RESEARCH & CONSULTING LTD. June 25<sup>th</sup>, 2017

# **Energix Renewable Energies Ltd.: Combining green energy growth opportunities with Fix Assets returns**

**Primary exchange: TASE** 

**Symbol: ENRG** 

**Sector: Technology** 

Sub-sector: Cleantech

Stock price target: NIS 3.20

As of June 21<sup>st</sup> 2017:

Closing price: NIS 2.82

Market cap: NIS 1,001 m

# of shares: 357.3 m

Stock performance (YTD): 1%

Daily-trading-vol.(12 months): NIS 928K

Kobi Hazan - Lead Analyst

**Analysts** NadavOfir Dr. Tiran Rothman **Toss Bruton** 

Frost & Sullivan Research & Consulting Ltd.

Email:Equity.Research@frost.com Tel.: +972-9-9502888 www.frost.com/EquityResearch

#### Company overview

Energix Renewable Energies Ltd. ("Energix") is a renewable energy company, currently active in the field of Solar Photovoltaic (PV) and Wind Energies. One of the largest Israeli Independent Power Producers (IPP), the company initiates, develops, constructs and owns (over the long term) renewable energy projects. Once it secures production rights through governmental tenders, Energix sells the generated electricity to utility companies and end users. Energix has traded on the Tel Aviv Stock Exchange since 2011.

#### **Highlights**

- Energix is owned by Alony-Hetz Properties and Investments Ltd. (70% majority share), one of the largest real-estate investments groups in Israel.
- Energix's owns a total capacity of 168 MW (grid connected), comprising 119 MW wind and 49 MWp solar (PV) projects.
- The company is currently developing projects in Israel and Poland with a combined capacity of up to 400MW.
- Energix has an appealing combination of benefiting from both high returns during project development, and from relatively low risk characteristics based on long term steady revenues generated from fixed income projects.
- The company operates in a highly regulated market, with growth being dependent on political sentiment towards renewables and the availability of financing and interest rates levels. Once the company receives approval from financial and regulatory entities, we assume further growth in revenues.
- We estimate the company's equity valueat NIS 1.14 billion; price target of NIS 3.20 per share (price range of NIS 3.02-3.41).
- Following is our forecast for Energix revenues, EBITDA and Cash Flow after Debt for the years 2016-2020\*:

000,NIS	Revenues	EBITDA	FCF
2016A	113,219	66,187	21,500
2017E	124,819	99,551	51,266
2018E	125,734	103,678	55,392
2019E	159,515	134,165	64,771
2020E	325.546	258.052	132,370

<sup>\*</sup>Estimations are based on PLN/NIS ratio;as revenues from Poland projects are based on electricity spot prices, they may include volatility and be different from the company's estimation and actual numbers.





# **Executive Summary**

#### **Investment Thesis**

Energix Renewable Energies Ltd. was incorporated on December 7, 2006 as a private company, limited by shares. In May 2011, the company has become a public company. Energix's shares are listed on the Tel Aviv 125 Index The company's shares are included in the following stock exchange indexes: Blue Tech, TA Tech-Elite and TA Technology.

Energix was established by AlonyHetz Properties & Investments Ltd., one of Israel's largest real-estate holding companies focused on commercial real estate in Israel and overseas. AloniHetz is Energix's largest and controlling shareholder (of approx. 70%) and plays a significant role in strategy planning and execution.

Energex's strategy is to leverage its leadership's background and experience in the real estate sector, and use it to minimize the risks in the development stages of renewable projects and maximize the revenues during operation stages resulting in benefitingfrom both high returns during project development, and from the relatively low business risk that is the outcome of having long term electricity generation contract periods and steady revenue flow (usually 25 years).

Globally, solar PV was the fastest-growing renewable segment in 2016, with investments increasing by 11.6% to \$127 billion, and with expectations to reach \$141 billion in 2017. Wind investment is expected to reach \$97 billion in 2017, only second to solar PV in the renewable energy domain. However, these markets are highly regulated and growth for companies such as Energix is dependent on political sentiment towards renewables, as well as the availability of financing and interest rates levels, which are out of Energix's control.

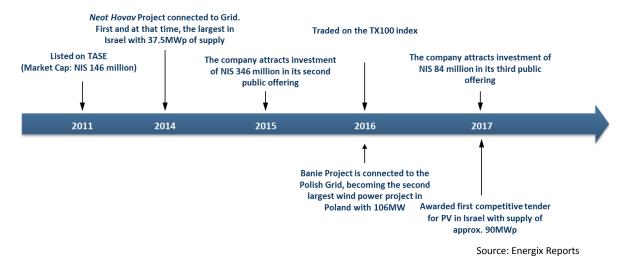
Energix's value proposition includes:effective feasibility analyses (technical and commercial), financial stability and backing, a successful track record with banks and financial institutions in closing deals, and an experienced project management team that works closely with regulatory bodies, Tier 1 /OEM and EPC companies to construct working facility in record time.

The company owns a total 168MW (grid connected) of generation capacity, comprised 119 MW of wind and 49MWp of solar (PV) projects. Annual revenue for 2016 was NIS 113 million. Significant growth in revenues and profits are linked to the addition of new generation capacity, which is not foreseen before 2018 at the earliest.

We view an investment in Energix as a good, relatively low risk investment, and an opportunity to invest in a 'fixed income' firm that is operating in different locations, but exposed to future regulatory risks.



### Time Line Summary



Upside scenarios	Downside scenarios
The company generated revenues from electricity sales of NIS 113 million in 2016. We estimate revenues of NIS 125 million for 2017. Once initiated, revenues in the renewable energy sector are generated as "fixed income".	Energix operates in a highly regulated market, and growth (i.e.,additional new facilities) is dependent on political sentiment towards renewables and the availability of financingand low interest rates levels.
The ARAN wind project in Northern Israel, if constructed, will resultin a major increase in the company's valuation.	Therenewable sector in Poland is witnessing regulatory uncertainty and, therefore, unstable market conditions and prices of green certificated and feed in tariffs for renewable energy. This may affect Energix's wind projects in the country.

# **Upcoming Potential Catalysts**

Project	Event	Significance	Timeline
ARAN- wind farm in	Project pending permission	High	Q3 or Q4 2017
Northern Israel	Financial closing	High, NIS 28 million annual revenues	2018

## Valuation Methodology

The Discounted Cash Flow (DCF) is an accepted modelused in financial valuations. In general, the DCF model comprises three primary methods:

- Real Options valuation method designated for pre-clinical and early-stage clinical programs/companies where the assessment is binary during the initial phases, and based only upon scientific-regulatory assessment (binomial model with certain adjustments)
- Pipeline assessment valuation method used for programs/companies. The company's value is calculated as
  thetotal discounted cash flow plus unallocated costs, and assessment of future technological basis or future
  projects
- **DCF valuation** valuation method used for non-R&D companies that are generating cash.

Energix initiates and develops "real estate" alike projects. However, the company can be viewed as aholding company with a pipeline of current and future projects. Thus, we evaluate Energix based on NPV of its current projects and its possible future projects, including a probability factor using the "pipeline assessment".

### **Valuation Summary**

In Israel, Energix owns or co-owns grid-connected installed systems with a capacity of 49 MWp (Energix's share amounts to approximately 45 MWp), and we assume an additional new project will be installed in 2019 with a capacity of 90 MWp. In Poland, Energix owns or co-owns grid-connected installed systems with a capacity of 119 MW (Energix's share amounts to approximately 115 MW).

Following is a list of Energix's projects:

- a) Neot Hovav (37.5 MWp)
- b) Small and medium solar PV systems (11.5 MWp, Energix average share is 7.4 MWp) are split among 39 small capacity systems, with different partners such as Granot (50% in a 3.5 MWp facility) and with Meitarim (50.1% in a 5 MWp facility).
- c) New solar PV project: In March 2017 Energix won a first ever, in Israel, competitive tender process to install 70 MW (equal to 90 MWp) which reinforcedEnergix's leadership position in the renewable energy market in Israel
- d) Banie project in Poland (106 MW, phasesI+II)
- e) Ilawa project (13.2 MW)
- f) ARAN (152 MW)

We evaluate Energix's equity value based on its current grid-connected pipeline + future ARAN project. Company cash balance as of 31.3.2017 is NIS 16.95 million, added as a non-operational asset.

The company's equity value is NIS 1.14 billion with a price target in the range of NIS 3.02-3.41 (average price target of NIS 3.20).

Projects:	Value:
Neot Hovav	180,037
Small and Mid-sizesystems	43,430
New Project 90MWp	87,377
Banie	471,207
Iława	40,078
Aran – Israel 152 MW	304,533
Enterprise Value	1,126,662
Cash	16,950
Non-operational debt ,Net	16,950
Equity Value	1,143,612



# **Table of Contents**

Executive Summary	2
Investment Thesis	2
Time Line Summary	3
Upcoming Potential Catalysts	3
Valuation Methodology	3
Valuation Summary	4
Company Overview	6
General	6
Value Proposition	6
Company Structure	7
Time Line	7
Global Renewable Energy Market Overview	8
Poland Renewable Energy Market Overview	10
Israel Renewable Energy Market Overview	12
Company Activities	13
Key Projects – Israel	14
Key Projects – Poland	15
Valuation	17
Financial Analysis	17
Forecast	18
Upside future projects	20
Equity Value	20
Sensitivity Analysis	20
Contact Details & Management	21
Appendices	22
Appendix A - Financial reports	22
Appendix B - Capitalization rate	24
Appendix C - Team Bios	25
Disclaimers, Disclosures and Insights for more Responsible Investment Decisions	26



# **Company Overview**

#### General

Energix Renewable Energies Ltd., (hereafter "Energix"), which commenced operations in 2006 and became public in 2011, is a company active in the renewable energy industry in Israel and abroad.

The company develops, operates and ownswind and solar electricity generation facilities in Israel and overseas and aims to become a leading Independent Power Producer (IPP)<sup>2</sup> in the markets it operates in.

Energex's strategy is to leverage its leadership's background and experience in real estate to enjoy both the high returns during project development, and the low risk and steady revenue flow during the long term contract period (usually 25 years).

Energix was established by AlonyHetz Properties & Investments Ltd. (TASE: ALHE, market cap: NIS 5,700 million), one of Israel's largest real-estate holding companies focused on commercial real estate in Israel and overseas. AloniHetz is Energix's largestand controlling shareholder of approx. 70% and plays a significant role in strategy planning and execution.

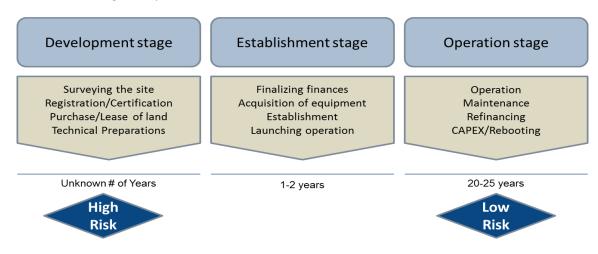
The renewable sector has some characteristics that are similar to the commercial, income-producing, real estate sector. In both, the project development stage is associated with high risks/high returns, while rental and leasing contracts enjoylow risk /long term steady revenue streams. AloniHetz identified an opportunity to combine its experience in project development and management skills with long termrenewable project contracts, in order to gain high returns on investment.

Over the past few years, Energix has built a strong financial position, and demonstrated how it implements innovative project management practices to meet highly challenging schedules and deadlines.

#### Value Proposition

Energixhas gained capabilities and experience across the three stages of renewable energy projects:development, establishment /construction and operation. Energix's proposition to partners and suppliers includes:

- Effective feasibility analyses (technical and commercial)
- Financial stability
- Successful track record with banks and financial institutions to close deals
- Project management team that works closely with regulatory bodies, Tier 1 /OEM and EPC companies to construct a working facility in record time.



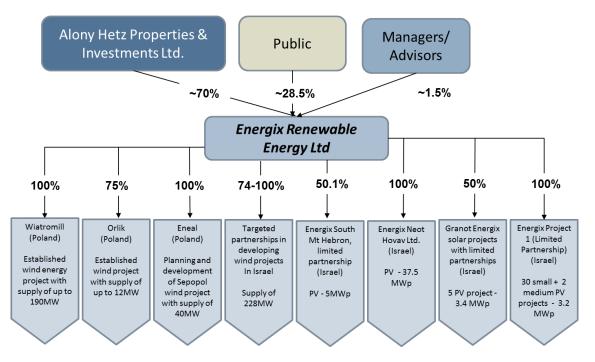
<sup>&</sup>lt;sup>1</sup> Renewable energy; energy generated from non-fossil fuels sources such as solar, wind, geothermal heat, etc.

<sup>&</sup>lt;sup>2</sup> Independent power producer (IPP)- an electric power generation entity that is not a public utility



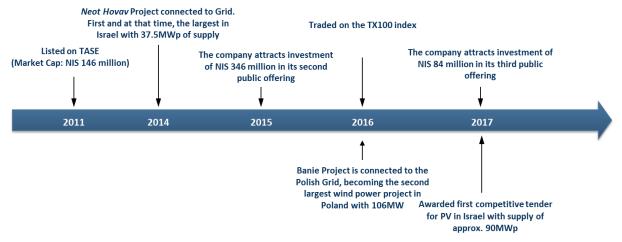
# **Company Structure**

Energix's structure reflects the multiple projects and initiatives with which the company is involved, from inception and development to operations and ownership.



Source: TASE, Energix Reports

#### Time Line



Source: Energix Reports

Next major milestonewill be to receive a contingent license for the Golan Heights wind project during Q3 or Q4 2017.

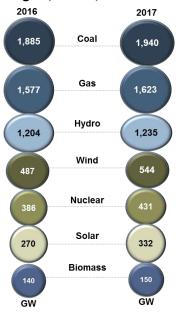
In this analysis, we will focus on Neot Hovav, other small and mid-sized solar energy projects in Israel, the Banie and Ilawa wind projects in Poland, and the ARAN wind project in Israel.

# **Global Renewable Energy Market Overview**

The global renewable energy market is driven by commercial and technological developments, including price reduction and, increased efficiency, as well as supporting regulatory incentives from governments.

- Global installed capacity of power generation in 2016 was 5,950 GW, and is expected to increase by 4.6% in 2017 to 6,250 GW.
- Global power investment is forecast to increase by 3.3% in 2017 and reach \$443.52 billion.
- Solar PV (increasing by 23.3%) and wind (increasing by 11.7%) are driving growth in 2017.
- Solar PV was the fastest-growing technology in 2016, with investment increasing by 11.6% to \$126.9 billion, and is expected to record the fastest growth in 2017 (11.5%) and will account for \$141.56 billion.
- Wind investment expected to reach \$97 billion in 2017, showing the second highest growth aftersolar PV.
- The contrast between regions for renewable investment is significant. In Europe, 73.4% of power generation investment was for renewable technologies, whereas in Russia and CIS only 7.7% was investedinrenewables.

Installed Capacity Forecast by Region, Global, 2016–2017

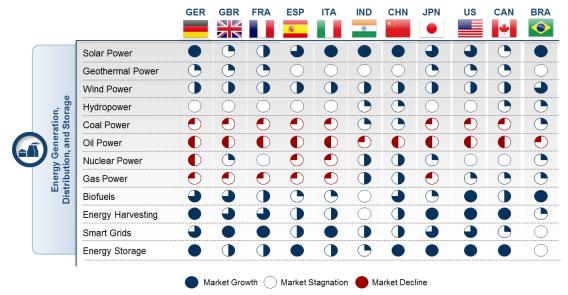


Source: Frost & Sullivan

In 2016, renewable energy capital costs continued to decline, driven by decline in equipment costs, but in some cases through competitive market-based contracts that reward the lowest bidders for providing capacity. Thus the amount of capacity constructed per \$ invested continues to increase, making renewables more competitive to other energy sources.

The signing of the COP21 Agreement in December 2015 has put pressure on utilities in many markets to consider future carbon liabilities. Key Asia-Pacific markets, such as South Korea, Japan, and Vietnam, all indicated that future policy will center on minimizing new coal investment.

Power Market: Impact of COP21 on Key Power Technology Markets by Key Country, Global, 2017



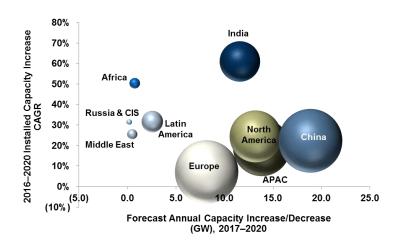
Source: Frost & Sullivan, Global Power Industry Outlook, 2017



#### **Global Solar Market Overview**

Global solar power investment is expected to increase from \$127 billion in 2016 to \$180 billion in 2020. Solar power is forecast to account for 37.5% of global power investment by 2020. India's installed capacity is forecast to increase by a CAGR of 61.1% between 2016 and 2020.

Solar Power Market: Installed Capacity by Region, Global, 2016–2020

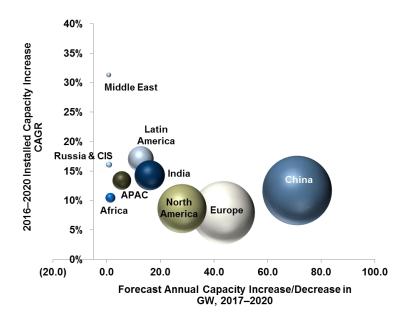


Source: Frost & Sullivan, , Global Power Industry Outlook, 2017

#### **Global Wind Market Overview**

Windcapacity is forecast to increase by 48% to 725 GW by 2020, with annual investments in the range of \$95-100 billion, attracting 21.0% of global power investment during this period. Double-digit growth is expected most regions; even themature European market is forecast to record a CAGR of 7.9%. China will almost double its cumulative installed wind capacity to reach 263GW by 2020.

Wind Power Market: Installed Capacity by Region, Global, 2016-2020



Source: Frost & Sullivan, Global Power Industry Outlook, 2017



# Poland Renewable Energy Market Overview

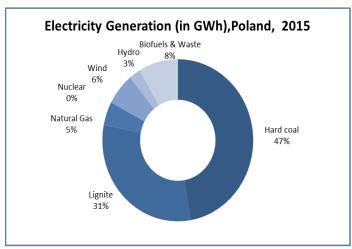
The Polish power generation sector is dominated by coal (hard and soft), contributing 78% of the total electricity generated in 2015. Poland is a prominent producer of coal with proven coal reserves of 5.7 billiontons, worth hundreds of billions of dollars in revenues and a key reason for politicians to oppose renewable energy projects.

Poland's geography makes both offshore and onshore wind energy an attractive option, however recent laws banning installation of a turbine from within 2 kilometers of a house or forest has had a dramatic negative impact on the industry.

Solar Energy is unlikely to be a major source of power due to the limited amount of consistent sunlight over Poland.

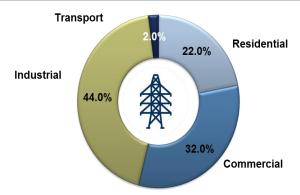
Recent years has seen a continual 22% growth of demand for electricity byresidential and commercial users, however, industrial demandof 44% is expected to remainthe largest demand sector for at least the next 15 years.

Electricity in Poland is sold through a designated exchange. The chart below provides electricity prices for Polish households between 2010 - 2016, on a semi-annual basis (euro cents per kilowatt-hour).

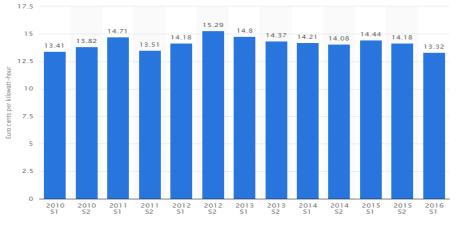


Source: Frost & Sullivan

Electricity Industry Profiles: Electricity Demand by Sector, Poland 2015



Source: Frost & Sullivan



Source: Statistics

Poland has a commitment to achieve a target of 15% renewable sources (RES) by 2020 under the EU Renewable Energy Directive (2009/28/EC)<sup>3</sup>. In recent years, due to political changes, the Polish renewable sector is witnessing regulatory uncertainty and, therefore, unstable market conditions and prices of renewable. Most experts believe that the likely result of various regulatory changes, including the switch from a green certificate scheme to auctions

<sup>&</sup>lt;sup>3</sup>Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC



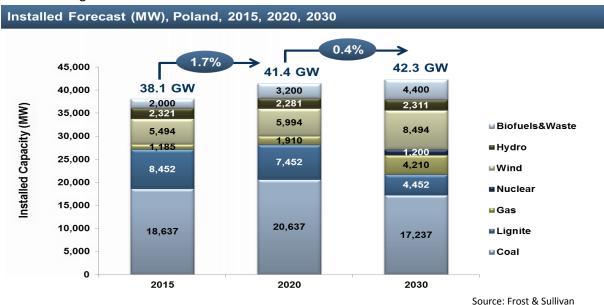
for green certificates, will be Poland missing its 15% renewable energy target for 2020. Still, the Polish government does not appear to see this as a high priority issue, and renewable energy growth is forecasted to be very low. As an example, Poland was the only country, in addition to Greece, that refused to agree not to add new coal plants after 2020, and is, therefore, likely to remain dependent on coal-fired generation for at least another decade.

#### **PolishWind Power Market**

With respect to Poland, wind power is the leading renewable energy technology. Much of the wind capacity is developed through Independent Power Producers (IPPs). IPPs play a major role in the Polish Energy Industry. Recent political conditions in Poland are not very favorable for wind power generation, yet, despite this, the country managed to add approximately 680 MW in 2016. Moreover, there are approximately 2,500 MW in the pipeline to be added by 2020.

The recent move by the government towards an auction-based system favorscoal-based energy generation. Recent taxes on wind farms have created some uncertainty in investors' minds, affecting new wind auctions in the country.

Due to the new RES act, the Polish wind industry is forecast to witness a setback in new capacity by an average of 500 MW annually until 2020. Wind power is the only way for the country to achieve its 2020 target and much depends on the Polish government from 2018 onwards.



#### Polish Regulations - Green Certificate System

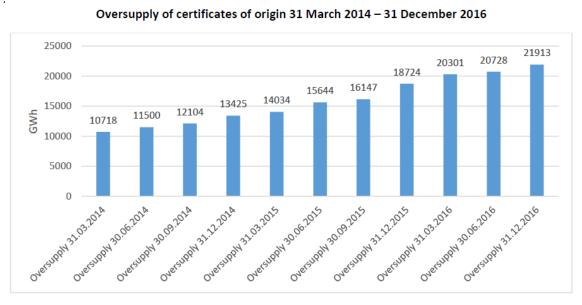
Poland has a Green Certificate system in place, whereby authorized electricity providers utilizing renewable energy sources are awarded 1 Green Certificate per 1 MWh of generated electricity; these certificates are traded on the commodity exchange. Since the new renewable laws were put into effect, the price of certificates has witnessed a steep decline, decreasing from 100-150 PLN (Polish Zloty) during 2015 to below 30 PLN during March-May 2017.



Source: Polish Power Exchange



The key reason for the decline in the price, according to the Polish Wind Energy Association (PWEA), is the oversupply of certificates. The PWEA published that at the end of 2016 the oversupply of green certificates reached 21,913 GWh. Over the pastyear, the oversupply of green certificates increased by 3,189 GWh.



### Source: PWEA

### Israel Renewable Energy Market Overview

Israel, a country with over 300 sunny days annually, has an opportunity to become a leader (in terms of percentage of total power generation) in PV energy. However, Israel failed to meet the 5% of renewable energy generation by 2014 targets that have been decided by the government, due to various regulatory and administrative barriers and restraints.

In October 2015, in anticipation for the Paris Convention, the government of Israel set new targets to reach 13% of renewable energy generation by 2025 and 17% by 2030.

According to the 2016 annual electricity status market report, submitted and published by the Electricity Authority in Israel, renewables accounted for 2.6% of total electricity production in 2016, and a target has been set to reach 10% by 2020.

Working to meet these targets, the first of six tenders, to be held over the next two years for a total of 1,000 MW by 2019, were awarded in 2017 by the Ministry of Energy and the Electricity Authority.



#### **Competitive Landscape**

The opportunities in the Israeli renewable energy market supported the rapid development of many companies; some specializing and some diversifying through add-on activity. These companies competed over the limited quotas available for developing, contracting, building and operating renewable power generation facilities.

In addition to local companies, multinational companies have become actively involved in the development and operations of facilities, highlightingthe local market's potential.

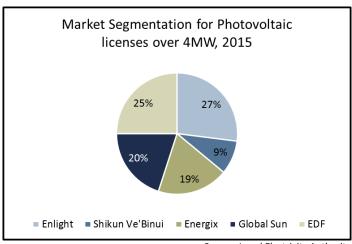
Interestingly, the relatively new renewable energy sector sharessimilarities, in how it is structured and operated, withthe established real estate sector.

Of the 100 or so companies active in the Israeli renewable energy marketmost arefocused on one stage of the project process (development, establishing/construction, and operations), and some operate in more than one renewable energy sector. Only a few, typically large companies, such as Enlight, ShikunUbinui and EDF, operate across all project stages.

In the wind power sector, large scale projects are still in the preliminary survey and initiation stages,a few years away from construction and operations. Key companies similar to Energix that operate within this sector, are Afkon (Ramat Sirin) and Enlight (EmekHaBacha).

# **Company Activities**

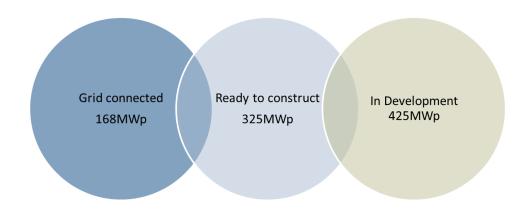
Energix initiates, develops, constructs, manages, operates and owns renewable energy projects. The company's project pipeline, across all these stages, totals over 900 MW.



Source: Israel Electricity Authority

Energix's current pipeline and projects, per stage, are defined as:

- "Grid connected": a facility that is fully active and selling electricity to a grid.
- "Ready to construct": a project that has received regulatory approval but hasnot yet reached financial closure or that construction is halted by Energix, usually due to unfavorable regulatory or commercial conditions.
- "In Development": a project that is at the stage of evaluation, planning, or regulatory processes, for redesignating agricultural or uncultivated land in order to revive a regulatory permit to build and operate an electricity generation facility.





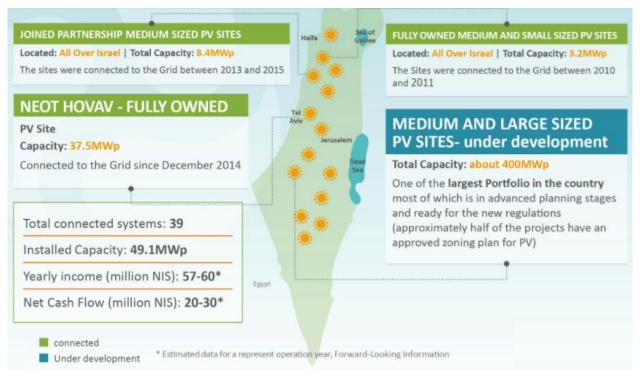
### Key Projects – Israel

Energix initiates, develops, constructs, manages, operates and owns renewable energy projects.

#### **Photovoltaic Systems in Israel**

Energix owns or co-owns grid-connected installed systems with a capacity of 49 MWp (Energix's share amounts to approximately 45 MWp). A project in Neot Hovav has 37.5 MWp, and the remaining 11.5 MWp is split among 39 small systems with different partners such as Granot (50% in a 3.5 MWp installation) and Meitarim (50.1% in a 5 MWp installation).

In March 2017, Energix won a first ever competitive tender to install 90 MWp and received a guaranteed price of 0.199 NIS per KWh over a 23-year period. Energix estimates the cost of construction at NIS 250-300 million, with an annual EBITDA of NIS 23-26 million. Work is expected to commence during Q3 2017.



Source: Energix

#### Neot Hovav Solar PV Project

The Neot Hovav project is currently Energix's flagship project in Israel.

Constructed on an area of contaminated industrial pools, the project is considered innovative as it converts wasteland into a renewable energy power plant.

The first stage of financing, prior to construction of the project, was provided by Deutsche Bank.



Source: Energix

This fact is significant as it was the first time in Israel that a foreign bank accompanied an energy project and it demonstrates Energix's position and how it is perceived and evaluated by large international institutions.



In December 2014, Energix signed an agreement with an institutional entity to finance the replacement of the initial agreement. The NIS 290 million loan was provided byinstitutional entities. This is one of the only known financing agreements in Israel, in which financial institutionsprovided a loan without a bankacting as a consortium leader or even as aparticipant. This eventreflects the great potential that exists in such projects, in terms of yields and stability, in today's interest-rate environment.

Energix 2016 actual results- the Neot Hovav project:

- Annual revenuesNIS 44.4 million
- FFO (Funds From Operations) NIS 29.8 million
- Net operating profit (project)NIS 38.7 million
- Free cash flow after serving debt NIS 15.6 million

#### **Wind Projects**

#### ARN (Golan Heights)

Located in the Golan Heights Energix has a project in development for 152 MW. Following a clearance from the Ministry of Defense in June 2016, and positive feasibility reports received during Q1 2017 from Israel Electric Company, Energix expects financial closing during 2018. Once the project is constructed, the company estimates it will generate annual revenues of NIS 140-160 million.

# Key Projects - Poland

Energix initiates, develops, constructs, manages, operates and owns wind energy projects in Poland.

Energix owns or co-ownsgrid-connected installed systems with acombined capacity of 119 MW (Energix's shareamounts to approximately 116 MW). A project in Banie has a capacity of 106 MW, and another in Ilawa has a capacity of 13.2 MW. The company sells the electricity on the Polish Power Exchange (TGE).

Energix has two projects in its Poland pipeline, ready to be installed, with a capacity of approximately 120 MW. However, due to recent regulatory changes the company has not initiated construction and has announced that it will "decide if to develop them based on regulatory and market conditions."



<sup>&</sup>lt;sup>4</sup>Energix Capital Market Presentation Q1, 2017

15



# Engergix2016 actual results in Poland:

	Banie	Iława
MW Installed	106	13.2
Energix share	100%	75%
Annual revenues	NIS 50.231million	NIS 3.829million
FFO (Funds From Operations)	NIS 26.619million	NIS 2.655million
Free cash flow after serving debt	NIS 23.605million	NIS 2.655million



### **Valuation**

# **Financial Analysis**

#### Revenues

Energix's revenues from electricity have dramatically increased during the last three years, from NIS 58.8 million in 2015 to NIS 113.2 million in 2016, based on new projects added to its portfolio. Q1 2017 revenues are NIS 30.5 million. The Banie wind project in Poland contributed the majority of the revenues (NIS 50.2 million). The Neot Hovav PV project added NIS 44.4 million to 2016 revenues.

Projects:	MW	Company`s Share	2016 Revenues	2016	GP %
				GrossProfit	
PV Projects					
Neot Hovav	38	100%	44,375	38,650	87%
Small and Mid-sizesystems	12	100% -50%	14,565	11,708	80%
Wind Projects - Poland					
Banie	106	100%	50,231	34,048	68%
Iława	13	75%	3,829	2,655	69%
Total Revenues			113,000	87,061	77%

Gross profit in 2016 was 77% from all projects, the majority of expenses being maintenance and general expenses (such as accountants and legal expenses). Solar PV projects in Israel provide higher gross marginsdue to lower maintenance expenses.

Energix usually indicates FFO (Funds from Operations) as it is an Alony-Hetz group company. Energix's FFO in 2016 wasNIS 68.2 million, and NIS 44.0 million in 2015. However, Energix is a pseudo-REIT company where EBITDA (Earnings Before Interest, Depreciation and Amortization) is calculated as: FFO + financial expenses. We assume it is more relevant to address the company's financial measurement with EBITDA (FFO+financial expenses) as most renewable energy projects' revenues, unlike REITs companies, have fixed income. In 2016 the company's EBITDA was NIS 66.2 million.

#### **Balance Sheet**

Energix's equity as of March 31, 2017 is NIS 602.8 million; a 15% increase from NIS 523.9 million on December 31, 2016. The company has NIS 17 million in cash as of March 31, 2017 and loans in the amount of NIS 596.1 million.

#### **Financing**

Energix finances its projects with bank loans or full financing by its shareholders, allowing the company a flexible financing structure for future projects. The company's financial metrics have improved from 2014 to Q1 2017, with solid financial stability. Energix raised NIS 83.2 million on January 2017:

	31.12.14	31.12.15	31.12.16	31.3.17
Debt to Equity	1.45	0.79	1.25	0.02
Debt to Assets	0.54	0.41	0.52	0.02
Equity to Assets	37.3%	51.8%	41.4%	94.0%

<sup>&</sup>lt;sup>5</sup>The formula for FFO is as follows: FFO = Net Income + Depreciation + Amortization - Gains on Sales of Property. Many leading real estate companies believe that the FFO calculation is the best presentation of operating results. This is because real estate historically rises and falls with macroeconomic conditions, and any operating results calculated using the cost accounting method are not an accurate measure of performance (investopedia.com)

#### **Forecast**

#### Solar Photo-Voltaic Systems in Israel

In Israel Energix owns or co-owns grid-connected installed systems with a capacity of 49 MWp (Energix's share amounts to approximately 45 MWp), and we assume an additional new project will be installed in 2019 with a capacity of 90 MWp (70 MW).

- a) Neot Hovav (37.5 MWp)
- b) Small and medium solar PV systems (11.5 MWp, Energix average share is 7.4 MWp) are split among 39 small capacity systems, with different partners such as Granot (50% in a 3.5 MWp facility) and with Meitarim (50.1% in a 5 MWp facility).
- c) New solar PV project: In March 2017 Energix won a first ever, in Israel, competitive tender process to install 90 MWp (equal to 70 MW). The winning reinforces Energix's leadership position in the renewable energy market in Israel.

#### Valuation points:

- The company receives a fixed tariff from the Israeli ElectricityAuthority.
- We include a degradation in revenues from solarPV systems due to technical aspects in this operation, of 0.6% annually degradation.
- Revenues growth we assume a steady state in revenues.
- Maintenance according to Energix, the Neot Hovav project will switch to in-house maintenance costs of NIS 1.5 million annually rather than the NIS 5 million cost as of 2017.
- General, administration and other expenses we assume legal, administration and other expenses will be NIS 1-1.5 millionannually.
- Depreciation Energix has been granted an accelerated depreciation overthe next 3 years.
- Working Capital (WC) changes we did not consider WC changes as Energix is primarily engaging with only one customer, the Israeli ElectricityAuthority.
- Tax Our tax model assumes no tax payments on solarPV projectsuntil 2025.
- Financing we consider each and every project amortization table based on the company's financial reports.
- Capitalization rate we calculate Energix's cap. rate as 7.24%. Additional information is available in Appendix B.

#### Following is a summary of our assumptions:

Project	Project time	Price per KWh (NIS)	Hours of Light (annually)	Degradation (annually)
Neot Hovav	Until 2034 + 10 years at alower rate	0.65	1,840	0.6%
Small- and mid-sized projects	Until 2034 + 10 years at alower rate	0.65	1,750*	0.6%
New project	Until 2041 (23 years from 2019 + 10 years at alower rate)	0.199	1,840	0.6%

<sup>\*</sup>due to different PV technology, based on Energix's data.



#### Wind Systems in Poland and Israel

Energix owns or co-owns grid-connected installed systems with a capacity of 119 MW (Energix's share amounts to approximately 115 MW). These include the Banie project (106 MW, phases I + II) and the Ilawa project (13.2 MW) Valuation points:

- The company sells electricity in Poland via a designated exchange. Spot price is 171 PLN (NIS 160) per Kw.Electricity prices have been higher in recent years. We base our valuation on a conservative approach based on spot prices.
- Wind systems do not undergo significant degradation as maintenance costs also cover replacement of parts.
- Revenues growth we assume 2% annual growth as demand for electricity will increase, although in a conservatively.
- Hours of wind we based our valuation on Energix's assumptions.
- Green certificates these certificates sell at a spot price of 27 PLN (31.3.2017). We based our valuation on the Banie project generating green certificates' revenues based on the current spot price over the next 15 years, according to Energix's data and current market status. Moreover, Energix has an inventory of 389 MW of green certificates.
- Maintenance maintenance expenses in these Polish wind systems are covered by a specialized firm guarantee and on-going system operation. We evaluate these expenses as 25% of each project's revenues.
- General, administration and other expenses we assume legal, administration and other expenses will be NIS 500K annually.
- Depreciation
   — the depreciation method in Poland allows for amortization according to a given company's financial needs.
- Working Capital (WC) changes similar to Israeli solar PV projects, we did not consider WC changes as Energix is primarilyengaging with only one customer.
- Tax –our tax model assumes no tax payments on solar PV projects until 2025.
- Financing we consider each and every project amortization table based on the company's financial reports. Ilawa has no loans.
- Capitalization rate we calculate Energix's cap. rate as 7.24%. Due to regulations difficulties in Poland we added 1% to our WACC model for wind projects in Poland. Additional information is available in Appendix B.

### **ARAN Project**

The ARAN wind project in the Golan Heights will create a positive change in the Energix's cash flow over thenext years.

This wind project is planned to be of 152 MW and will, according to Energix's data, operate for 40 years, similar to wind systems in other parts of the world.

We assume Energix will have financial closing in 2018, build the system in 2019 and have it fully operating n 2020.

The main challengethat the ARAN project may encounter is Israeli regulation difficulties, although the company has recently received approval from the Ministry of Defense. Thus, we set a probability factor of 70%, based on our understanding of the company's current status and we added a 2% specific risk to our WACC model.



Following is summary of our assumptions:

Project	Project time	Price per KWh (NIS)	Hours of Light (annually)	Degradation (annually)
Banie (Poland)	Until 2055	0.16 (171 PLN per Kw)	3,400	0%
Ilawa (Poland)	Until 2034 + 10 years at a lower rate	0.16 (171 PLN per Kw)	3,400	0%
ARAN (Israel)	Until 2041 (23 years from 2019 + 10 years at alower rate)	0.34	3,200	0%

## Upside future projects

Energix has a total of 920 MW projects, of which 386 MW are already installed. Thus, 534 MW are at different development, regulatory or financial stages. We assume, based on our calculation of the company's projects, that 1 MW NPV is equivalent to approximately NIS 1 million. However, difficulties may arise. Thus, we set a 20% probability factor, evaluating the company's future pipeline at approximately NIS 110 million.

Allbeit, our valuation does not include this upside as some aspects are still unknown.

# **Equity Value**

We evaluate Energix's equity value based on its current pipeline and the future ARAN project. The company's cash is NIS 16.95 million as of March 31, 2017, added as a non-operational asset.

The company's equity value is NIS 1.14 billion:

Projects:	
Neot Hovav	180,037
Small and Mid-sizesystems	43,430
New Project 90MW	87,377
Banie	471,207
Iława	40,078
Aran – Israel 152 MW	304,533
Enterprise Value	1,126,662
Cash	16,950
Non-operational debt ,Net	16,950
Equity Value	1,143,612

## Sensitivity Analysis

We analyzedEnergix's price target based on our WACC model, +/- 0.5%. Thus, Energix's price target is in the range of NIS 3.02-3.41 with an average of NIS 3.20.

WACC	Price
	Target
7.7%	3.02
7.2%	3.20
6.7%	3.41
6.2%	3.63



# **Contact Details & Management**

#### **Contact Details:**

Atrium Building
2 Jabotinsky St.

Ramat Gan 5250501, Israel Phone: 972-3-5668855

Fax: 972-3-5668822

Email: info@energix-group.com

#### **Management:**

#### Mr. Asa (Asi) Levinger, CEO

Serves as CEO since the company was founded in 2009. Prior to joining Energix, he was the Assistant to the CEO of AMOT Investment Ltd.

#### Mr. Elad Cohen, CFO

Servesas Chief Financial Officer since March 2014. Prior to joining Energix, he served as a corporate controller at AlonyHetz Properties and Investments Ltd.

### Mr. Nathan Hetz, Chairman of the Board

One of Israel's most notable real estate and property figures, he is the founder of AlonyHetz Properties and Investments Ltd. and Chairman of the Board of Directors of Amot Investments Ltd.

### Mr. Israel Aviram, VP Operation

Over 15 years of management experience in the O&M field, including managing a number of companies at Mer Group in Israel and abroad, primarily those involving infrastructure and energy projects.

# **Appendices**

# Appendix A - Financial reports

Balance Sheet	31.12.14	31.12.15	31.12.16	31.3.17
Current assets				
Cash and cash equivalents	38,167	73,435	39,114	16,950
Deposit held	3,011	5,024	0	0
Marketable securities	0	0	0	0
Clients	3,157	5,786	10,351	41
Current maturities of Financial assets for concessional	13,347	0	0	0
arrangements				
Accounts receivable (AR)	55,449	59,833	12,854	4,879
AR for investee companies	0	0	0	4,535
Green Certificates	0	900	9,558	0
Hedged Financial Instruments	0	2,770	5,035	0
Total current assets	113,131	147,748	76,912	26,405
Cash limited in the Long Term	0	16,692	31,527	0
Deposit held	6,226	0	0	0
Leasing expenses paid in advance	31,168	29,679	27,006	0
Connected power generation systems	38,858	746,943	1,057,870	279
Systems being established	4,200	36,380	32,391	244
Receivables for projects under execution	0	957	0	0
Financial assets for concessional arrangements	284,628	0	0	0
Fixed Assets	1,033	0	2,323	2,296
Loans to investee companies	0	0	0	7,532
Investment in investee companies (as per the balance method)	16,133	16,277	14,827	588,579
Other receivables	2,686	1,170	7,887	15,772
Long term financial instruments	0	0	12,624	0
Differed taxes	4,267	6,329	3,591	0
Total non-current assets	389,199	854,427	1,190,046	614,702
Total assets	502,330	1,002,175	1,266,958	641,107
Suppliers and service providers	42,607	66,661	52,227	1,752
Short term financing from financial institutions	158,489	26,000	65,501	0
Loan from parent company	45,412	0	0	0
Current maturities of long-term loans	2,614	16,666	31,898	1,068
Creditors and credit balances	26,195	69,048	5,494	0
Accounts Payable (AP)	0	0	0	2,976
Total current liabilities	275,317	178,375	155,120	5,796
Loans from financial institutions	39,638	296,108	552,574	13,153
Differed tax liabilities	0	4,196	7,034	6,936
Liabilities from terminating relations between employee/employer	0	0	0	347
Citipio y Corporation Citipio y Citi	0	0	0	8,475
AP Balance of held companies	0	0	0	60
Other long-term liabilities	166	4,082	28,283	3,500
Total non-current liabilities	39,804	304,386	587,891	32,471
Total Liabilities	315,121	482,761	743,011	38,267
Total Equity	187,209	519,414	523,947	602,840
Total liabilities and equity	502,330	1,002,175	1,266,958	641,107
- Total Hazilicio ullu equity	302,330	1,002,173	1,200,338	0-1,107

#### FROST & SULLIVAN

## RESEARCH & CONSULTING LTD.

Profit and loss	31.12.14	31.12.15	31.12.16	31.03.17
Total Revenues	12,503	60,035	113,219	322
<u>Expenses</u>				
Leasing	948	2,430	4,202	2
Acquisition of Systems	651	4,945	17,121	307
Reduced value of green certificates	0	0	6,616	0
Costs of establishing facilities	1,769	70	241	0
Development expenses	4,391	2,315	1,891	0
Associated fees	5,830	6,207	7,974	0
Initial expenses for projects	0	0	0	567
Salary and associated expenses	0	0	0	1,925
Administration and other expenses	3,685	5,881	8,987	2,103
EBITDA	4,771	38,187	66,187	4,582
Discharge of financial asset impairment losses	0	0	3,594	0
Depreciation and amortization	3,332	15,803	36,400	144
EBIT	8,103	22,384	33,381	4,726
Financial income	2,677	3,831	478	2,578
Financial expenses	1,855	15,040	28,646	324
Loss after Financing	7,281	11,175	5,213	2,254
Balance carried forward from holding companies	1,422	1,023	1,501	717
Income Tax	1,666	3,151	1,653	205
Annual losses attributable to minority interests	2	3	1,164	0
Annual Loss (Attributed to Shareholders)	4,195	9,044	6,225	0
Currency Conversion	0	0	0	135
Gain (Loss) from exchange rate differentials in respect of derivatives designated for hedging investments in subsidiaries that constitute foreign operations, net of tax	0	0	0	744
Net change in the fair value of instruments used to hedge cash flows	0	0	0	163
Comprehensive Annual Loss	4,193	9,047	5,061	2,266

# Appendix B - Capitalization rate

Cost of equity capital (ke) represents the return required by investors. The capitalization rate is calculated using the CAPM (Capital Asset Pricing Model). It is based on a long-term 20-year T-bond with a market risk premium, and based on ProfessorAswathDamodaran's (NY University) commonly used sample (www.damodaran.com). As of December 31, 2016, the Israeli market risk is estimated at 6.69%.

A three-year market regression Beta is 0.47, according to a sample of 25 companies (at various stages), representing the renewable energies sector (Damodaran.com data). Debt to Equity ratio is 1.74 and debt beta is equal to 0, i.e., Beta is 1.29:

βе:		
Unlevered beta	βа	0.47
D/E - average for a sample of 25 firms	D/E	1.74
	βd	0.00
βe=βa +D/E* (βa -βd)	βе	1.29

CAPM model (ke) is estimated as follows:

$$ke = rf + \beta(rm-rf) + P$$

We therefore estimate the company's CAPM to be 12.1 %. The company financial structure, based on the WACC model, is as follow:

WACC	Parameter	Data	Source
Long-term (20 years) T-bond	R(f)	3.50%	Rf - Israel
Market risk premium	R(m)- R(f)	6.69%	based on Damodaran (1/1/17) - Israel
Beta	βε	1.29	Beta sample - Renewable energy (Damodaran, 2017)
Cost of Capital	Ke	12.1%	
Debt, rate	Rd	3.2%	Company`s financial long term average loans
Debt (%)	D/(D+E)	50.3%	Q1 17 financial data
Equity(%)	E/(D+E)	49.7%	Q1 17 financial data
Тах	t	23.0%	
WACC= Rd(1-t)*(D/D+E)+Re(E	/D+E)	7.24%	



# Appendix C - Team Bios

**Kobi Hazan** is the Lead Analyst at Frost & Sullivan Research & Consulting Ltd., a subsidiary of Frost & Sullivan in Israel. He has over 14 years of experience in capital markets, including research, analysis, investment advisory, and management. Mr. Hazan served as a Fund Manager for provident and mutual funds at Analyst Ltd. and, since 2012, he owns and manages the Amida Israel Fund, a hedge fund specializing in Israeli equities. Kobi holds an Economics and Management degree from The College of Management Academic Studies. He is licensed as an Investment Advisor in Israel.

**Dr. Tiran Rothman** is an Analyst and Consultant at Frost & Sullivan Research & Consulting Ltd., a subsidiary of Frost & Sullivan in Israel. He has over 10 years of experience in research and economic analysis of capital and private markets, obtained through positions at a boutique office for economic valuations, as chief economist at the AMPAL group, and as co-founder and analyst at Bioassociate Biotech Consulting. Dr. Rothman also serves as the Economics & Management School Head at Wizo Academic College (Haifa). Tiran holds a PhD in Economics, MBA (finance), and was a visiting scholar at Stern Business School, NYU.

**NadavOfir** is a Senior Consultant at Frost & Sullivan in Israel. He has over 12 years of experience in consulting and providing research and economic analysis for companies in various industries, including in the energy and real estate sectors. Nadav holds a Master's degree in Entrepreneurship and Innovation (MEI) from Swinburne University of Technology (Australia) and a B.A in International Relations from the Hebrew University of Jerusalem, Israel.

**Ross Bruton** is a Senior Industry Analyst for Smart Energy Systems, in Frost & Sullivan's Energy & Environment practice. He has 10 years of experience in authoring energy related reports, and analyzing technologies and companies. Ross holds a Bscin Molecular and Biotechnological Sciences and a Post Graduate Degree in Marketing.

# Disclaimers, Disclosures and Insights for more Responsible Investment Decisions

Definitions: "Frost & Sullivan" – A company registered in California, USA with branches and subsidiaries in other regions, including in Israel, and including any other relevant Frost & Sullivan entities, such as Frost & Sullivan Research & Consulting Ltd. ("FSRC"), a wholly owned subsidiary of Frost & Sullivan that is registered in Israel – as applicable. "The Company" or "Participant" – The company that is analyzed in a report and participates in the TASE' Scheme; "Report", "Research Note" or "Analysis" – The content, or any part thereof where applicable, contained in a document such as a Research Note and/or any other previous or later document authored by "Frost & Sullivan", regardless if it has been authored in the frame of the "Analysis Program", if included in the database at www.frost.com and regardless of the Analysis format-online, a digital file or hard copy; "Invest", "Investment" or "Investment decision" – Any decision and/or a recommendation to Buy, Hold or Sell any security of The Company.

The purpose of the Report is to enable a more informed investment decision. Yet, nothing in a Report shall constitute a recommendation or solicitation to make any Investment Decision, so Frost & Sullivan takes no responsibility and shall not be deemed responsible for any specific decision, including an Investment Decision, and will not be liable for any actual, consequential, or punitive damages directly or indirectly related to The Report. Without derogating from the generality of the above, you shall consider the following clarifications, disclosure recommendations and disclaimers. The Reportdoes not include any personal or personalized advice as it cannot consider the particular investment criteria, needs, preferences, priorities, limitations, financial situation, risk aversion, and any other particular circumstances and factors that shall impact an investment decision.

Frost & Sullivan makes no warranty nor representation, expressed or implied, as to the completeness and accuracy of the Report at the time of any investment decision, and no liability shall attach thereto, considering the following among other reasons: The Report may not include the most updated and relevant information from all relevant sources, including later Reports, if any, at the time of the investment decision, so any investment decision shall consider them; The Analysis considersdata, information and assessments provided by the company and from sources that were published by third parties (however, even reliable sources contain unknown errors from time to time); The methodology aims to focus on major known products, activities and target markets of the Company that may have a significant impact on its performance as per our discretion, but it may ignore other elements; The Company was not allowed to share any insider information; Any investment decision must be based on a clear understanding of the technologies, products, business environments, and any other drivers and restraints of the company performance, regardless if such information is mentioned in The Report or not; An investment decision shall consider any relevant updated information, such as the company's website and reports on Magna; Information and assessments contained in The Report are obtained from sources believed by us to be reliable (however, any source may contain unknown errors. All expressions of opinions, forecasts or estimates reflect the judgement at the time of writing, based on the Company's latest financial report, and some additional information (they are subject to change without any notice). You shall consider the entire analysis contained in the Reports. No specific part of a Report, including any summary that is provided for convenience only, shall serve per se as a basis for any investment decision. In case you perceive a contradiction between any parts of The Report, you shall avoid any investment decision before such c

Risks, valuation and projections: Any stock price or equity value referred to in The Report, may fluctuate. Past performance is not indicative of future performance, future returns are not guaranteed, and a loss of original capital may occur. Nothing contained in The Report is, or should be relied on as, a promise or representation as to the future. The projected financial information is prepared expressly for use herein and is based upon the stated assumptions and Frost & Sullivan's analysis of information available at the time that this Report was prepared. There is no representation, warranty, or other assurance that any of the projections will be realized. The Report contains forward-looking statements, such as "anticipate", "continue", "estimate", "expect", "may", "will", "project", "should", "believe" and similar expressions. Undue reliance should not be placed on the forward-looking statements because there is no assurance that they will prove to be correct. Since forward-looking statements address future events and conditions, they involve inherent risks and uncertainties. Forward-looking information or statements contain information that is based on assumptions, forecasts of future results, estimates of amounts not yet determinable, and therefore involve knownand unknown risks, uncertainties and other factors which may cause the actual results to be materially different from current projections. Macro level factorsthat are not directly analyzed in the Report, such as interest rates and exchange rates, any events related to the eco-system, clients, suppliers, competitors, regulators and others may fluctuate at any time. An investment decision must consider the Risks described in the Report and any other relevant Reports, if any, including the latest financial reports of the company. R&D activities shall be considered as high risk, even if such risks are not specifically discussed in the Report.Any investment decision shall consider the impact of negative and even worst case scenarios. Any relevant forward-looking statementsas defined in Section 27A of the Securities Act of 1933, and Section 21E the Securities Exchange Act of 1934 (as amended) are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995

TASE Analysis Scheme: The Report is authored by Frost & Sullivan Research & Consulting Ltd. within the framework of the Analysis Scheme of the Tel Aviv Stock Exchange ("TASE") regarding the provision of analysis services on companies that participate in the analysis scheme (see details: www.tase.co.il/LPages/TechAnalysis/Tase\_Analysis\_Site/index.html, www.tase.co.il/LPages/InvestorRelations/english/tase-analysis-program.html), an agreement that the company has signed with TASE ("The Agreement") and the regulation and supervision of the Israel Security Authority (ISA). FSRC and its lead analyst are licensed by the ISA as investment advisors. Accordingly the following implications and disclosure requirements shall apply.

The agreement with the Tel-Aviv Stock Exchange Ltd. regarding participation in the scheme for research analysis of public companies does not and shall not constitute an agreement on the part of the Tel-Aviv Stock Exchange Ltd. or the Israel Securities Authority to the content of the Equity Research Notes, or to the recommendations contained therein.

As per the Agreement and/or ISA regulations: A summary of the Report shall also be published in Hebrew. In the event of any contradiction, inconsistency, discrepancy, ambiguity or variance between the English Report and the Hebrew summary of said Report, the English version shall prevail. The Report shall include a description of the Participant and its business activities, which shall inter alia relate to matters such as: shareholders; management; products; relevant intellectual property; the business environment in which the Participant operates; the Participant's standing in such an environment including current and forecasted trends; a description of past and current financial positions of the Participant; and a forecast regarding future developments and any other matter which in the professional view of Frost & Sullivan (as defined below) should be addressed in a research Report (of the nature published) and which may affect the decision of a reasonable investor contemplating an investment in the Participant's securities. To the extent it is relevant, the Analysis shall include a schedule of scientific analysis by an expert in the field of life sciences. An equity research abstract shall accompany each Equity Research Report, describing the main points addressed. A thorough analysis and discussion will be included in Reports where the investment case has materially changed. Short update notes, in which the investment case has not materially changed, will include a summary valuation discussion. Subject to the agreement, Frost & Sullivan Research & Consulting Ltd. is entitled to an annual fee to be paid directly by the TASE. The fees shall be in the range of 35 to 50 thousands USD per each participant. Each participant shall pay fees for its participation in the Scheme directly to the TASE.

The named lead analyst and analysts responsible for this Report certify that the views expressed in the Report accurately reflect their personal views about the Company and its securities, and that no part of their compensation was, is, or will be directly or indirectly related to the specific recommendation or view contained in the Report. Neither said analysts nor Frost & Sullivan trade or directly own any securities in the company.

© 2017 All rights reserved to Frost & Sullivan and Frost & Sullivan Research & Consulting Ltd. Any content, including any documents, may be published, lent, reproduced, quoted or resold without the written permission of the companies.