



***Our Intended Impact:***

***Carbon-free electricity will power our entire community, showing the nation that this transformation is possible.***

**Introduction**

In the Spring of 2019, Causewave began working with a group of community stakeholders to investigate what would be required to transition our community to beneficial electrification. The first part of the Go All Electric initiative, Phase A, established a community strategy including an Intended Impact (the effort's overall goal) along with a Theory of Change (the steps required to achieve the goal).

As part of our efforts to achieve the intended impact shown above, Causewave worked with a steering committee of local experts to assess the changes required to achieve the priority behavior change: ***Organization leaders will take concrete steps to implement beneficial electrification in their institutions.*** The behavior change was further divided into two focus areas: Beneficial Electrification of Buildings and Transitioning Fleets to Electric Vehicles.

In order to ensure resources are directed where they are needed, Causewave uses a behavior change assessment process known by the acronym AKAMSOB, which was originated by The TCC Group<sup>1</sup>. AKAMSOB helps determine the size and nature of the gap between the current state and the desired state. Causewave uses this tool to go one step further and identify needed interventions in two domains: programmatic interventions and message interventions.

Three themes emerged across both Buildings and EV Fleets focus areas. These are candidates for Phase C – Creative Development. These actions balance the goal of closing large gaps between current and desired states and the ability to make progress in the short term. The themes:

1. Focus on organization leaders who we have reason to believe are near the tipping point of making the transition to beneficial electrification. These are leading edge investors.
2. Highlight projects that show successful transition to beneficial electrification. Communicate the benefits along with the means by which the transition was made possible.
3. Develop an advocacy strategy with local government and NYS that balances sticks and carrots to incentivize organization leaders to make the transition to beneficial electrification.

What follows is a summary of this assessment, along with recommended intervention strategies. Those elements of our assessment with the largest gaps warrant the greatest investment of time and resources. Additional detail resides within the companion AKAMSOB worksheet; what is presented here in summary form are recommendations that had the most energy across the steering committee.

Members of the steering committee that worked on this Phase B - Behavior Change effort are listed at the end of this report.

The Go All Electric Phase A – Community Strategy Report is available upon request.

---

<sup>1</sup> York, Peter: "Success by Design" TCC Group Briefing Paper, July 2011.

## **Organization Leader Behavior Change: Buildings**

### **Awareness: Medium Gap**

The desired state: organization leaders are aware of what beneficial electrification is and are aware of its benefits, both at an organization level and a community level. Currently, there is a wide disparate range of awareness, dependent on the segment of the market. Funding sources (e.g. NYS) are causing some to investigate further. Organization leaders are familiar with the concept of "green buildings" or decarbonization of buildings but there is a lack of awareness of the term "beneficial electrification."

Programmatic recommendations for closing this gap include offering tours of beneficial electrification projects – in the hard-hat phase as well as post-opening – and bringing in national leaders to speak on the topic.

Messaging should include: media profiles of beneficial electrification building projects and contractors transitioning to these technologies; and using awards to recognize beneficial electrification projects. Messaging also needs to find the right way to describe beneficial electrification (e.g. Go All Electric, decarbonization, green, etc.).

### **Knowledge: Large Gap**

The goal: for organization leaders to know what components of beneficial electrification relate specifically to their organizations; the range of costs; and the basics of transitioning to beneficial electrification in their organizations. Currently costs, and benefits are not well understood by owners, managers or other HVAC industry – both up-front and long term. There is a mixed level of understanding of the basics of transitioning among these audiences. Organization leaders lack knowledge of the health benefits associated with the electrification of buildings.

Recommended programmatic efforts include: partnering with trusted resources to assess needs and provide education to fill gaps for all constituencies, tied to continuing professional education where possible; partnering with the Chamber to develop an information resource; developing cost-benefit scenarios backed by science and experience; using / modifying the existing residential education campaign (re: heat pumps) to educate developers, etc.; and developing a way to describe the health benefits of BE buildings (look at NYC retrofit accelerator as a model for knowledge support).

Messaging could include an online ROI calculator that yields cost per square foot and environmental impact (e.g. Community Preservation Corp VeriFi tool); pitching news stories on the health benefits of beneficial electrification and incorporating this into messaging.

### **Attitude: Small Gap**

The desired state: organization leaders believe their organization's transition to beneficial electrification will have a positive (meaningful) impact on their organization and the community. At this point in time organization leaders generally believe in the environmental benefits of going all electric.

Recommendations include including a carbon footprint differential in all education messaging (e.g. NY GEO resources). Messaging should include profiles of that show the environmental benefit of implemented projects.

### **Motivation: Large Gap**

Desired state: organization leaders to believe it is a worthwhile investment of their time and effort to transition their organizations to beneficial electrification. They are motivated by a sense of urgency, the positive brand image they will convey, the financial incentives established for the transition, and demand from their potential customers. Currently, there is significant skepticism about the cost-saving opportunity as well the ability to maintain reliable power, based on risks associated with interruption of electric supply (people in our region have experience with losing electricity fairly regularly; rarely do they have interruption in gas supply). Lack of demand from customers further exacerbates skepticism.

Even if they are aware of them, organization leaders don't know how to put a value on health benefits. Finally, language we have all become accustomed to makes it easy to confuse environmentally friendly power with efficient power.

To make progress on this large gap, there are a number of programmatic recommendations that came out of the Phase B work: developing cost-benefit scenarios backed by science and experience; developing/ finding backup plans for reliability; advocating to utilities and NYPSC for grid work to improve reliability; developing and promoting a new "ROC Beneficial Electrification Seal of Approval;" partnering with utilities to validate the accuracy of scenarios/recommendations; advocating for policy changes that support conversion to beneficial electrification (reduced electricity rates, carbon tax on natural gas, policies); opening an ongoing dialog with RGE (e.g. their roadmap for achieving the goals of the Climate Leadership and Community Protection Act - CLCPA); and creating tenant-based demand for BE buildings (note: this can't significantly out-pace supply).

Messaging can include: sharing relevant stories (similar climate, variety of building sizes) that dispel cost and reliability concerns and help promote living in/working in BE buildings to potential tenants. They should communicate that beneficial electrification buildings are safe, reliable and affordable to operate. Messaging should also position beneficial electrification as the future for new builds and renovations stressing that now is the time to prepare for success in that environment. They should strike at both the practical (*Those who transition to BE now will achieve progressively better returns throughout the grid transition process. The state's transition to carbon-free electricity - by 2050 - will require a re-set of incentives currently allocated to natural gas to renewable energy and grid improvement. Now is the time to consider geothermal, specifically, due to incentives that step down.*) as well as the altruistic (*Make decisions today that you will be proud of 20 years from now. Now is the time to start saving, reduce your carbon footprint.*).

### **Skills: Large Gap**

Our goal is that organization leaders know what is required to transition to beneficial electrification, including where to find consultants, contractors, how to secure incentives, and information about equipment and facilities requirements. Another goal is to have organization leaders know how to communicate to their constituents the transition process. Currently there is a smaller pool of contractors skilled in this type of work (estimating, design and implementation) and they are harder to find. Current contractors aren't seeing the demand that would incentivize their adoption of these technologies. Incentives aren't as feasible as for residential projects. Assessing the applicability of various technologies to various settings is not a widely understood discipline (e.g. geothermal).

Programmatic recommendations include partnering with trusted resources (AIA, etc.) to ensure that architects and engineers know how to design this in and sell it to building developers, owners and managers. Progress could be made collaborating with education partners to develop training curriculum that would be offered for free to contractors. Other recommended efforts include developing and sharing estimating support tools as well as promoting the existing NYSERDA grant opportunity to fund an on-site energy manager.

Messages need to convey that resources exist to support professional and organizational development in these areas. It is important to ensure organizational leaders are aware of the grant opportunities available to them.

### **Opportunity: Large Gap**

The ideal state: transitioning to beneficial electrification is accessible to all organizations and that these organizations have the capacity and resources to make the transition. Currently, upfront costs are prohibitive for some. Incentives (funding, regulations, policy) are not driving adoption of beneficial electrification. Timeframes and the competitive landscape associated with design and bid procedures doesn't accommodate the longer process of selecting and bidding some of these technologies.

Solutions need to focus on getting architects and engineers to include beneficial electrification in their designs, rather than an attempt to build it in at the competitive bid stage. One way to support this is by benchmarking electrification-

friendly RFP processes from other regions in NYS. It is also recommended to partner with municipalities to require/promote beneficial electrification in the permitting process (e.g. City of Rochester) and encourage adoption of the “stretch codes” created in association with CLCPA. To lower the cost barriers, it is recommended to develop an advocacy plan for increased incentives.

Messages should include a blend of “carrots and sticks:” *Beneficial Electrification is the future for new builds and renovations - now is the time to prepare for success in that environment. Make decisions today that you will be proud of 20 years from now. Protect your organization from the volatility of fossil fuel pricing and the likelihood of carbon tax -think of it as carbon tax insurance. Don't get stuck with old, less environmentally friendly technology.*

## **Organization Leader Behavior Change: Electric Vehicle Fleets**

### **Awareness: Small-Medium Gap**

The desired state is that organization leaders are aware of what beneficial electrification is and are aware of its benefits, both at an organization level and a community level. Currently, while there is a growing awareness of EVs amongst organization leaders due to charging stations in our community, there is a lack of awareness of the benefits of EV fleets. Mass transit bus fleets in NYS are highly aware of EV transitioning to NYS zero-emission mandates in that sector.

The highest priority programmatic recommendation is to expand the efforts of the EV Accelerator to strengthen and broaden its outreach with the business community – both for EV fleet transition and charging station installation. Other efforts to supplement the EV Accelerator program could include developing an EV fleet literacy program, and developing and highlighting awards for organizations that pursue EV fleet conversion.

Messaging needs to convey benefits and promote that organizations don't need to wait – *it's not all or nothing*. Messages should also communicate that making the transition delivers better results and easier than organizations think, using case studies and business success stories profiled in the RBJ and other business media outlets.

### **Knowledge: Large Gap**

The goal: organization leaders know what components of beneficial electrification relate specifically to their organizations; the range of costs; and the basics of transitioning to beneficial electrification in their organizations. Currently, organization leaders lack knowledge of EV fleet costs (vehicles, charging stations, maintenance), what models are available to support their needs and what charging infrastructure is required to support EV fleets. They lack knowledge of, and where to find, resources that exist to provide fleet transition support and readiness training.

Programmatic actions recommended include creating a one-stop-shop EV fleet conversion landing page with incentives, resources, conversion webinars, and a tool developed to calculate conversion costs. Other programmatic recommendations include: working with the Chamber of Commerce to establish an EV fleet conversion standing group roundtable (possibly incorporated into existing Chamber sustainability efforts); focusing specifically on working with a school district to transition their school bus fleet (using parent engagement to create demand); partnering with the Auto Show to feature an EV fleet transition section, and featuring new EV fleet models, including municipal vehicles (e.g. street sweeper). Messages should convey that resources exist to help organizations figure this out; that organizations don't need to wait; results are better than organizations think possible and it's easier than organizations think. EV fleet FAQ messaging should also be developed.

### **Attitude: Medium Gap**

The desired state is for organization leaders to believe that their organization's transition to beneficial electrification will have a positive (meaningful) impact on their organization and the community. Currently most organization leaders aren't focused on this topic and haven't formed an opinion or attitude about it. They don't know or don't believe that EV

fleet conversion will be a requirement at some point in their future. Fleet operators still think that switching to natural gas is an environmentally-friendly option. Those leaders who are considering or are in the midst of an EV fleet transition likely believe the transition will have positive environmental benefit, even to the point of wanting to be seen as a leader in this area. Some organization leaders might not believe that it's better for their organizations (due to upfront costs, driver satisfaction, fleet management, etc.).

A programmatic recommendation is to create an EV fleet transition ambassador club that uses knowledgeable individuals to promote EV fleet conversion and serve as resources for other organizations.

Messaging needs to communicate that EV fleet conversion is in every organization's future so getting ahead of the mandates is in their best interest. It is also important to communicate that electric is THE green choice, carefully choosing the right language for "green" that resonates with this audience. Other message recommendations include using testimonials to help convince organizations they can make the transition and that by doing so, they will make a difference in our community. Air quality data from the COVID-19 period can be used as proof points of what can happen when zero-emissions vehicles are on our roads.

### **Motivation: Large Gap**

We want organization leaders to believe it is a worthwhile investment of their time and effort to transition their organizations to beneficial electrification. We expect them to be motivated by a sense of urgency, the positive brand image they will convey, and the financial incentives established for the transition, the demand for their potential customers. Currently organization leaders tend to be risk adverse which leads to taking a wait and see position – especially given the rapidly changing EV landscape. They find it easier to stay with the status quo due to perceived challenges with EV fleet transition (lack of funding, current availability of cheap gas and quick refueling, etc.). Organization cultures exist within various sectors of transportation in which includes identities being tied to their vehicles and perceptions that EVs are "nerdy" and lacking in power. Organization leaders also resist transition due to misperceptions that exist regarding EV fleet performance (torque, travel distance between charge, driver training, fleet maintenance, battery handling safety). On top of these motivational barriers, organization leaders lack the capacity to make EV fleet transition a priority.

Programmatic recommendations to address this large gap include securing EV fleet driver testimonials (especially EV drivers who had previously resisted transitioning from their fossil-fuel-powered vehicle). Incenting organizations through establishing a pledge that organizations can sign commit to transitioning their fleets to EVs while also setting up friendly competition between institutions, and creating all-star awards featured in newsletters (perhaps a dedicated EV newsletter or annual report) could be used to make progress. A dedicated landing page (as described in Knowledge) could be used as a communications channel for these efforts.

Messaging needs to convey that organizations don't have to wait; while full fleet conversion may not be possible, EV models exist that fit organization needs and can allow them to reap the benefits now. Messaging should create a positive image of EV fleets and how that translates to organizations being on the leading edge of this movement. False EV perceptions need to be addressed with "truths" in all our messaging.

### **Skills: Large Gap**

Our goal is that organization leaders know what is required to transition to beneficial electrification, including where to find consultants, contractors, how to secure incentives, and information about equipment and facilities requirements. Another goal is to have organization leaders know how to communicate to their constituents the transition process. Currently, organization leaders lack subject matter experts who are skilled in this transition and, while external experts exist, there is a lack of capacity of these resources to support increased demand. Additionally, organization leaders lack the ability to prepare their organizations for the transition to EV fleets.

Programmatic recommendations include developing an EV fleet conversion “How To” guide that not only describes specific EV fleet and infrastructure details but includes organization readiness actions and communications. Another recommendation is to develop the role of an EV fleet transition coach – both in the municipal and private sectors. Developing case studies can help organizations understand various models that have been successful from full EV fleet conversion to partial conversion to test piloting in one area. Getting this information out to businesses could be done through partnering with the Chamber of Commerce as described in Knowledge.

Messages should convey that organizations don’t have to be experts in EV fleet transitioning, there are resources available for them and that it’s not an all or nothing scenario; conversion can happen in stages.

**Opportunity: Medium Gap (Cars, Small Cargo) / Large Gap (Trucks, Large Cargo)**

The ideal state is that transitioning to beneficial electrification is accessible to all organizations and that organizations have the capacity and resources to make the transition. At this point in time, there are several issues limiting organization leaders’ opportunity to adopt EV fleets. There is limited, but growing, availability of EV models that suit the needs of many organizations. Cost issues still present challenges including the lack of widely available incentives / rebates that are at the level necessary for fleet transition, as well as a utilities infrastructure that is not set up with a fee structure specific to EV fleets (e.g. recognizing the different load of vehicles versus buildings).

To address these gaps, recommendations include working with local EV fleet suppliers (e.g. auto dealers) to make information available regarding EV fleet model availability, pricing, lease options, ROI calculations, required charging infrastructure, maintenance requirements, and other information needed to support EV fleet adoption. It is also important to develop an advocacy plan for establishing expanded incentives, rebates and EV charging rates.

Messages should communicate the availability of incentives and rebates that DO exist. Messages should also communicate that resources are available to help organizations outfit their EV fleet and that they don’t have convert all at once.

## **Go All Electric Phase B Steering Committee**

Shal Beath, Project Manager, Department of Environmental Services, City of Rochester

Dave Beinetti, Chief Marketing Officer, SWBR

Dave Belaskas, Director of Engineering and Facilities Management Regional Transit Service

Joe Bovenzi, Program Manager, Genesee Transportation Council

Rob Cain, Senior Real Estate Developer, PathStone Corporation

Enid Cardinal, Senior Advisor to the President for Strategic Planning and Sustainability, Rochester Institute of Technology

Marc J. Cohen, Chief of Staff, Greater Rochester Chamber of Commerce

Patricia Donohue, Program Manager, New York State Pollution Prevention Institute

Haylee Ferington, Clean Energy Communities Coordinator, Genesee/Finger Lakes Regional Planning Council

Lauren Gallina, Marketing Director, Gallina Development

Gillian Griffin, Pollution Prevention Engineer, New York State Pollution Prevention Institute

David Keefe, Coordinator, Greater Rochester Clean Cities Coalition

Robert Kersbergen, Project Manager – EMCOR Services Betlem

Tammy Mayberry, Director, Government Relations, Finger Lakes Regional Economic Development Council/Empire State Development

Abigail McHugh-Grifa, Executive Director, Rochester People's Climate Coalition

Melissa Pennise, Associate Director of Strategic Initiatives, Common Ground Health

Thomas Piekunka, President, Piekunka Systems, Inc.

Anne Spaulding, Manager of Environmental Quality, City of Rochester

Kristen Van Hooreweghe, Rate Case, Sustainable Homes Rochester, Collective Impact Project Manager, Rochester People's Climate Coalition

Michelle Virts, Deputy Director, Department of Environmental Services, Monroe County

Michael Waller, Director of Sustainability, Rochester Regional Health

Harold Zink, Chief Engineer, Rochester Housing Authority

Todd Butler, President and CEO, Causewave Community Partners – Go All Electric staff support

Mary Hadley, Senior Program Manager, Causewave Community Partners – Go All Electric staff support