

### **What is the purpose of this survey?**

This survey is in support of President Obama's Climate Action Plan (CAP), which sets forth a series of actions aimed at reducing the amount of energy consumed and greenhouse gases emitted by Americans. As part of CAP, the Treasury Department (LIHTC properties), USDA (Rural Development properties), and HUD (public housing and multifamily-assisted properties) have been charged with installing 100 megawatts (MW) of renewable energy capacity by 2020 within the federally assisted housing stock.

HUD does not currently collect the necessary information to support this initiative. The information collected from this effort will assist the Department in establishing a baseline assessment of the renewable energy capacity within its public housing and multifamily-assisted housing portfolios.

### **What will the collected information be used for?**

Upon establishing a baseline of HUD's current capacity of renewable energy, HUD will begin to develop policies and programs aimed at meeting the President's mandate. The Department envisions that these initiatives will serve to inform managers of HUD assisted housing stock, other federal/state/local agencies, and general public about cost- and energy-efficient uses of renewable energy systems.

All responses collected during this research effort will be used for research purposes only and will NOT be used for compliance monitoring.

### **How is HUD collecting the requested information?**

The requested information will be collected through a web-based survey. The survey will be administered through a two-phase approach and sent to the Executive Directors and Property Managers (or Property Owners) of public housing agencies and multifamily-assisted properties, respectively. To assist in maximizing survey response, telephone calls will be made to a subset of non-respondents to encourage survey completion. It is anticipated that this collection effort will span approximately three months.

The initial phase will be a brief questionnaire that will be sent to all targeted participants. The purpose of this phase is to get a snapshot of the agencies and properties that have, do not have, and/or plan to install renewable energy systems in the future. In addition, this questionnaire will inquire about the barriers and/or challenges that may have been faced regarding these systems. This phase will only consist of a web-based data collection effort. No follow-up phone calls will be made to these participants. It is anticipated that this questionnaire will consist of 8-10 questions and can be completed within 5 minutes.

The second phase will be more in-depth and target the participants who specified that they have (or there is informal evidence that they have) installed renewable energy systems. These questions will focus on the type, capacity, and financing and costs associated with the renewable energy systems. This phase will consist of a web-based data collection effort and follow-up

phone calls to non-respondents. It is anticipated that the second phase will consist of approximately 400 participants.

### **How do you measure renewable energy capacity?**

Renewable energy capacity is equivalent to the power (rate at which energy is consumed or generated) in which the system can consume or deliver. In most residential applications, system capacity is either expressed in an International System of Units (SI) or traditional English set of units. SI units are expressed in a form of wattage: watts (W), kilowatts (kW), megawatts (MW) and traditional English units may be expressed as British Thermal Units per hour (BTU/hr) or Refrigeration Tons (ton). HUD will convert all reported information into a single measurement unit as part of the data analysis.

### **What counts as renewable energy for this survey?**

Renewable energy sources for this survey include electrical energy production that is derived from solar (photovoltaic), wind, and hydroelectric (water turbine) systems. Heating production is derived from solar (thermal), geothermal heating, biomass, and biofuel.

### **Why is the survey not collecting consumption related data?**

The Climate Action Plan specifies that by 2020 the federal assisted housing stock must have installed 100 megawatts (MW) of renewable energy capacity. To minimize the burden on those providing responses, we are addressing only system capacity.

### **Who should I contact if I have any questions regarding this survey?**

Questions related to the survey should be directed to the study's Helpline at XXX-XXX-XXXX or Renewables@hud.gov. If you have questions about the study itself, please contact Mr. Michael Early, Energy Engineer, Office of Policy Development and Research, HUD at (202) 402-2566 or Ms. Crystal Bergemann, Energy Program Analyst, Office of Economic Resilience (OER), HUD at (202) 402-4592.

### **Who is being asked to complete this survey?**

The survey is being sent to the Executive Directors and Property Managers (or Property Owners) of Public Housing Agencies and Multifamily-assisted properties, respectively. The Department believes that these individuals will be the first line of contact regarding any renewable energy systems that may be installed at their agencies and properties. However depending on the organization of the agency or property, other personnel (e.g., Energy Manager or Facilities Engineer) may need to complete the survey or sections thereof. The survey will request the contact information for all participants who assist in completing the questionnaire.

### **Am I required to complete this survey?**

No, targeted participants are not required to complete this survey; however, the Department is eager to receive responses from all participants so that the reported baseline will provide the most

accurate illustration of the renewable energy capacity within the Department's assisted housing stock.

### **What is a renewable energy system and what kind of systems are considered in this survey?**

For the purposes of this study, the Department is interested in gathering information related to systems that receive energy from natural resources that are continuously replenished, such as: sunlight, wind, geothermal heat, water, and biomass.

In residential applications, energy derived from renewable energy systems is primarily associated with, but not limited to: solar (photovoltaic or solar thermal) power, geothermal heating, and wind power. Biomass, biofuel, and hydroelectric (water turbine) systems are less common renewable energy systems for residential applications.

### **What about combined heat and power (CHP) systems?**

Combined heat and power (CHP) systems, also known as cogeneration, use a single fuel source to simultaneously produce electricity and useful heat. CHP systems are used in a variety of energy-intensive applications. These systems are energy conservation devices because they make effective use of wasted energy; however, they are not considered renewable energy systems for the purpose of this survey.

### **Doesn't HUD already have this information?**

The Department does not have a comprehensive list of agencies and properties that have installed renewable energy systems.

Inconsistent information related to the agencies and properties that have installed renewable energy improvements can be found in Departmental databases – Public Housing Energy Performance Contracting (EPC) Database, Energy and Performance Information Center (EPIC), and Recovery Act Management Performance (RAMPS) – or via Internet searches.

The Public Housing EPC Database stores information related to the completed construction of EPCs that have executed by public housing agencies (PHAs). The database provides a snapshot of the costs, savings, term, size, and type of improvements associated with the respective EPCs.

EPIC is a departmental tool that collects information on capital grant activity and energy efficiency measures (EEMs) that are implemented with PIH Capital Fund Formula or Replacement Housing Factor (RHF) grants. The system also tracks information related to the submission, approval, and performance of the EPCs that utilize at least one of HUD's utility cost savings incentives.

RAMPS (RAMPS), now defunct, was a data reporting mechanism for grants the Department funded by the American Recovery and Reinvestment Act (ARRA).

The Department currently does not have any databases that track renewable energy systems for multifamily-assisted properties.

**If I want more information related to the President’s Climate Action Plan (CAP), where should I look?**

Additional information relating to the Climate Action Plan can be found at:  
<http://www.whitehouse.gov/climate-change>.

The document outlining the President’s specific actions can be found at:  
<http://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf>.

**If I want more information related to renewable energy, where should I look?**

A large amount of information relating to renewable energy systems can be found online. Both the Department of Energy (DOE) and U.S. Environment Protection Agency (EPA) provide useful information regarding renewable energy systems.

DOE, Office of Energy Efficiency & Renewable Energy:  
<http://energy.gov/eere/office-energy-efficiency-renewable-energy>

U.S. Environmental Protection Agency:  
<http://www.epa.gov/statelocalclimate/local/topics/renewable.html>

**What are the PHA Code, Property ID, FHA (or Property) Number, and Contract Number?**

Each agency and property within HUD’s housing stock has an identification number that uniquely distinguishes it.

For public housing agencies, each agency has a PHA Code that consists of five (5) alphanumeric characters correlating to the agency’s resident state and program type (i.e., public housing and/or voucher program).

For multifamily-assisted properties, each property has a Property ID, Property Name, and Contract Number and/or FHA (or Property) Number. The Property ID is a nine (9) digit code that is unique to each property and used *internally* within HUD. The Contract Number consists of eleven (11) alphanumeric characters and correlates to the rental subsidy(s) that the property receives. The FHA (or Project) Number consists of eight (8) alphanumeric characters and correlates to the financing used to construct the property.

**What about off-site renewable energy sources? If my housing authority or property receives energy from one of these sources, should I include it in my response?**

No, this study only relates to **on-site** renewable energy systems. Although the concept of receiving energy from **off-site** renewable energy sources, such as: renewable energy retail power markets, renewable energy utility providers, and/or renewable energy certificates (RECs), has become very prominent in recent history, this type of renewable energy deliverance is not the focus of this research effort.

**Why is HUD interested in developing case studies?**

The Department is interested in highlighting the success and benefits that some agencies and properties have had with renewable energy systems. The case studies will provide technical and general information that will be of value and interest to the HUD housing stock, other federal/state/local agencies, and general public.

**If I complete the survey, will a case study be developed for my agency or property?**

No, completion of the survey will not automatically result in the development of a case study.

At the conclusion of this research effort, HUD will analyze the results and seek to find a diverse mix of agencies and properties that have installed renewable energy systems. All potential candidates will be first contacted and asked for their permission to develop a case study.

**Why is the study being completed in two phases?**

The two-phase approach for the administration of the survey was chosen so to minimize the overall burden placed on invited participants and increase response rate. It is anticipated that only a small percentage (~ 1%) of the HUD house stock will have installed renewable energy systems.

As previously mentioned, the initial phase will be a brief questionnaire that will be sent to all targeted participants and the second phase will be more in-depth and target the participants who specified that they have (or there is informal evidence that they have) installed renewable energy systems.