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Leviathan's Dowry: Reviewing Israel's Changing Energy and Climate Policies

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Israel is firmly building its image as a state committed to climate protection. However, the authorities and society began to adapt to global trends in this field only in the last decade. Despite newly launched exploitation of gas deposits and technological potential, structural problems continue to be a challenge for Israel and are aggravated by high demographic growth, growing resources consumption, and inconsistent government policies. Energy and climate are also increasingly influencing Israeli foreign policy, which is visible in, for example, its contribution to the regional gas market and export of green technologies.

Israel's Energy Security

Due to the scarcity of its own resources, Israel has been dependent on energy imports for most of its history. The conflict with the Arab states resulted in a cut-off from regional oil supplies and a partial embargo by other producers. The end of the Cold War and the reduction of Israeli-Arab antagonism made it possible to overcome energy isolation and expand import directions, mainly for coal and oil. New suppliers (e.g., Russia, Azerbaijan, Iraqi Kurdistan[1]) allowed improvements in the Israeli economy, for example in the petrochemical industry.

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A fundamental change came with the discovery of gas deposits in the territorial sea and in Israel's exclusive economic zone (EEZ) at the beginning of the 21st century. Production from the *Mari-B* deposit began in 2004. Crucial for Israel's position was the confirmation of large deposits—*Tamar* (in 2009), *Leviathan* (2010), *Delphin* (2011), *Tanin* (2012), and *Karish* (2013)—as well as smaller reservoirs such as *Dalit*. According to the Israeli Ministry of Energy, proven reserves amount to 921 billion cubic metres (bcm; total as of May 2022), with 12 bcm of annual consumption.[2] The search for new resources continues, for example in the *Hermes* fields (15 bcm potential), *Athena* (8 bcm), *Katlan (68 bcm)* and *Ishai* (adjacent to the larger Cypriot *Aphrodite* field). Some of the deposits are to be retained as a strategic reserve, and conversion of depleted deposits, for example for the storage of CO_2, is being considered.

Confirmation of the new resources coincided with the creation of Benjamin Netanyahu's second government in 2009 and forced the authorities to develop and implement a strategy for their use. A division of production for internal needs and export was established as production exclusively for the Israeli market would be unprofitable for the energy companies.[3] Forty percent of the annual production was allocated for sale abroad, and the exploitation—in accordance with Netanyahu's neoliberal economic programme—was transferred to private operators.[4] At the same time, Israel remained unprepared for a quick start of production in terms of infrastructure (weakness of transmission networks) and legislation. It was only in 2015 that an agreement (Natural Gas Framework) was adopted between energy companies and the state, specifying the distribution of profits and liabilities of the parties. A triple system of fees was introduced: income tax, royalties, and an additional tax on investment profits. The Israeli Supreme Court, monitoring institutions (e.g., Competition Authority), and public opinion and environmental NGOs also played a major role in forging new regulations.[5]

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Gas production from the new deposits began in 2013 after the *Tamar* field was opened. The opening of the *Leviathan* and *Karish* fields in 2018 and 2022 made it possible to fulfil export contracts. The dynamics of production and exploration remained closely bonded to the structure of the

[1] M. Wojnarowicz, "Israel and the Kurdish Question," *PISM Bulletin* No. 89 (1029), 26 September 2017, www.pism.pl.
[2] D. Zaken, "Global energy crisis opens possibilities for Israeli natural gas," *Al Monitor*, 22 May 2022, www.al-monitor.com. To compare, the reserves of Qatar are estimated at 24.7 trillion bcm.
[3] O. Eran, E. Rettig, "New Obstacles Facing Israeli Natural Gas Exports," INSS Insight No. 1073, 18 July 2018, www.inss.org.il.
[4] D. Avis, "Israel to Withhold Gas Exports to Protect Domestic Supplies," *Bloomberg*, 14 October, 2021, www.bloomberg.com.
[5] S. Ashwarya, *Israel's Mediterranean Gas. Domestic Governance, Economic Impact, and Strategic Implications,* Routledge, 2019, pp. 5-109.

gas market. Too low gas prices made it difficult to conclude long-term contacts that would guarantee the profitability of deposit exploitation. In addition, the lower activity of energy companies was affected by the decreased demand in the first phase of the COVID-19 pandemic.[6] The trend reversed in 2021-2022 as demand increased. Russia's invasion of Ukraine and its effects on energy markets led to the cancellation of a one-year moratorium on the exploration of new deposits introduced in December 2021 by then Minister of Energy Karine Elharrar, which was motivated by environmental considerations and the desire to develop renewable sources.[7] In 2023, another licensing round for new deposits began and investments in infrastructure (floating LNG liquefaction terminals) are being pursued. Estimates indicate that Israel could reach almost 40 bcm of annual production in 2025.

The exploitation of gas deposits allowed for a gradual reduction of coal share in the energy mix. In 2021, its combustion accounted for 23% of electricity production (52% in 2013), as gas stood for 69%.[8] According to government data, internal gas consumption will increase (among others as a result of developments in transportation) from the current 12 bcm to 27.5 bcm in 2045 (the total in the period 2021-2045 is to amount to 500 bcm).[9] At the same time, gas discoveries are attributed to delays in the use of renewable sources in energy production in Israel. It was only in 2022 that their share exceeded 10% in the energy mix, while the total capacity of renewable installations reached about 4.8 GW.[10] The primary source is solar energy (Israel averages more than 300 sunny days per year), but its use remains selective. Its application is mandatory for housing to provide hot water, but the share of photovoltaic installations in electricity production remains limited. The largest solar power plant, Ashalim, with a capacity of about 120 MW, was launched in 2019. Other renewable sources (e.g., wind farms on the Golan Heights) play a marginal role. A limitation in the context of renewable sources—primarily solar energy—is the shortage of usable space.[11] The most suitable areas of the Negev desert are located peripherally to the centres with the greatest energy demand and are largely protected natural areas, used by the military or are the subject of ownership disputes between the state and the local Bedouin population. An additional factor hindering the increase in the use of renewable sources by industry and individual consumers is the weakness of the infrastructure, primarily the low capacity of transmission networks and electricity storage capacity.[12] The Israeli authorities also omit the option of developing nuclear energy, pointing to the costs, lack of a suitable location, and safety issues.

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An important element of energy and climate security is Israel's strengthening of its potential in the field of green technologies. The priority areas of development are water management (over 90% of usable water is recycled in Israel), clean energy (e.g., technologies for cleaning solar panels in desert areas are being developed), and modern agriculture (e.g., agricultural drones). Some of the technologies being developed are directly related to Israel's geophysical conditions. Hence, the main aspect is to increase efficiency: miniaturisation, looking for substitutes for expensive materials (e.g., rare earth metals), or facilitating the management of limited space (e.g. work on transparent solar panels for installation over agricultural fields). Prospective areas also

[6] "The Pandemic Compendium: Reactions of States to COVID-19," 8 April 2020, www.pism.pl.
[7] L. Berman, "Blasting Russian 'blackmail,' EU chief calls for more energy cooperation with Israel," *Times of Israel*, 14 June 2022, www.timesofisrael.com.
[8] Central Bureau of Statistics (Israel), www.cbs.gov.il.
[9] "Natural Demand", State of Israel, www.energy-sea.gov.il.
[10] "Be-pa'am ha-rishona: yizra'el avra et ha-asara achuzim be-chibur mitkanim le-y'icur energia mitchadeshet - al fi du'ach matzav energi'ot mitchadshot she-mefarsemet reshut ha-chashmal," State of Israel, 12 February 2023, www.gov.il.
[11] S. Ashwarya, *Israel's Mediterranean Gas Domestic Governance …*, *op. cit.*, p. 46.
[12] S. Surkes, "The sun is shining, so why isn't Israel making hay of its solar energy?," Times of Israel, 20 October 2021, www.timesofisrael.com.

include: hydrogen energy or storage of greenhouse gases. In 2021, there were in total about 2,000 companies, including 637 startups, dealing with climate technologies in Israel.[13] In 2018-2020, companies from this sector collected investments totalling $3 billion. At the same time, direct state expenditures in the areas of energy, water, environment, and sustainable development were low (4% of public investment from the Innovation Authority in 2018), and Israel itself recorded worse indicators for the development of climate technologies compared to other OECD countries.[14]

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Climatological assessments indicate that the Middle East and North Africa are areas most at risk of climate change. The related losses in GDP projected for the region may range from 8.5% to 27.6% by 2050.[15] According to Israeli meteorological data, the climate in Israel is warming twice as fast as the global average.[16] This will affect the frequency of extreme weather events (e.g., heat waves expected to reach 50°C) and their effects (droughts, forest fires, water cycle disturbances) for the functioning of the population (higher mortality of the elderly, migration pressure) and the economy (e.g., higher power consumption by air conditioners, difficulties in food production)[17]. Projected sea level rise could threaten the viability of coastal cities and water management. This is particularly important for Israeli strategic infrastructure such as desalination stations. There are currently five installations operating in Israel, which, after the completion of the next two, are to cover 90% of the annual consumption of municipal and industrial water. Ultimately, by 2030, Israel is to desalinate 1.1 bcm of seawater.[18]

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Climate change overlaps with Israel's problems related to rapid demographic growth and increasing population density. Since the beginning of the 21st century, its population has increased by 50%, from 6.3 million in 2000 to 9.5 million in 2022, and it is projected to reach 16 million in 2050.[19] This increase, which is above average for developed economies, overloads the existing infrastructure (e.g., public services, housing), intensifies unfavourable phenomena (e.g., air pollution), and increases the consumption of resources (e.g., electricity), as well as greenhouse gas (GHG) emissions. The level of these emissions in Israel is close to medium-sized countries—0.18% of global emissions with 0.11% of the world's population (in 2019, it was 82% higher than the global average and 36% higher than the EU average).[20] In 2020, the largest emitters of GHGs (77.42 Mt) were the energy sector (48%), transport (22%), and industry (18%), including the modern technology sector, such as computing centres or server rooms requiring high power demand.[21] Israeli green construction is also poorly developed, with only 8% of buildings meeting the criteria of the ecological certification system (compared to 30%

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[13] "*Israel's State of Climate Tech 2021*," innovationisrael.org.il.
[14] The Organisation for Economic Cooperation and Development. See: "Special report: National Climate Action by the Government of Israel," State of Israel, 26 October 2021, www.mevaker.gov.il.
[15] *Ibidem*.
[16] L. Yaron, "Israel Will Get Much Hotter by 2050, Heat Waves Will Increase, Expert Prediction Finds," *Haaretz*, 30 January 2022, www.haaretz.com.
[17] L. Yaron, "Israel to Add Heat Waves to 'Threat Map' Amid Grim Climate Projections," *Haaretz*, 20 July 2022, www.haaretz.com.
[18] M. Kaplan-Zantopp, "How Israel used innovation to beat its water crisis," *Israel 21c*, 28 March 2022, www.israel21c.org.
[19] Central Bureau of Statistics (Israel), www.cbs.gov.il.
[20] S. Ashkenazi, "Bennett aims to make Israel a climate-tech leader," Globes, 31 October 2021, en.globes.co.il/en/; "Special report: National Climate Action by the Government of Israel," State of Israel, 26 October 2021, www.mevaker.gov.il.
[21] United Nations Climate Change, www.unfccc.int.

in Poland and the U.S.).[22] Additionally, Israel faces other environmental problems resulting from previous extensive economic activities, including the progressing degradation of the Dead Sea, related (apart from climate change) to mining of minerals, the issue of soil contamination in industrial zones, and forest management not adapted to local conditions. Historically, the authorities have also justified support for coal-based energy and the petrochemical industry, despite the visible environmental costs, on national security grounds (greater flexibility of supplies), which influenced the dynamics of changes in energy policy.[23]

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The growing pressure of public opinion and the adoption of international commitments have become an impulse for the Israeli government to undertake climate policy reforms. In 2016, the first national plan to reduce CO_2 emissions was created. In 2018, the government adopted a National Programme for preparing for climate change. In April 2021, the Ministry of Energy presented a new roadmap, indicating goals and tools, including a complete departure from coal, a four-fold increase in photovoltaic capacity by 2030, and an 85% reduction in emissions in the power industry.[24] Despite the initiation of favourable processes (e.g., expansion of marine protected areas, improvement of air quality, increase in the share of independent electricity producers), the effectiveness and scope of decisions introduced by successive Netanyahu cabinets were assessed as insufficient. The State Comptroller's report from October 2021 drew attention to the modest scope of Israel's climate goals compared to other countries (including a lack of declarations on the absolute reduction of emissions), which were not met anyway—for example, the aim of reaching 10% of energy production from renewables by the end of 2020. The plans and recommendations also lacked appropriate regulations or secured budgeting, such as a support system for electric cars sufficient to fulfil the promise to abandon the import of internal combustion cars by 2030.[25] Slow processes also included phasing out coal-fired units, gasification of the industry and energy sector, as well as strictly environmental issues such as the liquidation of the industrial zone in Haifa or improving the ecological situation of the Dead Sea. Israel has not joined the international emissions trading system and use of gas and electric motors in transport remains low, though growing (increase from 75,000 vehicles in 2020 to 188,000 in 2022).

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A stronger commitment to climate and environmental issues was one of the stated goals of the government led by Naftali Bennet and Yair Lapid in 2021-2022, which identified climate change as a threat to Israel's national security.[26] At the COP26 summit in November 2021, Israel repeated its promise to phase out coal by 2025, increase the share of renewables in energy production (up to 30% in 2030), reduce emissions by 27% by the end of 2030 and achieve zero-emissions by the end of 2050. Participation in the summit was preceded by the adoption by the government of another climate action plan totalling $4.8 billion, including for the development of climate technologies.[27] The authorities also justified the suspension of the agreement with the United Arab Emirates (UAE) on

[22] S. Ashkenazi, "Comptroller slams Israel's green energy failure," *Globes*, 20 October 2020, en.globes.co.il/en/.
[23] S. Ashwarya, *Israel's Mediterranean Gas Domestic Governance …*, *op. cit.*, p. 33.
[24] S. Surkes, "In run-up to Earth Day, Energy Ministry publishes road map for cutting emissions," *Times of Israel*, 19 April 2021, www.timesofisrael.com.
[25] "Special report …," *op. cit.*
[26] M. Wojnarowicz, "*United Opposition: The 'Government of Change' Against Netanyahu*," *PISM Bulletin* No. 119 (1815), 18 June 2021, www.pism.pl.
[27] R. Bassist, "In Glasgow, Israel's Bennett pledges net zero emissions by 2050," *Al Monitor*, 1 November 2021, www.al-monitor.com.

increasing the transport of oil via the Eilat-Ashkelon pipeline,[28] or the moratorium on gas exploration (revoked in March 2022) on environmental grounds. However, despite the ambitious goals, they again failed to implement them into legislation due to inter-ministerial disputes over the scope of institutional commitments and financial issues.[29] As a result, the promise of zero emissions by 2050 was replaced by a declaration to reduce emissions by 85% (compared to 2015), and the plan to introduce a carbon tax was blocked.[30] The Bennett-Lapid government also tried to expand business climate responsibility by working on regulations supporting sustainable activities of companies (taxonomy).[31]

Economic Benefits and Social Challenges

The benefits for the economy and citizens resulting from the discovery of gas became an important element of the political messaging of successive governments after 2009. By 2022, revenues from royalties amounted to $3 billion, and together with other taxes, totalled about $5 billion. The opening of subsequent deposits in recent years has increased the income from this source—in the first half of 2022, it increased by 48% compared to 2021 to $250 million.[32] In 2014, Israel established a state-owned wealth fund (modelled on Norway's), using profits from the sale of gas. After delays in obtaining the appropriate level of income (ILS 1 billion, equivalent to about $275 million), the fund became operational in May 2022.[33] At the same time, the financial benefits from gas exploitation remains less felt—contrary to political announcements and despite the decrease in the average price level—by domestic consumers. The unfavourable structure of the contracts initially concluded meant higher gas prices for the industry, for which the purchase of foreign LNG was at a certain point more advantageous (Israel has an import terminal in Hadera). An additional difficulty is the weakness of the infrastructure, including the lack of a direct connection to the deposits or lower production capacity of gas power plant blocks compared to coal ones.[34]

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Although climate issues do not dominate in the political narrative in Israel (e.g., during election campaigns), the changes that have taken place in recent years have led to an increase in public awareness. The mobilisation of local pressure groups and non-governmental organizations (NGOs) played an important role in the creation of regulations protecting consumer rights and the environmental protection framework, which also has an impact on the development prospects of certain branches of the economy (e.g., chemical industry, mass tourism). The authorities remain aware that more commitment on the part of consumers is needed to achieve the assumed climate goals. Hence, they declare, for example, the extension of facilitations for prosumers—individuals and enterprises—with energy-generating installations

The authorities remain aware that more commitment on the part of consumers is needed to achieve the assumed climate goals.

[28] Built in 1968, the pipeline was a joint Israeli-Iranian investment, planned as an alternative transit route to the Suez Canal.
[29] L. Yaron, "Israel's Cabinet Endorses Climate-change Bill, Dividing Environmentalists," Haaretz, 9 May 2022, www.haaretz.com.
[30] S. Surkes, "Israel heads to COP27 without official backing for former PM Bennett's net zero vow," *Times of Israel*, 24 October 2022, www.timesofisrael.com.
[31] S. Surkes, "Ministry drafts plans to recruit finance, business sectors to fight climate change," *Times of Israel*, 26 October 2022, www.timesofisrael.com.
[32] D. Peskin, "Israeli natural gas revenues boom," *Al Monitor*, 12 September 2022, www.al-monitor.com.
[33] E. Levi-Weinrib, "Israel launches sovereign wealth fund," *Globes*, 30 May 2022, www.en.globes.co.il.
[34] A. Barkat, "IEC to sell cheap imported gas to Israeli industry," *Globes*, 1 June 2020, www.en.globes.co.il.

(e.g., photovoltaics), support for electromobility (scarcely developed in Israel[35]), or the improvement of waste recycling and public transport.[36]

At the same time, traditional divisions in Israeli society translate into energy and environmental issues, such as the construction of new infrastructure. Social resistance excludes land in the densely populated central and northern districts from use for these purposes, while peripheral centres do not agree to bear the burdens for the benefit of the inhabitants of the richer part of the country. For the Bedouin population of the Negev, often living in settlements not recognised by the state and without access to water and electricity, the plans for new energy projects are seen as an attempt to limit their rights to land and an example of favouring the Jewish population.[37] The introduction of a sugar tax and an additional fee on disposable plastic products in 2021 was perceived as harassment of the ultra-Orthodox population, which often have many children. Religious parties, after returning to the government, cancelled the taxes in January 2023. The latest challenge for Netanyahu's government is a significant increase in electricity prices (by 20% compared to 2021)—especially in the context of the promises of cheap energy made to citizens many times after the discovery of gas deposits.[38]

Role in Security and Foreign Policy

The international dimension plays a key role in Israel's energy and climate policy. Since Israel does not have the necessary infrastructure (e.g., lack of liquefaction stations, insufficient network of connections with deposits), it remains dependent on cooperation with partners who have it, primarily Egypt.[39] In terms of ownership of deposit extraction rights, the advantage of drilling companies from among Israel's closest international partners (e.g. U.S., India, Greece) is visible. An important context is also the threat to the security of energy infrastructure, which has been the object of attacks (e.g., rocket fire from the Gaza Strip) or indicated as a target (e.g. threats by Hezbollah regarding offshore platforms[40]). Therefore additional security measures were introduced, including an increased navy budget and joint sea manoeuvres with allies (e.g. U.S., France, Greece, UAE).

The promotion of the technical offer, especially in the field of climate technologies, is one of the most important elements of Israel's image policy, at the central level and as part of local government diplomacy.

Israel actively uses energy and climate issues in multilateral diplomacy, treating them as a pillar of institutionalisation in the region, where it promotes the vision of a "Renewable Middle East".[41] The most important formats include the Eastern Mediterranean Gas Forum,[42] which is an outgrowth of the normalisation process with Arab states, as well as the Negev Forum,[43] I2U2 group (together with UAE, U.S. and India), and the Eastern Mediterranean and Middle East Climate Change Initiative (EMME-CCI), which in February 2022 adopted a 10-year action plan for regional climate cooperation. The promotion of the technical

[35] M. Reut-Gelbart, "The Transition to Electric Vehicles in Israel," *Boell*, 4 March 2022, il.boell.org.
[36] T. Pavel, "Israel earmarks residential rooftops for electricity production," *Al Monitor*, 8 December 2022, www.al-monitor.com.
[37] D. Zaken, "Israel to build first solar plant on Bedouin land," Al Monitor, 28 June 2022, www.al-monitor.com.
[38] "New year brings rash of price hikes in electricity, gasoline, water and property tax," *Times of Israel*, 1 January 2023, www.timesofisrael.com.
[39] S. Nowacka, "The Influence of Gas Resources on Egyptian Policy in the Eastern Mediterranean," *PISM Bulletin* No. 157 (1905), 4 November 2019, www.pism.pl.
[40] M. Wojnarowicz, "The Influence of Gas Resources on Egyptian Policy in the Eastern Mediterranean," *PISM Bulletin* No. 157 (1905), 12 November 2019, www.pism.pl.
[41] "Israel's Herzog calls for 'renewable Middle East' at COP27," i24, 7 November 2022, www.i24news.tv.
[42] Along with Israel, the other members are Cyprus, Greece, Italy, Jordan, Egypt, France, and the Palestinian Authority, while the EU and the U.S. have observer status.
[43] Initiated in March 2022 by the U.S. Secretary of State and the foreign ministers of Israel, the UAE, Bahrain, Morocco, and Egypt. During the summit, six working groups were established, for example to focus on clean energy, food, and water security.

offer, especially in the field of climate technologies, is one of the most important elements of Israel's image policy, at the central level and as part of local government diplomacy.[44] In addition to the security ties, it is the basis of relations with Asian and African countries. The Israeli offer also is used by countries without normalised relations, and institutions and forums dealing with climate and energy provide space for informal dialogue also at the political level.[45] At the global level, Israel has been a party to the United Nations Framework Convention on Climate Change since 1996 as a developing economy. In 2004, it ratified the Kyoto Protocol, and in November 2016, the Paris Agreements. It is at the final stage of accession to the International Energy Agency and has also joined initiatives related to reducing emissions as a signatory to the Global Methane Pledge and as part of the Alliance to Phase Out Coal during COP26.[46] At the same time, the level of political involvement on Israel's side has increased only in recent years, for example raising the rank of diplomatic delegations to COP summits since 2015.

The discovery of gas deposits in the Mediterranean Sea became an impulse to partially regulate the issue of delimitation of territorial waters and exclusive economic zones (EEZ).[47] Israel is not a signatory to the Convention on the Law of the Sea, but it treats it as customary law and defined its sea areas based on its provisions (except for the border with Jordan).[48] In 2010, it conducted delimitation talks with Cyprus but there is still no agreement on the exploitation of the combined *Ishai* and *Aphrodite* fields on the EEZ border.[49] In October 2022, with the mediation of the U.S., Israel signed an agreement on the sea border with Lebanon, which regulated the status of the disputed *Karish* and *Qana* gas fields.[50] The final division of Israeli and Palestinian territorial waters off the Gaza Strip remains unresolved due to the failure of the peace process.

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Currently, the largest role for Israel's energy and climate policy is played by its neighbours: Egypt, Jordan, and the Palestinian Authority (PA). The first two are the countries that are the largest direct recipients of Israeli gas. Also, relations with Egypt have a strategic dimension. Improvement in these relations in recent years and the resolution of contentious issues have provided Israel with access to Egypt's liquefaction plants and absorptive market.[51] Deliveries of Israeli gas began in 2019, and Egypt's revenues from re-exports to date have totalled $3.5 billion.[52] In order to increase transmission, Israel plans to build an additional above-ground branch of the Al-Arish–Ashkelon gas pipeline and sea connections within five years (plans for a joint liquefaction installation in the Red Sea were abandoned due to environmental concerns). It has also announced investments in the Egyptian renewable energy sector. At the same time, Egypt's resources are serious competition for Israeli gas, for example for

[44] R. Bassett, "Israeli mayor leads Haifa's charge against climate change," *Al Monitor*,17 February 2021, www.al-monitor.com.
[45] L. Yaron, "Israeli, Iraqi, Lebanese, Palestinian Leaders Agree on Climate Cooperation in Rare Meeting," *Haaretz*, 8 November 2022, www.haaretz.com.
[46] Z. Nowak, "COP26 - pod górkę, ale do przodu," *PISM Spotlight* No. 87/2021, 18 November 2021, www.pism.pl.
[47] S. Zaręba, "Delimitation of Maritime Areas in the Eastern Mediterranean as a Challenge for the EU," *PISM Bulletin* No. 65 (1495), 3 April 2020, www.pism.pl.
[48] In the Eastern Mediterranean, the United Nations Convention on the Law of the Sea was ratified by Cyprus, Lebanon, Palestine (PA), Egypt, and Jordan. Syria and Turkey did not join. www.un.org.
[49] D. Zaken, "Negotiations likely to start over in Israel-Cyprus gas field dispute," *Al Monitor*, 14 February 2022, www.al-monitor.com.
[50] S. Nowacka, M. Wojnarowicz, "Israel and Lebanon Conclude Maritime Agreement," *PISM Spotlight* No. 138/2022, 28 October 2022, www.pism.pl.
[51] P. Sasnal, M. Wojnarowicz, "Improvement in Israeli-Egyptian Relations," *PISM Bulletin* No. 116 (1558), 24 November 2017, www.pism.pl.
[52] "Egypt making 'huge fortune' selling Israeli gas to Europe, media says," *Middle East Monitor*, 13 December 2022, www.middleeastmonitor.com.

new customers in Europe.[53] Egypt also plays an important role in Israeli-Palestinian energy negotiations.

Israeli-Jordanian cooperation is more complex. In Jordan, there is widespread opposition to it (parliament regularly calls for it to be ceased) and it is adversely affected by tensions related to the policies of Netanyahu's government. At the same time, pragmatism resulting from internal needs is visible on the side of the Jordanian authorities. In 2016, a 15-year contract worth $10 billion was concluded for the supply of about 3.1 bcm of gas per year, beginning in 2020.[54] Israel is also the main supplier of water to Jordan and uses its infrastructure to export gas to Egypt. A new initiative is a trilateral agreement with the UAE concluded in November 2021. Under this agreement, a solar power plant managed and financed by the UAE is to be built in Jordan, which will export electricity to Israel in exchange for the supply of 200 million cubic meters of water per year from a new desalination plant. Jordan is also an important partner in relations with the Palestinians, for example, as a supplier of fuel and electricity to the West Bank.[55] Another area of cooperation is the protection and exploitation of common watercourses: the Jordan, Yarmuk, and Dead Sea. The project to build a canal connecting the Red Sea with the Dead Sea to halt water loss has not been implemented. At the same time, the parties reached a preliminary agreement on the use of the Jordan (mainly for agriculture) and purification.[56]

In 2016, a 15-year contract worth $10 billion was concluded for the supply of about 3.1 bcm of gas per year, beginning in 2020.

The asymmetry of the Israeli-Palestinian conflict also translates into the energy and environmental dimensions. Both the West Bank and the Gaza Strip remain dependent on Israel for electricity (94% of the West Bank's electricity) and fuel (e.g., oil for the Gaza power plant). Effective control exercised over the Palestinian territories (including the development of Jewish settlements, restrictions on the import of goods) limits the possibilities of Palestinians to develop renewable energy or expand their own infrastructure.[57] Palestinians, as well as Israeli NGOs, emphasise other ecological effects of the occupation in the West Bank, including blocked access to water sources, illegal garbage dumping, or exploitation of local resources. At the same time, the poor environmental condition of the Palestinian territories directly affects Israel itself. For example, pollution from the Gaza Strip, which has no sewage system, threatens Israeli desalination stations.[58] The poor state of political relations and the intra-Palestinian conflict between Fatah and Hamas complicate the issue of the exploitation of gas deposits (estimated at 30 bcm), which would enable the PA to improve its economic situation and meet its own energy needs, including for the Gaza Strip.[59] In recent years, however, activities in this area have intensified. In February 2021, the PA signed agreements with Egyptian Natural Gas Holdings regarding gas fields, and in October 2022, a tripartite agreement between Palestinian, Israeli, and Egyptian institutions was announced (also with the participation of the U.S. and EU). The possible start of production and exports depend on the current state of Hamas-Israel and PA-Israel relations, intra-Palestinian relations, and the interest of energy companies. The deepened antagonism between the Palestinian and Israeli populations also hinders cooperation on environmental issues, for example among NGOs.

Israel has deepened the regional dimension of its energy policy and climate cooperation as part of the normalisation process with Arab states since 2020. Normalisation has restored its potential as

[53] S. Gorodeisky, "Israeli energy stocks plunge on huge Egyptian gas find reports," *Globes*, 27 June 2018, www.en.globes.co.il.
[54] S. Ashwarya, *Israel's Mediterranean Gas Domestic Governance …*, *op. cit.*, p. 196.
[55] "Jordan expands power supplies to the West Bank," i24, 24 August 2022, www.i24news.tv.
[56] D. Zaken, "Israel, Jordan to restore Jordan River," *Al Monitor*, 26 October 2022, www.al-monitor.com.
[57] "Tired of power cuts, Gaza Strip turns to solar solution," *Y Net News*, 10 March 2022, www.ynetnews.com.
[58] S. Efron, K. Noach, N. Schusterman, "The Gaza Strip and the Climate Crisis," Special Publication, 7 June 2022, www.inss.org.il.
[59] D. Zaken, "Talks underway for agreement on offshore Gaza gas field," *Globes*, 20 October 2022, www.en.globes.co.il.

a transit country (e.g., in the field of oil transport, an alternative to the Suez Canal) and officially opened new markets for Israeli companies (agreement signed for gas exploration on the Atlantic coast of Morocco), and investments in the Emirati and Moroccan clean energy sectors are being planned and implemented.[60]

New perspectives for Israel are also opened by the improvement of relations with Turkey, which was an important point of reference for Israel's gas strategy as a potential transit partner and recipient.

Relations with the UAE are developing particularly intensively, while the Emirates is acting as an investor (purchase of shares in Israeli gas fields by the state-owned Mubadala holding in 2021, investments in startups), development partner (e.g., in hydroelectricity), and a recipient of technology (e.g., in food production).[61] They also play an important political role as a partner and co-investor in Israel's cooperation with Egypt and Jordan. New perspectives for Israel are also opened by the improvement of relations with Turkey, which was an important point of reference for Israel's gas strategy as a potential transit partner and recipient. The plans were thwarted by the diplomatic crisis and the rupture of relations in the previous decade. The improvement in relations (including the return of ambassadors) and declarations by Turkish decision-makers point to opportunities for energy cooperation.[62] Political issues pose obstacles, primarily Turkey's policy in the Eastern Mediterranean and its bad relations with Greece and Cyprus (Israel's close allies within the so-called Energy Triangle), as well as the unstable situation in Syria.[63] From Israel's perspective, an important role among regional actors is also played by Qatar (which still does not recognise Israel) as a potential shareholder in Lebanese and Palestinian gas fields and as a fuel supplier to the Gaza Strip.

From Israel's point of view, the U.S. is also an important partner as an investor (participation of American companies in gas extraction, takeover of Israeli Noble Energy by Chevron in 2020), diplomatic support (e.g., participation in mediations with Lebanon), and in the field of regional security and technology.

Israel and the Plans to Strengthen the EU's Energy Security

The EU is one of Israel's most important energy and technological partners and a point of reference in the field of climate policies. The EU market has traditionally been seen as a main destination for Israeli gas. The crucial obstacles were the cost of extraction and transport of the gas to Europe. The focus then was on the EastMed gas pipeline project, which would connect Israeli fields through the Cypriot and Greek sea areas with the territory of the EU. Despite political support (including letters of intent signed with the governments of Cyprus and Greece, declaring the status of the project as of special interest to the European Commission), the complicated conditions of its construction and potential environmental effects impact the profitability of the investment. The project is still being considered, although in January 2022 the U.S. withdrew its support.[64] In addition, low gas prices and the resulting lack of

The focus then was on the EastMed gas pipeline project, which would connect Israeli fields through the Cypriot and Greek sea areas with the territory of the EU.

[60] M. Link, "A Gateway to Africa? Economic Opportunities in Israel-Morocco Relations," INSS Insight No. 1604, 26 May 2022, www.inss.org.il.
[61] D. Zaken, "Israel, UAE to cooperate on clean hydroelectricity," Al Monitor, 23 March 2022, www.al-monitor.com.
[62] R. Soylu, "Turkey still interested in bringing Israeli gas to Europe, Erdogan says," *Middle East Eye*, 18 January 2022, www.middleeasteye.net.
[63] K. Wasilewski, "Tensions in the Eastern Mediterranean: an Urgent Challenge for the EU," *PISM Bulletin* No. 117 (1865), 19 August 2019, www.pism.pl.
[64] K. Svetlova, "The EastMed Pipeline Is Dead, Long Live the EuroAsia Electricity Project," *The Media Line*, 1 January 2022, www.themedialine.org.

interest from private investors meant that Israel was not perceived as a real alternative supply direction for the EU.

The impulse to change the European position was the sudden need to diversify energy sources after Russia's invasion of Ukraine. On 15 June 2022, a preliminary agreement was signed between Israel, Egypt, and the EU regarding the export of Israeli gas to the EU market for a period of three years.[65] Israel is also developing bilateral cooperation, such as plans to build joint LNG terminals with Cyprus or new connections with Egyptian infrastructure. An important joint Israeli-European project is the extension of the EuroAsia interconnector, which, when completed in 2026, would connect Israel to the European electricity grid (together with Cyprus), strengthening the energy security of the southern EU states.[66] Israel is also an active participant in EU projects related to climate technologies under the Horizon programme. At the same time, Israel's exports to the EU, due to delays in the decarbonisation of the economy, may be covered by the carbon border adjustment mechanism.[67] In addition, EU countries are active participants in the regional energy and climate dialogue at the bilateral and multilateral levels.

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Perspectives

The issues of energy and climate have gained great importance in Israeli politics in the last decade, being increasingly perceived in terms of the existential security of the state. In the internal dimension, the role of climate, environmental and energy factors will require more active involvement on the part of the government both in the short term (increase in energy prices) and in the longer term (response to the development needs of a growing population). A collision between the environmental and economic interests on the part of the authorities, business, and citizens will be inevitable. Fears of socially unpopular reforms in the field of adaptation to climate change may lead to a conservative policy on the part of the government, especially due to access to gas resources sufficient to meet Israel's needs. This may slow the speed and efficiency of the decarbonisation process and affect climate commitments. At the same time, the government will allocate more funds to the development and implementation of more environmentally friendly technologies and infrastructure (e.g., in electromobility, green housing), avoiding greater burdens for citizens as long as possible.

From the perspective of economic and diplomatic interests related to energy and climate, Israel is currently entering a period of favourable economic conditions. This is particularly visible in the gas sector; hence, the government will strive to quickly conclude long-term contracts in order to avoid stagnation and a decrease in interest in further exploitation, as well as infrastructure development, which will increase the attractiveness of Israeli deposits. It is also possible to change the proportion of production to the domestic and foreign markets.[68] Increasing its own energy production and transmission capacity may also enable Israel to play export electricity. From the EU perspective, Israel is an attractive supplier, and cooperation with it is particularly preferred by the

Increasing its own energy production and transmission capacity may also enable Israel to play export electricity.

[65] E. Gjevori, "Israel sees gas exports to Europe boom in wake of Russian invasion of Ukraine," Middle East Eye, 25 August 2022, www.middleesteye.net.
[66] European Commission, "Commission participates in launch of EuroAsia Electricity Interconnector," 14 October 2022, www. commission.europa.eu.
[67] M. Jacob, "What is the EU's carbon border adjustment mechanism (cbam)?," 24 March 2022, www.ippi.org.il.
[68] Y. Katz, D. Brinn, "How Israel is using gas exports to boost its diplomatic standing," *Jerusalem Post*, 19 June 2022, www.jpost.com.

Mediterranean EU countries. However, due to the scarcity of resources in relation to European demand, it will play a complementary role in the wider process of the EU seeking alternative energy resources to Russian sources.[69] An additional factor is the constant threat to security due to conflicts involving Israel, primarily with Iran and the Palestinians. Israel will also continue to expand and export its technological offer regarding the green economy and renewable energy, although for some partners such cooperation may meet with growing political and social opposition due to the Israeli-Palestinian conflict.

Israel will intensify climate and energy cooperation with the countries of the region, trying to transform the old antagonistic relations into economic interdependence and deepen the institutional dimension. Without cooperation with regional partners, Israel will find it difficult to respond to some development problems (e.g., lack of space) and to cross-border climate challenges. This strategic trend also expands the area of cooperation between Israel and the EU and the U.S. At the same time, ongoing political tensions remain a burden on Israeli-Arab cooperation, especially due to the participation of the radical right in Israel's current government coalition. The new government's tougher policy towards the Palestinians (which is the party most affected by climate problems) will make it difficult for the region's states to maintain the pragmatic nature of relations, also in the field of energy and climate.

At the same time, ongoing political tensions remain a burden on Israeli-Arab cooperation, especially due to the participation of the radical right in Israel's current government coalition.

[69] D. Rosenberg, "Israel Is Back in the Gas Business. Thanks, Putin," *Haaretz*, 1 June 2022, www.haaretz.com.