

Disclosure of Research Study – Mattamy Homes Riverfall Community**Title of Study:** North Carolina Connected Communities Project**Research Investigator:** IBACOS, Inc., Pittsburgh, PA, info@nconnectedcommunities.com**Study Website:** <http://www.nconnectedcommunities.com/riverfall>

You are being invited to participate in an innovative [Connected Communities](#) research study with IBACOS, Inc., Duke Energy, Mattamy Homes, and the U.S Department of Energy.

Why is this research being done?

The purpose of this study is to learn how using your electrical appliances and equipment can help your electric utility provide you with better electrical service. The project will last 24 months and will include up to 1,000 homes in Duke Energy territory. The project is being funded by the U.S. Department of Energy and Duke Energy in collaboration with your homebuilder, Mattamy Homes.

The project will use energy data collected from the following devices installed in your home to help electrical utilities identify more ways to cleanly and efficiently serve their customers' energy needs: smart, WiFi-enabled thermostat(s); water heater; smart electrical panel, smart breakers, or home energy monitoring system; utility meter; electric vehicle (if present); and battery and photovoltaic (PV) systems (if present). Data collected will be coded and your direct identifiers remain confidential. Your feedback will be requested through periodic surveys to help the study team understand your experiences with this program and the technologies in your home. More information on these devices and their terms and conditions are located on the project website at <http://www.nconnectedcommunities.com/riverfall>.

What should I know about a research study?

- Whether you choose to participate in this research study is entirely up to you.
- You can always choose not to take part in this study. Your participation is voluntary.
- You may ask us any questions you want before deciding to participate in the study.
- You can agree to take part in the study and later change your mind without giving any reason.
- Your decision will not be held against you, and there will be no penalty or loss of benefits. *(If equipment is subsidized in relation to participating at the "Enhanced Participation" level, early withdrawal from the study may lead to an obligation to reimburse certain costs of the subsidized battery system.)*
- You do not waive any of your legal rights by signing this form.

Could being in this study be bad for me? What are the predicted risks?

You are expected to enroll in the Duke Energy Progress EnergyWise Home® smart thermostat program as part of this study. When enrolled, we will be changing your thermostat temperature by a few degrees during times of peak energy use on the electric grid; therefore, you may feel a little uncomfortable when this happens. However, if this happens, you can change your thermostat back to a more comfortable temperature setting whenever you want. We will also be changing the times your water heater is running to help with the grid and, if you are on a time of use electrical rate, to save you money on your electrical bill; you should not lose any hot water and you can choose to run your water heater whenever you want. Any adjustments you make to your thermostat or water heater will not result in a loss of data or impact the results of the study. We may also operate additional equipment in your home, if present and enrolled in a respective Duke Energy program, such as batteries and electric vehicle chargers, to help with the grid; this equipment will be managed according to the terms of the respective Duke Energy program.

Loss of your personal information also represents a potential risk in the study. Although our team has collaborated with the Department of Energy and Duke Energy to ensure the required Cybersecurity measures are in place for this project, we recognize the potential for errors, mistakes, and prospective data breaches.

What are the expected benefits of the research? Is there any way being in this study could help me?

We cannot promise any benefits to you or others from your taking part in this research. However, possible benefits include a more comfortable home with lower electrical bills than a similar home that is not participating in the study. Also, the connected water heater in your home could detect water leaks before they become expensive repairs. The smart electrical panel or breakers gives you the insight and control of every circuit or key circuits in your home and could help save you money on your electrical bill; the smart panel or breakers can also help you manage larger loads in your home such as electric vehicle charging, batteries, and PV systems (if present) to help save you money when participating in relevant Duke Energy programs and rate plans. Home energy monitoring systems can provide you with real-time insight into your energy usage and help you make decisions about how you use energy in your home. Batteries and PV systems, if present, can also help provide backup power if your power goes out. Your home could be easier to maintain since you can control your heating and cooling system and water heater and other equipment from any location using your smart phone. The smart equipment in your home could also help the utility use more solar and wind power, which is better for the environment.

More benefits of participation can be found on the Riverfall community page of the project website at <http://www.nconnectedcommunities.com/riverfall>. While some of these benefits may stop at the end of the study, you could continue to receive these or similar benefits through participation in programs or electric rates offered by Duke Energy after the study.

What happens if I say “yes, I want to be in this research study”?

You will be enrolled in the North Carolina Connected Communities program when you purchase your new home at the Mattamy Homes Riverfall community. You can elect the Basic Participation or Enhanced Participation level in the Homeowner Agreement that will be presented to you when you purchase your home. Basic Participation includes energy efficient construction; smart, WiFi-enabled thermostat(s); smart electrical panel, smart electrical breakers, and/or home energy monitoring system; and a water heater controller. Enhanced participation includes an electric storage battery at a low or no cost to you and participation in one of the Duke Energy battery management programs (Duke Energy Progress PowerPairSM or EnergyWise[®] Home). Following the purchase of your home, you will be contacted by the study team by email to help you set up the participating smart devices in your home. You can contact the study team at any time at info@nconnectedcommunities.com or through the project website at www.nconnectedcommunities.com with questions or to opt out of the study.

Because of the smart equipment in your home, you may be contacted by Duke Energy or the study team during or after the study, with offers to participate in new Duke Energy programs, products, or services.

How long is project participation?

Project participation is twenty-four (24) months or until March 31, 2027 (the end date of the study), whichever comes first.

What data of mine will be collected in the study?

During the 24-month study, the following data will be collected about you and your home: Name, address, phone number, email address; household demographics, home ownership or rental status, and building and equipment characteristics (building age, equipment installed on premise); Duke Energy account numbers and utility billing data; energy use and operation of the following equipment in your home: heating and cooling systems (compressor, air handler, heat strips), water heater, other equipment (dishwasher, range, dryer), whole house

(mains), electric vehicles (if included), electrical storage batteries (if included), photovoltaic (PV) system (if included), smart electrical panel (if included); thermostat device settings and changes such as temperature settings; and survey results of your experiences in the home and use of equipment in the home.

You will receive approximately nine (9) emailed surveys to complete over the 24 months you are in the study. At the conclusion of the study, you will receive a thank you letter from the research team that will include contact information if you have any questions.

Who can I talk to if I have questions?

You may contact the study team with questions at any time by emailing the study team at info@nconnectedcommunities.com, and someone from the study team will contact you shortly. Information on the study can also be found in the FAQs located at www.nconnectedcommunities.com/faqs.

This study has been reviewed and approved by the Central Department of Energy Institutional Review Board (CDOEIRB), an administrative group of people who oversee the rights and welfare of human-research subjects participating in research activities conducted with support of U.S. Department of Energy.

- If you have any questions, concerns or complaints about the research study, or for any other reason, you may contact the CDOEIRB at (865) 574-4359 or at CDOEIRB@orau.org.
- You also may ask questions about your rights as a research subject, request to obtain information, or offer input.
- If you want to know more about the program, visit the Department of Energy [Human Subjects Protection Program website](https://science.osti.gov/ber/human-subjects) at <https://science.osti.gov/ber/human-subjects>.

What happens to the information and data collected for the research?

The data we collect will be stored safely and securely in a protected and encrypted data warehouse that will require user authentication for access. Personal information will not be shared outside of the project team.

More information on data protection and security for this study can be found in the FAQs on the project website at www.nconnectedcommunities.com/faqs and in the study Privacy Policy at <https://www.nconnectedcommunities.com/privacy-policy>.

If I decide to withdraw from the study, how do I do this?

You can withdraw from the study at any point. In this case, you will notify the study team by emailing them of your desire to unenroll at info@nconnectedcommunities.com or contacting them through the project website at www.nconnectedcommunities.com. You may be asked to provide a reason for your withdrawal. You can keep all the equipment and devices in your home as part of the Basic Participation level when you withdraw.

If you elected the Enhanced Participation level with an electric battery storage system and withdraw before the end of the study period, you will be required to reimburse the study team for the full cost of the provided battery system.

More information on withdrawing from this study can be found in the FAQs on the project website at www.nconnectedcommunities.com/faqs.

What happens at the end of the project?

You will get to keep all devices and equipment installed in your home for this project. You may continue to participate in any available Duke Energy programs after the project's completion.