

# NEWS

## From GEORGIA TECH'S ENGINEERING EXPERIMENT STATION

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MIDDLE EAST MAY DEPEND

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ON U. S. PHOTOVOLTAIC TECHNOLOGY

For Immediate Release

ATLANTA, GA....America soon may have the technology to give Middle East oil producing nations a dose of their own medicine.

A Georgia Tech researcher believes the Arab World one day may depend on U. S. made photovoltaic solar cells to generate electric power.

"If this country maintains its current lead in photovoltaic development, we could some day have a potent lever for driving down oil prices," said Dr. J. Richard Williams, a Tech solar researcher and associate dean of the College of Engineering.

Photovoltaics are transistorized components which convert solar energy directly into electricity. Williams said technology is advancing so rapidly that photovoltaics may be a prime source for electric power in homes within ten years. But he thinks solar cells today are an attractive option in some underdeveloped countries, particularly those in the Middle East.

Arab oil producing nations are keenly aware that their petroleum reserves are beginning to run out. Most have started programs to develop solar energy for the 21st Century.

Photovoltaics are particularly attractive to these countries because the photovoltaic panels are produced primarily from glass and silicon, two materials manufactured from sand.

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"Sand and sunlight are among the most plentiful natural resources in the Arab world," Williams said. "Arab leaders are naturally enthusiastic about this opportunity."

Interest soon may translate into concrete action in one quarter. The country of Jordan is considering an opportunity to build a \$2 million plant powered by photovoltaics which would provide fresh water and electricity to desert areas of the country. Williams and Bill Sangster, dean of engineering at Georgia Tech, met with Jordan's Royal Scientific Society early this month to discuss the proposal.

Williams believes that photovoltaics are economical in remote areas, like the Jordanian desert, where other electrical systems do not now exist.

"It now costs less to set up photovoltaic panels in some isolated villages than to string power lines," he said.

Williams has studied photovoltaic needs in the Middle East firsthand and is involved with the Worldwide Photovoltaic Electrification Program sponsored by the U. S. Agency for International Development (USAID) and NASA. Through this project, he toured villages in Jordan, North Yemen, Sudan and Egypt last January and February.

Much of his enthusiasm about the future of photovoltaics is based on strides made by solar researchers in the field in the past 15 years. In this period, costs per peak watt hour have shrunk from nearly \$500 to around \$8.

"We're not even mass producing solar cells yet," he said. "That alone would get the price down to a couple of dollars a watt and maybe a dollar. Then, with a few technological breakthroughs, the cost could meet the Department of Energy's goal of 50 cents per peak watt for photovoltaics within the next five years."

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At that point, photovoltaic costs would be comparable to those required to produce nuclear power.

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