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Petition to the Town of Chapel Hill Council

On behalf of the Chapel Hill Sustainability Committee, I hereby ask the Town Council to consider preparing a proposal to seek funding from the federal economic stimulus plan as described below.

Chapel Hill Sustainable Energy Demonstration Program

Proposal from the Chapel Hill Sustainable Energy Committee

Introduction: The Obama Administration and Congress have passed a massive program of public spending to boost the US economy. This program has 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 and public housing, 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 and public schools that have not had one over the past ten years (maximum 50); (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 (\$110,000 for low-income/public housing, municipal buildings, and public schools)
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 (\$4M for low income/public housing, municipal buildings, public schools) 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/public 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, public schools, and low-income/public housing. 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: \$3M (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/ft² of collector area for residential and institutional systems and \$10/ft² for commercial/industrial systems for the installation of 4000 systems. Estimated cost: \$6.4M

7. Funds to install 1000 kW of solar PV systems on appropriate municipal buildings, public schools, and low-income/public 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, including program outcomes study: Estimated cost: \$1.6M

Total Estimated Program Cost: \$40M

Program Implementation

- 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.
- Estimate the costs for energy efficiency upgrades in municipal buildings, school buildings, and low-income/public housing.
- Estimate the number of solar hot water and PV systems to be installed on municipal buildings, school buildings, and low-income/public housing.
- Develop a budget including costs for administration.
- Contact sustainable energy contractor to estimate the impact of this program for creating jobs. This program can leverage approximately \$50M in additional spending by individuals and companies. It is estimated that the energy audits and installation of solar energy systems will create approximately 100 Chapel Hill area jobs. If all of the proposed solar energy systems are installed, it is estimated that almost 20 MWh of electricity equivalent will be produced annually.
- Develop a detailed proposal.

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

Submitted to the Town Council on February 23, 2009