KSTAR
Powering the Future

KSTAR Case Study

Transforming Spring Water Production in Turkey:

KSTAR's 900kW Rooftop Project with BlueKernel Series

www.kstar.eu

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Background

The mineral water production industry faces high utility costs, prompting a shift towards solar energy. Embracing solar power not only slashes electricity expenses but also showcases environmental responsibility, bolstering green credentials. By harnessing solar energy, factories reduce reliance on traditional energy sources, curbing carbon emissions and contributing to sustainability efforts.

Client Profile

Established in 1993, Hisar Doğal Kaynak Su A.Ş. stands as one of Turkey's leading water companies. Situated within Istanbul's Belgrad Forests, a natural protected area, its factory operates amid approximately 1,000,000 m^2 of pristine surroundings.

Hisar Natural Spring Water facility, nestled within the Belgrad Forest, spans a total area of 60,000 m^2, comprising 40,000 m^2 of open space and 20,000 m^2 of enclosed area. Operating since 1993, the facility boasts state-of-the-art machinery, including automatic and fully automated new-generation equipment. Hisar Natural Spring Water is meticulously produced under stringent hygiene standards, ensuring purity from source to bottle.

Challenge:

The factory faces challenges in energy management, including high costs and environmental impact. High energy expenses strain profitability and competitiveness, while reliance on conventional sources hampers sustainability goals, risking consumer trust and regulatory compliance. Operational disruptions due to energy issues further impede efficiency and revenue generation. Transitioning to renewable energy offers a solution by reducing costs, minimizing environmental footprint, and enhancing operational reliability. Implementing energy-efficient technologies improves sustainability and long-term viability, aligning with regulatory requirements and consumer expectations for eco-friendly practices.

Solution:

To address these challenges, the factory has opted for KSTAR solar solutions, utilizing its 5854m² empty rooftop to install a 900kW solar system.

The chosen KSTAR solar solution, utilizing the KSG-120CL-M0 model, offers a range of features and capabilities tailored to address Hisar Natural Spring Water's specific needs and challenges effectively:

01 High Efficiency:

With a remarkable working efficiency of 98.7%, the system ensures stable and reliable energy supply, minimizing wastage and maximizing output, thus reducing the client's energy costs significantly.

02 Adaptability:

The system's 10 MPPTs enable seamless adaptation to complex installation locations and multiple types of solar panels. This flexibility ensures optimal performance regardless of environmental variables, maximizing energy generation potential.

03 Safety and Reliability:

The KSG-120CL-M0 is renowned for its safety and reliability, providing peace of mind to the client regarding the stability and longevity of the solar plant.

04 User-Friendly Design:

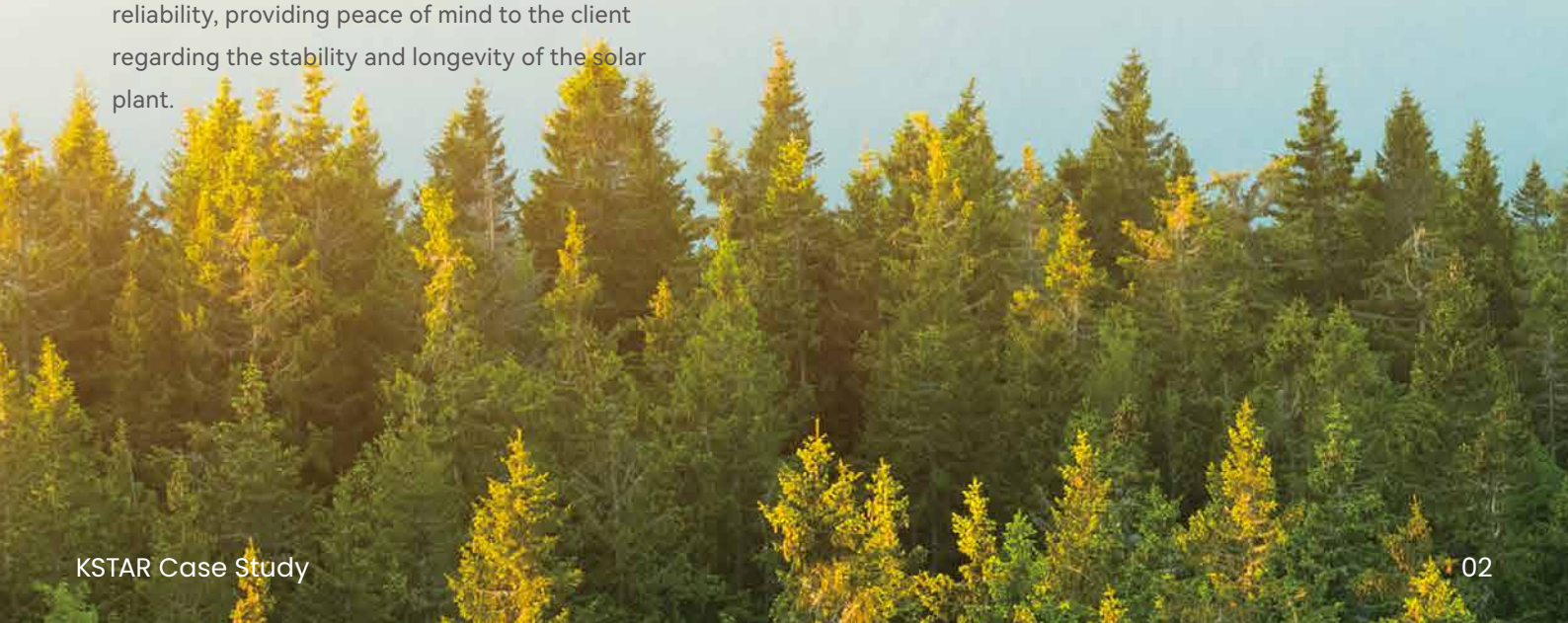
The system is designed with user-friendliness in mind, making it easy for the client to operate and maintain. Features such as remote monitoring, fault diagnosis, and software upgrades enhance operational efficiency and simplify maintenance tasks.

05 Environmental Benefits:

By harnessing solar power to generate electricity, the system significantly reduces the client's reliance on conventional energy sources, thereby lowering carbon emissions and minimizing environmental impact. This aligns with the client's sustainability objectives, demonstrating a commitment to eco-friendly practices and reducing their overall carbon footprint.

05 Cost Savings:

By generating its own green electricity, the client can reduce their energy costs substantially over the long term. This financial benefit aligns with the client's objectives of improving operational efficiency and profitability while also contributing to their sustainability efforts.



Results:

The solar plant will produce 1450 MWh of electricity annually while decrease emissions by 1446 tons of CO_2 equivalent.

Environmental impact equivalents:

506,558
kilograms of coal burned

373,395
liters of oil consumed

4,169,751
kilometers driven by an average gasoline-powered passenger vehicle

16,749
tree seedlings grown for 10 years

Customer feedback:

"Our decision to partner with KSTAR for our solar project has been transformative for our business. Not only have we significantly reduced our energy costs, but we've also taken meaningful steps towards sustainability. KSTAR's solution has been reliable, efficient, and seamlessly integrated into our operations, allowing us to focus on what matters most – delivering quality natural spring water to our customers."

Conclusion:

In summary, the KSTAR solar solution effectively addresses the client's energy management challenges by providing a high-efficiency, adaptable, and user-friendly system that not only meets their operational needs but also aligns with their sustainability objectives. By leveraging solar power, Hisar Natural Spring Water can achieve significant cost savings, reduce environmental impact, and enhance their overall sustainability performance.

Contact Information:

KSTAR, a leading global new energy solution provider, boasts a well-established presence in key solar markets worldwide. Our expertise spans the spectrum, delivering cutting-edge PV inverters and energy storage systems featuring CATL battery solutions. Our offerings cater to residential, commercial & industrial, and large-scale utility applications. Backed by 30 years of experience in electrical and electronic technology, KSTAR is committed to generating superior new energy solutions for a diverse global clientele.

Offering solar solutions ranging from 3kW to 900MW, and beyond, we're ready to tailor a sustainable energy solution to fit your business needs. Take the first step towards a brighter, greener future by contacting us at marketing@KSTAR.com.