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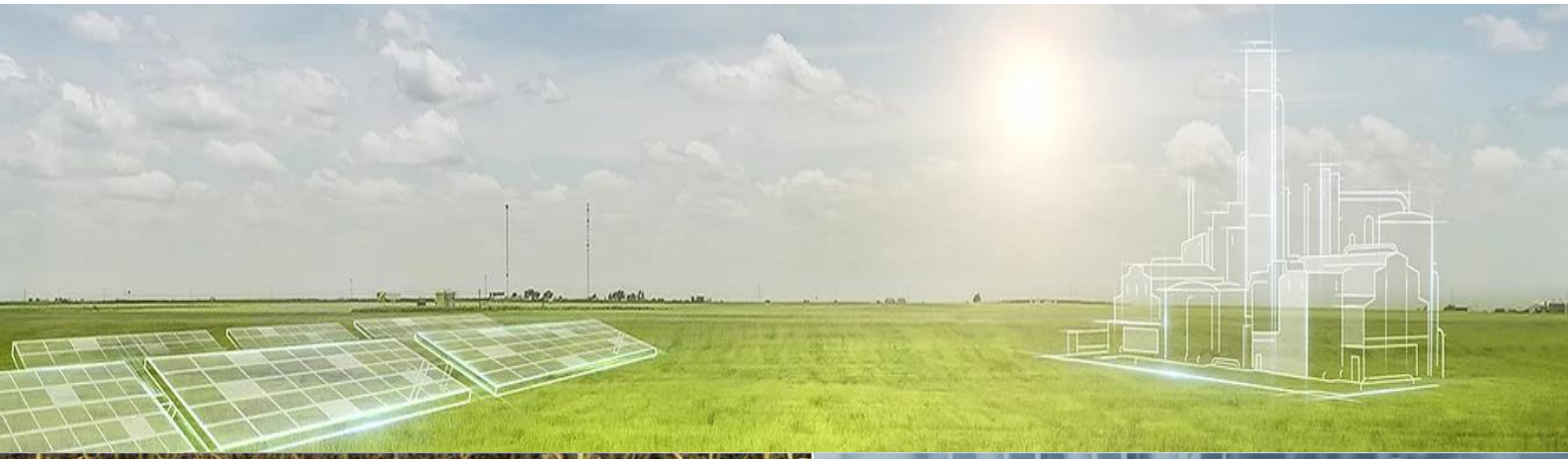

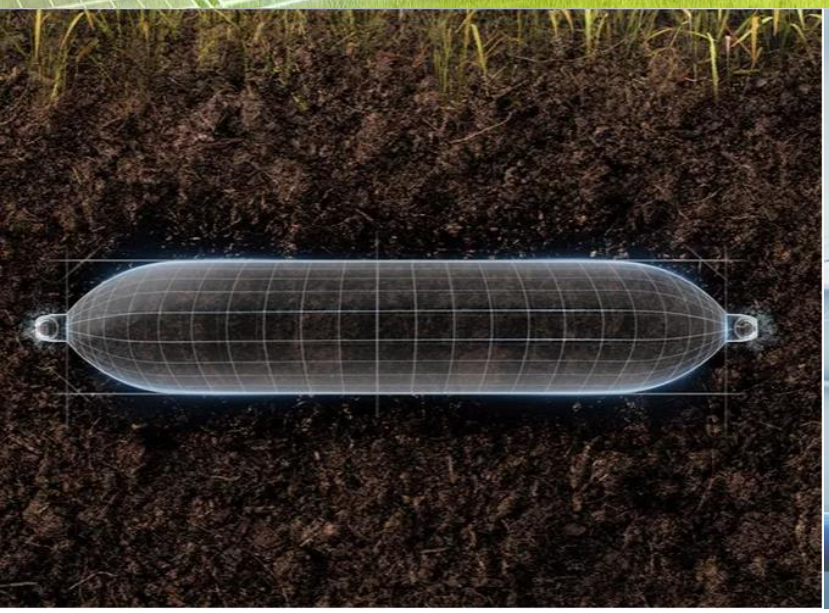

AUGWIND

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28 September 2020

Stock Exchange: TASE

Symbol: AUGN

Sector: Technology

Sub-sector: Cleantech

Stock Price Target: NIS 121.3

Closing Price: NIS 97.1
Market Cap: B NIS 1.9
# of Shares: M 19.4
Average Daily Trading Volume (3M): 13,526
3M Return: 7%

Dr. Tiran Rothman – Lead Analyst

Equity.Research@frost.com
Tel.: +972-9-9502888

Highlights

Augwind Ltd. (TLV: AUGN) hereafter "the Company" and/or "Augwind" is a publicly-traded Israeli company with the vision of becoming a cutting-edge global technology provider in the energy storage and energy efficiency domains.

Augwind has developed an energy storage solution based on compressed air storage (the AirBattery) that will be commercially available in 2021 and aims to provide an answer to the exponentially expanding renewable energy storage market.

The Company's energy efficiency solution (the AirSmart), which is utilized by major entities such as Siemens and PepsiCo, aims to save factories substantial electricity costs and is based on the same compressed air storage core technology.

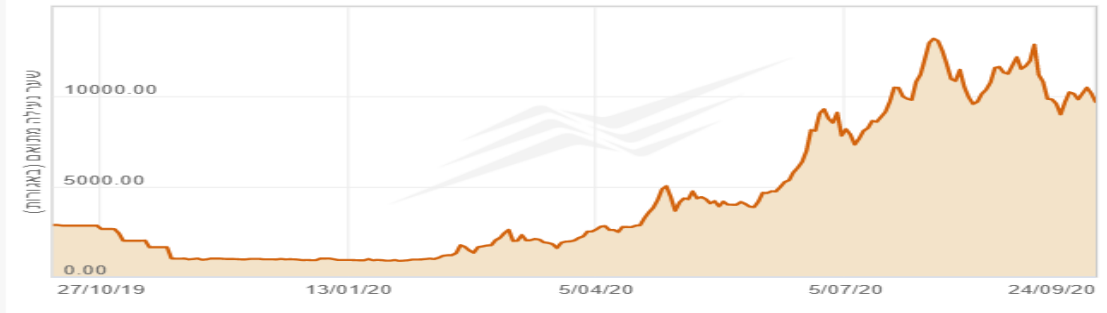
Strategically, Augwind is a technology provider and not an execution company. This allows it to utilize its advantages in a fast and scalable manner. This model will allow the company to operate a relatively flexible and lean operation. The company contends that this model will also contribute significantly to the penetration capacity of the AirSmart solution. Due to the synergy between the AirBattery and AirSmart solution, the AirBattery is predicted to further increase adoption of the AirSmart solution in the Company's target countries. **Financially, Augwind raised NIS 165 million in private placement (July 2020), thus we assume this can support any activities in the near future.**

We view Augwind as a great opportunity for investors seeking to invest in cleantech and specifically within one of the most growing elements in cleantech – energy storage. Increased investment in energy storage is an international phenomenon, and countries including China, the US, Germany and Israel all have detailed plans to increase their energy storage portfolios. The ESA recently extended its vision to a goal of 100 GW of new energy storage installed by 2030, and Israel's Ministry of Energy has outlined a tenfold increase in storage capacity over the same period.

We are starting with a valuation of NIS 2.3 billion; we estimate Augwind's price target to be at the range of NIS 104.3 to 144.1 NIS with a mean of NIS 121.3. We will update Augwind value based on its quarterly progress.

We present our P&L forecast for 2020-2023 below and the trading graph at the last 12 months*:

NIS	2020E	2021E	2022E	2023E
Total revenues	5,700,000	62,585,000	346,550,000	546,640,000
Operating (loss) profit	-3,934,500	2,060,150	81,464,500	148,887,100



*Augwind performed a reverse merger during December 19

Executive Summary

Ten years ago, the lion's share of our electricity came from non-renewable energy sources such as coal, while renewable energy sources, such as solar and wind energy, accounted for a negligible 1-2% of electricity in most developed energy ecosystems. Carbon emissions from electricity generation were predicted to rise for decades to come, but surprisingly, between 2010 and 2020, coal-based energy significantly decreased, while natural gas and solar power began significantly increased.

The changes of the past decade will likely be dwarfed by those we expect to see in the coming decade. Because renewable energy sources depend are inherently intermittent, such as daylight and wind currents, they require supporting solutions to provide a consistent, stable flow of energy. The exponential adoption of renewables is propelling many countries to implement supporting solutions, such as energy storage and electricity grid management systems, as enablers of renewable energy adoption.

Just 3 weeks ago (August 25, 2020) at the US Energy Storage Association's (ESA) annual conference, the US Department of Energy (DOE) deputy secretary Mark Menezes stated that energy storage is "the next great chapter in a story of American energy innovation."[1] He further mentioned that the DOE is investing heavily in storage R&D in order to provide energy flexibility and reliability. Furthermore, the US Office of Electricity (OE) explicitly mentions energy storage as one of its four main priorities[2] and details its goal to "work with other DOE Offices to investigate and integrate new technologies for advancing megawatt scale storage with added resiliency and control capabilities."

Increased investment in energy storage is an international phenomenon, and countries including China, Korea, the US, Germany, France, Italy, the UK, Australia, Japan, India and Israel all have detailed plans to increase their energy storage portfolios. The ESA recently extended its vision to a goal of 100 GW of new energy storage installed by 2030[3], and Israel's Ministry of Energy has outlined a tenfold increase in storage capacity over the same period.

Renewable energy sources are fuelling the need for energy storage capacity, and stored energy brings with it a whole slew of advantages that can be effectively utilized by a variety of factories and production facilities. For example, the use of compressed air energy storage technology (CAES) allows for substantially reduced energy costs by storing electricity when it is cheap and allowing factory machinery to utilize that energy during peak load times.

Augwind is a CAES technology provider that has developed solutions to support both renewable energy storage infrastructure and production facilities. They enable the deployment of large scale and grid-scale CAES to store energy for later use using compressed air. Their technology is primed for adoption as it is cost effective, highly scalable, completely green, and can easily be incorporated into existing facilities. Their solution for energy storage is called the AirBattery and their solution for production facilities is called AirSmart.

We view Augwind as a great opportunity for investors seeking to invest in clean-tech and specifically within one of the most growing elements in clean-tech – energy storage.

[1] https://essentialenergyeveryday.com/energy-storage-will-fundamentally-change-the-energy-landscape/
[2] https://www.energy.gov/oe/mission/oe-priorities
[3] https://energystorage.org/wp/wp-content/uploads/2019/06/esa_vision_2025_final.pdf

Company Overview

Augwind Ltd. (TLV: AUGN), hereafter “the Company" and/or “Augwind,” is a publicly-traded Israeli company with the vision of becoming a leading and cutting-edge global technology provider in the energy storage and energy efficiency domains. The Company is revolutionizing energy storage by providing technology for storing compressed air underground. The company’s revenue for 2017, 2018, and 2019 respectively was 693K NIS, 3.14M NIS, and 6.89M NIS. The company operates out of its HQ in Yakum, Israel.

In recent years there has been a significant increase in the volume of energy production from wind, solar, and water sources to replace pollutant sources such as coal, petroleum, and gas. The shortfall of this approach is that renewable energy sources are unstable and do not allow continuous power supply throughout the day. For example, we are unable to utilize the sun at noon to power factories at hours when there is no sun out. The solution to this problem is highly efficient and cost effective energy storage. The energy storage market for renewable energy sources is projected to grow exponentially. It is also expected that in the next few years, regulators will begin to require energy storage solutions for renewable energy sources.

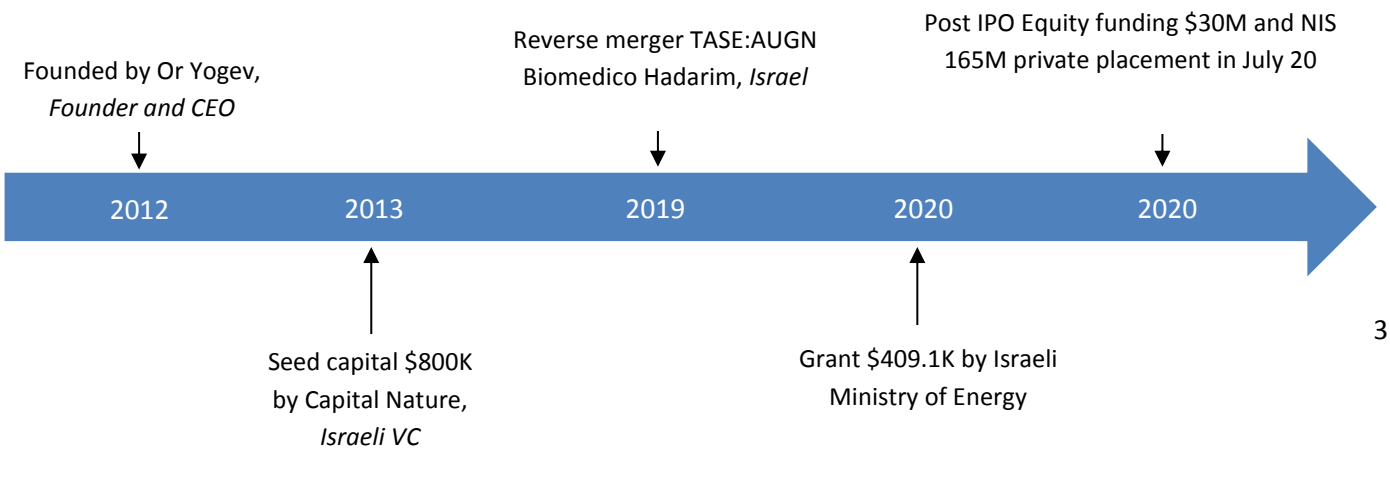
Today, almost every factory uses compressed air to power its machines, but compressed air systems are one of the most inefficient systems in the industry, and constitute 15% of overall factory energy consumption on the average (up to 20%; source: US Department of Energy).

Augwind’s two flagship technology solutions solve both the energy efficiency and energy storage problems above. Their commercially available solution, AirSmart, stores energy and powers machinery that operates on compressed air. It allows for up to 45% savings in electricity consumption (source: Augwind) while reducing operating costs. The company states that this compressed air can be specifically designed to meet different factory air consumption patterns, meaning it can first stabilize the production profile of the factory’s compressors array to a stable state, optimizing significantly their electricity consumption compared to a non-stable state. Secondly, by adding a large vessel of compressed air, energy can be stored in the form of compressed air while it is cheap, and used during peak demand times. The company has designed and installed its patented compressed-air storage units for large industrial plants all across Israel, including tier-1 factories from the dairy, food, and plastic industries such as : Strauss, Tnuva, Nesher Cement, Israel Aeronautics Industry (IAI), Shalam Packaging and more.

Their solution under development, the AirBattery (commercially available by mid 2021), stores electrical power generated by any source (Renewable and non-renewable) and dispatch iton-demand also by form of electrical power. . The AirBattery solution has obvious advantages over current energy storage solutions, such as batteries Since it has no degradation, unlimited cycles and it is 100% green technology utilizing air and water.

Strategy and Business Model

Augwind was founded by Dr. Or Yogev in 2012. In 2019, the company performed a reverse merger with the public company ‘Biomedico Hadarim’ on the Tel Aviv Stock Exchange. Biomedico Hadarim was later renamed Augwind Energy.



Compressed air is required for many applications in the industrial sector, and operating electrical costs for a single compressor are often exorbitant, running into thousands of dollars annually. Usually the demand for compressed air is not constant, but periodic, and compressed air is produced accordingly. Thus the load on the air compressors can vary, leading to wasted energy. This challenge of waste can be mitigated by using a large energy storage tank that can act as a buffer and stabilise the system thereby reducing energy waste. The compressed air energy storage solution developed by Augwind is at least 80% more cost-effective than the current alternative. This solution has resulted in 45% reductions in energy costs at industrial plants where it is currently installed, thereby recovering the cost of investment in just 2-3 years.

Due to these factors the company's AirSmart solution targets industries with two characteristics: 1) those that incur high electricity prices and 2) those with large players, such as plastics, foods, metals, etc. Today the company is targeting large industrial parks in the US, Germany, and Israel. In March, Augwind's AirSmart met the standard demands of the National Sanitation Foundation (NSF) and were officially approved by the NSF.

Upon commercial availability in 2021, the company's AirBattery solution will target renewable energy producers and plants, from small-scale, private producers to large-scale producers.

In terms of its business model, Augwind acts as a technology provider and will operate internationally via sales and execution contractors (EPC) that license the company's technology. For each installation, Augwind designs customized plans for the size and placement of its units to best meet the demands of its clients. Afterward, project management and installation is carried out by the EPCs.

The Company delivers its products both in a CAPEX package and in an OPEX savings distribution model. The OPEX model allows both the client and Augwind to share the savings generated via their technology. Additional revenue is produced through annual maintenance of the company's solution.

With significant support from the Chief Scientist of Israel and the European Union, Augwind has taken major steps to patent and develop their technologies. Augwind has 10 approved patents and 5 pending patents, all in the energy domain.

Products and Technology

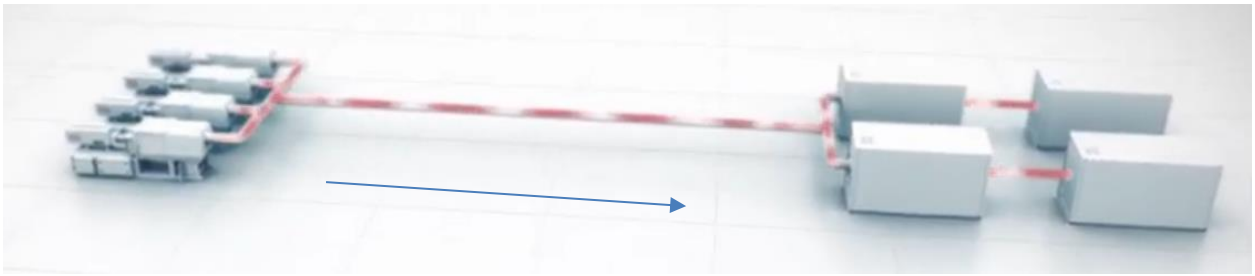
Industries require a large amount of compressed air to keep their machinery running. With a variety of applications from plastic manufacturing to chemical refinement, compressors supply machines with the air pressure they need to work. However, air consumption varies between machines and across tasks, thus limiting the efficiency of standardized compressed air systems. Augwind's patented compressed air storage units are installed underground. By mediating between the compressor and the machinery, Augwind's units can reduce compressors' power consumption costs by up to 45%.

Rather than providing the machinery with compressed air directly, the compressors supply Augwind's storage units. Augwind's system mediates between the compressors and the machines by intelligently and efficiently storing and supplying compressed air. With Augwind's units, the compressors only refill the storage tank when necessary, keeping the minimum number of compressors operating at any given moment. Augwind's units provide a smoother,

more controlled stream of air pressure to precisely meet each machine's demands. Augwind's specialized, flexible compressed air storage units are designed to harness the geo-mechanical power of the earth itself to contain the immense pressure that comes with storing large amounts of compressed air, at a fraction of the cost and with no visible footprint.

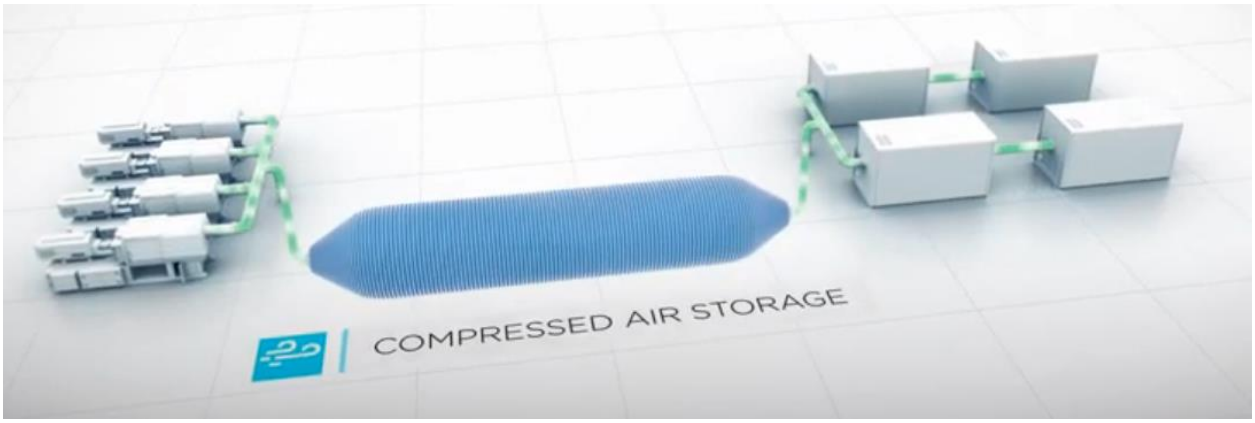
In the US and most of Europe, electricity costs are higher during peak consumption times. Factories often face large fines for operating during peak hours. With Augwind's system, storage units can be filled or charged with compressed air during off-peak hours, or at low air consumption times. The stored compressed air can then be utilized when costs are high, eliminating the need for operating the compressors during peak hours.

How compressed air is utilized today:



Air compressors directly supply machines on demand using minimum storage units in between, mainly in order to protect the compressors from frequent shutdown . This is a highly inefficient and costly methodology.

How compressed air is utilized with Augwind's system:



The Company leverages its unique AirX technology that stores large amount of compressed air at up to 40 atmospheres of pressure. This technological platform has several applications. **Their commercially available solution, AirSmart, stores energy for small time periods and powers pneumatic equipment that operates using compressed air. The airSmart can be attribute as a buffered system that enable the compressors to operates much more efficiently. Alternatively , the AirBattery solution provide means to store electrical power by converting it to compressed air, store it for long time periods inside AirX tanks and then converting it back to electrical power when required.**

1) **AirSmart**: a commercially available energy efficiency solution for air compressors, combining underground energy storage along with a unique monitoring system, supported by a dedicated simulator.

Augwind's patented AirSmart solution allows for the storage of a vast quantity of compressed air, specifically designed to meet factory air consumption patterns. This reduces the inherent inefficiencies of compressed air systems and improves both economic and ecological outcomes.

Augwind's solution has saved up to 45% of power consumption to the air delivery system for current clients. In addition Augwind's solution managed to save air consumption by enabling more efficient use to compressed air by the air consumers

Augwind's units have managed to save millions of dollars of wasted energy by improving the efficiency of compressed air systems in addition to providing significant operational benefits, including pressure stabilization, improved air quality, and emergency backup compressed air storage.

The benefits of the AirSmart solution include:

- **Energy Savings:** electricity consumption is reduced by allowing compressors to work more efficiently
- **Cleaner Compressed Air:** equipment is supplied with cleaner and dryer more stable and more precise air supply
- **Compressor Longevity:** compressors work more efficiently, thereby extending their lifespan
- **Production Continuity:** in case of a power outage Augwind's compressors can supply machinery with energy until compressors are brought back online
- **Peak Shaving:** Augwind's AirShaver system which consist of high pressure large volumes AirX tanks are filled with high pressure air off peak times. During high peak times air is released from the AirShaver system hence curtailing peak power consumption. This peak shave operation save electrical cost due to high peak power consumption times.
- **Quick Implementation**: installation takes several weeks at the most, depending to the size of the system
- **No footprint:** the system is installed underground and does not take up expensive real-estate
- **Environmentally friendly**: the carbon footprint is reduced
- **NSF compliant:** the technology is National Sanitation Foundation (NSF) compliant

Major AirSmart customers include:

2) **AirBattery**: In recent years, there has been a significant increase in the volume of energy production from wind, solar, and water sources to replace pollutant sources such as coal, petroleum, and gas. The problem is that renewable energy sources are characteristically unstable, and do not provide a continuous power supply throughout the day and across the seasons. You cannot use the midday sun to turn on the lights at night-time. The solution is energy storage. It is expected that in the next few years, regulators will require energy storage solutions for renewable energy sources. This market is projected to increase exponentially. Augwind's AirBattery solution is completely green and targets a high cost benefit of over 80% energy round trip efficiency.

AirBattery is a modular energy storage solution in advanced development stages intended for medium-sized solar and wind energy installations. Augwind has developed innovative underground compressed air storage units that store large amounts of compressed air at high pressure. The most significant challenge renewable power generation deployment is dispatching it using energy storage . Today, a significant amount of electricity is either curtailed or not utilized, solely because it is easier to utilize it directly during peak hours than to store it for later use.

This solution is intended for the energy storage market, and in particular, for the electrical utility sector. The development of this system is based on Augwind's existing compressed air storage system, combined with a unique technology for converting the energy stored in compressed air back into electricity at high efficiency.

Augwind's energy storage system is designed for medium-sized and large scales, and will effectively compete existing energy storage systems in the market, given its low costs, high efficiency, unlimited cycles and zero degradation. When completed successfully, the system will serve as an alternative to batteries and other means of energy storage that are currently on the market but suffers drastically from may drawbacks. When completed, this solution will provide optimal storage volume for solar farms, wind farms and power grid, at much lower prices, with little need for maintenance and minimal environmental impacts.

Integrating renewable energy sources with efficient storage systems will increase their reliability and reduce dependence on fossil pollutant power plants. s

The benefits of the AirBattery solution include:

- **High conversion rate:** over 80% energy efficiency
- **Cost effective:** the solution aims to be highly cost competitive
- **Endless charging cycles:** the system has more than 40-year lifespan, during which it can be charged repeatedly with no limits
- **High capacity:** the system contains high pressure by utilizing the earth's geo-mechanical forces
- **No footprint:** the system is installed underground and does not take up expensive real-estate
- **Environmentally friendly:** the carbon footprint is reduced
- **Expandable and modular:** the technology can be scaled for increased capacity
- **Green and cutting-edge:** the first 100% green energy storage solution (uses only water and compressed air)

AirBattery Pilot

In order to prove the feasibility of the AirBattery, Augwind set up a pilot in Kibbutz Yahel, along with the PV and wind energy infrastructure company Doral. Augwind received a grant of 1.5M NIS from the Israeli Ministry of Energy, based on an estimated total cost of 3M NIS. The pilot is expected to be completed in the coming months and will demonstrate the ability of the AirBattery to store 1000 kilowatt hours at 250KW power rating. Upon this successful PoC, the AirBattery will be commercially available in 2021.

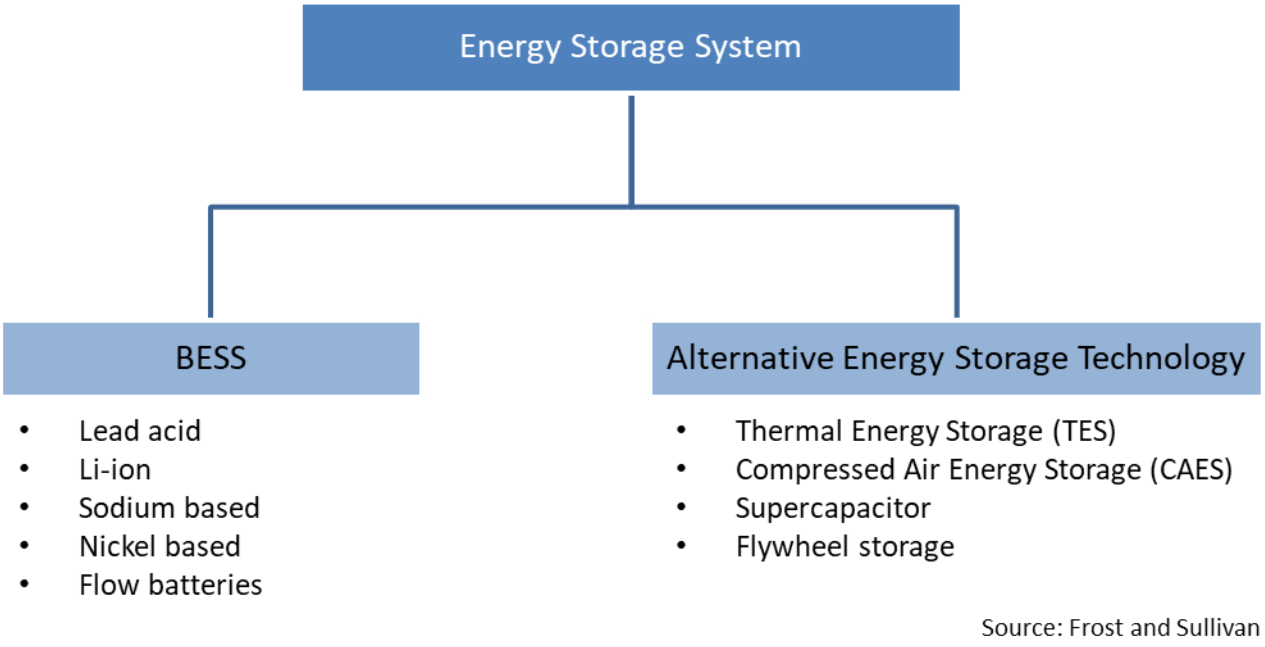
Energy Storage market overview

Energy storage is gaining importance, with increasing demand for both residential and industrial applications. Energy storage is a viable solution to utilize renewable energy and an attractive option for implementing clean energy sources. Key countries including the United States, the United Kingdom, China, Germany, Japan, South Korea, India, and the UAE have set a target to achieve significant power generation through clean energy sources. The overall global energy storage was at 4.2GW in 2019.

Steady growth is expected in 2020 as well, with an estimated capacity of above 6GW. South Korea was the global leader in energy storage solutions in 2018. However, in 2019, the United States surpassed South Korea and became the global market leader. Growth in 2020 will be largely determined by the demand in the United States, China, and South Korea, followed by other key countries such as Australia, the United Kingdom, Germany, India, and UAE. Among end-user categories, residential-scale storage is witnessing significant growth, exceeding commercial and utility, though utility-scale storage is also gaining momentum alongside commercial/industrial applications. The Global market of energy storage is expected to increase from 19,215.3mWHr in 2019 to 25,536.3mWHr in 2020 and is expected to grow at 32.9%.

The Global market for energy storage can be segmented as below:

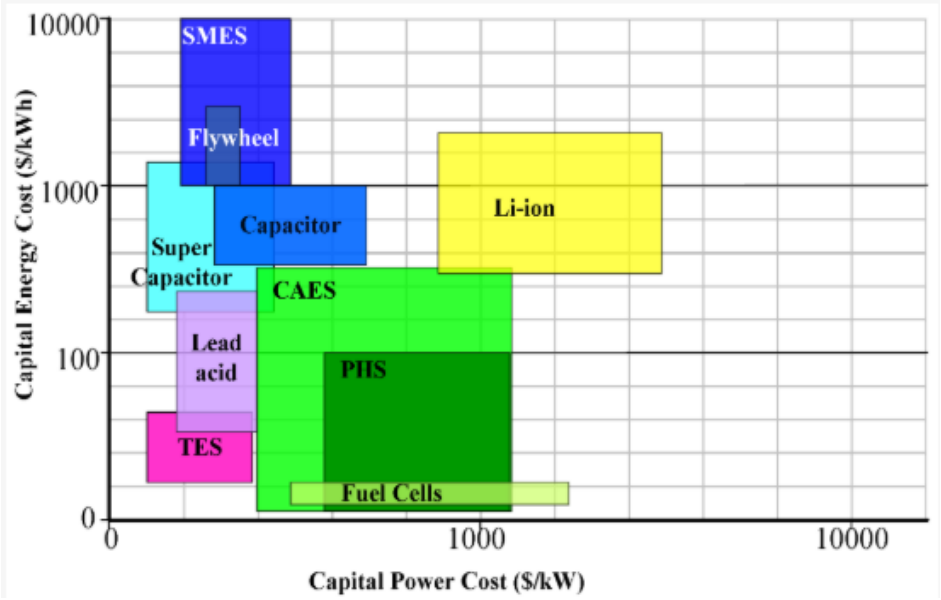
Global Energy Storage System breakdown 2020



Source: Frost and Sullivan

One of the more recent and imminent challenges facing our environment has been replacing fossil fuels with renewable energy sources without major changes to economic growth. Two of the most important steps taken in this direction have been: (1) improving energy efficiency / reducing energy consumption and (2) developing sustainable and renewable sources of energy. Based on the nature of storage medium used, energy storage can be further classified into primary fuel (Coal, Oil storage), intermediate fuel (gas, hydrogen etc.), electrical energy storage, and others.

Capital energy cost vs. capital power cost



PHS (Pumped Hydropower Storage) is a common, established technology for energy storage. It has proven to have many benefits such as high efficiency, low operational cost, continuous technology development, large power rating, and a long service life. But PHS also has certain drawbacks on account of choice of location, lengthy construction timing, extremely high maintenance costs, and negative ecological impact, which may hamper further adoption.

Pumped Hydro has the maximum power rating among the various energy storage systems and is non-polluting, but has inherent disadvantages of high initial capital costs and environmental impact. Compared with PHS, CAES has relatively low impact on the environment, and the cost of building a CAES plant is similar to the cost of PHS. In recent years, as the growth and development in PHS has decelerated on account of environment factors, CAES has emerged as the technology with the highest potential that can serve as a possible replacement to PHS.

Characteristics of selected energy storage systems

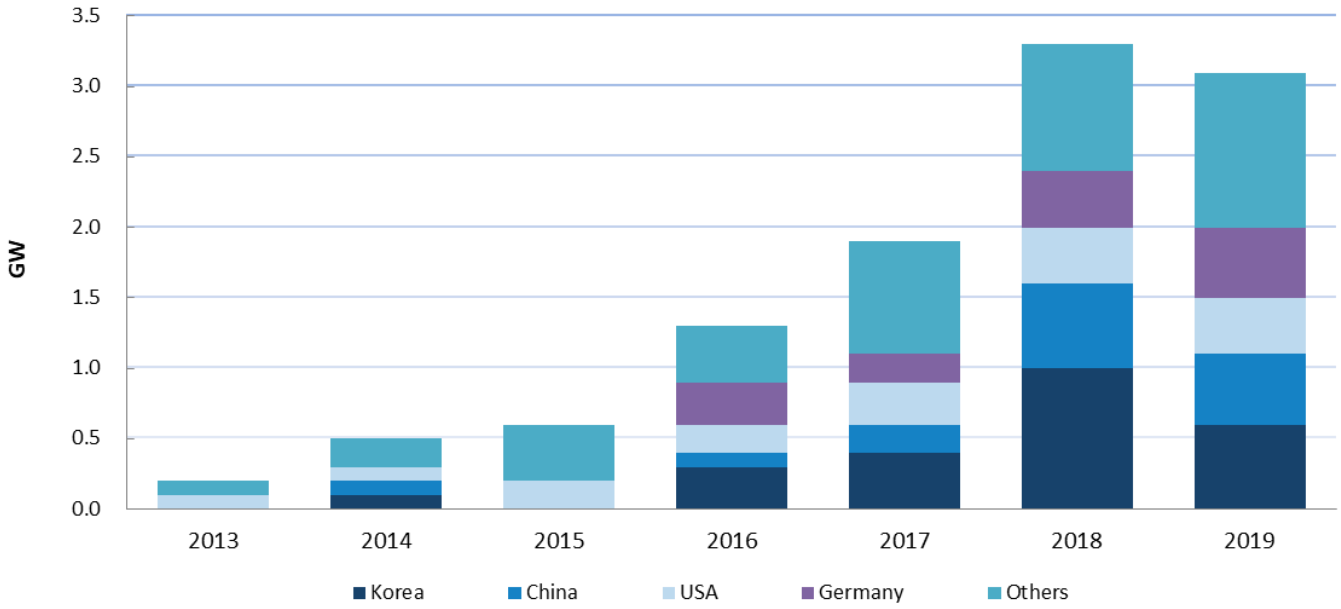
	Max. Power rating (MW)	Discharge time	Max cycles or lifetime	Energy density (Watt-hour per litre)	Efficiency
Compressed Air	1,000	2h – 30h	20 – 40 years	2 – 6	40 – 70%
Pumped Hydro	3,000	4h – 16h	30 – 60 years	0.2 – 2	70 – 85%
Molten Salt (Thermal)	150	Hours	30 years	70 – 210	80 – 90%
Li-Ion battery	100	1min – 8h	1000 – 10,000	200 – 400	85 – 95%
Lead acid battery	100	1min – 8h	6 – 40 years	50 – 80	80 – 90%
Flow battery	100	hours	12,000 – 14,000	20 – 70	60 – 85%
Hydrogen	100	mins – week	5 – 30 years	600 (at 200 bar)	25 – 45%
Flywheel	20	secs – mins	20,000 – 100,000	20 – 80	70 – 95%

Source: The World Energy Council

Among the different available energy storage technologies, Li-ion batteries have high energy density and are lightweight. Thus, they comprise a significantly large percentage of the global grid battery storage market. Li-ion batteries have been increasingly used in applications such as laptops, smart phones, tablets etc. in the past decade. For rural electrification, since they are low maintenance, Li-ion batteries are combined with solar panels for households, buildings and businesses to use limited amounts of electricity.

Compressed Air Energy Storage is the technology being used by AugWind in AirSmart and AirBattery. **Compressed Air Energy Systems offer several advantages over conventional systems** used by power utilities for meeting peak load requirements. Replacement of current gas turbines by CAES plants could result in annual savings of several thousand barrels of oil. Compressed Air Energy Storage may have the highest delta between minimum and maximum efficiency levels but **offers one of the highest discharge times with no degradation**. Its maximum power rating is 1,000MW which is next only to PHS.

Annual Energy Storage deployment by country, 2013-2019



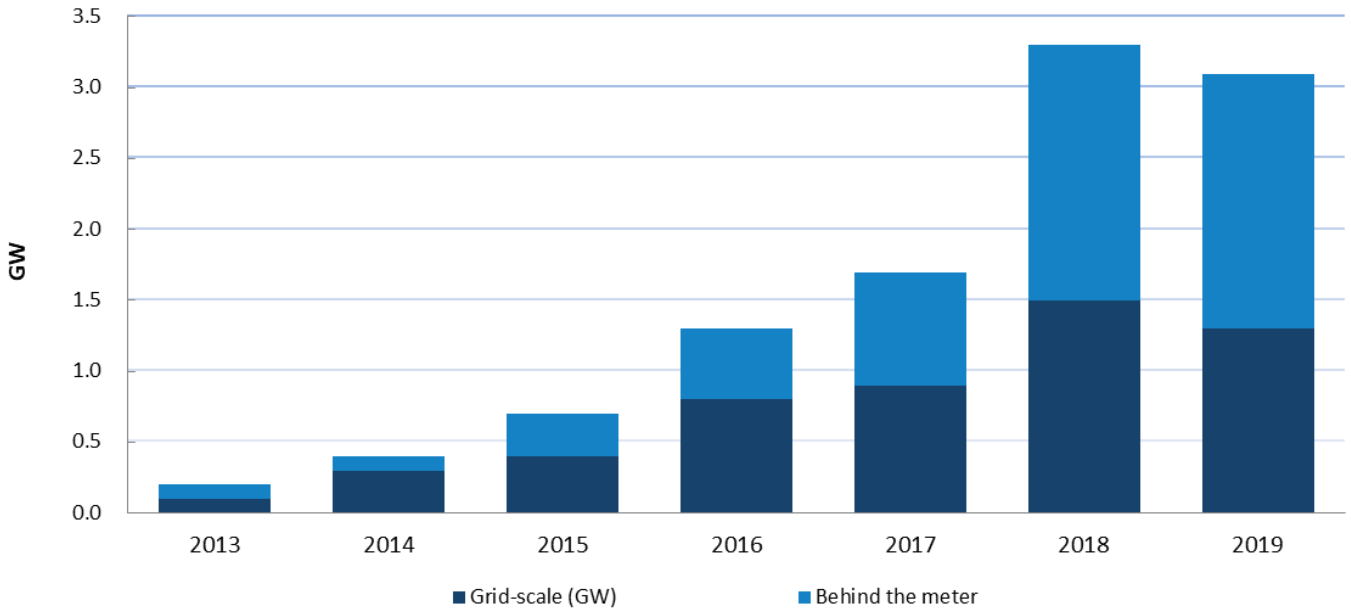
Source: International Energy Agency (IEA)

From 2013 through 2018, the market for energy storage grew steadily. It witnessed a slight dip in 2019. This dip can be attributed to an 80% fall in Korea compared to 2018, when Korea accounted for one-third of all capacity installed worldwide. In the coming years, other countries are expected to increase their energy storage deployment depending on policy intervention.

The main markets outside China and Korea are the USA, Germany, France, Italy, the United Kingdom, Japan, and India.

Energy Storage is also expected to return to double-digit growth numbers to stay on track with the Sustainable Development Scenario (SDS) pathway. SDS outlines a major transformation of the global energy system, showing how the world can change course to deliver on the three main energy-related Sustainability Development Goals (SDGs) simultaneously.

Annual Energy Storage deployment, 2013-2019



Source: International Energy Agency (IEA)

AugWind deploys large scale or grid-scale CAES to store energy generated at one time for use at another time using compressed air. For utility scale, compressed air energy generated during periods of low energy demand (off-peak) and lower tariff can be released to meet higher-demand (peak load) and higher tariff periods.

The annual installations of energy storage technologies fell year-on-year in 2019. Grid-scale storage installations dropped 20%, while behind-the-meter storage remained flat overall despite a near-doubling of residential batteries, consolidating a shift towards behind-the-meter storage. The storage capacity installation rate in Europe slowed by 40% year-on-year. Behind-the-meter storage outshone sluggish deployment of grid-scale applications, led by Germany where over 50,000 systems were deployed through 2019 without any subsidy.

A key driver of growth in energy storage has been the co-location of renewable energy production facilities with energy storage assets, which stabilises production and ensures firmer capacity during peak demand periods.

Market Drivers

- **Costs and multiple applications/capabilities**: High costs of electricity, decreasing costs of storage systems and multiple possible uses of cases and applications
- **Regulatory frameworks and incentives:** key to stimulating and enabling storage to manifest, especially when looking to unlock potential in multiple markets
- **The residential sector:** expected to account for the largest share in the energy storage market by application with majority of the demand coming from Germany, Australia, and the United States

Residential energy storage system (RESS) business models are still at the early development stages in most markets. However, residential customers are expected to become actively involved in modifying their energy spending patterns by monitoring their actual consumption in real time.

Asia-Pacific is a growing market across the globe driven by the increasing demand for energy storage systems from the countries such as China, South Korea, and India.

Market Challenges

- **Perception of performance and safety**: Grid operators have to be confident that energy storage systems will perform as intended within the larger network. Advanced modelling and simulation tools can facilitate acceptance — particularly if they are compatible with utility software. In addition, many of the storage solutions use flammable and toxic chemicals, causing severe safety risks and NIMBY concerns.
- **Cost-Effectiveness**: Actual energy storage technology contributes around 30%- 40% to the total system cost; the remainder is attributed to auxiliary technologies, engineering, integration, and other services.
- **Regulatory and market guidelines:** It is critical to remove the rules that are distorting the market and/or crippling investment. Energy storage systems provide different functions to their owners and the grid at large, often leading to uncertainty as to the applicable regulations for a given project. Regulatory uncertainty poses an investment risk and dissuades adoption.
- **Co-operation from multiple stakeholders**: Energy storage investments require broad cooperation among electric utilities, facility and technology owners, investors, project developers, and insurers. Each stakeholder offers a different perspective with distinct concerns.

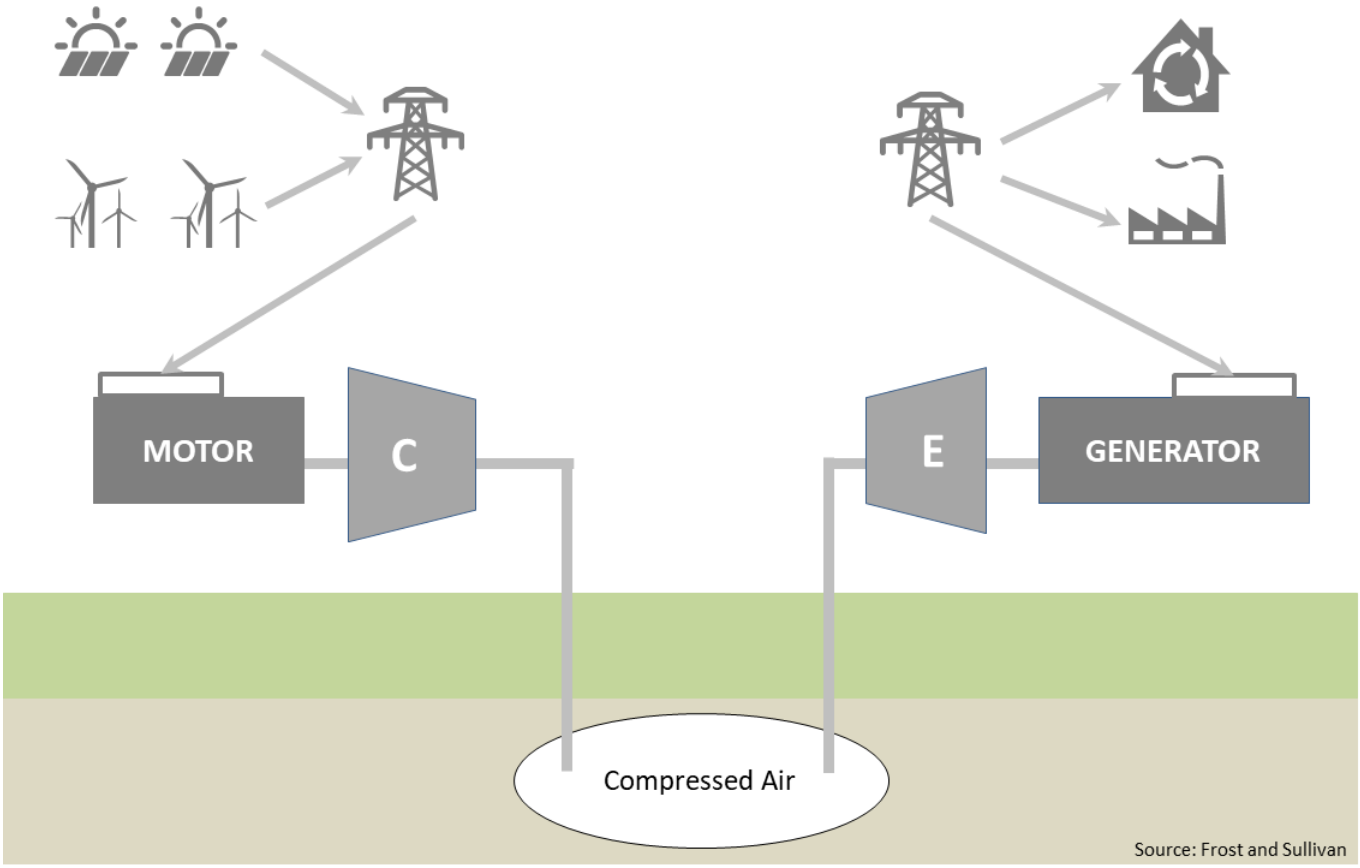
Compressed Air Energy Storage (CAES) technology

Traditional Compressed air energy storage (CAES) is based around the gas turbine cycle. Surplus power is used to compress air using a rotary or axial compressor and then store it, often in an underground caverns. When the power is required, compessed air is released from the caverns and passed through an air turbine that generates electricity from the flow of high pressure air.

The aim of CAES technology is to store sustainably-produced energy while minimizing fossil fuel emissions. During the compression stage of a traditional CAES system, a large amount of heat is generated and then discharged through radiators or coolers directly to the atmosphere. During the expansion stage, a large amount of heat is required to boost the power, which is sourced from fossil fuel combustion (or other heat sources) to increase the air temperature inside the expanders to improve the power capability. Therefore, to improve the efficiency of the whole cycle, the use of compression heat should avoid fossil fuel such as coal, petroleum or natural gas.

For a CAES plant, there are two different stages of operation, namely compression (C) and expansion (E). Since the two stages do not run simultaneously, there is higher system efficiency (48–54%) than in traditional gas turbine systems.

Compressed Air Energy Storage Process



The application prospects and the potential of CAES in supporting power system operation have become widely recognized. It is forecasted that CAES will play an increasingly crucial role in energy management of the time of separation between generation of power and its usage. The potential applications of CAES are generally considered twofold: (1) Suppliers and (2) Consumers (behind the meter).

For the supply side, the T&D (transmission and distribution) network operators can use CAES for bulk energy rescheduling for maintaining the load balance.

For the consumer side, the users can use CAES to regulate the electricity usage taken from the suppliers based on the energy price to minimize their energy bill.

Some of the potential applications of CAES can be listed as under:

1. **Assimilation of Renewable power generation plants:** CAES can help support the seamless assimilation of renewable power generation plants into the existing power network to ensure the objective of a stable power grid. The problems of inherent intermittence and instability of renewable power generation can be solved by a stable power grid. From the idea of a micro-grid, CAES can quickly curb the power fluctuations in micro-grid and improve the quality of power supply, which is imperative for the reliable operation of micro-grids.
2. **Peak shaving and demand side management:** Peak shaving refers to the process of storing energy during off-peak periods and compensating electrical power generation shortfalls during the periods

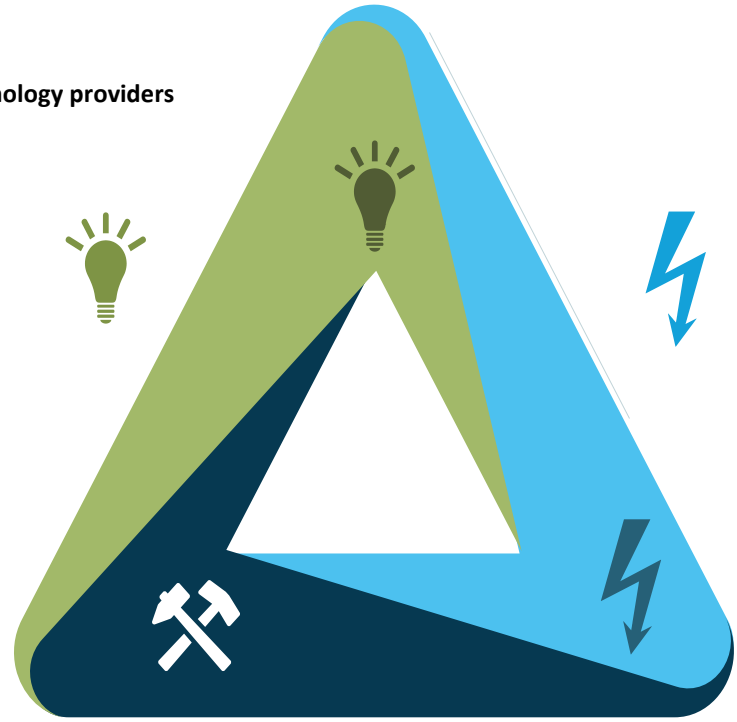
of high demand. Due to the difference in price tariff associated with peak and off-peak periods, users can use CAES to manage the demand side energy by storing energy at the time of low tariff prices and utilising the stored electrical energy during the period of higher tariff. In this way, the consumers can reduce their electricity costs.

3. **Application to smart grids:** Smart-grids, that hold the direction and future trend of the electric power industry, aim to achieve energy management in both directions, that is, from both supply and consumption with the support of internet and big data technology.
4. **Applications to Compressed Air Engines:** The compressed air energy can be converted into other forms of mechanical energy through compressed air engines that are mainly used in air-powered vehicles.
5. **Applications in other fields:** During the failure of power systems, CAES systems can be used as an alternative back-up power source or uninterrupted power supply (UPS), which can supply power to important end users, such as banks, data processing centres, hospitals and other important sectors.

Trends in Compressed Air Energy Storage (CAES)

- **CAES Technology will be driven by advancements** such as underwater CAES that may take 3-4 years to complete. Air balloons are filled with pressurized air and located on the ocean floor. When electricity is revoked, the system operates reversely, and the water weight pushes air back to land to convert back to energy. This technique can be used for peak demand shifting.
- **Companies will embrace technologies** such as energy storage virtual power plants (VPP) to not only reduce the demand charges during peak demand periods but also offer a revenue generation opportunity by participating in utilities' DR and other load balancing programs. This will provide a strong business opportunity for ESS. Pilot project with VPP are being run in US, Japan, Canada and Australia.
- **Integration of innovative business models and multiple revenue streams** such as revenue stacking must be adopted by providers to tap the full potential while enhancing the attractiveness of Energy storage solutions. ESS companies, project developers, and ESS aggregators have to forge partnerships with stakeholders across the energy value chain for proper functioning of business models.
- **Advanced CAES technologies have made significant inroads into the United States**, with the project in Utah which Mitsubishi Hitachi Power Systems (MHPS) is developing with its partners to store 1000MW of renewable energy. The project is likely to be operational by 2025.

Compressed Air Energy Storage stakeholders



Energy Storage Technology providers

Augwind
Hydrostor
Dresser-Rand
Sustain X
ALACAES

Project developers

Iberdola USA
Apex Compressed Air Energy Storage
Hydrostor
ALACAES
ATK Launch Systems
Storelectric Ltd

Utilities

E.ON
Southern California Edison
WEB Aruba N.V.
New York State Electric & Gas

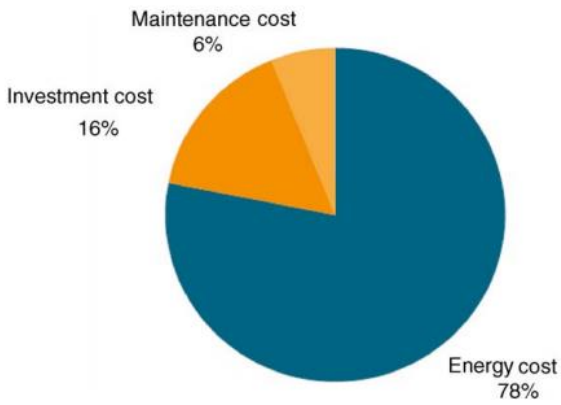
AirSmart (Energy Efficiency)

Market Overview

Compressed energy storage (CAES) is a solution to store the compressed air energy that is generated during peak requirement so as to be used during off-peak requirements. CAES is important in the current context of renewable energy sources such as Wind and Solar that are intermittent, but at the same time gaining importance. The application of CAES is to ensure uninterrupted supply of compressed air during peak as well as non-peak hours. CAES as a technology can play a vital role in enhancing the flexibility of the grid and eliminating the need of backup power plants.

Use of compressed air in industry and in service sectors is common as its production and handling are safe and easy. In most industrial facilities, compressed air is necessary to manufacturing. Compressed-air generation is energy intensive, and for most industrial operations, energy cost fraction of compressed air is significant compared with overall energy costs. Yet, there is a vacuum of reliable information on the energy efficiency of a typical compressed-air system.

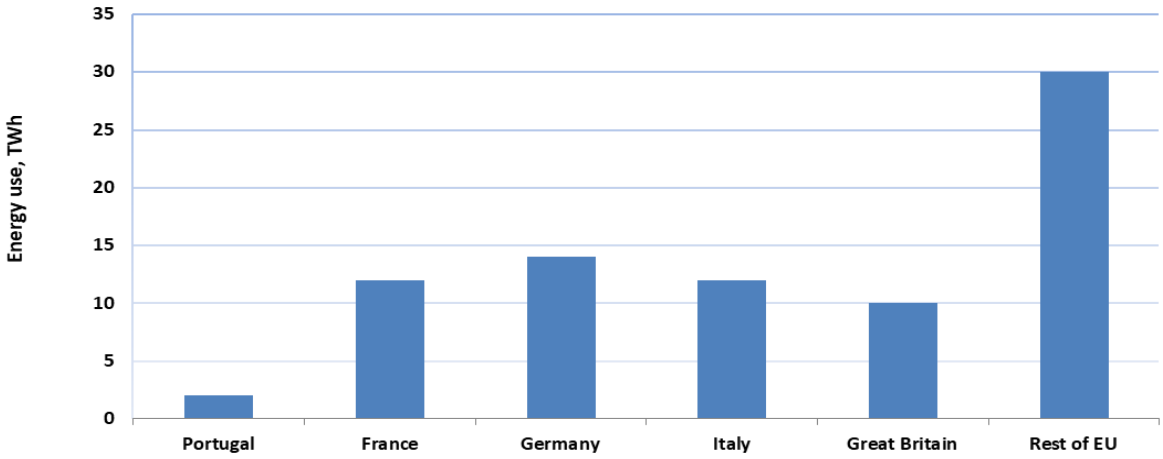
Life Cycle Cost of Compressed-air Energy use



According to the total life cycle costs (LCC), initial investment and maintenance represents only a small portion of the overall cost of compressed air equipment and the power required to operate the compressor is usually 75% or more, of the annual cost of compressed air. Over a compressed-air system's lifetime, operating energy is its single greatest cost, in many cases exceeding five times the initial equipment cost.

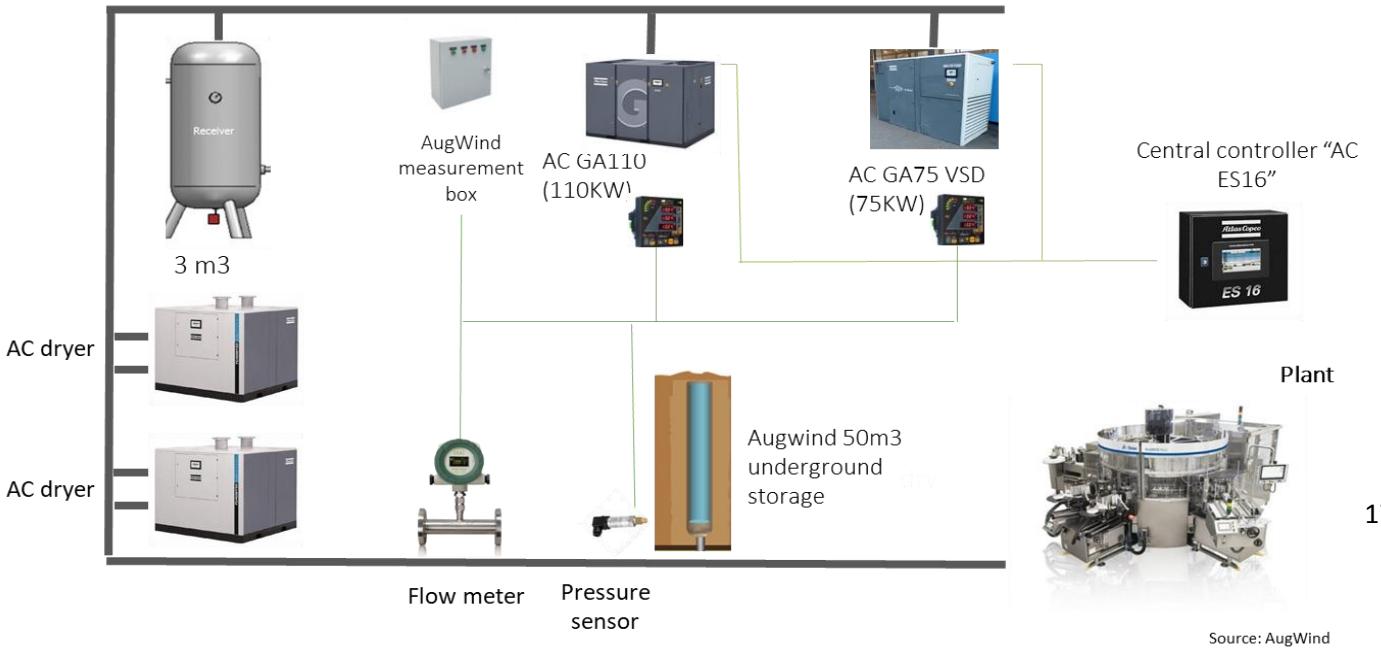
Compressed air accounts for as much as 10% of industrial electricity consumption in the European Union. Figure below shows compressed-air energy use in 15 EU countries.

Compressed Air Energy use in 15 EU countries



Source: World Energy Council

AirSmart (Energy Efficiency) Architecture



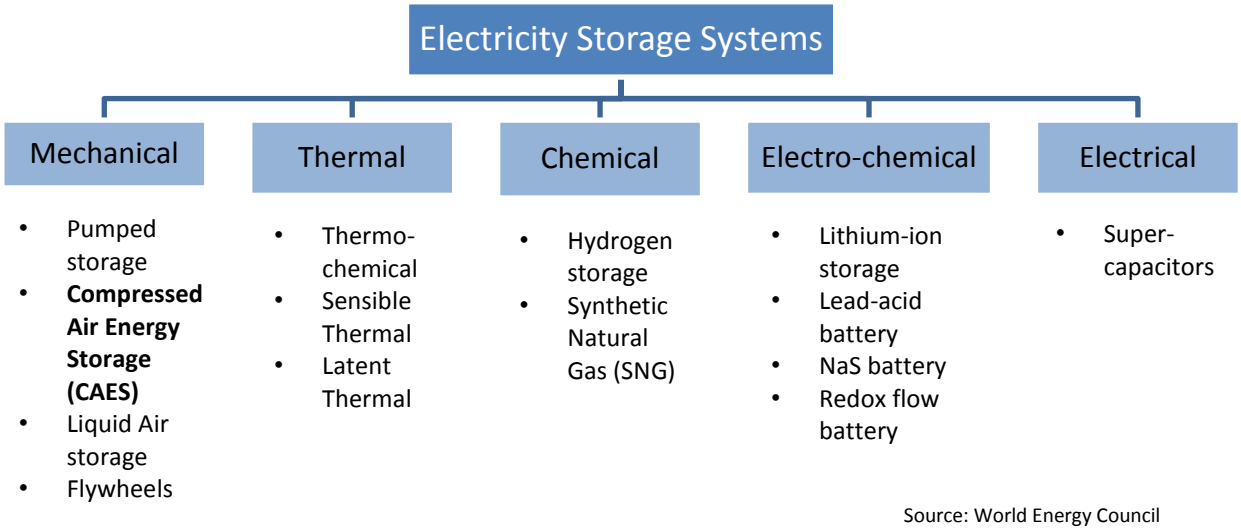
Source: AugWind

AirBattery (Energy Storage and Efficiency)

Market Overview

Renewable sources of energy such as wind and solar energy are now used as sustainable options. Despite being clean sources of power, they are susceptible to supply volatility. Especially, when there is no wind blowing or during the night in case of solar power. As the world looks to achieve sustainability goals, it is important to harness the investment in renewable sources of energy. Thus the importance of storing the energy that is generated when the wind is blowing and the sun is shining. The energy that has been stored can be used on demand to ensure uninterrupted supply during soaring demand or unavailability.

Types of Electricity Storage Systems

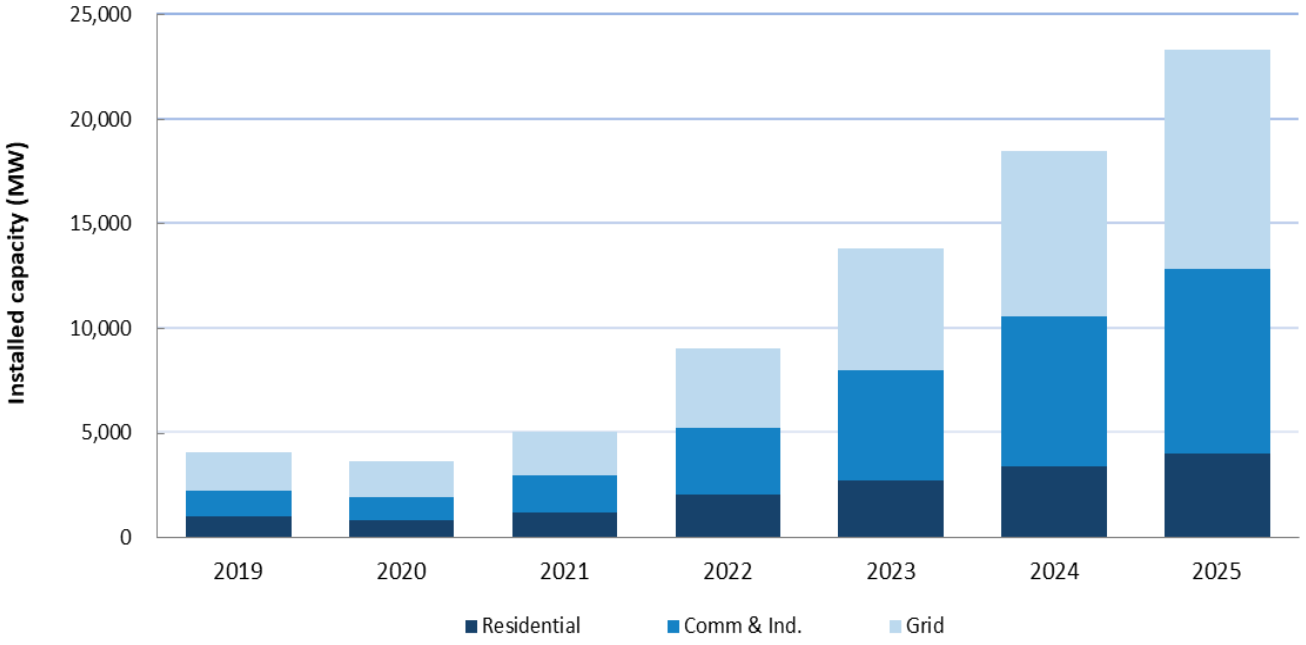


Source: World Energy Council

As global energy demand progresses towards a sustainable future, energy storage will continue to occupy a prominent place. Battery electric storage systems are currently the epitome for this changeover by acting as reserve capacity, providing frequency response and other services. Enhancing small grids, bolstering domestic solar systems and replenishing electric vehicles can also be supported by battery electric storage systems.

Today's electricity grid -- the interconnected network that delivers electricity from suppliers to consumers -- has virtually no storage. The storage facilities that do exist use pumped hydropower, a system that pumps water uphill to a reservoir when excess electricity is available and then lets the water flow downhill through turbines to generate electricity when it is needed. While pumped hydropower storage works well, it can only be located in very limited areas of the country.

Battery Energy Storage Market: Installed capacity forecast, Global, 2019-2025



Note: All figures are rounded. The base year is 2019. Source: Frost and Sullivan

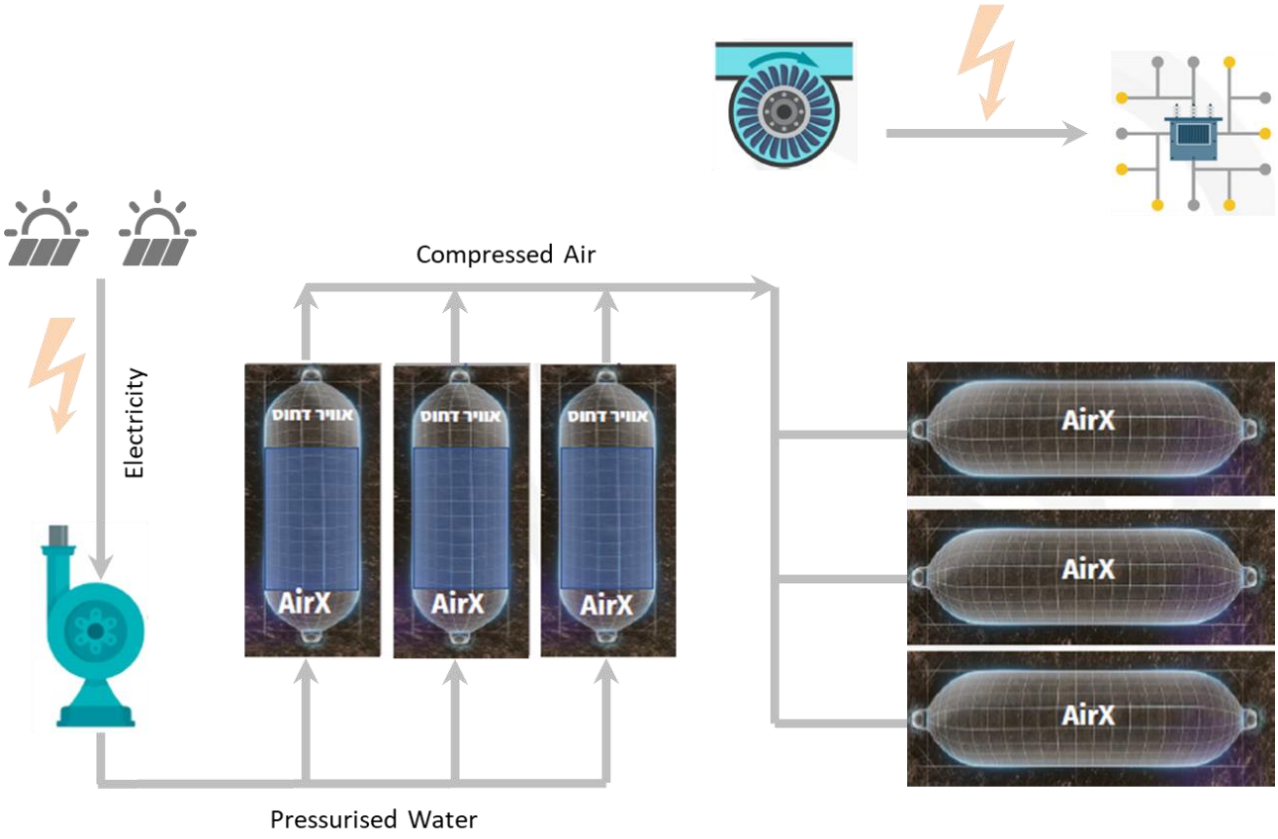
Source: World Energy Council

Li-ion Battery electricity storage is a key technology in the world's transition to a sustainable energy system. Li-ion Battery systems can support a wide range of services needed for the transition, from providing frequency response, reserve capacity, black-start capability and other grid services, to storing power in electric vehicles, upgrading mini-grids and supporting "self-consumption" of rooftop solar power.

In the longer-term, batteries could support very high levels of variable renewable electricity, specifically by storing surplus energy and releasing it later, when the sun is not shining or the wind not blowing strongly enough.

While pumped-hydro systems still dominate electricity storage (with 96% of installed storage capacity in mid-2017), Li-ion battery systems for stationary applications have started growing rapidly. Wider deployment and the commercialisation of new battery storage technologies has led to rapid cost reductions, notably for lithium-ion batteries, but also for high-temperature sodium-sulphur ("NaS") and flow batteries.

AirBattery (Energy Storage) Architecture



The Future of Battery Energy Storage

Battery Energy Storage Future Outlook

North America: Highest Growth region

By 2022, NA is expected to takeover APAC and stay ahead tilll 2025, though both register strong growth. NA market is forecast to increase at a CAGR of approximately 37% while APAC will increase 30%.

System cost reduction

Capital costs and long payback periods are concerns in residential and commercial sectors. By 2025, the average system cost will decline by 30%.

Reducing Electricity cost and Reliability

Electricity storage will provide a way to mitigate the impact of high electricity costs. Being able to minimise any supply disruptions will be an important driver in USA and Asia.

Stimulus for storage

No plans at the moment but storage participants are hopeful of support. In NA, objective is to ensure renewable projects with storage qualify for tax credits while in

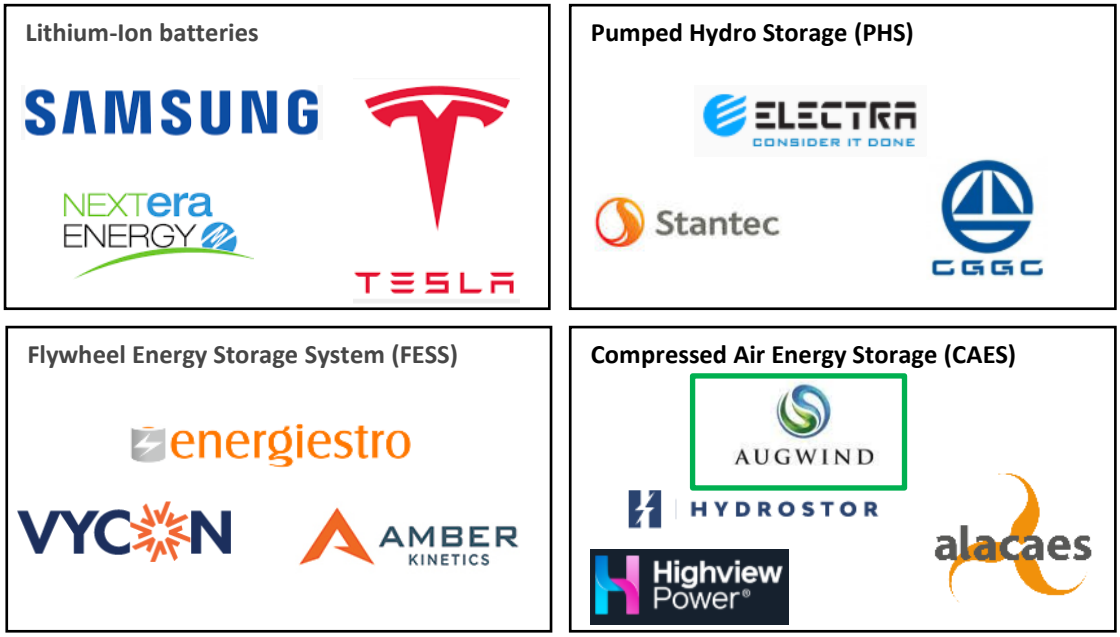
Source: Frost and Sullivan

Advantages of Stored Energy System

Energy storage technologies have several benefits:

- **Security**: A more efficient grid that is more resistant to disruptions.
- **Environment**: Decreased carbon dioxide emissions from a greater use of clean electricity.
- **Economy**: Increase in the economic value of wind and solar power and strengthened U.S. competitiveness in the clean energy race.
- **Jobs**: New income sources for rural landowners and tax revenues for wind and solar development areas. More jobs in supporting sectors such as manufacturing, engineering, construction, transportation and finance

Augwind Competitive landscape



There are different types of energy storage technologies prevalent in the market today. PHS, CAES and FESS are all mechanical storage technologies whereas Lithium-Ion is a chemical. Compressed air energy storage is a technique for storing energy by using compressed air. Energy is generally stored for utilizing it later to meet the high demand during peak hours. Compressed air energy storage has been the most prevalent form of energy storage after pumped-hydro storage technology. Compressed air energy storage is preferred because of its higher efficiency, greater reliability, and economic feasibility when compared to other energy storage technologies.

In CAES technology, other competitors do not offer cost-effective and efficient solutions. Hydrostor offers adiabatic CAES, but needs to tackle the main issue of processing the extra heat generated during compression and recuperating it back at the time of decompression. Similarly, the AA-CAES technology used by ALACAES utilises caverns in mountains as pressure chambers that may have impact on environment and cost. Augwind offers a breakthrough technology in CAES that uses a compressed air polymer container cheaper than the existing above ground steel container and there is a marked reduction of 35-42% in power consumption of active power in the compression process using Augwind water compressors compare to compression using air compressors.

Augwind's AirSmart provides a fast and efficient solution to save money and environment, reduce electricity usage, save space due to underground installation, reduce carbon footprint and cut electricity costs by at least 25% without compromising on output. The polymer-based tanks, used for AirSmart, are elastic, cost-effective, food grade certified, adequately safe and ensure long life. The **only alternative or competitor to AirSmart** technology is the high-pressure steel tank manufacturers (stainless for food grade industry) such as Intranox of Spain, Emiliana Serbatoi of Italy, Southern Tank of USA, Tamada of Japan, Modern Welding Company of USA, Highland Tank of USA, CGH Group of Poland and so on.

The competitors of AirBattery that offer CAES based solutions

- **Hydrostor**, based in Canada, is a private company founded in 2010. It is one of the leading developers of utility-scale energy storage facility that uses its proprietary Advanced Compressed Air Energy Storage (A-CAES) technology and underground storage chambers. It develops and commercializes underground cavern based compressed air energy storage technology that converts surplus electrical energy to underwater compressed air and stores it for use at peak times.
- **Alacaes**, based in Switzerland, is a developer of Advanced Adiabatic Compressed Air Energy Storage (AA-CAES) for large-scale electricity storage. Its technology uses caverns in mountains as a pressure chamber and a proprietary thermal energy storage technology to achieve an overall storage efficiency of more than 72%. The technology is eco-sensitive and eliminates greenhouse gas emissions.
- **Highview Power**, based in UK, is a developer of CRYOBattery™ technology which is a long-duration energy storage solution. The technology utilises air, which is cleaned, cooled and stored as a liquid, and then converted into the gaseous state to drive a turbine that produces electricity. Highview Power has joined hands with Carlton Power to install a commercial-scale liquid air energy storage plant.

Other technologies -

- **Airthium**, based in France, was co-founded in May 2016 by Andreï Klochko and Dimitri Botvitch. Airthium stores solar and wind energy on site and above-ground for a 24/7 uninterrupted service using MW-scale thermodynamic energy storage modules. The company uses electricity to power a heat pump and store the heat at 500°C (932°F) in low cost materials. The heat pump then becomes a heat engine to convert the heat back into electricity when it is needed.
- **LightSail Energy**, based in USA, is a CAES technology start-up that works on energy storage devices based on compressed-air energy storage infused with water vapour in order to retain calorimetric energy and increase energy efficiency up to marketable levels.

- **NRStor**, based in Canada, designs projects with a technology agnostic approach leveraging the best technology possible for utility-scale applications, including flywheels, compressed air energy storage, and batteries.
- **General Compression**, based in USA, offers dispatchable wind power systems which collects and stores wind energy in the form of compressed air and generates electricity. The key to expanding clean power is stabilizing power output from wind and other variable sources, the company has developed the General Compression Advanced Energy Storage (GCAESTM) system to store large quantities of energy from wind farms and make it available on demand.
- **SustainX Inc.** based in USA, offers grid-scale energy storage solutions. The Company develops isothermal, multi-megawatt, and grid-connected energy storage systems. The company develops energy storage technologies for renewable, commercial, and industrial energy management; and transmission asset utilization and optimization. It offers an energy storage system that utilizes an energy conversion system to store electrical energy in the form of compressed air.
- **General Compression** and **SustainX** have since merged to become **GCX Energy Storage**.
- **Cheesecake Energy**, based in UK, is developing advanced thermal and compressed air energy systems to store energy from intermittent renewables, turning them into reliable power on-demand.
- **Gaelectric Energy Storage**, based in UK, was established in 2006 by Gaelectric Group to progress grid-level energy storage technologies, including compressed air energy storage (CAES) technology with a 330 MW project near the town of Larne in Northern Ireland. The Group has established positions in onshore wind generation in Ireland and the United States. The company went into liquidation in 2018.

Augwind's Israeli Ecosystem

As noted above, Augwind's market is divided into an air compression efficiency segment (AirSmart) and an energy storage segment (AirBattery). The air compression efficiency segment offers an innovative way for a traditional market, industrial air compressors, to operate more efficiently in order to save on energy costs and, in Israel, shows conservative yet steady growth. The energy storage segment is a high potential developing market that has come to answer the problem of how we store energy from renewable sources.

The growth engine behind the energy storage market in Israel is the country'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. The projected 6 fold increase in renewables by 2030 will in turn produce an exponential increase in Israel's energy storage market.

Air Compression Ecosystem and Stored Compressed Air Ecosystem in Israel:

According to research undertaken by Augwind the compressor market in Israel is worth around 400 million NIS per year, half of which is represented by maintenance costs. The average cost of a compressor is around 100 thousand NIS with an average lifespan of about 8 years.

The market is dominated by 8 players that represent 90% of units in Israel. Augwind has identified hundreds of factories in Israel that are relevant customers for their air compression technology. These are factories that utilize at least 1500 m^3/h of compressed air at regular pressure (5-13atm) or at least 800 m^3/h of compressed air at high pressure (15-40atm).

According to Augwind's research and based on reports from the ministry of energy, annual compressor electricity costs for factories in Israel amount to 1.125 billion NIS. Augwind believes that 80% of this market is relevant to their technology (900 million NIS). The company believes it will be able to penetrate 350 million NIS per year of this market within 5 to 7 years. **Energy Storage Ecosystem Trends in Israel:**

Israel's Ministry of Energy has defined its energy vision as "natural gas or renewables only" by the year 2030. The three major drivers of the energy storage 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) pollution regulations

1) **The decreasing cost and availability of solar infrastructure** due to cost reductions and technological advancements is driving the foundation of large solar energy projects.
2) **A global shift to electric vehicles** instead of internal combustion engine (ICE) vehicles. In the past years 14 countries, representing over 50% of total vehicle market unit sales, have declared a ban on new ICE vehicle sales by dates ranging from 2020 to 2040. The decision of China, the largest car market in the world with about 30% market share, to ban all ICE vehicles by 2040 was an end-game call for all manufacturers and lagging countries and puts an end to the ICE era. Israel has banned the import of new ICE vehicles by 2030.
3) **Global regulations** for the reduction of polluting and gas emissions. Israel is actively committed to the Paris Climate Agreement.

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. According to the ministry of energy, *"This (transition) requires addressing many challenges concerning management of a very decentralized electricity network with a high level of reliability… The greater part of renewable energy in Israel is expected to be produced by solar systems based on solar energy. On their own, these systems do not provide stable energy 24 hours a day, thus becoming an obstacle in implementing renewable energy…* ***This hindrance may be resolved as a result of technological advancement, mainly in the field of energy storage."*** http://www.energy-sea.gov.il/English Site/Pages/Regulation/energy_economy_objectives_2030.pdf

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.

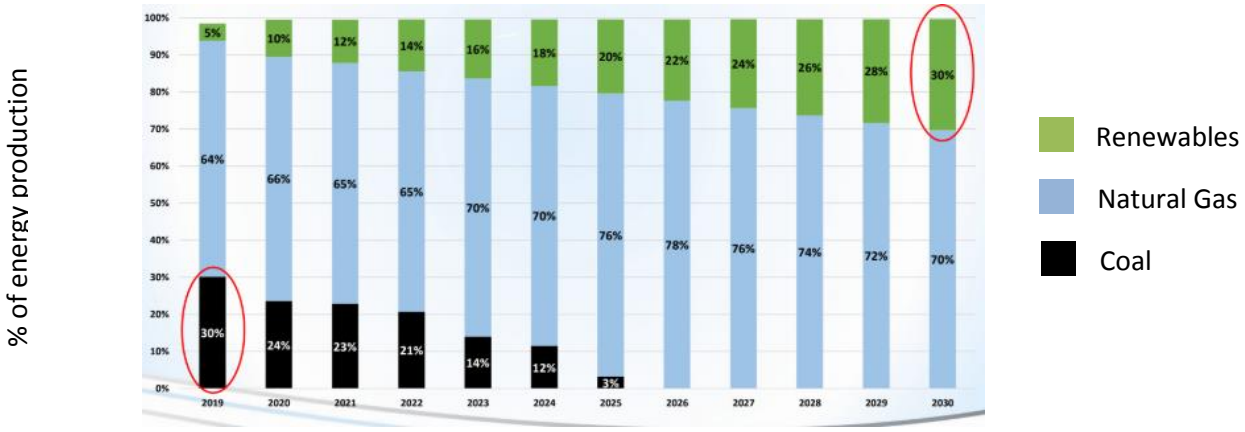
To support the transition to realize the 2030 vision, the government is putting major systems and regulations in place:

- **Promoting significant investment in R&D to upgrade energy storage.**
- Massive development of the electricity grid for the integration of solar energy.
- Implementing tools for developing a stable electrical system capable of handling sharp changes in production scale.
- Obligating any government or public building with an area exceeding 750 square meters to establish a solar system on at least half of the roof area
- Establishment of a fund for the construction of renewable energy sources for buildings owned by subsidized entities.
- Joint venture with the Israeli Lottery to build 1200 PV systems on public roof tops.
- Providing exemptions from having to obtain non-ionizing radiation permits for small rooftop PV facilities.
- Removing land allocation barriers and promoting land use for the establishment of renewable energy facilities.
- Establishing charging stations for electric vehicles.

The Ministry of Energy has detailed the following data in order to show how the energy ecosystem in Israel will transform in the next 10 years. (All graphs sourced from Energy Ministry)

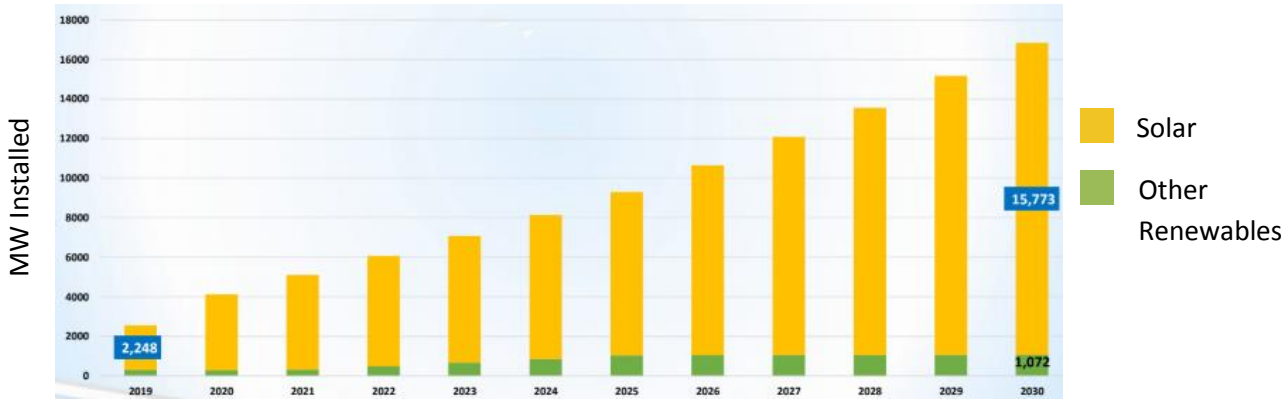
Israel's Energy Source Composition

Renewables Will Replace Coal over the Next 10 Years

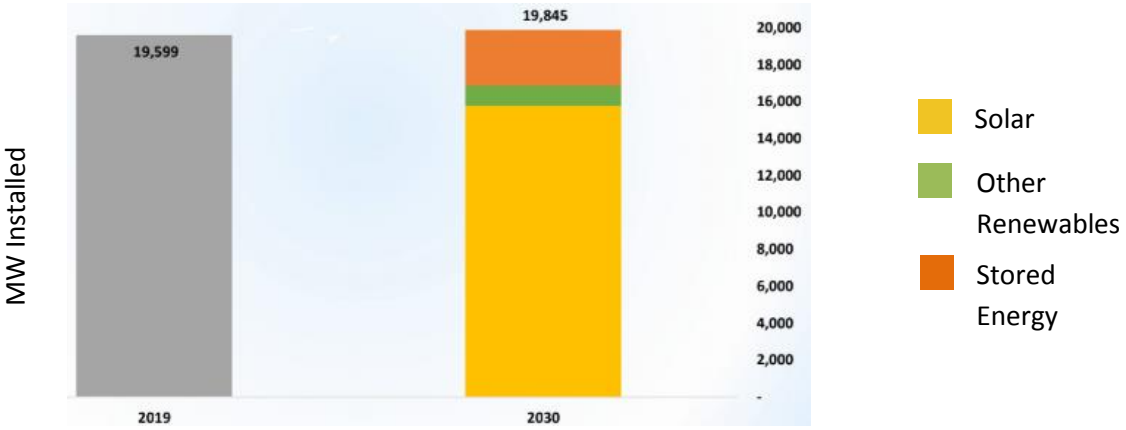


In the next decade it is expected that the capacity of renewable energy sources will increase 6 fold and that **they will amount to the same power capacity of all the energy sources powering Israel today. This represents more power stored than is produced today by Israel's largest coal-burning electricity plant Orot Rabin which produces around 2.7 GW.**

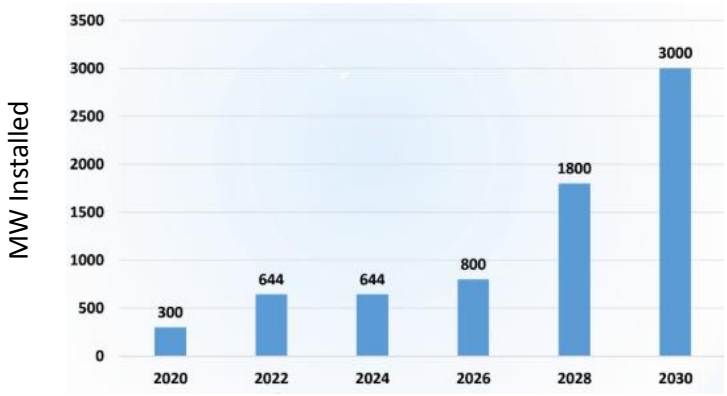
Renewables 6 Fold Increase in the Next Decade



Renewable Power in 2030 vs Total Power in 2019



10X Increase in Installed Stored Energy



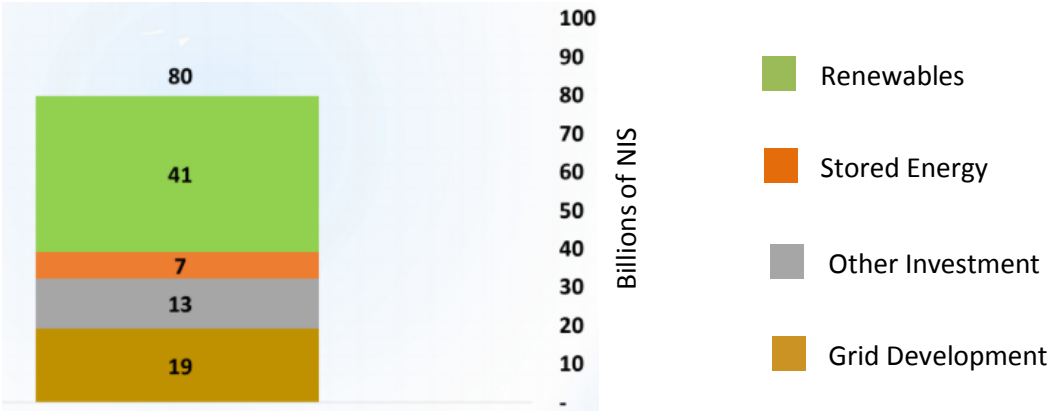
In 2030 **Israel is positioned to be the world leader in solar energy dependency** at a staggering 26% of energy produced by the country. For perspective, in second place is Italy with 17% dependency and Germany with 14% dependency.

Despite the growing demand for electricity and due to the transition to renewable energy sources, Israel is experiencing an exponential decrease in Nox and SO2 levels.

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.

The breakdown of investment from 2020 to 2030 in the energy sector is as follows. It can be seen that 7 billion NIS will be invested in energy storage solutions.

Investment in Electricity Infrastructure by 2030



In conclusion, the Israeli ecosystem has major growth drivers pushing for a solar energy era such as the decreasing cost of solar energy equipment, pollution regulations, and electric vehicle regulations. The country is projected to become the most renewable energy dependent country in the world. To actualize its vision, the country is investing in new infrastructure for renewable energy production and in turn this infrastructure is projected to create a 10X increase in the energy storage capacity of the country.

Valuation

Valuation Methodology:

Augwind is a growth company. Valuations for companies in growth are challenging due to a non-cash / limited cash flow valuation with reletavely a long time-to-market in most cases. Methods typically used for company valuations, such as asset valuation or multiplier methods, are incompatible with the valuation of growth companies. In such companies, the current status of business cannot be analyzed by the capital in the balance sheet, and in most cases cannot be compared to similar companies due to their uniqueness, in both technological and financial aspects.

As part of a discounted cash flow (DCF), the accepted method used in financial valuations, there are several modifications to a growth company's valuation. In general, there are three primary methods within the DCF method:

1. **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 upon scientific-regulatory assessment only (binomial model with certain adjustments).
2. **Pipeline assessment** - valuation method used for programs/companies prior to the market stage. The company's value is the total discounted cash flow plus unallocated costs and assessment of future technological basis. The assessment of the future technological basis is established based on the company's ability to "produce" new clinical and pre-clinical projects and their feed rate potential.
3. **DCF valuation** - similar to companies with positive cash flow from operations.

Augwind's valuation was conducted under the DCF valuation method as the company has already revenues and time to market, according to our estimate is close. We also consider Augwind technology value under the terminal value within our DCF model.

Company valuation

Augwind revenues are mainly based on products and services with two main direct business models:

a) Capex sale – the company sells the system and provide on-going maintain fees.
b) Opex sale – the company gain revenues if electrify savings are obtain.

Augwind has also focused recently its business model (for AirSmart) via distributers, such as SuperGas in Israel, where it uses the distributer's capabilities in sales and marketing with local presence that can add Augwind solution into other services. **We see this updated business model as an optimal model for Augwind as it positioning Augwind as a technology firm, focusing on technology rather than an infrastructure firm sells end-to-end products.**

We analyse Augwind activities based on three products serving different customers as we described above:

- AirSmart - include 3 airX units on avg.
- AirShaver - include 4 high pressure AirX units.
- AirBattery - 40mWHr typical include 200 airX units.

We then analyze these three products based on the location of sales (US, EU and Israel); and by revenues and gross profit per product per location per business model. Our assumptions are based on our understanding of the market, its trends and also management estimations.

As of 31/12/20 the company will recognize its backlog of NIS 5.1 million from on-going projects. In 2017 the company revenues were NIS 693k; 2018 were NIS 3.1 million and in 2019 NIS 6.9 million.[4]

Below is our revenues forecast by territories (Israel, EU and US) for 2020 – 2025:

Israel	2020	2021	2022	2023	2024	2025
No. Projects						
AirSmart - include 3 airX units on avg	5	5	8	10	12	15
AirShaver - include 4 high pressure AirX units	0	2	8	10	12	15
AirBattery - 40mWHr typical include 200 airX units	0	1	2	4	5	10
Fees. Per Projects (NIS)						
AirSmart - include 3 airX units on avg	1,050,000	225,000	225,000	225,000	225,000	225,000
AirShaver - include 4 high pressure AirX units	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000	1,050,000
AirBattery - 40mWHr typical include 200 airX units	35,000,000	35,000,000	35,000,000	35,000,000	35,000,000	35,000,000

US	2020	2021	2022	2023	2024	2025
No. Projects						
AirSmart - include 3 airX units on avg	1	5	20	50	60	80
AirShaver - include 4 high pressure AirX units	0	3	10	10	12	15
AirBattery - 40mWHr typical include 200 airX units	0	0	3	5	7	8
Fees. Per Projects (NIS)						
AirSmart - include 3 airX units on avg	450,000	1,575,000	1,575,000	1,575,000	1,575,000	1,575,000
AirShaver - include 4 high pressure AirX units	1,575,000	1,575,000	1,575,000	1,575,000	1,575,000	1,575,000
AirBattery - 40mWHr typical include 200 airX units	35,000,000	35,000,000	35,000,000	35,000,000	35,000,000	35,000,000

EU	2020	2021	2022	2023	2024	2025
No. Projects						
AirSmart - include 3 airX units on avg	0	5	20	25	30	30
AirShaver - include 4 high pressure AirX units	0	3	10	12	15	20
AirBattery - 40mWHr typical include 200 airX units	0	0	2	2	4	4
Fees. Per Projects (NIS)						
AirSmart - include 3 airX units on avg	1,470,000	1,470,000	1,470,000	1,470,000	1,470,000	1,470,000
AirShaver - include 4 high pressure AirX units	1,470,000	1,470,000	1,470,000	1,470,000	1,470,000	1,470,000
AirBattery - 40mWHr typical include 200 airX units	35,000,000	35,000,000	35,000,000	35,000,000	35,000,000	35,000,000

[4] Company investors' presentation, April 2020.

Operating expenses:

- Selling and marketing – the main product (AirSmart) is sold by distributers, i.e. limited costs are assumed, however lower GP.
- General and administration – we assume a constant growth rate of 1% annually.
- Research and development – Augwind is a technology firm, i.e. higher costs are assumed.

Below is our forecast for 2020 – 2025:

	2020	2021	2022	2023	2024	2025
Revenues						
AirSmart - include 3 airX units on avg	5,700,000	16,350,000	62,700,000	117,750,000	141,300,000	173,475,000
AirShaver - include 4 high pressure AirX units	-	11,235,000	38,850,000	43,890,000	53,550,000	68,775,000
AirBattery - 40mWHr typical include 200 airX units	-	35,000,000	245,000,000	385,000,000	560,000,000	770,000,000
Total revenues	**5,700,000**	**62,585,000**	**346,550,000**	**546,640,000**	**754,850,000**	**1,012,250,000**
Gross Profit	**2,122,500**	**17,686,000**	**99,930,000**	**174,353,500**	**237,395,000**	**342,392,500**
% of revenues	*37%*	*28%*	*29%*	*32%*	*31%*	*34%*
R&D	6,000,000	15,000,000	15,000,000	20,000,000	25,000,000	25,000,000
% of revenues	*105%*	*24%*	*4%*	*4%*	*3%*	*2%*
SG&A	57,000	625,850	3,465,500	5,466,400	7,548,500	10,122,500
% of revenues	*1%*	*1%*	*1%*	*1%*	*1%*	*1%*
Total operating costs	6,057,000	15,625,850	18,465,500	25,466,400	32,548,500	35,122,500
% of revenues	*106%*	*25%*	*5%*	*5%*	*4%*	*3%*
Operating Profit	**-3,934,500**	**2,060,150**	**81,464,500**	**148,887,100**	**204,846,500**	**307,270,000**
% Operating Margin	*-69%*	*3%*	*24%*	*27%*	*27%*	*30%*
Tax	0	0	0	0	47,114,695	70,672,100
Operating Profit after tax	**-3,934,500**	**2,060,150**	**81,464,500**	**148,887,100**	**157,731,805**	**236,597,900**

Equity Value

Non-operational assets/liabilities and unallocated costs

As of June 30, 2020, Augwind has non-operational assets (cash) of approximately NIS 22.3 million. The company has no loans as of June 30, 2020.

Based on the above parameters we evaluate Augwind's equity value at NIS 2.3 billion.

Sensitivity Analysis

The table below presents Augwind's equity value in relation to the capitalization rate. We set a range of 1% change from our CAPM model (see Appendix B).

Sensitivity Analysis - Capitalization Rate vs. Target Price

CAPM	Target Price
9.0%	176.2
10.0%	**144.1**
11.0%	**121.3**
12.0%	**104.3**
13.0%	91.1

We estimate Augwind's price target to be in the range of NIS 104.3 to 144.1 NIS with a mean of NIS 121.3

Appendices

Appendix A - Financial Reports

Balance Sheet

31 בדצמבר	ליום 30 ביוני		
2019	2019 (*)	2020	
מבוקר	בלתי מבוקר		
	אלפי ש"ח		
			נכסים שוטפים
6,952	811	22,340	מזומנים ושווי מזומנים
2,689	2,044	1,338	לקוחות
428	127	1,121	חייבים ויתרות חובה
1,785	2,436	1,678	מלאי עבודות בתהליך
11,854	5,418	26,477	
			נכסים לא שוטפים
353	377	1,230	רכוש קבוע
-	-	931	נכס זכות שימוש
1,046	974	1,066	נכסים בלתי מוחשיים
1,399	1,351	3,227	
13,253	6,769	29,704	
			התחייבויות שוטפות
2,103	494	-	אשראי מתאגידים בנקאיים ואחרים
343	944	587	ספקים ונותני שירותים
4,014	3,151	3,481	זכאים ויתרות זכות
6,460	4,589	4,068	
			התחייבויות לא שוטפות
100	-	-	התחייבויות לתאגידים בנקאיים
700	-	624	זכאים ויתרות זכות
-	-	511	התחייבות בגין חכירה
1,497	1,765	1,128	התחייבות בגין תמלוגים לרשות החדשנות
-	3,500	-	הלוואות מאחרים
2,297	5,265	2,263	
			הון (גרעון בהון)
55,881	7,398	75,639	הון מניות ופרמיה
21,929	-	24,743	תקבולים על חשבון כתבי אופציה
330	236	3,652	קרן בגין עסקאות תשלום מבוסס מניות
(73,644)	(10,719)	(80,661)	יתרת הפסד
4,496	(3,085)	23,373	סה"כ הון (גרעון בהון)
13,253	6,769	29,704	

Income Statement

	לשנה שהסתיימה ביום 31 בדצמבר	ל-6 חודשים שהסתיימו ביום 30 ביוני	
	2019	2019 (*)	2020
	מבוקר	בלתי מבוקר	
		אלפי ש"ח	
הכנסות	6,887	4,011	1,691
עלות המכירות והשירותים	5,768	2,416	2,180
רווח (הפסד) גולמי	1,119	1,595	(489)
הוצאות מחקר ופיתוח	40	290	1,789
הוצאות מכירה ושיווק	729	102 (**)	1,226
הוצאות הנהלה וכלליות	1,984	834 (**)	3,275
הוצאות רישום למסחר ברכישה במהופך	60,644	-	-
הוצאות אחרות	53	-	-
רווח (הפסד) תפעולי	(62,331)	369	(6,779)
הכנסות מימון	188	141	2
הוצאות מימון	568	296	240
רווח (הפסד) נקי	(62,711)	214	(7,017)
סה"כ רווח (הפסד) כולל	(62,711)	214	(7,017)

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 10-year T-bond with a market risk premium, and based on Professor Aswath Damodaran's (NY University) commonly used sample (www.damodaran.com). As of January 2020, the US market risk is estimated at 6.12%. A three-year market regression unleveraged Beta is 0.89, according to a sample of 160 companies representing the US electronics firms. We used an unleveraged beta of this sample, which is higher than a leveraged beta, due to high rate of cash versus debt. The implied CAPM is 7.0%.

CAPM model (ke) is estimated as follows: $ke = rf + \beta(rm-rf) + P$

The Company is a small cap company, under $2b, in which marketability and size premiums need to be considered. We added 4% additional risk premium to the CAPM. We therefore estimate the company's CAPM to be 11.0%.

CAPM Model		Value	Source
Long-term (20 years) T-bond	R(f)	1.43%	Rf, Israel bond 42
Market risk premium	R(m)- R(f)	6.26%	based on Professor Damodaran's sample (1/20)
Beta unleveraged	B	0.89	Beta sample of 160 electronics firms (1/20)
Cost of Capital	Ke	7.0%	
Size Premium		4%	
CAPM	CAPM	**11.0%**	

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Dr. Tiran Rothman **T:** +972 (0) 9 950 2888 **E:** equity.research@frost.com

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