



COMMUNITY
ENERGY
TECHNOLOGY
IN THE MIDDLE EAST



2012 Annual Report





IN THE MIDDLE EAST

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Comet-ME is an Israeli-Palestinian organization providing basic energy services to off-grid communities using environmentally and socially sustainable methods. We facilitate social and economic empowerment of some of the poorest and most marginalized communities in the Occupied Palestinian Territories through installation of renewable energy systems (wind and solar), capacity building and reliable maintenance.

Our work developed out of long-lasting relationships and commitment to the marginalized Palestinian communities in South Mount Hebron. Initially a voluntary initiative, Comet-ME carried out its first installations in 2006, and formally incorporated in Israel as a public benefit company in September 2009. Today, we are a vertically integrated utility, providing basic energy services to more than 20 communities encompassing over 1,400 people. Comet-ME is currently the leading provider of sustainable rural electrification services in the region. We are committed to providing basic energy services to all off-grid Palestinian communities in South Mount Hebron.

The following report reviews what we have accomplished through 2012, our principles, methodologies, and plans for the future.



0/2 Who we are

Founders

Elad Orian

Noam Dotan

Project manager

Ala Qawasmi

Community

liaison

Ezra Nawi

Technicians

Wasim al-Jabari

Jalal al-Tamimi

Field
coordinators

Krikor Hagopian

Organizational
development

Aya Shoshan

Financial
management

Hadar Gafni

Board of
directors

Dr. Dan Rabinowitz

Dr. Danielle Shani

Libby Lenkinsi

Yossi Mosel

Yoav Lahan

We work in an area called Masafer Yatta, home to several thousands Palestinian farmers and shepherds living in caves and tents. Often referred to as the 'cave-dwellers', they subsist on non-mechanized agriculture and herding. The region is arid (an average annual rainfall of less than 150mm, and drought in recent years) which makes survival a difficult task.

Israeli military occupation makes matters even worse. Most of the region is defined as "Area C" in the Israeli-Palestinian Interim Agreement, meaning that Israeli authorities possess full military and civil control. Neither Israel nor the Palestinian Authority provide these communities with basic services or infrastructure. Jewish settlements in the region, some of which considered illegal by the Israeli government, enjoy modern water, sewage and electricity infrastructure, while the Palestinian communities adjacent to them suffer recurring harassments, demolitions and violence at the hands of settlers and soldiers.

The poverty and marginalization of these communities is a product of the political situation more than geography or the economy. Our work is motivated by the desire to alleviate the unnecessary suffering imposed on these communities by conflict and political violence.

In the Media

The
Guardian

theguardian

Palestinians prepare to lose the solar panels that provide a lifeline

March 14



"Comet-ME is an Israeli NGO trying to circumvent these crippling restrictions on Palestinian development by harnessing Hebron's abundant natural energy sources - wind and sun.

In technical terms it's do-able, but it depends on Israeli policies," says Elad Orian, Comet ME's founder. "Power is a human right, like housing and education" he says.



Technology is knowledge and knowledge is power. We recognize that in highly technological projects such as ours, knowledge dissemination is an integral part of community empowerment. We therefore base our work on three core principles.

Community participation

We consider the communities we serve as both partners and clients. We invest in direct and long-term contact with the residents, and we use a work model that is based on substantial and meaningful community participation and ownership at every stage of the process.

Open source

All technological details of our systems are available in the public domain. Our partnership strategy extends to a global network of practitioners. Sharing our experience with global partners, such as Engineers Without Borders, Wind Empowerment association, and the UN Sustainable Energy for All Practitioner Network, creates a uniquely short loop of technology development and implementation. Lessons learned in South Mount Hebron can serve communities in Africa; developments made in student labs in the U.S. can find their way to the field within weeks.

Local sourcing

Comet-ME procures inputs from local manufacturers whenever possible. Most of the installation materials are purchased from suppliers in Yatta, Hebron and Ramallah. Building the wind turbines ourselves is a central aspect of our work. By developing the knowledge and practice in the field of renewable energy we invest in local technological infrastructure.

We apply this principle to human resources as well. Comet-ME trains and employs Palestinian electricians from Hebron, who also train local community members in basic maintenance and diagnostics. We develop a local knowledge base that serves as a source for future development.

In the Media

Der Spiegel

SPIEGEL ONLINE

Tilting at Windmills: Palestinian Villages May Soon Go Dark Once Again

February 16



"The women here no longer have to make their butter by hand; they can refrigerate the sheep's cheese, which is their livelihood; and their children can do their homework at night. Now they can sit together and watch TV - and connect to a world that seems far removed from their lives on the edge of the Judean Desert. It is but a small revolution, achieved at little cost. But it is a good example of successful development aid."



2012 ACTIVITIES OVERVIEW

The Comet-ME

Center for Appropriate Technologies

In December we celebrated the inauguration of our new center for renewable energy in South Mount Hebron, together with friends, partners, and community members. This was a major milestone as it marks a new stage in our activity and in our relationship with the local communities.

The center is located inside one of the communities we work with. The renovated structure will serve as our base of operations, training and volunteer facility, workshop and warehouse, and as a development center for appropriate rural development technologies. Its purpose is to provide a space for people to come together and work out concrete solutions that can be implemented on the ground.

In the sustainable spirit of Comet-ME, our center is completely environmentally friendly and energy independent. We use only green energy sources, consume self-collected rainwater and recycle it for irrigation, and use non-polluting olive refuse as heating fuel.

Reestablishing Hope and Solidarity:

Comet-ME Volunteer Day
November 2012



In the middle of the tense and difficult period during operation Pillar of Defense, Comet-ME brought a group of more than 70 Palestinian, Israeli and international volunteers together in South Mount Hebron to help renovate our new center for appropriate technologies. Together, we built the center's fruit tree garden, painted walls and windows, and coated cave walls with eco-friendly mud mixture. Despite the discouraging political atmosphere, the volunteer day was a great success, demonstrating one of Comet-ME's fundamental principles - that joint concrete work can reestablish hope and solidarity even in the hardest moments.





Installations

In 2012 we completed new installations in four communities. All four communities are located inside an area designated by Israel as 918 military firing zone, in Area C of the West Bank. Israel is seeking to displace these communities from their land and establish a military zone in their place. The communities are fighting the decision in the High Court of Justice. A decision is expected during 2013. In choosing the communities for installation, priority was given to the communities facing the most severe hardship due to occupation and political violence.

Comet-ME currently provides renewable energy services to 21 communities encompassing more than 1,400 people.

Installations in 2012

COMMUNITY	Beneficiaries	Rated Solar Power (kW)	Avg. Daily production (kWh)
<i>Fakhit</i>	30	3.8	19
<i>Mak'urat Fakhit</i>	15	1.7	8.4
<i>Tabban</i>	50	5	25
<i>Mak'urat Tabban</i>	15	1.7	8.4
Total	110	12.2	60.5

Total Install Base 2012

COMMUNITY	Beneficiaries	Solar panels	Wind turbines	Total Rated Power (kW)	Avg. Daily production (kWh)
21	1442	332	10	65.68	283.825



Upgrades

Comet-ME is committed to providing high quality long-term reliable service. As time passes and communities grow, there is a need to expand the capacity of the systems to match new consumption levels. This year we implemented system upgrades in six communities, increasing battery capacity, adding solar panels, upgrading equipment quality standards, and laying cables to new households.

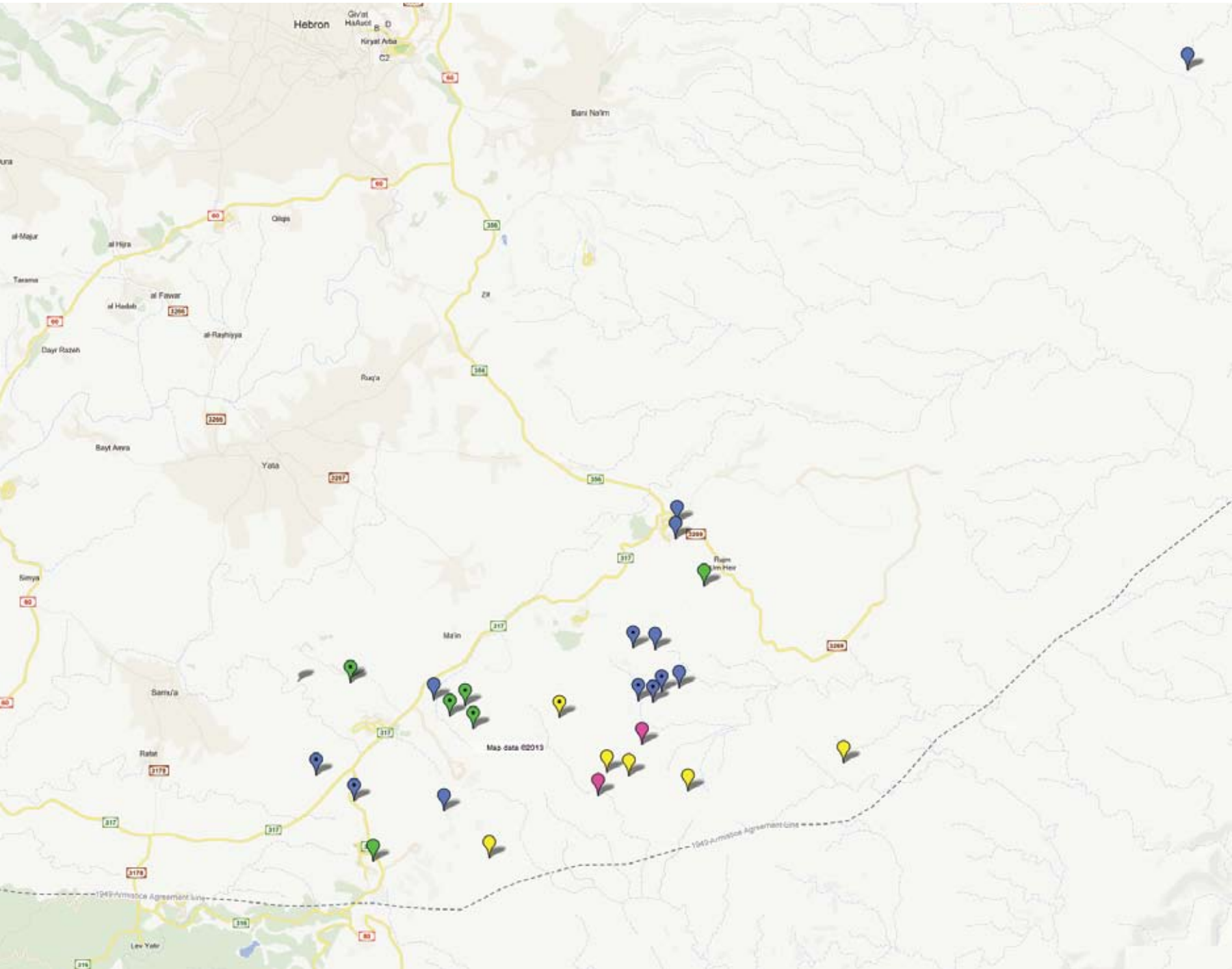
Community Survey

Comet-ME is committed to providing renewable energy services to all off-grid communities in South Mount Hebron. As we expand our install base and plan our future activities, we also invest in mapping and surveying off-grid communities in the southern parts of the West Bank. This year we conducted a detailed mapping and needs survey in the Yatta and Bethlehem areas, with the goal of facilitating the selection of locations for next projects and the advancement of future work.



Tuba // Tomer Appelbaum

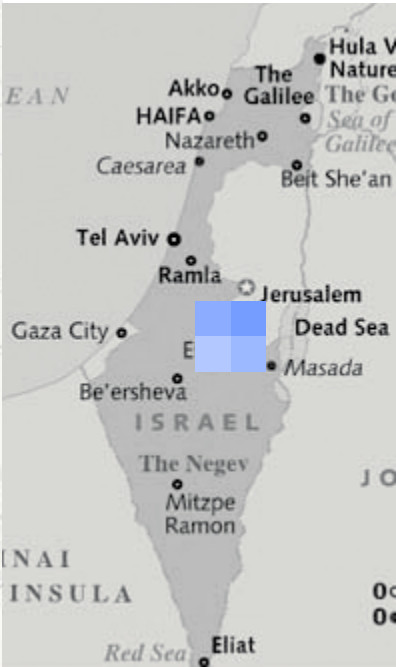
Map of installations



Map Legend:

- Prior to 2010
- 2010
- 2011
- 2012
- Surveyed in 2010
- Hybrid wind-solar
- Solar only

[South Mount Hebron region >>](#)



Fighting Threat of Demolitions: A Political Rather than Technical Barrier

This year, Israeli authorities issued, for the first time, demolition orders to nine of our systems. More than 1,000 people depend on these systems for livelihood, lighting and refrigeration.

Demolition orders and lack of permitting in Area C, which encompasses 62% of West Bank territory and is under full Israeli control, are not a technical matter, but a direct result of Israeli political agenda. The bureaucratic procedures utilized by Israeli authorities to impede development projects such as ours are part of a larger policy aimed at pressuring rural communities in Area C to relocate into Palestinian urban centers in Areas A and B, thus securing Israeli demographic dominance in the only remaining open areas of the West Bank. This is part of an Israeli policy of setting facts on the ground without negotiation.

Like all Palestinians in Area C, the residents of the South Hebron Hills are subject to Israeli military rule, which is separate from the civil legal system that applies within Israel proper. They do not possess political and civil rights within the legal system that was imposed upon them. The Israeli intention to demolish the renewable energy systems serves as further proof that Israel is not interested in allowing these communities to live a decent life on their land.

Comet-ME has invested extensive resources in fighting the threat of demolitions and reaching a sustainable long-term solution for the communities of South Mount Hebron. Through legal action, diplomatic outreach and a public campaign, and with the invaluable help of our friends from Medico International and the Federal Republic of Germany's Foreign Office, who sponsored the lion's share of the projects, we have temporarily succeeded in holding back the execution of the demolitions.

In the Media

AP



Palestinian Village Faces Demolition by Israel

June 20



"Israel could encounter an international complication: Several European countries, with traditional Israel ally Germany in the lead, have funded solar panels, wind turbines and wells to make life in area villages more bearable. A diplomatic incident may loom.

The Israeli group that installed the panels, Comet-ME, said demolition orders or their precursors, stop-work orders, have been issued against nine of their 18 sites, including Susiya. The group is providing electricity to 1,300 Palestinians in the area."



Legal action

Photo // Comet-ME and Bimkom preparing legal documentation together with the residents



Comet-ME has hired expert human rights lawyers to represent the case against the demolitions in the court. We have been working closely with our lawyers in following all necessary legal steps to ensure that the threat of demolitions will be removed and that the communities can continue enjoying clean and reliable energy services in their homes. We also enhanced our cooperation with Bimkom, the Association for Civil Rights in Israel and Rabbis for Human Rights, all of whom have been working tirelessly for many years on preventing demolitions in the region.

In the Media

The New York
Review of Books

The New York
Review of Books

Israel in Peril

June 6



"The immediate change in the quality of life in this harsh region was dramatic; my friend Ali Awwad from Tuba, proudly turning on a light bulb in the cave he inhabits, said to me, "For the first time in my life, I feel like a complete human being." Can these minimal infrastructures, entirely benevolent in intention and effect, funded mainly by European donors at the level of hundreds of thousands of euros, constitute a threat of any sort to Israel?"



Diplomatic outreach



International awareness and pressure is crucial in order to prevent the demolitions from happening and enabling Comet-ME to continue its work. Throughout the year, Comet-ME has organized and participated in dozens of visits of diplomatic delegations seeking to understand the situation on the ground. In May, we participated in a tour organized by B'Tselem for representatives of European missions. In August, Elad Orian presented to a group of high-level European officials as part of a tour organized by Breaking the Silence which included the participation of Salam Fayyad. In November, we hosted a delegation of European parliament members in our project in Sha'eb el Buttom. Additionally, we have conducted meetings with dozens of diplomatic missions including the U.S. Consulate in Jerusalem.



Left / Salam Fayyad hearing from Comet's Noam Dotan about the advantages of the solar system in Susya // Right / Elad Orian speaking to high level diplomats in Susya // Guy Butavia

Public campaign



Photo //
Elad Orian speaking to students
in the University of Pennsylvania
during a J Street U event

Legal and diplomatic work cannot succeed without strong public backing abroad. Throughout the year, Comet-ME has worked intensively to bring the issue of demolitions of renewable energy systems to the awareness of a global audience. Using both traditional and new media, we have reached tens of thousands throughout the world.

More than twenty news stories were published in leading media outlets such as the New York Times, the Guardian, Der Spiegel, BBC, and Israeli Channel 2. Using online tools, we issued a letter campaign to the Israeli Defense Minister demanding the removal of the demolition orders. We also partnered with J Street U and issued a call for concerned Americans to sign a petition delivered to Israeli Ambassador Michael Oren. In September, Elad Orian went on a U.S. tour where he met with students and policy-makers. Additionally, we joined an Oxfam Novib media initiative bringing together more than thirty international organizations to take coordinated media action for the protection of rights of communities in South Mount Hebron.

In the Media

Ha'aretz

HA'ARETZ

Israel demolishes West Bank village as Jewish outposts remain untouched

June 6



"The next target of the Civil Administration (which, of course, carries out the government's policies) in Tha'lah and nearby villages are renewable energy installations - wind turbines and solar panels that two good Israelis, Noam Dotan and Elad Orian, members of Comet (Community, Energy and Technology in the Middle East), set up for them."

AWARDS AND SPECIAL EVENTS

Energy Globe Award



One of the most prestigious international environmental awards today, the Energy Globe presents successful sustainable projects to a global audience. The Award distinguishes the best projects in five categories: earth, fire, water, air and youth. Comet-ME was selected as a finalist in the category fire and was represented by Ala Qawasmi at the award ceremony in Vienna in August.

Global South-South Development Expo



A UN-led initiative, the Expo showcases successful Southern-grown development solutions to address the Millennium Development Goals. Comet-ME was selected to present its work to a global audience at the week-long event in November in the Royal Palace in Vienna, and was represented by Aya Shoshan.

Photo / @Xinhua

Clinton Global Initiative



For the third consecutive year, Comet-ME has been selected to participate in the Clinton Global Initiative Annual Meeting in New York in September. Represented by Elad Orian, Comet-ME showcased its work on venue walls.



Sustainable Energy for All



This year, Comet-ME joined the UN Sustainable Energy for All Practitioner Network, working to make sustainable energy for all a reality by 2030. While 2012 was declared as the Year of Sustainable Energy for All, the UN General Assembly in December declared 2014-2024 as the Decade of Sustainable Energy for All. Comet-ME is thrilled to take part in the global effort to make universal energy access a reality.



FUTURE OUTLOOK

As a leading rural electrification provider with a growing number of installations, Comet-ME's plan for 2013 focuses on continuing our legal action and public campaign to support work on the ground, and installing new systems in communities prioritized in our 2012 community survey. Additionally, Comet-ME plans to initiate a pilot water project aimed at developing a community-level water solution that ensures reliable, sustainable and clean water supply for entire communities. This solution will be based on collection of runoff water, pumping, filtering and a community distribution system.







THANK YOU

Comet-ME is grateful for all the local and international donors, partners, research institutions and individuals who have made our work possible through support, advice, and collaboration.



Federal Republic of Germany
Irish Aid
New Zealand Foreign Office



Medico International
Swedish Postcode Foundation
Rockefeller Brothers Fund
Swiss Olive Oil Campaign
Center for Emerging Futures
Dan Church Aid
IPCRI
Clinton Global Initiative



Bernard Amedai and EWB international
EWB Denmark
EWB Princeton
EWB Technion
Hugh Piggott and Scoraig Wind
Wind empowerment association
Superwind Inc.



Bimkom
Association for Civil Rights in Israel
Rabbis for Human Rights
Breaking the Silence

INVITATION

Our work is made possible through the generous donations of our friends and partners. Please consider supporting our work by making a [donation](#).



. . . GET INVOLVED

Comet-ME is always looking for supporters, partners and volunteers.

Please get in touch at info@comet-me.org

For more information visit our website www.comet-me.org

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