



MITSUBISHI POWER EGYPT

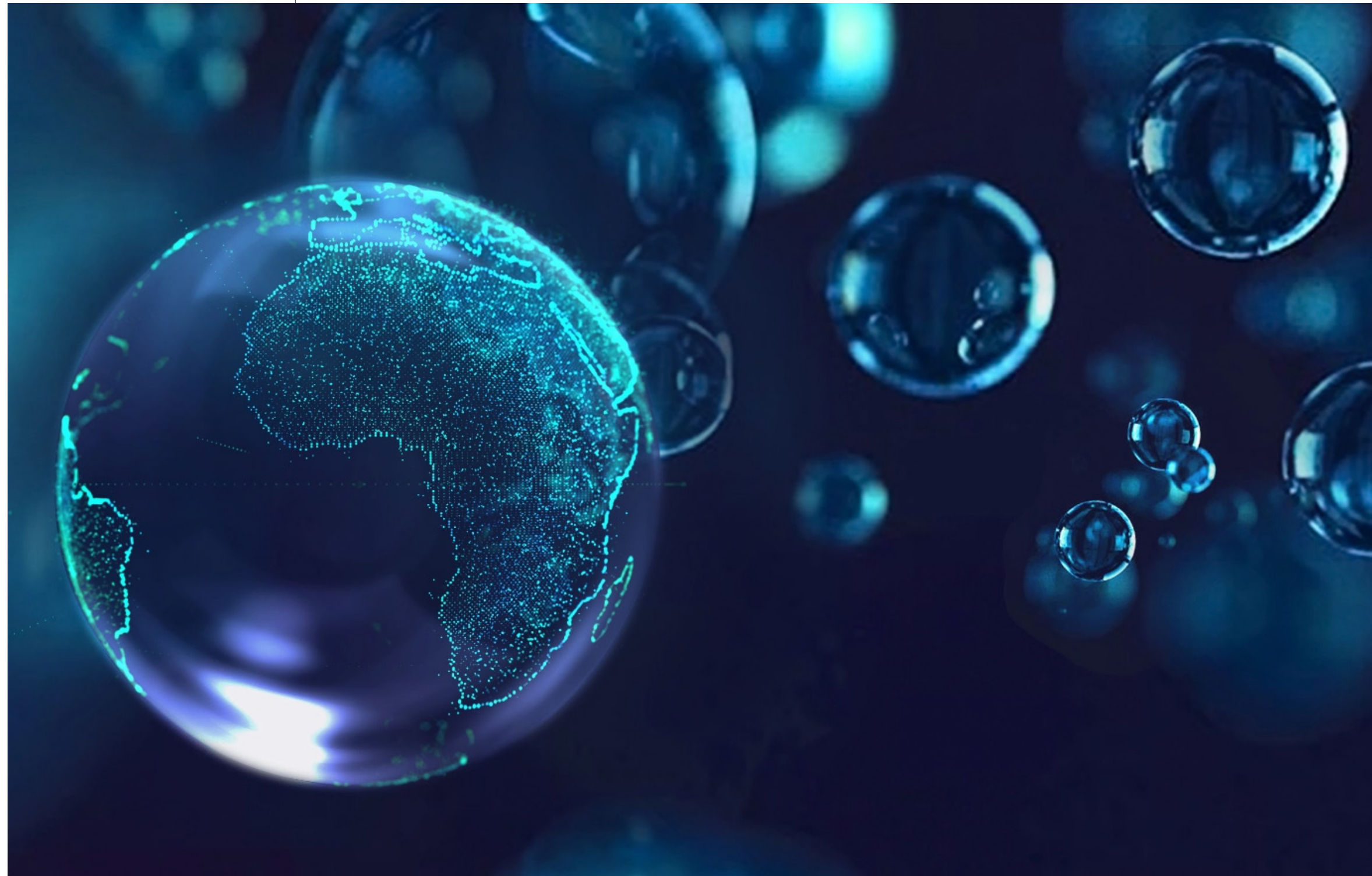
**BUILDING THE FUTURE OF ENERGY TRANSITION IN EGYPT,
USING ONE OF THE CLEANEST FUELS**

WHAT WE DO

Mitsubishi Power, the power solutions brand of Mitsubishi Heavy Industries, Ltd. (MHI) is a world leader in power generation and energy storage solutions – effectively designing, manufacturing, building, servicing, and optimizing power systems for people and the planet.

Building on more than a century of innovative engineering and distinctive service, Mitsubishi Power is collaborating with customers, governments, utilities, and industry leaders to drive decarbonization agendas while addressing the energy challenges of today and tomorrow, to be able to create a future that works for both people and the planet.

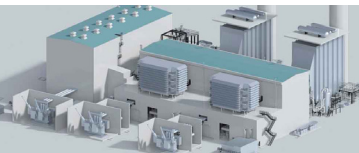
Mitsubishi Power is working with governments and countries around the world to deliver solutions to lessen carbon emissions and bring clean and competitive energy security. At the 2022 United Nations Climate Change Conference or Conference of the Parties (COP27), Mitsubishi Power showcased its pioneering technology advances in decarbonization and their application to accelerate the energy transition. Participating in Climate Change's Hydrogen Transition Summit, Mitsubishi Power underscored the opportunity of hydrogen as a main enabler of energy transition, and as an integral constituent of a future decarbonized energy system. With international co-operation, the emerging hydrogen market has the potential to be more inclusive.



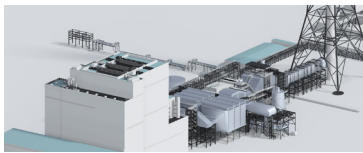
OUR TOTAL ENERGY SOLUTIONS

From pioneering the world’s largest, most efficient, and most reliable gas turbines, to hydrogen powered GTs, energy storage, and carbon utilization technologies, total energy management solutions, and power infrastructure digitalization, Mitsubishi Power is making significant investments to create a sustainable future. With a 100+ year track record of excellence in the energy industry, Mitsubishi Power develops the world’s most innovative clean power solutions and digital offerings for customers, empowering them at every stage of their energy transition journeys, affordably and reliably.

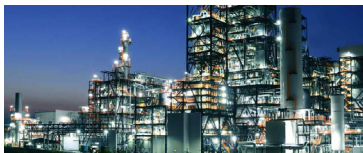
PRODUCTS



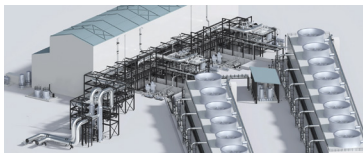
[GTCC](#)



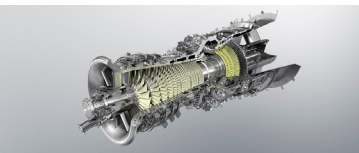
[Steam Power](#)



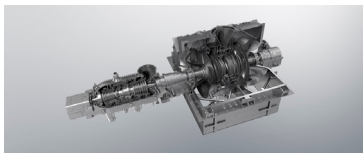
[IGCC](#)



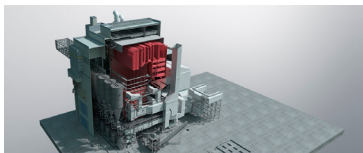
[Geothermal](#)



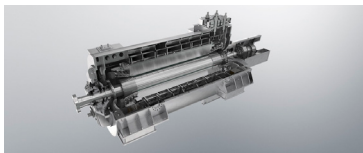
[Gas Turbines](#)



[Steam Turbines](#)



[Boilers](#)



[Generators](#)



[Control Systems](#)



[Fuel Cells](#)

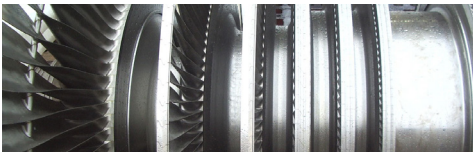


[Others](#)

SERVICES



[Gas Turbines](#)



[Steam Turbines](#)



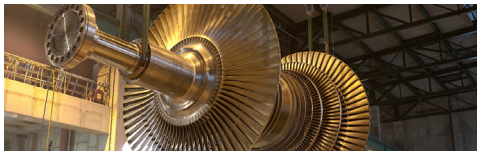
[Boilers](#)



[Generators](#)



[Air Quality Control System \(AQCS\)](#)



[Long Term Service Agreement](#)



[Support of Operation and Maintenance](#)



[Training](#)



[Comprehensive Maintenance](#)



[Intelligent Solutions TOMONI®](#)

OUR OPERATIONS IN EGYPT

Mitsubishi Power is a strategic partner to Egypt's economic and social development since it started operations in April 2011. Our industry-leading power technology, combined with a strong clean energy strategy, has enabled the company to provide optimal power solutions and value to Egypt's power infrastructure expansion.

The Egypt office provides gas and steam turbines aftersales services for power generation, O&G and LNG plants around the country as well as boiler services and hydrogen fuel conversion.

 **34** Total number of employees

MITSUBISHI POWER WORKS WITH KEY ENERGY STAKEHOLDERS IN EGYPT INCLUDING:



Alongside a rapidly expanding renewable energy segment, Egypt is looking to adopt hydrogen technology to further diversify the energy mix. The construction of green hydrogen facilities will support the government's plan to establish Egypt as global energy leader in line with Egypt Vision 2030.

Mitsubishi Power is working to support Egypt achieve this goal, on projects such as the recent hydrogen fuel conversion project with Alexandria National Refining & Petrochemicals Company (ANRPC).

To support customers in enhancing availability and efficiency of operations, Mitsubishi Power also has long-term service agreements with its customers, including providing two M701F gas turbines for Sidi Krir Power Station, El Atf Power Station and Cairo North GTCC plants in Egypt. The 16-year service agreement for the three power plants helps ensure the long-term reliability, availability, and optimal performance of the units. These plants operate natural-gas-fired gas turbine combined cycle (GTCC) generators with a rated output of 750 MW. The company has also signed an LTSA contract with Damietta LNG (DLNG) Under the terms of the agreement, Mitsubishi Power will undertake the parts, repairs and services for five Mitsubishi Power H-25 gas turbines installed at the facility, located in New Damietta Port in the northern region of Egypt.





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“Mitsubishi Power is a long-term power partner to Egypt and has been active in utility and industrial power projects with major power players for over 20 years. As witnessed at COP27, Egypt is committed to the development of a national hydrogen industry. With some of our recent landmark projects like ANRPC, we are providing partners with innovative fuel conversion solutions that will help them achieve their commercial goals while reducing their carbon footprint. At Mitsubishi Power, we will continue to work with our partners in Egypt and across the Middle East and Africa to help them achieve decarbonization and deliver a sustainable future for the region.”

KHALED SALEM

President, Mitsubishi Power Middle East & Africa (MEA)

MITSUBISHI POWER PROJECTS IN EGYPT

DAMIETTA LNG (DLNG)

Mitsubishi Power signed a Long-Term Service Agreement (LTSA) with Damietta LNG (DLNG), a leading producer and exporter of liquid natural gas in Egypt, to enhance the reliability, efficiency, and availability of power supply, and protect LNG production at the plant. Under the terms of the agreement, Mitsubishi Power will undertake the parts, repairs, and services for five Mitsubishi Power H-25 gas turbines installed at the facility, located in New Damietta Port in the northern region of Egypt.

Mitsubishi Power will also provide its award-winning suite of intelligent solutions TOMONI®, a customizable suite of digital power plant solutions fueled by cutting-edge analytics and decades of turbine operating and monitoring data. TOMONI harnesses big data to provide real-time predictive insights and actionable knowledge, for higher power plant performance, reliability, and optimization and to achieve environmental performance goals.

This latest service agreement follows Mitsubishi Power's first LTSA for the units which was signed in 2006.



MITSUBISHI POWER AND EGYPTIAN O&G REFINERY HYDROGEN AGREEMENT

Mitsubishi Power is introducing hydrogen solutions for the O&G sector and has signed a full turnkey contract with leading Egyptian O&G Company Alexandria National Refining & Petrochemicals Company (ANRPC) to provide advanced hydrogen fuel conversion technology solutions, supporting the company to achieve its decarbonization goals. The solution will be installed at the ANRPC refinery plant in Alexandria, which provides 30% of Egypt's gasoline supply for domestic consumption.

Under the terms of the contract, Mitsubishi Power will be responsible for the design, engineering, procurement, construction, and commissioning of fuel conversion solutions for the existing 100 ton/hour boiler, enabling it to fire up to 100% hydrogen by the end of 2023. This includes the installation of state-of-the-art hydrogen burner technology and advanced control solution to ensure efficient and safe operations.

The addition of hydrogen, considered to be the fuel of the future to ANRPC's fuel mix will deliver the flexibility they need to support them in achieving cost efficiencies. This latest contract is part of Mitsubishi Power's continued commitment to develop technologies that convert existing thermal power systems to hydrogen and thus support our customers in the region to achieve their decarbonization goals.

Mitsubishi Power's hydrogen firing technology enables thermal power systems owners to decarbonize their existing plants with minimal modifications. This is part of Mitsubishi Power's mission to work with customers to create a sustainable roadmap to reduce CO₂ emissions.





DECARBONIZING GAS TURBINES: OUR HYDROGEN EXPERTISE

Mitsubishi Power has long pioneered hydrogen fuel combustion technologies, and our recent large-scale and ambitious projects demonstrate our commitment and accumulated expertise in this field.

Commercializing hydrogen is now a global priority, to scale its use. Mitsubishi Power, along with Mitsubishi Heavy Industries (MHI) are fast-tracking this process through projects such as the recently announced Takasago Hydrogen Park, the world's first center for the validation of hydrogen-related technologies, from hydrogen production to power generation, which will support the commercialization of small and large frame gas turbines.

Mitsubishi Power is building a value chain for hydrogen, from production to use, through further integration and advancement of the existing energy infrastructure and hydrogen-related technologies. By further developing this approach and linking it with many different types of hydrogen-centric industries, MHI aims to establish a hydrogen ecosystem that will accelerate its commercialization through verification at the Takasago Hydrogen Park.

Mitsubishi Power is committed to bringing our most advanced solutions and services to Egypt, to support our customers achieve an optimal transition to a clean energy future with a resilient, reliable, and robust energy supply.

OUR NET-ZERO JOURNEY

Mitsubishi Heavy Industries have set two ambitious new targets to realizing a carbon neutral society. MHI Group is aiming to remove all carbon dioxide emissions from its own operations by 2040 – cutting emission by half by 2030 (compared to 2014). MHI Group is also adopting a new goal to achieve Net Zero emissions through its entire value chain by 2040. These targets include the reduction in emissions attributed to our customers' use of our products and services, and the reduction contribution from MHI's Carbon dioxide Capture, Utilization and Storage (CCUS) business.

Net zero is a social and scientific imperative and highly achievable. Mitsubishi Power sees five interdependent factors that pave the way to net-zero and on this journey, and must ensure that decarbonization solutions are accessible, reliable, and affordable, across industries and geographies – as a company, as an industry and as a society.

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PARTNERSHIP AND COLLABORATION
The need to collaborate in unprecedented ways to develop technologies and business models that enable sustainable growth.
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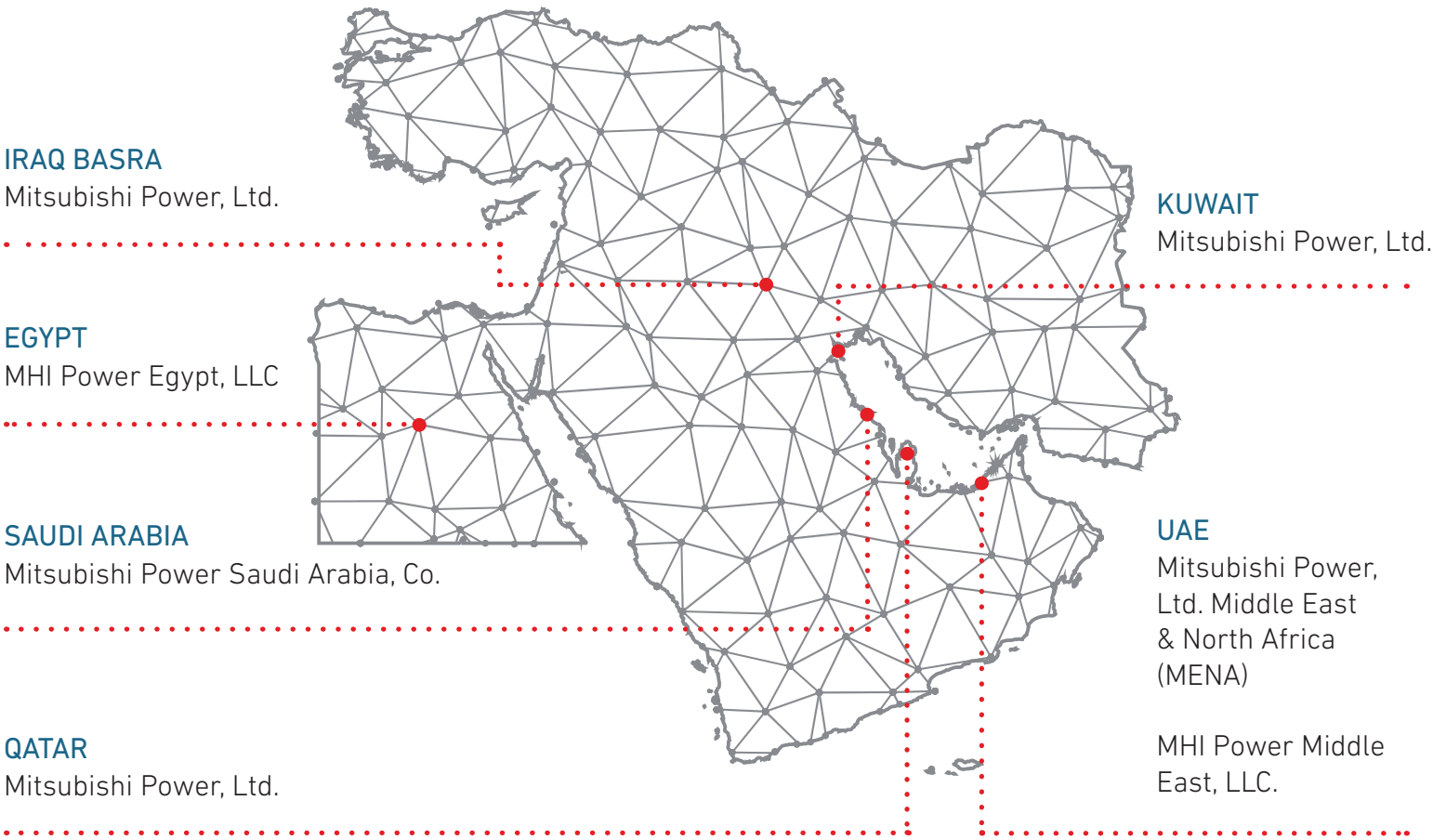
TECHNOLOGY AND INFRASTRUCTURE
The need for scale and the acceleration of a broad range of existing and new decarbonizing technologies.
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JOB AND SKILLS
Net-zero will be achieved with the people who can deliver it, so jobs and skills will be crucial. There is a need to create a culture of continuous learning, enabling talent to evolve and thrive with rapidly changing technologies.
- ✓

POLICY AND REGULATIONS
This will play a pivotal role in incentivizing the shift to low or zero carbon technologies. There is a need to globally align regulations that support ambitious yet pragmatic net-zero goals and mitigate any imbalance across the world.
- ✓

FINANCE
Lastly, the transition needs to be financed and needs to be backed by viable business cases. There is still work that needs to be done to explore new viable financial models for low-carbon solutions to reduce risk and accelerate adoption.

OUR MIDDLE EAST PRESENCE



For more information, please visit <https://power.mhi.com/regions/mena/>



THANK YOU