CLOSING THE CLEAN ENERGY KNOWLEDGE GAP

The case for creating a clean energy community conduit through K-12 teachers

WHAT TEACHERS REPORT **TEACHING**

Percent of responding teachers

2% Teach the term **electrification**

20% Do **NOT** teach any content around clean energy resources, energy efficiency, decarbonization or power generation

40% Teach about **energy efficiency**

41% Teach specifically about **clean energy resources**

**Survey questions were presented with multiple-choice answers*

WHAT TEACHERS REPORT **KNOWING**

Percent of responding teachers

83% Had **NOT** heard of or could define **Net Zero 2050**

71% Could **NOT** correctly define what a heat pump does

62% Correctly defined the term **beneficial electrification**, Yet, 26% were unsure what the term meant altogether

60% Correctly defined the term **carbon neutral**

**Survey questions were presented with multiple-choice answers*

OVERVIEW

With 46 years' experience of implementing behavior change programs in schools across the country, NTC developed, *Electrification Nation,* a clean energy educational program that teaches K-5 students about **electric generation, clean energy, carbon footprints,** and **what we all can do to help the energy transition.** The topic was top of mind for energy insiders, fit well into state and national educational standards, and was well-received in conversations with industry professionals and our utility clients. We did not anticipate, however, how far away the general public was from understanding the basics of the energy transition. While implementing the program, it was clear that the knowledge gap within the schools was much larger than previously experienced.

NTC surveyed its Professional Educator Network (PEN) cohort to gather additional data on what teachers know and teach about clean energy resources and the energy transition. The PEN cohort is a group of almost 5,000 educators from across the country who have participated in NTC school programs and have opted in to provide ongoing feedback. 144 teachers completed the survey, providing 3,004 years of collective teaching experience that shed light on the stark contrast between utilities' assumptions about the general public's energy literacy toward the future and what is actually in practice today.

KEY CHALLENGES

- The knowledge gap is larger than it might appear from the vantage point of those working in the energy utility sector
- Teachers transfer their knowledge to younger generations, creating a continuous societal learning and growth cycle, but, as of today, teachers are ill-equipped to provide the needed energy education en masse to make industry goals
- Education outreach for beneficial electrification, decarbonization and clean energy resources requires multi-pronged and relentless outreach campaigns to attain the necessary educational impact

PROBLEMS WITH THE *ELECTRIFICATION NATION* OUTREACH CAMPAIGN

In the spring of 2023, NTC implemented *Electrification Nation* on behalf of a Minnesota-based utility to spread awareness of beneficial electrification at the school community level. The target outreach goal was 12 public schools in the Minneapolis and St. Paul school districts. Ultimately, the goal was achieved, serving 3,372 students and 194 educators. However, the outreach process was atypical and held multiple insights into the depth of the clean energy knowledge gap.

Outreach started with email marketing, a typical starting point for most campaigns. A vetted and verified school list of 375 eligible schools for the 12 spots was used. NTC regularly enrolls one school per four schools offered and the odds of quickly booking 12 schools out of 375 seemed in favor of the campaign filling fairly quickly. That assumption though proved incorrect. After a set of four emails were sent to almost 6,000 contacts, not one school had enrolled. There was something atypical about the campaign.

Outreach efforts moved to NTC's call center, where an Outreach team started calling schools directly to increase enrollment efforts. A step usually employed on larger, more targeted campaigns. Shortly into the school call list, NTC's Outreach Director had an insightful call with a school principal who asked, "Why do you want to teach the kids about electrocution?" The Outreach Director explained that the programming was about electrification, not electrocution. The principal replied, "I've never heard that word before."

As the campaign continued other Outreach team members reported similar conversations. No one within the school community responsible for booking the educational engagement understood what electrification, the grid, decarbonization or the energy transition had to do with their school. They dismissed its legitimacy and made assumptions that they were receiving emails about the program in error. NTC had not encountered this before, specifically with a list of schools who had all hosted NTC programming. The reasons for the atypical outreach process for *Electrification Nation* were becoming clear—there was a significant knowledge gap within the school population in regards to what the program was trying to teach. So much so that the **value of teaching it held no weight.**

SOLUTIONS TO THE *ELECTRIFICATION NATION* OUTREACH CAMPAIGN

NTC pivoted and adjusted the program's educational content to read about "the future of energy" instead of the more specific terminology used by industry insiders. NTC also dedicated more staff to calling as emails were not reaching school decision makers in a meaningful way. It became important for the campaign to dedicate time and energy to making stronger relational connections within schools to explain the program's value more thoroughly. A typical NTC program enrolls schools with about a dozen outreach touches, from prospect to conversion. To successfully enroll schools for the *Electrification Nation* program, however, NTC, on average, needed 25 touches per school and relied on person-to-person outreach to fully explain the program's relevance to students and the school community.

THE KNOWLEDGE GAP PROBLEM

A gap exists between the utility industry's clean energy goals and the fluency and comprehension of those ideas by the general public. The industry collective has spent years strategizing about wide spread adoption of beneficial electrification to power the energy transition. Yet, a lack of understanding in the general population about what beneficial electrification looks like, why it is necessary, and what steps need to be taken to make it a reality is a clear barrier to its adoption.

A knowledge gap also exists between what the utility industry thinks their customers know and what those customers actually know. It is a common problem. Jargon within any industry can be difficult for outsiders to grasp when there is not a means to understanding it. The outsiders in this scenario, however, are energy consumers.

A knowledge gap also exists in our schools, where the next generation of energy consumers are learning and developing their lifelong habits. The long-term viability, growth, and development of grid modernization and the future of energy consumer behavior hinges on one major target for the utility industry—youth.

In fact, according to the National Retail Federation, 90% of parents say their children influence "almost every" purchase decision in their home. More than that, children can teach parents new consumer skills and information, which can lead to lasting changes in their behavior. Consider that statistically, parents are found to be more likely than non-parents to adopt new technology (Intel) – that's not a coincidence.

Additionally, 66% of Gen Z are willing to pay more for sustainable or environmentally friendly products and practices, according to a 2020 IBM study. These emerging adult consumers are a massive opportunity to become active participants in grid modernization and tip the scales toward adoption. Yet, there is a significant gap in the resources and knowledge within our schools to teach this pivotal generation what they need to help drive the energy transition.

KEY TAKEAWAYS

Recognizing the knowledge gap within K-12 schools, enabled NTC to pivot the outreach campaign for *Electrification Nation* and address the barriers to implementation. The first step in closing the knowledge gap in K-12 schools is to acknowledge that schools and educators do not possess the depth of information needed to teach the next generation about clean energy resources, decarbonization, electrification and the move to renewable power generation. Beyond acknowledgement, more robust educational outreach programming needs to be designed to meet the needs of the energy transition. Furthermore, to close the knowledge gap, quality education needs to be provided in tandem with relentless outreach campaign methods.

Moving the energy transition forward requires getting the next generation on board by first recognizing the knowledge gap and then by:

Designing educational programming that fits the need

Empowering teachers with in-depth and useful content and experiences

Planning outreach campaigns to address the knowledge gap

Ready to implement a high-impact, turn-key solution to the challenges of clean energy education outreach?

Contact NTC to leverage our creative engagement strategies and targeted outreach methods to put your message to work in your community.

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