CSLN
Chicago Sustainability Leaders Network

Preparing for Rainy Days (未雨綢繆):

Culturally-Inspired Smart Grid Education in 3 Communities

A Toolkit on Smart Grid and Energy Messaging in Three Chicago Communities

ABOUT THE PROJECT

The *Preparing for Rainy Days (未雨綢繆): Culturally-Inspired Smart Grid Education in 3 Communities* project began in 2014 when members of the Chicago Sustainability Leaders Network (CSLN) responded to a funding opportunity through the Illinois Science and Energy Innovation Foundation (ISEIF).

CSLN, founded in 2013, is a network of grassroots community leaders working collaboratively across Chicago to share resources, support each other's work, and build a stronger collective voice. As a multi-disciplinary network, organizations are constantly seeking opportunities to fully realize the skills, knowledge, and assets available when community organizations work together.

ISEIF is a foundation that provides grants for consumer education and seeks innovative approaches to engage energy consumers and better understand consumer motivation around energy. They strongly encourage collaborations and especially seek focused attention to the low-income, senior, and hard-to-reach populations that CSLN members often serve.

Four community organizations and one evaluator from the CSLN partnered with University of Illinois-Chicago's (UIC) Office of Sustainability and African-American Cultural Center to deliver Smart Grid education to three communities and the UIC campus community. Over the two year project (2015-2016), the organizations aimed to build their own capacity to address Smart Grid and energy education, educate residents about the Smart Grid and the importance of energy literacy, and act as a case study on culturally-specific messages that identify the most resonant values connected to energy related behavior change in each community.

WHO SHOULD USE THIS TOOLKIT

This toolkit provides an overview of the *Preparing for Rainy Days* project, including details about the **communities and partner organizations**, **methods to construct messaging** to impact behavior, **education tools** developed by partners, **evaluation methodology**, and **insights** resulting from evaluation.

It is intended for use by other ISEIF grantees, community organizations working on energy education for similar communities and any individuals or organizations with an interest in creating culturally resonant messaging for their programs.

Project Timeline 2015* & 2016

* See the full 2015 timeline in the appendices.

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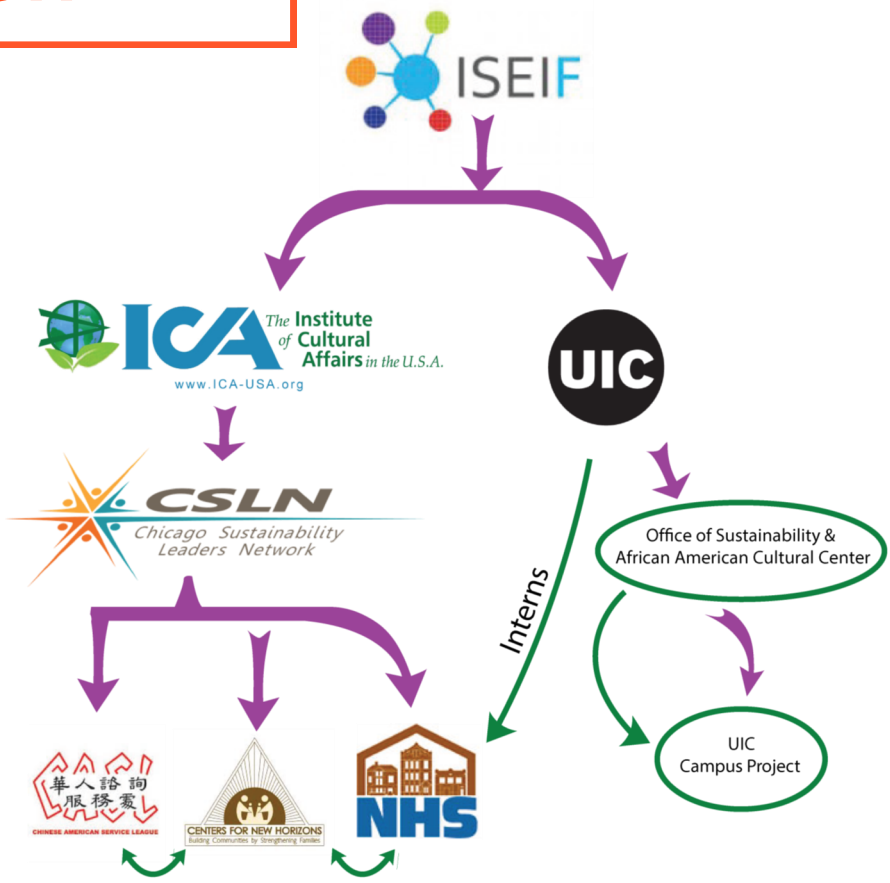
THE PROJECT

OUR APPROACH

The *Preparing for Rainy Days* project was designed through an anthropological lens. Project partners were trusted community organizations that are viewed as local experts and educators in their community areas. Their clients are often designated as "hard-to-reach" populations by larger institutions such as the utility company. The partners each translated the more technical details about Smart Grid into language and messages relatable to the values of each target community.



The Institute of Cultural Affairs (ICA) served as the project management team and, in 2016, provided the methods and training in imaginal education.

The **Chinese American Service League** (CASL - Chinatown) and **Centers for New Horizons** (CNH - Bronzeville) were partners in 2015-2016. Two additional communities were involved in 2015 but not 2016: **Sacred Keepers Sustainability Lab** (SKSL - Bronzeville) and **ICA** (Uptown). In 2016, **Neighborhood Housing Services** (NHS - Chicago Lawn/Gage Park) joined the project as the third community area.

UIC's **Office of Sustainability** engaged student interns to assist the community partners in developing and implementing Smart Grid programs in their communities. The **African-American Cultural Center** also contributed its expertise in ethnographic methods, through trainings provided to the students and partners. UIC hired student interns to develop and conduct a fifth community project: a Smart Grid education and outreach program shadowing the facilities staff on the UIC campus.

Additionally, CSLN member and sustainability consultant, **Belinda Li (CiTTA Partnership)**, conducted a qualitative evaluation of their outreach efforts to analyze the results in comparative perspective, to each other and, more informally, to the other partners based on documentation and stories shared primarily at quarterly meetings.

Creating the Messages: Image Shift Exercise

In 2015, the community partners incorporated Smart Grid energy education into their ongoing, community outreach and engagement programs. One of the objectives was to develop diverse outreach models tailored to specific communities and cultures. All four partners analyzed and compared their models when reflecting on their work at quarterly review meetings.

CNH and CASL additionally worked with evaluator Belinda Li to conduct a pilot qualitative evaluation of their outreach efforts and to analyze the results in comparative perspective, to each other and to the other partners based on documentation and stories shared primarily at quarterly meetings. This evaluation helped develop a more robust understanding of the values that each community area related to Smart Grid and energy .

In 2016, the three community partners worked with the ICA team to incorporate the values, identified in 2015, into messages using ICA's imaginal education methods. In the training, the community partners reviewed image shift theory, walked through the steps of the journey of image shift, reviewed an example of a personal image shift, then used the image shift worksheets to develop their own community messages. Each organization developed three distinct messages to use when educating residents about the Smart Grid. The group worked with Belinda Li to develop evaluation to assess which messages were most resonant with residents in the different communities, and, in particular, which messages were most likely to influence new behaviors.

When would the image shift methodology be useful in your work?

If you are working with a community group, organization, or even an individual who would like to change their behavior around a particular subject, the image shift exercise provides clarity about the current reality of a behavior and provides guidance around how new messages can support a behavior change.

Additional Tools

- Image of Man in Society
- What Does My Brain Have to Do With It?
- Image Shift Journey
- Personal Image Shift Example

Creating the Messages: Image Shift Theory

The concept of an „image' and its relationship derive from the work of Kenneth Boulding. In *The Image of Man in Society*, he asserts that behavior is based on the way people see themselves in the world. People continually incorporate, or discard, new messages into their accumulated understanding of themselves in the world.

It's a matter of self-perception, self-story, self-image – all of which are phrases that point to the same thing. People continually incorporate, or discard, new messages into their accumulated understanding of themselves in the world. Messages come in many forms: verbal, visual, and experiential. Outreach and education is an elaborate process of conveying various „messages' about particular subjects, such as the relationship to energy and utilities.

Messages come in varying degrees of strength: one reads all the time about the negative health effects of fatty foods. Yet these often only mildly alter one's prevailing self-understanding and behavioral choices about diet. A heart attack, however, is a much stronger message for influencing a shift in one's diet or exercise routine. Images change continuously. Most involve minor adjustments as new pieces of information (messages) are aligned with an existing image. Inconsistent messages that challenge a firmly held image are usually ignored.

Change occurs when an established image is replaced by a new self-understanding. When images change, behaviors change. This understanding can be summarized in five points:

1) **people live out of images**,
2) **images govern behavior**,
3) **images are created by messages**,
4) **images can change**, and
5) **when images change, behaviors change**.

The aim of ICA's work with communities both locally and globally has been to enable a shift in mindset from passivity (e.g., waiting as „clients' to receive services) to becoming active agents of their own development. This most often has been by encouraging collaboration among groups and individuals through collective action planning and implementation.

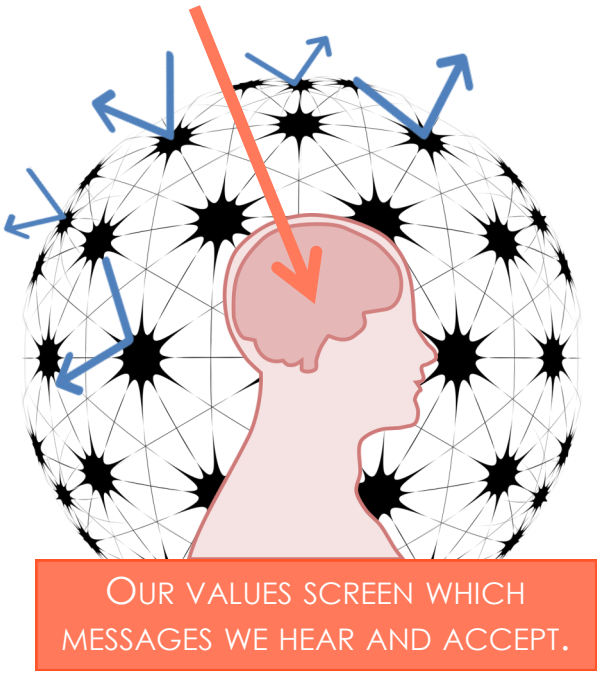


Image Shift Worksheet (see next page for instructions)

Aspirations for the Future

A _____ B _____ C _____

_____ _____

_____ _____

Behaviors to Change **Behaviors to Develop**

Image Sustaining values

Gifts, qualities, capacities

Image Supporting values

Messages that support images and values

Messages to shape new images and values

Current Governing Image

New Governing Image

_____ _____

Using the Image Shift Method

Use the Image Shift Worksheet for an Image Shift Assessment of or with your community. This assessment can be done together with community members or by yourself as a way to understand the information you have. Complete the Worksheet on next page on each of the items listed below. Start with considering what you hear/see/feel residents aspiring to achieve – their dreams or what would represent a great future. Write down 2 or 3 of the key things that would signify accomplishment for them. In the *Preparing for Rainy Days* project, community partners focused specifically on the community's relationship to energy and Smart Grid.

LEFT SIDE

1.**Behaviors to Change**: What are the community behaviors you see, hear, and experience? Note the ones that they particularly want to change to support the aspirations they have for the future. Write a few of these on the lines above the oval on the left.

2. **Current Governing Image**: On the line below the group picture on the left, describe the **IMAGE that is governing these behaviors** (ex: "our community is void of resources" or "our community could never change its conditions").

3. **Messages that Support Images and Values**: Think of the **messages** that they have received in the past (and perhaps presently) or are currently telling **themselves that have shaped this governing image**. Some of these messages may be language they use. Messages may be how assets and resources are distributed. Messages could be the way outsiders perceive them, the way they engage with institutions, and the infrastructure that shapes how they work and function. Write those messages in the arrows pointing to the IMAGE.

4. **Values Helping Hold Governing Image in Place**: Now consider the set of values that are locking their Governing Image into place and protecting it. Name those values (example: humility, perfection, tradition – suspicious of the new) and **write them on the "image sustaining values"** lines inside the oval on the left.

RIGHT SIDE

5. **Behaviors to Develop**: Now think of the **behavior you think they would like to develop** if they could come together around achieving their aspirations. Describe that behavior in a few short phrases on the line above the oval with on the right side of the page.

6. **New Governing Image**: Decide on a **new IMAGE that might govern or help shape the formation of the client's new behavior**. Name that IMAGE on the line below the group picture on the right.

7. **Gifts, Qualities, or Capacities**: Now think of **THREE positive qualities** that you sense they **have or they themselves have mentioned they have that can help them shift the current IMAGE that is limiting them**. These may be values they hold, resources they have access to, something in the current reality that will help them move forward (legislation, leadership, vibrant cultural history, etc.) Write each of these qualities in the "qualities, gifts, capacities" box.

8. **Image Supporting Values**: Name the **values they have or will need that would help support the new IMAGE** and hold it in place as it grows. Write these values on the lines inside of the figure on the right.

9. **Messages to Help Shape the New Governing Image**: Now decide on **the messages they can project to themselves that will support these values and shape the new, releasing IMAGE**. Think of visual, auditory, and kinesthetic ways of doing this as well as infrastructure that sends messages. Write these ideas on each of the arrows that point to the image on the right.

THE ORGANIZATIONS

THE COMMUNITIES: CHINATOWN

History

Chicago's Chinatown has migrated around Chicago's south side. It first formed in the downtown loop area in the 1880's, relocated to W Cermak Rd. and S Wentworth Ave., and then finally expanded south of W 26th St. and north of S Archer Ave. after the construction of major expressways cut through Chinatown. Today it is one of the largest Chinatowns in North America.

People

Chinatown's population has increased 24% between 2000 and 2010. It is home to more than 7,000 residents in its core area (bounded by S Canal St., W. 26th St., S. Clark/Federal St., and W. 18th St.) and more than 16,000 in greater Chinatown. About 78% of Chinatown residents speak Chinese at home.

Culture

Chinatown is a community hub for Chinese people in the Chicago metropolitan area with over 400 institutions including museums, monuments, cultural events, businesses, and restaurants. It is also a popular destination for tourists visiting Chicago.

Chinese American Service League: Organization Overview

About the Chinese American Service League (CASL)

Founded in 1978, CASL is a nonprofit, community-based social service **agency whose mission** is to strengthen the physical, economic, and mental health of people of all ages and backgrounds of the Chinese community in the Chicagoland area.

CASL has **four departments**: Housing and Financial Education, Child Education and Development Services, Family and Elderly Services, and Employment and Training. Interdepartmental and community collaborations ensure a holistic approach to service to enable clients to thrive and contribute to the greater Chicago community.

Housing and Financial Education staff participated in the Creating Culturally Inspired Messaging project and incorporated the Smart Grid education into their ongoing work.

Photo: Chinatown New Year Parade

There were three main outreach approaches:

1. One-on-one counseling on-site.

2. Financial workshops including Banking and Budgeting, Credit and Loans, and Homebuyer Education.

3. Cultural events including the Chinatown New Year Parade and the Chinatown Summer Fair.

LUCKY PHRASE FLAGS

These Lucky Phrases that was passed out for Chinese New Year. Text reads „Go Green & Enjoy the Benefits for Thousands of Years' and „Your Wealth Will Blossom in a Green Environment' See full sized version in the appendices.

Chinese American Service League: The Messages

In the image shift exercise, CASL staff identified the **current governing image of the Chinese community as one that is "Less education, Non-English speaking, and slow learners,"** which keeps them from adopting energy efficient practices. The challenge for CASL was to develop messages that address community members' current suspicion of complex, new technology and present Smart Grid and energy action as possible and desirable. CASL staff identified the community members' frugality and family support systems as capacities to support the shift to the **new governing image, "Responsible energy user."** They developed the following messages.

Engaging with Smart Grid allows you to take more control of your own life - this message is targeted for adults of all ages. Younger adults may feel constrained by the demands of their family and parents, while elderly feel like they don't have much freedom.

Saving energy equals saving money for yourself - this message is fairly self explanatory. CASL's clients in the last year indicated that being frugal in general is a good reason to be energy efficient, so this message captures the connection between saving energy and saving money.

By saving energy, you contribute to a more environmentally sustainable world for your children - this message appeals to residents' concern about the environment's ability to provide for their children and grandchildren.

Additional Tools

- CASL's Image Shift Worksheet

Chinese American Service League: Key Takeaways

The following takeaways were discerned by CASL after two years of engaging residents on Smart Grid energy education

1) It is important to have trusted and trained educators As social service providers, CASL staff often shares opportunities and new information with community members. However, they are not necessarily Smart Grid "experts." It was very clear from 2015 to 2016 that, with **time and experience**, CASL staff became more effective educators. [Figure 1.]

2) Take the time to create Chinese language outreach materials. For the Chinese community, the **language barrier** frequently limits engagement with utilities, so **Chinese-speaking presenters** at workshops and **Chinese-language Smart grid materials** contribute to CASL's ability to effectively communicate with residents about Smart Grid and energy. CASL staff members speak English as well as Cantonese, Mandarin and Toishanese.

3) Prioritize one-on-one engagement to share complex information. One-on-one counseling, typically related to housing and finance services, yielded the highest rate of clients having an accurate understanding of what the Smart Grid is. [Figure 2.]

4) Provide clear follow up steps. CASL staff specifically suggested that clients could:

1. Sign up for an energy savings program,
2. Check to see if a new meter had been installed, and
3. Practice general energy saving behaviors.

Figure 1.

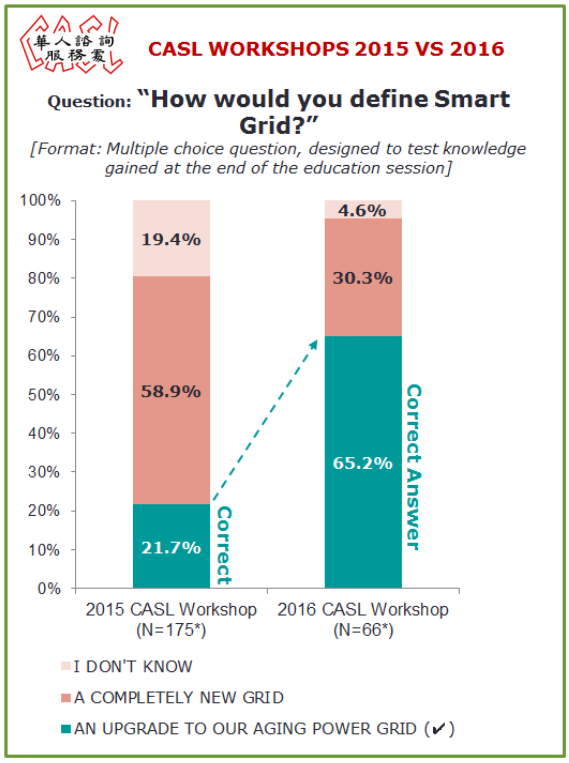


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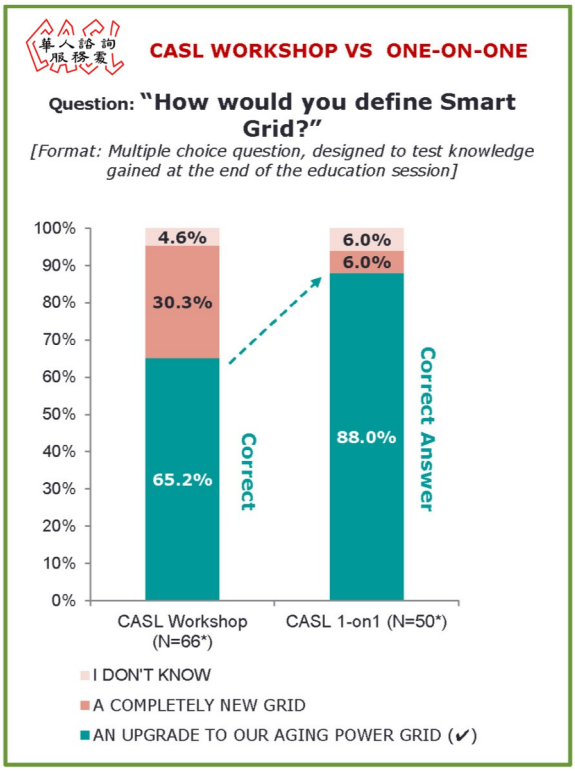
Figure 2.



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Chinese American Service League: Key Takeaways

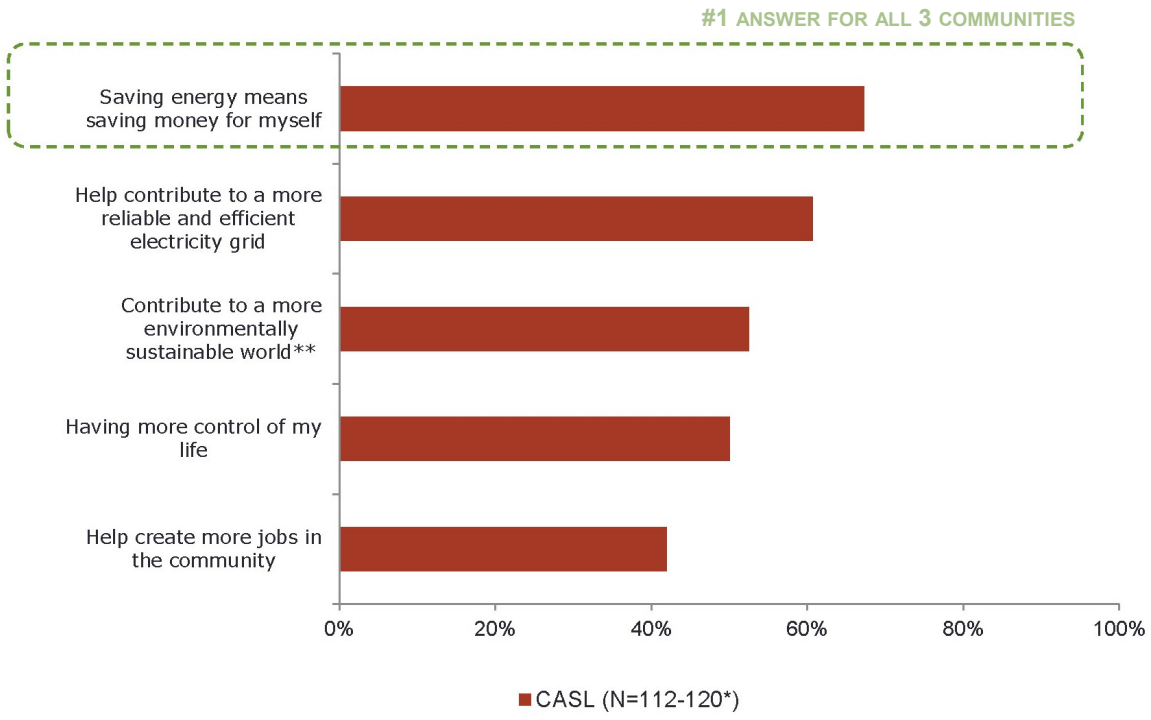
Messages

1) **Saving energy means saving money was the most resonant message.** "Being frugal in general" and "saving money" for a variety of reasons (to pay other household bills, to save for a home, etc.) was a highly ranked value in 2015 for CASL's clients, and saving money was still highly ranked in 2016 as a reason to sign up for Smart Grid energy programs. Many CASL clients were low-income and were seeking CASL services for financial assistance, so it makes sense that this message resonated.

2) **Contribute to a more reliable and efficient electricity grid was the second most resonant message.** Although this message was designed for NHS clients, CASL's clients indicated that it would strongly motivate them to consider signing up for a new electricity program.

   CASL staff recall residents having been receptive to the new grid because it was more efficient, and they believes that the grid would not have been replaced unless it was a service improvement (contrary to the perception that their residents were suspicious of new technology that was mentioned in the image shift worksheet).

Responses to "Today, we explained reasons for participating in Smart Grid. How likely might each reason **on its own** motivate you to sign up for a new electricity rate program?" and "What are other reasons that would **strongly motivate** you to consider signing up for a new electricity rate program? Check all that apply."



* Count of those who did not skip this question
** CASL added a qualifier that saving the environment/planet means saving our children

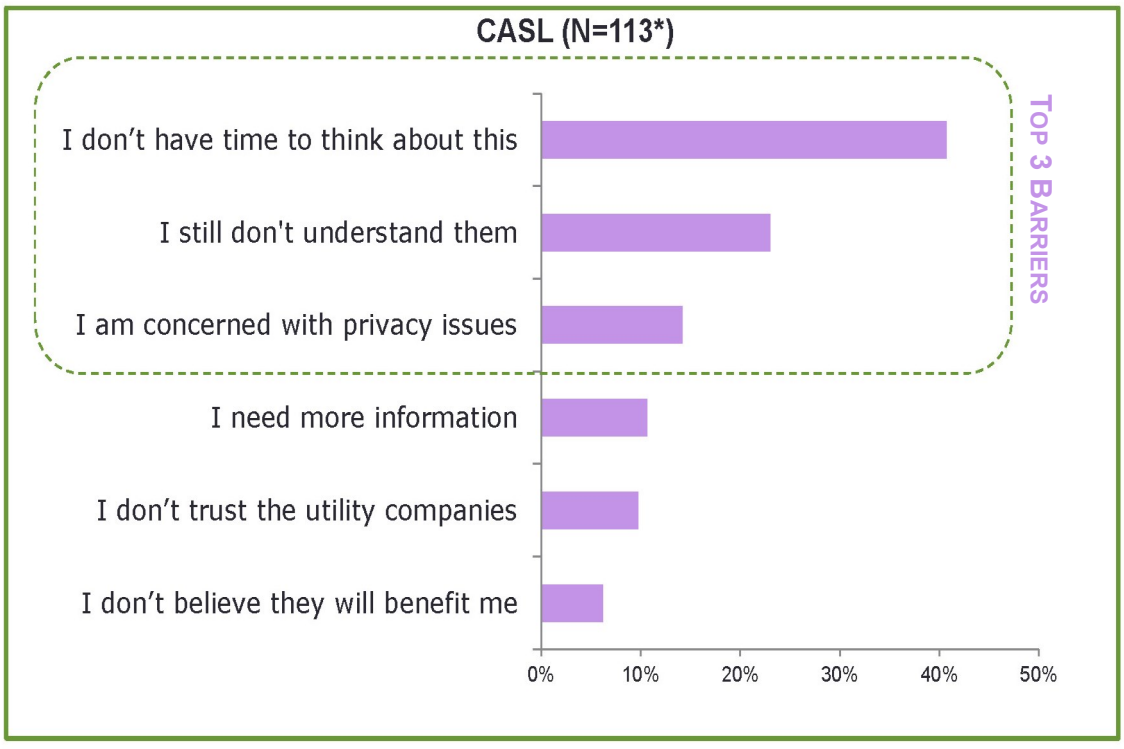
Chinese American Service League: Key Takeaways

Barriers

1) **Time is a barrier**. In 2015 and 2016 survey evaluations, CASL's clients indicated that one of the top reasons for not signing up was "I don't have time to think about this."

   According to CASL staff, this barrier is related to language more so than time in and of itself. In order to actually sign up for a program or engage with Smart Grid in a more sophisticated way, residents with limited English have to invest more time, either by following up with an English-speaking relative or returning to CASL to sign up with staff.

Question: "What are some reasons why you would NOT sign up for the above programs? Check all that apply." *["above programs" = Peak-Time Savings and Hourly Pricing]*



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Chinese American Service League: Tools

Creative and Culturally Relevant Outreach Material

In addition to translating Smart Grid material into Chinese, CASL incorporated energy information into cultural materials shared at the Chinese New Year Parade.

The Fai Chun is a traditional decoration displayed for Chinese New Year, typically to promote good luck and prosperity.

Additional Tools

- Smart Grid Brochure
- Smart Grid Power Point
- Energy Games 2015
- Energy Games 2016
- 2015 New Year Lucky Phrases
- 2016 New Year Fai Chun

THE COMMUNITIES: BRONZEVILLE

History

The Bronzeville community has historically served as the entry point for African-Americans migrating from the Jim Crow south to what was perceived as a more amenable environment for employment and social interaction. The area nurtured many African-American artists, musicians, and writers. A respite from the demeaning and demoralizing effects of racial hatred, Bronzeville was a safe place for positive social and emotional interactions between African-Americans.

People

Bronzeville is in the midst of gentrification as more affluent residents are drawn to the community. Additionally, it has growing art scene with the opening of several galleries in the area. Because of the demolition of many of the public housing high rise projects in the area the population of lower income residents has decreased substantially. Nevertheless, the area schools continue to experience the problems associated with areas with low income and education attainment.

Culture

Today, Bronzeville is an innovation center for the African-American community. As a center for African-Americans across income brackets, it is a hub to pursue answers for many of the challenges facing the African-American community. A number of creative initiatives are underway, including urban agriculture, art, and experimental and innovative education approaches.

Credit: Jyoti Srivastava

Centers for New Horizons: Organization Overview

About Centers for New Horizons (CNH)

Founded in 1971, CNH is a community-based nonprofit social service agency in Bronzeville, including Grand Boulevard, Douglas, Kenwood, Near South, Oakland and Washington Park.

Its mission is to develop the capacities of low- and moderate-income families to become self-reliant, improve the quality of their lives, and participate in community rebuilding. Services include Early Childhood Education, Youth and Family Development, Health and Wellness, Community Building/Organizing, Workforce Development, and Adult and Elder Care.

As part of its holistic developmental approach, CNH focuses much of its **community organizing** on Green Sustainable Community Development. In collaboration with the Bronzeville Alliance, they work in three main areas: 1. educating families about the emerging green economy, 2. improving quality of and access to healthy food in corner stores, and 3. promoting urban agriculture as a means to sustainable, self-reliant community livelihood. CNH views efficient, low-cost energy consumption as critical component to sustainable lifestyles. Staff from the Community Building/Organizing program have been the CNH partners on the *Preparing for Rainy Days* project.

CNH staff has incorporated Smart Grid and energy education into ongoing community and leadership development work, including:

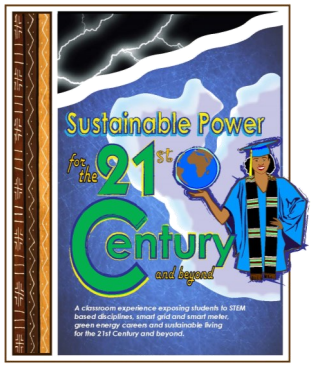
1. Youth outreach with the Bronzeville Greeners and at local elementary schools to incorporate into STEM learning curriculum

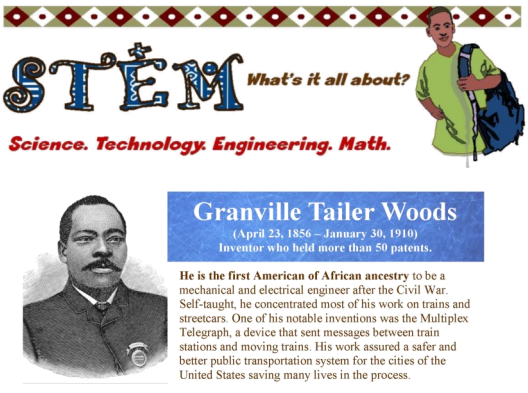
2. Parent outreach at the CNH Effie Ellis Childcare Center

3. Community outreach at the Elizabeth Dandridge Farm in Bronzeville

AFROCENTRIC DESIGN

CNH incorporated Afrocentric design into many outreach materials





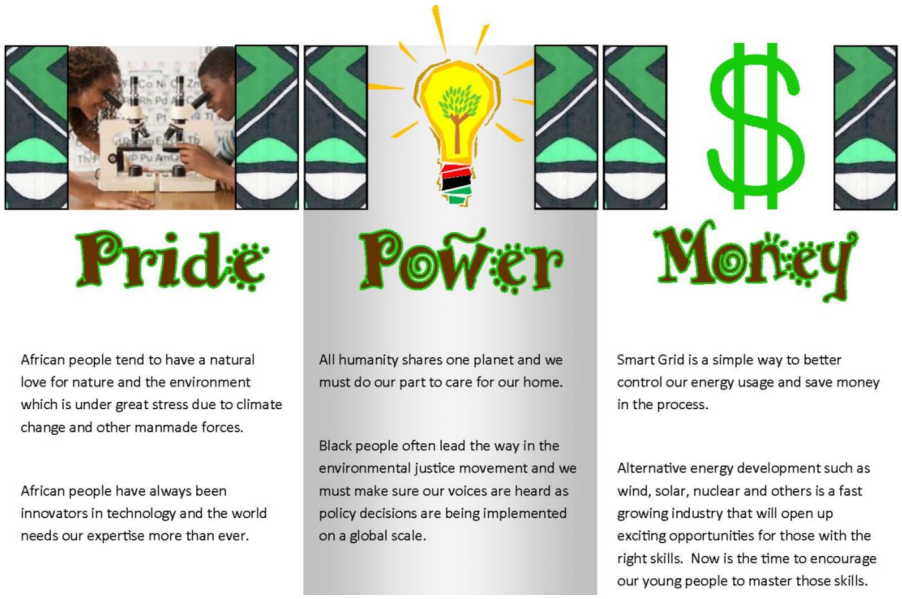
Centers for New Horizons: The Messages

In the image shift exercise, CNH staff identified the **current governing image of the Bronzeville community as "Basic Day to Day Survival."** This phrase highlights feelings of powerlessness, selfishness, isolation, and limited monetary funds that create a barrier to active engagement with energy. CNH identified the community's resiliency, adaptability, and rich traditions and heritage regarding historic struggle as capacities that could be engaged in the campaign to take ownership of energy and shift to a **new governing image of "Sustainability for the 21st Century."** They developed the following messages.

A long history of innovation in the African-American community - this message centers around pride in the African-American community about the many scientific contributions made by African-Americans that go unrecognized. It encourages further commitment to developing innovative response to modern challenges such as climate change.

By saving energy, you can help lead the way to a better Earth - this message is about leadership and power. All people share a common home, and the African-American have immense power in their ability to lead the charge to care for the Earth.

Engaging with Smart Grid provides opportunities to connect to new jobs in a growing industry - this message is about the growing jobs in energy and alternative energy. Engaging with energy and the Smart Grid by thinking "like a scientist" will set up African-American youth to be leaders in this industry.



Additional Tools

- CNH's Image Shift Worksheet

Center for New Horizons: Key Takeaways

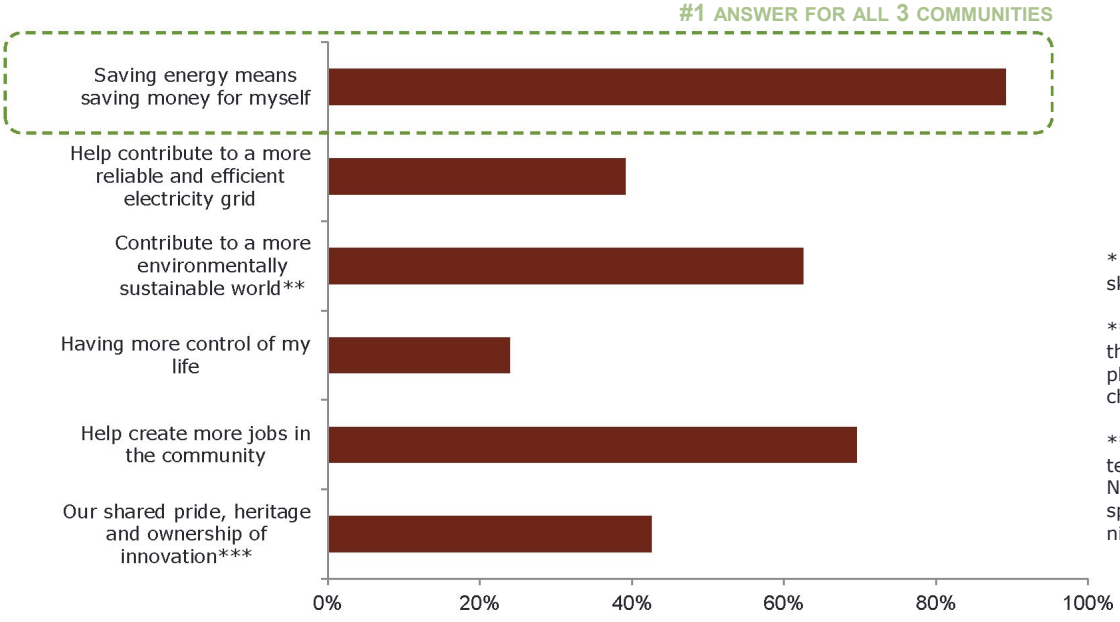
Messages

1. **Saving energy to save money was the most resonant message.** CNH staff identified "Basic Survival Day to Day" as the current governing image of the Bronzeville community. Having money to pay bills is already a high priority for CNH clients, and financial need is what draws them to CNH. While our objective was to identify values beyond saving money, this concern is an immediate community need. **Savings programs** like Peak Time Savings or **assistance programs** like Com Ed Residential Special Hardship program offer additional resources for financially struggling residents.

2. **Creating jobs in the community was the second most resonant message.** Youth and parents were particularly interested in jobs, especially when coupled with the recent passage of the Future Energy Jobs bill in Illinois. CNH encouraged residents to engage with the Smart Grid and energy in the home as an opportunity to expose their children to **thinking "like scientists"** who would be able to take advantage of new, clean energy jobs.

3. **Our shared pride, heritage, and ownership of innovation was a less resonant message.** While this message is a powerful narrative, it was less effective at encouraging residents to take action related to the Smart Grid, compared to the other two messages created in 2016. This message was more static, stating a concept, unlike the other two messages that suggest forward momentum directly related to engaging the Smart Grid.

Responses to "Today, we explained reasons for participating in Smart Grid. How likely might each reason **on its own** motivate you to sign up for a new electricity rate program?" and "What are other reasons that would **strongly motivate** you to consider signing up for a new electricity rate program? Check all that apply."



* Count of those who did not skip this question

** CASL added a qualifier that saving the environment/ planet means saving our children

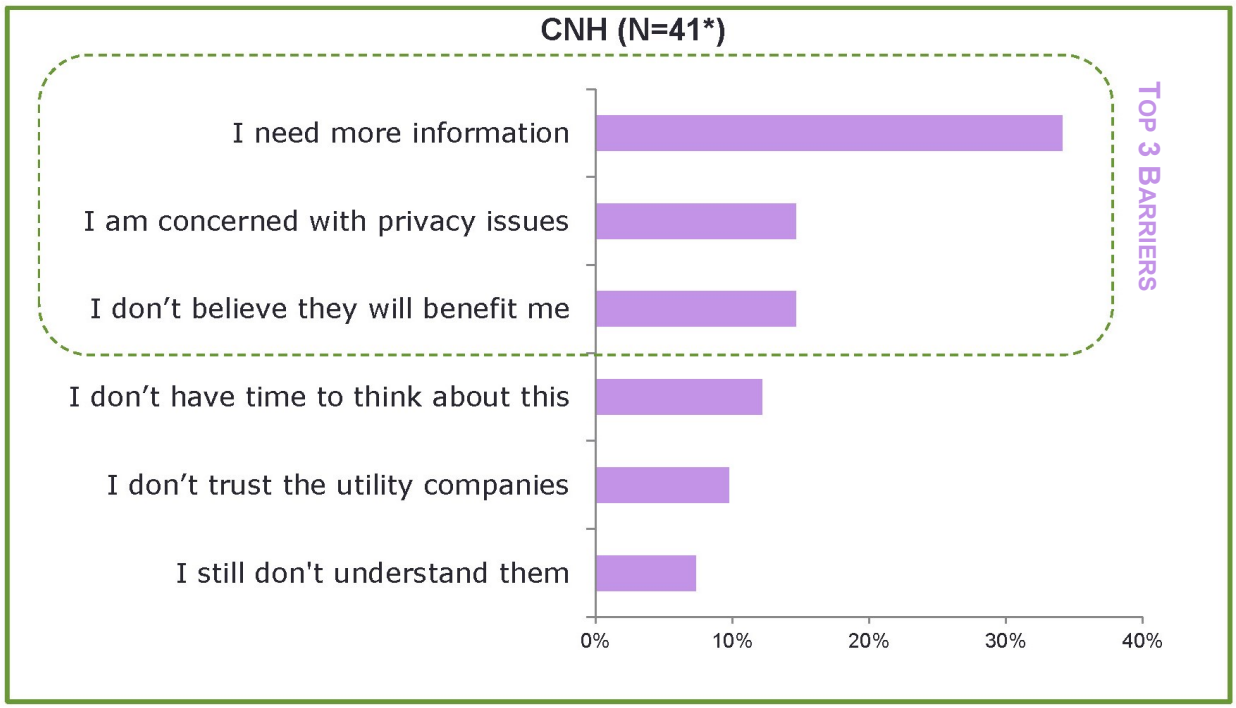
*** This reason was only tested at CNH, not at CASL or NHS-Chicago, as it applied specifically to CNH's community's history

Center for New Horizons: Key Takeaways

Barriers

4. A key barrier to signing up for programs was that they needed more information, which suggests that CNH can improve their outreach methods by supplying more information. Even though CNH clients responded that they needed more information about the energy programs, they didn't indicate that they "still [didn't] understand the programs." Based on feedback at the workshops, residents were looking for more information about next steps to take in general. **They needed material to follow up** on both the energy savings programs as the Smart Grid worksheets for home use with their children.

Question: "What are some reasons why you would NOT sign up for the above programs? Check all that apply." *["above programs" = Peak-Time Savings and Hourly Pricing]*



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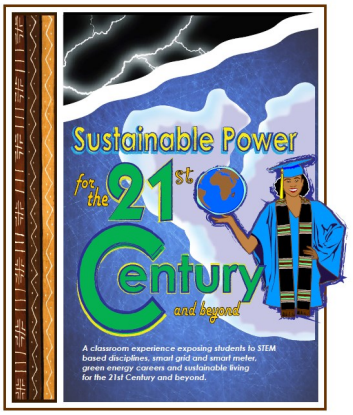
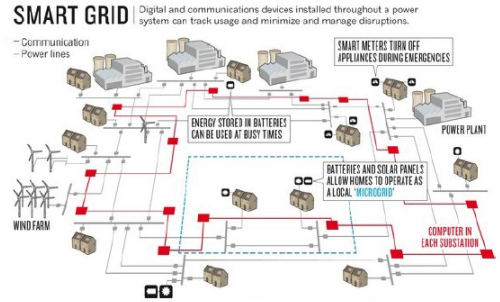
Center for New Horizons: Education Tool

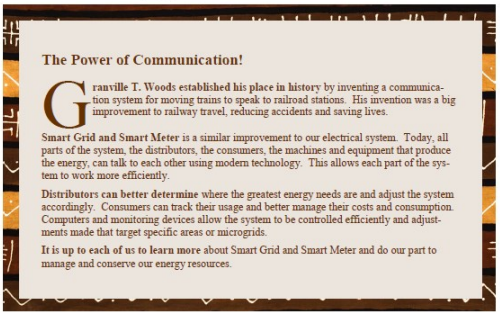


Creative and Culturally Relevant Outreach Material

Centers for New Horizons developed multiple education tools for students that connect Smart Grid and energy work to their behavior change messages. One example is the 21st Century Power Booklet which can be found in the appendices.

21st Century Power incorporates the message "**a long history of innovation in the African-American community**" to the Smart Grid by highlighting the with of Granville T. Woods. Woods improved the railway system for everyone by introducing a communication system. The Smart Grid is framed as an improvement to the energy grid communication system that benefits everyone.





The Power of Communication!

Granville T. Woods established his place in history by inventing a communication system for moving trains to speak to railroad stations. His invention was a big improvement to railway travel, reducing accidents and saving lives.

Smart Grid and Smart Meter is a similar improvement to our electrical system. Today, all parts of the system, the distributors, the consumers, the machines and equipment that produce the energy, can talk to each other using modern technology. This allows each part of the system to work more efficiently.

Distributors can better determine where the greatest energy needs are and adjust the system accordingly. Consumers can track their usage and better manage their costs and consumption. Computers and monitoring devices allow the system to be controlled efficiently and adjustments made that target specific areas or microgrids.

It is up to each of us to learn more about Smart Grid and Smart Meter and do our part to manage and conserve our energy resources.

The booklet also features engineers in the National Society of Black Engineers, whose mission is to increase the number of culturally responsible Black engineers. This feature connects to the "**Engaging with Smart Grid provides opportunities to connect to new jobs in a growing industry**" messages and shows students a possible STEM careers to aspire to.

Additional Tools

- Smart Grid One-Page Flyers
- Smart Grid Brochure 2015
- 21st Century Power Booklet
- Climate Change Worksheet for Students
- Sample Marketing Flyer
- Climate Change Power Point
- 21st Century Family Power Point

THE COMMUNITIES: CHICAGO LAWN

History

Historically, Chicago Lawn has been home to many new immigrant groups, particularly Lithuanians. Although the demographics have changed since the mid-twentieth century, the neighborhood is still known as a place for residents to buy homes and enter the middle class.

People

Today, Chicago Lawn is a multi-ethnic, primarily African-American and Latino, community that is home to many families with young children as well as seniors.

Culture

Community building organizations are very active in the neighborhood, addressing issues of racial division, violence, and predatory lending. Recreationally, soccer is a powerful draw in the community, bringing Chicago residents from within and outside of the community to play soccer year round at Marquette and West Lawn parks.

Credit: LISC Chicago

Credit: LISC Chicago

Historic Chicago Lawn

Neighborhood Housing Services: Organization Overview

About Neighborhood Housing Services (NHS)

Founded in 1975, NHS of Chicago is a social service organization whose **mission** is to create opportunities for individuals to live in affordable homes, improve their lives, and strengthen their neighborhoods. NHS offers its products and services citywide in Chicago, with neighborhood-based offices serving the following communities: Auburn Gresham and Englewood; Back of the Yards and Garfield Boulevard; Chicago Lawn and Gage Park; North Lawndale; Roseland; West Englewood; and West Humboldt Park, and in the suburbs, in Elgin, and East Hazelcrest.

For 40 years, NHS has partnered with a wide variety of community stakeholders to positively impact community reinvestment. Key players in this partnership effort have included local financial institutions, insurance companies, community organizations, the City of Chicago including local aldermanic offices and residents themselves. The role of financial institutions in this partnership has been key to ensuring that both prospective and current homeowners in our targeted neighborhoods have access to the good credit they need to make, improve and keep what is oftentimes their single biggest investment: their homes.

At the neighborhood level, NHS staff engage in a number of community-building activities. **In 1996**, NHS opened its Chicago Lawn/Gage Park Office and joined the efforts of neighborhood institutions to combat predatory lending, educate homeowners and get banks to reinvest in the community. These efforts have helped the community adjust to the rapid neighborhood change without losing significant housing stock. Residents of Chicago Lawn/Gage Park are determined to stop the downward spiral of disinvestment and urban decay and create an attractive, safe and inviting place to live for families from many backgrounds.

As a new partner in 2016, the NHS Chicago Lawn/Gage Park site incorporated the Smart Grid and energy education into outreach work in partnership with the South West Organizing Project (SWOP). NHS and SWOP outreach to community members from a community organizing perspective. Their main methods of outreach included incorporating Smart Grid energy education into:

1. Home ownership training for new homebuyers

2. Community outreach to parent mentor groups at local schools

Neighborhood Housing Services: The Messages

As a new partner in 2016, NHS staff developed more broad messages to measure the **community's values**, similar to the outreach in Bronzeville and Chinatown in 2015. NHS staff identified the **current governing image related to energy savings as "Sustainability does not relate to my life.**"

The language barrier for the primarily Spanish-speaking community as well as reluctance to trust corporations generate a sense of powerlessness that keeps residents from actively engaging with their energy usage. In order to shift the community's **governing image to "Active Energy Users Cutting Energy Use,"** NHS outreach needed to present the Smart Grid information as accessible and center residents' energy usage in their locus of control. They developed the following messages.

Saving more energy equals saving money for yourself - many residents that NHS connects with are soon-to-be or recent homebuyers and are concerned about managing the finances associated with homeownership. This message connects this need to save money and manage bills to saving energy.

By monitoring your energy use, you contribute to a more reliable and efficient electricity grid - this message emphasizes about one of the benefits of the smart grid, fewer blackouts and no more estimated bills, two challenges that residents had with the old energy grid.

By saving energy, you contribute to a more environmentally sustainable world - this message connects persona action to the bigger picture of sustainable practices benefiting our shared environment.

Additional Tools

- NHS's Image Shift Worksheet

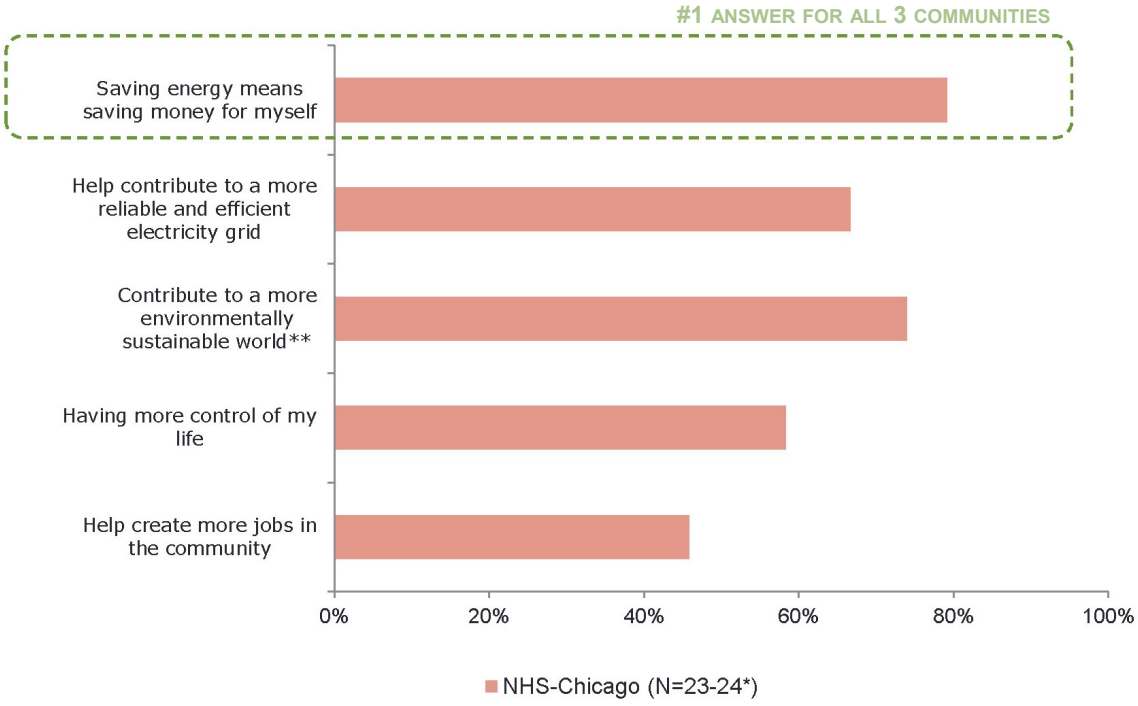
Neighborhood Housing Services: Key Takeaways

Messages

1. **Saving energy equals saving money was the most resonant message.** Most of the NHS outreach was conducted in homebuyer and homeowner workshops. Smart Grid and Smart Meters were presented as one of the many financial responsibilities within the home. Residents were most interested in learning how much money they could expect to save from the Smart Grid itself, savings programs like Peak Time Savings, and general energy efficiency practices.

2. **Contribute to a more environmentally sustainable world was the second most resonant message.** Clients frequently remarked on the importance of being aware of energy usage and cutting down on waste. In particular, the parent mentors connected energy-saving actions to their families and pointed out the potential to use natural light during the day instead of turning the lights on.

Responses to "Today, we explained reasons for participating in Smart Grid. How likely might each reason **on its own** motivate you to sign up for a new electricity rate program?" and "What are other reasons that would **strongly motivate** you to consider signing up for a new electricity rate program? Check all that apply."



* Count of those who did not skip this question
** CASL added a qualifier that saving the environment/planet means saving our children

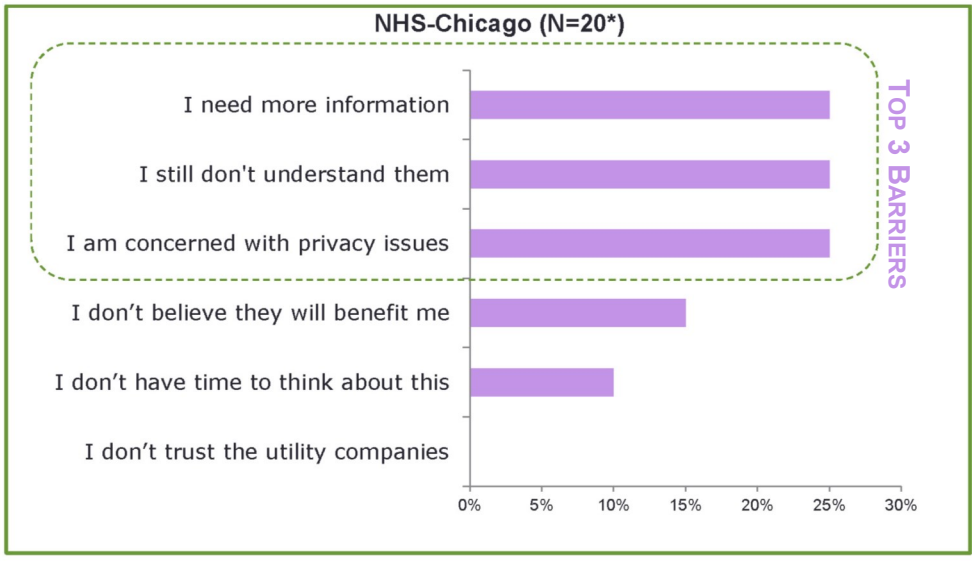
Neighborhood Housing Services: Key Takeaways

Barriers

3. **A trusted organization is especially important for outreach.** One key barrier was privacy issues. Residents felt uncomfortable about utilities companies being able to keep track of them. One resident was so suspicious of the Smart Grid and meters that she refused the installation for months until receiving the final notice about the penalty fee. While a trusted community organization to deliver the message might not be able to alleviate this concern, they can provide an outlet for residents to be heard and, if the privacy concern is related to people or organizations besides the utility companies getting their data, also provide information about the security of the data.

4. **Staff experience matters.** NHS clients indicated that primary barriers were "I need more information" and "I still don't understand [the Peak-Time Savings and Hourly Pricing Programs]". CASL's surveys showed that their experienced staff members were more effective after the first year. NHS's surveys suggest that the inverse is true as well; staff members with less experience will be less effective at educating clients. Not only was NHS a new partner in 2016, but a staff member who joined late in the year also conducted much of the outreach.

Question: "What are some reasons why you would NOT sign up for the above programs? Check all that apply." *["above programs" = Peak-Time Savings and Hourly Pricing]*



* Count of those who did not skip this question

ADDITIONAL TOOLS

- NHS Smart Grid Flyer

UNIVERSITY OF ILLINOIS AT CHICAGO

University of Illinois at Chicago: Organization Overview

The University of Illinois at Chicago (UIC) is a major research university located near downtown Chicago. With over 29,000 students, more than 10,000 faculty and staff and 15 colleges, including the nation's largest medical school, UIC is the largest university in the Chicago area.

The CSLN partners worked with the Office of Sustainability (OS) and African-American Cultural Center (AACC) to deepen the project's understanding of a cultural and cross community approach. The OS worked with the director of the AACC on their Energy Interconnections project to train students in Smart Grid and participatory action research in order to better understand the role of energy on the UIC campus and develop education techniques in response.

The OS has been working for over seven years to change behavior related to energy use on campus. They designed campaigns reminding people to turn off lights and computers, run competitions, and conducted various outreach activities. They developed a robust website that communicates what UIC is doing in the sustainability realm and how people can take action. They worked with Campus Utilities to develop an energy dashboard and kiosks that communicate energy usage in campus buildings and compares that usage historically and to other buildings. Most recently, they worked with student interns to design a Sustainability Toolkit to increase help to help people see their work on campus and their personal action that are sustainability-related and connect them to initiatives on campus. These approaches provided the foundation for the 2016 intern program to engage both campus community and community partners in learning about energy use and what the Smart Grid can do for them.

How the approach was integrated into ongoing work
Training Overview

May 17-19 2016, the UIC ISEIF grantee key personnel conducted and participated in a 3-day training workshop for the 8 smart grid interns and our Graduate Assistant. The training had three main objectives:

1. Introduce smart grid interns and key personnel to each other and the project,

2. Provide organizational, social, technical, economic and contextual frameworks for understanding smart grid, UIC stakeholders and project goals.

3. Provide hands-on methodological training in the "cultural approach," that Dr. Baptista brought to the project.

Smart Grid and 2015 Tools
Student leaders opened the first day of training by inviting the new intern cohort to play a couple of rounds of *EcoPong*. *EcoPong* (adapted from a popular college game that Min-an international student from China-first experienced on St. Patrick's Day during grant year one) is an interactive, student-centered and developed game. It was designed to assess students' baseline knowledge of SmartGrid, introduce smart grid and sustainability related concepts, and reassess SmartGrid knowledge in a quick, fun and engaging manner. Throughout the course of the next two days, student leaders restaged *EcoPong* as a pedagogical exercise, and introduced other tools that were developed during the first year of the project. These included a student produced SmartGrid informational video, website, power point presentation, the dashboard app, tabletop poster, and model "smart" home .

Additional guest speakers gave PowerPoint presentations and distributed handouts about:

- UIC Utilities
- The UIC Dashboard
- Smart Grid Consumer Education
- UIC Climate Commitments
- Smart Metering from a ComEd Perspective

Tabletop Smart Grid Poster and model "smart" home made from repurposed materials from the Rebuilding Exchange.

How the approach was integrated into ongoing work
Training Overview, continued

Ethnographic/cultural/participatory research methods
Dr. Baptista provided intensive training on ethnographic/cultural approach/participatory research methods. Students learned about techniques to engage stakeholders, the complexity of self-identities, and the important of asking open ended questions. A more nuanced understanding of the stakeholders, their responsibilities, values, and priorities helped interns to assess how they might relate to smart grid. The training explicitly addressed the importance of paying close attention, practiced observing and note taking. The interns then used a worksheet to map how particular campus stakeholders are impacted by energy use, conservation, efficiency methods, metering or smart grid relative to their missions and core or primary responsibilities.

Intern Placements
Following the trainings, students were placed with individual units and UIC staff and faculty whose core work and interests are somehow impacted by energy and would be willing to have a student shadow them. UIC personnel attempted placements that seemed to be a good fit for both the interns and stakeholders. Five of the interns were placed on UIC campus, and three of the interns were placed with ISEIF community partners, CNH and CASL. The interns were diverse themselves; they were evenly divided in terms of gender (4 women, 4 men) but diverse in terms of ethnicity, major, and interests.

Between 5/25/16 – 7/12/16 each of the remaining five interns spent approximately 10 hours shadowing one of the following stakeholder or stakeholder units: UIC's Department of Transportation, Facilities Management, UIC's Chief Power Plant Engineers, a Project Manager in Physical Plant, and the Director of Minority Affairs in the College of Engineering. After the first round of shadowing, interns additionally shadowed a lab manager for a research unit, an Assistant Chief Engineer in Physical Plant, and Heritage Garden interns who were under the supervision of and in residence at the African-American Cultural Center during the time of the observation.

Additional Tools

- Intern Training Design 2016
- Stakeholder Worksheet 2016

Analysis of Observation Data

The initial training, ongoing individual consultations, weekly sustainability internship seminar and analysis meetings with Dr. Baptista integrated the knowledge gained from these different experiences and supported student interns' ongoing participation in shadowing activities. Students also toured key campus assets such as the Mile Square Health Facility, East and West campus power plants and recycling plants, and met with administrators responsible for facility operations and maintenance. Each week as students completed their shadow assignments and wrote fieldnotes. The group met once a week for ten weeks to collectively review and code fieldnotes. Weekly analysis meetings provided opportunities for students to identify themes from the shadowing activities and connect these to their understandings of UIC's organizational, social, technical and economic infrastructures.

Coding consisted of identifying major and minor themes and concerns as written up in the notes. Once they agreed upon and coded the notes, they discussed the themes and concerns, and assessed how these themes and concerns were already (or could be) related to energy use, conservation, metering and smart grid. At the conclusion of the shadowing assignments, interns tabulated the coded results and divided into four working groups supported by key personnel. Each working group was tasked with reflecting upon one of the four themes that had the most potential for engagement and developing tools that incorporated project findings.

Top 5 themes that emerged from the shadowing activities

lights/lighting (73 mentions)
heating/cooling (30 mentions)
pipettes (28 mentions)
airflow (12 mentions)
phone(s) (12 mentions)

Top 3 campus concerns that emerged

Budget/funding (17)
Work load/comfort (8)
Reliability (2)

Analysis of Observation Data, Continued

Lighting spoke to the many different kinds of relationships that campus stakeholders have with lights/lightening. As a large, urban university campus with considerable built infrastructure, lighting is a major asset that can be found in every university facility. Campus stakeholders interact with lights/ lighting through individual behaviors (turning lights on/off in labs or office spaces), mission-driven group activities (the need for daylight or sunlight to grow plants in the Heritage Garden) as well as job-specific duties that range from influencing which lights are purchased (project manager), identifying lights that need to be replaced or repaired (zone manager) repairing or installing lighting fixtures and lights themselves (lampers/electricians), or measuring how much energy they save by turning off lights (Office of Sustainability, Earth Day).

The Mile Square Health Center makes use of natural day lighting

While budget and funding remain serious concerns that impact lighting infrastructure and use, lighting use patterns can also be attributed to motivations beyond cost savings. Currently, much of the campus is not metered. As a result, cost and cost savings are hard to measure on a unit basis. Comfort, aesthetics and environment significantly informed stakeholder's relationships with lighting. Some stakeholders used desk lamps instead of fluorescents because they provided a softer hue. Others were concerned that student computer labs that lacked natural light negatively impacted student use of the space and were open to considering more natural lighting alternatives. There was also a history of collaboration between stakeholders to address "co-benefits:" sustainability, aesthetics and cost savings. A couple of years ago, the Office of Sustainability, a project manager and a campus unit undergoing renovations successfully secured federal funding to install more energy efficient lighting in one of the campus buildings.

Heating/Cooling was mentioned a total of 30 times, and reflected both the initial shadowing placements with facilities/power plant/engineering units and issues related to reliability of aging equipment/infrastructure and comfort in office spaces.

Pipettes tips presented as an unusual but exceedingly common asset. Pipettes are glass or plastic laboratory tools commonly used in chemistry, biology and health sciences experiments to measure and move volumes of liquid. A large number of pipettes are used in labs each semester. However, they are often unable to be recycled because they become contaminated in use. UIC does have a pipette tip box recycling program for the boxes the pipettes tips come in.

Airflow was in many ways related to heating and cooling, but presented as a separate theme. Airflow could be impacted by the efficiency or functionality of heating or cooling equipment.

Phones emerged as a theme in the research because of their use as departmental communications tools as well as personal devices that a number of stakeholders use in different ways as job aids.

Research in Action: Working Groups

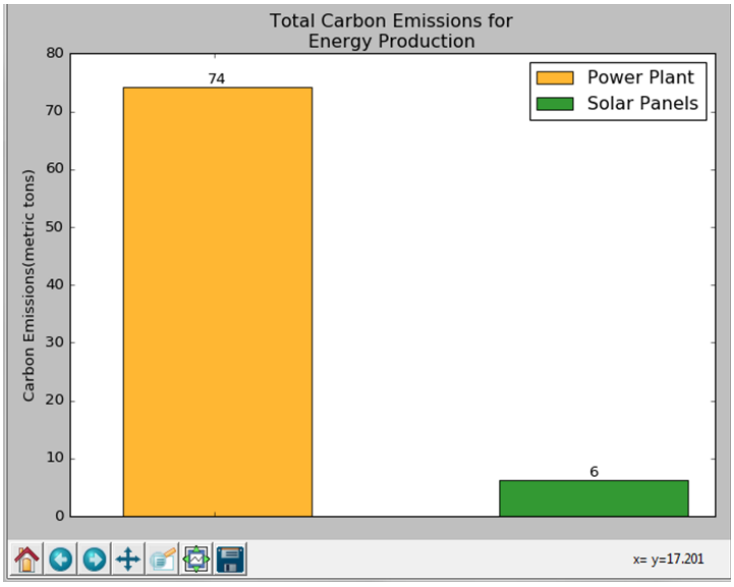
Based upon the research findings, the interns established four working groups to guide campus engagement strategies:

Natural Light and Health Working Group
Natural light/lighting related both to health and wellness issues and budget. Students made particular note of how natural light had been incorporated into the design – even of exam rooms – of the Mile Square Health facility so that people's privacy would not be compromised but they would have windows. The interns in this working group also did a literature review of studies that looked at the benefits of natural light in office and other settings, as well as some articles that considered how circadian lighting affected peoples' sense of well-being. They also collaborated to write a short blog post/article with photos highlighting Mile Square as a campus asset with a particular approach towards natural light relative to health and wellness that has a cost-savings benefit.

The other deliverable from this working group was the "Don't Be Afraid to Turn Off the Lights" campaign. The Office of Sustainability partnered with the Student Activities Board for the annual Halloween Bash. The sustainability interns were able to launch the Energy Dashboard at the event and share information about natural light, meters, and energy information with students while leading a face-painting table that featured glow-in-the-dark face paint.

A student receiving glow-in-the-dark face paint at the Halloween Bash

Unique Assets Working Group
The unique assets working group explored linkages between the campus Heritage Garden and energy, cost and value of installing solar energy, and possible next steps were regarding pipette heads. The main asset available to the Heritage card was solar energy. Interns have followed up by exploring different types of solar units, such as solar charging stations in benches, and have written proposals to fund installing units at the garden. In the process of exploring solar options, one intern create a solar calculator to generate the financial and energy implications of installing solar panels or installing energy efficient light bulbs. Regarding the pipettes, the interns found a company that sells a device that makes it possible to recycle pipette heads, but the cost/benefit analysis did not make sense to acquire the device.

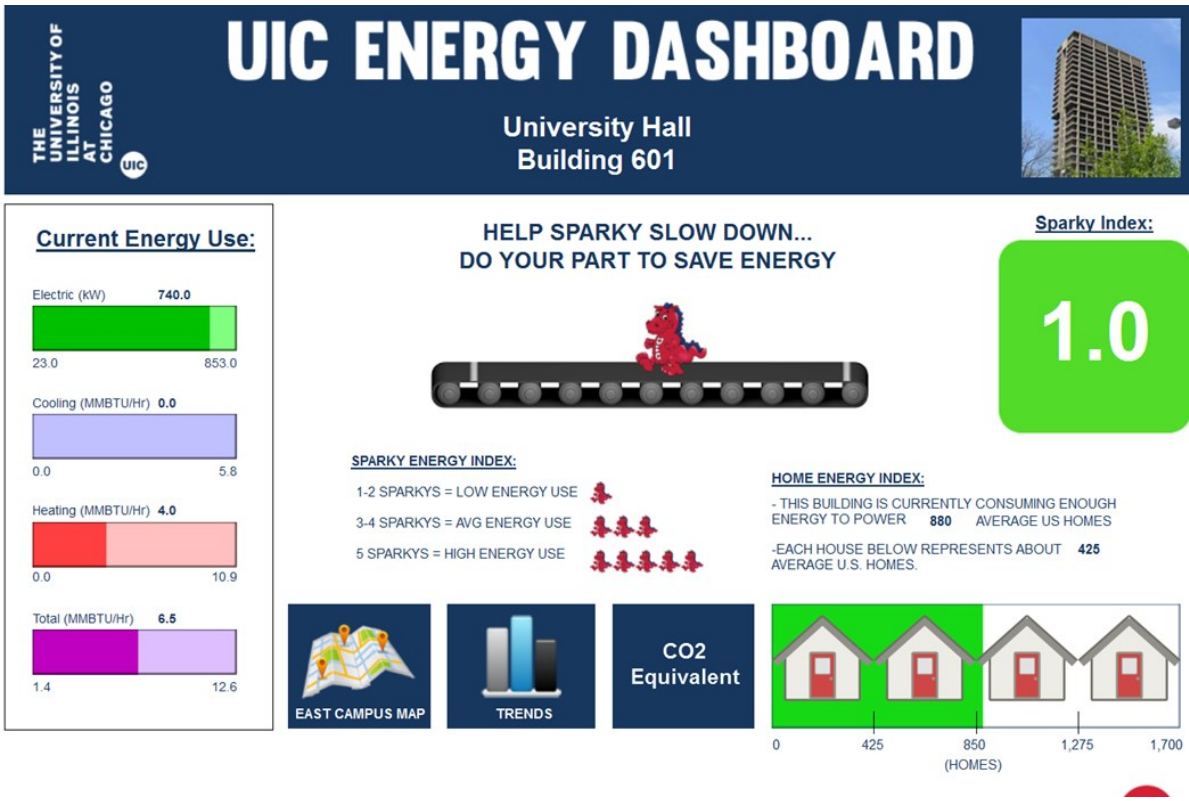


Solar calculator showing carbon emission estimates for a custom solar project

Research in Action: Working Groups, Continued

Dashboard Working Group

The interns in the dashboard working group created a UIC campus dashboard to visualize real-time energy demand and usage. They developed this dashboard by compiling screen shots, web links and other visuals of similar grid use data reporting systems at other campuses. The dashboard will be used to demonstrate to campus stakeholders real time demand/usage and explore ways to use the dashboard to implement efficiency programs, similar to those as other universities. One highlight of the dashboard is the visualizations paired with smart grid data; this arm of the project might have particular resonance for data visualization, computer science and engineering faculty, staff and students.



Technology Working Group

This group explored personal devices, vehicles, and campus systems. One intern from the CASL site shared information about a smart grid app and CUB energy saver. Another group member wrote a blog post about campus assets related to vehicles, such as hybrid cards, Divvy bikes, and charging stations. The final deliverable was a power point presentation sharing information gathered from shadowing campus engineers as well as recommendations for greater energy efficiency.

Additional Tools

- Eco Pong Facilitator's Guide
- Eco Pong Sample Questions
- UIC Energy Dashboard
- Solar Calculator
- Power Plant Power Point

Cross Community Events

Cross-community engagement has been key to our collaborative approach. Not only did the partners benefit from quarterly meetings to share strategies internally, but community members also had the opportunity to engage with each other in different community areas to learn about new ways of thinking about and managing energy. There were two cross-community events per year, drawing in over 150 residents from all communities. The cross community locations and activities can be engaging field trip opportunities for groups of community members.

Cross-Community Energy Exchange
July 13th, 2015 at the ICA GreenRise, featuring tours of ICA GreenRise and Illinois Solar Energy Association Solar House

This event aimed to have each partner share their approaches hands-on, create a collaborative art piece on energy with the community members, and share a cross-cultural lunch. While partners had verbally explained their approaches, this was the first time they were able to participate in the outreach activities. The highlights of the event were the creative ways partners had incorporating games and fun into their outreach, such as the UIC Eco Pong game and CASL's energy trivia with prizes.

Participant responses to "What does energy efficiency mean to you?" highlighted **changes in technology**, such as solar panels and wind turbines, and **lifestyles**, such as going outside more and "unplugging" from electronics.

The Past and Future of Energy
November 14th, 2015 at Illinois Institute of Technology (IIT)

This event aimed to deeply explore each community's values and learn about the innovative sustainability projects at IIT. To bridge the language barrier between groups, the activities incorporated drawing, in addition to spoken translation.

Insights from this event were around the generational differences related to energy. In an activity where participants recalled the relationship between energy and their senses growing up, a number of contrasting experiences emerged across generations and cultures (Chinese elders and African-American youth). Examples included the sound of a physical washboard for clothes versus the hum of a washing machine. Food experiences ranged from homemade food on a charcoal fire to oven-made food to fast food. In each of the contrasting experiences, the level of labor involved in generating energy was related to awareness of energy. **Group reflection revealed that the older generation had a labor intensive relationship to energy and were more aware of its presence while the younger generation had a more privileged relationship in not having to think about energy as much.**

Cross Community Events, Continued

Cross Community Energy Exchange: Touring The Plant Chicago
August 2nd, 2016 at The Plant Chicago

This event aimed to explore different approaches to a sustainable system. The group toured the building, a former meat packing warehouse that now functions as a sustainability hub for small businesses in the Back of the Yards community. The highlight of the tour was the aquaponics farm, with tilapia and saltwater shrimp connected to beds of greens.

After the tour, the group reflected together to connect their own communities to the energy loop at the Plant. Participants drew their own community maps to understand the energy involved in getting food from where it was produced to where it eventually ended up and consider what might be different in their ideal system. Residents from Chinatown and Bronzeville were interested in reducing landfill waste through larger scale composting operations and shared tips about how to manage a small scale operation at home.

Cross Community Energy Exchange: Touring the Charles Heppner Artist Studio
October 26th, 2016 at Charles Heppner Artist Studio

The final cross community event brought community residents to the Charles Heppner Artist Studio and Residence, one of the most sustainable homes in Chicago. Tim Heppner of Ecotelligent Design designed and manages the home; he frequently offers tours to residents and visitors from across the city. This home highlights the potential for homes to be sustainable through a comprehensive plan to capture stormwater, efficiently maintain comfortable temperatures, and produce energy. Attendees at this event were especially excited about techniques they could apply to their own homes.

Additional Tools

- July 2015 Event Design
- November 2015 Event Design
- August 2016 Event Design
- October 2016 Event Design
- *Where I'm From* Poetry Worksheets from Nov. 2015
- Closed Loop Worksheet, Aug. 2016
- Closed Loop Worksheet, Chinese, Aug. 2016

CONCLUSION

Measuring the Messages: Evaluation Objectives

Over the two years, three of the organizations used surveys with their community members to test effectiveness of their education methods and provide greater insight about community values and barriers to signing up for energy programs. Specifically:

2015	2016
Target: clients/community members who attended Smart Grid education sessions at:	
• CASL – primarily serving Chinese immigrants • CNH – primarily serving African American population *ICA, SKSL, and UIC were not involved in the evaluation in 2015.	• CASL – primarily serving Chinese immigrants • CNH – primarily serving African American population • NHS-Chicago – serving a mix of Latino and African-American populations
Evaluation aims to achieve the following objectives at a high level:	
1. Develop an understanding of: a. Educational / outreach approaches that are most and least receptive to CASL's and CNH's clients b. Key values and beliefs that motivate these two sets of constituents c. Key barriers preventing them from understanding and/or adopting technologies and programs related to Smart Grid 2. A comparison of the above between the two demographics – what are the similarities and what are the differences, if any in each?	1. Develop an understanding of: a. Educational approaches and messages that are most and least receptive to each community b. Key barriers preventing them from understanding and/or adopting technologies and programs related to Smart Grid 2. A comparison of the above between the three communities, where possible – what are the similarities and what are the differences, if any in each ?

*While a few questions on the 2016 survey were the same as those used in the 2015 survey, there were also differences in the questions on the surveys from the two years. Therefore, the ability to conduct year-to-year comparison is limited.

Measuring the Messages: Evaluation Methods

Most of the evaluation was done through paper surveys, and a handul of phone interviews were conducted. Specifically:

2015	2016
Two types of instruments: **1. Written survey, distributed at end of each educational event / session:**	
• CASL – primarily serving Chinese immigrants • CNH – primarily serving African American population	• CASL – primarily serving Chinese immigrants • CNH – primarily serving African American population • NHS-Chicago – serving a mix of Hispanic and African American populations
2. Phone interviews with a handful of CASL, CNH, and NHS (2016) clients:	
• On the above survey, also asked if session attendees would be willing to be contacted via phone after the Smart Grid education session – a small number gave consent, of which a subset was successfully interviewed • Interviews were conducted 1-3 months after education session, to assess degree to which materials taught were retained and if any actions were taken • Conducted in English, Mandarin Chinese or Cantonese Chinese, depending on the interviewees' preference	

Additional Tools

- 2015 Surveys
- 2016 Surveys
- 2015 Survey Analysis
- 2016 Survey Analysis

Final Takeaways and Implications

Similarities

The community profiles specified the unique preferences in each of the communities. Three main similarities emerged.

1. Our evaluations showed that linking energy efficiency to saving money was the most resonant message in all three communities. The program design and demographics likely played a large role in this correlation. First off, the Smart Grid training was paired with financial planning and budgeting workshops, and secondly many of the clients were low-income and have to manage many financial priorities.

2. Low-risk /variable reward energy pricing programs (Peak-Time Savings) were more appealing than some risk – high reward (Real Time Pricing) programs.

3. Across all communities, making connections to the family unit is important. For CASL clients with limited English proficiency, connecting to English-speaking family members provided an additional support when interacting with utility companies and new technology. For CNH clients, making connections to the opportunities available for young people in energy efficiency work was an important component of engaging adults.

Lessons Learned and Recommendations for Practitioners

1. Different community development approaches have different benefits

Our tactic in 2015 and 2016 was to work with trusted community-based organizations to deliver Smart Grid messaging to different communities. All of our partner organizations worked with residents who had a sincere mistrust of the utilities, but were willing to hear the trusted staff out about the smart grid.

There were differences in the way the community based organizations framed and delivered their community development work. CASL takes more of a direct service provider approach, while NHS and CNH take more of a community organizer/leadership development approach.

Throughout the project, CNH and NHS, employing the leadership development approach, experienced more challenges incorporating the education into their outreach with residents than CASL, despite having articulated a clear and relevant connection between Smart Grid and their community. However, when they did make connections, residents responded with deep insight about energy use that went beyond the "Day to Day Survival" and financial components of utilities. (See Appendix A172)

Additionally, it was fitting for CNH to talk more broadly about Smart Grid and energy, making connections to individual residents' situations and connecting them to collective actions that could improve the community. This process of organizing requires more listening than talking and doesn't lend itself well to pitching the benefits of Smart Grid. Signing residents up for energy programs is not in line with the mantra "don't do for someone what they can do for themselves" that is common for many community organizers. Instead of incorporating outreach into individual meetings, CNH and NHS focused on group sessions to present Smart Grid as an opportunity for action and followed up with individuals afterwards. CNH had the most success when connecting Smart Grid to jobs and job skills; residents were actively following up to get access to more ways to respond to Smart grid and energy. However, this method of outreach is resource intensive, and the education about Smart Grid in and of itself was less effective than CASL's approach.

Final Takeaways and Implications

CASL, employing a direct service model, received more responses post-training from residents who signed up for a savings programs and more feedback from clients about financial savings through the program.

As a service provider, it was fitting for CASL to walk clients through the process of signing up for Peak Time Savings and individually educate residents in a one-directional manner. This enabled them to reach out to and sign up many Chinatown residents, and the simple message in their education materials was more effective for communicating the basic information about Smart Grid. However, it was challenging to reveal the relationship that CASL clients had with energy beyond the fact that it was another bill to pay.

Based on the response from CASL residents at workshops as well as survey responses, this direct service approach seems most effective for making residents aware of and engaged with programs that are available. The most notable behavior change is engagement with the utilities. For CNH and NHS residents, the community organizing and leadership development approach is more effective for making connections between Smart Grid, energy, and residents' self-interest, or a desire, need, or underlying value that someone has. The most notable change is a different relationship to energy; instead of only being a burden, energy and utilities are also an opportunity.

Our experience with these two different approaches to community work showed us that a trusted community organization is most effective when educating residents in a way that is true to its typical interaction with residents. As referred to earlier in this toolkit, long-term behavior change occurs when the images that govern people's behavior begin to shift. While CNH and NHS tied Smart Grid into a more existential and intimate understanding of their constituencies relationship to energy, it is near impossible to note the long term impact that will have on the residents and their day to day energy usage. CASL's direct service model, using the number of residents signed up for a program as a metric of success is, offers a better immediate outcome.

2. Cross Community Collaborative Approaches deepen understanding and allow for more creative ideas to emerge.

As noted earlier, staff from our partner organizations met once a quarter to exchange successes and setbacks with one another, and twice a year to participate in a cross-community events. The quarterly meetings were helpful, especially early on to help the partners wrap their mind around the smart grid, and how they would integrate it into their programming, together. Although seemingly simple in concept, it can be difficult to integrate into programming or train others on without a nuance understanding.

The cross community events previously highlighted in the toolkit were extremely meaningful experiences for many that attended. These events included clients from all of our partners coming together to learn something new, and reflect on their relationship to energy. More importantly, they were co-designed by staff from different organizations, making sure that everyone would be able to participate in a way that would be engaging for them. It allowed partners to be able to share design tools and expertise, and learn more about the nuanced approach each partner has to their programming.

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