

STATEMENT OF PROJECT OBJECTIVES

212 Degrees Consulting, LLC, Las Vegas, NV.

Recovery Act: Demonstration project for deployment of alternative energy systems.

A. PROJECT OBJECTIVES

- Demonstrate the viability of wind turbine and solar cell generation systems within various urban environments, geographically located in areas conducive to solar and eolian technologies.
- The demonstration project will show that at least 35% of the energy used within the test area is self generated.

B. PROJECT SCOPE

- Architecture and hardware selection, coordination and selection of manufacturer and installer, verification of developmental and final processes for the installed hardware. Will design, write and execute entire the scope of work for project installation such that it meets the project objectives.
- Ensure generator selection, installation, site selection, evaluate effectiveness and perform system functioning and reliability tests.

C. TASKS TO BE PERFORMED

PHASE 1: Architecture and Selection of test hardware.

Task 1.0 Selection of project hardware.

The Company will develop the plan and scope of work for system, installation, monitoring, evaluation, of the key hardware components to demonstrate the efficiency and capability of urban deployment of wind and solar generators. Will choose hardware based on efficiency, reliability, cost, and aesthetics for a high density population.

- Consideration will be taken to select hardware that significantly reduces electricity costs.

Critical Milestone 1: The system performance will demonstrate and test to meet or exceed that manufacturer's specifications.

Critical Milestone 2: The Company will demonstrate that the hardware cost plus transportation, installation and maintenance represents a best value selection.

Task 2.0 Selection of Test and Demonstration Locations

- Locations will be selected from a variety of urban locations to demonstrate viability of generation or electricity in areas conducive to wind and solar systems.

Task 3.0 System Installation and Testing

- Complete transportation and installation plan. The design will satisfy OSHA requirements for hazardous materials and occupancy. The plan includes all the required safety measures including ventilation, waste, and safety.
- Ensure that the installation, use, maintenance, noise, and aesthetics of the system comply with all local, State, Tribal, and Federal law and regulation.
- Ensure compatibility and acceptance by primary transmission and distribution entity.

After assembly and fitting tests of all the hardware designed for this project, the Company will:

- Test the controls and functions.
- Test hardware performance such as generation performance in various weather, day/night, season, wind and overcast environments.
- Test Initial processes for film deposition rate, uniformity, minority carrier lifetime, resistance.
- Test film quality and identify the relationship between quality and process parameters such as temperature and gas flows.

Subtask 3.1 Measure and Monitor Energy Generation from all components at all times.

Subtask 3.2 Power Generation

Under this subtask the Company will monitor and maintain records of energy generate by systems and all subcomponents.

Critical Milestone 2: Complete initial tests and monitoring to show that the Company has an adequate record keeping and reporting system to prove the feasibility of achieving objectives.

Task 4 System Maintenance

The Company will maintain records on maintenance requirements, days and hours of down time, time and cost to repair. Costs will be itemized, documented and reported as both direct and indirect costs. The Company will report system reliability for all subcomponents.

Critical Milestone 3: The installation, repair, maintenance, and performance will show a best value.

Task 5. Preliminary Repeatability and Reliability Tests

Repeatability and reliability tests in various locations and environmental conditions.

Critical Milestone 3: Film properties meet specifications sufficient reduce processing time for quality wafers and establish repeatability confidence based upon tests of a large sample.

Task 6 Regulatory compliance and Subject Aesthetic Judgments

Document and vigilantly maintain compliance with all legal, zoning and regulatory requirements.

Establish metrics, document and report aesthetic factors associated with system deployment.

Task 7.0 Full Repeatability and Reliability Test, Product Release

The Company will have hardware and installation specialists available to meet the specifications below. The process will be repeatable. In these final tests test, the system will be run in continuous mode to establish mean time between failure (MTBF) parameters, and throughput.

Critical Milestone 4: Complete evaluation of the hardware for reliability, evaluation of the aesthetic and noise acceptance and demonstrate the system is cost efficient worthy and will meet cost targets for non-green house gas energy requirements. The project will demonstrate reliable, reasonable cost and publically acceptable alternative energy deployment in relatively dense population areas.

PHASE 4 Specific Process Development for Applications, Demo, and Beta Site Tests

Task 8.0 Select Demonstration Venues

The Company will select venues to install and demonstrate systems in a variety of environments.

Critical Milestone 5: Selection of experimental test sites.

Task 9.0 Beta Site Tests

The Company will complete extensive process tests for specific processes at beta sites to demonstrate reliability and repeatability.

Task 10.0 Project Management and Reporting

Reports and other deliverables will be provided in accordance with the requirements included in the grant, including the Federal Assistance Reporting. Company representatives will attend one program review meeting per year to present progress and results, and will provide a project summary for the solar energy Technologies Program Annual Report every year as requested.