

# SOLAR DECATHLON 2011

## Request for Proposals

### Amendment No. 2

RFP Issue Date: August 18, 2009

Amendment No. 1 Issue Date: November 3, 2009

Amendment No. 2 Issue Date: January 20, 2010

Conceptual Design Proposal Supplement Deadline: March 16, 2010, at 4 p.m. (Mountain Time)

This amendment to the Request for Proposals (RFP) is being issued to provide additional proposal evaluation requirements in the form of a conceptual design evaluation.

Technical Questions must be received in writing no later than 4 p.m. Mountain Time on February 11, 2009. (Please submit technical questions to [Jeffrey.Soltesz@nrel.gov](mailto:Jeffrey.Soltesz@nrel.gov))

**Notification of Intent to proceed:** To assist NREL in space planning for the conceptual design evaluation, each team is required to provide a written intent to proceed via email to Jeff Soltesz @ [Jeffrey.Soltesz@nrel.gov](mailto:Jeffrey.Soltesz@nrel.gov). This message should simply state whether your team intends to proceed in the competitive process, or your team intends to withdraw its proposal.

### **Conceptual Design Proposal Supplement Instructions**

The conceptual design shall include a tabletop display board presentation and scale model, as described below. The display board and scale model shall be presented anonymously such that the content shall not reveal the identity of the offerors or their specific location(s). Regional or climate indications of the conceptual design solution are appropriate.

#### Display Board Presentation

**Content Requirements:** The display board shall include graphics, e.g., sketches, drawings, diagrams, etc., and a one-page 500-word maximum narrative summarizing the most important elements of the conceptual design solution.

**Format Requirements:**

- The display board content, including the one-page narrative, shall be drawn directly on or mounted with secure adhesive to one 36 in. (91 cm) maximum tall by 48 in. (122 cm) maximum wide triptych display board that stands independently on a tabletop.
- The display board shall be made of foam core with a maximum thickness of 0.5 in. (1.3 cm). Display boards made of other materials, such as wood, metal, or glass, will be disqualified.

- No projections from the board are permitted. Three-dimensional work will not be accepted, but may be included as two-dimensional reproductions incorporated onto the display board.
- Entrants may use any presentation medium or combination of media that can be accommodated within the constraints of the above restrictions. However, unmounted or oversized material and electronic submissions will not be accepted.
- For identification, an unsealed envelope containing a sheet of paper with the offeror's name and address shall be firmly affixed to the back of the display board. The submitted display board becomes the property of NREL/DOE and will not be returned to entrants. The display boards of the 20 teams selected for participation in the Solar Decathlon 2011 shall be put on public display.
- The display board will be received, unwrapped, set up, and repacked for further shipment by others. Therefore, the combined weight of the display board and associated shipping materials shall not exceed 10 lb (4.5 kg) and the packing materials shall be easily reusable. Do not use loose-fill packing material.

### Scale Model

Content Requirements: The scale model shall include the primary dwelling structure and any accessory structures required to convey the conceptual design intent.

Format Requirements:

- The required scale of the model is 1:50.
- For identification, an unsealed envelope containing a sheet of paper with the offeror's name and address shall be firmly affixed to the bottom of the scale model. The submitted model becomes the property of NREL/DOE and will not be returned to entrants. The models of the 20 teams selected to participate in the Solar Decathlon 2011 shall be put on public display.
- The scale model will be received, unwrapped, set up, and repacked for further shipment by others. Therefore, the combined weight of the model and associated shipping materials shall not exceed 25 lb (11 kg) and the packing materials shall be easily reusable. Do not use loose-fill packing material.

### **Revisions to Attachment A, "Evaluation and Selection Process"**

- The note in the "Technical Innovation and Design" section has been deleted because a conceptual design is now required.
- **A fifth evaluation criterion, "Conceptual Design," has been added. This criterion is worth 25%. Therefore, the total of the five criteria is now 125%.** See below for the "Conceptual Design" sub-criteria:

25% **Conceptual Design**—The proposal demonstrates a net-zero energy house design at the conceptual design stage. The conceptual design communicates ideas, character, and forms of an architectural design including aesthetics, building envelope, and solar components. The design offers a sense of inspiration and delight. The design demonstrates a potential to benefit professional home builders.

## Revisions to Attachment E, “Statement of Work”

- In Section 1.0, the nominal “650 ft<sup>2</sup> (60.4 m<sup>2</sup>) to 1000 ft<sup>2</sup> (92.9 m<sup>2</sup>) finished floor areas” is changed to “600 ft<sup>2</sup> (55.7 m<sup>2</sup>) to 1000 ft<sup>2</sup> (92.9 m<sup>2</sup>) finished floor area.”
- The bulleted list of likely rule changes in Section 1.0 is replaced by the following:
  - Lot locations will be determined in a lottery conducted soon after the final selection of teams in April 2010. Therefore, for the conceptual design, consider the possibility that your project may be located on either the north or south side of Decathlete Way.
  - The total capacity of all PV and solar thermal collectors on a team’s site shall not exceed a maximum kW to be specified by the organizers as soon as possible.
  - The finished square footage, as defined by ANSI Z765-2003, “Square Footage—Method for Calculating,” shall be at least 600 ft<sup>2</sup> (55.7 m<sup>2</sup>), but shall not exceed 1000 ft<sup>2</sup> (92.9 m<sup>2</sup>).
  - The solar envelope dimensions will be as follows:
    - The maximum height of the solar envelope will remain 18 ft (5.5 m).
    - Lots will be 78 ft (23.8 m) east to west by 60 ft (18.3 m) north to south. In the past, lots were 82 ft (25.0 m) east to west by 67 ft (20.4 m) north to south (see Figure 1 in the SD2009 Rules).
    - The north and south planes of the solar envelope will be vertical, i.e., slope of 90 degrees from horizontal. In the past, the north plane sloped at about 47 degrees from horizontal.
    - The east and west planes of the solar envelope will have slopes of about 52 degrees from horizontal. In the past, the east and west planes of the solar envelope had slopes of about 48 degrees from horizontal.
- In Section 4.2, the words “in December 2009” have been deleted.
- In Section 5.0, the January 6 orientation teleconference has been rescheduled to April 14.
- In Section 5.0, the month of the first monthly teleconference has been changed from February to May.
- In Section 6.0, the deliverables schedule table is deleted and is replaced with the following:

## 6.0 DELIVERABLES

Due Date	Payment	Deliverable Name		Format	Comments
<b>PHASE I (\$50k total)</b>					
August 17, 2010	5%	Web Site		URL	<ul style="list-style-type: none"> <li>• Must be code compliant</li> <li>• Corrections and resubmittal due 14 days after receipt of reviewer comments</li> </ul>
November 23, 2010	10%	Design Development Phase	Building Information Model	Revit*	<ul style="list-style-type: none"> <li>• 80% design development</li> <li>• Corrections and resubmittal due 14 days after receipt of reviewer comments</li> </ul>
	20%		Drawings	DWF	
			Project Manual	PDF	
5%	Health and Safety Plan		PDF	<ul style="list-style-type: none"> <li>• Includes Project Manager's, Construction Manager's, and Health and Safety Officer's proof of recent OSHA 30-hour construction safety training</li> <li>• Corrections and resubmittal due 14 days after receipt of reviewer comments</li> </ul>	
January 4, 2011	5%	Virtual House Tour		3ds Max*	Must be presented by one or more student team members at the 2011 <a href="#">International Builders Show</a> in Orlando, FL
	5%	Physical Model		1:24 Model	
<b>PHASE II (\$50k total)</b>					
March 22, 2011	5%	Construction Documentation Phase	Building Information Model	Revit*	<ul style="list-style-type: none"> <li>• Must demonstrate code compliance and reflect final design</li> <li>• Corrections and resubmittal due 14 days after receipt of reviewer comments</li> </ul>
	20%		Drawings	DWF	
			Project Manual	PDF	
	5%	Stamped Structural Drawings		PDF	<ul style="list-style-type: none"> <li>• Must be suitable for submission to National Park Service and reflect final design</li> <li>• Corrections and resubmittal due 14 days after receipt of reviewer comments</li> </ul>
Stamped Structural Calculations		PDF			
April 26, 2011	5%	Project Summary		PDF	Corrections and resubmittal due 14 days after receipt of reviewer comments
June 30, 2011	5%	Public Exhibit Materials		PDF	Corrections and resubmittal due 14 days after receipt of reviewer comments
Fall 2011	5%	Disassembly		n/a	Safe, National Park Service-compliant disassembly of the project and complete, on-time removal of all equipment and project components from the competition site
November 22, 2011	5%	Final Report		PDF	Corrections and resubmittal due 14 days after receipt of reviewer comments

\* Autodesk Revit and Autodesk 3ds Max are the required design documentation and visualization tools to be used by all teams. The required versions of these software packages will be specified at a later date. Autodesk has made a verbal commitment to support teams by offering training at local Autodesk Authorized Training Centers. Training for other Autodesk products, such as Ecotect Analysis and Inventor, may also be offered.