

## **Committee Comments on Activities for Energy Strategy**

### **December 8, 2009 Sustainability Committee Meeting**

#### *Municipal Buildings*

SC Comments: Has the Town considered climate control systems that reset at night and occupancy sensors for common areas? Subsequently, one member recommended by email that induction lighting be explored along with LED for parking decks.

Staff Comments: This was discussed during the walk-thru. We will see what comes back in terms of recommendations from our engineer.

#### *Solar Charging Station (“Solar Grove”)*

SC Comment: Wallace Deck would be better than Town Hall due to sun exposure and public access.

Staff Comment: Wallace Deck is probably best from the two perspectives noted, though we’ll have to wait and see what the consultant brings back.

#### *Power Purchase Agreement*

SC Comment: 1-2 MW isn’t necessarily the minimum; some utilities are willing to invest in smaller installations (1/2 MW).

Staff Comment: The results of a feasibility study are needed; 3rd party would need to be identified; legislative authority could be pursued in the short session; ultimately this may not be an immediate activity because of the delay with authority.

#### *Refrigerator Replacement in Public Housing Units*

SC Comments: This is great. Where do the old refrigerators go? Any chance we could give them to folks who are using really old ones. In this same vein, have we considered replacements for A/C window units?

Staff Comments: Fairly clean in terms of metrics accounting. We can ask about the refrigerators.

#### *Part-Time Contract Energy Manager*

SC Comments: None that evening. Subsequently, one member expressed concern by email regarding the Town’s utility billing amount and whether

or not a part-time position could be justified. It was recommended that the Town explore a retired engineer one day per week.

Staff Comments: None.

#### *Canvass Program Pilot*

SC Comments: None.

Staff Comments: Discussion with Durham is needed.

#### *OWASA Incentives*

SC Comments: Concerns that this is more trouble than it's worth (why do this for the savings that are likely to be received monthly?). Have you run the numbers? Why not do a rebate program or just give people the toilets?

Staff Comments: The design of this activity is centered on the notion that it brings in job creation (contractors) and has longevity (creates a mechanism for doing this beyond the life of the funding: on-bill financing). Discussions are needed with OWASA.

#### *OPOWER Utility Bill Feedback*

SC Comments: The sample utility letters looked promising, and methods based on behavioral psychology are known to be effective.

Staff Comments: More discussions are needed.

#### *Efficiency 2.0*

SC Comments: How well does this really work? Similar efforts have not yielded measurable results. How many Chapel Hillians are missed with a web-based approach? Aren't there free versions of stuff like this?

Staff Comments: We know that a similar approach did not work as well with the University ([www.makemesustainable.com](http://www.makemesustainable.com)), largely due to the verification of results. This would be tailored to Chapel Hill, so that's what you're paying for. The Energy Advisor and the social media package appeal to the College Town crowd. The canvassing approach (Durham model extended to Chapel Hill) may fill in those gaps where this web-based approach doesn't reach all consumers.

*General Feedback*

I see that new lighting standards for the downtown are a Council goal. Is there some way to use block grant money to work on that project as well?

Staff Comment: I think that project has a slightly different mission (design, etc.). I can look into it, but I don't think it's exactly the same.

Did you all look at the Sustainability Committee's original recommendations for ARRA funds?

Staff Comment: That list was used by the staff committee when developing the list of proposed activities (this recommendation appears directly below).

-I still firmly believe that the Town could work with Duke Energy to do something similar to the Lakeland solar thermal initiative. There are opportunities to work with Renewable Energy Service Companies (RESCOs) to install solar hot water on homes and businesses in Chapel Hill in exchange for the Renewable Energy Credits (RECs) that the utility could claim. Lakeland is a public utility which is doing this in Florida. Perhaps some of the block grant money could be used to create a pilot with Duke Energy in Chapel Hill.

-We want to be kept in the loop in strategy development. Please send us all documents. Also, we assume that your decision-making criteria will include anticipated metrics for each project, along with financial estimates for certain building improvements. We would like to see all of this as you move toward a meeting with the SEE Committee, and some of us plan to attend that meeting.

-I am not convinced that behavioral initiatives will work as well as projects that actually "do things" like build or install a proven technology.

**February 16, 2009: Sustainability Committee recommendations for Recovery Act Funding**

Chapel Hill Sustainable Energy Demonstration Program

Proposal to the Sustainable Energy Committee

*Introduction:* The incoming Obama Administration and Congress are developing a massive program of public spending to boost the US economy. This program will include funds for public infrastructure upgrades that include the deployment of renewable energy and energy efficiency technologies. State and local governments are reported to be compiling lists of such projects that they are prepared to undertake promptly within the next few months. Therefore, it is

proposed that the Town of Chapel Hill establish a program for using a federal grant to deploy sustainable energy technologies (energy efficiency and renewable energy) on certain public and private buildings. The program will run for two years or until the funding is exhausted.

### *Proposed Program*

*Title:* Chapel Hill Sustainable Energy Demonstration Program

*Goals:* To deploy sustainable energy technologies within appropriate municipal buildings, public and private schools (except for UNC-CH), commercial and industrial buildings, low-income housing (Section 8), and other housing.

*Outcomes:* Reduction in building operating costs, reduction in greenhouse gas emissions, increase in local employment, demonstration that reliable sustainable energy technologies can be widely deployed in our region in a relatively short time.

### *Proposed Program Elements*

1. Funds for energy audits for (a) all municipal buildings that have not had one over the past ten years (maximum 36); (b) for all low-income houses and public housing (524 units); (c) for all commercial, industrial, and other private buildings whose owners request one. Estimated cost: \$1M (\$80,000 for low-income, public housing, and municipal buildings)
2. Funds for cost-effective energy efficiency upgrades identified by energy audits to all municipal buildings and low-income/public housing (including weatherization), and for rebates equal to 25% of the costs of cost-effective energy efficiency upgrades for other building owners. The cost-effective determination shall be by a life-cycle cost analysis. Estimated cost: \$10M (\$3M for low income, public housing, municipal buildings)  
Note: It is estimated that residential energy savings of 15% to 20% and commercial energy savings of 20% to 30% can be achieved.
3. Funds to replace old window A/C units with Energy Star models for all low-income housing units. Estimated cost: \$0.5M
4. Funds to train Chapel Hill residents as solar energy installation and service technicians. Estimated cost: \$0.5M
5. Funds to install solar hot water systems on all appropriate municipal buildings and low-income houses. An appropriate building is one that has a uniform hot water load throughout the year and whose roof permits the installation of solar collectors that face within 30° of south. Estimated cost: \$2.6M (Assume 50% of residential units @\$6500/unit and 50% of Town buildings @ \$50,000/unit)

6. Funds to provide solar hot water rebates of \$25/ft<sup>2</sup> of collector area for residential and institutional systems and \$10/ft<sup>2</sup> for commercial/industrial systems for the installation of 4000 systems. Estimated cost: \$7M

7. Funds to install 1000 kW of solar PV systems on appropriate municipal buildings and low-income housing. Estimated cost: \$8.5M

8. Funds to provide a solar PV rebate of \$2000/kW for residential/institutional and \$1000/kW for commercial/industrial building owners for the installation of 2500 systems. Estimated cost: \$8.5M

9. Program administration: Estimated cost: \$1.4M

*Total Estimated Program Cost: \$40M*

#### *Program Implementation*

1. Determine the status of energy audits of all municipal buildings, including schools to estimate number of new audits required. Determine number of eligible low-income housing for inclusion in the program. Assume 3000 other audits may be requested.

2. Estimate the costs for energy efficiency upgrades in municipal and low-income housing.

3. Estimate the number of solar hot water and PV systems to be installed on municipal and low-income housing.

4. Develop a budget including costs for administration.

5. Contact sustainable energy contractor to estimate the impact of this program for creating jobs. It is estimated that the energy audits and installation of solar energy systems will create 30 to 40 Chapel Hill jobs.

7. Develop a detailed proposal.

6. Coordinate the request for federal funds with Governor Perdue and Rep. David Price

**January 4, 2009 Sustainability, Energy and Environment Committee (SEE)**

Based on comments were made at today's meeting, we ask that Clean Energy Solutions and the Town staff provide additional information regarding opportunities related to solar thermal installations in public housing units and a possible community rebate program. This information should be brought back to the SEE Committee at its next meeting on January 15<sup>th</sup>.

After reviewing the information presented by Clean Energy Solutions and the Town staff, and after considering the discussion that took place concerning various activities listed amongst the possible options for a strategy, we recommend that the following steps be taken:

1. As part of an information item at the January 11<sup>th</sup> business meeting, the Council would receive the report entitled "Chapel Hill Energy Efficiency Block Grant Strategic Options" (Attachment 1), as well as a process memorandum which explains the committee's plan for developing and submitting the energy strategy.
2. The SEE Committee will meet at its regularly scheduled time later this month (January 15<sup>th</sup> at 10 a.m. in Town Hall) to consider the requested information concerning solar thermal projects (see above), and any further direction from the Council as provided in the January 11<sup>th</sup> meeting. In addition, the Committee will develop a recommendation for the Council's January 25<sup>th</sup> meeting, which identifies all of the activities that should be included in the Town's energy strategy.
3. Upon the full Council's approval of an energy strategy, Clean Energy Solutions will submit this plan to the DOE on or before January 28, 2010.