

Flash Report

**PLUNDERING THE SUN:
THE ISRAELI SOLAR ENERGY
INDUSTRY AND PALESTINIAN
FORCED DISPLACEMENT**

MAY 2018

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Methodology

This report is based on both desk and field research, as well as research conducted for the in depth report “Greenwashing the Israeli Occupation: The Solar Energy Industry and the Israeli Occupation” and the flash report “Greenwashing the Naqab: The Israeli Industry of Solar Energy” published by Who Profits in February 2017. Desk research includes collection and analysis of information from various public sources, such as company records and publications, public tenders, documents of the Israeli Registrar of Companies of the Ministry of Justice, newspapers and other media sources, archives of photography agencies and publications by various state authorities (including Israeli government ministries). The field research consisted of visits to commercial solar fields generating solar energy in Area C. Prior to publication, Who Profits contacted all the companies mentioned in this report and requested their comments and responses. Newly identified companies, as well as, companies included in the previous reports were contacted in 2017. Who Profits received only four responses from all companies identified: [SolarEdge](#), an Israeli-based multinational company, on 1 September 2016; [PADCON](#), a German-based company, on 10 October 2016; [ABB Group](#), a publicly traded Swedish-Swiss multinational corporation, on 30 November 2017; and on February 2018, Arava Power, a private Israeli company, also sent a written response to Who Profits. The full statements of all companies can be found in appendix I, appendix II, appendix III and appendix VI (respectively).

Introduction

The global demand for electricity is constantly rising, and with it – awareness of the irre-

versible ecological damage caused by using limited natural resources (oil and gas) for its production. This awareness has raised interest in generating electricity from renewable and non-polluting sources, also known as green energy.¹ Israel follows this trend and plans to generate 10% of its energy from solar power by 2020, backed by domestic and international corporations.

For this endeavor, Israel uses swaths of land in the Naqab (Negev) desert in southern Israel and in Area C of the occupied West Bank. Israel’s complete control over these two areas, with their vast lands, intense sunlight and scarce population, renders them ideal for the Israeli solar project. However, in the Palestinian context, even access to the sun has become political and carries extensive implications for Palestinian communities on both sides of the Green Line.

Palestinian communities living in these resource-rich areas bear the brunt of Israel’s brutal militaristic and discriminatory and economic marginalization policies. The majority of their Palestinian residents are deliberately left with no connection to the national Israeli electricity grid – the only electricity grid covering both Israel and the occupied Palestinian territory (oPt).

In this flash report, we look at how the fruits of Israel’s flourishing green industry are not only denied to Palestinian communities in the occupied West Bank and Palestinians living in unrecognized villages in the Naqab, but they are gained at their expense, leading to further dispossession and land annexation and contributing to their impover-

1 International Energy Agency, [Technology Roadmap: Solar Photovoltaic Energy](#), 2014, p. 9.

ishment and forced displacement.

The report provides further evidence to support the assertion made by Natalie Grove, a representative of the Office of the United Nations High Commissioner for Human Rights (OHCHR), that the Israeli policies in Area C create a “highly coercive environment that forces [Palestinians] to leave.”² These policies ultimately seek to clear the land of its people and further entrench the settlement enterprise in the occupied West Bank.³ For Palestinians living in unrecognized villages, the displacement from their ancestral land to make way for Jewish-only towns, commercial centers and military facilities is an official state policy⁴

Faced with no alternative and despite the considerable risk, some communities try to install solar panels to provide basic electricity needs. In contrast to Israeli solar panel fields, armed with the latest technologies and lavishly funded by the government and private companies, the Palestinian off-grid, community solar panels are small and often sponsored by international and local donors. However, their modest size and crucial role in sustaining life has not stopped Israeli authorities from confiscating and demolishing them.

In this flash report, we will first outline Israel’s booming solar energy industry, which is supported by state policies and financial incentives for corporations. We will review

2 Tovah Lazaroff, “[UN: Israeli Policies Forcing Palestinian to Leave Area C of the West Bank](#),” Jerusalem Post, 27 July 2016.

3 B’Tselem, [Acting the Landlord: Israel’s Policy in Area C, the West Bank](#), June 2013.

4 Adalah – The Legal Center for Arab Minority Rights in Israel, [Position Paper on Praver II](#), January 2017.

specific policies incentivizing investment for commercial and residential solar fields in both the Naqab and Area C. In both places, communities are deliberately marginalized and un-electrified, contributing to the coercive environment that leads to forced displacement. In section 4, concerning systematic un-electrification and dispossession, the report will demonstrate that while the overall strategy of marginalization and displacement is common in both areas, it is implemented using different mechanisms.

Finally, the report reveals Israeli and international corporate agents who support Israel’s political objectives, in violation of international law, whilst reaping immense financial gain. We will note the entry of four additional international corporations – [ABB Group](#), [SMA Solar Technology](#), [PGR Drive Technologies](#) and [Ja Solar Holdings](#) – since Who Profits’ previous reports on this area. Who Profits documented the involvement of 18 Israeli and international corporations in selected solar fields. In Area C, Who Profits documented the commercial involvement of seven Israeli and eight international companies. In the Naqab, where the Israeli solar energy industry was first launched, Who Profits examined some of the biggest solar fields and documented the involvement of four Israeli and four international companies. This flash report will also demonstrate the involvement of two international corporations, [Volvo Group](#) and [Fassi](#), in the confiscation of Palestinian solar panels installed with the aid and financing of non-governmental organizations.

“Going Green” Israeli Style

Israel’s determination to develop its renewable energy sector was described by Prime Minister Benjamin Netanyahu as “a national

goal of the highest importance because the addiction to oil has led to the Western world to being dependent on the oil-producing countries and harms the standing and security of the State of Israel.”⁵

The Israeli government has implemented several policies to promote the green electricity industry and entice international and Israeli corporations to invest in it. In January 2009, Government Resolution No. 4450 set a target for the generation of 5% of Israel’s electricity needs from renewable energy sources by 2014 and 10% by 2020, amounting to no less than 250 megawatts (MW) per year between 2010 and 2020.⁶ The resolution declared the Naqab and the Arava area, south of the Dead Sea, as “national priority areas for renewable energy sources.”⁷ To reach that goal, in 2010 the government approved a plan to invest USD 600 million over the next decade, particularly to encourage green construction and the development of innovative technologies.⁸

Since then, the Israeli solar energy industry has been thriving and domestic and international corporations have been reaping huge profits. By the end of 2016, the Israeli Electricity Authority (IEA) licensed and regulated solar energy projects in Israel and the oPt with a capacity of over 800 MW, all connected to the national electricity grid. According to the

IEA, photovoltaic systems – energy systems that rely on solar panels to generate electricity – were expected to generate approximately USD 450 million in electricity payments in 2016.⁹

In 2016, the Israeli government passed Resolution No. 1403, reinforcing Israel’s commitment to incentivize investment in green energy production and recommitting to grant an accelerated 20% tax depreciation on solar systems for the first three years.¹⁰ This applies to both private and commercial solar systems, but only those connected to the national Israeli electricity grid.

In March 2017, the IEA announced its intention to publish tenders for the generation of 1,000 MW of solar electricity over the following two years.¹¹ The first tender was for the generation of 235 MW of solar electricity. Energix, EDF and Shikun & Binui Renewable Energy were among the winning bidders.¹² These corporations are already making a profit from their involvement in constructing and providing services to solar fields in the Naqab and the occupied West Bank.

In addition to government subsidies, companies investing in the Israeli market enjoy significant tax exemptions as “benefited en-

5 Israeli Prime Minister’s Office, “[Cabinet Discusses National Plan to Reduce Dependence on Petroleum for Transportation](#),” September 2010.

6 Israeli Ministry of National Infrastructures, [Policy on the Integration of Renewable Energy Sources into the Israeli Electricity Sector](#), February 2010.

7 Ibid., p. 29.

8 The Associated Press, “[Israel Focuses Its Energy on Clean Technologies](#),” Jerusalem Post, 5 January 2011.

9 The Electricity Authority, “[Arrangements of Photovoltaic Structures in Israel – Installed Quantities, Prices and Annual Payments](#)” (Hebrew), 31 August 2015.

10 Israeli Prime Minister’s Office, “[National Plan to Implement Goals to Reduce Greenhouse Gases and Increase Energy Efficiency](#)” (Hebrew), 10 April 2016.

11 The Electricity Authority, “[Winners of the Electricity Authority’s First Huge Tender for Construction of Solar Electricity Generation Facilities Selected](#)” (Hebrew), 20 March 2017.

12 Ibid.

terprises” under the Law for the Encouragement of Capital Investment (hereinafter: Investment Law).¹³ While the Investment Law does not currently apply to Israeli industries in the West Bank, benefits have been granted through alternative government decisions and administrative arrangements.¹⁴ Since it is more complicated to apply tax benefits to an entire area in which Israeli law does not apply, the government decided to amend the Income Tax Order with regard to Israeli individuals (illegal settlers) in the West Bank.¹⁵ In June 2016, the Knesset passed Amendment No. 226, stipulating that Israeli residents of the West Bank, who are eligible for benefits under the Investment Law, will receive similar income tax benefits.¹⁶

The Investment Law was further amended in 2001 to incentivize corporate investment in the Naqab. The amendment allows – by offering investment grants, tax exemptions and generous loans to companies that establish factories in certain peripheral areas. According to Article 40(C), the investment grant provided by the State can reach up to 30% of the expenses – the highest rate offered under this law – when building a factory in the Naqab.¹⁷

Israel’s active encouragement of Israeli and international private investments in the solar

energy industry has brought a swift liberalization of the market and a proliferation of corporate actors. The Ketura Sun solar field, one of the first and largest commercial solar fields to be built in the Naqab, produces 4.9 MW of electricity.¹⁸ It is situated in the Hevel Eilot Regional Council, which covers approximately 13% of Israel’s land area and is populated by less than 5,000 people, only about 0.05% of Israel’s population.¹⁹ The construction of solar fields creates jobs (by some estimates 100 jobs per MW)²⁰ and provides incentives to individuals and families to move to the area – thereby helping to advance Israel’s first Prime Minister, Ben-Gurion’s dream of populating the Naqab with Jewish citizens.

According to Who Profits’ findings, at present there are six major solar fields in the Naqab. Together, these fields take up 2.1 square kilometers of land (210 hectares or about 520 acres) and generate 224.5 MW of green electricity²¹ for the benefit of neighboring kibbutzim and towns, while communities inhabited by the majority of the Naqab’s Palestinian population remain un-electrified and impoverished.

13 [Law for the Encouragement of Capital Investment](#), 1959 (Hebrew). See Article 51(a) on benefited enterprises, which was added in Amendment No. 60 (2005).

14 The Social Guard, “[Proposed Amendment to the Income Tax Order \(No. 226\)](#)” (Hebrew), hamishmar.org.il, 28 August 2016.

15 Ibid.

16 [Amendment to the Income Tax Order \(No. 226\), 2016](#) (Hebrew).

17 [Law for the Encouragement of Capital Investment](#), 1959 (Hebrew). Amendment No. 51 (2001)

18 Who Profits, [Greenwashing the Naqab: The Israeli Industry of Solar Energy](#), February 2017.

19 Hevel Eilot Regional Council, “[Geographic Review](#)” (Hebrew), eilot.org.il.

20 Arava Power Company, “[Solar Energy: Arava Power, realizing a Zionist dream](#)”, (Hebrew), Youtube

21 According to Who Profits’ findings, the Ketura Sun solar field takes up 8 hectares of land and generates 5 MW of electricity; Ramat Hovav takes up 48.5 hectares of land and generates 37.5 MW; Ashalim takes up 75 hectares of land and generates 121 MW; Zmorot takes up 60 hectares of land and generates 50 MW; Sde Boker takes up 9 hectares of land and generates 5 MW; and Hazerim takes up 10 hectares of land and generates 6 MW.



The Netiv Hagdud solar field, Jordan Valley, occupied West Bank | October 2017 | Photo by Who Profits

In the West Bank, the first medium-sized commercial solar field was constructed in 2015, in the settlement of Netiv Hagdud in the occupied Jordan Valley. The field occupies 5 hectares of Palestinian land and generates 4 MW of electricity.²² Its establishment was possible only after the Israeli government cemented its support for the development of solar energy fields in the oPt by becoming a financial guarantor for projects there. The government's involvement helped to overcome the Israeli banks' initial reluctance to provide loans for solar fields in the West Bank, fearing that Israel will withdraw from this area in the future and their investment will be lost.²³

There are currently four Israeli commercial solar fields in the West Bank: three in the Jordan Valley and one in the South Hebron

Hills.²⁴ Together they take up around 400,000 square kilometers (40 hectares or about 100 acres) of occupied Palestinian land and generate around 24.8 MW of green electricity.²⁵

The list of profiteers from the construction of these commercial solar fields in the oPt also extends to the Israeli Civil Administration (hereinafter: ICA), an arm of the Israeli military that controls and administers Area C of the occupied West Bank. Corporate bodies must get approval from the ICA and pay royalties to it before constructing solar fields in the oPt. In 2016, through a freedom of infor-

22 Who Profits, [Greenwashing the Occupation: The Solar Energy Industry and the Israeli Occupation](#), January 2017, p. 29.

23 Yedidya Ben Or, "First Solar Farm in Judea and Samaria" (Hebrew), *Arutz 7*, 26 April 2015.

24 There is one additional commercial solar field in the oPt, in the settlement of Petza'el, but it only generates 630 kW and therefore was not significant enough to document.

25 According to Who Profits' findings, the commercial solar fields of Kalia (10.8 MW), Netiv Hagdud (4 MW) and Shadmot Mehola (5 MW) have taken up to 28.5-30 hectares of land in the Jordan Valley, with prospects of future expansion. The Meitarim solar field (5 MW), situated in the Shim'a/Meitarim Industrial Zone in the South Hebron Hills, occupies up to 10 hectares of Palestinian land.

mation request, Who Profits learned that the corporate owners of the four commercial solar fields in the West Bank paid a combined amount of NIS 9,750,491 (approximately USD 2,760,000) in royalties to the ICA.²⁶

In addition to corporate and state beneficiaries, Israel's growing renewable energy indus-



ty to the Palestinian Authority).²⁷ The IEC buys solar-based electricity at a price that is four times that of regular electricity, from both commercial and residential systems.²⁸

In the oPt, a specific outline plan was issued by the ICA to ensure that settlers will be able to install and profit from residential solar



Settler homes in Shadmot Mehola and Netiv Hagdud, Jordan Valley, occupied West Bank | October 2017 | Photos by Who Profits

try is generating profit for Israeli citizens on both sides of the Green Line. If the residential solar system produces electricity in excess of consumption, the surplus electricity can be sold to the Israel Electric Corporation (IEC). The IEC, a government-owned public company, is one of the largest companies in Israel, with revenues of NIS 23,370 million in 2017 (NIS 1,613 of which through sales of electrici-

systems. In December 2011, the ICA issued Regional Outline Plan 55/1, a planning document for photovoltaic facilities in the West Bank.²⁹ The approval of this outline plan in 2011 ushered in a new era for solar systems in settlements. According to the organization Bimkom – Planners for Planning Rights, the outline plan introduced solar power systems

26 Kalia Clean Energy, which owns the Kalia solar field, paid NIS 4,302,424 in royalties to the ICA; Orot Netiv Hagdud, which owns the Netiv Hagdud solar field, paid NIS 901,762 in royalties to the ICA; Energy Sde Ilan 2010, which owns the Shadmot Mehola solar field, paid NIS 2,195,777 in royalties to the ICA; Energix and the Company for the Development of South Hebron, which own the Meitarim solar field, paid NIS 4,326,128 in royalties to the ICA. The full response from the ICA can be found in appendix VI of this report.

27 The Israeli Electric Corporation Ltd., [Annual Report 2017](#), 31 December 2017, p. 23.

28 In June 2008, the Electricity Authority passed regulations to incentivize the installation of residential photovoltaic systems. The regulations state that the price of solar-based electricity will be NIS 2.04 per unit (kWh), four times that of regular electricity, which is estimated at less than NIS 0.5 per unit. See: Solar Israel, "[The Price of Electricity](#)" (Hebrew), [solar-israel.co.il](#).

29 Israel Planning Administration, Regional Outline Plan (Judea and Samaria) 55/1, document on file with Who Profits.

in a regulated manner and ensured the connectivity of settlement residential systems to the grid, something that had not been previously available to Israeli settlers.³⁰ The connection to the Israeli grid not only ensures

solar panels documented were installed on every available space on residential rooftops (see photos), and in the Kalia settlement on chicken coops and cow sheds.



The Kalia settlement, Jordan Valley, occupied West Bank | October 2017 | Photo by Who Profits

that settlements and settlers have a regular supply of electricity, but also that they can profit from generating green electricity. This serves as a direct financial incentive, granting Israeli settlers the opportunity to profit from the use of occupied land and the sun that shines on it, whilst nearby Palestinians continue to struggle without electricity and the basic rights associated with it.

During a field research tour in October 2017, Who Profits documented solar panels installed on residential rooftops in the settlements of Kalia, Netiv Hagdud, Shadmot Meholá and Petza'el in the Jordan Valley.³¹ The

Systematic Un-Electrification and Dispossession

In stark contrast to Israel's boosting of its own solar industry, it utilizes its planning and zoning regime to strangle Palestinian natural growth, economic development and ability to develop green systems. The threat of property demolitions constantly looms over every aspect of life in Area C of the West Bank and in unrecognized villages in the Naqab. The systematic denial of building permits creates unrelenting pressure on Palestinians to abandon their lands and livelihoods and is at the

30 An interview with Bimkom representatives, conducted by Who Profits on 2 November 2016.

31 These four settlements are given as an example, and it is not suggested that solar panel

installation is limited to them. They are specifically mentioned because they were visited by Who Profits during a field research tour.

core of Israel's long-term plan for land grabs and annexation.

The Palestinian communities in Area C and the Naqab live in close proximity to thriving Jewish settlements, kibbutzim and towns that enjoy an uninterrupted flow of electricity. With no electricity network to provide them with light and with heating or cooling, the Palestinians are either forced to leave or left to survive on limited diesel-generated electricity. Diesel generators are notoriously expensive (the fuel can cost 100 dollars a day), unreliable, noisy and environmentally unfriendly.³² The exorbitant cost means that they can only be used for a few hours a day.

The Naqab: Industrialization and Impoverishment

In the Naqab, the flourishing solar energy industry and corporate involvement in it are part of Israel's ongoing industrialization, urbanization and resettlement plan. This plan is founded on the dispossession, economic de-development and forced displacement of the Naqab's Palestinian Bedouin community. Although Israel's focus on the Naqab region was recently intensified, the plan to displace its Bedouin community and populate the area with Jewish citizens has long been a declared policy, dating back to the establishment of the Israeli state and its first Prime Minister's goal to "make the desert bloom."

This process was to be carried out by state bodies such as the Negev Development Authority, an operational arm of the Ministry for the Development of the Periphery, Negev and Galilee, established in 1991. The Authority

32 Anne-Marie O'Connor, "[This Palestinian Village Had Solar Power Until Israeli Soldiers Took It Away](#)", The Washington Post, 7 July 2017.

carries out government decisions to incentivize resettlement of the Naqab by Jewish citizens, enhanced by the industrialization of the area³³ and forced displacement of the Bedouin population to "free up" the land.

The Naqab is a 13,000 square kilometer, semi-arid land area in southern Israel and home to some 200,000 Palestinian Bedouins. Before the establishment of the Israeli state in 1948, the Naqab was populated by an estimated 65,000-90,000 Palestinians who had owned land, settled and farmed the Naqab for centuries. Following Israel's establishment, 80-85% of the Naqab's population were expelled and became refugees; their land was appropriated and transferred to Israel's Development Authority and Land Administration.³⁴

The remaining 11,000 were placed under martial law until 1966, along with other Palestinians who remained within Israel's borders. Two thirds of the Palestinian communities in the Naqab were forcibly removed from their ancestral lands and confined to a territory called the siyag (restricted area), located in the northeastern Naqab, which represented only 10% of the land they had controlled before 1948.³⁵

The Naqab is about 60% of historical Palestine's total land area and critical to the Zionist project, which meant its indigenous population was perceived as an obstacle. In a letter

33 The Ministry of Construction and Housing, "[The National Strategic Plan for the Development of the Negev](#)", (Hebrew), [moch.gov.il](#).

34 Ismael Abu-Saad, "[Introduction: State Rule and Indigenous Resistance An Introduction: State Rule and Indigenous Resistance among Al Naqab Bedouin Arabs](#)", HAGAR Studies in Culture, Polity and Identities Vol. 8 (2), 2008, p. 3.

35 *Ibid.*, p. 3-4.

to his son, Israel's first Prime Minister David Ben-Gurion wrote in 1937: "Negev land is reserved for Jewish citizens, whenever and wherever they want... We must expel Arabs and take their places... And if we have to use force, then we have force at our disposal, not in order to dispossess the Arabs of Al Naqab, and transfer them, but in order to guarantee our own right to settle in those places."³⁶

Between 1969 and 1989, seven Bedouin townships were established as part of Israel's colonization process and attempt to "solve" what it considers "the Bedouin problem." The residents "were promised services in exchange for renouncing their claims to ancestral lands."³⁷ Moving to the townships would strip Bedouin of their traditional livelihoods as herders and farmers. About half of the Naqab's Bedouin population moved into these state planned townships and the rest remained in 46 villages, only 11 of which have been "recognized" by Israeli authorities over the years. Despite the fact that some of the unrecognized villages predate the establishment of the Israeli state and all predate the first master plan in the 1960s, they were not included in it and therefore denied services, paved roads, public transportation, connection to the water and electricity networks and waste management. This, despite the fact that the residents have Israeli citizenship and are taxpayers.

Under Israel's 1965 Planning and Building Law, any construction in these villages is illegal and no permits are granted.³⁸ Currently, approxi-

mately 70,000 Bedouin citizens of Israel who live in these unrecognized villages are considered by Israel as trespassers on their land.³⁹ Amendment No. 116 to the Law, which was passed by the Knesset in 2017, imposes penalties even on businesses that sell materials to be used for construction without a building permit.⁴⁰ This amendment terrorizes Israel's Palestinian citizens' who own builder supply businesses and forces them to act on behalf of the State. The lack of residential building permits means it is impossible to obtain a permit to install solar panels in the unrecognized villages, which as noted above are not connected to the national electricity grid.

Today, the Naqab's 200,000 Palestinian Bedouins living in recognized and unrecognized towns and villages are among the poorest and most vulnerable groups in Israel, ranking at the bottom of the socioeconomic ladder and with the highest rates of unemployment. The 2016 Poverty Index, published by the National Insurance Institute of Israel, showed that nearly 70% of the Bedouin children in the Naqab live in poverty.⁴¹ The chronic electrici-

recognized villages. Already existing structures will not be demolished, but new ones cannot be built and communities have not been connected to the national water or electricity grid.

39 Adalah – The Legal Center for Arab Minority Rights in Israel, [From Al-Araqib to Susiya: The Forced Displacement of Palestinians on Both Sides of the Green Line](#), May 2013.

40 Qasim al-Bakri, ["The Naqab: Authorities Prevent the Sale of Building Materials to Unrecognized Villages"](#) (Arabic), arab48.com, 26 November 2017.

41 National Insurance Institute of Israel, [2016: Poverty Rates and Social Gaps](#) (Hebrew), December 2017, p. 21. See also: Maya Aiden, ["1.8 Million People Below the Poverty Line, More Working Families Are Poor"](#) (Hebrew), Channel 10 News, 6 December 2017. In the same year, the Bedouin townships in the Naqab ranked highest in the national unemployment index, with Arara

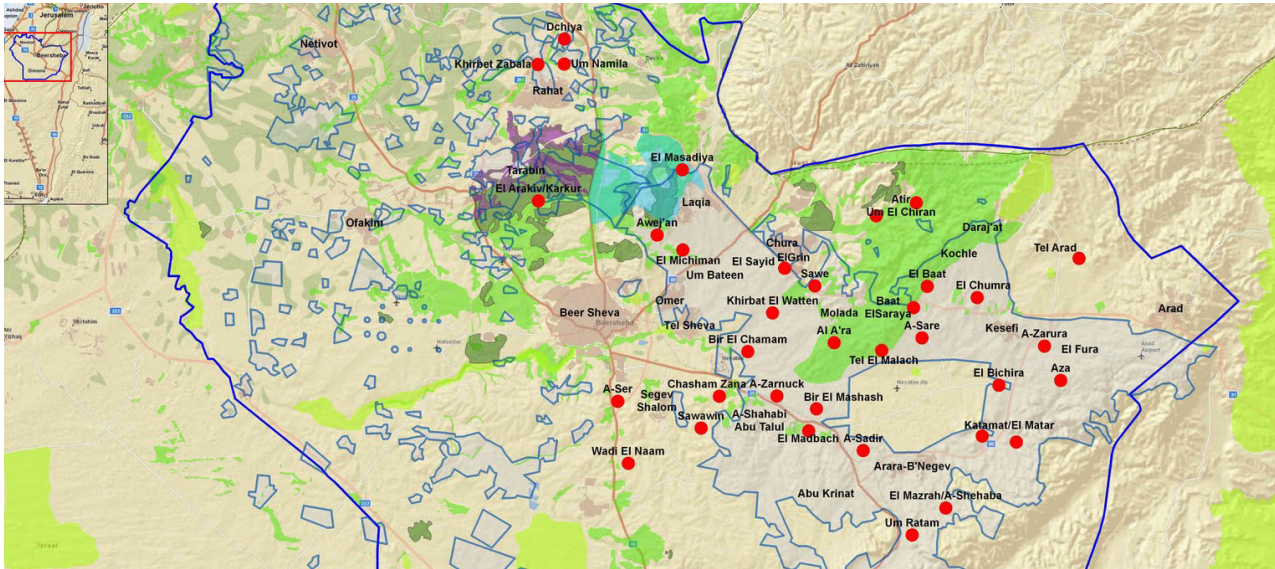
36 Ibid., p. 5.

37 Pekka Hakala, ["Forced Displacement Looms for Bedouins in the Negev,"](#) Directorate-General for External Policies of the European Union, 8 October 2012, p. 1

38 This also applies to some of the recently

ty crisis, due to Israel’s discriminatory policies in the Naqab, prevents economic growth and impedes the long-term development of Palestinian Bedouin communities.

using [Volvo Group](#) machinery. On the first day of August 2017, Al-Arakib was demolished for the 111th time,⁴³ and an Israeli court ordered the residents to pay NIS 262,000 (approx-



A Map of the Naqab’s unrecognized villages | Map by Bimkom – Planners for Planning Rights

Although forced displacement has been an ongoing reality for Bedouin communities, it was accelerated after September 2011, when the Israeli government approved the “Prawer-Begin Plan.” This plan included the destruction of all unrecognized communities and the forced displacement of nearly 90,000 people. In the face of international outcry and local resistance,⁴² the Israeli Knesset froze the plan in 2013.

Despite the official freezing of the Prawer Plan, in practice the demolitions and forced displacement in the Naqab were never halted. One of the most prominent cases is that of the Al-Arakib village, where a wave of demolitions started in 2010 during which two solar panels were destroyed by the Israeli police

mately USD 74,000) in demolition costs and an additional NIS 100,000 (~USD 28,000) for the expenses of the state’s lawyer.⁴⁴

Demolitions and forced displacements have been implemented using extreme force and police violence, for example in the unrecognized village of Umm al-Hiran, where residents are being displaced in order to build an exclusively Jewish town called Hiran. On 18 January 2017, one of the village residents, Yacoub Abu al-Qiyan, was shot dead during a pre-dawn raid by hundreds of police officers. The lethal attack left the community traumatized and terrified of an imminent expulsion.⁴⁵

first (25.3%), then Kseifee (20.8%) and Lakiya and Tel Sheva (around 16%). The national unemployment rate in 2016 stood at 4.8%.

42 Ben White, “[Fighting New Nakba in the Negev](#),” Al Jazeera, 17 July 2013.

43 Negev Coexistence Forum for Civil Equality, “[Al-ʿArāḡīb – List of Demolitions Since 2010](#),” dukium.org.

44 Almog Ben Zikri, “[Israeli Court Orders Bedouin to Reimburse State for Cost of Demolishing Their Homes](#),” Haaretz, 22 August 2017.

45 Jonathan Cook, “[In Umm el-Hiran It Is ‘a Continuing Nakba’](#),” Al Jazeera, 22 January 2017.



The demolition of a residential solar panel in the village of Umm al-Hiran, the Naqab | 13 January 2017 | Photo by Activestills

Demolitions in the Naqab villages are carried out using heavy machinery and are often accompanied by units from the Israeli police force. For example, in Umm al-Hiran stand-alone solar panels were destroyed using [Volvo Group](#) heavy machinery, as part of wider demolitions in the village.

[Volvo Group](#) heavy machinery was also documented demolishing homes in the recognized village of Kuhla (Kuhlih) on 26 February 2014, including the destruction of solar panels. Although Kuhla was recognised in 1992, it has not been connected to the national electricity grid and its residents are not permitted to build any new structures.⁴⁶ This deliberate de-development of the village aims to displace residents, despite the fact that they privately own the land.

For the Naqab's impoverished, off-grid communities, solar panels may be the only source

for a reliable and consistent supply of electricity. Many residents take the risk; despite the exorbitant cost of installing solar systems (off-grid communities are not eligible for state subsidies that reduce the cost of purchasing and installing residential solar systems).

Who Profits spoke to Rateb Abu Qrinat, who lives in the village of Abu Qrinat and installed six solar panels, 12 batteries and one distributor in his home.⁴⁷ The system cost Abu Qrinat NIS 15,000 (~USD 4,300) and generates electricity sufficient only for the operation of a television, fridge and washing machine. Despite the risks and high price, he considers solar panels to be “an environmentally friendly solution for the generation of electricity, which made life easier for us and are much more reliable than the generators we used to use in the past.”

According to Human Rights Watch, “Israe-

46 Haanet, [“Video and Pictuers: The Demolition of Two Homes in Kuhla – Abu Rbaia Rendering 21 people in the Open”](#), (Arabic), Haanet.co.il, 21 October 2007.

47 Abu Qrinat village is a recognized village. However, the residents are not allowed to build structures and only the community's school was connected to the national electricity grid.



Demolition of homes and solar panels in the village of Kuhla, the Naqab | 26 February 2014 | Photo by Activestills

li policies have created a situation whereby tens of thousands of Bedouin citizens in the Negev have little or no alternative but to live in ramshackle villages and build illegally in order to meet their most basic shelter needs.”⁴⁸ Adalah noted that this policy is deliberate and seeks to “encourage” the Arab Bedouin citizens to give up their ancestral land.⁴⁹

While Israel forcibly displaces and impoverishes its Palestinian Bedouin citizens, it continues to actively invest in populating the Naqab with its Jewish citizens and razes Bedouin villages like Umm al-Hiran to build Jewish-only towns. In order to encourage Jewish citizens to live in the Naqab, Israel grants incentives that include an income tax reduction of up to 24% for those living in “national priority locations” (military personnel receive an additional 5% reduction) and financial support for

buying houses and setting up businesses.⁵⁰

Israel’s discrimination against its Bedouin citizens is amplified by the allocation of large areas of land exclusively to Jewish citizens, for the establishment of private farms (known as havot bodedim, “individual farms”). According to Human Rights Watch, in 2008 there were about 59 such farms in the Naqab, “covering more than 81,000 dunams of land, which is greater than the total land mass that the State granted to the seven Bedouin townships housing around 85,000 people.”⁵¹ These farms are often built before securing building permits and local authorities connect them to the grid regardless of that.

According to statements by Israeli officials, in the coming decades the Naqab will see rapid economic changes. In 2014, the Israeli government announced a plan to establish

48 Human Rights Watch, [Off the Map: Land and Housing Rights Violations in Israel’s Unrecognized Bedouin Villages](#), March 2008, p. 2.

49 Adalah – The Legal Center for Arab Minority Rights in Israel, [The Inequality Report: The Palestinian Arab Minority in Israel, March 2011](#).

50 The Ministry for the Development of the Periphery, the Negev and the Galilee, [“Benefits”](#) (Hebrew), [negev-galil.gov.il](#).

51 Human Rights Watch, [Off the Map](#), supra note 47, p. 33.

22 new towns in the Naqab – only 7 of which are designated for Bedouins – and to increase the Naqab’s population by 1.2 million people by 2035.⁵² Amounts exceeding NIS 30 billion (~USD 8.5 billion) have been earmarked for investment by governmental and private entities into industrial, military and civil projects in the area,⁵³ and a new complex of military training bases, expected to be the third-largest population center in the Naqab, is already operational as part of a multiyear, massive relocation of Israeli army facilities to this region.⁵⁴

Area C: Land Grab and Forced Displacement

In Area C of the occupied West Bank, particularly in the Jordan Valley, where the Israeli solar energy industry is rapidly expanding, the connection between this booming industry, dispossession and forced displacement mirrors the Naqab, but is even more immediate and stark. In this area, the solar energy industry comes as an added layer to a brutal military occupation, ongoing land grab and the exploitation of agriculture and natural resources – creating a devastating reality for the Palestinian population.

The Jordan Valley accounts for some 28.5% of the West Bank’s area. It has been a longstanding target of Israel’s exploitation of Palestinian natural resources. Immediately after the occupation of the West Bank and Jerusalem in the 1967 War, Major General Uzi Narkiss

issued two military orders: Order 150, which regulated “absentee properties” in the Jordan Valley; and Order 151, which declared much of the Jordan Valley as a closed military zone, preventing “absentee Palestinian landowners,” even if present, from reaching their lands.⁵⁵ Those lands are a closed military zone to this day.

The colonization of the Jordan Valley began almost immediately after the war, with 21 settlements established in the first ten years. Later on, the government has encouraged Jewish citizens to move to Jordan Valley settlements with subsidies and incentives amounting to millions of shekels.⁵⁶ By 2012 there were approximately 9,500 illegal settlers living in 37 settlements in the Jordan Valley, and 87% of its territory was designated as Area C and prohibited for Palestinian use.⁵⁷

Under the 1993 Oslo Accords, in Area C Israel controls both security and all land-related civil matters, including land allocation, planning, construction and infrastructure. According to the United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA) there are some 300,000 Palestinians living in 532 residential areas located partially or fully in Area C,⁵⁸ and approximately 60,000 of them

52 Hilla Tzion, “[Plan: Increasing the Negev Population by One Million People](#)” (Hebrew), Ynet, 14 November 2014.

53 Who Profits, [Greenwashing the Naqab](#), *supra note 18*.

54 Meirav Arlosoroff, “[Israel to Issue Bonds to Pay for Mass Army Relocation](#),” Haaretz, 2 April 2014.

55 Hillel Cohen, [The Present Absentee: Palestinian Refugees in Israel Since 1948](#) (Arabic translation), Institute for Palestine Studies, 2003, p. 85.

56 Oxfam International, [On the Brink: Israeli Settlements and Their Impact on Palestinians in the Jordan Valley](#), July 2012, p. 2.

57 United Nations Office for the Coordination of Humanitarian Affairs, “[Humanitarian Fact Sheet on the Jordan Valley and Dead Sea Area](#),” February 2012, p. 1.

58 United Nations Office for the Coordination of Humanitarian Affairs, “[Occupied Palestinian Territory: Humanitarian Facts and Figures](#),” 21 December 2017, p. 12.

are in the Jordan Valley.⁵⁹ The Palestinians in the valley are isolated from adjacent Palestinian cities and villages suffer from restrictions on access to services, transportation routes, agricultural land and water resources.⁶⁰ Their living conditions are abysmal and their socio-economic levels are amongst the lowest in the West Bank.

There are approximately 400,000 Israeli settlers living in Area C in about 230 settlements and “outposts” (small settlements established without the authorities’ formal approval but with their de facto assistance).⁶¹ It is further subdivided into administrative categories. About 63% of Area C is under the jurisdiction of the local and regional councils of the settlements,⁶² securing the space for continuous settlement expansion. A further 30% of Area C lands have been designated as military firing zones, mostly in the Jordan Valley, and are thus also off limits to Palestinians.⁶³ However, there are 6,200 people in 38 mostly Bedouin and herding communities that predate Israel’s planning and zoning process, who live in such firing zones.⁶⁴ These communities live in extremely difficult conditions, with limited access to water and electricity, while enduring a constant threat of house demolitions and forced displacement.⁶⁵

59 UN OCHA “Humanitarian Fact Sheet,” *supra* note 56.

60 *Ibid.*

61 UN OCHA, “Occupied Palestinian Territory,” *supra* note 57.

62 B’Tselem, [Acting the Landlord: Israel’s Policy in Area C, the West Bank](#), June 2013, p. 13.

63 *Ibid.*, p. 14.

64 United Nations Office for the Coordination of Humanitarian Affairs, “[Four Herding Communities in the North Jordan Valley at Imminent Risk of Forcible Transfer](#),” 10 November 2017.

65 *Ibid.*

Less than 1% of Area C land is approved for Palestinian development, allowing Palestinians to request building permits,⁶⁶ and most of this minuscule area is already built up. This means that the population living in Area C has almost no space to accommodate natural population growth, either in terms of housing or public infrastructure. As in the case of the Naqab, these conditions are the result of decades of colonisation and deliberate policies bolstering Israel’s intent to expel Palestinians from their land.

In addition, through the Oslo Accords economic annex known as the Paris Protocol,⁶⁷ the Accords cemented Israel’s control over the Palestinian economy and its electricity sector, dictating that all electricity in the oPt and Gaza must be purchased from Israel.⁶⁸ This has generated enormous profits to the IEC and maintains the Palestinian electricity sector in a perpetual state of under-development.⁶⁹ For the majority of Palestinians in Area C, access to reliable electricity is an unattainable privilege.

To this day, under the agreement, Palestinian communities in Area C cannot install or develop any existing infrastructure, including electricity lines and networks, without the approval of the ICA.⁷⁰ As described above, for

66 UN OCHA, “Occupied Palestinian Territory,” *supra* note 57.

67 Also referred to as the Interim Agreement on the West Bank and the Gaza Strip, Gaza-Jericho Agreement Annex IV – Economic Protocol, 29 April 1994.

68 The World Bank, [Assessment and Action Plan to Improve Payment for Electricity Services in the Palestinian Territories: Study on Electricity Sector Contribution to Net Lending](#), World Bank Group, November 2014, p. 21.

69 Who Profits, *Greenwashing the Occupation*, *supra* note 21.

70 *Ibid.*

the Palestinians determined to remain and sustain life on their land, building permits are almost impossible to obtain in Area C.

During his tenure as UN Secretary-General, Ban Ki-moon described the Israeli zoning and planning policy in the West Bank as “restrictive and discriminatory.”⁷¹ No structure in Area C is off limits for the Israeli army and the ICA. According to the UN OCHA, in the years 1988-2016 a total of 16,085 demolition orders were issued against Palestinian homes and structures in Area C.⁷² During August and September 2017 alone, 40 Palestinian homes and structures in Area C were demolished or seized.⁷³ Between 2010 and 2014, Palestinian in Area C submitted 2,020 applications for building permits, of which only 33 were approved.⁷⁴ For Palestinian communities in Area C, no legal avenue has been left to secure building permits, including for solar energy systems.

Under these circumstances, in many Palestinian villages without proper plans in Area C, the residents are left with no access to basic services and unconnected to electricity, wa-

ter or sewerage.⁷⁵

In an attempt to bolster communities’ ability to sustain life on their land and resist displacement, local and international non-governmental organizations have been supporting communities to install solar systems. These donor funded systems are minuscule in comparison to the Israeli solar fields. As in the Naqab, solar panels are confiscated during demolitions in villages or by a small number of ICA personnel accompanied by Israeli soldiers and Border Police. For example, on 1 April 2015, 12 solar panels were confiscated from homes in the community of Khan al-Ahmar by ICA officers accompanied by Israeli Border police, using trucks manufactured by the Swedish-multinational company [Volvo Group](#).⁷⁶ The Khan al-Ahmar community has been systematically targeted by the ICA. 15 days after the initial confiscation of solar panels, ICA personnel confiscated two additional solar panels, affecting five people. An additional wave of confiscations hit the community on 7 April 2016, when another donor-funded solar panel was confiscated.⁷⁷ These panels are the sole source of electricity for the community, which comprises about 170 people and is not connected to the grid even though electric wires pass over it.

Khan al-Ahmar is one of 46 Palestinian Bedouin communities in Area C, comprising some 8,100 people, which the UN OCHA considers “at high risk of forcible transfer.”⁷⁸ Twenty five

71 UN News Center, “[Senior UN Relief Official Calls on Israel to Halt Demolitions in West Bank Immediately](#),” 17 February 2016.

72 United Nations Office for the Coordination of Humanitarian Affairs, “[Israeli Demolition Orders against Palestinian Structures in Area C, 1988-2016](#),” data.ochaopt.org.

73 United Nations Office for the Coordination of Humanitarian Affairs, “[Demolition and Seizure of Service Infrastructure in Palestinian Communities in Area C Exacerbates Risk of Forcible Transfer](#),” *The Monthly Humanitarian Bulletin*, 11 October 2017.

74 United Nations Office for the Coordination of Humanitarian Affairs, “[Fragmented Lives: Humanitarian Overview 2015](#),” ochaopt.org, 13 June 2016.

75 Bimkom – Planners for Planning Rights, “[Planning Assistance to Palestinians in Area C of the West Bank](#),” bimkom.org.

76 B’Tselem, “[Civil Administration Confiscates 12 Solar Panels from the Khan al-Ahmar Community Close to Ma’ale Adumim](#),” btselem.org, 19 April 2015 (see video).

77 Information is on file with Who Profits.

78 United National Office for the Coordi-

of these communities rely on solar panels as their only or main source of electricity, yet according to OCHA these panels “are at risk of requisition without prior warning.”⁷⁹

Similarly, on 2 February 2016, the Israeli army confiscated three solar panels from Khirbet Jenbah and two panels from Khirbet al-Halawah, two communities in Masafer Yatta in the South Hebron Hills, and demolished fifteen and seven dwellings, respectively. These solar panels, donated by a humanitarian aid agency, were the only source of electricity for the residents.⁸⁰ The photos from Khirbet Jenbah indicate that [Volvo Group](#) trucks were again used during the confiscation of the solar panels.⁸¹

Masafer Yatta is located in an area designated by Israel as “Firing Zone 918” and Palestinians are denied access and building permits. Not far from there lies the Meitarim solar field, which generates 5 MW of green electricity for the benefit of Israeli settlers in the area.⁸²

On 5 July 2017, two solar panels used by five families were confiscated from the community of Khirbet Tall al-Himma in the northern Jordan Valley.⁸³ Truck-mounted cranes manufactured by the Italian company [FASSI](#) were used for the confiscation of solar panels in Kh-

nation of Humanitarian Affairs, “Demolition and Seizure,” supra note 72.

79 Ibid.

80 B’Tselem, “[New Wave of Demolitions in West Bank: Another Phase in Policy of Expelling Palestinians from Vast Portions of West Bank](#),”

btselem.org, 16 February 2016.

81 Ibid.

82 Uri Blau, “[Solar Energy Access Drives New Wedge into Israeli-Palestinian Conflict](#),”

TakePart Magazine, 6 November 2015.

83 B’Tselem, “[Israel’s CA Confiscates Solar Panels from Khirbet Tall al-Himma, 5 July 2017](#),” July 2017.

irbet Tall al-Himma.⁸⁴

In close proximity to Khirbet Tall al-Himma is one of Israel’s largest solar fields, in Shadmot Mehola, where settlers enjoy an uninterrupted flow of electricity and private companies generate profit from solar energy. The Shadmot Mehola solar field covers 49,242 square meters of Palestinian land and generates 5 MW of electricity – enough to power some 2,500 houses.⁸⁵

In some cases, solar panels are not confiscated but damaged to incapacitate the system. For example, on 11 February 2016, seven privately financed solar batteries were damaged during the demolition of 12 structures belonging to the Khalet Khader community in the northern Jordan Valley. The demolition was carried out by the ICA and Israeli soldiers under the claim that the structures had been built without permits.⁸⁶

Comet-ME is a non-profit organization that provides green energy and clean water services to off-grid communities in the oPt and has installed 50 energy systems that generate electricity for some 5,000 people in the West Bank. At least 18 of those systems are facing various stages of demolition orders from the ICA.⁸⁷

The UN OCHA has documented 26 cases of solar panel confiscation or demolition within Area C between 2009 and 2016.⁸⁸ For the most part, solar panel confiscations and demoli-

84 Ibid .

85 Who Profits, [Greenwashing the Occupation](#), supra note 21, p. 34.

86 Information is on file with Who Profits.

87 Interview conducted by Who Profits with one of Comet-ME’s founders on 9 November 2017.

88 Information is on file with who Profits.

tions go unheeded, but some have garnered international attention. One such case was the confiscation of 96 solar panels in the village of Jubbet adh-Dhib, east of Bethlehem. This village, established in 1929, enjoyed access to a consistent supply of electricity for the first time in November 2016 through a Dutch-funded hybrid energy (solar and diesel) project.⁸⁹ The village residents have been demanding to be connected to the electricity grid since 1988, but all requests were rejected because the village does not have an outline plan. Israel rejected a plan jointly prepared by the councils of Za'atara and Jubbet adh-Dhib⁹⁰

The 40,000 Euro, small-scale solar field was funded by the Dutch government and installed and maintained through a collaboration between Comet-ME and the village women's committee.⁹¹ The power supply generated by the 96 panels barely met the residents' basic needs. Amar al-Wahsh, an electrician and resident of the village, noted that "the power supply was limited to lighting and ordinary domestic appliances such as fridges and washing machines," but nevertheless the residents' "quality of life improved."⁹² With the help of aid organizations, residents bought refrigerators, televisions, computers and washing machines. The consistent access to consistent electricity also boosted employment, for example one woman was able to open a grocery store and another – to work on film

89 Anne-Marie O'Connor, "This Palestinian Village," *supra note 32*.

90 B'Tselem, "[Israel Confiscates Solar Panels Supplying All Power for Palestinian Village It Has Not Connected to Grid for 50 Years](#)," [btselem.org](#), 17 July 2017.

91 Amira Hass, "[Dutch Protest Israeli Seizure of Palestinian Solar Panels They Funded in West Bank](#)," *Haaretz*, 1 July 2017.

92 B'Tselem, "Israel Confiscates," *supra note 91*.

and editing projects on a home computer.⁹³

In contrast to settlers, who receive incentives to install solar panels and profit by selling the excess electricity generated by their system, Jubbet adh-Dhib residents paid one shekel (around 30 American cents) per kilowatt.⁹⁴

By providing around the clock electricity, the women's committee sought to bring back the village's residents who had left it because of the harsh living conditions and lack of electricity and building permits.⁹⁵ However, after less than a year, on 28 June 2017, the military and ICA imposed a curfew on the village and confiscated its solar panels.⁹⁶ Israeli soldiers also confiscated electronic equipment from the power room. As with all solar panel confiscations and demolitions in Area C, the reason provided by the Israeli authorities was the lack of the almost unattainable permits.

Some isolated, stand-alone solar panels withstood the challenges and currently provide electricity to impoverished and displaced Palestinian communities.⁹⁷ As a rare exception, in 2017 the village of Dhaher al-Malah in the northwestern West Bank, which had been established in the 1930s, was connected for the first time to the national electricity grid. The decision came after the Israeli NGO Bimkom petitioned the High Court of Justice. The

93 Ibid.

94 Ibid.

95 Amira Hass, "Dutch Protest," *supra note 92*.

96 Ibid.

97 The villages of Atouf, Yarza, Amkahel, Ibzeq and Al-Hadidiya are examples of rural communities that have been electrified using solar systems. These projects were installed under the supervision of the Energy Research Center at An-Najah National University. See: An-Najah National University – Energy Research Center, "[Projects: Rural Electrifications](#)," [najah.edu](#).

village's fortunate 240 residents could finally enjoy consistent electricity for the refrigeration of perishable goods, for air conditioning and so on.⁹⁸

The case of Dhaher al-Malah is an anomaly. Other Palestinian attempts to connect to electricity have been thwarted under the pretext that they were not conducted in accordance with an outline plan and a permit from the ICA. As described above, outline plans and building permits are virtually impossible to obtain for Palestinians in Area C.

For Palestinians facing demolition threats, solar panels are a lifeline and means of survival. Their destruction or confiscation directly and significantly contributes to a coercive environment, which leads to the forced displacement of a protected population in contravention of international law. To quote Ali Mohamed Hraizat, head of the village council of Imneizil, a Palestinian village in the South Hebron Hills that is not connected to the grid and whose solar panels have been slated for demolition: "We've been here since 1948. We try to stay and maintain our lives, but people will leave if the electricity is cut off [...] The solar panel isn't doing any harm [...] I just don't see the point in demolishing it."⁹⁹

Profiteering from Forced Displacement

On both sides of the Green Line, domestic and international corporations play an integral

98 Yotam Berger, "[After Decades of Darkness, Palestinian Village Gets Power](#)", Haaretz, 4 September 2017.

99 Phoebe Greenwood, "[Palestinians Prepare to Lose the Solar Panels that Provide a Lifeline](#)", The Guardian, 14 March 2012.

role in Israel's growing green energy industry, reaping immense profits while contributing to Palestinian dispossession, de-development and forced displacement.

Two of the newly identified companies who supply equipment to Israeli solar fields in the oPt are [ABB Group](#), a Swedish-Swiss multinational corporation that manufactures electrification products, and [SMA Solar Technology](#), a publicly-traded German solar energy equipment supplier. Both companies are signatories to the UN Global Compact, which encourages businesses "to align strategies and operations with universal principles on human rights, labour, environment and anti-corruption, and take actions that advance societal goals."¹⁰⁰ ABB Group, which is involved in equipping the Kalia solar field in the occupied Jordan Valley, is a founding member of the UN Global Compact. In a reply to Who Profits, ABB Group stated that it is "strongly committed to doing business in compliance with all applicable international regulations," and that the company considers its involvement in Israel's solar industry in the West Bank to be "in line with this principle."¹⁰¹

The principles of the UN Global Compact and the companies' declared commitments contradict their involvement in Israel's solar energy industry on occupied land. Their involvement bolsters Israel's settlement enterprise and intricate mechanism of discriminatory policies, which contravenes international law and deprives Palestinians from equal access to electricity, ultimately creating conditions that lead to the forcible displacement of impoverished Palestinian communities.

100 United Nations Global Compact, "[What Is Global Compact](#)," [unglobalcompact.org](#).

101 The full response of the ABB Group can be found in appendix III.

In 2017, two Who Profits reports outlined corporate involvement in Israel’s booming, “greenwashing” solar energy capitalist endeavour.¹⁰² In Area C, Who Profits documented the commercial involvement of seven Israeli companies ([Clal Sun](#), [Energix Renewable Energies](#), The Company for the Development of Mount Hebron,¹⁰³ [Enerpoint Israel](#), [Green Is Us](#), [SolarEdge](#), [M.G.A. Energy](#)) and six international companies ([First Solar](#), [PADCON](#), [SunTech](#), [Refu Elektronik](#), Sun Edison and Enerpoint Italy)¹⁰⁴. In the Naqab, where the Israeli solar energy industry was first launched, Who Profits examined some of the biggest solar fields and documented the involvement of four Israeli ([Energix Renewable Energies](#), [Enerpoint Israel](#), Arava Power Company¹⁰⁵, Shikun Binuy Energy¹⁰⁶) and three international companies ([First Solar](#), [SunTech](#), EDF Energies Nouvelles¹⁰⁷).

In this report, Who Profits documents the entry of four additional international corporations – ABB Group, SMA Solar Technology, PGR Drive Technologies and JA Solar Holdings in Israel’s solar energy industry. Below are the corporate profiles for these corporations and for corporations involved in the confiscation of small-scale Palestinian solar systems on both sides of the Green Line – Fassi Ltd. and Volvo Group.

[Fassi Ltd.](#)

A private Italian manufacturer of cranes. On

102 Who Profits, Greenwashing the Naqab, supra note 18; Who Profits, Greenwashing the Occupation, supra note 21.

103 See Appendix V for company profile.

104 Since then, Sun Edison Ltd, has dissolved and Enerpoint Italy’s Israeli subsidiary, Enerpoint Israel, became an independent company, but kept the name.

105 See Appendix VI for company profile.

106 See Appendix VII for company profile.

107 See Appendix VIII for company profile.

5 July 2017, a Fassi manufactured crane was documented during the confiscation of solar panels by the Israeli Civil Administration in the Palestinian village of Khirbet Tall al-Himma in the Jordan Valley in the occupied West Bank. The two solar panels, donated by a humanitarian aid organization in March 2017, had been used by five families.¹⁰⁸

Corporate information:

Ownership: Part of the Fassi Group owned by the Fassi family.

Other companies in the Fassi Group:

Cranab (Sweden), Slagkraft (Sweden), Vimek (Sweden), Bracke Forest (Sweden), Marrel (France), Jekko (Italy)

Revenue: \$1,024 Million in 2016.

Subsidiaries: Fassi France, Fassi UK, Fassi Germany.

Partners: The company’s exclusive distributor in Israel is K.D.M. Engineering & Cranes Ltd. Clients of K.D.M. Engineering & Cranes include the Israeli Ministry of Defense, the Israel Electric Corporation, [Bezeq](#), [Electra](#), [Readymix](#), [Avi Cranes](#) and [Albar](#).

Tel: +39 035776400

Website: www.fassi.com

Global Presence: France, Spain, Sweden, UK, Germany.

Company Response: No response.

[Volvo Group](#)

A Swedish-based, multinational public company, which manufactures trucks, buses, construction equipment and marine and industrial engines. Volvo equipment has

108 B’Tselem, “[Israel’s CA Confiscates Solar Panels from Khirbet Tall al-Himma, 5 July 2017](#)”, July 2017.

been used by the Israeli Civil Administration in the confiscation of solar panels belonging to Palestinian communities in Khirbet Jebnah and Khan al-Ahmar.

In February 2016, Volvo trucks were used by the Israeli Civil Administration and the Israeli military to confiscate solar panels in Khirbet Jebnah.¹⁰⁹ In April 2015, a Volvo truck was documented in the confiscation of 12 solar panels belonging to Khan al-Ahmar by the Israeli Civil Administration and Border Police.¹¹⁰ In both cases, the solar panels, provided by humanitarian aid organizations, were the community's sole source of electricity.

Volvo Group heavy machinery is used during demolition of Palestinian houses in the oPt, East Jerusalem and within the Green Line. Volvo machinery was used in multiple demolitions in the city of Lod. In addition, the company's wheel loaders were used in numerous attempts to evict the Bedouin community of Al-Araqib and Um el-Hiran from its land in the Naqab (Negev) desert. This included the demolition of solar panels. The company's equipment was used for the construction of the Har Gilo settlement and the Barkan Industrial Zone. Volvo trucks were used for the construction of the Huwwara checkpoint, Route 443 (a West Bank road for Israelis only) and the Separation Wall near the Palestinian village of Al-Walaja.

Volvo Buses, a subsidiary of the Volvo Group, owns 26.5% of Merkavim, which supplies armored buses for Egged lines in the occupied Palestinian territory. Merkavim's

109 B'Tselem, "[New Wave of Demolitions in West Bank: Another Phase in Policy of Expelling Palestinians from Vast Portions of West Bank](#)", 16 February 2016.

110 B'Tselem, "[Communities Facing Expulsion: The Khan Al-Ahmar Area](#)", 10 October 2017.

remaining shares are held by Mayer's Cars and Trucks, which is the exclusive distributor of Volvo in Israel.

In response to a freedom of information request by Who Profits, the Israel Prison Service confirmed that the Volvo Group and its subsidiary Merkavim provide services to the Israel Prison Service, including buses for the transportation of prisoners.

The Volvo Group supplied maintenance trucks to the Jerusalem Light Rail project, which connects settlements in occupied East Jerusalem to one another and to the western part of the city.

Corporate information:

Traded: a public company traded on Nasdaq Nordic

Ownership: The Volvo brand comprises Volvo AB and Volvo Cars. In 2010, Volvo Cars, which was held by Ford Motors, was sold to the Chinese corporation Geely. Volvo AB includes Volvo Trucks, Volvo Buses, Volvo Penta, Volvo Construction Equipment, Volvo Financial Services and Volvo Holdings.

President and CEO: Martin Lundstedt

Revenues: \$36.66 Billion (36,655,378,740 USD in 2016)

Subsidiaries: Volvo has dozens of subsidiaries worldwide, including Volvo Penta (Sweden), Volvo Construction Equipment (the Netherlands), Volvo Financial Services (Sweden), Volvo Holdings (Sweden), Volvo Group Japan, Volvo China, Volvo GB, Volvo Holding Mexico, Volvo Norway, Volvo Malaysia, Volvo Italy, Volvo Russia, Volvo Singapore and Volvo Latvia.

Partners: The Volvo Group has production facilities in 18 countries and a presence in more than 190 markets worldwide.

Head Office: SE-405 08 Gothenburg Sweden

Tel.: +46-31660000

Website: www.volvogroup.com

Company Response: no response.

ABB Group

ABB Group is a publicly traded Swedish-Swiss multinational corporation manufacturing electrification products, robotics and motion, industrial automation and power grids. The Group serves customers in utilities, industry, transport and infrastructure.¹¹¹

ABB Group equipment was documented by Who Profits during a field tour, October 2017, at the Kalia settlement solar energy field in the Jordan Valley, the occupied West Bank. The specific product documented was the 1SL0221A00, an industrial electrical enclosure.

Corporate Information:

Trade: A public company traded on SIX Swiss Exchange, NASDAQ OMX Stockholm Exchange and the New York Stock Exchange under the ticker symbol ABB.

Ownership: ABB Ltd, is the ultimate parent company of the ABB Group, which comprised approximately of 320 consolidated operating and holding subsidiaries worldwide.

CEO: Ulrich Spiesshofer.

Revenue: \$33,379 Million in 2016.

Subsidiaries: ABB group has an Israeli subsidiary, ABB Israel. ABB Israel's CEO is Ronen Aharon.

Partners: Philips Lighting (The Netherlands), Microsoft (USA), Nordke Shell (a subsidiary of Royal Dutch Shell), Fluor (USA), Aibel (Norway), Doral Solar (Israel).

Head office: Affolternstrasse 44 / Postfach,

111 ABB Group, [About](http://About.new.abb.com), new.abb.com.



SMA Solar Technology and ABB Group Packaging, Kalia, Jordan Valley, occupied West Bank | October 2017 | Photo by Who Profits

8050 Zürich, Switzerland

Tel: +41-43-317 4144

Website: www.new.abb.com

Company Response: Full company response can be found in Appendix III.

SMA Solar Technology

SMA Solar Technology is a publicly-traded German solar energy equipment supplier. SMA Solar Technology develops, produces and sells photovoltaic inverters and monitoring systems for photovoltaic facilities.

SMA equipment was documented by Who Profits on October 2017 at the Kalia settlement solar energy field in the Jordan Valley region of the occupied West Bank. The specific product provided was STP-60 which is a solar panel system solution for

commercial and utility PV plants.

Corporate Information:

Trade: Publicly traded on the Frankfurt Stock Exchange under the ticker symbol FSE:S92.

Ownership: The company is owned by its founders, their trusts and families (29.64%), Pool SMA Solar Technology AG (25.20%), Dafoss A/S (20%) and the remaining 25.16% are floating shares.

CEO: Pierre-Pascal Urbon.

Revenue: \$1117.8 Million in 2016.

Subsidiaries: SMA Solar Technology, holds, directly or indirectly, 100% of shares in the SMA Group. The SMA Group consists of 35 companies, eight of which are based in Germany and 27 abroad.

Partners: Siemens, Tigo Energy, Danfoss.

Head office: Sonnenallee 1, 34266, Niestetal, Germany

Tel: +49-561-95220

Website: www.SMA.de

Company Response: No Response was received.

JA Solar Holdings

JA solar Holdings is a Chinese corporation that designs, develops, manufactures and sells solar power products for residential, commercial and utility-scale power plants.

JA Solar Holdings' JAP310 panels were installed in the Meitarim Solar field in the occupied Jordan Valley.¹¹²

Corporate Information:

Traded: Publicly traded on NASDAQ under the ticker symbol: JASO.

Ownership: Top five institutional

112 Energix Group, Meitarim, energix-group.com

holdings (6.54%): Numeric Investors LLC, Morgan Stanley, Guggenheim Capital LLC, Renaissance Technologies LLC.

Other shareholders: All directors and Officers as a Group (17.35%), Jinglong Group Co., Ltd. (16.35%).

Revenue: \$2.3 Billion in 2016.

Partners: Shanghai branch of China Development Bank ("CDB"), Soventix GmbH.

Subsidiaries: The company has tens of directly owned subsidiaries mainly in China. Its global subsidiaries include: JA Development Co., Ltd. (British Virgin Islands), JA Solar Malaysia Sdn. Bhd. (Malaysia), JA Solar Vietnam Company Limited (Vietnam), JA Solar USA Inc. (U.S.).

Head Office: Building NO.8, Noble Center, Automobile Museum, East Road, Fengtai District, Beijing, China 100160.

Tel: +86 -10- 63611888

Website: www.jasolar.com

Factories: The company has a total of 9 factories: 7 factories in China and 2 in Vietnam and Malaysia.

Global presence: JA Solar products and services are delivered globally including in: China, Japan, US, South Africa, Australia, Germany, Israel.

Company Response: No Response was received.

PGR Drive Technologies

PGR Drive Technologies is a private Turkish gear and gearbox manufacturer and exporter. The company also produces variators and Servo Drivers. The company has two main production factories, one in Turkey and the other in Germany.

PGR Drive Technologies equipment was documented by Who Profits in October 2017

at the Nativ Hagdud settlement solar energy field in the Jordan Valley in the occupied West Bank.

Corporate Information:



PGR Drive Technologies Equipment, Netiv Hagdud, Jordan Valley, occupied West Bank | October 2017 | Photo by Who Profits

Ownership: A private Turkish company part of the POLAT Redukto Group. The Group also includes Aykutsan Oluklu Mikkavva and POLAT Tarim.

Partners: PGR Drive Technologies has two Israeli distributors: A. Aziki Transmission Solutions and Pelshar Conveyers Solutions. Pelshar's clients include the Israeli Ministry of Defense and the Israeli national water company, Mekorot.

Head office: Ahi Evran Cad 1203.sk No: 18 D: 58-60 Isgem Ostim-Ankara, Turkey.

Tel: + 90 -312 354 44 08

Website: <http://www.pgr.com.tr/>

Company Response: No Response was received.

Conclusion

Israel's oppression and control over Palestin-

ian communities in Area C and the Naqab is manifested in a variety of mechanisms and policies, but they have a shared goal of clearing the land for more Jewish-only settlements, while exploiting Palestinian natural resources, including sunlight¹¹³ to generate profit.

Israel uses its flourishing green energy industry to paint a progressive image of itself. However, the reality on the ground shows that this capitalist enterprise is in fact a continuation of Israel's decades-long violation of international law, oppression and dispossession of the Palestinian people on both sides of the Green Line. The development of the Israeli solar energy industry, backed by state and private (domestic and international) funding, comes at the expense of Palestinian communities. At the same time, Palestinians are virtually prohibited from utilizing the sun to generate electricity. A consistent access to electricity would improve the harsh living conditions of these Palestinian communities and enable them to sustain life on their land.

Israeli state bodies and international and Israeli corporations are highly complicit in this process and facilitate it from its inception – planning, construction, providing equipment and technology – to finally connecting and maintaining it, as well as quashing the potential of small-scale, Palestinian, green energy generation.

Israel's deliberate denial of electricity through conventional or solar systems is a calculated policy, backed by a lack of building permits and outline plans. It is an integral part of the Israeli occupation and web of systematic discriminatory policies, which leads to the dispossession and forced displacement of Palestinians on both sides of the Green Line.

113 Ibid.

Appendix I: Solar Edge Response



September 1, 2016

WHO PROFITS
P.O.B 1084
Tel Aviv 6101001
ISRAEL

Re. Your letter dated August 10, 2016

To whom it may concern,

We are in receipt of the above referenced letter containing reference to a project in Shadmot Mechola which you stated contains "your solar systems."

Please note that as a leading provider of intelligent inverter solutions, we sell our products to distributors worldwide. **We are not an installer and are not involved in installation projects.** As a publicly traded Company (NASDAQ: SEDG), SolarEdge Technologies, Inc. complies with U.S. and Israeli laws and except for specific limitations imposed on selling into certain black listed countries, we do not limit our distributors in their resale of our products. As such, we do not control where they are installed and are not involved in the construction of said site.

Our products are installed in more than 90 countries and are instrumental in generating an optimal amount of solar energy from solar panels, further reducing the need to burn fossil fuels and helping create a cleaner environment.

Nothing contained in this letter shall be construed as a waiver of any of SolarEdge's rights, all of which are preserved in full.

Sincerely,

Rachel Prishkolnik, Advocate
VP General Counsel
SolarEdge Technologies, Ltd.

Appendix II: PADCON Response

..... Forwarded message

From: **Silvia Engelhardt** <silvia.engelhardt@padcon.de>
Date: Mon, Oct 10, 2016 at 10:51 AM
Subject: Who profits
To: "whoprofits@gmail.com" <whoprofits@gmail.com>

Dear Who Profits Research Team,

We received your letter from 26 September 2016 regarding our components being used in a Solar Field called Kalia.

Thank you for making us aware of this.

Padcon is regularly supplying electrical equipment to construction companies in Israel that build photovoltaic projects.

However, due to the nature that Padcon equipment is a commodity equipment, we don't know nor require to ask where this equipment was installed by the Israeli companies. Therefore, Padcon had no way to know that its equipment was used for that project and had not supply any services to this project.

Furthermore, please note that Padcon does not supply inverters but only electrical and software components.

With best regards

Mit freundlichen Grüßen

Silvia Engelhardt

Kfm. Auftragsabwicklung
Commercial order processing

PADCON GmbH
Steigweg 24 - Gebäude 44
97318 Kitzingen / Germany



Tel.: +49 9321 2680 -299
Fax: +49 9321 2680 -9299
www.padcon.de
E-Mail: silvia.engelhardt@padcon.de

Appendix III: ABB Group Response

From: **Adrienne Williams** <adrienne.williams@ch.abb.com>
Date: Thu, Nov 30, 2017 at 8:10 AM
Subject: Re: Request for response to a publication about ABB Group
To: "whoprofits@gmail.com" <whoprofits@gmail.com>

Dear Madam, Sir

This is to confirm receipt of your letter dated November 9, 2017, requesting us to respond on your planned publication about certain business of the ABB Group.

We confirm that the draft statements you have submitted to us for review are basically correct. We suggest the following amendments:

As regards your proposed list of Partners, Doral Solar is a local customer, but not a strategic business partner of ABB.

For correct quotation of our 2016 revenues, kindly note that they amount to 33,379,000,000 USD.

ABB is strongly committed to doing business in compliance with all applicable international regulations, and we consider the business cases you are referring to in your letter to be in line with this principle.

Yours sincerely,

Adrienne Williams

Head of Corporate Responsibility



ABB Asea Brown Boveri Ltd
Affolternstrasse 44
8050 Zurich, Switzerland
Phone: +41 (0)43 317 65 52
Mobile: +41 (0)79 456 68 60
email: adrienne.williams@ch.abb.com

Appendix IV: ARAVA Power Company Response



Date: February 20, 2018

To
The Who Profits Research Team
P.O.Box 1084
Tel Aviv 6101001

By E-Mail

Dear Sir or Madam,

Re: Response to Your Letter dated February 6, 2018 (the "Letter")

You are hereby requested to avoid and refrain from publication of any information that relates to the undersigned and/or its projects and/or its partners.

Moreover, let it be clarified that any and all use and/or publication of information that belongs and/or relates to the undersigned and/or its projects and/or its partners, is and shall be subject to our prior written approval.



Nothing in this letter shall be construed in any way as a waiver nor exhausting or limiting our present and future rights, claims, demands or remedies under any applicable law.

Sincerely yours,

Arava Power Company Ltd.

Appendix IV: Response from the Israeli Civil Administration to Who Profits' Freedom of Information Request

בלמים
-1-

לישראל	הגנה	צבא		
אז"ש	אזרחי	מנהל		
הציבור	המדיע	פניות		
39328	-	חופש		
התשע"ז	אייר	כ"ז		
2017	בנאי	23		

לכבוד,
ע"ד אמילי שפר
באמצעות דוא"ל: contact@sford.co.il

הנדון: בקשת חופש מידע - חוות פנאלים סולאריים - התייחסות מנהל אז"א
מנייתך מתאריך: 09.10.2016

1. הריני לאשר קבלת מנייתך בנושא שבנדון. להלן התייחסותנו:

א. סעיף 4.4 לפנייתך: הנופים אשר קיבלו אישורי בנייה באתרים המוכרים בפנייתך הינם:

- בחוות קליה - "קליה אנרגיה נקייה בע"מ"
- בחוות נתיב הגדוד - "אורות נתיב הגדוד" בע"מ
- בחוות שדמות מחולה - "אנרג'י שדה אילן 2010" בע"מ
- בחוות מיתרים - "אנרג'יקס א.ת. דרום הר חברון" בע"מ

ב. סעיף 3.4 לפנייתך: התמלוגים משולמים לקופת המנהל האזרחי, להלן פירוט סכום התמלוגים:

- בחוות קליה שולמו 4,302,424 ש"ח במהוון.
- בחוות נתיב הגדוד שולמו 901,762 ש"ח במהוון.
- בחוות שדמות מחולה שולמו 2,195,777 ש"ח במהוון.

בלמים
-2-

ג. סעיף 3.4 ב. ד לפנייתך: מצ"ב הנתונים הממוקשים:

מיקום המתקן	גודל המתקן	שם בעל הרישיון	תאריך הענקת הרישיון
קיבוץ קליה	MW10.8	קליה אנרגיה נקייה בע"מ	31.12.2015
נתיב הגדוד	MW 4	אורות נתיב הגדוד בע"מ	09.04.2016
שדמות מחולה	MW 5	אנרג'י שדה אילן 2010 בע"מ	30.08.2016
יישוב מיתרים	MW 5	אנרג'יקס א.ת. דרום הר חברון	04.11.2015

2. לידיעתך.

בברכה,

בר נאוראני
סגן קצין פניות הציבור
לשכת ראש הפנאל האזרחי

Appendix V: The Company for the Development of Mount Hebron Corporate Profile

The Company for the Development of Mount Hebron is a private company, established in 1984 by the Hebron Regional Council together with surrounding settlements and cooperatives from the Kiryat Arba settlement.

The company was established in order to develop industrial projects in the area of the

South Hebron Hills. By declaring most of the regional councils of West Bank settlements as "national priority areas," the Israeli government is officially able to allocate 65% more grants for settlement councils than local councils inside Israel¹¹⁴

The company owns 49.9% of the Meitarim solar field located in Meitarim settlement, occupied Jordan Valley¹¹⁵

Corporate information:

Revenue: \$19.61 Million in 2016.

Company director: Yehoshua Moshe Michael Korman.

Head office: Otniel Settlement, occupied West Bank.

Tel: +972 -8-6254800

Company Response: No Response was received.

Appendix VI: Arava Power Company Corporate Profile

Founded in 2006, Arava Power Company is a private Israeli company that develops medium and large scale solar energy projects in the Naqab desert.

Arava Power built the Ketura Sun solar field, the first commercial solar field in the Naqab. The 18,500 solar panel field covers 80,000 square meters and generates 4.9 MW of electricity. Panels used in the field were provided by SunTech. The total cost of the field was 312.5 million NIS, 250 million (80%) were invested by Bank Hapoalim.

Aside from Ketura Sun, the company has other projects developed in the Naqab; Elifaz Project with 24000 solar panels and 7 MW in capacity taking up 96,000 sq meters of land;

114 Ibid

115 Energix Group, [Meitarim](http://Meitarim.energix-group.com), energix-group.com.

Grofit Sun Project with 22100 solar panels and 6,4 MW in capacity, taking up 84,000 sq meters of land; Yotvata Sun Project with 23400 solar panels and 6.8 MW in capacity taking up to 88,000 sq meters of land; Maslal Sun with 30,700 solar panels and 8.9 MW in capacity, taking up to 140,000 sq meters of land.

Corporate Information:

Ownership: The Arava Power Company is a privately held partnership, owned by the Israeli incorporated Global Sun Partners Company.

Global Sun Partners Company is held by Arab Power Company, The Phoenix Group, The Jewish National Fund, Arava Institute for Environmental studies and Partners, LP global Sun.

Shareholders: Global Sun Partners (52%), The Phoenix Group (41%), The Jewish National Fund (6%) and the Arava Institute for Environmental Studies (1%).

Partners: Arava Power partnered with SunTech for the construction of the Ketura solar field, in the Naqab.

Arava power, formed a partnership – Arava Meshakim & Partners – with the financial bodies of The Negev settlements, the Southern region and the Kibutzim.

Meshaki the Negev settlements, the Southern Region are independent investment bodies, but they are also included under the Meshaki the Kibutzim.

Meshaki the Kibutzim has 270 members from across the Green Line. Meshaki Southern Region, include Jordan Valley settlements of Almog, Ma'on, Beit HaArava, Niran, Gilal and Kalia. It also includes the settlements of Beit Yatir, Kfar Etzion, Mevo Horon, Migdal Oz and Rosh Tzurim, in the

occupied West Bank.

Meshaki the Kibutzim also includes Meshaki the Golan Heights, including the settlements of Odem, Oral, El Rom, Dan, Gadat, Dafna, Meron Golan, Ein Zivan and Snir.

According to Arava, this partnership amplifies the “ultimate integration of Zionism and business.”

Head Office: Kibbutz Ketura, D.N. Hevel Eilat 88840, Israel

Tel: +972-74-7171810

Website: www.aravapower.com

Company response: The company responded asking us not to publish any information.

Appendix VIII: Shikun Binuy Energy Corporate Profile

The renewable energy division of the Israeli Shikun & Binui Group. The company constructs and operates renewable energy projects, including solar fields.

In partnership with the publicly traded Chinese company, SunTech, Shikun Binui developed the Sde Boker and Hatzerim solar field. Sde Boker and Hatzerim fields generate 5 MW, taking up 75,000sq meters of land and 6 MW, taking up 90,000sq meters of land (respectively).

The joint investments of Shikun Binui and SunTech in the fields reached \$20 million, making it one of the largest deals ever in the solar energy field in Israel.

Corporate Information:

Traded: Publicly traded on the Tel Aviv Stock exchange under the ticker symbol SKBN

Ownership: Shikun & Binui Renewable Energy Ltd is a fully owned subsidiary of the Shikun & Binui Group.

Parent company ownership: Arison Investments Ltd. (47%), Clal Insurance Enterprises Holdings Ltd. (4.30%), Migdal Insurance & Financial Holdings Ltd (4.25%)

CEO: Didi Paz

Revenue: Shikun & Binui Groups revenue: 5.379 Million NIS. Revenue generated from renewable energy : NIS 44,679 thousand.

Subsidiaries: Etgal Energy Ltd (100%), Negev Energy (50%)

Partners: TSK Group, Noy Foundation. Through its parent company the Renewable Energy Ltd has a partnership with the Israeli Ministry of Defence.

Global Presence: Renewable Energy Ltd's parent company is present in around 20 countries, including: US, UK, The Netherlands, Germany, Guatemala, Kenya, Uganda, Switzerland.

Head Office: 1a Ha'Yarden st., P.O.B 1133, Airport City 7010000, Israel

Tel: +972-3-6301111

Website: <http://www.shikunbinui.co.il>

Appendix VIII: EDF Energies Nouvelles Corporate Profile

EDF Énergies Nouvelles is a French based global producer of electricity from renewable sources. The company develops, builds and operates green electricity power plants.

With its Israeli partner, Solex Generating power, EDF Énergies Nouvelles operates the Zomrot solar field, in the Naqab. The 207,000- panel field has a 50 MWp capacity, enough to cover the annual electricity needs of 30,000 inhabitants.

Through its Israeli subsidiary, EDF Énergies Nouvelles Israel, the company is also involved in the Ketura solar field, in the Naqab. The 18200 panels produce 4.9 MW of

solar power, which is able to send electricity to the 33,000 volt line to kibbutzim in the area.

With its Israeli partner EDF Énergies Nouvelles operates twenty solar fields, with the total capacity of 160 MW.

Corporate information:

Ownership: EDF Energies Nouvelles is a wholly owned subsidiary of French electric utility EDF, a French electric utility company, largely owned by the French state. EDF operates a portfolio of more than 120 countries.

Revenues: \$82.90 billion in 2016.

Partners: EDF Énergies Nouvelles partnered with the Israeli company Solex.

Subsidiary: Photowatt.

Global Presence: The company is active in 21 countries. In the solar energy market the company operates its fields in India, Israel, Greece, Italy, France, Spain, Chile, USA and Canada.

Head office: Coeur Défense – Tour B 100, Esplanade du Général de Gaulle 92932 Paris La Défense Cedex

Tel: +33 (0)1 40 90 23 00

Website: www.edf-energies-nouvelles.com

Israeli partner, Solex:

Head office: Yam 2 St. Beit Yanai, Israel

Tel: +974-54-8161310

Website: www.solexrenewable.com