



Malta - SEMS

Transforming the Future of Energy Storage

IPER 2025

- January 29, 2025



Malta SEMS – Steam Energy Management and Storage

Flexible Power and Heat:

Malta SEMS' flexible power and heat supply is one of the best options for asset owners to manage changes in future needs and market structure

Lowest Combined Cost:

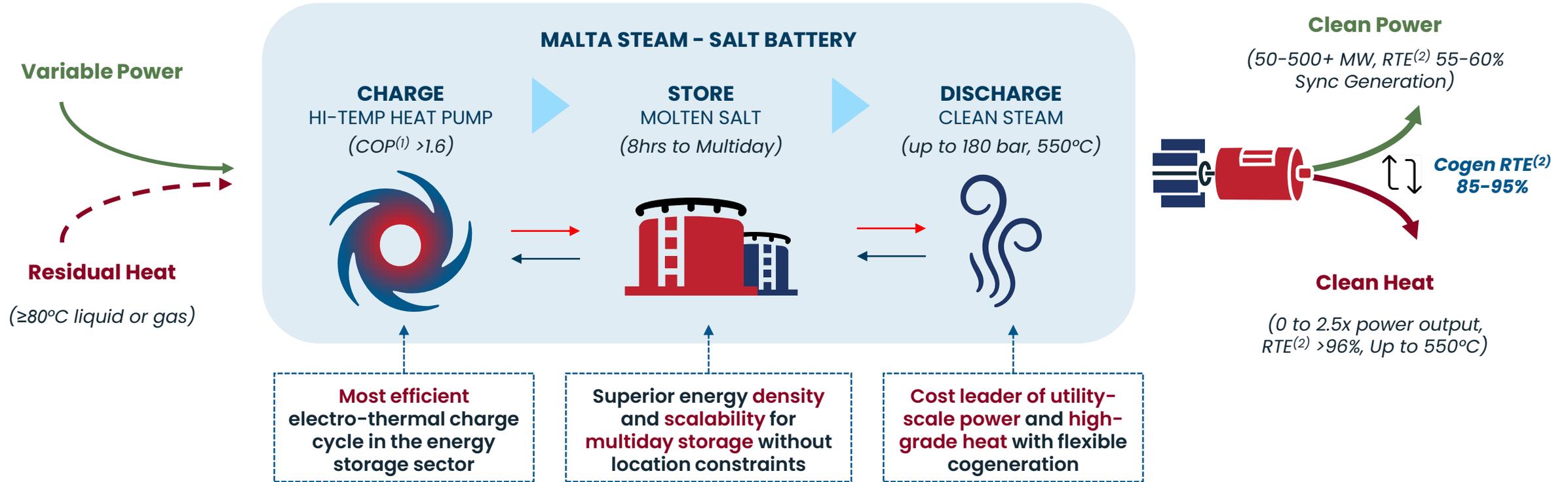
Malta SEMS can easily change its delivery mix (power and heat) and is more cost-efficient than a combined system of single-function technologies

At Scale:

Malta SEMS is uniquely able to support, enhance and replace the attributes that today can only be provided by fossil assets

Malta Steam Energy Management and Storage (SEMS)

Malta SEMS is a cost efficient, steam-based heat pump, storage and generation solution that is easily integrated with existing cycles or deployable as a stand-alone solution



Flexible Power and Heat



Integration-Ready with Existing Assets



Scalable

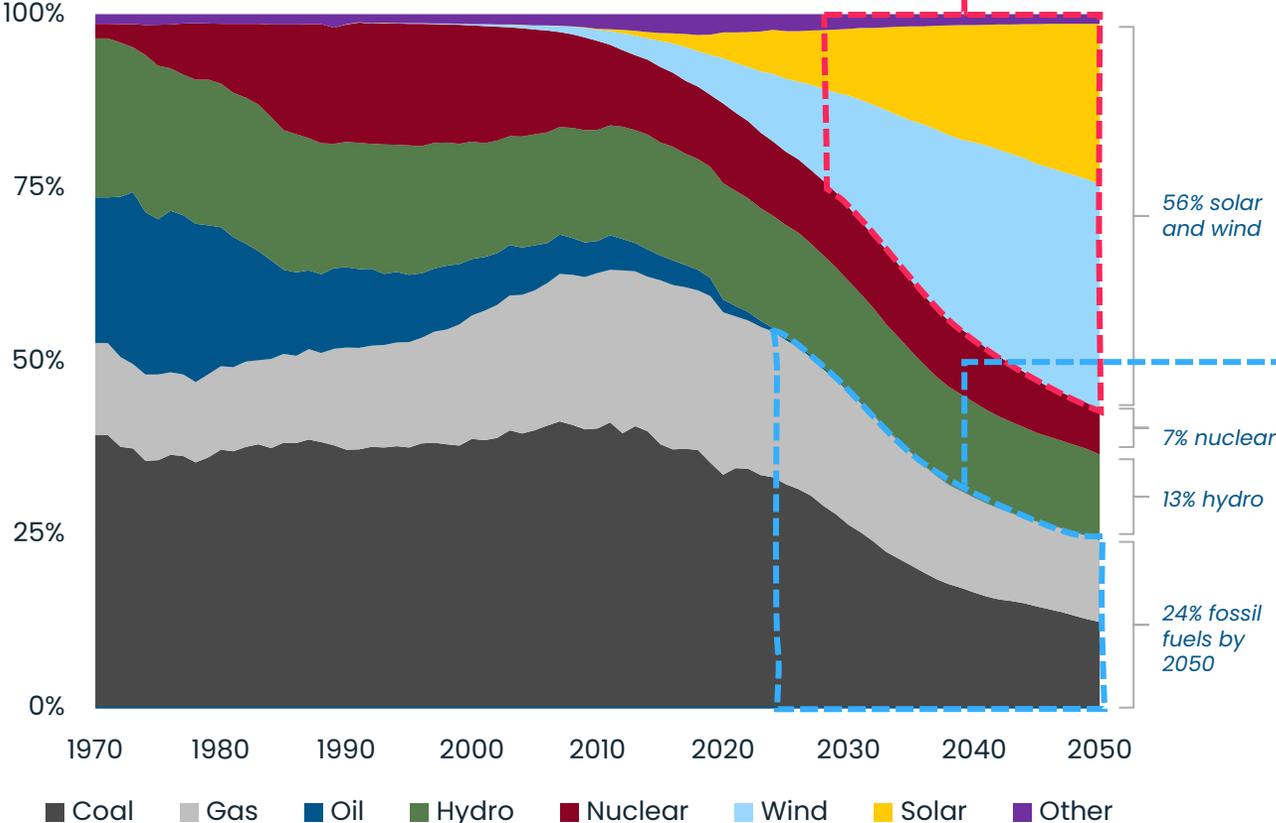
(50-500+ MW / 0.4-12+ GWh)

1. Coefficient of performance indicates the ratio of useful heating or cooling provided to energy needed for a system to operate.
2. Round-trip efficiency indicates the ratio of energy output to energy input.

Malta SEMS Use Cases

Malta's SEMS products address applications across the majority of the global power generation mix and various industrial use cases

Global Power Generation Mix



Malta SEMS Stand-alone Product Use Cases

1. Renewables Adoption



Flexible & Low-cost Storage



Grid Stability Services



Geothermal Power Plants



Next Generation Data Centers

Malta SEMS Integrated Product Use Cases

2. Decarbonization & Retirement of Fossil Assets



Natural Gas and Coal Power Plants

3. Heat / Steam Decarbonization & Electrification



District Heating / Cooling



Industrial Heating

Malta SEMS has the ability to integrate with and help decarbonize >75% of global power generation

Source: BloombergNEF Economic Transition Scenario.

Malta is the Standout Storage Solution in Identified Use Cases...

Malta is developing commercial opportunities across multiple use cases with a near-term focus on attractive integrated power and heat applications where Malta delivers outsized, quantifiable commercial value to customers

Geothermal



Malta SEMS enables a geothermal plant to become a flexible, dispatchable asset

District Heating / Cooling



Malta SEMS integrates easily in district heating and cooling to enable decarbonization and reinforced reliability

Combined Cycle Gas Turbine (CCGT) Transition



Malta SEMS enables cost-efficient decarbonization and mitigation of future fuel price risks (natural gas and clean hydrogen)

Utility-scale, Stand-alone



Malta SEMS for 24/7 clean power and industrial heat

Immediate Focus in 2025 on Malta-D Commercial Demonstration Plant

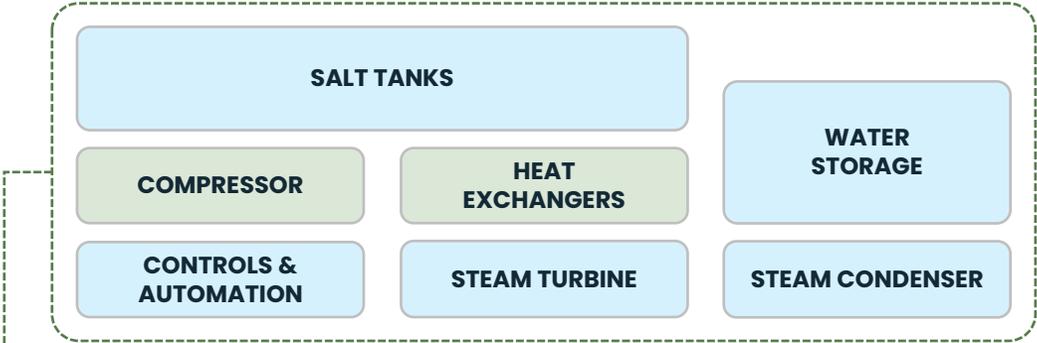
Commercial demonstration plant will validate the operability and control of the full-scale plant to lay the foundation for full-scale (~100 MW) Malta SEMS deployment



Malta SEMS Equipment is Commercially Available and Widely Deployed Today to Enable Simple Scale-up From Malta-D to Full-scale Malta SEMS

Key Components of Malta SEMS

Each subsystem has more than one million hours in operation



Development opportunities to optimize system cost and performance

Best-in-class Strategic Partners & Investors

Critical components led by industry leaders, committed to Malta as strategic investors



Heat Exchanger



High Temperature Compressor



SEMS Detailed Engineering & Balance of Plant

Thank you for your attention.





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