

## Doral Energy – Update Report

01.01.2023

Stock Exchange  
**TASE**Symbol  
**DORL**Sector  
**Technology**Sub-sector  
**Renewable Energy**Stock price target  
**NIS 24.5**Closing price  
**NIS 8.29**Market cap  
**NIS 1.47 Bn**No. of shares  
**177.7 Mn**Average Daily  
Trading Volume  
**4,914 stocks**Stock Performance  
(Since Jan. 2022)  
**-40.1%**

Doral shows significant progress constructing in several markets with the capacity of solar projects of approx. 1,290 MW (DC) + approx. 1,300 MWh of storage facilities in construction/approaching construction stages, received construction permits for the entire Indiana project; secured the necessary capital to establish the mature backlog and continued growth in the US; growth in the company's revenues; price target is unchanged.

Doral presents additional growth in its operations alongside revenue growth. Doral ended Q3 2022 with revenues of approx. NIS 66.1 million (Non-GAAP). The company presents a significant increase in its portfolio to approx. 16 GW (DC) and approx. 10 GWh, of which approx. 2.88 GW (DC) and approx. 1.8 GWh are mature (projects that are profitable and ready for connection, under construction or nearing construction and/or after winning competitive procedures or signing a PPA). Also, in recent months, the company has demonstrated accelerated progress in its activities, both in the PV and storage fields in the US, continued progress in the construction of the first part of the giant project in Indiana, Mammoth North (480 MWp), signing agreements for the sale of electricity for each Indiana project (approx. 1,600 MWp) for 15 years, and issuing building permits for the entire Indiana project. The company is in the midst of building solar projects combined with storage in Israel and has even commercially operated the first project of this type in Israel. The company operates in a variety of different technologies, including solar, solar + storage, standalone storage, wind, and biogas.

As one of the dominant players in Israel, Doral enjoys advantages of scale in procurement and more. In addition, the company established the Doral Tech arm, which invests in start-up companies engaged in the development of synergistic technologies for the group's activities.

**Additional significant events in Q3 2022:**

- Received building permits for Indiana South and Indiana Central projects, and in the process, a building permit for the entire Indiana project.
- Doral LLC entered into a deal with Apollo, which enables the continued implementation of the growth strategy in the US.
- Signed MoU to finance solar + storage projects in Israel and bridging frameworks for financial closure.
- Won a cap and a protection tariff for 80 MW (AC) for upper voltage part of "Hadrei Sha'an" project.
- Entered into agreement with Waaree Energies, a PV panel supplier, for approx. NIS 500 million.
- Completed a deal for the full acquisition of 33% of Invenergy Solar Development's holdings in the "Hadrei Sha'an" project.

Recall that global growth potential is far from being exhausted. Investment in renewable energy peaked at \$350 billion in 2020, of which solar and wind energy account for \$290 billion. In addition, we see potential for renewable energy in the US by huge programs promoted by the Biden administration totaling \$3 trillion.

We anticipate significant growth in the company's activity in 2023, alongside the commercial operation of the first major project in the US, and a variety of solar and storage projects in Israel. We are updating the economic model based on the company's progress in the various projects including

Year	Revenues* (M NIS)	EBITDA* (M NIS)
2020A	59.9	55.2
2021A	71.7	63.5
2022E	114	100



\*Expected annual revenues/EBITDA from projects (representing 100% holdings in projects), not including management fees and additional income at the corporation level.

**Key events in Q3 2022 and in recent months:**

- On December 8, the company commercially operated its first facility in Israel under the Electricity Authority's competitive procedures 1 and 2 for the construction of solar facilities combined with storage, with a capacity of approx. 5.5 MW (DC) combined with approx. 12 MWh of storage.
  - o This is the first facility of its kind to be connected to the electricity grid in Israel, which includes storage capabilities and electricity flow management according to the rules of the competitive procedures, which will enable the supply of renewable energy to the electricity grid, even beyond the conventional production hours in which solar panels generate electricity.
- On November 3, Doral LLC received a construction permit for the Indiana South and Indiana Central projects, whose capacity is estimated at 1.1 GW (DC). Upon receiving the building permit, the process of issuing building permits for the entire Indiana project was completed.
- On October 14, Doral LLC entered into a transaction with funds managed by Apollo and/or its affiliated companies, a leading global alternative investment management corporation, through a wholly owned corporation, which will own all of Doral LLC's subsidiaries. As part of the transaction, the investor will provide up to USD 500 million, against the receipt of the convertible notes, which will be used mainly for investments in renewable energy projects in the US.
  - o At the time of completion of the transaction, the designated corporation issued to the investor a convertible note in the amount of USD 90M, of which the company intends to use 63 million dollars to finance part of the equity capital needs for the Indiana South project. In accordance with the terms of the agreement, the designated corporation will be allowed (but not obligated) to issue additional convertible notes to the new investor, in amounts of up to USD 410 million, no later than 31.12.2024.
- On September 15, the company won a cap and protection tariff for 80 MW (AC), intended for the upper voltage part of the "Hadrei Sha'an" project. Together with the other parts of the project, which are intended to connect to the high-voltage grid, the "Hadrei Sha'an" project is expected to amount to a capacity of about 180 MW (DC).
- On September 8, the company's board of directors approved a private allotment of approx. 31 million ordinary shares to third parties in exchange for NIS 11.5 for one ordinary share of the company, which amounts to a total (gross) of approx. NIS 353.7 million.
- On August 31, Doral LLC, through a project corporation held by it at a rate of 77.5% (in chain), which holds all the rights in the Indiana South project, whose capacity is estimated at 360 MW (DC), entered into an agreement with Waaree Energies Ltd. Supply photovoltaic panels for the construction of the project, at a cost of approx. NIS 500 million.
- On August 23, a transaction was completed for the purchase of the entire 33% holdings (in the chain) of the company Invenergy Solar Development LLC in the "Hadrei Sha'an" project, and this, to the best of the company's knowledge, against the background of strategic changes in Invenergy's activities in Israel.
- On August 10, the company signed a memorandum of understanding for financing of solar + storage projects of approx. NIS 2.2 billion (senior debt and other frameworks). The financing is intended for projects whose construction cost is estimated at approx. NIS 1.5 billion, through a consortium of lenders that will be formed led by Bank Mizrahi-Tefahot.
  - o On November 14, a corporation wholly owned by the company entered into a rolling bridging framework agreement with the bank, in the amount of NIS 200 million, to finance projects in the immediate term, even before financial closure.
- On June 23, the company entered into a cooperation agreement with companies controlled by Phoenix Holdings Ltd. and Ampa Partnerships Limited Partnership for the initiation, development, construction, operation, or sale of facilities for storing electricity and/or managing the charging of batteries for electric vehicles, provided that these facilities are used for the electricity consumption at the site where they are located, and all within the territory of the State of Israel, including the aforementioned facilities which will be located in residential buildings, parking lots, hospitals, office buildings and commercial, industrial and tourist centers with an expected scope of hundreds of megawatt hours.

## Executive Summary

### Investment Thesis

Globally, the renewable energy sector is in growth momentum in most countries as a result of government decisions and organizations to reduce dependence on polluting fuels and reduce greenhouse gas emissions, which are reflected in governments' actions to meet renewable energy targets they are committed to according to the Paris 2015 agreement.

The implementation of government decisions translates into policies, regulations, and licensing processes of companies that build renewable energy electricity generating facilities that are supposed to provide electricity over many years in a reliable, safe and economical manner.

Doral is well respected in its industry, both locally and globally. Their reputation extends across the Renewable Energy value and supply chains, as well as within their specific business ecosystem. The company has successful experience across all steps and stages of renewable energy projects, including initiation, development, financing, construction, management, operation, ownership, and sale of assets.

**The company aims to continue creating value by leveraging its significant land reserves and proven expertise in working with landlords, in Israel and internationally. The company's strategy is to select and operate in markets that demonstrate a combination of factors with specific emphasis on; supportive policy, regulations, favorable natural resources, an opportunity to optimize the development, and market size that supports future growth. In international markets the company partners with local entities that provide advantages in the initial early stages of development.**

Doral's strategy is to target Israel, the USA, and Europe as its main markets for the foreseeable future. It has the experience, the capital and knowledge to promote its projects; however, the test will be in converting pipeline projects due in 1-5 years to grid connected facilities. Thus, in our economic model we used probabilities to quantify this conversion. Specifically, the company's strategy is to select and operate in markets that demonstrate a combination of factors, with specific emphasis on supportive policy, regulations, favorable market conditions, an opportunity to optimize technology and increase installed capacity. In international markets, the company partners with local entities that have competitive advantages at the initial and early stages of development.

#### **Doral's value proposition to investors, partners, and suppliers include:**

- Capabilities of developing and initiating renewable energy facilities, from identifying the appropriate land for the project to connecting the facility to the electricity grid and holding it in the long-term.
- Creating larger profit margins due to exceptional accessibility to land in Israel, Europe, and the United States and optimizing the development processes.
- Focus on markets that are mature or maturing in terms of renewable energy policy and regulation, and such markets where renewable energy sources provide competitive electricity prices without the need for subsidies.

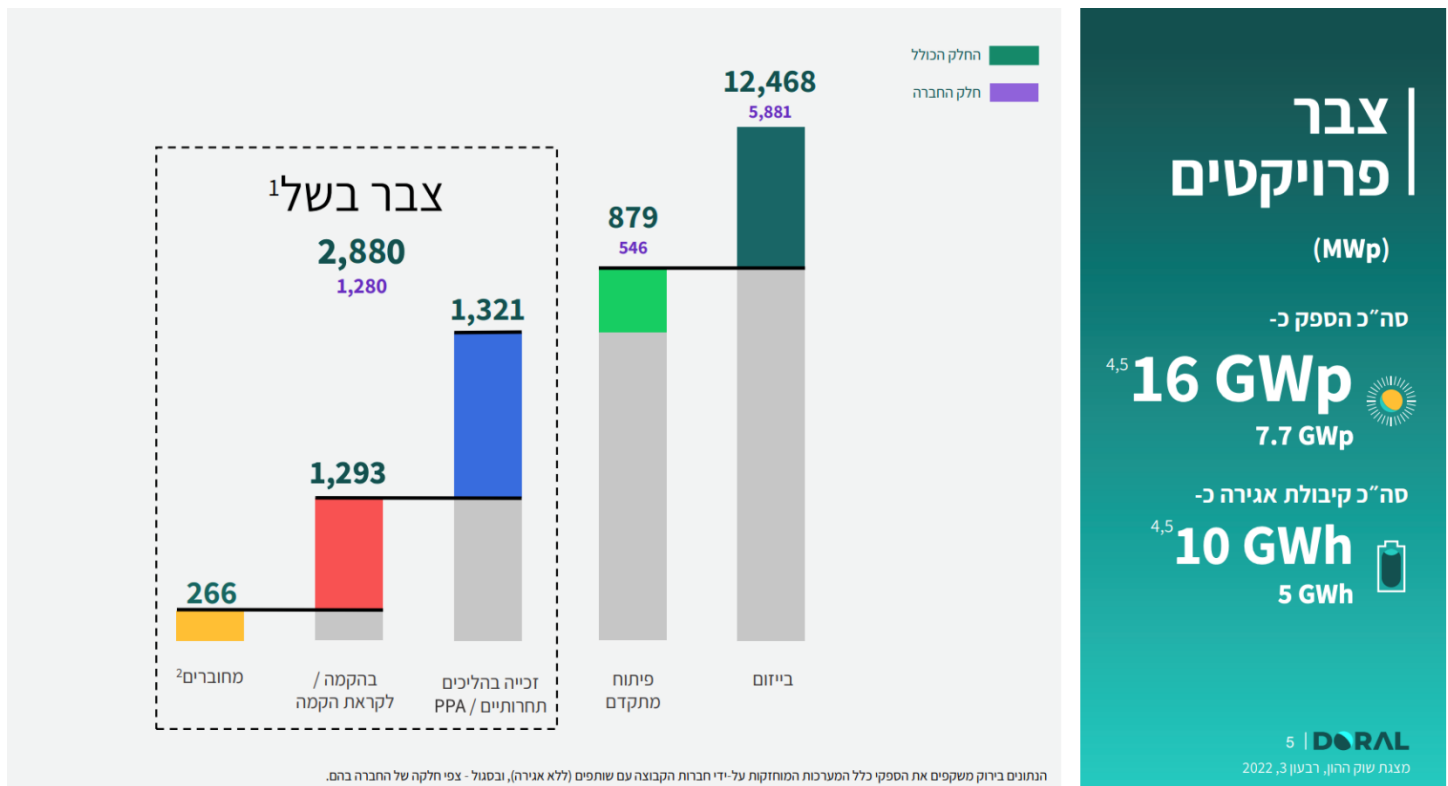
- Size advantage in the purchase of equipment for projects, financing of projects, and contracts with entities to sell electricity.
- High probability of obtaining financing due to a positive reputation and established business relationships in the industry.
- Identifying opportunities, creativity, innovation, and daring.

**We forecast that Doral's projects' (representing 100% holdings in projects assuming a full year of operation) will generate revenues of NIS 124 million by the end of 2022.**

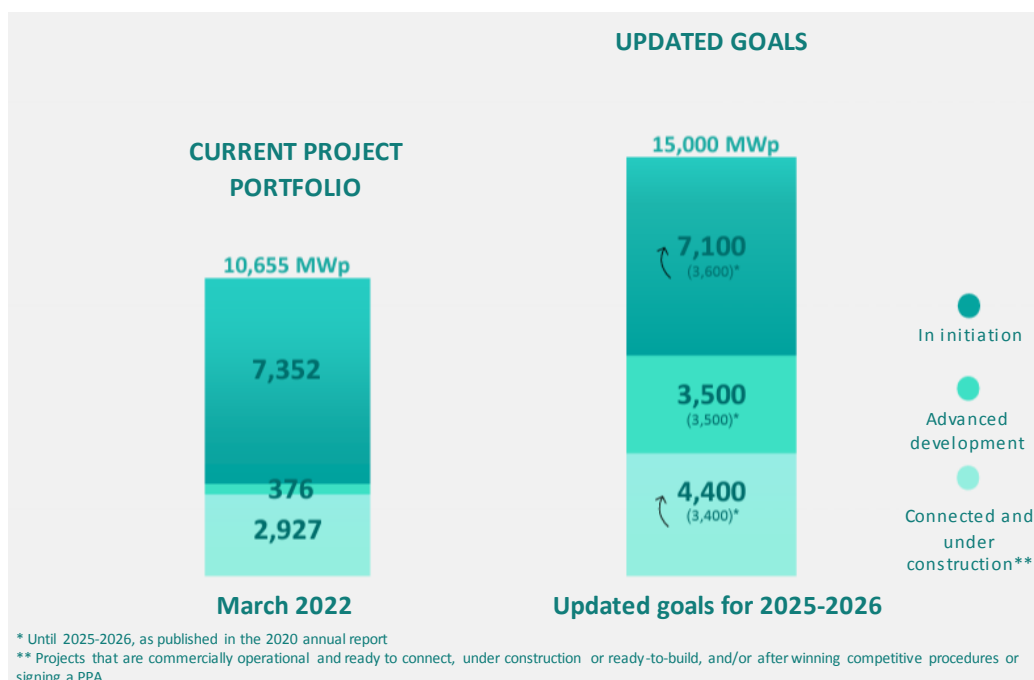
## Company Overview

Doral Renewable Energy Resources Group (TASE:DORL) initiates, develops, builds and operates renewable energy projects across Israel, the US and Europe. The company's vision is to implement their renewable energy projects globally. The company has projects with a capacity of approx. 16 GW that are in various stages of initiation and development. At the beginning of 2022, the company set an updated goal for the years 2025-2026, when as of the date of publication of the reports, the general portfolio goal it had set for itself had already been achieved today. Doral believes in the application of innovative technologies and is active in various fields of renewable energy, including the combination of solar energy and energy storage. Doral is the big winner in the first and second competitive procedure for the construction of solar facilities that integrate energy storage, with the total portfolio including approx. 10 GWh of energy storage facilities.

### Project pipeline overview



### Update of the company's goals for the coming years



The Company has five main divisions of activity:

1. **The Israel Division**, in which solar energy, including in combination with storage, is dominant in terms of the company's portfolio.
2. **The US Division**, in which large solar projects and large solar projects combined with storage capacity are expected to increase the company's portfolio substantially.
3. **The European Division**, in which joint ventures in Italy, Poland and Romania are expected to further increase the Company's renewables portfolio substantially.
4. **The Doral-Tech Division** is the innovation division that invests in synergistic technological ventures for the company's operations that are in various stages of growth.
5. **The Environmental Infrastructure Division**, which operates in the fields of biogas, waste management and wastewater treatment.

To support these divisions Doral's strategic strengths include:

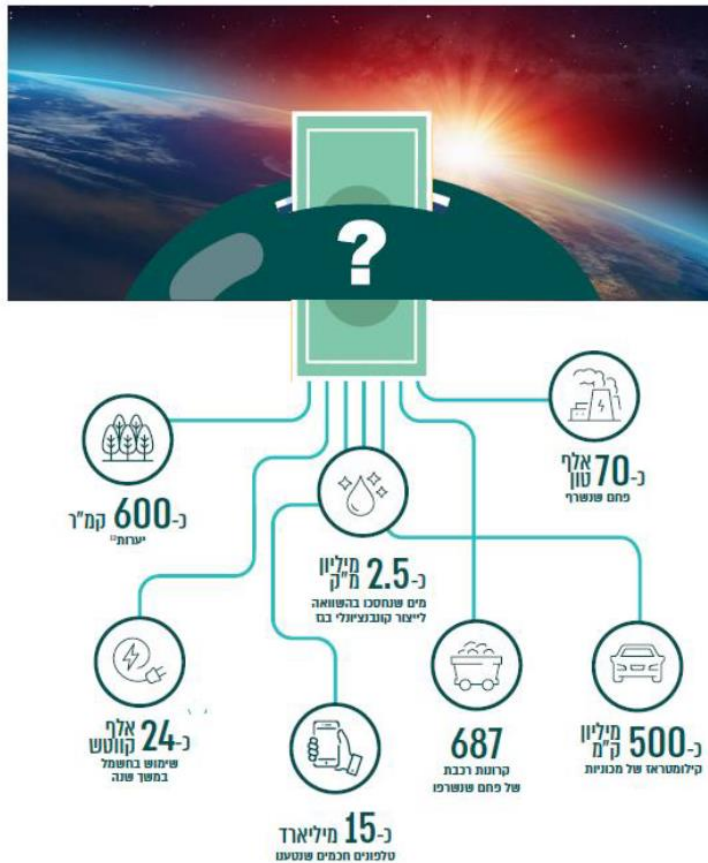
1. A well-seasoned team with vast experience and professional knowledge.
2. The ability to navigate regulatory requirements and authorities.
3. Working closely with first-class technological equipment manufacturers.
4. Established relations with financing banks and Institutional Investors.
5. Partnership agreements with the majority of kibbutzim throughout Israel, for the establishment of energy production systems.

All of these strengths have allowed Doral to come to the table and offer truly competitive value that has led to long lasting partnerships.

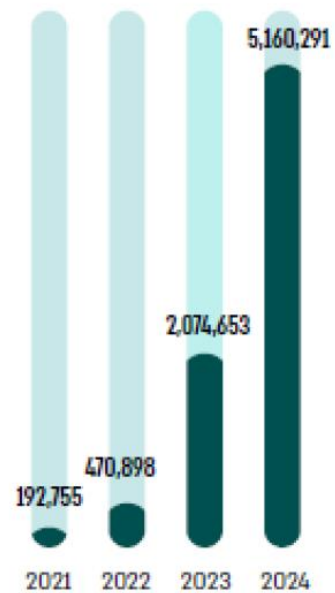
## Corporate Responsibility

In May 2022, the company first published a [corporate responsibility report](#) with the aim of maximizing the positive impact and producing long-term value for all stakeholders. Doral chose to centralize the management of the ESG area in a systemic way and report transparently to their stakeholders, reflecting their perception that they must conduct their activities with fairness and maximum transparency, along with striving to bring value to their stakeholders. The company shows the significant environmental impact of its projects:

**The savings made possible from green production  
in the company's projects in 2021**



**Prevention of equivalent carbon  
dioxide emissions (tons)**





## Israel Activity

In 2008 Doral was the first company to connect a photovoltaic system to the national electricity grid in Israel, and in December 2022 the company commercially operated the first solar + storage of its kind in Israel, with a capacity of approx. 5.5 MW (DC) and approx. 12 MWh of storage, which will enable the supply of renewable energy to the electricity grid even beyond the conventional production hours of solar installations. The company leads the energy storage market and engages in advanced projects that combine electricity production from solar energy with energy storage. The company has large Israeli projects nearing construction, which are the product of the first and second competitive procedures that combine facilities for generating electricity from solar energy with energy storage. As of today, Doral has a yield or maturity in Israel of renewable energy facilities with a capacity of approx. 1 GW (DC) and approx. 1.8 GWh, including over 530 yielding solar systems in Israel, which it initiated and developed itself, including on the ground, on reservoirs and ponds, and on roofs. The company has built photovoltaic systems of various scales, starting with large infrastructure projects and ending with small systems intended for self-consumption. In addition, the company recently received a license from an electricity supplier and began selling electricity to end consumers and even issuing green certificates.



**נגישות לקרקע**  
כ-230 שותפויות עם קיבוצים, מושבים ואגודות שיתופיות  
למעלה מ-530 מתקנים מניבים בכל רחבי הארץ שהחברה יזמה, פיתחה והקימה בעצמה

**חוזקות בשוק הישראלי**

**מובילים באגירה**  
כ-1,300 MWh מתקני אגירה בשלבי הקמה ולקראת הקמה<sup>4</sup>  
אגירה לצד מתקני ייצור, אגירה בחצר הצרכן ואגירה לצד קווי חשמל





**מספקים חשמל ירוק**  
החלה מכירת חשמל לצרכנים גדולים והפקת תעודות ירוקות

8 | DORAL  
מצגת שוק ההון, רבעון 3, 2022

Among other things, the company owns the "Hadrei Sha'an" project - One of the largest power plants in the Middle East from renewable energy, located in the Beit She'an Valley. Doral has a partnership agreement with 11 kibbutzim from Emek Beit She'an that are partners in this project.

Tenders that combine electricity production from solar energy with energy storage facilities - Doral is a major player in the energy storage market in Israel and won 300 MW (AC) out of 777 MW (AC) allocated by the Electricity Authority as part of competitive procedures No. 1+2 for photovoltaic facilities that include energy



storage. The projects are expected to bring in approx. NIS 287 million per year, EBITDA of approx. NIS 231 million, and FFO of approx. NIS 187 million. Doral owns approx. 60 – 65% (weighted average) of these projects. **Doral is a leader in the field of PV combined with storage in Israel** - the company holds about 40% of the total solar + storage quotas in Israel.

## השבחת רווחיות פרויקטי PV + אגירה בישראל<sup>5,6,11</sup>

להערכת החברה,

אסדרת השוק

מאפשרת ניצול

יעיל ורווחי יותר של

שדות סולאריים,

והפקת ערך רב יותר

מאותה יחידת שטח

נתוני 2Q

נתוני 3Q

הספק

300 MWac

MWac 300

הליך 1

הליך 2

אסדרת השוק

הליך 1

הליך 2

אסדרות

נתוני 2Q

נתוני 3Q

שינוי

(במיליוני ש"ח)

עלויות הקמה

2,843

2,428

-14.6%

הכנסות

285

287

+0.7%

EBITDA

210

231

+10.2%

FFO

146

187

+27.8%

תמהיל המשלב מכירה לחברת החשמל ומכירה בשוק החופשי

מתקנים באסדרת השוק ימכרו את החשמל המיוצר למספק החשמל

אסדרת השוק מאפשרת מכירת חשמל במחירי פסגה באמצעות מתקני האגירה השלובים בפרויקטים

10 | DORAL

מצגת שוק ההון, רבעון 3, 2022

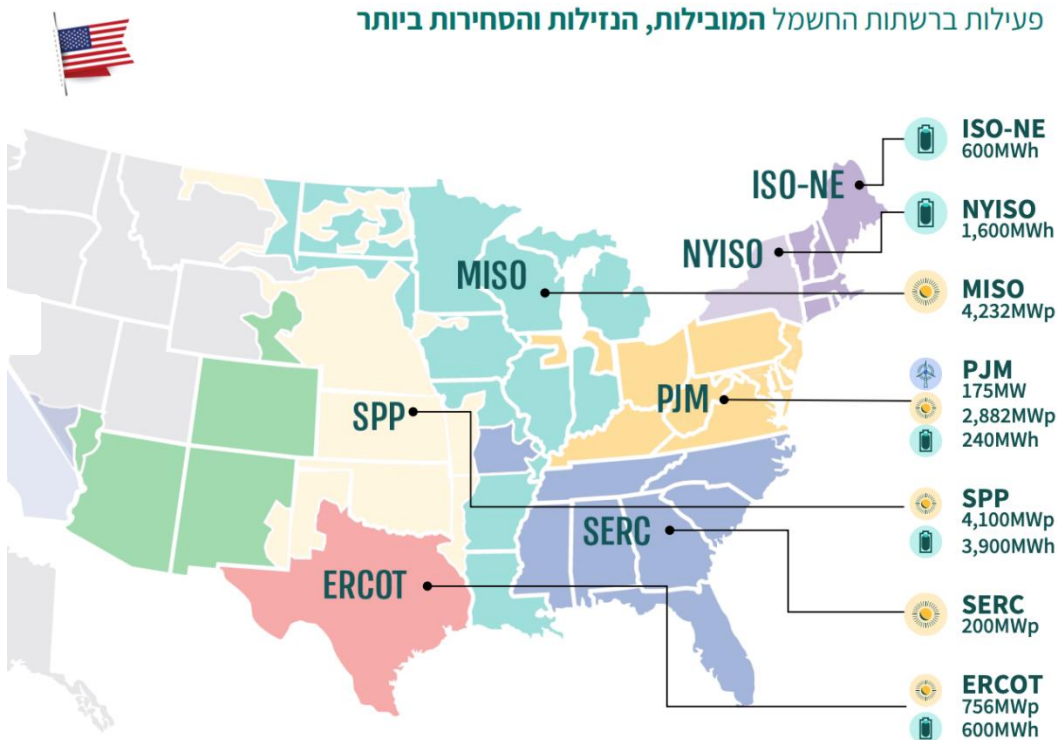
\* להרחבה בנושא אסדרת השוק, ראו סעיף 1.1 לדוח הרבעוני

### US Activity

Doral operates in the US through Doral LLC, a corporation held 41.78% by Doral USA, 20% by a corporation owned by Migdal Insurance Company Ltd. and 38.22% by Clean Air Generation LLC, A local partner, with connections, organizational and managerial ability, and extensive experience in the field of renewable energy in the US. Doral LLC is involved in the initiation, management, development and construction of renewable energy facilities in the US, including solar facilities combined with energy storage and stand-alone storage facilities, and also owns a wind energy project. The company's activities are carried out in various markets, including PJM, MISO, and SPP (in several countries), with a total volume of approx. 12.3 GW (DC) and a storage capacity of approx. 6.94 GW/h.

Doral's giant project in Indiana, Mammoth Solar, entered the construction phase in 2022, and its first part (480 MWp) is expected to be connected and commercially operated in 2023. The company announced the completion of the sale of electricity for each Indiana project in the amount of approx. 1.6 GW for 15 years, and for issuing building permits for the entire project. The total expected revenues from the sale of electricity for all the agreements signed in the US is approx. USD 1.5 billion, alongside additional merchant revenues in significant volumes. The Mammoth Solar project in Indiana covers an area of approx. 50,000 dunams (as the municipal area of Tel Aviv-Jaffa) and the total supply estimated at approx. 1,600 MW (DC), the remaining two parts of the project are expected to be commercially commissioned in 2024.

This is a significant milestone for the company, which proves the company's ability to execute in the development of its project backlog.



In August 2022, President Biden signed the Reduction Inflation, which will allocate approximately USD 370 billion to the fight against the climate crisis. The legislation, in its current form, includes the following sections (in summary) relevant to the renewable energy market:

- (1) Extending the ITC (Investment Tax Credit) benefit by 10 years and increasing the tax credit threshold for all investments in solar facilities to 30% for projects that begin construction until 2032, to 26% for projects that will begin construction in 2033 and to 22% for projects that will begin construction in 2034.
- (2) An additional 10% tax credit for projects included in the "Energy Community" track subject to certain conditions, including the establishment of a project on land considered damaged or contaminated or the establishment of a project in an area defined as an unemployment area, where employment was based on coal/natural gas energy production facilities or an area located near a closed coal mine/coal station. Also, an additional 10% tax credit for projects, subject to certain conditions, among them, the rate of use of raw materials produced in the USA in the project.
- (3) the extension of the PTC (Production Tax Credit) benefit, which allows receiving tax credits according to energy production from sources "Greens", for a period of 10 years, and the opening of the possibility of receiving this benefit for solar projects.
- (4) The eligibility for tax benefits also applies to stand-alone energy storage facilities (Stand Alone Storage).
- (5) Easements in the equity tax investment plan, including the possibility For the sale of most benefits and tax credits to other companies without the need for the complex sales structure that exists in tax partner agreements, the possibility of selling parts of the tax benefits and

splitting the sale over several years, as well as extending the periods for receiving tax refunds - up to 3 years back and up to 22 years forward (one year has passed back and 20 years ahead as of today).

- (6) the regulation and tax benefit for storage facilities and green hydrogen facilities. In this context, the Indiana North project, which began construction in 2022, will work to receive a maximum tax credit of 30%, subject to the consent of the tax partner and lenders. Also, in the company's estimation, the legislation will have a materially positive effect on all of Doral's backlog of projects in the US. In addition, Doral has begun the process of Projects in the backlog that it promotes, which may meet the criteria for receiving an additional tax credit of 10%, below is the list of the relevant projects:

Project	Solar MWp	Storage MWh
<b>Mammoth South</b>	360	
<b>Mammoth Central I</b>	360	
<b>Mammoth Central II</b>	360	
<b>Goonies</b>	233	
<b>Other Projects - PJM</b>	100	
<b>Other Projects - MISO</b>	984	
<b>Other Projects - SPP</b>	1,020	900
<b>Total</b>	<b>3,417</b>	<b>900</b>

## European Activity

### Italy

Doral entered into an agreement to initiate, develop, and erect photovoltaic systems in cooperation with a third party. As of the date of the report, the portfolio stands at a total of approx. 484 MW (DC), with the capacity of approx. 26 MW (DC) in construction or nearing construction.

### Poland

As of the date of the report, the company has contracted with a number of third parties that are not related to the company, in framework agreements for the initiation and construction of photovoltaic projects that are in various stages of development. Also, the company established with Elmor a dedicated corporation that deals with engineering and planning construction (EPC) and maintenance and operation (M&O) of the company's projects, and has already started with the establishment of projects. As of the date of approval of the report, the company has projects in Poland in various stages of initiation with a capacity of approx. 525 MW (DC), of which approx. 16 MW (DC) are ready for connection, approx. 28 MW (DC) in the stages of construction/toward construction, approx. 192 MW (DC) in advanced development, and approx. 288 MW (DC) in initiation.

## Romania

Doral entered into an agreement with a third party for cooperation in the initiation and construction of photovoltaic projects that are in various stages of development. As of the date of approval of the report, the company has approx. 28 MW (DC) of photovoltaic projects in the construction / approaching construction stages, approx. 277 MW (DC) of photovoltaic installations in advanced development stages, approx. 100 MW of a wind turbine project in an advanced development stage and approx. 272 MW (DC) of photovoltaic projects in the pipeline.

## Denmark

Doral has a cooperation agreement with a local entrepreneur in the initiation, development, and construction of photovoltaic projects in Denmark. Approx. 60 MW (DC) are in advanced development stages and approx. 340 MW (DC) are in initiation stages.

## Innovation and technology in the world of renewable energy

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Doral is a growth company, and it is expanding its activities beyond the traditional renewable energy markets (PV and wind) to the following sectors: energy storage and environmental infrastructure (waste and wastewater treatment, including biogas facilities).

In addition, the company established **Doral Tech**, within which the company works to locate innovative startups that develop groundbreaking green technologies, whose goal is to deal with significant sustainability challenges, and whose activities are synergistic to the company's activities ("the target companies"). The target companies are in various recruitment stages, and the group makes investments in them both in capital and in management resources. The purpose of Doral Tech's activity is to provide the target companies with the full infrastructure for the development of the projects, to accompany the projects in all stages of development, to assist them in creating the connections required for development and to accelerate their growth path through the provision of capital, development and testing sites, technological capabilities, orientation to products, academic collaborations, marketing, business development and finally - enjoy the right of first movers on those technologies.

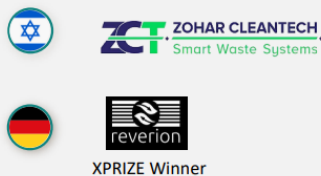
## כלכלה מעגלית



## מימן ירוק



## WASTE 2 ENERGY



## אגירת אנרגיה וטעינה אלחוטית

דוראל-טק  
פורטפוליו  
השקעות

20 | DORAL

מצגת שוק ההון, רבעון 3, 2022



השלמת 2 סבבי גיוס  
חדשים בסך של \$300M



זכתה במענק יוקרתי בסך  
\$480M ממשדד האנרגיה  
האמריקאי לקידום תעשיית  
הסוללות והפיכת פסולת  
סוללות לחומרים פעילים



השקת פיילוט מסחרי  
ראשון לייצור מימן ירוק  
המשלב את תאי ה-AEM  
הגדולים בעולם.



השלמת סבב גיוס של  
\$25M

דוראל-טק  
אירועים  
עיקריים  
בחברות  
פורטפוליו

21 | DORAL

מצגת שוק ההון, רבעון 3, 2022

Below we will introduce the global renewables market in detail and focus heavily on solar energy because the lion's share of Doral's activities is within this domain. We will further specifically detail the US market and give a comprehensive overview of the Israeli renewables ecosystem to give readers a solid understanding of Doral's landscape.

## Global Renewable Market Introduction

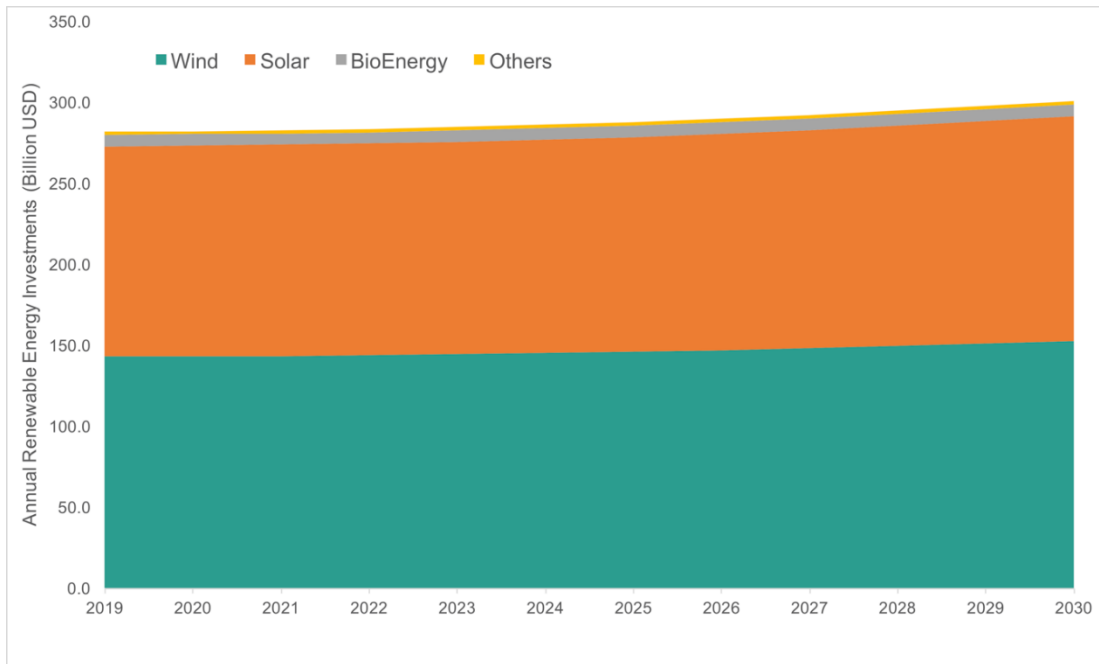
Historically, global power generation was dominated by centralized energy sources such as coal, nuclear, oil, and large hydropower plants. These plants were usually state-owned, and the electricity generated would be transmitted across the country via a centralized grid. There was a minimal competition within the market, and the environmental impact was hardly considered. This situation has gradually changed over the past two decades, mainly driven by market decentralization and favorable regulatory frameworks (which boosted competition), concerns over the impact of climate change, and supportive renewable incentive programs.

Driven by the transformation across the energy sector, renewable energy sources (RES), primarily wind energy and solar energy, have become well established low-carbon energy sources to meet global energy demand because of their widespread availability, cost-effective nature, and flexibility compared to other RES. An increase in the adoption of wind and solar energy technologies would significantly mitigate and alleviate issues associated with energy security, climate change, unemployment, etc. and help in reducing global CO<sub>2</sub> emissions by more than 50% between now and 2050.

The impact of the renewable revolution has been felt in many global markets, but European nations and the US have been at the forefront, later joined by China. Although the incentives schemes for renewable energy in many markets have gradually become less generous, this has largely been offset by consistent declines in renewable energy technology and project costs, construction and service innovation, and the continuation of favorable regulatory frameworks that ensure renewables have priority access to the grid. Once a wind or solar plant is online it is basic common sense anyway to ensure that the power generated is given priority, as the fuel cost is zero.

Wind power and solar PV dominate global renewable investment (large hydropower, which is still a significant technology in a number of markets, is not considered truly renewable because of the potential environmental damage to the river networks). Global investments in renewable energies accounted for \$282 billion in 2019, with wind and solar energies accounting for ~97% of non-hydro renewable investment in 2019. A total of ~\$3 trillion is forecast to be invested across the next decade in renewable energy sources, with annual renewable energy investment exceeding ~\$300 billion in 2030. Further cost reductions mean that both technologies will reach grid parity (a situation where it is as cheap to build a solar plant as it is a coal plant) in an increasing number of markets over the coming decade, further supporting the business case for investing in renewables.



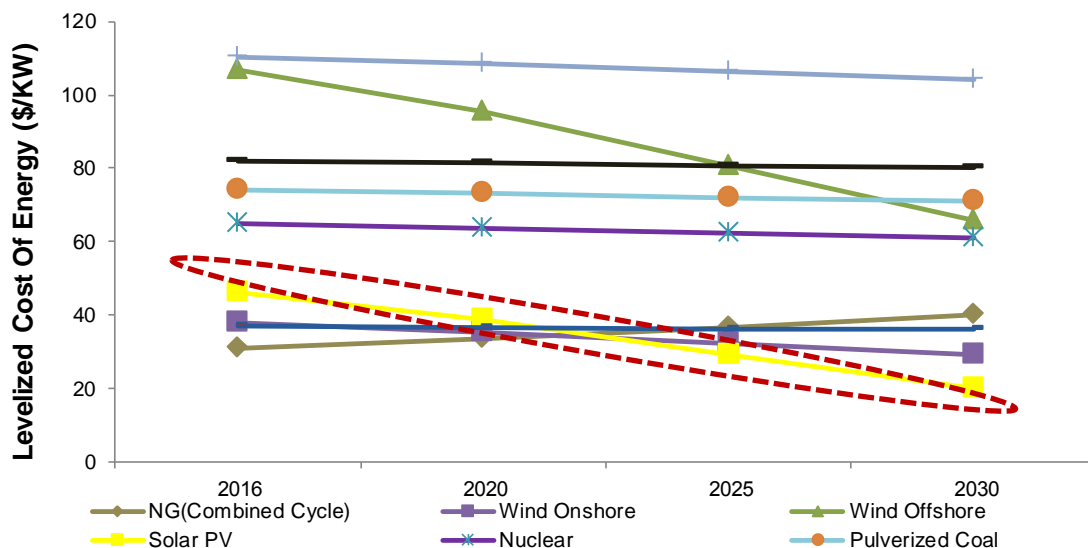


**Figure: Annual Global Investments in Renewable Energies (Billion USD)**

### Continued Decline in Wind and Solar Technology and Project Costs

The decline in renewable energy project costs started around 2010, with solar PV leading the way. Solar module costs have declined by around 82% across the course of the decade (modules account between 35% and 45% of total project costs). Wind technology cost declines started later, but have also been substantial – the global average price per MW for an onshore wind has declined by 39% and offshore wind by 29% between 2010 and 2019.

Continued cost reductions are forecast for both wind and solar, through a combination of lower core technology costs (larger turbines and taller hub heights are a significant factor for wind projects); a reduction in total project costs (greater efficiencies in construction and commissioning), and lower servicing costs.



## Israel Renewables Ecosystem

The growth engine behind renewables in Israel is the government's vision to utilize "natural gas or renewables only" for the production of energy by 2030. In order to realize this vision the government is putting major systems and regulations in place in order to completely replace the energy produced from coal with energy produced from solar sources. This transition is projected to produce a 6 fold increase in renewables and a 10 fold increase in energy storage capacity.

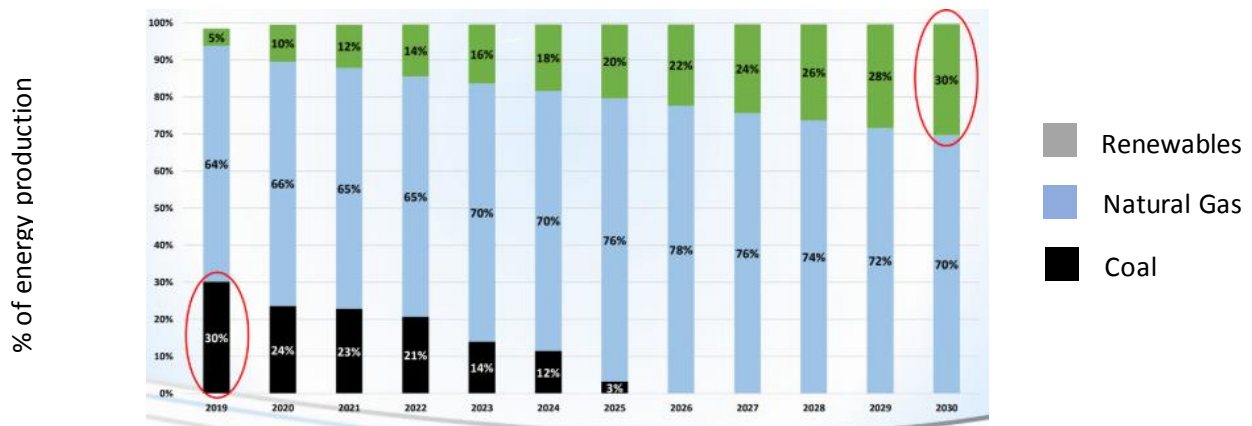
The four major drivers of the renewable energy market in Israel as stated in the Ministry of Energy's economic plan are: 1) the decreasing cost of solar technology 2) the global shift to electric vehicles 3) energy security 4) pollution regulations

These trends propel Israel into a reality that requires a heavy transition to renewable energy sources and therefore promotes the need for energy storage solutions.

Israel is exceptional in its high population growth rate as well as its high electricity consumption. Today, solar power is almost exclusively the country's renewable energy source and this will be true through 2030.

### Israel's Energy Source Composition

#### Renewables Will Replace Coal over the Next 10 Years



In 2030 **Israel is positioned to be the world leader in solar energy dependency** at a staggering 26% of energy produced by the country. By 2030, during the noon hours, 80% of the electricity generated in Israel will come from solar sources and this solar energy will surpass consumption demands during certain hours of the day.

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