

TADIRAN Group - Israeli Innovator Goes Global

Following a very strong rebound in 2021, Israel's GDP should grow by an impressive 6.3% in 2022, with the strength of the high-tech sector, and robust expansion of exports and investment all driving momentum, according to the OECD. The organisation asserted that expanding renewable energy will enhance Israel's energy security. The government has made this a priority, and in May 2022 unveiled a \$22bn plan to generate 30% of its energy needs from renewable sources, and lift installed RES capacity from 3.7GW in 2021 to 15.8GW by 2030.

It is into this burgeoning market that Tadiran Group has stepped. One of the world's most advanced manufacturers of heating, ventilation and air-conditioning (HVAC) systems, over recent years Tadiran has also expanded into the green energy segment with an ongoing wave of acquisitions, bringing its talented team and world-leading R&D capacity to one of the most dynamic global industries. With the importance of clean and healthy air being ever more widely understood and Tadiran expanding globally, the company is introducing new cutting-edge technologies that revolutionise indoor air quality. In January 2022, Tadiran acquired a 60% stake in Italian renewable power equipment distributor VP Solar for €50m, stepping onto the European renewable energy market, where it plans continued expansion.

"In 2020, we built a strategic plan for the market, covering everything that we want to do in the next 5 years," says Tadiran Group CEO Moshe Mamrud. "The first main focus is to make another division in the company, for energy. Reaching the European market is another strategic goal. Due to our extensive knowledge, professional people and new

"For us introducing new technologies for improving indoor air quality is part of our vision which allows consumers all over the world to trust the air they breathe indoors."

technology, we decided to launch in Europe within the energy sector. As citizens of the Start-Up Nation, we understand that true progress comes from new technologies and innovation"

Tadiran Group has two divisions - HVAC, which has been its core business; and "New Energy", working in renewables. Mamrud bought Tadiran from the US company Carrier Global in 2009, at a time when the Israeli HVAC industry was moving production outside the country. Mamrud made the decision to keep production in Israel, despite the availability of lower labour costs



elsewhere. It is a decision that has been vindicated by the company's success: it has more than 40% of the Israeli HVAC market. Two years ago, Tadiran started producing heat pumps, that have become increasingly popular during recent energy crises. In 2021, Tadiran entered the energy segment with the acquisition of two Israeli companies, one a distributor of solar systems, and the other an energy storage and EV charging business. The deals have

given Tadiran a share of more than 50% of the mounting systems market, advanced engineering and technological capabilities, highly-adaptable uninterruptible power supply systems, and energy storage for solar power plants that ensure grid stability. The company has secured major contracts for utility-scale storage in Israel for around \$215m in 2023-24.

"So we searched for the best company that can help us start," Mamrud continued, "and we found VP Solar in Italy, which is very strong and very experienced. It was established more than twenty years ago and

the owner is a very smart engineer who also has a lot of commercial skills and knows the market; many people in the market appreciate him."

Stefano Loro, VP Solar's founder and CEO, retains a 40% stake in the company and will continue to play a central role, having brought it to a prominent position in the Italian and European market through its wide product range, that has supported the growth of renewable energy on the continent. The company offers its clients a one-stop-shop of customised and integrated solutions, including photovoltaics, storage systems, heat pumps, and products for charging electric vehicles. Enjoying a bumper year in 2021, VP Solar further strengthened its position in Italy, and grew across Europe. Together with Tadiran New Energy, which is the largest distributor of renewable energy products on the Israeli market, the combined venture will account for annual sales of more than 1000 MW of photovoltaic products and 600 MWh of storage systems. The partnership will support VP Solar's growth, enhancing its competitiveness, product range, and integrated logistics services through synergies with Tadiran. The company has been focused on solar systems and storage for rooftops, but under its new ownership will expand into the commercial and industrial market. Some 80% of VP Solar's turnover is generated in Italy and 20% outside its home market; foreign sales are set to take a larger share going forward.

The acquisition will also be a launchpad for Tadiran's expansion in Europe.

"As we speak, we are looking for other acquisition opportunities in Europe," says Mamrud. "We are also looking to build subsidiaries or to start a new business in another country. We want to become a significant player in the European market, and not only for renewable energy, but also for air-conditioning, Indoor Air Quality and heat pumps."

Tadiran aims to start with renewable

products in the European market and then build or acquire subsidiaries to offer other products. It will be building on its huge success in the Israeli market, and leveraging its technology-intensive solutions including its TADIRAN AIROW air purification systems.

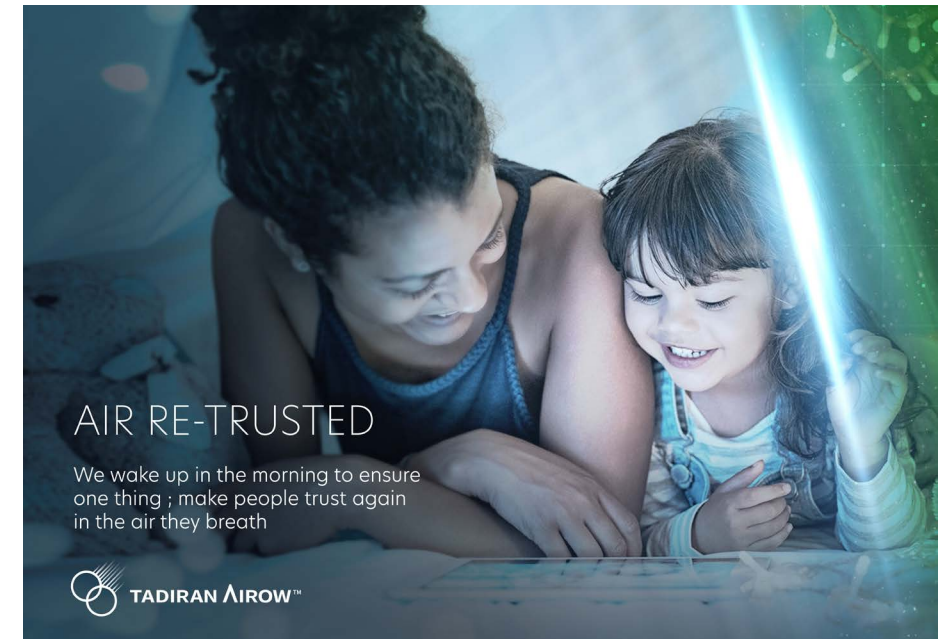
Some years ago, Mamrud decided that Tadiran should manufacture solutions that did not simply warm and heat air, but purify

"As an Israel-based company, we are driven by innovation and developing our own IP. TADIRAN AIROW is an important milestone in our value proposition and positioning strategy targeting global expansion."

it too. While this was not a new concept, the products on the market were generally of poor quality and not as efficient and effective as they should be. After years of research and development, including tests all over the world, the company achieved a breakthrough with TADIRAN AIROW™ air purification devices that are based on a unique hydrogen peroxide proprietary technology, which efficiently removes 99% of certain known aerosolized pathogens including COVID, viruses, bacteria, fungi and mold*. TADIRAN AIROW is based on a



hydrogen peroxide generator that releases healthy molecules into the air with no ion omissions. It uses a discharge current to split oxygen molecules into separate atoms before combining them with water molecules to be transformed into hydrogen peroxide, which is distributed throughout the air-conditioning unit, travelling through the conditioned space to eliminate pathogens. Tadiran has signed distribution agreements worldwide, including in the USA, Japan, UK, Italy, UAE and Australia, and plans to launch TADIRAN AIROW in 2023. TADIRAN AIROW complements products including the INVIZ, an innovative design



feature which makes the part of the air-conditioning units attached to the outside of buildings barely visible - and silent.

"We are pleased that introducing TADIRAN AIROW into our systems is feasible for all end users," says Mamrud. "It's maintenance free, there's no need for any spare parts or replenishment and can be implemented in any air conditioning system. Our R&D capabilities and the factory in northern Israel allow us to develop innovative and unique systems that bring new technologies which are beneficial and can fit perfectly to any type of consumer and market."

"Tadiran is a green company that is always changing," Mamrud adds. "It's a company with a lot of smart, talented, and motivated people who want to create an

"Being part of the start-up nation, we always seek new innovations and technologies in the climate tech ecosystem, and promote open innovation locally and globally."

impact in our world. We understand that there are energy shortages, and energy is becoming more expensive, and we want to provide our customers with the best solutions to meet people's needs at the best price. We know customers are unique and we want to provide what each and every one needs."

As it grows its business across Europe,

Tadiran Group can continue to benefit from the advantages of its home country. Numerous Israeli businesses have become world leaders based on the nation's highly-skilled workforce, intensive investment in R&D, and outstanding business environment.

"Israel is known worldwide because of its ability to bring new technologies to the market, and that is where we should focus on for the future.

We innovate and invest in venture capital. Having an open mind and thinking outside of the box is the predominant mindset and



makes Israel a really good place to invest for the future. These key aspects provide a really powerful reason to come and invest in this country and its companies. As a veteran businessman who has been operating in the Israeli ecosystem for more than 50 years, the out-of-the-box thinking and significant accomplishments of Israeli entrepreneurs throughout the past decade never stops to amaze me and I'm confident that Israeli innovation will continue leading global development and transformations."



* TADIRAN AIROW 3 reduced detected virus (SARS-CoV-2) aerosol levels by 99.93% within 60 min (18 cubic meter test chamber), detected Bacteria Staphylococcus epidermidis aerosol levels by 99.994% within 90 min (1 cubic meter test chamber) and reduced 99.4% of blue mold aerosolized in within 3 hours (25 cubic meter chamber).