

06-14-2023 Town Council Meeting

Responses to Council Questions

ITEM #4: Modernize the Town's Energy Policy for Conditional Rezoning Applications and Align it with the Climate Action and Response Plan

Council Question:

In light of this new policy, should the Eastowne project be asked to agree to meet these new efficiency standards as a baseline, and any updates in force at the time they apply for a ZCP for a new building?

Staff Response:

The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) describes health care facilities as being “among the largest and most energy-intensive buildings in a community.” As Council is aware, UNC Health has made a commitment to design buildings that are 20% better than ASHRAE 90.1-2016—or the latest adopted version within the NC building code—whichever staff determines is more energy efficient at the time of application.

Referencing information from the US Department of Energy, we estimate that UNC Health’s energy commitment will result in medical office buildings that are at least 52.8% more energy efficient than the “baseline” standard that was in place at the time the Council first adopted an energy policy for rezonings (ASHRAE 90.1-2007). For comparison, the U.S. Department of Energy has encouraged states to adopt ASHRAE 90.1-2019 as the National Energy Standard (or model code), which is 37.5% better than our baseline and 15.3% lower than UNC Health’s commitment for this campus.

The New Buildings Institute (NBI) 40% Stretch Energy Standard that staff is recommending for conditional rezonings is approximately 66% better than baseline; however, we recognize that the proposed standard is a “stretch” goal and—if adopted by Council—staff will seek agreement with applicants, knowing that for certain building types there will be valid reasons why they cannot meet all aspects of the standard.

ASHRAE Version	Percent Better than ASHRAE 90.1-2007	Notes
90.1-2013	26%	Current NC code
90.1-2016	32.8%	
90.1-2019	37.5%	DOE Nat'l Energy Std
20% > 90.1-2016	52.8%	UNC Health Std
40% > 90.1-2013	66%	NBI Stretch 40 Std

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We understand that UNC Health has also committed to covering 50% of all rooftop space with photovoltaics, which supports the Town's goals for emissions reduction and clean energy. Knowing that utilities have goals to reach net-zero carbon emissions by 2050 and for the reasons cited above, staff is comfortable with UNC Health's proposed level of energy performance relative to our proposed "stretch" standard for new construction.