NCHFA 2019 QAP Program Comments

August 31, 2018

Dear North Carolina Housing Finance Agency,

On behalf of our 250-plus member company developers, contractors and other high performance construction companies across the state, North Carolina Building Performance Association (NCBPA) submits the following comments regarding the 2019 Qualified Allocation Plan (QAP) program.

These recommendations encourage the adoption of energy efficient, green and high performance building design, installation and maintenance practices that are accessible and cost-effective to developers in your program. In addition, these changes benefit rental tenants through reduced utility bills, improved health and safety, reduced maintenance and a lower environmental impact in their home.

1. 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
Measures/attributes: • Smart thermostats or resident-controlled smart metering devices in all units. • Dual flush or low flow toilets in all units. • Lavatory faucets 1.5 GPM or less in all units. • 100% LED bulbs in all lighting fixtures in all units.	*Measures/attributes:* • Mechanically-controlled humidity management appliances in all units. *Whole building certifications and/or ratings:* • ERI average of less than 60. • ENERGY STAR Certified New Homes 3.0 certification for all	*Measures/attributes:* • On-site renewable energy generation (TBD size). • Gray water system(s). *Whole building certifications and/or ratings:* • ERI average of less than 55. • Passive House Institute US (PHIUS) or Passive House

Whole building certifications and/or ratings: • Energy Rating Index (ERI) (based on Home Energy Rating System (HERS) Index Scores) average of less than 65.	single family units. • ENERGY STAR Multi-Family 3.0 certification for all multi-family units. • U.S. EPA's WaterSense certification for all units. • U.S. EPA's Indoor airPLUS certification for all units. • National Green Building Standard Bronze level certification. • LEED Certified rating. • Enterprise Green Communities certification.	Institute (PHI). • Department of Energy's Net Zero Energy Ready Home program with renewable energy system. • LEED Gold rating. • National Green Building Standard Gold certification. • Living Building Challenge certification.

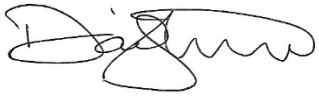
2. Increase new construction ENERGY STAR standards and requirements from version 2.0 to 3.0 and offer alternative certification programs.

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. For comparison, South Carolina's QAP program operates on version 3.0.

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 ~~2~~3.0 or another approved certification program (from list above) 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/verifiers must, at minimum, comply with sampling protocol per industry standards for all diagnostic testing including blower door and duct testing. ~~perform blower door tests on the greater of 10% of the total number of units or 8units. 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.

Thank you for the opportunity to provide these recommendations. Please contact me with questions and if any additional information is needed.



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Supporting data for inclusion of the Passive House certification includes:

1. 15 states have committed to adopting this. 39 states are actively engaged in assessing this opportunity.
2. Since adopting this strategy in its 2015 QAP, Pennsylvania has seen progress in:
   a. 85 multifamily project applications submitted with 39 being awarded.
   b. 38% applied with the Passive House certification and 8 received funding.
   c. 422 new Passive House-certified multifamily units have been constructed.
   d. Developers report a "negligibly different" cost for building to the Passive House standard.
3. The following real-world project example details how a Passive House market-rate multifamily project in Kansas City resulted in a net revenue increase for the developer and benefits to the tenants. In place of an increased Tenant Rent shown in the table below, keeping the same Tenant Rent amount for an affordable housing development would yield an $8,557 net revenue increase for the developer and provide an additional $32,666 for construction of additional units.

A Revenue Comparison of Passive House vs. Code Construction for a Kansas City Market-Rate Multifamily Project

Code-compliant building cost:	$7,783,196
Passive House building cost:	$8,075,493
Cost difference (investment):	$292,297
Percent cost increase:	3.76%

49-unit apartment building: Annual Revenue

	Builds to code	Builds to Passive House & pays tenant power bill	HVAC electricity use common areas	HVAC electricity use living units	Tenant rent	Tenant total cost	Owner net revenue	Passive House net revenue increase
Apt. Bldng. Owner A	x		113,250 kWH $12,344	299,685 kWh $32,666	$588,000	$620,666	$575,656	0.00
Apt. Bldng. Owner B		x	9,513kWh $1,037	25,225 kWh $2,750	$620,666	$620,666	$616,879	~~$41,223~~ $8,557 to building owner $32,666 to construction of additional units

Assumes all-electric Heating, Ventilation, and Air Conditioning (HVAC). kWh cost is KCK average $0.109/kWh.
Total conditioned area: 41,259sqft. Common area: 11,325sqft.

4. *See supporting documentation for sample language from other states.*

Connecticut Housing Finance Authority: Plans and specifications ≥ 40% complete and reflecting Passive House Design and construction may be provided. Note that ≥ 40% complete plans and specifications are expected to include all of the necessary requirements described in sections V, C,

and D.1. above. In addition, a detailed scope of proposed Passive House design and construction measures, coordinated with section details of the proposed building thermal envelope at key intersections (footings, foundations, slabs, floors, walls, windows, doors, projections/overhangs, roofs, etc.), and a preliminary modeling analysis/output report prepared by a certified Passive House consultant through the Passive House Planning Package (PHPP) as developed by the Passive House Institute (PHI), or through WUFI Passive, as developed by the Passive House Institute (PHI), or through WUFI Passive, as developed by the Passive House Institute United States (PHIUS), must also be provided. It is expected that submissions under the Passive House Design category are "pre-certification-ready"; i.e., all documentation required by PHI or PHIUS to be submitted for pre-certification review must be provided, so that submission for pre-certification review can be made immediately upon notification of an award of tax credits. In order to facilitate Passive House certification by PHI or PHIUS, it is important that the development of final construction drawings be informed and guided by their pre-certification review comments. In addition, all Passive House projects must receive third-party verification of all PHIUS+ requirements during construction, provided by PHIUS+ certified raters, who are not part of the design or construction development team (this requirement applies regardless of which Passive House organization approves the pre-certification). All hard costs shall be reflected in the project cost summary.

New Hampshire Housing Finance Agency: Energy Efficient Design and Construction (5 points): Project achieves Passive House Certification or meets NGBS silver or higher designation. If the project fails to achieve certification, the authority will determine if the Design and Construction team made a good-faith effort to achieve certification. 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.

Montana Board of Housing: Passive House is a voluntary international building standard develop by the Passive House Institute (PHI), locate in Darmstadt, Germany (referred to as the "Passive House Standard"). The Passive House Standard is composed of several strict performance requirements for new building construction. For the renovation of existing buildings, PHI developed a similar if slightly more lenient performance standard. The resulting performance represents a roughly 90% reduction in heating and cooling energy usage and up to a 75% reduction in primary energy usage from existing building stock.

Illinois Housing Development Authority: Projects whose architectural design and construction meet or exceed green initiative standards, evidenced through submission of the Scoring – Green Initiatives Certification, available on the Website, can earn up to three (3) points as follows:

1 point:

- Commit to obtaining EPA Energy Star certification – or –
- Minimum 10% improvement for new construction (5% for rehab) above SHRAE 90.1 2010 proven by a completed energy model, - or –
- HERS rating of 75 or lower

2 points:

- Commit to obtaining a sustainable building certification from one of the following:
  - U.S. Green Building Council LEED certification – or –
  - Enterprise Green Communities 2015 certification – or –
  - ICC 700 National Green Building Standard certification – or –
  - Passive House Certification through PHIUS or PHI

3 points:

- Meet minimum standards in the Authority Standards for Architectural Planning and Construction indicated for water conserving fixtures; and
- Commit to obtaining a sustainable building certification from one of the following:
  - Certification through Living Building Challenge – or –
  - Alternative certification for a high performance building achieving 'Net Zero Capable' status as approved by the Authority.

Ohio Housing Finance Agency:

Developments in all pools that include exceptional design features may earn three points. Partial points will not be awarded. Exceptional elements must be appropriate to the population served. Proposals will receive weighted consideration for their incorporation of any or all of the following exceptional elements:

WEIGHTED VALUE: 1 EACH	WEIGHTED VALUE: 3 EACH	WEIGHTED VALUE: 5 EACH
• Community Garden(s) • Exterior open spaces and paths • Play areas and/or pocket parks • Rain garden or bioswale • Smoke-free campus • Smart thermostats or resident-controlled smart metering • Dual flush toilets throughout • Annual, on-site, free dental and/or vision services • Monthly, staffed Ohio Benefit Bank on-site	• Dedicated fitness center with exercise machines • Dedicated business/work-from-home center • Computer/tablet lending program in lieu of dedicated computer room[3] • Reuse of NIP-funded site acquired from county land bank • Free resident Wi-Fi • DOE Zero Energy Ready Home[4] • Free Medicaid/Medicare billing services • Free access to on-site, licensed physician or nurse practitioner at least once per week.	• On-site renewable energy generation • PHIUS+ Project Certification (Passive House) • DOE Zero Energy Ready Home with renewable energy system • Platinum LEED rating; OR Emerald NGBS ICC 700 National Green Building Standard; OR Exceeding minimum Enterprise Green Communities Criteria by 20 or more points. • Gray water system(s) • Dedicated health clinic[5]