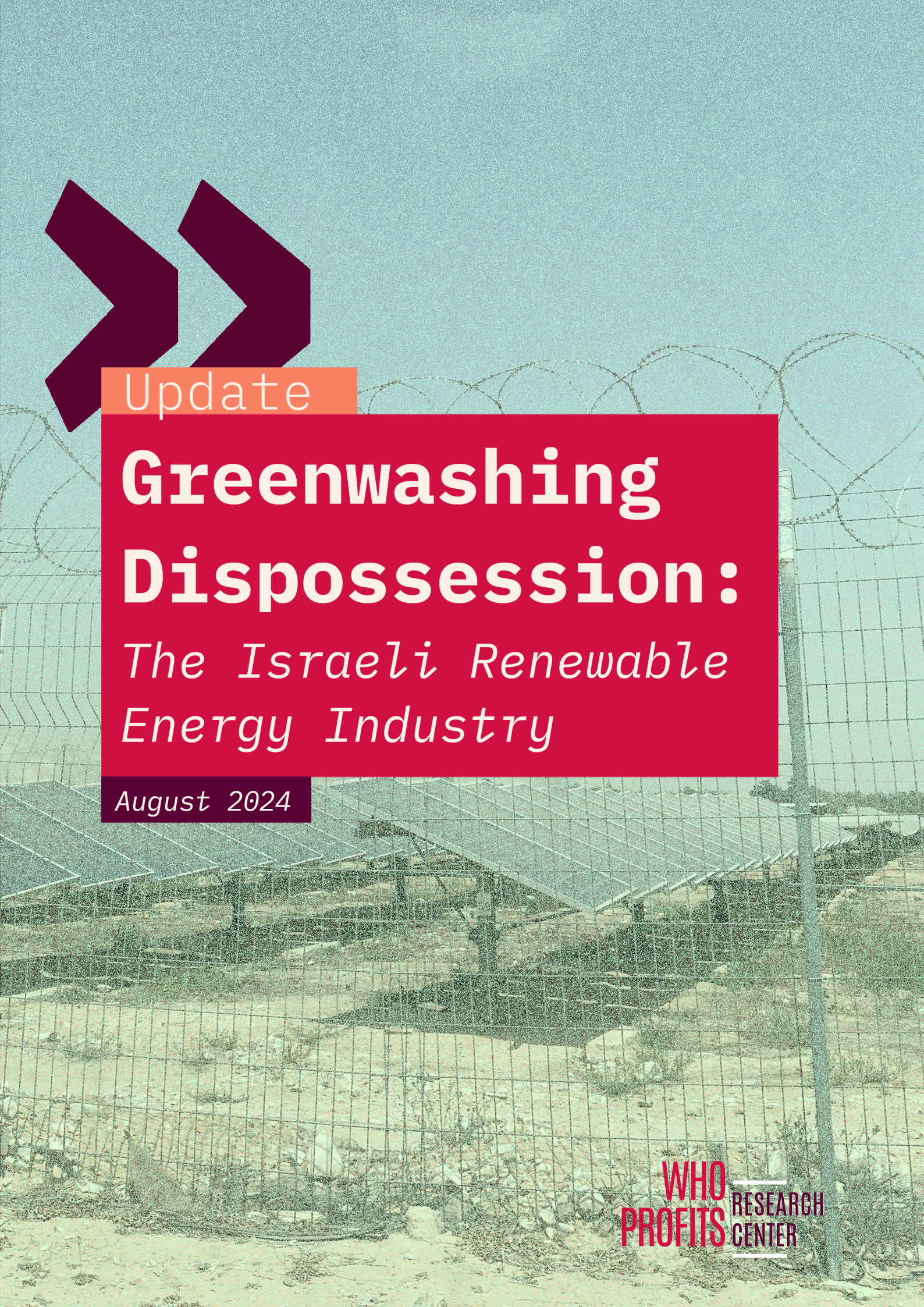

Update

Greenwashing Dispossession:

The Israeli Renewable Energy Industry

August 2024

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Greenwashing Dispossession:

The Israeli Renewable Energy Industry and the Exploitation of Occupied Natural Resources

August 2024

Israel's Renewable Energy Industry

Green energy is a booming global industry. The global renewable energy market was valued at USD 970 billion in 2022 and is expected to reach around USD 2182 billion by 2032.[1] As part of the global effort to reduce emissions and combat climate change, governments worldwide are increasingly pursuing policies to diversify their energy sources and invest in renewable energy.

Over the last two decades, the Israeli government has taken steps to encourage the establishment of commercial renewable energy facilities and increase its renewable energy production. The budget of the Israeli Ministry of Energy and Infrastructure for 2023-2024 stood at an unprecedented level—approximately NIS 1,380 billion and included the promotion of plans for the production of renewable energy and storage facilities.[2]

In 2002, the Israeli government approved Decision No. 2264, which encouraged the establishment and operation of renewable energy facilities for electricity production by both private electricity producers and the Israel Electric Corporation (IEC).[3] In 2009, the Israeli government approved Decision No. 4450, setting a target of 10% of the country's energy needs to be generated from renewable energy sources by 2020.[4]

In 2011, Government Decision No. 3484 ratified the 2009 objective and defined specific quotas for the installation of solar, wind, biogas, and biomass technologies.[5] The decision determined that 10% of the quotas for electricity production for medium-sized solar energy facilities with up to 30 Megawatt (MW) producing capacity, would be allocated to facilities located in the occupied West Bank.[6]

Subsequent decisions have affirmed the development of a renewable energy industry as a national priority.[7] Most recently, in 2020, Decision No. 465 set the goal that 30% of electrical

[1] Precedence Research. 'Renewable Energy Market (By Type: Wind Power, Hydroelectric Power, Solar Power, Bio Energy, Geothermal; By End User: Residential, Industrial, Commercial, Others) - Global Industry Analysis, Size, Share, Growth, Trends, Regional Outlook, and Forecast 2023 – 2032'. Accessed 25 November 2023
[2] Israeli Ministry of Energy and Infrastructure. Press release: 2023-2024 budget in the energy sector. 26 February 2023 (Hebrew).
[3] Prime Minister's Office. Electricity production policy - renewable energies, Decision No. 2664. 4 November 2002 (Hebrew).
[4] Prime Minister's Office. Guiding target and formulating tools to promote renewable energies in particular in the Negev and Arava region, Decision No.4450. 29 January 2009 (Hebrew).
[5] State Comptroller. Annual Report 68a. 25 October 2017 (Hebrew).
[6] Prime Minister's Office. Government policy in the field of energy production from renewable sources: Decision No. 3483. 17 July 2011 (Hebrew).
[7] Prime Minister's Office. Reducing greenhouse gas emissions and optimizing energy consumption: Decision No. 542 20 September 2015, A national plan for the implementation of the goals for reducing greenhouse gas emissions and energy efficiency: Decision No. 1403 10 April 2016 and Approval of a national plan for energy efficiency: Decision 3269. 17 December 2017 (Hebrew).

production be from renewable sources by 2030.[8] In June 2023, the National Planning and Building Council approved the allocation of an additional 40,000 dunams of land in open areas to establish solar facilities for electricity production, in addition to the 20,000 dunam quota already set in 2020 for this purpose.[9]

Between 2018 and 2022, the capacity of Israeli renewable energy facilities increased to approximately 37% per year on average, compared to 16% between 2015 and 2017.[10] In 2020, renewable energy accounted for 5.7% of all energy produced in the Israeli economy.

According to the Israeli Electricity Authority (hereafter: IEA), by 2030, the capacity of renewable energy will reach 16 gigawatts—more than six times the capacity as of the end of 2020[11]—and will account for 30% of total electricity production.[12]

Between 2016 and 2020, the Ministry of Energy allocated NIS 39 million—19% of its total budget for the promotion of research and development projects—to support innovative renewable energy projects. [13]

In March 2020, the Israeli Ministry of Energy formulated a plan to accelerate investment in energy infrastructure, including the promotion of renewable energy projects by providing incentives such as the provision of a state-guaranteed loan of NIS 500 million, designed to incentivize the economy to invest an additional NIS 5.3 billion in renewable energy, as well as removing barriers to the promotion of existing wind energy projects.[14] According to a document on the subject published by the Ministry, the benefit to the Israeli economy from such projects is estimated at tens of billions of NIS.[15]

As part of the implementation of government plans to promote renewable energy goals and increase supply, between 2017 and 2022 the Israeli Land Authority (ILA) generated profits of NIS 184.5 million, a record 68 new renewable energy transactions from solar field projects[16] with a

[8] Prime Minister's Office. Promotion of renewable energy in the electricity sector and amendment of government decisions: Decision No. 465. 25 October 2020 (Hebrew).
[9] Staff, Toi. Israel to triple amount of open space dedicated to solar energy production. *The Times of Israel.* 7 June 2023.
[10] Israeli Electricity Authority. The State of Renewable Energies in the Electricity Sector. 2002, p. 3.
[11] The Knesset Research and Information Center. Renewable energy in Israel – Background and issues for discussion – Update. 7 December 2021, p. 15.
[12]The Knesset Research and Information Center. 'An overview of the electricity sector and the factors affecting the price of electricity. 29 January 2023 (Hebrew). P. 6.
[13] The Knesset Research and Information Center. Renewable energy in Israel – Background and issues for discussion – Update. 7 December 2021 (Hebrew). P. 4.
[14] Israeli Ministry of Energy: Acceleration of infrastructure projects in the energy and water economies to encourage economic growth. 30 May 2020 (Hebrew).
[15] Raviv, Erez. "The Plan of the Ministry of Energy: around NIS 25 billion for investment in infrastructure, tenth of them with state funding". *Davar*. 28 April 2020 (Hebrew).
[16] Petersburg, Ofer. Let's continue to Break Records: two huge tenders for the establishment of solar projects in the Naqab have been closed. *Walla*. 10 May 2023 (Hebrew).

total capacity of 750 MW.[17] In 2022 alone, 23 transactions were marketed with an exemption from tender in an area of approximately 3,442.5 dunams, with a production capacity of approximately 356.2 MW.[18] In 2021, 20 transactions were marketed with an exemption from tender in an area of approximately 2,449.2 dunams with a capacity of approximately 185.7 MW.[19]

Israel's renewable energy industry is fully privatized, with the state acting to incentivize and facilitate private investment. The tariff policy established by the IEA incentivizes renewable energies through subsidies. Initially, government policy encouraged producers through fixed feed-in tariffs per kilowatt-hour fed into the Israeli electricity grid, involving considerable subsidies. More recently, regulation through price tenders has been added, where the price for energy production is even lower than the price of energy production from fossil fuel, or conventional sources.[20] In 2021 and 2022, government investment in the transition to renewable energy through the electricity tariff alone was NIS 1.7 billion, annually.[21]

From the construction, management, and operation of solar and wind projects to the manufacturing of solar panels and wind turbines, private Israeli and international companies are the most prominent actors in the renewable energy field. Between 2019 and 2021, the number of Israeli renewable energy companies traded on the Tel Aviv Stock Exchange more than doubled, from five to twelve, and their cumulative worth rose from NIS 3 billion to some NIS 23 billion in the same period.[22]

The emergence of the Israeli renewable energy industry has been inextricably linked with Israeli control over occupied Palestinian and Syrian land. Recent years have witnessed a significant increase in the number and scope of solar energy projects in the West Bank and wind energy projects in the Syrian Golan.

[17] Israeli Government Website. Israeli Land Authority. Press Release: "Two important tenders for the construction of renewable energy production facilities in the Negab with an area of approximately 5,000 dunams and a capacity of approximately 850 megawatts have been successfully completed". 17 May 2023 (Hebrew).
[18] Magdilim. Going wild on Israeli Land Authority tenders: a gap of about NIS 270 million between the minimum price and the winning price. 10 May 2023 (Hebrew).
[19] Ibid.
[20] The Knesset Research and Information Center. Renewable energy in Israel – Background and issues for discussion – Update. 7 December 2021 (Hebrew). P.27-28.
[21] Ashkenazi, Shani.The Ministry of Energy presented a plan for renewable energy, but had difficulty estimating the government's investment in it. 29 May 2022 (Hebrew) *Globes.*
[22] Lan, Shlomit. A deal every week: Israeli solar energy companies are exploding abroad. 7 January 2022 (Hebrew) *Globes.*

Israeli Solar Energy Production in the Occupied West Bank

Area C, comprising 61% of the West Bank, where the majority of open and flat areas suitable for the establishment of solar farms are located, is under the full control of Israel. All electricity-related infrastructure development, plans approval and permits granted for power generation facilities are subject to the Israeli Civil Administration (hereafter: ICA) in the West Bank.[23] Palestinians living in Area C cannot install any electricity lines, networks, and infrastructure, or even develop existing infrastructure, without the approval of the ICA.[24]

In June 2020, the IEA published a report estimating the potential of available land for solar energy production to meet Israel's 2030 renewable energy goals.[25] The report identified significant, additional land reserves in the West Bank, as well as in military firing zones, and privately owned Bedouin land within the Green Line,[26] totaling 50,000 dunams and an installed capacity of 4,955 MW.[27] The report noted "a great potential of ground and dual land areas" in the West Bank and called for measures to allow the Coordinator of Government Activities in the Territories (hereafter: COGAT) to realize the production potential in Area C.[28] The report also estimated the total roof area that can be used for solar electricity generation in Israeli settlements at 8,458 dunams.[29] The report noted that to meet the government's goals, virtually all potential land identified would need to be exhausted.

As of May 2024, eight Israeli commercial solar fields are operating in the occupied West Bank and are connected to the Israeli electricity grid in the occupied West Bank.[30]

In 2017, Who Profits documented four Israeli commercial solar fields, built between 2015 and 2016, on Palestinian land in the occupied West Bank, particularly in the Jordan Valley region, as detailed in the Who Profits report: Greenwashing the Occupation: The Solar Energy Industry and the Israeli Occupation. All four fields—located in the settlements of Kalia, Netiv Hagdud, and Shadmot Mehola in the Jordan Valley, and in the Meitarim Industrial Zone in the Mount Hebron

[23] Government Website. The Civil Administration in Judea and Samaria: Energy Office. 16 September 2020 (Hebrew).
[24] Who Profits. Greenwashing the Occupation: The Solar Energy Industry and the Israeli Occupation. January 2017.
[25] Israeli Electricity Authority (IEA). Draft for public comment: Raising targets for electricity production from renewable energy for 2030. June 2020 (Hebrew).
[26] Israeli Electricity Authority (IEA).
Raising targets for electricity production from renewable energy for 2030. August 2020 (Hebrew).
[27] Ibid.
[28] Ibid.
[29] Ibid. p.92.
[30] Israeli Civil Administration. Office of the Staff Officer for Energy Affairs. List of holders of electricity production licenses using photovoltaic technology over 50 KW that connect to the distribution network in Judea and Samaria. 08 August 2022 (Hebrew).

settlement Regional Council—are connected to the Israeli electricity grid and provide electricity purchased by the IEC to Israeli households on both sides of the Green Line.[31]
Between 2016 and 2022, four additional commercial solar fields were established in the West Bank, with licenses to produce electricity and connect to the Israeli distribution network in the West Bank.[32]

In 2016, a new solar field was built in the settlement of Petza'el in the Jordan Valley with a production capacity of 0.63 MW[33]. In 2019, a new solar field was built in the Ma'ale Amos Industrial Zone[34] on 69.8 dunams of Palestinian land,[35] mostly belonging to the Palestinian town of Sa'ir, and seized by Israel as "state land" in the 1980s. The field has a 3.31 MW[36] production capacity and is partially owned by the Ma'ale Amos settlement.[37] Two additional solar fields were established in the Barkan settlement Industrial Zone, and both hold licenses for production capacities of 0.63 MW each.

Corporate Complicity

Kalia Solar Field:

Kalia Clean Energy Ltd.[38] is owned by the residents of Kalia settlement, through Kalia Development and Holdings 2004 Ltd.[39]
***Location*:** Kalia settlement
***Size*:** 133 dunams
***Capacity*:** 10.8 MW[40]

[31] Who Profits. Greenwashing the Occupation: The Solar Energy Industry and the Israeli Occupation. January 2017
[32] Israeli Civil Administration. Office of the Staff Officer for Energy Affairs. List of holders of electricity production licenses using photovoltaic technology over 50 KW that connect to the distribution network in Judea and Samaria. 08 August 2022 (Hebrew).
[33] Energy Israel. Petz'ael Solar Field. (Hebrew).
[34] Kerem Navot. Solar Energy Field in the Territories? Only if You Are Settlers. 01 December 2019 (Hebrew).
[35] Israeli Government Website. Israeli Land Authority. Exempt Committee Decision 2627. 01 April 2021 (Hebrew).
[36] Ibid.
[37] File with Who Profits: Orot Amos Solar Field company registrar file.
[38] Israeli Civil Administration. Office of the Staff Officer for Energy Affairs. List of holders of electricity production licenses using photovoltaic technology over 50 KW that connect to the distribution network in Judea and Samaria. 08 August 2022 (Hebrew).
[39] Israeli Civil Administration. Office of the Staff Officer for Energy Affairs. List of holders of electricity production licenses using photovoltaic technology over 50 KW that connect to the distribution network in Judea and Samaria. 08 August 2022 (Hebrew).
[40] Who Profits. Greenwashing the Occupation: The Solar Energy Industry and the Israeli Occupation. January 2017.

Meitarim Sun Solar Field:

Meitarim Sun L.P.[41] is owned by Meshek Energy-Renewable Energies (TASE: MSKE).[42]
***Location*:** Meitarim Industrial Zone, Mount Hebron settlement Regional Council
***Size*:** 98.7 dunams
***Capacity*:** 5 MW, 16,000 solar panels [43]

Netiv Hagdud Solar Field:

Orot Netiv Hagdud Ltd.[44] is owned by private Israeli company Zabar Solar.[45]
***Location*:** Netiv Hagdud settlement, Jordan Valley
***Size*:** 50 dunams
***Capacity*:** 4 MW - 13,000 solar panels

Shadmot Mehola Solar Field:

Energy Sde Ilan 2010.[46] is owned by Haviv Levy Holdings Ltd. (50%) and Energ Assia-Shuarti Ltd. (50%).[47]*
***Location*:** Shadmot Mehola settlement, Jordan Valley
***Size*:** 49.2 dunams[48]
***Capacity*:** 5 MW[49]

Ma'ale Amos Solar Field:

Orot Ma'ale Amos Ltd.[50] is owned by Zabar Solar (74%) and the Ma'ale Amos settlement community cooperative (26%).[51]
***Location*:** Ma'ale Amos settlement

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[41] Israeli Civil Administration. Office of the Staff Officer for Energy Affairs. List of holders of electricity production licenses using photovoltaic technology over 50 KW that connect to the distribution network in Judea and Samaria. 08 August 2022 (Hebrew).
[42] File with Who Profits: Meshek Energy 2021 3rd Quarterly report. P. 128.
[43] Who Profits. Greenwashing the Occupation: The Solar Energy Industry and the Israeli Occupation. January 2017.
[44] Israeli Civil Administration. Office of the Staff Officer for Energy Affairs. List of holders of electricity production licenses using photovoltaic technology over 50 KW that connect to the distribution network in Judea and Samaria. 08 August 2022 (Hebrew).
[45] File With Who Profits: Orot Netiv Hagdud Company Registrar File.
[46] Ibid.
[47] File with Who Profits: Energy Sde Illan 2010 Company registrar file.
[48] Who Profits. Greenwashing the Occupation: The Solar Energy Industry and the Israeli Occupation. January 2017.
[49] Energy Israel Website. Shadmot Mehola Project. (Hebrew).
[50] Israeli Civil Administration. Office of the Staff Officer for Energy Affairs. List of holders of electricity production licenses using photovoltaic technology over 50 KW that connect to the distribution network in Judea and Samaria. 08 August 2022 (Hebrew).
[51] File with Who Profits: Orot Ma'ale Amos Company registrar file.

***Size*:** 69.8 dunams[52]
***Capacity*:** 3.31 MW

Petza'el Solar Field:

Energy Sde Ilan 2010.[53] is owned by Haviv Levy Holdings Ltd. (50%), and Energ Assia-Shuarti Ltd (50%). [54]
***Location*:** Petza'el Settlement, Jordan Valley
***Capacity*:** 0.63 MW

Barkan Solar Field:

Zabar Solar 3 Ltd. is owned by Zabar Solar.[55]
***Location*:** Barkan Industrial Zone
***Capacity*:** 0.63 MW

Barkan Solar Field 2:

Owned by Zvi Meir Properties Ltd.[56]
Location: Barkan Industrial Zone

Capacity: 0.63 MW

[52] Israeli Land Authority Government Website. Israeli Land Authority. Exempt Committee Decision 2627. G*ov.il.* 01 April 2021 (Hebrew).
**Attempts were made to contact the company, in case of a response Who Profits will update accordingly.*
[53]Israeli Civil Administration. Office of the Staff Officer for Energy Affairs. List of holders of electricity production licenses using photovoltaic technology over 50 KW that connect to the distribution network in Judea and Samaria. 08 August 2022 (Hebrew).
[54] File with Who Profits: Zabar Solar 3 Company registrar file.
[55] Israeli Civil Administration. Office of the Staff Officer for Energy Affairs. List of holders of electricity production licenses using photovoltaic technology over 50 KW that connect to the distribution network in Judea and Samaria. 08 August 2022 (Hebrew).
[56] Ibid.

Israeli Solar Fields in the Occupied West Bank

The Exploitation of Occupied Palestinian Land and Natural Resources

Eight commercial Israeli solar fields are operating on occupied land in the occupied West Bank. These solar fields are connected to the Israeli electricity grid and supply electricity to Israeli households on both sides of the Green Line

Barkan
Solar Field 1

Location: Barkan Industrial Zone

Capacity: 0.63 MW

Barkan
Solar Field 2

Location: Barkan Industrial Zone

Capacity: 0.63 MW

Ma'ale Amos
Solar Field

Location: Ma'ale Amos settlement

Size: 69.8 Dunam

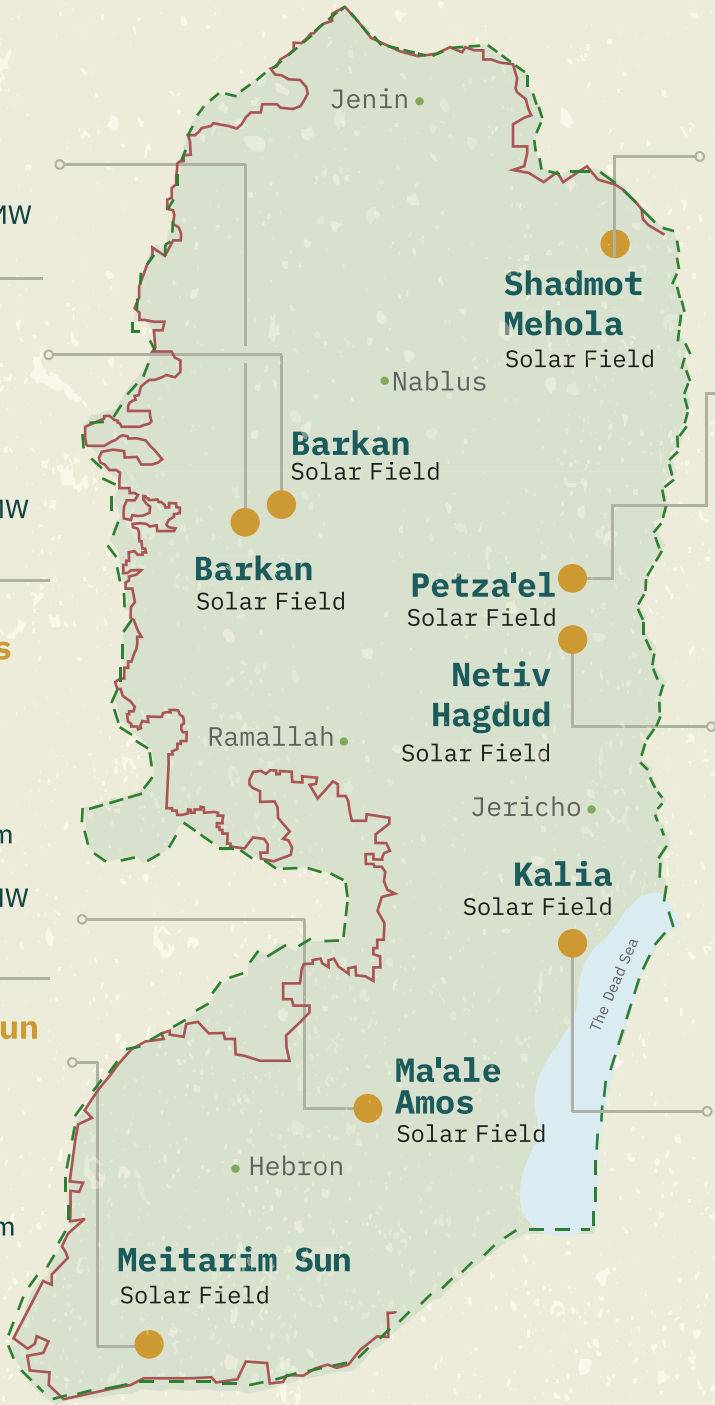
Capacity: 3.31 MW

Meitarim Sun
Solar Field

Location: Meitarim Industrial Zone

Size: 98.7 Dunam

Capacity: 5 MW, 16,000 solar panels



Shadmot Mehola
Solar Field

Location: Shadmot Mehola settlement

Size: 49.2 Dunam

Capacity: 5 MW

Petza'el
Solar Field

Location: Petza'el settlement

Capacity: 0.63 MW

Netiv Hagdud
Solar Field

Location: Netiv Hagdud settlement

Size: 50 Dunam

Capacity: 4 MW, 13,000 solar panels

Kalia
Solar Field

Location: Kalia settlement

Size: 133 Dunam

Capacity: 10.8 MW

Green Line
The Separation Wall

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Settlement Solar Energy Production in the West Bank

As of September 2023, the Israeli Civil Administration in the West Bank is promoting 22 plans to establish additional solar power generation systems in Area C in the West Bank, one of which is to be larger than all currently existing facilities on both sides of the Green Line.[57] In addition to favorable geographical conditions, the proximity of the West Bank to the center of Israel, and especially the proximity of the Jordan Valley region to Jerusalem, facilitates the transfer of electricity to areas with high demand.

In August 2023, the Megilot Regional Council in the northern Dead Sea completed the establishment of a solar energy project in the Kalia settlement. The regional council includes eight settlements: Kalia, Beit HaArava, Vered Yeriho, Almog, Mitzpe Shalem, Beit Hogla, Ovnat, and Kedem Arava. The solar energy project is worth around NIS 1.8 million and includes 200 solar panels built on the roof of a basketball court at an elementary school in the settlement, with a capacity of 100 KW for electricity production and sale to the electricity grid.[58]

Also in August 2023, a plan was approved for the establishment of a new 3,250 dunam solar field in the Jordan Valley. The field will be built within the jurisdiction of the settlement of Na'ama and 12 other settlements, with a production capacity of 320 MW, while the capacity of the two largest facilities approved so far is 250 megawatts.[59] In addition, 21 other plans for the construction of smaller solar facilities throughout the West Bank are currently being promoted, which will comprise collectively, approximately 7,800 dunams of land. These projects are expected to yield considerable economic benefits to the settlements and provide them with a more stable electricity supply.[60]

In July 2023, five Israeli companies—Teralight, El-Mor, Volta Solar, Ormash Solar Technology, and Magalim Energy—were awarded a tender issued by 19 settlement authorities for the construction of photovoltaic (PV) installations to generate electricity on the rooves of local council buildings and the roofing of public areas.[61] The tender, supported by the Ministry of Energy, included the proposed construction of solar systems on more than 1,541 dunams, and a planned capacity of 173.6 MW, with a potential revenue of NIS 120 million a year. The settlements that took part in the tender include: Ma'ale Adumim, Modi'in Illit, Bitar Illit, Elkana, Beit El, Karnei Shomron, Kdumim, Givat Ze'ev, Sha'ar Shomron, Oranit, Emanuel, Alfei Menashe, Emanuel, Har Adar, and

[57] Hasson, Nir. Solar electricity is faltering in Israel, but is becoming a significant economic sector in the settlements 05 September 2023 (Hebrew). *Haaretz.*

[58] ICE. (The solar energy revolution continues: A project in the Dead Sea has been completed. 01 August 2023 (Hebrew).

[59] Ibid.

[60] Ibid.

[61] Hararri, Orly. The winning companies in the tender for the construction of solar facilities in the Judea and Samaria were announced". 20 July 2023 (Hebrew) *Channel 7.*

the settlements of the Jordan Valley Regional Council, the Megilot Regional Council, Mateh Binyamin Regional Council, Shomron Regional Council, and Mount Hebron Regional Council.[62]

In 2019 and 2021, the ICA published two competitive procedures for setting tariffs for electricity generation using PV technology facilities in the West Bank, one for ground facilities and the second for dual-use facilities installed on the rooves of buildings, landfills, cemeteries, water or wastewater reservoirs, roads and interchanges, parking lots, and fences.[63]

In March 2020, the ICA published the winning bids for the first procedure, whereby public Israeli companies Energix Renewable Energies, Teralight, and private Israeli company Zabar Solar, were allocated a total of 40.57 MW.[64] Teralight was awarded a tender to establish a 9.75 MW capacity solar PV facility in the West Bank which will be connected to high and low-voltage distribution networks, at a fixed tariff for a period of 23 years from the date of commercial operation of the project.[65] To establish and operate the project, the company and the settlement of Na'ama in the Jordan Valley, established a company in which they hold 74% and 26% stakes, respectively. The project, costing NIS 36 million, is currently under construction.[66]

In January 2022, the ICA published the winning bids for the second procedure, where 90 MW were allocated for dual-use PV facilities in the West Bank, of which 75 MW were awarded to the public Israeli company Prime Energy, and the remaining 15 MW was awarded to Zabar Solar. [67]

Dual-use Facilities

As part of the government's decision to increase the target for electricity production from renewable energies, in January 2022, the Ministry of Energy and the Ministry of Agriculture and Rural Development launched a pilot program to examine the construction of dual-use facilities for the production of solar electricity on active agricultural lands on a total area of 1,800 dunams, including in the West Bank and the Syrian Golan.[68]

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[62] Ibid.

[63] Israeli Government Website. Israeli Civil Administration. Energy sector: competitive procedures announcement. 15 May 2022 (Hebrew).

[64] Israeli Civil Administration. Office of the Staff Officer for Energy Affairs. An update regarding the winners of the competitive procedure for determining a tariff for electricity production using photovoltaic technology in Judea and Samaria for facilities that will be connected at high voltage and low voltage. 1 March 2020 (Hebrew).

[65] Ibid.

[66] File with Who Profits: Teralight 2022 Annual Report. P. 35. (Hebrew).

[67] Israeli Civil Administration. Office of the Staff Officer for Energy Affairs. An update regarding the winners of the competitive procedure for determining a tariff for electricity production using photovoltaic technology in Judea and Samaria for facilities that will be connected at high voltage and low voltage. 26 July 2022 (Hebrew).

[68] Roah, Anat. 26 companies will participate in a pilot for the production of solar electricity on active agricultural land. 11 January 2022 (Hebrew) *Calcalist.*

Among the 26 companies selected to participate in the pilot, the public Israeli company, Enlight Renewable Energy was selected to develop agro-voltaic facilities in the Carmel settlement in the West Bank in collaboration with Ben Gurion University, and Teralight was selected to construct an agro-voltaic facility in a vineyard in the Beka'ot settlement in the Jordan Valley, in collaboration with Ariel University, located in the Ariel settlement.[69]

While both Israeli settlements and companies generate profits from commercial farms built on occupied land, neighboring Palestinian communities in Area C suffer from forcible displacement, home demolitions, a lack of basic services, and economic strangulation. Alongside Israeli restrictions on Palestinian electricity generation and related infrastructure construction, Israeli authorities continuously confiscate and destroy the solar panels used by Palestinians in the occupied West Bank, depriving them of the possibility to use their natural resources to sustain themselves.[70]

Israeli Wind Energy Production in the Occupied Syrian Golan

The exploitation of occupied Syrian land lies at the heart of the growing Israeli wind energy industry, so much so, that the Israeli Ministry of National Infrastructure has instructed the IEC to prepare an outline plan specifically to ensure the transfer of energy generated by the wind turbines in the Golan to the national electricity network.[71] The plan, titled 62/a, was approved by the Israeli Committee for National Infrastructure on 26 March 2018 and entails the establishment of electricity infrastructure in the Syrian Golan designed to absorb the energy generated by wind projects in the Golan and transport this to the Israeli electricity grid, together with the expansion of an existing electrical substation located in the settlement of Katzrin.[72] In January 2020, the Ministries of Energy, Defense, Finance, and the Electricity Authority announced the signing of an agreement to finance the development of a technological solution addressing the security aspects of wind turbines in the Golan and northern Israel, estimated at NIS 250 million.[73] The agreement

[69] File with Who Profits: Israeli Ministry of Energy and Infrastructure. List of 2021 winners in the Ministries of Energy and Agriculture and Rural Development pilot program for testing the production of electricity from solar energy on active agricultural land in an area of 1800 dunams. 11 January 2022 (Hebrew).
[70] B'tselem. Israeli forces demolish agricultural structures, destroy solar panels and break trees in Khirbet Ma'in, Hebron District. 25 January 2023. Also Israel confiscates solar panels in Qawawis community, Masafer Yatta. 18 august 2022.
[71] Planning Administration. National Infrastructure Plan 62/א - High tension cable 161KW Hulah Bar On Junction and Katzrin substation. 12 July 2018 (Hebrew).
[72] Ibid.
[73] Koren, Orah & Gabizon, Oren. NIS 70 million: The public will pay the Ministry of Defense for the construction of wind turbines. 1 January 2020 (Hebrew) *The Marker.*

allows the construction of hundreds of new wind turbines, exploiting the occupied natural resources in the Golan.

The fact that several of the wind farms in the Golan as well as their associated infrastructure have been classified as national infrastructure, makes clear that they are primarily intended to benefit the Israeli economy and population.

As of May 2024, three large commercial wind energy projects in the Golan are in various stages of development, one of which is in full commercial operation.

Emek Habacha

The Emek Habacha project, located in the northern Golan, was developed and is owned by the Israeli publicly traded company, Enlight Renewable Energy. The project features 34 wind turbines with a total capacity of 109 MW and is expected to generate power for 40,000 Israeli households,[74] and an annual revenue of NIS 105-145 million in electricity payments according to a license period of 20 years.[75]

The wind turbines on the farm are made by US-based company General Electric (NYSE: GE), which also employs electrical engineers and field technicians to work on the wind farm, providing maintenance services, management and training of subcontractors, purchase orders, and work with suppliers, equipment ordering, and inventory management.

Ruach Beresheet

Ruach Beresheet (Wind of Genesis) wind farm is the largest renewable energy project in Israel so far, with a production capacity of 206.7 MW.[76] The farm is located in the Tel el Farass area in the southeast of the Golan and was established by Enlight Renewable Energy, in partnership with the settlements of Yonatan, Alonei HaBashan, Ramat Magshimim, Mevo Hama, Natur, Kanaf, Avnei Eitan, and Ma'ale Gamla, which own 10% of the project. The project also includes the construction and expansion of 35 km of roads and a high-voltage line that will include optical fibers to be spread across the Golan, enabling high-speed internet for the settlements in the area.[77]

[74] Enlight website. Wind: Emek Habacha
[75] Enlight Renewable Energy. 2021 annual report. 2022 (Hebrew).
[76] File saved with Who Profits: Electricity Authority. List of permanent licenses in all technologies except solar. 31 August 2023 (Hebrew).
[77] Wineburg, Yehuda. Establishment of Ruach Beresheet Project. 17 June 2021 (Hebrew) *Shishibagolan.*

The farm features 39 wind turbines produced by the General Electric Company, which is also responsible for the production, supply, transportation, hoisting, and running of the turbines at the project site. [78]

In June 2023, Enlight energized the first wind turbine at the farm[79] which is expected to generate an annual revenue of NIS 192 million under a 20-year inflation-linked agreement with the IEC.[80]

ARAN Wind Farm

In December 2021, the Israeli Ministry of Defense signed an agreement with the public Israeli company, Energix Renewable Energies[81] allowing the construction of the ARAN project comprising 41 wind turbines at a height of 200 meters each, designed to supply electricity to 50,000 Israeli households per year for 20 years.[82] The ARAN project was approved as a national infrastructure project,[83] holds a conditional license for a capacity of 104 MW, and is expected to connect to the electricity grid in April 2027[84] with an estimated annual revenue of over NIS 90 million.[85] In June 2023, Energix started the construction of 23 wind turbines on agricultural lands belonging to the towns of Majdal Shams and Masa'ada in the Golan.[86] The ARAN wind farm will occupy about a fifth of the agricultural land still in the possession of Syrians in the occupied Golan[87] and will deny them access to their natural resources. The construction of wind turbines will have devastating effects on the residents' primarily agricultural economy, their health, and the environment.[88]

In June 2019, Energix filed a lawsuit for NIS 900,000 against Al-Marsad - Arab Human Rights Centre in Golan Heights, alleging defamation and claiming that Al-Marsad violated Israel's Anti-Boycott

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[78] Gabison, Yoram. Enlight's NIS 1.25 billion wind energy project in the Golan Heights is underway. 28 July 2020. (Hebrew) *The Marker.*

[79] Enlight's Website. News Release: "Enlight Energizes the First Wind Turbine at Genesis Wind, Israel's Largest Renewable Energy Project. 12 June 2023.

[80] Enlight's Website. News Release: "Enlight Energizes the First Wind Turbine at Genesis Wind, Israel's Largest Renewable Energy Project. 12 June 2023.

[81] Fischer, Noa. 41 Wind Turbines Will Be Constructed in the Northern Golan Heights. 28 December 2021 (Hebrew) *Ynet.*

[82] Ashkenazi, Shani. "Netanyahu Decided: Construction Work for the Wind Turbines in the Golan Get Postponed, Again". 03 July 2023 (Hebrew) *Calcalist.*

[83] Ibid.

[84] File saved with Who Profits: Electricity Authority. List of permanent licenses in all technologies except solar. 31 August 2023 (Hebrew).

[85] File saved with Who Profits: Energix 2022 Annual Report.

[86] Hashmonai, Adi & Khoury, Jacky & Others. Five seriously injured in clashes between Druze protesters and policemen in the Golan, protesters broke into a police station. 21 June 2023 (Hebrew) *Haaretz.*

[87] Al-Marsad. Natural Resource Exploitation. 24 February 2022.

[88] Raviv, Erez.Health and environment expert: The turbine project in the Golan is a social and environmental injustice, it should be cancelled and the developers should be compensated. 22 June 2023 (Hebrew) *Davar.*

Act. Energix was the first company to file a lawsuit using Israel's Anti-Boycott Act of 2011, due to the organization's work against the company's project in the Golan.[89]

In September 2022, the Israeli ministries for Energy and Finance allocated NIS 28 million for the establishment of a special police force dedicated to securing the construction of Energix's wind turbines and suppressing the protests of the local Druze community against the project. A significant part of the budget for the training of the force was paid for by Energix in exchange for the police deploying their forces to secure construction and prevent damages and delays in the project's development.[90] In June 2023, dozens of Druze protesters were injured by the Israel Police's crowd control weapons during protests against the construction of wind turbines on their agricultural lands in the occupied Syrian Golan.[91] According to the company, the commercial operation of the project is expected to start in 2025.[92]

Israeli Solar Energy Production in the Occupied Syrian Golan

Israeli control of the fertile and resource-rich Syrian Golan has also allowed the expansion of settlement solar projects developed for the benefit of Israelis on both sides of the Green Line, while facilitating extensive land grabs, the de-development of local agriculture, and the further exploitation of the Golan's natural resources.

In recent years, as part of the government's efforts to increase renewable energy production, the Mei Golan Water Corporation, owned by 27 settlements in the Golan, has been involved in the development of new renewable energy projects in the Golan, built on available water infrastructure such as ponds, reservoirs, and pumping stations.[93] In 2023, the corporation established three new solar systems with a capacity of 600 KW in water reservoirs in the Golan.[94] The corporation has also six installed PV systems with 4.65 MW in partnership with Enlight Renewable Energy, seven additional tariff based projects under development, and 41 MW capacity projects in partnership with Enlight Renewable Energy, in advanced planning stages.[95]

[89] Al-Marsad, Al-Haq, ESCR Net, Cornell Law School, & Boston University School of Law. Report on the Repression of Human Rights Defenders in Israel the Occupied Territories of Palestine and the Golan. January 2022.
[90] Kraus, Yair & Shompolvi, Atira & Shenrav Yeshi. . 60 police officers, NIS 28 million: the unit established to secure construction work in the Golan. 25 June 2023 (Hebrew). *Ynet.*
[91] Hashmonai, Adi & Breiner, Josh & Others. Israeli Police Fire Rubber Bullets, Stun Grenades at Druze Protesters in Golan Heights. 21 June 2023. *Haaretz.*
[92] Energix 2023 Quarterly Report Q3- . P. 13.
[93] Mei Golan's Website. Renewable Energy Page. (Hebrew).
[94] Ice. With an investment of NIS 4 million: Mei Golan built new solar systems. 14 September 2023 (Hebrew).
[95] Mei Golan Website. Renewable Energy Page. (Hebrew).

In June 2023, the Mevo Homa settlement in the Syrian Golan completed the construction of one of the largest solar systems on the roof of a dairy farm.[96] The system includes 2,400 solar panels installed on 11.5 dunams on the farm roof belonging to the settlement of Mevo Homa and the nearby settlement of Geshur. The project has a production capacity of 1.3 MW. It will generate electricity for sale to the electricity grid, with an expected income of approximately NIS 19 million, equivalent to the annual consumption of 300 households.[97] Additionally, as part of the 2022 pilot program for constructing dual-use solar facilities on active agricultural lands[98] between January 2022 and March 2023, the construction of 29 pilot facilities on agricultural land in 16 settlements in the Golan was approved. These facilities will be constructed on 349.1 dunams and have a total production capacity of 23.67 MW.[99] Among the companies granted these projects are, Energix Renewable Energies, Enlight Renewable Energy, and Shikun & Binui.

Solar Energy Production in the Naqab

Most of the solar energy production potential within the Green Line lies in the Naqab area. The 2020 IEA report identifying the land reserves in the West Bank, also recognized the significant potential for renewable energy production in the Naqab, specifically on privately owned Bedouin lands. [100]

Of almost 300,000 Palestinian Bedouins who live in the Naqab region, over 100,000 live in 35 villages considered "unrecognized" by Israel and are systematically deprived of basic infrastructure and services, including electricity. These communities are under constant threat of forced displacement and are subject to an aggressive policy of house demolition. As part of a range of discriminatory policies to force the Bedouin communities to move off their land, the residents are not connected to electricity infrastructure, do not have a continuous supply of electricity, and suffer immensely from a chronic electricity crisis that has severe implications on their health, food security[101] and long-term economic development.[102]

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[96] Ice. "Advancing solar energy: the construction of the huge project in the Golan Heights has been completed". 28 June 2023 (Hebrew).

[97] Ibid.

[98] Roah, Anat. 26 companies will participate in a pilot for the production of solar electricity on active agricultural land. 11 January 2022 (Hebrew) *Calcalist.*

[99] Israeli Government Website. Ministry of Energy and Infrastructure. The Ministries of Energy and Agriculture and Rural Development will test the production of electricity from solar energy on active agricultural land in an area of 1800 dunams in a pilot program. 11 January 2022 (Hebrew). Updated 16 March 2023.

[100] Israeli Electricity Authority. (IEA).
Raising targets for electricity production from renewable energy for 2030. August 2020 (Hebrew).

[101] Peleg, Bar. Without electricity and water, the food of the Bedouins in the Negev is rotting and the food insecurity is getting worse. (Hebrew) *Haaretz.* 10 September 2023.

[102] Who Profits. "Tools of Dispossession in the Naqab Dynamic Map". (2021).

In recent years, there has been a significant increase in the number of renewable energy projects being advanced in the Naqab—projects that are contingent on the forced displacement and dispossession of the native Bedouin population.

According to the 2020 IEA report, in addition to four previous plans that have been promoted for the construction of solar installations on privately owned Bedouin land, there is additional significant potential in promoting large ground PV installations on such private land. The report notes that these lands have claims of ownership by their native Palestinian Bedouin residents that will make the realization of such plans difficult.

In 2009, Israeli Government Resolution No. 4450, set a guideline target for electricity generation from renewable energy sources in the Naqab and Arava regions, of at least 250 MW each year between 2010 and 2020.[103] The Naqab area was the first to experience Israel's newly licensed solar commercial fields that have been expanding ever since their initial establishment in 2011.[104]

Previous research by Who Profits from 2017, detailed in the report, Greenwashing the Naqab: The Israeli Industry of Solar Energy, identified five Israeli commercial solar fields in the Naqab. These include the solar fields Ketura Sun, Ramat Hovav, Zmorot, Sde Boker, and Hatzerim.[105] As of May 2024, seven additional large commercial solar fields and power stations now operate in the Naqab. These include Ashalim, Megalim, Shneur Tze'elim, Halutziot, Ashalim P.V. 2, Ashalim Sun P.V., and the Nevatim projects.[106]

Electricity production in the Naqab requires the transfer of electricity throughout the country through high-voltage lines.[107] Line 400 is an extensive project of the IEC for the construction of electricity transmission lines designed to transmit around 300 MW of renewable energy from the Naqab area to the center of Israel, where most electricity is consumed. The project, approved by the Israeli courts, requires the forced displacement of Bedouin families in the Ramat Beka area, and an order for their evacuation has already been issued.[108]

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[103] Prime Minister Office. Resolution 5540' Setting a guiding target and formulating tools to promote renewable energies in particular in the Negev and Arava region. 29 January 2009 (Hebrew).
[104] Who Profits. Greenwashing the Naqab. (February 2017).
[105] Ibid.
[106] Israeli Government Website. Electricity Authority. "Status of all the licenses for facilities connected to the transmission grid - only solar". February 2023 (Hebrew).
[107] Binyamin, Idan. Illegal construction in the Negev hinders the use of renewable energy in the electricity grid. 12 February 2023 (Hebrew) *The Marker*.
[108] Ibid.

As part of the Ministry of Energy and the Ministry of Agriculture and Rural Development 2022 pilot program for the construction of dual-use solar facilities on active agricultural lands,[109] between January 2022 and March 2023, the construction of 42 pilot facilities on agricultural land in the Naqab was approved. These facilities will use 431.5 dunams and have a total capacity to produce 35.641 MW.[110] Among the companies granted these projects are Enlight Renewable Energy and Shikun & Binui.

In May 2023, the Israeli Land Authority published the results of two tenders worth NIS 1.06 billion for the design and construction of six PV facilities[111] in an area of about 5,000 dunams with a production capacity of about 850 MW in the Neot Hovav Industrial Zone in the Naqab.[112] Israeli companies Energix Renewable Energies, Shikun and Binui, and Neot Hovav Sun, a subsidiary of EDF Renewable Energy Israel,[113] won one compound each, and public Israeli company OPC Energy won the remaining three compounds. The six lots are located within the Ramat Beka Special Military Industrial Zone plan, comprising an area of approximately 112,838 dunams. Its planned expansion entails the demolition of 1,200 Bedouin homes while exposing thousands of Bedouin residents of the area to health risks.[114]

Corporate Complicity - Solar Fields in the Naqab

Ashalim Sun P.V.:

Owned by EDF Renewable Energy Israel[115] *
***Size*:** 750 dunams - around 101,000 solar panels
***Capacity*:** 30 MW [116]

[109] Roah, Anat. 26 companies will participate in a pilot for the production of solar electricity on active agricultural land. 11 January 2022 (Hebrew) *Calcalist*.
[110] Israeli Government Website. Ministry of Energy and Infrastructure. The Ministries of Energy and Agriculture and Rural Development will test the production of electricity from solar energy on active agricultural land in an area of 1800 dunams in a pilot program. (Hebrew) 11 January 2022. Updated 16 March 2023.
[111] Nissani, Yuval. Billion Shekels Contracts in Six Facilities for the Production of Electricity in the Negev. 19 May 2023 (Hebrew) *Globes*.
[112] Petersburg, Ofer. Let's continue to Break Records: two huge tenders for the establishment of solar projects in the Naqab have been closed. 10 May 2023 (Hebrew) *Walla*.
[113] File with Who Profits: Neot Hovav Sun Company registrar file.
[114] Adalah: The Legal Center for Arab Minority in Israel Website. Israel's plan to force Bedouin from their homes to clear way for military testing zone delayed due to Adalah, Bimkom legal action. 16 June 2020.
[115] Electricity Authority. "Decision 60201: Approval of the transfer of holdings in the production license of Ashlim Sun PV Ltd". 14 March 2023 (Hebrew).
**Attempts were made to contact the company, in case of a response Who Profits will update accordingly.*
[116] Koren, Orah. The solar power plant in Ashalim will be inaugurated today with an investment of NIS 280 million. 25 January 2018 (Hebrew). *The Marker.*

Ashalim P.V. 2:

Owned by EDF Renewable Energy Israel[117]
***Size*:** 600 dunams
***Capacity*:** 42 MW and 77,600 solar panels

Eshkol-Havatzelet-Halutziot:

Eshkol Havatzelet - Halutziot - Enlight L.P. is owned by Enlight Renewable Energy (TASE:TRLT) (90%), and Neve Haklaut Ltd., a cooperative by Moshav Neve.[118] [119]
***Size*:** 1000 dunams[120]
***Capacity*:** 55 MW [121]

The Ketura Sun Solar Field:

Ketura Solar L.P.[122] is owned by Ketura Power 600 (2010) Ltd., Global Sun Israel L.P., Solar Park Projects (one) L.P., and Ketura Real Estate-Agricultural Cooperative Ltd. Solar Park Projects is owned by The Phoenix Holdings (49%) and EDF Renewable Energies Israel (51%).
***Size*:** 80 dunams
***Capacity*:** 4.9 MW[123]

Zmorot Solar Field:

Zmorot Solar Park Ltd.[124] Is owned by EDF Renewable Energies Israel (51%) and PMA Solar Facilities L.P. (49%).[125]
***Size*:** 600 dunams
***Capacity*:** 50 MW[126]

Megalim Solar Field:

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[117] Binyamin, Idan. EDF launched its low cost solar project in Israel. 17 July 2023 (Hebrew). *The Marker.*
[118] File with Who Profits: Eshkol Havatzelet - Halutziot - Enlight L.P.Company Registrar file.
[119] File saved with Who Profits: Enlight 2022 Annual report. P. 195.
[120] Barakat, Amiram. Enlight and Keren Noy in a principled agreement to invest in Halutziot Project. 03 January 2013 (Hebrew) *Globes.*
[121] Enlight Renewable Energy Website. Halutziot 1 & 2. (Hebrew).
[122] Israeli Government Website. Electricity Authority. "Status of all the licenses for facilities connected to the transmission grid - only solar". February 2023 (Hebrew). File with Who Profits: Ketura Solar L.P. company registrar file.
[123] Who Profits. "Greenwashing the Naqab". February 2017. P.11.
[124] Israeli Government Website. Electricity Authority. "Status of all the licenses for facilities connected to the transmission grid - only solar". February 2023 (Hebrew).
[125] File saved with Who Profits: Zmorot Solar Park Ownership file.
[126] Who Profits. "Greenwashing the Naqab". February 2017. P 14.

Megalim Solar Power Ltd.[127] is owned by Noy Megalim L.P. (75%) and General Electric Power Netherlands (25%).[128]
***Size*:** 3000 dunams[129]
***Capacity*:** 136 MW [130] around 50,000 solar panels.[131]

Negev Energy-Ashalim Thermo Solar Power station:

Negev Energy is owned by Shikun & Binui Group (TASE: SKBN) (50%), Noy Fund (40%), and Spanish TSK 10%.[132]
***Size*:** 4000 dunams
***Capacity*:** 136MW

Nevatim:

Owned by Shikun & Binui Energy which is owned by Shikun & Binui Group (TASE: SKBN).[133]
***Capacity*:** 18 MW

Shneur Tze'elim Solar Field:

Owned by Shikun & Binui Group (TASE: SKBN)[134]
***Size*:** 1400 dunams
***Capacity*:** 120 MW

The Sde Boker and Hatzerim Solar Fields:

Owned by Suntech[135] and Shikun & Binui Group (TASE: SKBN).[136]

[127] Gutman, Lior. After a decade and a half of planning and execution: the thermo-solar power plants in Ashalim received operating permits. 10 April 2019 (Hebrew) *Calcalist.*
[128] File saved with Who Profits: Megalim Solar Power Company registrar file.
[129] Levy, Aviv. Scared of Criticism? Nofar withdrew from the deal to purchase the Magalim power plant from Keren Noi. 02 September 2021 (Hebrew) *Globes*.
[130] Israeli Government Website. Electricity Authority. "Status of all the licenses for facilities connected to the transmission grid - only solar". February 2023. (Hebrew)
[131] Levy, Aviv. Scared of Criticism? Nofar withdrew from the deal to purchase the Magalim power plant from Keren Noi. 02 September 2021. (Hebrew) *Globes*.
[132] Gabison, Yoram. Thermo-Solar Power Station in Ashalim will start to provide electricity to consumers tomorrow. 10 April 2019 (Hebrew) *The Marker.*
[133] Shikun & Binui Website. Nevatim 1. (Hebrew).
[134] Shikun & Binui Website. Shneur Tze'elim. (Hebrew).
[135] Who Profits. "Greenwashing the Naqab". February 2017. P.16.
[136] Shikun & Binui Website. Sde Boker Page. (Hebrew). Also, Hatzerim Page. (Hebrew).

***Size*:** 190 dunams[137]
***Capacity*:** 11 MW

Ramat Hovav (Neot Hovav) Solar Field:

Owned by Energix Renewable Energies (TASE:ENRG)[138]
***Size*:** 490 dunams[139]
***Capacity*:** 37.5 MW [140]

[137] Biz Portal Website. Suntech will provide Shikun & Binui Renewable Energy with panels worth NIS 37 million. 21 May 2013 (Hebrew).
[138] File with Who Profits: Energix 2022 Annual Report. P. 220.
[139] Energix Website. Neot Hovav.
[140] Who Profits. "Greenwashing the Naqab". February 2017. P.12.

Greenwashing Dispossession:

The Israeli Renewable Energy Industry and the Exploitation of Occupied Natural Resources

As of August 2024, at least ten commercial Israeli renewable energy fields are operating in the occupied West Bank, the Syrian Golan, and the Naqab - contingent on the exploitation of occupied Palestinian and Syrian land and natural resources.

These solar and wind fields are connected to the Israeli electricity grid and supply electricity to Israeli households and industry on both sides of the Green Line while reinforcing the de-development and dependency of the Palestinian electricity sector.

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