PHOENIX Business Journal

UP FRONT 3

OCTOBER 29, 2010

EnviroMission reaches power deal

BY PATRICK O'GRADY
pogrady@bizjournals.com

EnviroMission Inc. has finalized a deal for a utility to buy power from a 2,400-foot-tall solar tower the company plans to build in western Arizona by 2014.


Davey

The deal with the Southern California Public Power Authority was approved Oct. 21, but EnviroMission still must gain Arizona Corporation Commission approval, meet local permitting requirements and secure financing to build the 200-megawatt plant, said EnviroMission President Chris Davey.

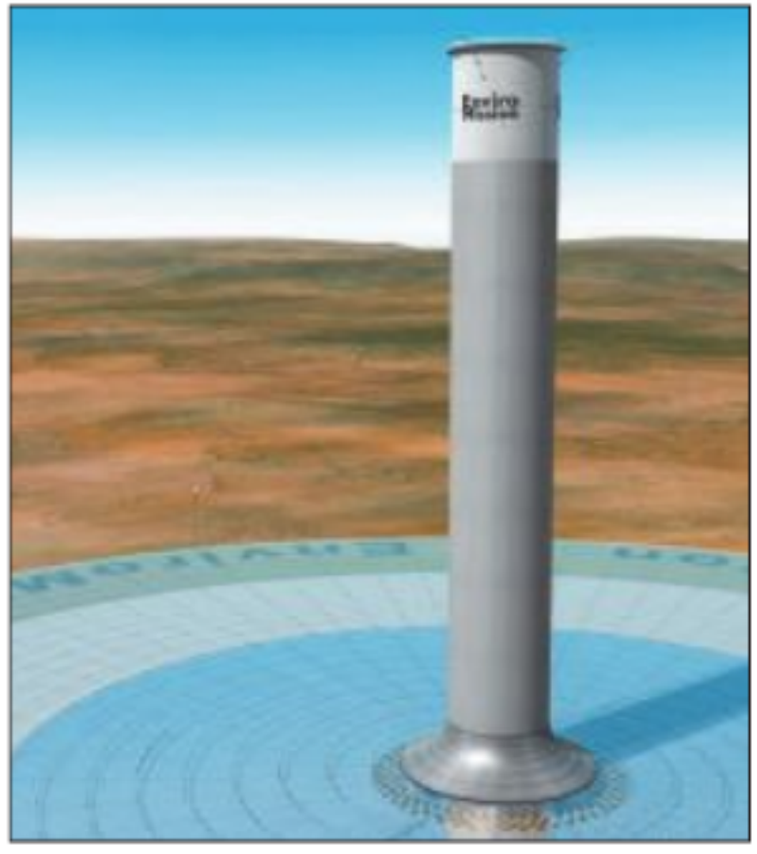
"All those development steps need to be done to move forward," he said.

The project, to be built between the towns of Parker and Quartzsite in La Paz County, will be equivalent to a 240-story building. SCPPA's approval provided something other large-scale solar providers have been lacking in recent months: a contract to sell their power to utilities.

Many utilities, including Arizona Public Service Co. and Salt River Project, have been shifting away from large concentrated solar projects and focusing instead on smaller photovoltaic projects.

EnviroMission, the U.S. subsidiary of Australia-based EnviroMission Ltd., had been selected as the top project in submissions to SCPPA, a joint operation of 11 municipal utilities with more than

SEE TOWER | 49


RENDERING PROVIDED BY ENVIROMISSION INC.

EnviroMission Inc. plans to build a 2,400-foot solar tower in western Arizona by 2014.

TOWER: Firm still needs ACC approval

FROM PAGE 3

2 million customers. In finalizing the deal, SCPPA Executive Director Bill Carnahan said the technology would allow the authority to buy power at competitive rates without using water — a plus in the solar industry.

The solar tower concept differs from other concentrated solar projects. A massive tower is surrounded by a huge greenhouse that traps air heated by the sun. That air is funneled up the tower at 35 mph past 32 wind turbines at its base, which generate the electricity.

EnviroMission now must wrap up work on financing, engineering and environmental studies required for projects on federal and state lands. The company already has started on those fronts and plans to bring in someone to finalize financing in the next 30 days as it starts lining up contractors, Davey said.

"From an execution perspective, it's really about delivering the power within the period we've agreed," he said.

The company also is finalizing the tower's cost, but Davey believes it will be lower than traditional solar plants. An early estimate of about $3 per watt, or $700 million total, still is possible. A comparable concentrated solar power plant would cost $1 billion or more. Davey said the company won't know final figures until engineering and design are complete.


Newman

The tower concept has drawn interest in Arizona because it doesn't use water. CSP power plants have been under scrutiny for their heavy use of water, which can be the greatest of all sources of power generation.

"The technology used by this 200-megawatt project is truly innovative as it uses no water, just hot air, to drive turbines," said Paul Newman, a member of the Arizona Corporation Commission. "The capacity factor is higher than solar PV and, if the project works as expected, could be just the kind of technology Arizona can benefit from."

The water issue was front and center last week when the commission approved a certification of environmental compatibility and grid connections for the Hualapai Valley Solar LLC project in Kingman. Although approved, it came with challenges to use treated sewage water instead of groundwater. It also must use a technology called dry cooling that limits water use in power production, but also lowers overall power production capability.

ACC Chairwoman Kris Mayes said water is an issue for all power producers, not just solar.

"I think it's pretty clear that large-scale utility projects moving forward should be dry-cooled and not using water," she said.

There are potential exceptions, Mayes said. For example, when agricultural land is adapted for solar uses, power plants would use less water than crops.