

## STATEMENT OF PROJECT OBJECTIVES

[Recipient Name]

[Project Title]

*All of the information to be included in the SOPO should be consistent with the Application upon which the award is based. The SOPO should be written for public disclosure, and, generally, the total length should not exceed 4-5 pages.*

*The following items should not be included in the SOPO:*

- *Dollar amounts.*
- *Specific dates.*
- *Subcontractors by name. The award is with the prime and, as such, the SOPO should not reference the subcontractors.*
- *Intellectual property information or data.*

### **A. PROJECT OBJECTIVES**

The Town of University Park, MD will implement the *Sequential, Transformative Energy Program for University Park (STEP-UP!)*, a \$1,425,000 effort to create a model community energy transformation program that serves as a roadmap for small towns across the U.S.

The STEP-UP model is designed for easy replication in other similarly resource-constrained small towns like University Park. STEP-UP includes a full suite of model activities for replication including: energy audits and retrofits for residential, institutional and public sector buildings, financial incentives (leveraged at 5:1), local community delivery partners, and leading edge but low-cost social marketing. STEP-UP also includes highly innovative elements, such as integrated solar and voluntary carbon market applications.

### **B. PROJECT SCOPE**

The overall goal of STEP-UP will be to retrofit fully one third of the buildings in University Park, achieving average annual utility bill savings (attributable to the project) of 20%, or \$250 per homeowner. The broader project impact goal is to facilitate STEP-UP replication in at least five other small towns during the duration of the Recovery Act-funded projects, and in more than 85 other towns in the three years following the project. The detailed STEP-UP project outcomes include:

1. 50% of UP residents will have a PEPCO home assessment with modest “direct install” measures, achieving a 3% reduction in energy use in participating homes;
2. 25% of UP homes will have the Maryland *Home Performance with ENERGY STAR* full audit and retrofit program, achieving a 20% reduction in energy use in participating homes;
3. An additional 5% reduction in measureable community-wide energy use will be achieved through streetlight retrofits, kitchen waste composting, and a program to reduce vehicle miles travelled (VMT);

4. 5% of UP households will invest in renewable energy, primarily through shares purchased in the UP Solar Co-op;
5. 500 other small-towns will download from STEP-UP the free, ready-to-use tool-kit of templates, replicable best practices, and community case studies. 1% of these towns will use STEP-UP model resources to implement a version of their own program in the three-year project duration.

## C. **TASKS TO BE PERFORMED**

### 1. Establish Baselines

Credible, quantitative baselines for every element of the STEP-UP program will be established from the very outset, against which program impacts and cost-effectiveness can be tracked and measured. Aggregated baselines will be developed for a simple reporting “dashboard”. The dashboard will serve as a visual tool for the STEP-UP Energy Coach, partners and project management council in their efforts to continually improve the program. Three percent (3%) of the STEP-UP program budget has been set aside for baseline and EM&V activities, in accordance with industry best practice.

### 2. Outreach and Community-Based Social Marketing

Outreach will be accomplished through a community-based social marketing campaign that builds awareness, motivates participation among town residents, and drives traffic to the STEP-UP web site. STEP-UP will recruit early participants to become program ambassadors, reaching out to their immediate neighbors to encourage their participation in the program. Efficiency leaders such as Babylon, NY, Cambridge, MA and Smart Power have proven that social marketing works – an approach that will be particularly effective in a close-knit community such as University Park.

The local channels to be leveraged as part of the STEP-UP social marketing / outreach campaign include:

- Working with the University Park Elementary school and the Parent Teacher’s Association (PTA) as STEP-UP outreach partners will be a central part of the program. Activities may include: K-6 energy curriculum, the local Blue Sky Puppets program, the rooftop solar array as a learning/science focus, visits from the local NASA/Goddard facility, and a school “fundraiser” selling energy efficient products such as CFLs or LEDs (instead of wrapping paper for example);
- The University Park Solar Co-op, whose rooftop solar arrays will provide a visible prompt;
- Both church congregations, one of which will be the first to host a rooftop solar array, will be approached to support *STEP-UP* through congregational participation. A key partner in this activity will be the Greater Washington Interfaith Power and Light Organization (?);
- Deploying *STEP-UP* materials through the University Park “Welcome Wagon” run by the civic association, and two realtors who manage the majority of town real estate transactions;
- Providing resources to the many local volunteer groups and helping them to identify effective ways to support STEP-UP, including: book clubs, church youth groups, the Woman’s Club, Brownies/guides/Scouts, and UP sports leagues;
- The University Park town web site, Google group community list serve, and other related media;
- The University Park town newsletter (monthly) and local Gazette (weekly);

- Having a *STEP-UP* display and outreach materials available at the many University Park community functions and at Town Hall.

Building a dynamic *STEP-UP* web site will be central to the success of the program. The site will contain all program information on services, incentives, partners, key dates and milestones as well as public recognition of UP energy leaders. The web site will support social networking tools such as Twitter, Facebook, MySpace, YouTube, mobile marketing, blogs, and broadband media.

Finally, *STEP-UP* will provide program participation incentives, encourage friendly competitions, issue challenges, and publicly acknowledge leading residents who meet energy efficiency milestones. The comparative power of seeing one's utility bill benchmarked against that of a "typical" neighbor will take place through partnerships with OPower (bill confidentiality assured), and by distributing a free Google Power Meter to all *STEP-UP* participants.

### 3. Leverage Partnerships and Incentives

Partners, services and resources that will be leveraged as part of *STEP-UP*. This leveraging is an essential cost-containment tool for small towns, and necessary for effective program delivery.

### 4. Facilitate Implementation

The *STEP-UP* Energy Coach will work with each UP resident to implement measureable energy reduction activities in their home. Support will be provided at every step – education, contracting, financing and follow-up. Davis-Bacon prevailing wage rates will be confirmed prior to engaging any sub-contractors or personnel on the project (see Attachments). The *STEP-UP* facilitation will include:

- a) *PEPCO home assessment and direct install program*: PEPCO's existing program can be immediately deployed at scale in University Park with *STEP-UP* providing the outreach by pairing the audits with energy coaching for the homeowner, verifying direct install measures, and providing participation incentives.
- b) *Maryland Home Performance with ENERGY STAR program* (being delivered in partnership with MEA and PEPCO): *STEP-UP* will play a major facilitative role in support of this turnkey service, educating UP residents about the pre-screened contractors, supporting the audit process, organizing bulk-purchasing of ENERGY STAR products, and most importantly, providing access to below-market financing through a revolving loan fund that will be created to help defray the up-front cost of retrofits. Home Performance with ENERGY STAR audit/retrofit measures include the following systems: air sealing, attic, wall and crawl space insulation, duct sealing, windows, furnace, air conditioner or heat pump, water heater, efficient lighting and programmable thermostat. In addition, *STEP-UP* will offer UP residents:
  - a. Smart Grid connection through PEPCO Smart Meter program;
  - b. Cool roof application, which can save a further 5-10% in home energy reduction.
- c) *PEPCO ENERGY STAR product rebate program, federal tax credit, MEA state incentives*: *STEP-UP* will serve as a one-stop-shop for UP residents regarding the wide range of federal, state and utility clean-energy incentives available to Maryland homeowners. Renewable energy and energy efficiency subsidies will be part of the *STEP-UP* clearinghouse.

- d) *Bulk purchase program*: In support of the ENERGY STAR product rebates, STEP-UP will facilitate the bulk ordering of ENERGY STAR products by aggregating demand from participating UP residents. The intent is to drive prices lower through bulk ordering, and to repeat this periodically in support of Home Performance with ENERGY STAR activities. The Alliance will support the bulk purchasing efforts through negotiation with their Associate partners.
- e) *Energy Performance Contracting*: STEP-UP will work with the local churches and the University Park Elementary school to secure a performance contract through an Energy Service Company.
- f) *Solar Co-op investment match*: UP will provide an investment match, up to a certain ceiling, for town residents who purchase shares in the local Solar Co-op. The intention is to begin *STEP-UP* through an existing, visible community platform in the solar arrays. The resulting town co-op shares will provide a sustainable revenue stream well beyond the end of the program period.
- g) *Streetlighting retrofit with PEPCO*: The UP streetlight serve as a “visible” program element that can be deployed quickly and that demonstrated leadership by example on behalf of the Town. The resulting replacement program will form one of the replicable templates for *STEP-UP*.
- h) *Community transportation alternatives*: UP already runs a commuter shuttle bus to the local metro station and has been active in extending local bus routes in the surrounding communities. STEP-UP will continue to expand the frequency and options for local public transit. In addition, STEP-UP will encourage UP residents to participate in the Alliance to Save Energy’s *Drive Smarter Challenge*.
- i) *Community Composting program*: A kitchen-waste composting program that avoids landfill methane is a natural extension of UP’s recycling program that already includes mixed paper, glass, aluminum, plastic, steel cans, and leaves. STEP-UP will facilitate homeowner education, bulk purchase and distribution of rat-proof backyard composters.

## 5. Measure Impacts

On behalf of STEP-UP, the Alliance to Save Energy will engage a qualified professional firm to perform EM&V in accordance with the International Performance Measurement and Verification Protocol (IPMVP), which is the most widely respected protocol for EM&V of energy savings projects, and the Model Energy Efficiency Program Impact Evaluation Guide of the National Action Plan for Energy Efficiency (NAPEE). The EM&V practitioners will be engaged early in program and project design so that an EM&V plan and necessary baselines for estimating energy and cost savings can be established.

All assumptions and methodologies will be clearly stated, including those for determining stipulated or deemed measures of savings, net-to-gross savings ratios (i.e., accounting for free rider and spillover effects), persistence and lifetimes of energy savings measures, adjustments for seasonality and weather, and other parameters. The EM&V plan will address required levels of rigor and uncertainty, and will estimate the following, at a minimum:

- Energy savings and demand reduction by measure, sector, and end-use: lighting, space heating, space cooling, refrigeration, water heating, etc.;
- Cost savings and impacts considering labor, maintenance, replacement, and non-energy utilities;
- Carbon dioxide emissions avoidance;
- Other emissions avoidance, such as for sulfur dioxide and nitrogen oxides; and

- As warranted, impacts on water consumption such as water use and cost savings.

## 6. Market Transformation

University Park is committed to increasing program impact by catalyzing market transformation within other small towns. Working in partnership with the Alliance to Save Energy, STEP-UP will create ready-to-use templates, model documents, and case studies of lessons learned, all designed specifically for replication by other small, resource-constrained towns. The model programs to be followed in this task are the *Energy Efficiency Guide Book for Public Power Communities*, a comprehensive and practical “how to” guide developed by the Center for Wisconsin Strategy, and the *Rapid Deployment Energy Efficiency Toolkit* (RDEE) of the Environmental Protection Agency. The STEP-UP web site will host the materials, and will also actively promote efficiency through the distribution channels .

## 7. Sustainable Program

The STEP-UP model will only prove successful if it can be sustained beyond the grant period. STEP-UP includes several elements that encourage sustained retrofit uptake and low energy use, including:

**Sustainable Financing and Community Infrastructure:** The revolving loan fund, by its design, provides a sustainable financial option for UP residents wishing to undertake future clean energy investments. The City’s solar co-op shares provide ongoing revenue stream through annual dividends. By increasing the energy literacy of the entire community, STEP-UP will pave the way for future investments in leading clean energy applications including: participation in the carbon market, home labeling, PACE-type financing, wind farm or biomass applications, and electric plug-in hybrid vehicles. Through the success of STEP-UP, the UP Town Council may likewise consider adopting new progressive energy policies, such as energy-related ordinances for new construction and energy-related ordinances for point-of-sale.

**Comparative Bill Analysis:** Working with OPower (formerly Positive Energies), STEP-UP will provide comparative bill analysis for UP participants. Using data analysis and energy consumption comparisons, OPower will compile customer data (confidentiality assured) benchmarked against the consumption patterns of an “average” UP resident in a similar house. Comparative approaches have sustained energy savings rates approaching 5%.

**Carbon Offsets:** Carbon offsets can provide a positive, tangible reward to ensure ongoing home energy management by STEP-UP participants. STEP-UP will partner with MyEmissionsExchange.com, making use of their system in which website users only need to input limited utility bill information. As users maintain their reduced energy usage against their pre-retrofit baseline, the reductions are verified by MyEmissionsExchange and certified as "personal carbon credits." These credits are then sold on the voluntary market to large companies looking to demonstrate their environmental commitment. Profits are deposited directly into MyEmissionsExchange.com users' accounts to be spent any way they like. Once again, this provides a direct incentive for clients to sustain low energy use.

**Bulk Power Purchase Agreement:** STEP-UP will enter negotiations with PEPCO to facilitate a collective bulk power purchase agreement only for UP residents who have undertaken a retrofit as part of the STEP-UP program. Residents who maintain reduced energy bills will be eligible to join the aggregated power purchase pool at lower power rates based on bulk tariffs. If clients abandon their energy saving ways and their power consumption exceed a set threshold, after failure of remedial intervention they will be removed from the pool. This provides a direct incentive for clients to sustain low energy use.