

**A RESOLUTION ACCEPTING THE STAFF REPORT AND SEEA ALLOCATION
AND APPROVING THE MULTIFAMILY RESIDENTIAL PILOT
FOR THE ENERGY EFFICIENCY PROGRAM**

Draft Resolution No. 65/2011-12

WHEREAS, the Town submitted an ARRA grant application that was accepted by the US Department of Energy (USDOE) Retrofit Ramp Up/Better Buildings program through the Southeastern Energy Efficiency Alliance (SEEA) in collaboration with the Town of Chapel Hill and other southeastern jurisdictions to pursue community scale energy efficiency retrofits; and

WHEREAS, the Town has previously accepted grant awards of \$75,000 and \$50,000 and negotiated an agreement with the SEEA, and developed a Memorandum of Agreement with Chapel Hill to share administrative costs and make all necessary arrangements to implement a budget; and

WHEREAS, the initial \$75,000 of funding from SEEA and the Memorandum of Agreement with Chapel Hill included funding for extension of \$55k of loans through a revolving loan fund to small businesses, with an additional \$5k of funds to support residential energy efficiency assessments, and the remainder to administration via a contractor, Clean Energy Solutions, and quality assurance; and

WHEREAS, the Town has used local funds to supplement the small business energy efficiency revolving loan fund with \$45,000, and support program administration; and

WHEREAS, the additional \$50,000 of discretionary funds from SEEA received in 2011 is being used to launch a single family residential energy efficiency program in Carrboro;

WHEREAS, the Town has entered into a triparty agreement with Duke Energy and Chapel Hill to pilot single family residential energy efficiency improvements, with funding from Duke Energy;

WHEREAS, SEEA has approved the allocation of an additional \$165,000, to be spent by May 2013, to the Town to expand the single family residential energy efficiency program and pursue one or more pilot multifamily residential projects; and

WHEREAS, Town staff continue to work with Clean Energy Solutions, Chapel Hill, SEEA, Duke Energy staff and contractors to implement the energy efficiency program, and meet ARRA requirements;

NOW THEREFORE BE IT RESOLVED by the Carrboro Board of Aldermen that the Aldermen accept the staff update, approve the multifamily residential energy efficiency pilot design, and authorize the Interim Town Manager to update the Agreement with SEEA and Memorandum of Agreement with Chapel Hill to recognize and accept the new funding, and prepare a budget amendment.



TOWN OF CARRBORO

NORTH CAROLINA

TRANSMITTAL

PLANNING DEPARTMENT

DELIVERED VIA: ☒ HAND ☐ MAIL ☐ FAX ☐ EMAIL

To: Matt Efird, Interim Town Manager
Board of Aldermen

From: Randy Dodd, Environmental Planner
Nora Barger, Clean Energy Solutions, Inc.

Cc: Patricia McGuire, Planning Director
Arche McAdoo, Finance Director
Annette Stone, Economic and Community Development Director

Date: January 11, 2012

Subject: Energy Efficiency Projects Update

Summary

The purpose of this memo is to update Board members and the public on Carrboro's implementation of community scale energy efficiency efforts. Town staff have worked with Chapel Hill staff and a nonprofit, the Southeastern Energy Efficiency Alliance (SEEA), to participate in a successful application to the US Department Of Energy (DOE) for ARRA funds geared towards energy efficiency retrofits of existing buildings (the "Worthwhile Investments Save Energy" [WISE] program). This memo provides an update on progress in the fall/winter of 2011, and also discusses staff recommendations for programming of an allocation of new funding from SEEA. Previous agenda items and memos about the opportunity were provided on June 1, June 22, and December 3, 2010 and June 15 and August 23, 2011; information from those reports is for the most part not repeated in this memo. Town staff have also been working with UNC through a State Energy Office funded grant program that places DELTA (Developing Energy Progress Through Action) interns and fellows in workplaces to provide support on energy related projects. An update on support the Town has received and continues to receive through this program is provided

Information

The SEEA grant funded project and WISE program were initiated in 2010, and will continue to unfold until May 2013. Chapel Hill and Carrboro have entered into separate but coordinated agreements with SEEA, and a Memorandum of Agreement between the Towns. Carrboro

received notification of an additional allotment of funding in December, 2011 to supplement the original allocation and subsequent bonus pool funds. Carrboro (and Chapel Hill) are receiving administrative support from Clean Energy Solutions, Inc. to pursue this effort. Carrboro and Chapel Hill have also entered into a triparty agreement with Duke Energy. This agreement formalizes a partnership in which the two towns offer programmatic support and Duke Energy offers single family residential subsidies for energy efficiency improvements.

Commercial Update

The Town has created an Energy Efficiency Revolving Loan Fund; staff have been working in the past several months to recruit businesses. To date, one business, Surplus Sids, has followed through to the point of completing an energy retrofit. A barrier for businesses has been the upfront cost associated with the energy assessment. SEEA has put the Town on notice that one or more additional loan applications will be needed in early 2012 or the Town risks some loss of funding. Given this, staff are moving forward with offering one or two subsidized/no cost assessments to encourage new loan applications. In order for an interested business to receive a subsidized assessment, they will need to agree to allow the program to use the report for outreach to other businesses.

Residential Update

Town staff have worked with CESI, Chapel Hill, and Duke Energy staff to release single family residential energy efficiency incentives, including subsidies using SEEA funds for residential energy assessments and improvements for owner-occupied single family residences, and improvements for Duke Energy residential customers. Prequalified contractors are conducting energy assessments for eligible homeowners. The Town is subsidizing up to \$150 of the cost of the assessment for a residence. It is the homeowner's responsibility to cover the rest of the cost of the assessment, and contact the prequalified contractors to arrange for the energy assessment. Completing an assessment through one of the Town's prequalified contractors prepares a homeowner to apply for and receive additional subsidies for improvements from the Town via SEEA funds and Duke Energy.

Chapel Hill released a residential energy efficiency program in early 2011. This program quickly reached capacity (125 homes) for the initial phase of the program, and included a 50% subsidy for selected measures focusing on building envelope improvements and a 25% subsidy for selected measures focusing on systems and appliances, with a maximum subsidy of \$5k. Chapel Hill released a second phase of the program in October 2011, and is currently in a similar process involving programming of the final distribution of SEEA Better Buildings funding. Phase II of the Chapel Hill WISE program has a subsidy cap of \$1500 and a \$150 subsidy for the assessment. The program has utilized both SEEA and Energy Efficiency Community Block Grant (EECBG) funds, which resulted in the leveraging of about 4:1 private \$ for every \$ of funds provided through the SEEA grant (with additional subsidy provided by the EECBG funds). To date the program has yielded over \$500,000 in local investment with an average value of over \$10,000 per project. The program has been served by four prequalified contractors, with quality assurance provided by Advanced Energy. More details on the program are available at <http://www.ci.chapel-hill.nc.us/index.aspx?page=1666>.

Carrboro initiated the SEEA sponsored energy assessments and Duke sponsored pilot program in June, 2011. Carrboro expanded the program in the fall of 2011 to include additional subsidies for energy efficiency improvements. The program design is based on the existing Chapel Hill WISE residential energy efficiency program. Chapel Hill WISE has 160 homes participating in the program and 77 projects (committed or completed). The conversion rate currently is 48%. To date Carrboro has 20 homes participating in the program. Assessments have been completed on 12 of the homes; 5 of the homes do not qualify for the program because they could not reach the 15% estimated energy savings through cost effective energy efficiency improvements. Two homeowners decided not to move forward with the assessment because of cost and were directed to the Weatherization Assistance Program. To date 3 projects have been completed and one will be completed in January for a total of 4 projects and a 33.3% conversion rate of assessments to retrofit projects. As of the end of December \$5450 of the WISE funds have been spent leveraging over \$12,000 in private investment. (All 4 projects have received the Duke Pilot subsidy. Duke Energy staff have indicated that they will accept new homes for their subsidy through the end of January, 2012; Town and CESI staff have pursued outreach efforts to recruit additional participation in the program. Additional details on the program are available at <http://www.townofcarrboro.org/ecd/EERLF.htm>.

New SEEA Allocation

SEEA staff have recently informed Carrboro staff that SEEA would be allocating the remainder of their Better Building Grant funds to participating subgrantees, with SEEA offering Carrboro an allocation of \$165,000. This is new funding to be programmed and spent by May, 2013. Town staff have prepared a draft budget based on a concept of: modifying the Memorandum of Agreement with Chapel Hill to continue to use CESI staff for program administration; accepting additional funding for the single family residential program, and pursuing one or more pilot projects with multifamily residential properties.¹ The overall budget for the WISE program and the SEEA grant are presented below, showing both previously budgeted funds and funds proposed for adding to the Town's budget for FY 11/12 and FY 12/13.

With the additional SEEA funds, Carrboro now must reach a goal of 80 residential (single and multifamily) units by May 2013. Part of the additional funding will be allocated to marketing and outreach to further promote the program and meet the goal.

¹ Town and CESI staff have been in contact with a local property manager, Ann Aylward, regarding one potential multifamily project: the Crest Street Apartment complex. Ms. Aylward has indicated an interest in utilizing the WISE incentives for energy efficiency upgrades as part of a planned renovation of the 19 unit building in 2012.

**Table 1: Carrboro WISE Program/SEEA Grant Budget Summary
(Including Town Funding Support)**

	Original SEEA Funds	Additional Town Appropriation	SEEA Bonus Pool	New SEEA Allocation	TOTAL
Program Management	\$10,000	\$7,900	\$2,100	\$15,000	\$35,000
Commercial EERLF	\$55,000	<u>\$45,000</u>			\$100,000
Residential Measure/Finance Subsidy			\$34,650	\$55,000	\$85,650
Audit Subsidy	\$5,000		\$9,750	\$11,000	\$24,750
QA/QC	<u>\$5,000</u>		<u>\$3,500</u>	\$4,000	\$12,500
Multifamily Pilot				\$75,000	\$75,000
Marketing				\$5,000	\$3,000
SEEA G&A fee				<u>\$7,000</u>	<u>\$7,000</u>
Total	\$75,000	\$52,900	\$50,000	\$172,000	\$342,900

Multifamily Residential Program Design

A multifamily draft program design has been created to guide the piloting of multifamily energy efficiency improvements through the WISE program. The goals of the Multifamily Pilot include:

- Reduce energy consumption by at least 15% (per project)
- Reduce energy bills for property owners and tenants
- Pilot project; the design may be modified based on lessons learned.

Details of the design are provided in Appendix 1. A summary is provided below.

Incentive Levels

Incentive levels ranging from \$1000 to \$1500 per unit (not to exceed 50% of total cost) are proposed for retrofit projects, depending on metering. For gut rehab projects, the incentive is 120% of incremental cost for going from standard efficiency to high efficiency measures. (maximum total incentive not to exceed 30% of total project cost). An additional incentive is available to cover the cost of the assessment upon completion of the project.)

Eligibility

Buildings/property/property owners must: have at least 5 units; lie within corporate limits; agree not to raise rent for 1 year. Funds are NOT available retroactively -- only new projects are eligible

Application Process

Applications will be considered on a first come first serve basis and completed with assistance from the Energy Efficiency Program Coordinator and a contractor. Applicants submit utility bills with their application, and are responsible for filing for applicable tax credits.

Assessments

The Assessment shall be paid for by the Property Owner, unless an eligible project reaches completion, in which case the WISE program shall absorb the assessment cost. Assessments are expected to cost between \$1,000 and \$5,000 per project.

Contractor Participation and Quality Assurance

Carrboro will maintain a list of pre-qualified contractors to implement measures. The Energy Efficiency Coordinator will prequalify contractors. Bigwoods Energy Engineering will perform QA and Monitoring and Verification (M&V) on a case-by-case basis

Partnership with UNC's Delta Fellows Program

The Developing Energy Partners Through Action (DELTA) is a federally funded (ARRA) internship and fellowship program through funds allocated to the North Carolina State Energy Office . The program is designed to build a skilled energy workforce in North Carolina and is coordinated by the UNC Institute for the Environment². The program sponsors 61 energy and carbon reduction related undergraduate and graduate internships. Over the past 6 months, two DELTA Fellows have been working on marketing and outreach activities associated with the WISE program (Table 2). An undergrad DELTA Fellow completed success stories of the two Carrboro WISE projects. These success stories will be used to promote the program on the Town's website and at outreach events. A graduate DELTA Fellow has completed a market characterization study using socioeconomic, demographic, and housing data to highlight areas with the most energy efficiency opportunity. The study identifies potential neighborhoods in Carrboro and Chapel Hill to focus on factors such as household and social security income, date of construction, and heating fuel type. The study identified three census block groups in and just west of downtown as potential neighborhoods for focused marketing and outreach to achieve higher participation from lower income residents to reach populations that might not learn of the WISE program through traditional outlets. Staff have also been working with other DELTA Fellows on projects and initiatives related to energy efficiency in municipal buildings, greenhouse gas reporting protocol, and renewable energy.

² (<http://www.facebook.com/pages/Developing-Energy-Partners-Through-Action-DELTA/159347837435227?v=info>)

Table 2: Support for Carrboro Energy Projects from UNC DELTA Fellows

<u>Delta Fellow</u>	<u>Residency</u>	<u>Focus</u>
Vanessa Fixmer-Oraiz	Summer 2011	Greenhouse gas reporting protocol; community renewable energy
Chris Lazinski	Fall 2011-Spring 2012	Greenhouse gas reporting protocol; energy usage/efficiency in municipal buildings; community renewable energy
Aspen Price	Fall 2011-Spring 2012	WISE residential program market analysis
Lauren Mendel	Fall/Winter 2011/2012	WISE program marketing and outreach support
Torrey Beek	Winter/Spring 2012	Community renewable energy

Other Implementation Activities/Next Steps

Town and CESI staff intend to continue to work with Chapel Hill, SEEA, and Duke Energy staff, contractors, DELTA Fellows, and all other stakeholders to satisfy all ARRA and grant specific requirements, and to plan for future enhancements to the program. The intent is to have the two Town's residential programs be designed to work in tandem to grow demand for energy efficiency services, learn from experience in rolling out the programs, minimize confusion to the community, streamline administration and delivery of services and information, and maximize collaboration/partnering and the leveraging of funds. In the near future, in addition to continuing to implement the program elements and grant requirements described above and in previous staff reports, Town and CESI staff intend to work with Chapel Hill to update the Memorandum of Agreement between the two towns in consideration of new funding allocations, and develop a longer term strategic plan for the program. This longer term plan will outline how an Energy Alliance with a mission of delivery of energy efficiency and potentially renewable energy services might be established, and will recognize the significant partnering and strategic development to move forward. The expansion of CESI staff capacity is seen as a positive step to further pursue a possible Energy Alliance.

As an information item and not related to active staff work, there is a separate energy efficiency program/source of subsidy for low income homeowners being administered by Joint Orange-Chatham Community Action Agency (JOCCA). JOCCA has been actively recruiting homeowners to participate in the program. Staff understand that Transition Carrboro-Chapel Hill volunteers have been reaching out to the community to help promote the program. More information is available at <http://www.transitionech.org/jocca>.

Recommendations

Staff recommend that the Board adopt the attached resolution accepting the draft budget for additional funds from SEEA, accepting this report, approving the multifamily residential program pilot and granting authority to staff to update the Town's agreement with SEEA and Memorandum of Agreement with Chapel Hill. Staff encourage the Board not to delay action because of the risk of jeopardizing grant funding and performance, and to facilitate activities associated with the new multifamily pilot and residential program. Staff intend to bring a formal budget amendment to the Board as soon as the agreement with SEEA has been finalized.

Appendix 1

Carrboro WISE Multifamily Pilot Program Design Draft

In the fall of 2010, Carrboro received funding from the federal government through participation in a Better Buildings Program Grant, administered through the Southeast Energy Efficiency Alliance (SEEA). In January 2012, Carrboro received additional funds from SEEA to implement a Multifamily Pilot Program. The goals of the Multifamily Pilot include:

- Reduced energy consumption by at least 15% (per project)
- Reduced energy bills for property owners and tenants
- Pilot project for Carrboro, with the hopes of expanding the program in future years.

Incentive Levels

Retrofit Projects

Master Meter Properties = \$1000 per unit (max total cannot exceed 50% of total cost of Energy Efficiency Measures)

Individually Metered = \$1500 per unit (max total cannot exceed 50% of total cost of Energy Efficiency Measures)

Gut Rehab

Energy efficiency measures costs for going from standard efficiency HVAC, lighting, controls, appliance and water measures to high efficiency measures cannot exceed 120% of the incremental project cost, or 30% of total project cost.

Project Completion Incentive

Assessment cost will be covered by WISE program (only upon completion of an eligible project.)

Eligibility & Program Process

1. Building must have at least 5 units to be considered multifamily and qualify for program
2. Property must lie within Town of Carrboro Corporate Limits.
3. Proposed measures must meet at least 15% Estimated Energy Savings.
4. Property owner agrees not to raise rent for 1 year.
5. Applicants submit 12 months of utility bills to the Town and agree to submit 2 years of utility bills after completion of work.
6. Applications will be completed with assistance from the Energy Efficiency Program Coordinator and a contractor.
7. Applications will be considered on a first come first serve basis and are awarded subject to fund availability.
8. Funds are NOT available retroactively -- only new projects are eligible.
9. Filing for applicable tax credits which may apply as part of this program is the responsibility of the Property Owner.

Assessment

The Assessment shall be paid for by the Property Owner. In the event that an eligible project reaches completion, the WISE program shall absorb the cost of the Assessment as an additional incentive. Depending upon the number of units and the complexity of the project, assessments shall cost between \$1,000 and \$5,000 per project, based on the Assessment Cost Formula below.

Master Metered Properties

To be conducted by a Certified Engineer with Multifamily/Energy experience. Assessment should meet the requirements of at least an ASHRAE Level I assessment and be able to show an estimated 15% energy savings.

Individually Metered

To be conducted by an Energy Auditor, from a list of auditors pre-qualified by the Town of Carrboro. Additional auditors may apply for pre-qualification status. Requirements include: BPI Certification, Certified Engineer, (or equivalent certification) and proof of experience conducting Multifamily Energy Assessments). Must be able to verify estimates and assumptions for Energy Savings of proposed measures. Assessment should meet the requirements of a Building Performance Institute (BPI) energy assessment and show an estimated 15% energy savings.

Gut Rehab Projects

To be conducted by a Certified Engineer with Multifamily/Energy experience. Must be able to verify estimates and assumptions for Energy Savings of proposed measures which include constructing baseline scenarios, reviewing designs and calculating incremental efficiencies for replacement fixtures.

Assessment Cost Formula

Assessments shall be billed on a per unit basis with an overall minimum of four (4) units assessed per project. The number of units assessed must meet **all** of the following criteria:

- 1) At least 15% of all units shall be assessed.
- 2) At least two of each reasonably unique floor plan where applicable shall be assessed.
- 3) Units chosen for assessments shall be based on most varied natural and built conditions. (e.g. one north-facing interior unit and one south facing end unit, presence/ absence of vegetation).

Contractor Participation

Carrboro will maintain a list of pre-qualified contractors to implement measures. Contractors agree to aid property owners in applying for additional utility incentive measures. Additional parties may apply for pre-qualification with Carrboro's Energy Efficiency Coordinator. Property owners may use any prequalified contractor subject to scope of work and equipment specification verification conducted by Program prior to project approval. ALL work will be quality assurance tested upon completion of project.

Quality Assurance

Based on qualifications and their existing agreement with the Town to provide Quality Assurance (QA) for the Commercial WISE program, Bigwoods Energy Engineering will perform QA and Monitoring and Verification (M&V).