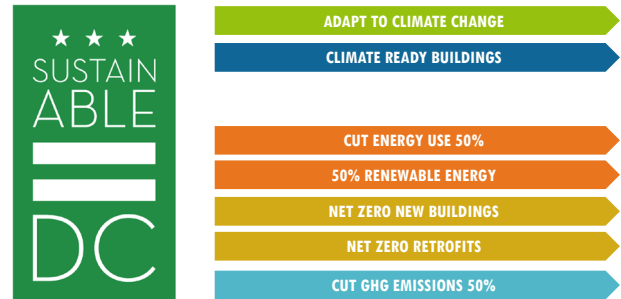


DC Construction Code Changes

On May 29, 2020, the District of Columbia (DC) construction codes were changed from the 2012 International Codes Council (ICC) code suite to the 2015 ICC codes, except for the District’s Green Code which will continue to reference the 2012 code. The District’s move to the 2015 model codes mirrors similar advancement we’ve seen in surrounding jurisdictions across the DMV region. These updates follow the logical advancement of the building codes for safety and efficiency; the changes were also deemed necessary to achieve the 2032 Goals set forth by the District outlined in the Sustainable DC Plan which include:

50% renewable energy, 50% reduction in energy consumption, and 50% reduction in carbon emissions. See Figure 1.1

GOALS: 2032



2050: Mayor Bowser Commitment to ZERO Carbon

Figure 1.1. DC’s 2032 Goals, DCRA

Both ASHRAE and the IECC offered prescriptive and performance pathways which led to at least four possible compliance paths – a process which designers and reviewers found unnecessarily cumbersome. The multiple options also presented design challenges later on, if a team determined the compliance path needed to change after design had begun.

In the District of Columbia, first-time tenant fit outs are required to follow the construction code the base building was designed to. Accordingly, providing fewer compliance pathways will reduce confusion for first-time tenant fit outs.

Migrate energy-related requirements from the DCgCC to the newly issued DCECC. In order to further enhance the efficiency improvements in the 2017 Codes, all energy-related requirements from Chapter 6 of the DCgCC have been moved to the newly issued DCECC. These requirements will now apply to all District projects, regardless of size. Daylight harvesting and plug load controls, among other energy requirements, are now included in the DCECC. Commissioning requirements have also migrated to the DCECC and commissioning is now required for projects greater than 10,000 SF for new construction or Level III Alterations; or greater than 20,000 SF for renovation projects. Envelope commissioning will now be required for new buildings in excess of 50,000 SF or where a renovation project requires replacement of 25% or more of the building’s envelope.

Vestibule requirements. Vestibule requirements have grown more stringent, and the minimum space between inner and outer vestibule doors has been defined. Insulation and fenestration performance requirements have also become more stringent.

OVERVIEW

Six years ago, the code change that caught the region by surprise included the introduction of the first DC Green Construction Code (DCgCC). Based on the 2012 International Green Construction Code (IGCC), projects over 10,000 SF were faced with enhanced sustainability requirements similar to those found in LEED. At the time, the DC Energy Conservation Code (DCECC) was updated and enforced, but it otherwise received only minor changes from the International Energy Conservation Code (IECC) model code.

In the 2020 code issuance (referred to as the *2017 DC Construction Codes*), most of the changes which impact the District’s design and construction industry are included in the updated Energy Code. The new code is expected to provide energy savings in the range of 15% - 24% compared with the 2013 code. The 2017 DCgCC still references the 2012 IGCC code, as little changed since the 2013 issuance.

Later this year, DCRA will be issuing a consolidated set of codes that combine the DC edits with the model codes. In the meantime, GHT has summarized the major changes to the Energy Codes below:

Alter the underlying model code from IECC to ASHRAE 90.1-2013. The language of the DCECC is now based on ASHRAE 90.1-2013. Prior energy codes have allowed compliance with either the IECC or ASHRAE 90.1. ASHRAE 90.1 better addresses energy modeling as a path to energy code compliance and the majority of commercial office buildings are being designed to meet ASHRAE standards due to robust energy modeling provisions and acceptance by the LEED rating system.

DC Construction Code Changes

Additional Provisions for On-Site Renewable Energy Systems.

New construction, additions, or Level 3 alternations (or any combination thereof) in excess of 10,000 SF are now required to have on-site renewable energy generation. The Standard Renewables Approach in the DCECC requires renewable energy generating capacity of 6.0 kBtu/ft² of roof area for single-story buildings and 10.0 kBtu/ft² of roof area for all other buildings. DCECC provides an Alternative Renewables Approach, which allows a reduction in onsite renewable energy generation (4.0 kBtu/ft² of roof area for single-story buildings and 7.0 kBtu/ft² of roof area for all other buildings) by requiring more efficient equipment inside the building. The 2017 DCECC will allow certain renewable electricity products (credits) to be purchased in lieu of installing on-site renewable energy generation.

Other notable requirements added. Heat pumps will now be required for the first stage of heating. Electric resistance heating may be utilized, but it must be provided as the second stage of heating.

Duct and plenum insulation requirements have increased to match ASHRAE 189.1-2014 (ASHRAE 189.1 is to the IGCC as ASHRAE 90.1 is to the IECC).

New building automation systems must provide an automated demand response system, which can systematically shed loads upon receiving a peak load-shedding signal from the power company. Participation and load-shedding are not required, but the infrastructure to do so is. By requiring the infrastructure, the District aims to facilitate participation in more advantageous utility rate programs, while eliminating peak load generation typically provided by diesel generators.

Automatic receptacle controls are now required in both private offices and open offices with systems furniture.

Energy metering by load type will be required for new buildings and complete electrical system upgrades.

Lighting power densities have been further reduced and daylight harvesting is mandatory in perimeter zones where lighting exceeds 150 Watts. However, there is a new provision that exempts projects from automatic daylight harvesting where the total (entire project area) lighting power density is reduced to 80% below the maximum allowable code levels.

The guidelines for lighting power density have also incorporated the ASHRAE 90.1 format, which may be unfamiliar to many designers. Allowances for decorative lighting have been reduced. It will be important for lighting designers to understand the impacts of these requirements to incorporate into future projects.

TRANSITORY PROVISIONS

Issuance of the 2017 DC Construction Codes may have come as a surprise to members of the building community – fortunately, the District has provided several transitory provisions which allow projects to proceed under the 2013 codes, provided they meet any of the following criteria:

1. If you have an existing (executed) design contract in place, your project will be allowed to proceed using the 2013 codes in order to obtain a permit for up to one year (from May 29, 2020). You will need to show proof of the signed contract along with an affidavit attesting to its accuracy.
2. If you have already obtained a building permit from the District, you can proceed with construction under the previous codes.
3. If you have filed for permit under the previous codes, you have 12 months (from May 29, 2020) to receive permit approval under the previous codes.
4. If the project is a first-generation tenant space, it will be completed under the code that the base building was designed (no expiration).

DC Construction Code Changes

ADDITIONAL INFORMATION

DCRA will provide a consolidated set of codes for reference; this is intended for release later this year. GHT Limited will offer a free AIA- and GBCI-accredited webinar on Thursday, July 23, 2020. Information on how to register will be shared in the coming weeks. Please continue to monitor GHT Limited's LinkedIn page for the latest news and updates regarding the changing DC codes.

ABOUT THE AUTHOR

Patrick Kunze is a Senior Principal in GHT's Interiors Studio and is committed to advancing sustainable design practices in the building industry. He is a voting member of the Green Technical Advisory Group (TAG) subcommittee of Washington DC's Construction Codes Coordinating Board (CCCB) and he participated in the review and development of the inaugural Green Codes.



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