LEXINGTON, Ky. — The task is to build an 800-square-foot house, but there’s one major catch. No electricity is allowed.

A team from the University of Kentucky is one of 20 chosen to compete in next year’s Solar Decathlon, a prestigious contest sponsored by the U.S. Department of Energy.

Students are required to build a home that not only runs entirely on solar energy but also is mobile — able to be transported to the National Mall in Washington, where they will be judged in fall 2009.

Greg Luhan, an associate dean for research at UK’s College of Design who is among three faculty members leading the effort, said the university’s entry could potentially involve hundreds of students from six colleges and 16 departments.

After all, this contest involves far more than engineering expertise. The houses will be judged in 10 areas, including architecture, market viability, hot water and comfort.

UK kicked off its project earlier this month by soliciting suggestions about how best to represent “native elements” that are useful to sustain development in Kentucky.

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