

SEEA SOUTHEAST CONSORTIUM

FINAL TECHNICAL REPORT

Award Number:

DE-EE0003575

BBNP Name:

Southeast Energy Efficiency Alliance

Project Title:

Southeast Communities Retrofit Ramp-Up Consortium

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Executive Summary

In 2010 the Southeast Energy Efficiency Alliance (SEEA) received a \$20 million Energy Efficiency and Conservation Block Grant (EECBG) under the U.S. Department of Energy's Better Building Neighborhood Program (BBNP). This grant, funded by the American Recovery and Reinvestment Act, also included sub-grantees in 13 communities across the Southeast, known as the Southeast Consortium.

The objective of this project was to establish a framework for energy efficiency retrofit programs to create models for replication across the Southeast and beyond. To achieve this goal, SEEA and its project partners focused on establishing infrastructure to develop and sustain the energy efficiency market in specific localities across the southeast. Activities included implementing minimum training standards and credentials for marketplace suppliers, educating and engaging homeowners on the benefits of energy efficiency through strategic marketing and outreach and addressing real or perceived financial barriers to investments in whole-home energy efficiency through a variety of financing mechanisms.

The anticipated outcome of these activities would be best practice models for program design, marketing, financing, data collection and evaluation as well as increased market demand for energy efficiency retrofits and products. The Southeast Consortium's programmatic impacts along with the impacts of the other BBNP grantees would further the progress towards the overall goal of energy efficiency market transformation.

As the primary grantee SEEA served as the overall program administrator and provided common resources to the 13 Southeast Consortium sub-grantees including contracted services for contractor training, quality assurance testing, data collection, reporting and compliance. Sub-grantee programs were located in cities across eight states including Alabama, Florida, Georgia, Louisiana, North Carolina, South Carolina, Tennessee, Virginia and the U.S. Virgin Islands. Each sub-grantee program was designed to address the unique local conditions and population of its community. There was great diversity in programs design, types of financing and incentives, building stock characteristics, climate and partnerships.

From 2010 through 2013, SEEA and its sub-grantee programs focused on determining best practices in program administration, workforce development, marketing and consumer education, financing, and utility partnerships. One of the common themes among programs that were most successful in each of these areas was strong partnerships and collaborations with people or organizations in the community. In many instances engaged partners proved to be the key to addressing barriers such as access to financing, workforce development opportunities and access to utility bill data. The most challenging barrier proved to be the act of building a market for energy efficiency where none previously existed. With limited time and resources, educating homeowners of the value in investing in energy efficiency while engaging electric and gas utilities served as a significant barrier for several programs.

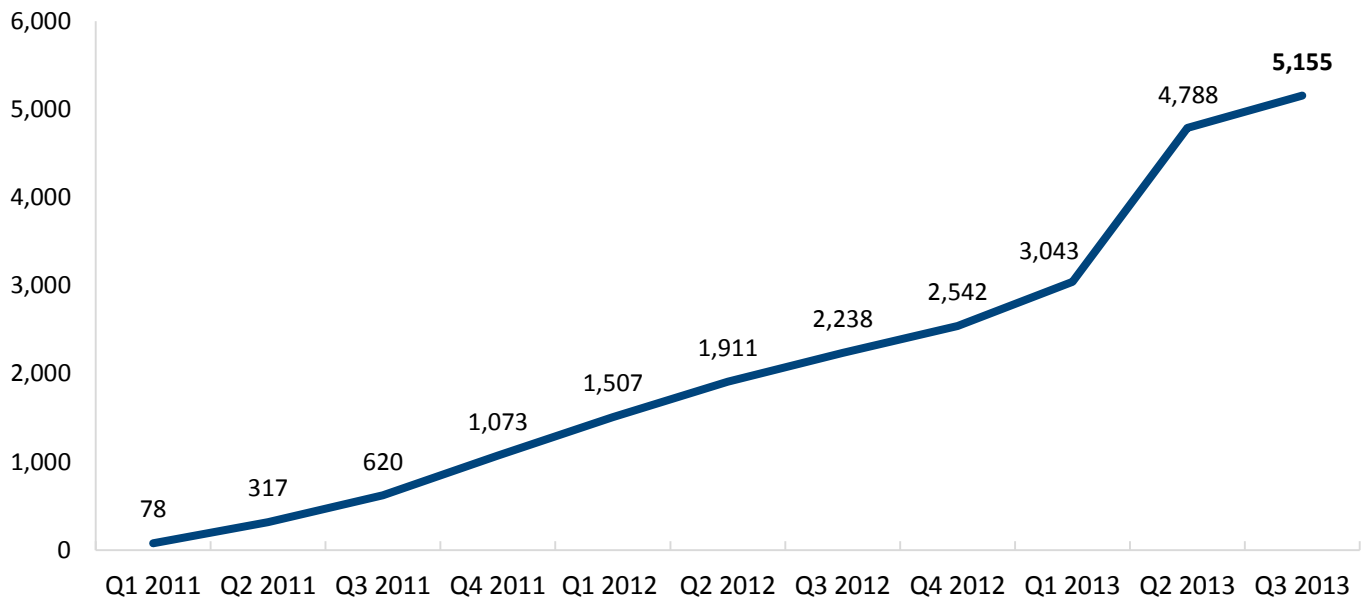
While there is still much work to be done to continue to transform the energy efficiency market in the Southeast, the programmatic activities led by SEEA and its sub-grantees resulted in 8,180 energy audits and 5,155 energy efficiency retrofits across the Southeast. In total the Southeast Consortium saved an estimated 27,915,655.93 kWh and generated an estimated \$ 2,291,965.90 in annual energy cost savings in the region.

Listed below are the final audit and retrofit numbers for each Southeast Consortium Program:

Southeast Consortium Completed Audits and Retrofits

		Single-Family	Multi-Family	Commercial	
Program	Total Number Completed Audits	Cumulative Total Completed Retrofits			Total Number Completed Retrofits
Sustainable Home Initiative in the New Economy (SHINE) Atlanta, GA	324	310	14		324
Carrboro WISE Carrboro, NC	118	18	93	5	116
Chapel Hill WISE Chapel Hill, NC	232	161	198		359
CharlestonWISE Charleston, SC	711	127			127
Commercial Building Energy Efficiency Retrofit Program (CBRetro) Charlotte, NC	11		1,042	2	1,044
Local Energy Alliance Program (LEAP) Charlottesville, VA	1,355	1,215		12	1,227
Decatur WISE Decatur, GA	74	54			54
NEXT STEP Program Hampton Roads, VA	62	62			62
Alabama WISE Huntsville, AL	970	735			735
ShopSmart with JEA Jacksonville, FL	457	206		4	210
Nashville Energy Works (NEW) Nashville, TN	3,032	510			510
NOLA WISE New Orleans, LA	885	171	213	1	385
USVI WISE U.S. Virgin Islands	8			2	2
Southeast Consortium Grand Total	8,180	3,569	1,560	26	5,155

Southeast Consortium Completed Retrofits



Final Technical Report

Institutional Design and Business Model

While no one program under the Southeast Consortium was designed exactly the same, the sub-grantee programs can generally be categorized in the following way:

Programs Run by Municipalities:

The sub-grantee programs in Nashville, Charlotte, and Atlanta were each run out of a city municipal department. Charleston, Decatur, Chapel Hill, and Carrboro, originally intended to have the grant programs managed by their municipal departments, but outsourced program management to another entity. Programs run out of municipalities experienced low overhead costs and were able to leverage existing city resources such as marketing, finance, and legal departments for the benefit of the program. However, these programs were often challenged by their own procurement or approval processes which slowed program progress in some cases.

Programs Run by Non-Profits:

In Huntsville and Charlottesville, nonprofit organizations managed the programs from the very beginning. The cities of Charleston and New Orleans both selected existing local nonprofits to manage their programs. Programs run out of non-profits often struggled with sustainable cash flow and had to ensure all expenses were submitted in a timely manner. The benefit of running a program out of a non-profit is that programs are able to be flexible and adapt program design when needed.

Programs Run by Third Party Implementers:

The programs in Decatur, Chapel Hill, Carrboro, Hampton Roads, and USVI outsourced program management to third-party organizations. These management or consulting companies were contracted by SEEA or the sub-grantee and tasked with program design and/or management on the sub-grantee's behalf. Third-party administrators often were able to start programmatic work quickly once agreements were in place. However, programs run by for-profit third-parties were often very costly and unsustainable.

Programs Run by Utilities:

The City of Jacksonville used its award funds to add a component to an existing incentive program at its municipally run utility JEA. Running a program out of utility allows the program to launch quickly and utilize existing utility program infrastructure. Despite having resources to lean on, JEA struggled internally to align its existing program with BBNP requirements.

Other programs, although run by a municipality or third party, utilized a utility add-on model to complement existing utilities programs and incentives. Atlanta, Huntsville, Nashville, and Decatur all designed their programs to generate more interest for existing utility programs by offering incentives on top of utility incentives. New Orleans worked as the marketing arm for the Entergy-New Orleans program, but chose not to provide additional rebates. Programs that worked closely with utilities benefited from sharing utility marketing resources and often were successful in accessing utility bill data directly from the utility.

Program Design and Customer Experience

In an effort to serve as “test labs”, the sub-grantee administrators were allowed to design their programs according to the needs and capacity of the local market. From direct administration out of the municipality to non-profit administration, a number of best practices and lessons learned help to inform implications for future programming. Namely, the program design and customer experience are two related elements that had a direct impact on the program administration, implementation and market transformation. Several programs underwent multiple program design changes as implementation informed the best course of action. Utility partnerships, contractor-based, and the energy advocate/consultant model were the three models that were most prevalent in the SEEA Consortium.

Utility Partnerships

Over the course of the grant period, partnerships with utilities proved effective for increasing market demand. Generally, the programs in the SEEA consortium that were designed to complement utility incentive programs achieved success in the number of retrofits. Typical program design includes customers going through the utility incentive program, and those that receive upgrades that are estimated to achieve 15 percent energy savings will receive an additional rebate through BBNP funds. Atlanta, Decatur, Huntsville, Jacksonville, and Nashville programs each partnered with their local utility to provide customers whose retrofit activities resulted in at least 15 percent energy savings with an additional incentive. It is important that there is agreement between the utility and the program early on regarding the nature of both the partnership and the administrative requirements of the grant. For example, while the Huntsville WISE program enjoyed a high demand for eligible retrofits, the relationship between the program and the local utility eventually wavered due to a lack of commitment to the additional administrative requirements by the utility. On the other hand, the Jacksonville ShopSmart program was administered through the utility itself, Jacksonville Electric Authority (JEA). Similar to the Huntsville program, JEA ShopSmart resulted in a high demand for energy efficiency retrofits that were eligible for additional incentives through BBNP. While solid partnerships with utilities are ideal, energy efficiency programming is fairly new to the Southeast, resulting in minimal interest by utilities to encourage additional retrofit activities.

Another important observation with respect to utility partnerships is that both Nashville and Huntsville enjoyed significant customer uptake through utility partnerships, despite having very low incentive levels - \$200 and \$400, respectively. Initially, it can be assumed that participants would be driven by incentive level but experience has shown that programs that had easy access to existing utility programs, and a streamlined process generated more uptake. On the other hand, the Chapel Hill and Carrboro WISE programs provided incentives of up to \$1500 on top of existing utility incentives, yet struggled to obtain participation until effective marketing tools were in place, as discussed below in the Marketing section.

Contractor-Based Programs

Programs found that the most successful way to market their programs and increase demand was to have qualified contractors with the technical knowledge of both building science and energy efficiency technology necessary to effectively communicate the benefits of energy efficiency to potential customers. In addition to the technical expertise, customers seeking home improvements have the opportunity to learn about measures that can be taken to improve the energy efficiency of their homes. This is valuable in increasing market demand. Contractor sales training can help to enhance the value of contractor-led marketing efforts. SEEA engaged North Carolina Advanced Energy to conduct contractor sales training to several of the consortium partners in an effort to further equip the locally involved contractors. After Nexus Energy Center ceased its relationship with Huntsville Utilities, it transitioned to a contractor-led model, Huntsville WISE Gold. Without the customer-base of the local

utility, the Huntsville WISE Gold program demand was much lower than that of the utility-led Huntsville WISE. As contractors in their network were further trained on how best to “sell” the benefits of energy efficiency, Nexus Energy Center saw an increase in demand. Charlottesville LEAP, also a contractor-led program, benefited from incorporating contractors in their overall program feedback process. The Technical Advisory Committee (TAC), facilitated by LEAP contractors, provided feedback to program administrators that allowed for ongoing program improvement.

Energy Advocate/Consultant

As easy access to utility customers and marketing efforts led by contractors have proven to be effective program designs for several of our consortium partners, acquiring the trust of potential customers is extremely important. Several programs, such as the Sustainability Institute out of Charleston, S.C., employed an Energy Advocate or consultant to guide customers through the retrofit and incentive process. In Charleston, an Energy Advocate was assigned to customers to perform building energy assessments, provide consultation on retrofit activities, overall process guidance, and referral of qualified contractors. In this case, they found that homeowners felt more empowered to choose contractors, as well as choose eligible upgrades. As customer experience is directly tied to the program design, this helped to instill trust and energy literacy to the customer – the lack of which are barriers to effective market transformation.

Importance of Streamlined Processes

Regardless of the program design, easy access to the incentive for the customer is key. The Atlanta SHINE program, for example, found that while there was greater access to customers by attaching their program onto that of Georgia Power, additional administrative steps required through the SHINE program proved to be confusing, administratively burdensome, and served as a deterrent for customers. As SHINE was administered through the municipality, additional procurement requirements to pay customers and facilitate contractor involvement continued to slow the process. Alternatively, the Chapel Hill WISE and Carrboro WISE programs, also administered through local government, not only outsources the administration to a for-profit entity (Clean Energy Solutions, Inc.), but also engaged an IT tool, Long Jump, to effectively keep track of their customer base and their status throughout the process. Efficiently engaging customers, but also keeping track of their progress through the program and ensuring a streamlined process is important to providing a positive customer experience.

Effective Partnerships

As discussed below in Challenges, one of the key drivers, and also barriers, to success was the nature of partnerships to help carry out the programs. The most effective partnerships were those that, early on, established clear roles and responsibilities, as well as worked together to achieve the goal of energy savings in their local region. The Nashville Energy Works incentive program, for example was in partnership with Nashville Electric Service (NES), TVA Energy Right Program, and Conservation Services Group (CSG), the third-party program administrator. This partnership involved a contract that clearly delineated the roles of each partner, and while this was helpful in streamlining the administrative process, it left little room for flexibility in terms of reaching other goals of the program, such as energy education and workforce development. Later in the program, NEW partnered with The Housing Fund, NES, and Hands on Nashville to promote workforce development and energy efficiency programs in the Nashville and Davidson County region. One of the important steps that was taken early on was to clearly identify the roles and responsibilities of each party, each being transparent about their capacity and

individual organizational goals. This resulted in increased outreach of the loan product, workforce development activities, and a direct install program in a low-income district affected by the 2010 flood.

Another example of an effective partnership is that of Advanced Energy and the Chapel Hill WISE Carrboro WISE program. As both of these programs were contractor-led and run out of the municipality, ensuring both contractor qualifications and the quality of the work performed could be burdensome. Advanced Energy was engaged early on to provide HPwES training and certification, as well as establish a quality assurance program that all properties receiving incentives would undergo. Overall, the most effective partnerships were those that both helped to drive participation in the program, as well as help simplify the administrative burdens of both the customers and contractors.

A Note on Future Programming

A key challenge to the sustainability of the programs is funding for future activities. As programs were not allowed to receive program income while receiving BBNP funding, many of them are resorting to new models that may prove to be sustainable, as discussed below in the Sustainability Plans section. For example, Nexus Energy Center will charge a fee to contractors for leads, as well as fees for administering the Alabama Saves energy efficiency financing program. Continuing energy efficiency programming through the NOLA WISE program, Global Green New Orleans is in the process of working with Entergy New Orleans to be the program administrator of their energy efficiency rebate program. Partnerships with utilities will be critical ongoing program success as these will be the primary incentive programs being offered to consumers.

Driving Demand

Through research, innovation, and trial and error, Southeast Consortium programs refined their marketing tactics, and while specific strategies differed between programs, most redirected their focus toward grassroots engagement and outreach within target markets.

At the outset, many Consortium programs gravitated toward more traditional marketing channels, including signage, print campaigns, and even radio and TV spots. However, it quickly became evident that these efforts were not driving retrofit demand in a cost-effective manner. As a result, Consortium members began taking much more direct, personal and grassroots approaches to reaching their intended audiences, including retrofit customers and contractors. Each Consortium member approached grassroots engagement differently and achieved varying degrees of success. In Chapel Hill word of mouth or program promotion between friends and neighbors was the most effective mode of driving homeowners to the program. Over 30% of their program participants came to the program based on the recommendation of a friend or neighbor.

Consortium members deployed a range of marketing tactics, including rallying neighborhood organizations like homeowners associations, churches and schools; garnering earned media from local events or pitches; co-branding with contractors and other partners; and hosting or coordinating local outreach events. A few cities initially invested their grant allocations to retain professional marketing and public relations firms. Atlanta and New Orleans both took this approach, and based upon both the size of budget expenditures and consultant outcomes, SEEA urged both cities to end the contract and adopt the grassroots tactics that had proven to be successful elsewhere. In the case of New Orleans the change in approach to focusing their efforts to build upon their strengths in community education and outreach paid big

dividends in driving demand toward the end of their program and was recognized by the New Orleans City Council and Entergy New Orleans as a strength of the NOLA Wise Program. This was also one of the factors that ultimately led to the merger between the NOLA Wise program and Entergy's Energy Smart program managed by CleaResult.

Contractor engagement also proved a natural and crucial component for driving demand of Consortium programs. In many cases, contractors served as the primary point of customer contact, and for all Consortium members except Charlotte and Nashville, they were also the primary marketing channel. They also proved an extremely inexpensive form of marketing from a programmatic perspective, costing only the time and resources needed to train them.

LEAP worked very closely with their contractors to help drive demand, within their main service areas of Charlottesville and Albemarle County, they were able to achieve better than 2% market penetration in the residential sector (57,000 owner occupied homes).

Nexus was able to leverage a Department of Labor grant along with their BBNP and SEP funding to provide a significant amount of training and continuing education for their contractors and market actors. This included "Sales Training for EE Contractors." They also provided training to Realtors and Appraisers across the State of Alabama. Through the education and training Nexus Energy Center was able to raise the quality level of their preferred contractors, who in turn were responsible for approximately 25% of all jobs in their AlabamaWise program.

Survey results conducted by the Cadmus Group, Inc. on behalf of SEEA showed that Consortium efforts had a significant impact on energy efficiency awareness in each community, in addition to driving audit and retrofit numbers. Nearly 55 percent of program participants reported being very knowledgeable about energy efficiency, and additional 45 percent said they were somewhat knowledgeable. Exactly 90 percent of this group reported that their energy efficiency knowledge increased directly because of Consortium programs.

For utilities and other entities with a stake in generating increased consumer interest in energy efficiency, the lessons learned through the Consortium's efforts are particularly telling. Big-ticket items like branded ad campaigns, billboards and bus wraps, which are frequently used to advertise utility efficiency programs, proved largely ineffective. Instead, the key determinant of marketing success for Consortium programs was the support of a local – even-neighborhood-specific-champion with a strong foothold in the local community and a robust network. In many cases, this was a trusted local nonprofit, an influential community leader or even a local contractor.

Additional background information on driving demand can be found in [SEEA's Energy Pro³ Report](#). Supporting information is also available in the in the attached Cadmus report. (SEEA Phase 1 Process Report Pgs. 30-42 and 82-85).

Workforce Development

One of the drivers of ARRA and the Better Buildings Neighborhood Program was to enhance the economy by paving the way for local job growth. To meet the demand for energy efficiency improvements, it was necessary to have a qualified workforce. Some of the consortium partners made a careful effort to incorporate workforce development and training opportunities to their local labor force. Such training included BPI certification and quality assurance training for existing contractors. As energy efficiency is relatively new in the Southeast, there were instances, such as in Charleston and New Orleans, where there was a lack of contractors that would meet the standards of the program. In those instances, training was necessary to even ensure a qualified local contractor base. As of the end of September 2013, out of the 193 participating contractors in the Southeast Consortium, 158 had been trained and 103 certified.

Listed Below are the jobs hours reported and accompanying jobs created calculation for each quarter:

Jobs Created per Quarter

Year	Quarter	Total Job Hours	Jobs Created
2010	4	5,762	11.08
2011	1	14,303	27.51
2011	2	6,550	12.60
2011	3	33,554	64.53
2011	4	27,166	52.24
2012	1	27,637	53.15
2012	2	26,983	51.89
2012	3	24,275	46.68
2012	4	19,912	38.29
2013	1	38,374	73.80
2013	2	20,712	39.83
2013	3	20,660	39.73

*Calculated using 520 full-time schedule hours per quarter divided by the total number of job hours reported per quarter.

One of the most successful workforce development training programs came out Nexus Energy Center in which they received a grant from Alabama Department of Economic and Community Affairs (ADECA) that resulted in a partnership with the program Still Serving Veterans. Through the grant and partnership, Nexus offered Renewable Energy Institute (REI) training to Drake State Technical College Students. One such student and Veteran, Sheila Stewart, graduated at the top of her class, receiving BPI Certification, and is currently employed with Nexus Energy Center as a business administrator and quality assurance technician.

Charleston WISE also administered a successful workforce development program. To respond to a limited quality contractor base, the Charleston WISE partners with the Sustainability Institute's Energy Conservation Corps (ECC) and Pathways to a Green Economy (P2GE) to train veterans, underemployed, and displaced workers to become BPI certified technicians. One such employee that previously struggled to find work in South Carolina, J.R. Daniels, was able to successfully complete the Energy Conservation Corps program and remain gainfully employed through the Sustainability Institute Charleston WISE program.

With regard to missed opportunities, as the Bureau of Labor and other entities continue to try to define and quantify "green jobs," in the future reporting that is in line with existing labor data standards would help to adequately assess the labor impact of federally administered green programs.

One of the barriers to ongoing workforce development opportunities after the grant period will be limited funding for programs specifically geared towards energy efficiency work force development. Ongoing partnerships with technical colleges to provide a pipeline for the local workforce to meet the demand of utility programs is one method of increasing momentum for workforce development after the grant period. As we have seen in Alabama, as well as other parts of the region, such as Arkansas, partnerships with technical colleges will most likely be the most effective at creating sustainable career pipelines.

Financing and incentives

With DOE's encouragement, SEEA and its sub-grantee programs became a regional test lab for various energy efficiency financial instruments. Initially, SEEA utilized \$1,285,000 of BBNP grant funds to help setup six energy efficiency finance programs with an expected leverage of \$7 million in retrofit loan activity. Across the Consortium, both the structure and the success of local financing programs varied tremendously. In total, the program participants took out 190 loans, constituting 4.77 percent of completed projects. Despite this low penetration rate, the majority of the loans came from a handful of programs, which in turn financed a much higher percentage of retrofits. Given the three-year program timeline, the number and variety of mechanisms that Consortium partners were able to test was limited, but even within these constraints, each financing program yielded distinct lessons on best practices and overall effectiveness.

Specific examples of lessons learned and best practices can be found in the information below and in [SEEA's Energy Pro³ Report](#). Additional information on the financing mechanisms is available in the attached Cadmus reports. (SEEA Phase 1 Process Report Pgs. 21-28 and 80-81; SEEA Phase 2 Process Report Pgs. 8-9 and 14-15).

The initial emphasis in Carrboro's Wise program was on establishment of a commercial loan fund program, The Carrboro Wise EERLF (Energy Efficiency Revolving Loan Fund), in recognition of Carrboro's established and successful business revolving loan fund and Town priorities to support businesses. This structure and focus also was chosen to create a sustainable financing mechanism. Clean Energy Solutions Inc. (CESI) and Town staff worked to create the program design and reach out to small businesses, with a goal of completing four loans during the grant period. The program was able to complete five loans with a total value of over \$100k.

The Carrboro Wise EERLF is operated out of the Town of Carrboro's Economic and Community Development office. As the loans are repaid the program will be able to continue to provide financing to additional projects. Currently there are various recommendations that the Town is considering to ensure the sustainability of the loan fund. To continue to support the EERLF, the Town is considering in future budgets a small budget for contract support for administering the EERLF. Carrboro Wise found that the administration of this program during the grant was time intensive and specialized. While some of the requirements in terms of reporting and oversight have been reduced as the grant ends, there is still significant need for administrative assistance. Additionally, the Town will explore options for providing outreach and technical assistance to business owners. Each project was and will be different and the property owners and the contractors need guidance to move through the process. Carrboro Wise has concluded that the small commercial sector can be a difficult market segment to reach and without dedicated outreach, it will be more difficult to fully utilize the EERLF.

In the fall of 2012 the Carrboro Wise program began offering the PowerSaver loan through SunWest bank based in California. The loan program was set up through SEEA. Additional SEEA funds were utilized to buy down the PowerSaver interest rate to around 4% based on the rate at the time of application. The loan was promoted through the contractors that were pre-qualified through a SunWest partner. Regardless of the SunWest prequalification, only Wise prequalified contractors could offer the loan with the reduced interest rate.

Carrboro Wise experienced little if any interest in the PowerSaver loan and did not make any residential loans. The program noted a couple of challenges in promoting the loan to Carrboro property owners. Including, the fact that SunWest is a west coast bank (California) that Carrboro homeowners had never heard of before and instead of a personal connection the application was completed on-line, over the phone. In addition, the contractors had already gone through a rigorous process to become Wise contractors and were reluctant to go through the prequalification process again for

PowerSaver without fully understanding the benefits. Finally, throughout the program, very few homeowners were interested in financing their projects, choosing to pay for them outright or put them on a credit card.

LEAP experimented with several different rebate structures over the life of the BBNP grant. Cash rebates at different times ranged from 20% of job up to \$500 all the way up to a maximum of \$2,000. While all their clients and contractors appreciated these rebates, it is unclear how many customers actually made decision based on them. With regard to financing, LEAP has offered a PowerSaver loan through the UVA Community Credit Union since September of 2011. LEAP used BBNP funding to buy down interest rates for homeowners. In general, the cash rebates were far more popular than the rebate buy downs – even when 0% interest rate was an option.

The Chapel Hill Wise Program tested 4 different incentive levels throughout the course of the program: Phase I, Phase II, Promotion, and Phase III. All incentive amounts were based on percentages of measure cost, which provided the highest level of incentive for the most cost effective measures.

The program started with a rich incentive that was very effective at moving homeowners forward. The incentive level was then reduced and the assessment cost increased. As expected the demand dropped. However, in terms of the assessment cost, the contractors were more comfortable with the program because the assessment became less of a loss-leader for them. Late in 2012 a promotional offer was released by the program with an increased incentive amount for up to 100 homes. At that time, realizing that the assessment cost might be a barrier to entry, the assessment incentive was increased to cover the entire cost of the assessment if a property owner moved forward with an eligible project. In Phase III the incentive amount for improvements was decreased but the assessment incentive structure was kept to fully fund assessments of the projects that moved forward.

After testing several different incentive structures, Chapel Hill Wise based on the data and anecdotal evidence, has determined that an incentive around \$2,000 for both the assessment and the improvements is rich enough to motivate homeowners to move forward with the retrofit work.

Data and Evaluation

Data collection and reporting is a key component in understanding program performance and impacts. As the grantee SEEA is required to report monthly, quarterly, semi-annually, and annually on program performance, financial expenditures, and compliance with ARRA, Davis Bacon and historic preservation requirements.

SEEA required its sub-grantee programs to complete two monthly reports, one qualitative narrative report and one quantitative spreadsheet report (identical to the DOE Program Report). Sub-grantees were also required to submit information used to complete Davis Bacon, historic preservation and ARRA related reports. Having a calendar with clearly marked dates and deadlines as well as frequent communication proved helpful in keeping everyone involved aligned on reporting requirements. Having access to DOE's BBNP Google Site was also helpful to reference guidance documents, templates, and other materials when needed.

In order to complete the monthly quantitative report sub-grantee programs had to report on estimated energy savings based on an audit and on the actual measures installed for the retrofit. The Southeast Consortium programs utilized many different methods of estimating energy savings the most commonly used methods included: deemed savings tables, Beacon Home Energy Advisor, CSG Real Home Analyzer, Home Energy Score, HESPro, REM/Rate, and SIMPLE. Program audits ranged from simple clipboard audits to more detailed walkthroughs with extensive modeling in order to determine

potential measures. Generally programs found it was best to be consistent and use the same tool or methodology for estimating savings before and after the retrofit.

One challenge in utilizing these tools and systems for estimating energy savings was that several were not designed to suite the climate or housing stock in the Southeast. The Southeast Consortium cities lie in EPA climate zones 2, 3 and 4 which are generally characterized by mixed to hot, humid climates. The NOLA WISE program in New Orleans in particular noted that their modeling tools were under-estimating savings because they were not calibrated for the hot, humid climate and older building stock.

One requirement under the BBNP programs was to collect utility bill data in order to verify report energy savings. All programs required participants to sign a waiver indicating they agreed to provide access to their utility bill data. A small number of programs worked directly with the building owner to obtain utility bill data. This process worked well to collect the 12-months of pre-retrofit utility bill data, but proved to be a challenging method to collect the 12-month post-retrofit data. In most cases homeowners were less inclined to provide information up to 1 year after a retrofit was completed. The majority of the programs worked directly with their local gas and electric utilities to collect the necessary data in electronic file formats. The programs that were most successful in obtaining information directly from the utility consulted with the utilities to determine what information they need to include in the client waiver and had a written memorandum of understanding. Some programs did not have written agreements, but a strong relationship with the utility proved valuable in obtaining utility bill information. Also programs found it best practice to only make data request to utilities on a quarterly basis as many utilities don't have a dedicated department for data exporting.

In June 2012 SEEA contracted with the Cadmus Group to perform an extensive process and impact evaluation of SEEA and its sub-grantee programs. Throughout the summer and fall of 2012 Cadmus gathered information on the Southeast Consortium Programs and conducted interviews with program staff, participating contractors, vendors, and program participants. Cadmus reported initial findings of the process evaluation conducted in 2012 in a detailed Interim Report in April 2013 which examined the design, delivery, and market effects of each program. In July 2013 Cadmus delivered a Phase Two process evaluation report which focused on community partnerships, financing programs, and sustainability plans. The impact evaluation portion of the report which details program savings, realization rates, and measure information was delivered in December 2013. In November 2013 SEEA asked Cadmus to perform a regional model to identify the number of jobs created and economic impact of DOE's investment into the Southeast Consortium programs. This economic impact model will be delivered in the January 2014.

Accomplishments

Listed below are the original statement of project objectives and a detailed description of target and actual objectives and activities.

Task 1: Initial Start-up funding to the partner communities

- Target: Providing start-up funding to the partner communities to enable them to launch programs in their local jurisdictions.
- Approach: The first-year allocations are adapted from the original submissions in December and SEEA determined appropriate amounts based on the cities' budgets, impacts, and matches, with a focus on first year needs. SEEA used three criteria to determine allocations across the 12 city partners:
 1. Capacity to achieve their originally stated goals, given their present organizational structure, staffing, track record, target market size and resource matches from EECBG funds, local utilities, foundations, private capital and other sources;
 2. For smaller communities, a threshold level of support required to enable their successfully launching a building retrofit program; and
 3. A total first year budget comprising no more than 25% of the award total.
- Year one allocations will be distributed in two allotments, with the second contingent (50%) given after 6 months, upon reaching specific milestones. The milestones will be defined in the accepted proposal, during the first six months of program start-up.
- Actual: Almost all of the cities received their initial funding allocation within the first six months of the award being granted. Several programs did not receive their initial allocations until six to twelve months after the award was granted due to delays in contract negotiations.

Task 2: Second and Third-year Funding: Performance-based Sub-granting

- Target: Establishing a performance-based funding mechanism, so that cities achieving success will receive ongoing funding to support and expand their projects. This mechanism will encourage successful program structures at the partner city level.
- Approach: Second-year allocations will be made according to progress in meeting first-year milestones and funds will be reallocated following issuance of late fall 2010 solicitation to the cities. Third-year allocations will follow the same process. Second and third year funds will be allocated to communities based on completed project agreements with customers, with a minimal cost-share or leveraging requirement of 50%. To do so, SEEA will establish a central bank account, consistent with DOE guidelines, that disburses incentives and program support funds. The SEEA allocations can be split between customer incentives and program support in any manner the community decides, although SEEA will ensure that the overall portfolio of funds use is consistent with DOE requirements. SEEA will plan to disburse 50% of the funds allocated through this performance-based mechanism once a customer Letter of Intent (LOI) is signed. The remaining 50% will be disbursed upon the signing of a customer agreement or contract to move forward.
- Actual: At the request of DOE, SEEA did not allocate second year funding based on performance. Many programs required additional time and resources to become established before their funding levels could be evaluated based on performance. In the third year of the award SEEA used a method of assessing program performance

based on several key areas including retrofit production, partnerships, workforce development, and program sustainability, among others. The programs that had the highest impact in these areas were awarded additional funding. SEEA also assessed if programs were underperforming and whether to keep funding at current levels or to claw back funds.

Task 3: SEEA Program Administration and Support

- Target: Conducting ongoing program administration and support, to enable participating cities to benefit from a network of regional partners and SEEA's centralized capabilities.
- Approach: SEEA will conduct centralized program administration with a group of internal staff assigned to monitor and manage sub-awardees and their respective technical consultants. The program will be structured on a pay-for-performance basis, with SEEA's organizational structure set up to ensure solid program design and innovative implementation across the region. Each community will be able to prescribe its own services delivery system, and SEEA's "program manager" will provide expert assistance along each step of the programs' life cycle. Additionally, SEEA will require communities to work closely with their state energy offices, utilities, governor's office, and state legislatures.
- Actual: SEEA discovered that one program manager would not be enough to successfully meet the requirements of serving the partner cities as well as managing vendors, reporting and processing payments. Early in the project SEEA was not adequately staffed to handle the amount of work that went into the daily administration of the partner programs. In 2011 SEEA experienced a period of staff turnover. In the interim SEEA's partner Clean Energy Solutions provided additional support in program administration until additional staff were hired in early 2012. When fully staffed SEEA required the following staff members to successfully meet the needs of the partner programs: two Program Managers, Data Analyst, Director of Programs and Services, Communications Associate, and Finance Associate. SEEA also leveraged the support of the Director of Finance, President, Vice President, and Development Manager.

In order to influence the sharing of ideas and best practices among the partner programs SEEA developed a website that housed key resources and documents and allowed users to participate in discussions via an online discussion board. For three years SEEA also hosted a SEEA Summit which brought the sub-grantee partners together in-person to learn and share experiences. SEEA staff also made regular site visits to partner cities to assess performance, view accomplishments and provide one-on-one support.

Task 4: Regional Loan Loss Reserve Seed Fund

- Target: Facilitating communities' access to financing programs, through funds allocated to a Loan Loss Reserve (LLR) for a Financing Program available to all of the sub-granted communities.
- Approach: SEEA will select a lending team to establish a program throughout the Southeast to provide, process, market, and service a loan loss reserve backed loan program. The LLR will not set allocations by community, but be wedded to a single program serving all of the partner communities. SEEA's finance team will work closely with DOE's technical assistance specialists for financing support and guidance in the establishment of this centralized program. In addition, a significant private capital leverage component will be vital to the success of this region-wide lending pool.

- Actual: SEEA initially decided to create a regional LLR for all sub-grantee partners to utilize. Unfortunately due to a lack of interest from various lending institutions SEEA determined it would be best to take a more localized approach to establishing financing mechanisms. Ultimately SEEA was able to establish nine different financing mechanisms that ranged from loan loss reserves, interest rate buy-downs, and direct loans.

Task 5: Technical Consultant support in the areas of Program Design and Finance

- Target: Providing ongoing technical assistance support through a cross-disciplinary team of energy program specialists acting as a Technical Assistance resource for all the partner cities.
- Approach: SEEA will bring together specialists in the areas of program design, finance, and marketing to support partner communities. Program administrators and city officials from partner cities will have “on call” access to technical specialists and funds not spent on consulting assistance by the cities will revert back to the total allocation of second and third round funding for the city programs.
- Actual: SEEA engaged Clean Energy Solutions, Inc. (CESI) as its program design and technical consultant. CESI has played an integral part from the very beginning of the award in helping SEEA and its sub-grantee programs develop, evaluate and improve program design and implementation.

Task 6: Communications and Marketing Program for Partner Communities

- Target: Providing a full-scale marketing and communication protocol to be used at the local city level for all the communities.
- Approach: The communications and marketing effort will include the creation of messaging, communications protocols, and drafts of collateral materials to assist in recognition programs. SEEA will work with a nationally prominent advertising firm, to design branding, messaging, and collateral materials with common themes for the partner communities, and a strong recognition program will be developed for all classes of participants. Multimedia approaches—including door-to door canvasses—will be employed in all partner cities. Bill stuffers, billboards, telemarketing, direct mail, and community group approaches will also be part of the strategy. SEEA will facilitate a joint marketing campaign with the local utility and the city sponsor, thereby linking this program to an existing utility program or billing system, or with an independent NPO agency. An emphasis on cooperating closely with the local utility will be a hallmark of this approach, and will ensure that messages are consistent and delivered jointly where possible.
- Actual: SEEA worked with an advertising firm to develop the WISE brand (Worthwhile Investments Save Energy) to be used by the entire Southeast Consortium. Sub-grantee programs were provided with logos and collateral for marketing purposes. Many programs chose to utilize the WISE brand, but several programs chose their own. SEEA also provided training on grass roots marketing campaigns which proved to be the most successful and appropriately scaled method of marketing programs. SEEA’s Communications Associate also worked closely with each sub-grantee program to develop strong and effective marketing plans tailored specifically to their program and geographic location.

Task 7: Workforce Development

- Target: Ensuring that partner cities have access to a pool of qualified contractors and a well-trained retrofit workforce.
- Approach: SEEA will assemble a team of workforce development specialists to assess training needs within the twelve partner communities and to partner with local contractor associations and other organizations to develop training and certification programs for energy retrofit professionals. The team will then coordinate with partner communities to forecast labor needs—based on the local building stock, the community funding allocations, and projected retrofit uptake. Throughout the period of the program, SEEA and the workforce training team will rely on local community colleges and workforce development agencies to deliver the training.
- Actual: SEEA contracted North Carolina Advanced Energy to serve as workforce development specialists and help the sub-grantee programs communities create and retain jobs by leveraging local training centers and placing qualified technicians with the right contractors. Advanced Energy provided trainings on building auditing, air sealing, HVAC and controls technologies. They also performed spot checks and Quality Assurance and Quality Control inspections on sub-grantee projects.

Task 8: Monitoring, Verification, & Evaluation

- Target: Providing monitoring, verification and evaluation of project achievements, energy savings, and use of grant funds.
- Approach: Project staff will track outcomes, outputs and expenditures and insure the project is attaining goals and objectives within the projected timeline, making adjustments with DOE approval, as necessary. SEEA will work with its subcontractor to create a uniform and robust approach to evaluation, measurement, and verification for all of the partner communities. This will create uniformity and economies of scale in M&V, which can be replicated and leveraged across the region. This approach to M&V will be developed in collaboration with DOE, in order to be as consistent as possible with DOE protocols.
- Actual: SEEA required its sub-grantee programs to report on a monthly basis to ensure accurate and timely collection of project data. SEEA reviewed the data for completeness and worked with programs to improve their data collection methods. In 2012 SEEA contracted the Cadmus Group to perform an in depth process and impact evaluation of the Southeast Consortium Programs. The Cadmus Group delivered the final process and impact evaluation in late 2013 which includes analysis on reported savings, comparison of program design and recommendations for future programs.

Challenges

Start-up delays and staff capacity

In the beginning of the grant period the programs and program administrators experienced delays in setting up the contracts and services necessary to begin accepting clients. The delays were caused by a number of issues including staff capacity, sourcing the appropriate vendors, and the involvement of many different organizations that required additional time and communication.

The Carrboro Wise program was operated through the Carrboro municipal government. The Carrboro Environmental Planner was the 'program director' and primary liaison for the town while the program administration was contracted out to Clean Energy Solutions, Inc. Having a dedicated point person with the town to work with the different departments including the manager's office and elected officials was imperative for program success. From reporting to financial and grant management and operations, without a dedicated individual to oversee all of the various tasks, timely progress and continuous process improvements by the program would have been much more challenging.

For Nashville Energy Works (NEW) capacity and change in leadership were two challenges that the program was able to work through successfully but not as efficient as it could have been. Due to the original BBNP grant termination of June 1, 2013, the Mayor's office was already implementing plans for the Energy Efficiency Program Director to end his tenure with the office to align with the grant's end. While this was already taking place, the program learned that the BBNP grant had been extended until September 30, 2013. Because of the grant's termination date change, the new City budget did not allocate funding to continue the EE Program Director position so the grant administration was given to a member of the Mayor's Office staff who was already at capacity with her current responsibilities. Therefore, the last four months of NEW's transition to Hands On Nashville could have been more efficient, and possibly more effective, if the full time EE Program Director remained funded and in place until the end of the grant.

The Charleston Wise program constantly evolved throughout the course of the BBNP grant period. Most of this can be attributed to the fact that the program has had 3 different Program Managers. The differing ideas and opinions of each Program Manager led to some confusion on how the actual program was set up. There were times when a loose process was identified which led the program not being consistent with each customer.

Originally when the Chapel Hill Wise program started an energy efficiency coordinator position was shared between the Chapel Hill and Carrboro programs and was hired for 24 hours a week. It was quickly realized that the time was not sufficient to manage and grow the pilot programs. The amount of administrative time originally allocated to the Chapel Hill Wise program was underestimated.

During the second phase and with the receipt of additional funds, program management and administration was increased. A full time Energy Efficiency Coordinator was hired to manage the contractors, provide guidance to program participants, complete monthly reporting requirements and assist with marketing. The Energy Efficiency Coordinator continued to work with both Chapel Hill and Carrboro Wise programs. A Wise Program Manager was retained to oversee the project, work with vendors, secure financing, assist with future program planning and work towards the sustainability of the program. The Wise Program Manager worked halftime on both programs.

Over the course of the program and despite the added resources Chapel Hill Wise learned that regardless of the size of the program, a few key personnel are required: A program manager to give general oversight of the program; A marketing and outreach manager dedicated to messaging, creating collateral and providing innovative community social based marketing to the targeted population; An energy efficiency coordinator who is solely focused on homeowner assistance,

contractor management and data reporting and collection; A Quality Assurance (QA) and contractor mentor/trainer that is expert in building science that provides third party verification that the retrofit work has been completed to local and program standards. Additionally, this person could provide training and mentoring for program contractors.

Contractors

Working with contractors proved to be a challenging task for many programs. Programs had to structure their requirements on contractors to meet the requirements of the grant which often caused conflicts and slowed program progress. Programs received a great deal of opposition from contractors who were reluctant to modify their business model and commit to the amount of paperwork and data collection required for compliance.

The Atlanta SHINE Program experienced a backlog of homeowner rebates that could not be processed without the proper paperwork from the participating contractor. The SHINE Program was able to overcome this challenge through increased enforcement of paperwork submission requirements, but this required extra staff time and slowed down the program progress. In Carrboro and Chapel Hill program staff discovered that even though contractors may have met the required program criteria and had the same credentials, the quality of their work and their understanding of building science varied substantially. To address these issues Chapel Hill implemented a debarment policy and worked closely with Advanced Energy to develop a contractor mentoring and probationary policy/corrective action plan to help contractors improve the quality and consistency of their work.

CharlestonWISE also struggled with finding home performance contractors that were invested in whole home energy performance regardless of incentives. They found that some contractors only participated in the program for the rebates and focused on their particular area of expertise instead of focusing on the whole house. CharlestonWISE gradually decreased their incentive levels down to zero and as they did several contractors dropped out of the program. They found that the contractors who continued working with the program were genuinely committed. They were able to pair insulation/air sealing contractors with HVAC contractors and vice-versa. This created solid relationships and expanded the home performance industry in Charleston.

LEAP also found that monthly required contractor meetings helped to facilitate communication and foster relationships between the program and contractors. These meetings allowed for trust to be built between program and contractor and provided an opportunity to discuss any outstanding issues.

Client and Program Management

Several programs experienced challenges in determining necessary staffing and systems for effective client and program management. About half of the Southeast Consortium sub-grantee programs were managed by one full time equivalent employee (FTE). Programs that had more than one FTE, or where able to leverage help from other organizations or volunteers, found the work load administering the program to be more manageable. Since many of these programs were created specifically for the Better Buildings Neighborhood Program it was difficult to anticipate the amount of time and breadth of knowledge needed to run the programs. In many cases sub-grantee program managers had to balance a variety of tasks including contractor management, rebate processing, marketing and outreach, and client and partnership relationships, to name a few.

Technology can play a key role in automating processes and assist in overall project management. For both SEEA and the sub-grantee programs finding the appropriate technology to track and analyze client and project data proved difficult to implement. In 2011 SEEA contracted with a company to build a regional Information Technology (IT) solution that would serve SEEA and all of the sub-grantee programs. The process of designing and building the tool took much longer than expected and when the tool was deployed it did not function properly for every program. SEEA terminated the contract for the regional IT tool and instead allowed programs to develop their own IT solution. Some programs continued to use a combination of Microsoft Excel and paper files to manage information. Many programs, including SEEA, implemented database systems build on various platforms including Salesforce, Longjump and Microsoft Access. A small number of programs implemented robust solutions designed specifically for energy efficiency programs and added customizations tailored to their needs.

Marketing, Market Knowledge and Demand

Key barriers to driving demand for energy efficiency in the Southeast during the BBNP grant period were effective marketing and promoting energy literacy in the region. As previously indicated, energy efficiency is relatively new to Southeastern residents, utilities, and other stakeholders. Several challenges were present in driving demand in the market, including contractor engagement and effective messaging, which resulted in testing a number of marketing techniques over the grant period.

Effective Messaging & Energy Literacy

As the administration of the grant alone required significant staff time for the sub-grantees, the capacity for marketing and outreach efforts was often lacking. Understanding the responsiveness of potential customers requires market research specific to the locality that the grant period did not afford. Programs such as Huntsville WISE and Atlanta SHINE participated in promoting their programs through events such as festivals, healthy eating events at grocery stores, and even radio and television segments. While these events may have increased visibility of the programs, they were not as effective at increasing demand for the incentives. Huntsville WISE program management found that the greatest challenge to their marketing was in fact understanding the local market. Through testing various marketing techniques, they found that the best messaging focused on the comfort, health and safety aspects of energy efficiency, as opposed to solely the energy and cost savings. In another example, Chapel Hill WISE ran a promotion, 100 Retrofits in 100 Days, in which the incentive was increased by \$500 during the promotional period. Program administrators saw that in this period, there was increased demand for retrofits.

Contractor Engagement

Contractor engagement tends to be one of the most effective marketing channels for generating uptake in retrofit programs. One of the challenges to contractor engagement was lack of knowledge of how to actually sell the benefits of energy efficiency to the customer base. Contractor sales training was a tool that many of the programs took advantage of to minimize this barrier. SEEA enlisted the services of Advanced Energy to provide such training. Contractors from programs such as Charleston WISE, Atlanta SHINE, and Huntsville WISE participated in these training events and found them to be incredibly useful in contractor-promotion the programs. Another example of contractor engagement to promote programs is LEAP who provided ongoing contractor sales and marketing training. While there were issues with encouraging wide participation in the trainings, such as in Huntsville, the contractors that participated proved to be the most dedicated and effective contractors in their networks.

Partnerships and Collaborations

Partnerships and collaborations have been integral to the success, and some challenges, of the Better Buildings Neighborhood Program. They have either presented additional program challenges or served as a solution to limits in capacity. For example, Nexus Energy Center initially partnered with Huntsville Utilities to administer the Huntsville WISE program, as well as tie in their local contractor base. As guidance and administrative burdens changed early in the program, Huntsville Utilities was not motivated to continue with the partnership. One of the lessons learned was that, early on, it is necessary to have clear goals, and roles and responsibilities defined for each party.

On the other hand, where the Nashville Energy Works (NEW) program enjoyed a positive and streamlined relationship with its utility, Nashville Electric Service (NES), the staffing capacity of the Mayor's Office of Sustainability limited the ability to do additional promotion of the program and the local energy efficiency financing product through The Housing Fund CDFI. NEW partnered with Hands on Nashville to do marketing for the financing of the program and direct installations in low income neighborhoods in Nashville that were impacted by the 2010 flood. Though the BBNP segment of NEW has ended, the City of Nashville has decided to continue working with Hands on Nashville as new sustainability opportunities arise. Similarly, the Chapel Hill WISE and Carrboro WISE programs each partnered with Clean Energy Durham to promote the WISE program and increase energy conservation literacy by using Clean Energy Durham's Pete Street Program. Through a series of workshops and volunteer events, several neighborhoods in the region were taught about the benefits of energy efficiency and low-cost measures that can be taken to save energy and money. One of the constraints of the program was that the partnership was relatively short due to the impending closing of the program. A significant lesson learned through many of the program collaborations is that clear and efficient partnerships are most maximized when entered into early on in the program.

Program Goals and Requirements

The original retrofit target that SEEA established based on feedback from the members of the newly formed Southeast Consortium was 10,000. This number proved to be drastically unrealistic based on the fact that all but one of the local programs was new or still in the early stages of development when they needed to ramp up program operations. Each of the consortium members faced unique challenges establishing the basic program infrastructure such as developing methods for processing applications, generating checks, and handling IT, accounting, and reporting before any of them could effectively offer program services. SEEA with the help of outside consultation spent a considerable amount of time re-evaluating the retrofit target for the consortium and established a more realistic target of 3,600. If similar programs are developed in the future the goals and timeline should align with the starting conditions and work that needs to be accomplished in order to achieve the goals.

Another critical factor that contributed to slowing the momentum of the consortium was that the Department of Energy was still in the process of finalizing program requirements for BBNP when the programs were launching and continued to update program requirements throughout the course of the grant period. For example, the inability to collect fees, as outlined in the DOE guidance, was an obstacle to establishing a sustainable program model, hindering the creativity and longevity of all of the programs. Also, the portfolio approach that came down from DOE initially caused confusion and took some additional time and resources from SEEA to fully implement the option with consortium members.

Data and Evaluation

Data collection and reporting were key components to tracking and assessing program performance towards target goals, but they also proved to be very challenging and time consuming for the programs and their partners. Several issues that programs encountered included: contractor objection to collecting and regularly reporting data, lack of sophisticated systems to track, analyze, and transfer project data, and the large amount of time and resources needed to collect, process, and format data to be used for analysis.

Program also encountered difficulty in obtaining access to utility bill data. Some programs were able to establish relationships with their utilities and obtain the information needed for program evaluation. Other programs discovered that some utilities did not have adequate staff or resources to pull the data they needed or they required a large fee in order to release the information. Some utilities did not even have adequate information technology infrastructure to query their database and export electronic files and instead were only able to print out paper copies of utility bills.

Programs also experienced challenges in collecting the information needed for third party evaluation, measure, and verification activities. Both SEEA and DOE contracted third parties to evaluate program activities. These various evaluations, while operating separately, at times overlapped and caused a huge burden to be placed upon the programs to provide information. While the programs were aware that the evaluations would be taking place it was discovered that the data that the various evaluation teams needed as inputs did not necessarily correlate with the data that programs were collecting from homeowners and contractors. SEEA and Cadmus worked to coordinate efforts where possible, but the programs expressed their frustration at having to dedicate a large amount of resources towards collecting data for the evaluations that could have been used towards running their programs. One solution for future evaluations would be to identify data inputs at the beginning of the program and ensure programs have the means to collect and report that information.

Program Sustainability Plans

Sustainable Home Initiative in the New Economy (SHINE) - Atlanta, GA

Currently, the City of Atlanta does not plan to continue a rebate incentive program similar to the SHINE Program. However, the City of Atlanta, in conjunction with local and state entities, has pursued, and will be launching a Property Accessed Clean Energy (PACE) program for certain properties located in the city proper. The SHINE Program was instrumental in assisting to define terms, expectations, and elements for the PACE program. The City of Atlanta will continue to explore new revenue sources, such as grants, collaborations with local utilities and affinity groups, and foundations in hopes of establishing a financial incentive programs for properties that may not be eligible for the PACE program.

Also, the City of Atlanta is continuously considering new and/or improved policies and programs related to increasing energy efficiency in every sector of the City. For those efforts, certain elements of the SHINE Program, such as the network of qualified assessors and contractors, the inventory of properties that have invested in energy-efficiency measures, and the information on utility disclosure procedures and on gathered usage data, will be critical in policy/program development and in related community outreach and education efforts. SEEA is located in Atlanta and interacts with the city of Atlanta on a regular basis. SEEA will likely continue to engage the city on their PACE program and benchmarking initiatives in the future.

Current Contact:

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jgarcia-sanchez@atlantaga.gov

Carrboro WISE - Carrboro, NC and Chapel Hill WISE - Chapel Hill, NC

Though both Chapel Hill WISE and Carrboro WISE have ceased their incentive programs, Carrboro will continue with its Commercial Revolving Loan Fund. During the course of the grant period, Chapel Hill, with the consultation of Clean Energy Solutions, Inc. explored the feasibility of a North Carolina Regional Energy Alliance (NC REA) that would include the Town of Carrboro. While there is significant interest in the state, the lack of funding commitments is an impediment to solidifying plans of such an alliance. The Duke Energy Direct Install and Pay for Performance Program, however is seen as a model that could be complementary to the NC REA. There is an existing contractor base tied to an established IT platform, existing marketing tied to local government and civic associations, and existing credibility throughout the region that make the model ideal for the goals of the NC REA. There are continued discussions with Duke, local governments, and business/civic association, but there are not yet concrete plans to move forward. SEEA continues to be engaged in North Carolina and in 2014 will participate in a working group that will establish North Carolina's technical resource manual for energy efficiency programs.

Current Contact:

Carrboro WISE

Randy Dodd
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Chapel Hill WISE

John Richardson
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CharlestonWise - Charleston, SC

CharlestonWise will retain its name and will serve both the residential and commercial markets. For the residential market the program will manage, provide direct services, and capture referral fee for a targeted 52 retrofits. The program is currently planning their goals for the commercial market. They will use the residential business model and will include direct service agreements with commercial contractors. CharlestonWise will offer energy auditing, manual J modeling, Beacon reporting, filing for utility rebates, and project management (i.e. general contracting of building performance trades). The program has recently secured a commitment from the City of Charleston to provide \$35,000 to them for three years with an additional \$30,000 for the first year. They are also working with the cities of North Charleston and Mt. Pleasant to secure matching funding as these are areas that will continue to be served by the CharlestonWise program.

Current Contact:

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Charleston Wise Program Manager
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joe@sustainabilityinstitutesc.org

Commercial Building Energy Efficiency Retrofit Program (CBRetro) - Charlotte, NC

Plans are being discussed to continue the CBRetro program as designed with minor tweaks, such as requiring a third party audit to establish baselines and for defining the most impactful scope, applicants would select a scope appropriate for the funds they have available from the audit recommendations. A maximum per project budget would be established. The program believes that proceeding in this manner would ensure that baseline readings are accurate and that efficiency improvements are selected based on value of impacts as opposed to aesthetic or other motivations. Additionally, a recognition program is being considered to better recognize non-residential properties who elect to complete energy efficiency improvement without local financial incentives.

Current Contact:

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nrstorey@charlottenc.gov

Local Energy Alliance Program (LEAP) - Charlottesville, VA

LEAP has secured their Class A contractor's license and will be participating as a contractor delivering Home Energy Check Ups for Dominion Power customers. This multi-year program applies to most of LEAP's service area and pays a rebate (\$230) directly to them for an in-home evaluation and direct install. LEAP staff are then able to enroll homeowners into their Home Performance with ENERGY STAR (HPwES) program and assign those customers to a contractor who can best assist them. LEAP's participating contractors will not perform the Check Ups themselves, but rather, LEAP will educate and pre-qualify the customer for them, so they believe there is no conflict with the contractors in the marketplace. The referral fees LEAP receives from the contractors become an additional form of revenue to support their operations. Their goal is to leverage their trusted, nonprofit partner status to do whole neighborhoods at a time (four per day for each LEAP Energy Coach), and thus generate significant program income.

LEAP does have a number of grants whose performance periods go into Q1 or Q2 of 2014, which in conjunction with program income will take them through the next year. The City of Charlottesville, the Virginia Department of Mines, Minerals, and Energy, and the State Energy Program have all awarded LEAP grants that will allow them to continue their program services. SEEA will continue to engage with LEAP on issues related to data access and identification of best practices.

Current Contact:

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(434)-825-0232
cynthia@leap-va.org

Decatur WISE - Decatur, GA

The Decatur WISE Program is closed and there are no current plans to reopen the program.

NEXT STEP Program - Hampton Roads, VA

The NEXT STEP Program is closed and there are no current plans to reopen the program.

Huntsville WISE (Alabama WISE) - Huntsville, AL

As the Huntsville WISE program is now focused on the goals of the State Energy Program (SEP) grant, it is now referred to as Alabama WISE. Alabama WISE is now a Home Performance with ENERGY STAR (HPwES) sponsor, which will provide additional credibility in marketing its services. Leaning less on the rebate incentive model, Alabama WISE continues to generate revenue from interest through its involvement in the Alabama WISE loan program. It is also now focused on marketing the benefits of its program – “Affordable Comfort, Quality Contractors.” Through its dedicated and growing quality contractor base, the organization will require annual fees and lead fees from contractors benefitting from the network. SEEA will continue to work closely with the AlabamaWISE program through the Alabama SEP program that has been extended through March 2014. SEEA will focus on helping Nexus Energy Center to identify other sources of capital for the very successful AlabamaWISE Home Energy Financing Program.

Current Contact:

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ruchi@nexusenergycenter.org

ShopSmart with JEA - Jacksonville, FL

The Shop Smart with JEA program ended in August 2012 and there are currently no plans to reinstate it. However, the loan program established with Jax Metro Credit Union remains active and energy efficiency loans are still being made. SEEA continues to work closely with Jax Metro Credit Union in planning and implementation of SEEA's innovative financing program.

Current Contact:

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Nashville Energy Works (NEW) - Nashville, TN

Administered through Hands on Nashville, NEW continues to be the Nashville and Davidson County marketing tool for energy efficiency in the local region. Through the website, <http://nashvilleenergyworks.org>, residents now have a "one-stop-shop" for increasing energy efficiency literacy and finding local resources. The Energy Efficiency Loan program administered through The Housing Fund is also marketed through this website.

Current Contact:

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Chief Service Officer, Mayor's Office of Environment and Sustainability
(615)-862-6030
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NOLA WISE - New Orleans, LA

NOLA Wise has signed a contract with CleaResult for the next 7 months to focus on the NOLA Wise loan product, community outreach, "Ask the Expert" hotline, and performing a pilot for their School Kit program as a precursor to a potential partnership/merger with Entergy New Orleans' Energy Smart Program.

The contract with scopes of work can be found [here](#).

Current Contact:

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U.S. Virgin Islands (USVI) WISE - U.S. Virgin Islands

Though the USVI WISE program ended without plans to continue the commercial incentive program, the Energy Office continues energy programs, particularly through renewable energy tax credits, per their website. One of the lessons learned with the program, is the prior to testing out programs, greater efforts on policy, workforce development and general energy education are ongoing needs that would maximize the success of future programming.

Verification of Data

The Southeast Energy Efficiency Alliance and its project partners have reviewed and verified the summary information of data submitted to the BBNIS to be used for third-party evaluations.

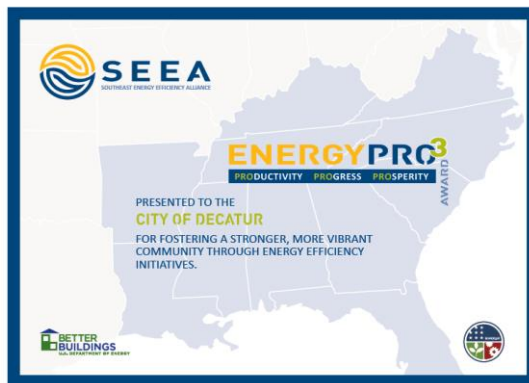
The Cadmus Group completed a third-party process and impact evaluation of Southeast Consortium programs. These reports will be submitted along with this report.

Developed Products

- The Cadmus Group *SEEA Better Buildings Neighborhood Program Process and Impact Evaluation Report*
- LEAP HPXML (home performance XML) field definition and API protocol
- [The SEEA Energy Pro³ Report](#)
- [SEEA Quarterly Snapshot Reports](#)
- SEEA Salesforce Database
- Sustainability Institute [Historic Structures Curriculum](#)
- WISE Brand (Worthwhile Investments Save Energy) Marketing Materials (Includes logos and print campaign)



- Energy Pro³ (Progress, Prosperity, Productivity) Brand Materials (includes awards, pictures, presentations)



Appendix

Listed below are detailed overviews of Southeast Consortium sub-grantee program performance through December 31, 2013.

Sustainable Home Initiative in the New Economy (SHINE) Atlanta, GA

Overview	
Completed Audits	324
Completed Retrofits	324
Retrofit Goal	553
Allocation	\$1,200,000.00
Spent to Date	\$952,686.10



Average Energy and Cost Savings for Installed Measures		
Costs and Savings	Residential Average	Multi-family Average
Retrofit Invoiced Cost	\$7,542.15	\$7,422.50
Annual Electricity Savings (kWh)	4,189.72	3,412.67
Annual % Electricity Savings	24%	26%
Annual Natural Gas Savings (Therms)	482.32	232.00
Annual % Natural Gas Savings	30%	48%
Average Annual Cost Savings (\$)	\$937.48	\$512.89

Carrboro WISE Carrboro, NC

Overview	
Completed Audits	118
Completed Retrofits	116
Retrofit Goal	108
Allocation	\$310,605.00
Spent to Date	\$302,742.00



Average Energy and Cost Savings for Installed Measures			
Costs and Savings	Residential Average	Multi-family Average	Commercial Average
Retrofit Invoiced Cost	\$7,253.40	\$2,675.46	\$28,605.00
Annual Electricity Savings (kWh)	1,877.94	3,268.44	1,648.00
Annual % Electricity Savings	13%	22%	15%
Annual Natural Gas Savings (Therms)	138.13	550.00	164.60
Annual % Natural Gas Savings	30%	89%	76%
Average Annual Cost Savings (\$)	\$324.21	\$322.54	\$320.67

Chapel Hill WISE
Chapel Hill, NC

Overview	
Completed Audits	232
Completed Retrofits	359
Retrofit Goal	428
Allocation	\$ 945,720.00
Spent to Date	\$729,971.74



Average Energy and Cost Savings for Installed Measures		
Costs and Savings	Residential Average	Multi-family Average
Retrofit Invoiced Cost	\$8,883.64	\$60,186.67
Annual Electricity Savings (kWh)	3,354.88	1,420.86
Annual % Electricity Savings	17%	25%
Annual Natural Gas Savings (Therms)	257.56	-
Annual % Natural Gas Savings	27%	-
Average Annual Cost Savings (\$)	\$480.83	\$1,513.43

CharlestonWISE
Charleston, SC

Overview	
Completed Audits	711
Completed Retrofits	127
Retrofit Goal	300
Allocation	\$937,005.00
Spent to Date	\$928,904.53



Average Energy and Cost Savings for Installed Measures	
Costs and Savings	Residential Average
Retrofit Invoiced Cost	\$6,548.79
Annual Electricity Savings (kWh)	4,856.81
Annual % Electricity Savings	24%
Annual Natural Gas Savings (Therms)	163.67
Annual % Natural Gas Savings	27%
Average Annual Cost Savings (\$)	\$618.83

Commercial Building Energy Efficiency Retrofit Program (CBRetro)
Charlotte, NC

Overview	
Completed Audits	11 buildings
Completed Retrofits	1,044
Retrofit Goal	200
Allocation	\$607,005.00
Spent to Date	\$607,005.00



Average Energy and Cost Savings for Installed Measures		
Costs and Savings	Multi-family Average	Commercial Average
Retrofit Invoiced Cost	\$78,952.29	\$ 254,749.23
Annual Electricity Savings (kWh)	96,631.50	60,170.50
Annual % Electricity Savings	7%	29%
Annual Natural Gas Savings (Therms)	1,933.50	193.60
Annual % Natural Gas Savings	7%	13%
Average Annual Cost Savings (\$)	\$9,816.70	\$ 4,888.77

Local Energy Alliance Program (LEAP)
Charlottesville, VA

Overview	
Completed Audits	1,355
Completed Retrofits	1,227
Retrofit Goal	796
Allocation	\$2,700,000.00
Spent to Date	\$2,507,502.00



Average Energy and Cost Savings for Installed Measures		
Costs and Savings	Residential Average	Commercial Average
Retrofit Invoiced Cost	\$8,027.69	\$130,615.17
Annual Electricity Savings (kWh)	3,063.75	9,709.37
Annual % Electricity Savings	17%	17%
Annual Natural Gas Savings (Therms)	543.68	5,611.93
Annual % Natural Gas Savings	30%	59%
Average Annual Cost Savings (\$)	\$489.59	\$3,585.10

Decatur WISE
Decatur, GA

Overview	
Completed Audits	74
Completed Retrofits	54
Retrofit Goal	55
Allocation	\$150,363.35
Spent to Date	\$150,363.35



Average Energy and Cost Savings for Installed Measures	
Costs and Savings	Residential Average
Retrofit Invoiced Cost	\$9,533.84
Annual Electricity Savings (kWh)	4,629.85
Annual % Electricity Savings	24%
Annual Natural Gas Savings (Therms)	379.32
Annual % Natural Gas Savings	29%
Average Annual Cost Savings (\$)	\$866.45

NEXT STEP Program
Hampton Roads, VA

Overview	
Completed Audits	62
Completed Retrofits	62
Retrofit Goal	100
Allocation	\$493,268.73
Spent to Date	\$493,268.73



Average Energy and Cost Savings for Installed Measures	
Costs and Savings	Residential Average
Retrofit Invoiced Cost	\$12,273.98
Annual Electricity Savings (kWh)	2,843.97
Annual % Electricity Savings	22%
Annual Natural Gas Savings (Therms)	347.17
Annual % Natural Gas Savings	45%
Average Annual Cost Savings (\$)	\$1,385.42

Huntsville WISE (Alabama WISE)
Huntsville, AL

Overview	
Completed Audits	970
Completed Retrofits	735
Retrofit Goal	500
Allocation	\$1,007,005.00
Spent to Date	\$999,978.55



Average Energy and Cost Savings for Installed Measures	
Costs and Savings	Residential Average
Retrofit Invoiced Cost	\$6,032.18
Annual Electricity Savings (kWh)	3,230.31
Annual % Electricity Savings	19%
Annual Natural Gas Savings (Therms)	111.05
Annual % Natural Gas Savings	19%
Average Annual Cost Savings (\$)	\$349.51

ShopSmart with JEA
Jacksonville, FL

Overview	
Completed Audits	457
Completed Retrofits	210
Retrofit Goal	380
Allocation	\$1,220,000.00
Spent to Date	\$1,112,932.07



Average Energy and Cost Savings for Installed Measures		
Costs and Savings	Residential Average	Commercial Average
Retrofit Invoiced Cost	\$8,643.44	\$354,500.00
Annual Electricity Savings (kWh)	5,231.40	382,122.00
Annual % Electricity Savings	25%	35%
Annual Natural Gas Savings (Therms)	-	-
Annual % Natural Gas Savings	-	-
Average Annual Cost Savings (\$)	\$699.96	\$49,529.25

Nashville Energy Works (NEW)
Nashville, TN

Overview	
Completed Audits	3,032
Completed Retrofits	510
Retrofit Goal	475
Allocation	\$880,000.00
Spent to Date	\$658,497.54



Average Energy and Cost Savings for Installed Measures	
Costs and Savings	Residential Average
Retrofit Invoiced Cost	\$5,954.03
Annual Electricity Savings (kWh)	3,262.36
Annual % Electricity Savings	20%
Annual Natural Gas Savings (Therms)	65.60
Annual % Natural Gas Savings	8%
Average Annual Cost Savings (\$)	\$448.00

NOLA WISE
New Orleans, LA

Overview	
Completed Audits	885
Completed Retrofits	385
Retrofit Goal	650
Allocation	\$1,637,005
Spent to Date	\$1,549,404.63



Average Energy and Cost Savings for Installed Measures		
Costs and Savings	Residential Average	Multi-family Average
Retrofit Invoiced Cost	\$7,273.50	\$29,445.64
Annual Electricity Savings (kWh)	4,548.91	92,211.11
Annual % Electricity Savings	35%	50%
Annual Natural Gas Savings (Therms)	152.84	-
Annual % Natural Gas Savings	16%	44%
Average Annual Cost Savings (\$)	\$688.97	\$8,188.89

U.S. Virgin Islands (USVI) WISE

U.S. Virgin Islands

Overview	
Completed Audits	3
Completed Retrofits	2
Retrofit Goal	3
Allocation	\$200,000
Spent to Date	\$159,102.53



Average Energy and Cost Savings for Installed Measures	
Costs and Savings	Commercial Average
Retrofit Invoiced Cost	\$51,240.00
Annual Electricity Savings (kWh)	77,922.50
Annual % Electricity Savings	48%
Annual Natural Gas Savings (Therms)	-
Annual % Natural Gas Savings	-
Average Annual Cost Savings (\$)	\$36,624.00