



Greenstar Solar Health Center

pilot installation at the Palestinian village of
Al-Kaabneh, West Bank

December 13-15, 1998

Press Release, Background Facts
Press photos and narrative

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Solar Energy Program Launched in the Palestinian Authority

[Al-Quds coverage of Greenstar Launch \(in Arabic\)](#)



ANNOUNCEMENT PRESS RELEASE For release at 1:00 am. EST, 12-14-98

WASHINGTON, DC; December 14, 1998: Greenstar Foundation, with the assistance of the U.S. Department of Energy, is sponsoring development of a solar-powered health center. The pilot installation of Greenstar components takes place today in the Palestinian village of Al-Kaabneh, near Hebron.

Michael North of Greenstar noted, "Our immediate aim is to put practical tools in the hands of the Palestinian people -- health, renewable energy, education, telecommunications, ecommerce -- to add momentum to the peace process in the Middle East."

Clean renewable energy technologies like these are being developed at U.S. Department of Energy National Laboratories across the country. The Energy Department's National Renewable Energy Lab is contributing its expertise for this project in the use of photovoltaic technology and its ability to support improved health care and sustainable development.

Greenstar Foundation is sponsoring the demonstration, along with a coalition of peace-minded organizations:

- The Palestinian Energy Authority will manage the program and has concluded support agreements with Mr. Audi Nasir Al-Najada, president of the Al-Kaabneh Village Council.
- The United Nations Development Program (UNDP) has committed to working with the Palestinian Energy Authority to support these efforts and will fund health care and education projects such as this in remote areas.
- A-S-E Americas is providing a large array of photovoltaic cells to power the components with up to 20 kilowatt-hours of electricity per day, which include a solar-powered ultraviolet water purifier, a vaccine cooler, and a digital cellular antenna for access to data networks.
- Global Health Initiatives is providing a public health database, and support for a future demonstration of telemedicine.

"A lot of useful research has been done on the complex interrelations between energy, health, economics and peace," noted Jock Gill, former Director of Special Projects, Office of Media Affairs at The White House. "Greenstar embodies some of those ideas -- that clean, renewable energy can be harnessed to serve basic local needs like health care."

A touchscreen from MicroTouch will be added later to allow for controlled public access to the Web, and an ecommerce server will allow the village of Al-Kaabneh to establish its own site on the Web, to promote and sell local products on the international market. A telemedicine system will enable doctors anywhere in the world to work with doctors in Al-Kaabneh over a two-way video link on the Internet.

Dr. Charles Gay, President and CEO of A-S-E Americas and former head of the National Renewable Energy Lab, is on hand to personally supervise the installation. From Jerusalem, he commented, "Greenstar uses advanced technology to build the health and education of Palestinians. It's American know-how used to empower people to build a healthy society."

And Dr. Michael McDonald, president of Global Health Initiatives and expert in telemedicine, added, "GreenStar will serve the health of the Palestinian people in three vital ways: with practical information for individuals and families, with assistance to doctors and clinics, and with tools for the whole community to work together to promote health. GHI is pleased to be part of this effort."

More detail is available online, at <http://www.greenstar.org>.

Dr. Omer Kittaneh, Director General of the Palestinian Energy Authority, will be at Al-Kaabneh today, signing agreements with village authorities and supervising the initial installation. He said, "We are looking forward to developing our relationship with the U.S. Department of Energy, and to the positive results of President Clinton's historic visit this week, which will strengthen the friendship between Palestinians and Americans."

"With solar power in Al-Kaabneh, we will be able to supply the school and the clinic with the electricity for lighting and operating small appliances (school radio amplifier, recorder, TV, computer, copying machine and refrigerator). In these small, practical steps, the seeds of peace are sown."

In addition to being the Energy Department's lead national laboratory for the research and development of renewable energy, NREL works directly with local and national governments around the world to encourage the use of clean, sustainable energy sources.

Greenstar Foundation is a non-profit organization committed to bringing solar power, telemedicine, distance learning, electronic commerce, manufacturing and agricultural support services to developing countries, and to all places where a centralized electrical power grid is not available. Its primary current program is production of the Greenstar Solar Health Center. The Foundation's mission is to install advanced technology to further the goals of peace and economic independence.

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Note: The initial press event will take place on 12/14/98 at 8:30 AM, local time, at the Headquarters of the Palestinian Energy Authority, Alersal Building, Alersal Street, Ramallah, on the West Bank.

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Greenstar Pressroom

Greenstar Middle East Pilot Installation

background press information and FAQ
(Frequently Asked Questions)

updated 12-15-98



■ What is unique about this event, and about the Greenstar installation at Al-Kaabneh?

The installation of components of Greenstar in the village of Al-Kaabneh marks a number of "firsts" in the combination of solar energy and allied technologies.

- This will be the first combination of solar and wireless, real-time, two-way communications for a rural population, aimed at improving the quality of life and at local wealth creation.
- It will be the first solar-powered wireless communication link that uses the Internet to network a rural population to urban areas, and to international sites.
- It marks introduction of the global "Greenstar" brand, which is characterized by the use of clean, renewable energy to generate local revenues, and concentrates on producing economic independence as opposed to fostering a dependence on international aid.



First-day installation photos from Al-Kaabneh. [Click on the photos](#) to see detail, and get reproduction-quality images.

■ Where is Al-Kaabneh? What is it like, and who lives there?

The town is located within Hebron District, about 40 km. southeast of the city of Hebron, 15 km. east of Yatta. 120 houses are distributed right and left of an asphalt street, 10 km in length. Most houses are built adjacent to each other in small groups of five homes. Drinking water comes from a cement storage tank. The inhabitants earn their living through raising cattle, tending herds of sheep and goats, and in growing wheat and barley; some residents also work in nearby Israeli settlements.

Al-Kaabneh has about 2000 residents; there are 86 children attending a small elementary school. The village at present has no electricity, and no running water, and there are no plans to bring conventional electric service to the town.

The settlement is also referred to as Arab Al-Kaabneh and Arab Kaabneh. [See the attached map.](#)

■ Where will Greenstar be installed, specifically? Who will run it?

The system will be installed on the grounds of the school and clinic, which are about 50 feet apart. The water purifier is being installed in the school for the children's drinking water; the vaccine refrigerator will be used by the clinic. There is a teacher in the school to operate the computer and internet communications set-up.

Ongoing operations support is being funded by the United Nations Development Programme. Local logistics and management will come from the Palestinian Energy Authority, and from the village authorities themselves; a written agreement on sharing of responsibilities has been signed by the PEA and the President of the Al-Kaabneh village council.



Photos taken on the day of installation. [Click on the photos](#) to see detail, and get reproduction-quality images.

■ How much electrical power will be produced by the solar array? Is it enough for the whole village?

20 kilowatt-hours per day of electricity will be produced by the pilot Greenstar solar array. This is the amount of power used by an average American urban home. It is more than one month's electricity for a rural home. The power from Greenstar will be shared among several systems used by the entire community of Al-Kaabneh, including a water purifier, vaccine cooler, a digital cellular antenna for access to data networks, a radio amplifier, recorder, TV, computer, fax and copying machine.

This pilot installation is not intended to supply the basic electrical needs of the population. To accomplish this, according to an October 1998 study by the Palestinian Energy Authority and EcoPeace, a total of 80 kilowatt-hours would be required.

■ Are there other Palestinian villages similar to Al-Kaabneh, which may also need Greenstar solar centers?

According to a study by the Palestinian Energy Authority and EcoPeace in October 1998, titled "Middle East Solar Energy Zone Project, a Scientific, Economic and Sociological Feasibility Study", there are more than 75 villages, towns and settlements in the West Bank, ranging in population from under 100 to 10,000, which currently have no regular electrical power from a public utility. They are identified as possible beneficiaries of solar power; the total affected population would be more than 80,000 people. [See the attached chart for details.](#)

The study was conducted by Mr. Ghalib Shanti - Solar Energy Engineer and Dr. Marwan Mahrnoud of the Renewable Energy Research Center, chartered by the Palestinian Hydrology Group, Shu'fat-Jerusalem.



Photos taken on the day of installation. [Click on the photos](#) to see detail, and get reproduction-quality images.

■ What's next for Greenstar?

The next Greenstar installation is planned for India (where systems have been ordered, and scheduled for delivery in spring, 1999). The group also plans to investigate how Greenstar may serve "First Nation" peoples in the US Southwest and Alaska, and may provide assistance in the ongoing recovery from Hurricane Mitch in Central America.

In February, 1999, preliminary results of the Al-Kaabneh pilot will be announced by the Palestinian Energy Authority, the United Nations Development Programme and Greenstar.



Photos taken on the day of installation. [Click on the photos](#) to see detail, and get reproduction-quality images.

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جريدة يومية سياسية تأسست سنة ١٩٥١

JERUSALEM - Tuesday, 15 December 1998, No 10529

إقامة وحدة توليد كهرباء شمسية في قرية عرب الكعابنة

رام الله - موسى الريماوي - بدأت أمس الاجراءات الأولية لإقامة وحدة توليد كهربائية تعمل بالطاقة الشمسية في قرية عرب الكعابنة جنوب الخليل. وذكر الدكتور عمر كتانة مدير عام سلطة الطاقة الفلسطينية ان الوحدة التي ستقام بالتعاون مع ادارة الطاقة الامريكية ومؤسسة جريستال الامريكية ستوفر الطاقة الكهربائية اللازمة لاضاءة مدرسة وعيادة القرية الصحية وتشغيل الاجهزة الكهربائية الضرورية.

وأضاف ان هذه الوحدة هي جزء من مشروع أوسع يهدف الى كهرية القرى والتجمعات السكانية النائية التي تفتقر لخدمات الكهرباء بواسطة الطاقة الشمسية وطاقة الرياح خاصة وان فلسطين تتمتع بمعدل عال من الاشعاع الشمسي معظم أيام السنة، الأمر الذي يشجع على استخدام الطاقة الشمسية.

وقال كتانة انه سيكون هناك تعاون مستقبلي بيننا وبين ادارة الطاقة الامريكية للاستفادة من تجربتهم في تطوير استخدام مصادر الطاقة المتجددة.

وقد أكد ميشيل نورث من مؤسسة جريستال أن هذا المشروع المشترك يهدف الى تمكين الشعب الفلسطيني من الاستفادة من التقنية الحديثة الخاصة بالطاقة المتجددة في تطوير الرعاية الصحية والتربية والتعليم وخدمات الاتصال في الريف الفلسطيني مما يساهم في تعزيز عملية السلام في الشرق الاوسط.

وقال وان ديشير السكرتير المساعد لاضراض الطاقة المتجددة أن مختبر الطاقة المتجددة الوطني طور تكنولوجيا الطاقة المتجددة لتلائم تطوير الخدمات في المجتمع المحلي. وأكد ان ادارة الطاقة الامريكية ومختبر الطاقة المتجددة يعملون على استكشاف المجالات التي يمكن ان تساهم فيها المؤسسة في دعم وتطوير برامجها في الشرق الاوسط. هذا وسيقوم د. تشارلز جي الرئيس السابق لمختبر الطاقة المتجددة بالاشراف على تركيب الوحدة، بينما ستقوم سلطة الطاقة بالتعاون مع المجلس القروي في عرب الكعابنة بالاشراف على تشغيل الوحدة.

Greenstar Solar Health Center

Initial installation photos, December 13-14, 1998; all taken at the village of Al-Kaabneh, on the West Bank near Hebron.



A student carries part of a photovoltaic solar panel array to the installation at his school, in Al-Kaabneh on the West Bank.



Audi Nasir Al-Najada, President of the Al-Kaabneh Village Council, carrying part of an ultraviolet water purifier to be installed at the local school.



Young men at Al-Kaabneh on the West Bank unload a solar-powered ultraviolet water purifier, which will be used to bring clean water to the village school and clinic.



Students with the school principal and President of the Village Council, Mr. Audi Nasir Al-Najada. He said the solar power system will open new horizons for not only the children but for the entire village community.



Mr. Al-Najada, the President of the Al-Kaabneh Village Council, and Mr. Ahmad Abu-Sabha of the Palestinian Energy Authority, examine papers regarding the management of the system.



Inspecting part of the new school solar array is Mr. Mahmoud Al-Magada (left). He commented that this solar power plant is the fulfillment of a great dream held by the Village Council for leaping into the 21st Century at full speed.



Students sing a song to dedicate Greenstar. Mr. Mohamed Salem (left), a teacher at the village school, said that Greenstar can open new horizons around the world, and that it's important for students at remote schools to have access to the interaction of the Internet.



The team of men and teenagers at the village of Al-Kaabneh on the West Bank, after unloading all the Greenstar Solar Health Center equipment.



There are 86 students at the school in Al-Kaabneh. At the opening of Greenstar, every one had a chance to learn about solar power and how it works.



The school and clinic at Al-Kaabneh will have electricity for the first time, powering a water purifier, a vaccine cooler, and other important medical and educational equipment.



Mr. Abdul Aziz, a medical specialist from the Palestinian Authority, spoke at a village meeting. He said that Greenstar is an opportunity to reverse the decline in water quality and access to electric power in the region over the past 25 years.



A new day for students in the remote village of Al-Kaabneh. With Greenstar, their school has electricity, a computer, and a connection to the Internet for the first time ever.



Dr. Omer Kittaneh (right), Director General of the Palestinian Energy Authority, greets the people of Al-Kaabneh. He is accompanied by Dr. Fuad Abulfotuh of ASE Americas (center), the company which supplies the photovoltaic cells used in Greenstar.



Dr. Charles Gay (left) of Greenstar congratulates Dr. Omer Kittaneh, Director General of the Palestinian Energy Authority. Kittaneh echoed Israeli leaders, saying that the best guarantee of security comes from a stable economy. Greenstar will connect the Palestinian economy with global markets through the Web -- so it builds the foundation of both economic and political security.



Mr. Mousa Abul-Sabha of the Palestinian Legislative Council spoke at the Greenstar launch on the same day that President Clinton visited the Council session in Gaza. He said that Greenstar could be a great new starting point for U.S.-Palestinian relations, and promised to provide the first photocopying machine to the village of Al-Kaabneh.



Two key employees of the Palestinian Energy Authority, Mr. Faried and Ms. Rula Bader, show how a solar panel works for people at Al-Kaabneh. The new Greenstar photovoltaic solar array will generate 20 kilowatt-hours of power per day, enough to supply key services for both a school and clinic.