

Energy Efficiency Case Study

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Connects with

NTC[®]

Where did the program originate?

During the 2015-2016 academic year, NTC presented a novel educational programming module, *The Resource Force*, to schools throughout the state of Illinois. The Third-Party Efficiency Program was managed by a large energy service provider and their consultant, Wisconsin Energy Conservation Corporation (WECC).

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

To meet state requirements and best serve the citizens of Illinois, NTC worked with the Third-Party Efficiency Program's program managers to determine program goals set according to a 12-month timeframe, with a \$650,000 budget. The overarching objective of the program was to empower middle school children and their parents to become a driving force behind household residential energy savings through the implementation of energy efficiency kits. Specifically, the program aimed to reach the parents of middle school-aged children throughout Illinois, and empower them to save 1,220,000 kWh (4,162,812,802.8 BTU) of energy during the 2015-2016 academic year. NTC's goal was to cause 7,610 households to order kits and have them install the components in their homes during this 12-month period.

What approach was used in implementing this program?

The Resource Force was powered by NTC's proven *Trickle Up*[™] customer engagement system. *The Resource Force* school tours center largely on live in-school theatre performances on energy efficiency, targeting middle school students to ultimately reach 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

COMMUNITY
ACTIVATION



PARENT
OPT-IN



SCHOOL
CHANNEL



NTC's *Trickle Up*[™] Customer
Engagement System

to order and install the EE components provided in a free energy efficiency kit for their households.

The Resource Force is a 40-minute play performed by two professional actors who engage middle school students through a series of improvisational comedy sketches, while teaching about resources and energy conservation and calling on students to do their part to conserve energy. Taking suggestions from the audience, the actors allow the students to help create the show that they see, forming a unique program with each presentation.

Within these sketches, the performers cover topics like renewable and non-renewable resources, how resources are used to create energy and electricity, the difference between energy conservation

and energy efficiency, and practical things that everyone can do to save energy.

In addition to the in-school performances, NTC further engaged students, teachers and parents through multi-platform communications tools, such as student playbooks and teacher guides, classroom posters and online activities hosted on the educational website, NTCplayworks.com.

Most importantly, through encouragement and incentives, teachers succeeded in motivating students to take home request forms so that their parents could order a free energy efficiency kit. Kit contents were based on the type of water heater used in the home – natural gas or electric. The students were encouraged to start a conversation with



their families about reducing household energy consumption, calling upon their parents to order the energy efficiency kits.

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 kit¹ – which included conservation information and free tools such as energy efficient lightbulbs, faucet aerators, energy-efficient showerheads, flow rate test bags, water temperature gauge cards and Smart Strip with Auto Shut off plugs – parents were able to reduce energy usage in their homes and associated utility costs.

Schools paid nothing for the live presentation, supplemental curriculum or energy efficiency kits delivered to each household. By connecting the local utility provider with middle school-aged children and their parents through in-school live theatre performances, NTC achieved outstanding energy savings.

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.

Once the kit was ordered, NTC tracked the installation of home energy efficiency measures and charted the notable energy savings. The innovation of this program lies not only in the creative and effective way in which NTC designs and deploys its live theatre programs, but also in the empowerment of these young



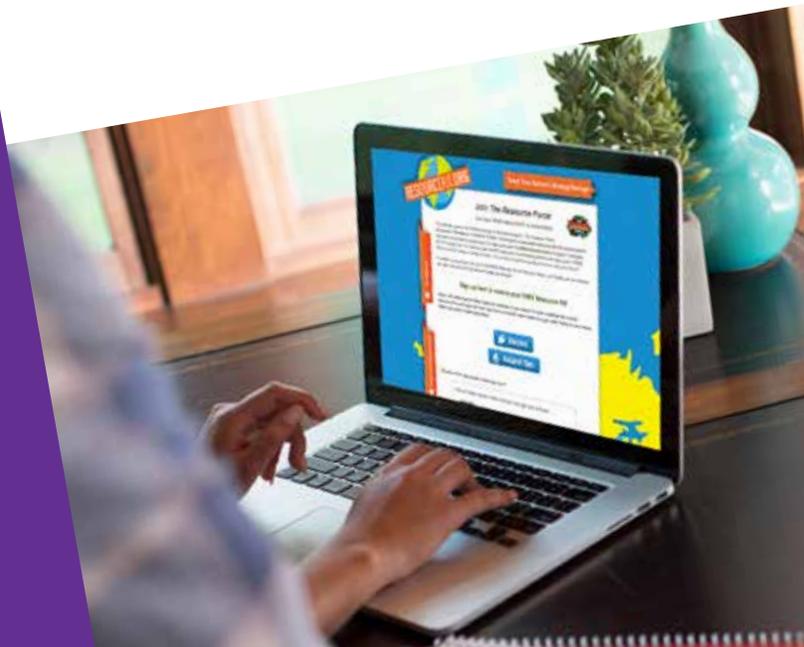
ambassadors to affect change within their households. Students, and their peers, are excited to learn about the ways that they (and their parents) can impact personal energy usage. This energizes the students to not only encourage their parents to opt-in to order the kit, but also to provide reminders to install the energy efficiency measures.

To connect with middle school students even further, NTC's live theatre performances of *The Resource Force* also come complete with grade-appropriate supplemental curriculum in both digital and print forms. This curriculum features characters found in the live theatre performances that, by design, extend the discussion beyond the classroom to the dinner table, as students are charged with passing their newfound knowledge onto their families. And, because NTC's programs are free to schools, educators and parents view the live enrichment component and its supplemental materials favorably.

When parents go online to order the energy efficiency kits, they are willingly opting into the energy-saving programs and are required to complete a website home audit to provide the utility with their home's unique data. The utility is then able to use that data to foster a customer relationship to continue generating energy savings.

Never have these programs been more important than now. Not only are teachers challenged with engaging students on a daily basis with limited materials, but also utility providers are constantly struggling to connect with existing and potential customers in an effort to meet state mandates/energy efficiency quotas. NTC's *The Resource Force* delivered on these initiatives in Illinois during the 2015-2016 academic year.

Parents opt-in to an energy efficiency kit school program



What are the significant and measurable impacts the program had on reducing energy consumption?

NTC's turnkey system, supported from the first school scheduled to the last kit delivered, aligns seamlessly with current industry standards by offering measurable and impressive results with consistency.

The Resource Force held 123 performances in **76 schools**, reaching **30,087 students** and **1,157 teachers**. As a result, NTC shipped **7,612 energy efficiency kits** (6,590 natural gas and 1,022 electric) to households in the utility provider's Illinois service territory.

Not only were the energy efficiency kits requested and delivered to over **7,600 households**, but also the installation rate far surpassed the industry average of 50 percent. NTC's *The Resource Force* led to a total savings of **1,279,512 kWh*** (43,658,761,76.1 BTU), surpassing the initial 12-month goal by almost five percent. Energy savings were determined by a third party independent evaluator, whose measurements took into account the estimated number of distributed kits; the assumed install rate; the estimated number of installed units; and the gross BTU savings per unit.

What were the measurable and significant non-energy impacts from this program?

A chance for middle school students to experience professional theatre – many for the first time – is an opportunity that educators are unlikely to pass up, especially since conservation education and energy efficiency kit information are delivered to every student and teacher in schools located in the utility's service territory. Further proving its worth, the objectives of NTC's *The Resource Force* are in alignment with Illinois Learning Standards in Science and Language Arts; Common Core State Standards; Next Generation Science Standards (NGSS) and National Core Arts – Theatre Standards².



What's more, studies have shown that in addition to having higher standardized test scores than their peers who do not experience the arts, students who do participate in drama often experience improved reading comprehension, maintain better attendance records, and stay generally more engaged in school than their non-arts counterparts (American Alliance for Theatre & Education)³. During the 2015-2016 academic year, NTC provided this incredible opportunity to **30,087 students** and **1,157 teachers** in the utility provider's service territory.

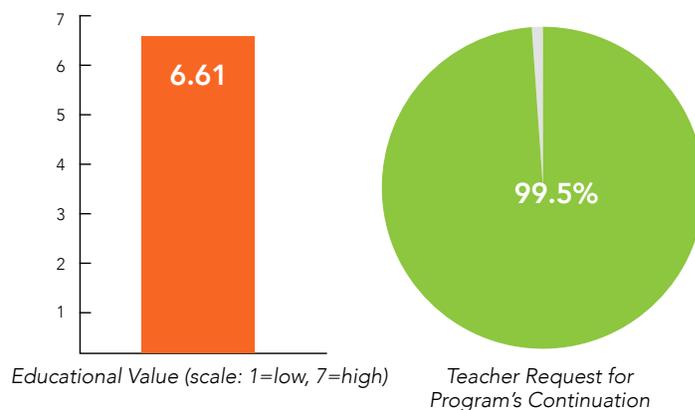
In addition, the program received rave reviews from students, teachers, principals and parents. Teachers rated the overall educational value of the program a **6.61 out of 7** and a staggering **99.5%** noted they would like to continue to see the programming in their schools.



What barriers did you face in implementing your program?

Like any program, a good campaign does not come without its challenges. Although the program provided NTC with a substantial budget of \$650,000, the parameters that were set in place required that NTC not exceed the savings provided and therefore, the budget by more than 10 percent. Not only did NTC provide incredible results on behalf of the state of Illinois, the company also remained within 5 percent of the originally proposed budget.

A significant challenge came early on in the initiative, when it was discovered, through kit orders, that 87 percent of the houses in the Illinois service territory were heated by gas and 13 percent were heated by electricity. To quickly adapt and overcome this challenge, NTC modified the type of energy efficiency kit that would be delivered to each household.



²www.nationaltheatre.com/educational-standards-resource-force

³www.aate.com

In NTC's industry, a consistent barrier is convincing schools to accept and pursue this type of educational programming. Schools have oftentimes already embraced the science curriculum that's been set in place, so NTC is challenged to enlighten administrators and teachers on the benefits of educating students in a new form, such as live in-school theatre.

In addition, administrators tend to avoid gathering middle school-aged children for large events due to the heightened risk of behavior issues. Adolescence is a period during which much social and emotional learning occurs, and administrators are quite mindful of that.

These types of issues may also be reflected in the students' home lives as well. It can often be a challenge to motivate middle schoolaged children to talk openly with their parents. NTC's programs give both students and their parents a topic and activity to engage with one another in an appropriate way. The unique structure of the *Trickle Up* system is what makes it so effective, as it grants students the opportunity of sharing knowledge with their families to inspire real change.

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.

NTC's unique and proven customer engagement program has delivered notable results for various utilities across the country.

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



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

NTC learned that, with the right approach, it really is possible to reach middle school students, inspire them to connect with their parents and ignite a call to action. The *Trickle Up* 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. All EE program providers are missing out on an opportunity to connect with these adults through educational programming in schools. The *Trickle Up* customer engagement strategy and programs, such as *The Resource Force*, deliver proven ROI and effectively engage students, teachers and adults within The School Channel.

In addition, this campaign also provided NTC with insights that within the Illinois service territory, far more houses were heated by electricity than expected, causing the need for a modified approach. But, even with this obstacle, NTC was quickly able to meet and surpass the program's objectives, delivering energy savings beyond the initial goal to households across Illinois.

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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