

August 27, 2019

North Carolina Housing Finance Agency
Mr. Chris Austin, Director of Rental Investment
3508 Bush Street
Raleigh, NC 27609

Dear Mr. Austin,

On behalf of our member companies and professionals working across the state, North Carolina Building Performance Association (NCBPA) submits the following comments regarding the 2020 Qualified Allocation Plan (QAP) program.

As designed, the 2020 QAP continues an unnecessary and uninformed trend of maintaining poor energy efficiency standards that contribute to increased energy burden for tenants and increased operating costs for owners. Conversely, increasing these standards and offering additional points to developers that go above and beyond during new construction – when doing so is most cost effective – would reduce energy burden and afford developers and the agency many additional benefits.

As many other states have already done, North Carolina can increase its standards in cost-effective manners that benefit all parties. But, NCHFA must first commit to doing so. At present, the program's minimum energy efficiency standard of ENERGY STAR 2.0 does not technically exist any more and falls below North Carolina's new 2018 Energy Conservation Code (NCECC) requirements in key areas including Total Duct Leakage. Building to the 2020 QAP standards is unlawful. NCHFA must take immediate action to address this and likely other energy code deficiencies.

NCBPA recommends that NCHFA initiates a nine-month study beginning November 1, 2019 to develop cost-effective energy efficiency requirements and options for the 2021 QAP that include:

1. Increasing the program's minimum energy efficiency standards from ENERGY STAR 2.0 to Version 3.0 or higher.
2. Analyzing the costs and benefits of these changes with involvement from key stakeholders.
3. Identifying short-term utility, foundation, state or federal incentives that would assist developers in making the transition to improved energy efficiency requirements and options.
4. Providing points for optional energy efficient, green and high performance measures, ratings and certification programs.

NCBPA, our members and partners are ready and willing to assist NCHFA in addressing these issues and opportunities. Thank you for the opportunity to provide the following recommendations.



D. Ryan Miller
Executive Director
North Carolina Building Performance Association (NCBPA)
919-841-6207
Ryan@BuildingNC.org

Detailed Recommendations

NCBPA and its members recommend the following action for the 2020 QAP:

(1) Take Action to Address Energy Code Deficiencies

As currently designed, NCHFA's 2020 QAP energy efficiency requirements **WILL NOT** meet North Carolina's new 2018 Energy Conservation Code (NCECC), which came into effect on January 1, 2019. In particular, the Total Duct Leakage (TDL) requirement of 6% is above the new minimum threshold of 5%. This and other code related issues and industry best practices – such as third party quality assurance requirements found in [ENERGY STAR Version 3 program](#) - must be addressed in the 2020 QAP.

NCBPA and our members recommend that NCHFA study the new energy code requirements and implement modifications to the 2020 QAP that support minimum code compliance. NCBPA and our members are available to assist with this activity as needed.

- Note, exceptions to this new energy code requirement include that (1) the system can meet the Duct Leakage to Outside (LTO) requirement of 4 CFM per 100 sq. ft. (4%) and (2) systems serving less than 750 sq. ft are exempted from testing requirements (NCBPA originated this code change proposal).

(2) Incorporate Energy Efficiency Benchmarks from Other Southeastern States

Many states have or are in the process of raising energy efficiency standards and incorporating optional points for high performance measures using cost-effective means for developers that offer real benefits to tenants. Every year, North Carolina's QAP program falls further behind and will face increasing difficulty to meet code improvements and market trends towards more energy efficient construction.

NCBPA and our members recommend that NCHFA commits to a nine-month study to identify the costs, benefits and resources needed to increase the minimum energy efficiency standards and offer points for additional energy efficient, green and high performance measures, ratings and certification programs.

- Refer to attachments A1, A5, A6 and A9.

(3) Codify Energy Efficiency's Role as a Tool for Improving and Preserving Rental Housing Affordability

Developers often feel that additional energy savings opportunities – no matter their ability to return positive long-term returns to their investments and future tenants – are simply too costly up-front to incorporate into their projects. With the 2020 QAP, NCHFA has an opportunity to begin shifting this dynamic and do more to codify the long-term value of energy efficient construction, of course giving proper consideration to the up-front costs incurred by developers. [According to the RAND Corporation](#), “the prioritization of energy-efficient measures in the scoring system for developers to obtain these highly competitive tax credits is one of the most significant ways to increase the share of resources for energy efficiency within affordable multifamily rentals.”

NCBPA and our members recommend that NCHFA commits to a nine-month study to identify the ways that the 2021 QAP can codify and incentive developers to invest in energy efficient, green and high performance design, measures, ratings and certification programs to directly address their data-proven ability to improve and preserve rental housing affordability.

- Refer to attachment A7 (pages 36 – 39).

(4) Identify Utility, Foundation, State or Federal Incentives to Assist Developers

Duke Energy incentives are available to help developers offset additional upfront costs for energy efficient design and product purchases. In particular, recent changes to [Duke Energy's North Carolina Energy Efficiency Design Assistance program](#) make LIHTC/QAP projects eligible to receive free consulting, energy modeling and Smart \$aver incentive application assistance when constructing new buildings, completing major renovations or making additions. Additional utility, private foundation, state and federal incentives may be available to assist developers in getting over the “hump” in the first few projects.

NCBPA and our members recommend that NCHFA work with Duke Energy and other utilities to offer incentives to developers that are on the cusp of being able to implement improved energy savings design, measures and products in their next projects. Offering incentives that encourage their transition to more energy efficient construction will support the needed transition to increased stringency in new QAP requirements.

- Refer to attachment A4.

(5) Incorporate Points for Third-Party Programs

Projects that meet varying levels of third-party energy efficiency programs such as National Green Building Standard and Passive House (amongst others) receive QAP points in many other state programs. NGBS, in particular, is widely used in North Carolina multifamily projects and could be used to support a transition to ENERGY STAR Version 3 as a new minimum standard for the 2021 QAP. Programs such as Passive House are showing significant financial returns to tenants in states including Pennsylvania where developers can implement the standard without any additional cost after their third project.

NCBPA and our members recommend that NCHFA commits to a nine-month study to identify how best to offer QAP points for third-party programs such as NGBS and Passive House in the 2021 QAP.

- Refer to attachments A2, A3, A8, A12, A13 and A14.

(6) Educate Developers on Savings Opportunities Through the New Energy Rating Index Energy Code Compliance Path

North Carolina's 2018 NCECC includes a [new optional pathway for residential projects](#) of three stories or less to use Home Energy Ratings (HERS Ratings), known in our new code as the Energy Rating Index (ERI), to pass for energy code compliance. Essentially, a low enough HERS rating expedites the energy code inspection and compliance process.

NCBPA and our members recommend that NCHFA communicate the added benefits of the ERI compliance pathway to developers as an additional voluntary incentive for having their projects rated for energy efficiency with HERS Ratings.

(7) Increase Energy Efficiency Standards to Improve North Carolina’s Crippling Home Energy Affordability Gap

According to a 2019 report from Fisher, Sheehan & Colton, “Home energy is a crippling financial burden for low-income North Carolina households... with incomes of below 50% of the Federal Poverty Level pay(ing) 33% of their annual income simply for their home energy bills.” As referred to earlier, new construction is the most cost-effective time to offer residents improved energy efficiency. Doing so later on only increases the costs and eliminates years of potential energy, health, safety and other benefits.

NCBPA and our members recommend that commits to a responsible transition to better energy efficiency standards that properly account for the value of up-front costs with long-term benefits to tenants and NCHFA.

- Refer to attachments A10 and A11.

(8) Incorporate Cost-Effective Energy Efficiency Improvements into Rehab Projects

In support of public comments dating back to at least 2015 from organizations such as [NRDC](#), *NCBPA and our members echo prior recommendations that NCHFA consider adopting additional requirements and incentives to extend the benefits of energy efficiency to rehabilitation projects.* Doing so will further advance the energy efficiency of existing properties as part of the QAP program. The 2020 QAP should (1) require an energy consultation or audit as a condition of eligibility for tax credits for rehabilitation projects and (2) adopt points to encourage performance-based energy savings in rehabilitation projects that seek an allocation of tax credits.

- Refer to attachment A15.

(9) Undertake a Study to Determine How Best to Implement Energy Data Benchmarking Requirements and Compliance Practices

Many states have already or are planning to offer QAP points for developers that incorporate energy data benchmarking into their projects. Doing so in North Carolina would assist NCHFA in tracking energy efficient, green and high performance improvements to determine how design, measures, ratings and certification programs are impacting the end results of tenant benefits compared to up-front costs for developers.

NCBPA and our members recommend that NCHFA commits to a nine-month study to identify how best to offer QAP points for developers that incorporate energy data benchmarking into their projects.

In support of the above recommendations, we have provided more detail on two key areas here:

Action Needed: Incorporate points for projects designed to include the following energy efficient, green building and high performance construction measures, attributes, certifications and/or ratings.

Recommendations for changes to existing standards language include:

A. Selection criteria to be used in determining the allocation of tax credits: ~~Energy efficiency~~ Energy efficient, green building and/or high performance construction measures, attributes, certification programs and rating systems.

Recommendations for new standards language include:

Points will be awarded to projects whose architectural design and construction meet or exceed the measures, attributes, certifications and/or ratings in the table below, evidenced through submission of completed third-party certification and/or verification documentation. Upon completion, if the project fails to implement the measures/attributes or achieve the certification/rating, the authority will determine if the Design and Construction team made a good-faith effort to do so. If so, no penalty will be imposed. If not, a five-point penalty will be levied against the next application for 9% LIHTCs submitted by the project sponsor.

1 Point	3 Points	5 Points
<p><i>Measures/attributes:</i></p> <ul style="list-style-type: none"> • Smart thermostats or resident-controlled smart metering devices in all units. • Dual flush toilets in all units. • 100% LED bulbs in all lighting fixtures in all units. <p><i>Whole building certifications and/or ratings:</i></p> <ul style="list-style-type: none"> • Home Energy Rating System (HERS) Index Scores of less than 65 for all individual units. 	<p><i>Measures/attributes:</i></p> <ul style="list-style-type: none"> • Mechanically-controlled humidity management appliances in all units. <p><i>Whole building certifications and/or ratings:</i></p> <p><i>Option 1: Achieve certification to one of the following:</i></p> <ul style="list-style-type: none"> • Enterprise Green Communities certification. • LEED-H certified level. • National Green Building Standard (NGBS) Bronze level. <p><i>Option 2: Achieve at least two of the following:</i></p> <ul style="list-style-type: none"> • Home Energy Rating System (HERS) Index Scores of less than 60 for all individual units. • ENERGY STAR Residential New Construction 3.0 certification for all units. • U.S. EPA’s WaterSense Labeled Homes certification for all units. • U.S. EPA’s Indoor airPLUS qualification for all units. 	<p><i>Measures/attributes:</i></p> <ul style="list-style-type: none"> • On-site renewable energy generation (TBD size). • Gray water system(s). <p><i>Achieve certification to one of the following:</i></p> <ul style="list-style-type: none"> • Passive House Institute US (PHIUS) or Passive House Institute (PHI). • Department of Energy’s Net Zero Energy Ready Home program with renewable energy system. • LEED Platinum certification. • National Green Building Standard (NGBS) Emerald certification. • Living Building Challenge certification.

Action Needed: Increase new construction ENERGY STAR standards and requirements from version 2.0 to Version 3.0 or higher.

The ENERGY STAR 2.0 program requirements are outdated and no longer supported by national certification bodies including the U.S. EPA's ENERGY STAR program and RESNET. Without this support, homes built to the 2.0 standards do not receive an official ENERGY STAR certification and do not participate in industry-approved quality assurance standards and requirements.

Recommendations for changes to existing standards language include:

Appendix B - IV. ENERGY STAR CERTIFICATION New construction projects must meet the standards and requirements of ENERGY STAR **23.0** as verified by an independent, third-party expert who assists with project design, verify construction quality, and tests completed units. Adaptive re-use and rehabilitation projects must comply to the extent doing so is economically feasible and as allowed by historic preservation rules. Third party raters must perform blower door tests on **the greater of 10% of the total number of units or 8 all** units. ~~The units tested must be different unit types and in different building locations.~~ Units that fail the blower door tests must be reported to the Agency at the time of failure. Additional testing may be required at owner's expense.

ATTACHMENTS

In support of the above recommendations, we have emailed the following attachments:

- A1: Virginia Housing Flyer
- A2: NAPHN Policy Resource Guide (see pages 23 – 25)
- A3: Build SMART Whitehall Case Study
- A4: Duke Energy Energy Efficiency Design Assistance Program Overview
- A5: Minnesota Housing Finance Agency Program Summary
- A6: Connecticut Housing Finance Agency Program Summary
- A7: Energy Efficiency as a Tool for Preservation of Affordable Rental Housing (see pages 38 – 39)
- A8: Pennsylvania Housing Finance Agency Passive House Project Case Study
- A9: Georgia Housing Finance Agency QAP Requirements
- A10: North Carolina 2018 Home Energy Affordability Gap Fact Sheet
- A11: North Carolina 2018 Home Energy Affordability Gap Detail
- A12: Onion Flats Passive House Program Presentation
- A13: Summary of Passive House Points in QAP Programs
- A14: Summary of National Green Building Standard
- A15: NRDC 2015 QAP Comments