Council Action

Accept the recommendation of the Building Construction Codes Commission to adopt the listed 2024 International Code Council Family of Codes and the respective amendments, to be in full force and effect on October 1, 2026:

2024 International Building Code with amendments
2024 International Residential Code with amendments
2024 International Fire Code with amendments
2024 International Existing Building Code with amendments
2024 International Plumbing Code with amendments
2024 International Mechanical Code with amendments
2024 International Fuel Gas Code with amendments
2023 National Electric Code with amendments
2024 International Property Maintenance Code with amendments.