

Energy Efficiency Kit Education Case Story

Duke Energy's
***Kilowatt Kitchen
& The E-Team***

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Where did the program originate?

During the 2017-18 academic school year, NTC presented a high-impact educational program on behalf of Duke Energy. The program was intended to connect Duke Energy to elementary and middle school students, their parents and communities throughout five states in Duke Energy's service territory – Indiana, Kentucky, North Carolina, Ohio and South Carolina – and generate requests for energy efficiency kits. The goals of the program for Duke Energy were twofold: to help meet government regulatory residential energy efficiency (EE) mandates; and to increase awareness of Duke Energy's EE programs.

What were the goals, timeframe and scale for the program?

To meet various state filings and best serve Duke Energy's customers, NTC set out with a goal of shipping 51,800 energy-efficiency kits to households throughout the 2017-18 school year. This number was split between the fall of 2017, during which NTC and Duke Energy strove to ship 31,080 EE kits; and the spring of 2018, which had a goal of 20,720 kits shipped.

Furthermore, EE kit request numbers were split between each of the states reached by the program, with North Carolina accounting for approximately 42% of kit request goals, South Carolina accounting for about 25%, Ohio accounting for 17%, Indiana 14%, and Kentucky 2%. These numbers were based off of the number of eligible Duke customers in each state's service territory.

The primary objective of the program was to empower elementary and middle school students and their parents to become a driving force behind household residential energy savings through the implementation of energy efficiency kits. In addition to providing EE kits to households throughout five states, Duke Energy and NTC's goal was to deliver an inspiring program that would encourage students and their parents to install kit component measures and maintain wise energy usage.



What approach was used in implementing this program?

The overall strategy was to create a branded, highly-visible elementary and middle school program to educate students about energy efficiency, and encourage them – through their parents – to order and install the free EE kits. (Each household was limited to one kit, and Duke customers could not receive more than one kit within a 36-month period.)

In order to achieve this, NTC developed two live, in-school theatrical programs with supplemental curriculum – one for elementary schools and one for middle schools. Kindergarten through 5th grade

students experienced *Kilowatt Kitchen*, a 25-minute comedic performance that used storytelling, creativity and engaging characters to teach about energy efficiency. Sixth through 8th grade students received *The E-Team*, a 40-minute comedy entailing a greater amount of audience participation and improvisation, though still centered around the importance of energy efficiency.

Each program included student playbooks, teacher guides, and digital games and activities, which armed students with valuable information encouraging smart energy choices, and provided educators with innovative solutions for delivering EE instruction in stimulating ways. All program deliverables were provided completely free to schools, thanks to Duke Energy's sponsorship.



Incentives and contests were offered throughout the school year that encouraged a higher number of kit orders, as schools with at least 75 unique kit sign-ups were entered into a drawing to win \$2,500, and earned additional entries with each additional 25 sign-ups after the initial 75. Furthermore, households that requested a kit were eligible for one of two \$1,000 prizes. Finally, schools were rewarded \$250 for each 100 unique kit sign-ups received throughout the 2017-18 school year. Such incentives motivated students, educators and parents and ensured a high level of kit requests among participants.

What distinguishes this program from others?

Although many utility providers have been distributing energy efficiency kits to customers since the 1990s, studies have shown that kits have a much higher installation rate when accompanied by behavioral program engagement – such as educational media of various types – leading to increased energy savings for customers (and utility companies).

Exciting live events like *Kilowatt Kitchen* and *The E-Team* impact students' behavior in ways that traditional methods cannot. The theatre component excites, engages and stimulates discussion, in many cases introducing young students to live theatre for the first time. By including audience participation in the program, the students are directly involved and become a part of not only the learning process, but the creative process as well. In this way, the "Four Cs" of 21st century learning skills – collaboration, communication, critical thinking and creativity – are incorporated. Educators witnessed the positive results of the program on their students firsthand, as evidenced by the selection of teacher comments below.



We loved the Kilowatt Kitchen program!!! Thank you for coming to our school and presenting such a fun and entertaining show about conserving energy. Even our Kindergarten students understood the message - "Save a Watt...Save a Lot!"

– Anne Stolarski, Kindergarten teacher
Sara Collins Elementary School, Greenville, SC

I loved it. They were super entertaining. Kids realized that they had filled out paperwork to receive the energy kits and were excited to receive them.

– Jennifer Mann, 5th grade teacher
Cloverdale Middle School, Cloverdale, IN

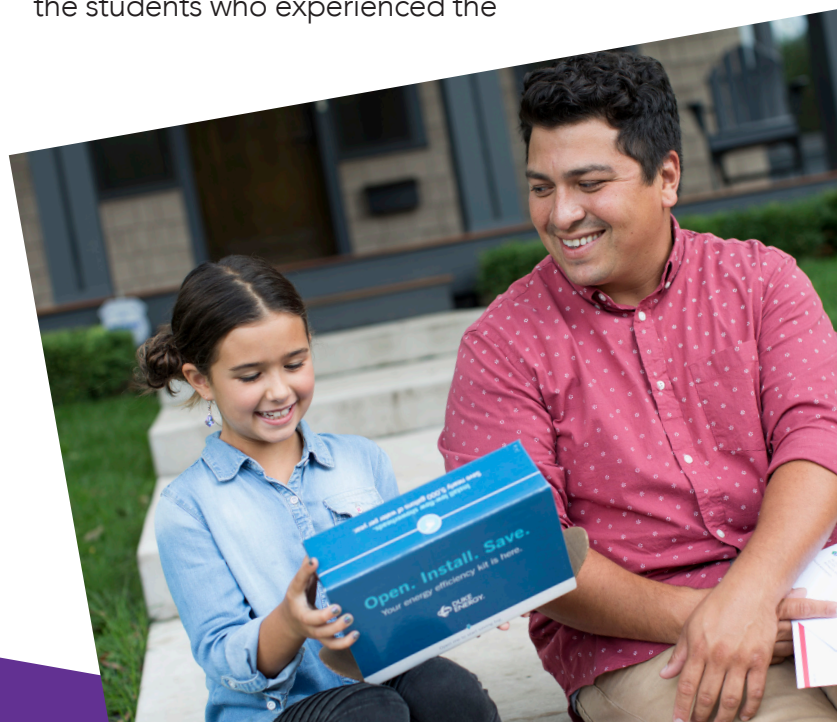
Once students were inspired to become champions of energy efficiency, their enthusiasm was passed on to their parents through NTC's proven *Trickle Up™* customer engagement system. *Kilowatt Kitchen* and *The E-Team* ultimately reached beyond elementary and middle school students to the adults responsible for managing household utilities: namely, the parents. The success of the *Trickle Up™* approach is not measured by how many people the program reaches, but by how many parents later respond to the call-to-action to order and install the EE components provided in a free energy efficiency kit for their households.

Unlike other utility programs that distribute kits to every student, NTC's programs target only those students (and parents) who are interested in opting into an energy reduction program, which leads to effective installation rates and tracking measures. By installing the components of the energy efficiency kit – which included conservation information and free tools such as energy efficient lightbulbs, faucet aerators, energy-efficient showerheads, water flow meter bags, water temperature gauge cards, LED night lights and more – parents were able to reduce energy usage in their homes and associated utility costs. By connecting Duke Energy with elementary and middle school-aged children and their parents in inspiring, long-lasting ways, NTC achieved outstanding energy savings.

What were the significant and measurable impacts of this program?

NTC and Duke Energy's *Kilowatt Kitchen* and *E-Team* programs generated a total of **79,854** kit sign-ups during the 2017-18 school year. About 52% of all kits requested were shipped to North Carolina, while Indiana, Ohio and South Carolina accounted for about 15% each. Kentucky received about 3% of all EE kits distributed through the program.

In addition to the number of kit requests, the live, in-school theatrical component and supplemental curriculum had a massively beneficial impact on behavior change. *Kilowatt Kitchen* and *The E-Team* reached **1,163 schools** with **1,794 performances** throughout 2017-18, inspiring **396,006 students** and **21,059 teachers** to learn about ways they can help conserve energy. About 20% of the students who experienced the





Kilowatt Kitchen and E-Team programs led their household to sign up for a free EE kit. Such widespread impact helps ensure that households will not only remember to install energy-saving measures, but also continue to embrace smart energy behavior.

The program received rave reviews from students, teachers, principals and parents. Teachers rated the overall educational value of the program a **6.59 out of 7** and a staggering **99.1%** noted they would like to continue to see NTC and Duke Energy offer this program to their schools.



The 2017-18 Duke Energy and NTC program marked the seventh year of an ongoing partnership stretching back to the 2011-12 school year. The success of the most recent tour was on par with previous iterations, as the EE kit program on average generates 73,506 total signups per year. Throughout all seven years of the program, NTC and Duke Energy have reached 2,979,601 students at 8,393 schools – indicating a robust educational program with long-lasting, widespread reach and nearly immeasurable impacts on energy savings.

Can this model be replicated and scaled by other organizations?

NTC has over 40 years of experience creating and deploying successful in-school theatre programs with the *Trickle Up™* model. It is replicable and scalable for use by many different organizations using varying educational models.

Any school-based EE program can be successful when it:

- Offers something to schools that they can't get elsewhere (like live theatre)
- Aligns program materials with state educational standards
- Adds proper motivation for schools, teachers and students to influence parents



This program was fantastic! Students had a wonderful time and the actors were extremely good in their performance. It was funny but educational at the same time. Students have been commenting on the show since we left the auditorium. Most have already signed up for their free energy kit.

– Cynthia Brown, 6th grade teacher
Blue Ridge Middle School, Greer, SC



What lessons did we learn from the implementation of this program?

NTC learned that, with the right approach, it really is possible to reach elementary and middle school students, inspire them to connect with their parents and ignite a call to action, leading to an extremely high rate of EE-kit signups and continued installation of energy-saving measures. The *Trickle Up*TM customer engagement strategy creates a ripple effect within households to ultimately decrease energy usage.

What was also uncovered during this campaign was that what NTC refers to as The School Channel is completely underutilized regarding effective

educational programming. The School Channel is made up of 111,465 schools in the United States, totaling 53,727,000 students and 3,219,400 teachers, which leads to the opportunity to connect with 85,963,200 adults with school-age children. Energy efficiency program providers are missing out on an opportunity to connect with these adults through educational programming in schools. The *Trickle Up*TM customer engagement strategy and programs such as *Kilowatt Kitchen* and *The E-Team* deliver proven ROI and effectively engage students, teachers and adults within The School Channel.

NTC is a premium provider of educational programming with operations in the U.S., Australia and New Zealand. We work directly between schools and clients to promote beneficial behaviors and life skills to students in grades K-12 on a local, regional and national level.

Since 1978, we have formed connections and helped develop relationships between thousands of schools and corporations, nonprofits and governmental organizations. Our value is not just in the impact we create; our turnkey services also change the lives and trajectories of students, mobilize parents and entire families with beneficial messages, and cultivate community-wide goodwill for clients.

Our award-winning educational programs are provided free for schools and are customizable to accommodate specific messages and goals for clients. Through formats including live performance, in-class discussion, graphic novels, print curriculum, and digital games and activities, we present topics such as energy conservation, safety, financial literacy, STEM, water and environmental stewardship, and health and social responsibility in ways that engage and empower students. In doing so, we are helping our clients to be forces of change for students, parents and communities.

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