



# **MALTA'S ENERGY SHIFT: A SUSTAINABLE POWER TRANSITION**

**PUBLIC CONSULTATION DOCUMENT**



# 1 FOREWORD BY THE MINISTER

Malta's success has always depended on our ability to transform and to innovate – and nowhere is this more vital than in the way we power our future. In recent years, we spearheaded a bold and ambitious transformation of Malta's energy landscape. This shift is our declaration of intent to embrace the future, invest in ambitious projects, and place people at the very heart of our energy transition.

Through this journey, we are not only modernising infrastructure but also reimagining what a secure, sustainable, and affordable energy system actually means for every family and business in the Maltese islands. Our vision is clear: to position Malta as a regional leader in clean energy and climate neutrality by proving that small nations can lead with big ambition.

This document offers a comprehensive overview of our path towards a sustainable power transition. It highlights the progress we have already achieved and the ambitious goals we still have ahead. With projects already well underway, others entering advanced stages, and new initiatives and projects being prepared, the push for change is undeniable.

Our transition to a cleaner and more secure electricity future is not just about technology or infrastructure. It is a strategic investment in our people, our economy, and our country's long-term wellbeing. It is also central to our vision for achieving climate neutrality by 2050.

As this document demonstrates, we are being ambitious and bold in our vision and actions. We have every reason to be optimistic about reaching our aim, given the significant progress we have achieved over the past decade, which shows we have delivered on our promises. Ambition demands perseverance – the direction we take today will determine how we live and thrive from this point on. That is why we must continue to modernise, innovate and adapt. Let us move forward with purpose, determination, and the belief that a clean energy future is not only achievable but is within our grasp.

**Dr Miriam Dalli**

*BA (Hons), MA (Eur), MBA (Exec), LLD, MP*





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## **GLOSSARY OF TERMS, ABBREVIATIONS AND ACRONYMS**

<b>AI</b>	Artificial Intelligence
<b>ARMS</b>	Automated Revenue Management Services
<b>BESS</b>	Battery Energy Storage Systems
<b>BCA</b>	Building and Construction Authority
<b>CAA</b>	Climate Action Authority
<b>CCS</b>	Carbon Capture and Storage
<b>CfD</b>	Contract for Difference
<b>CO<sub>2</sub></b>	Carbon Dioxide
<b>DC</b>	Distribution Centre
<b>EED</b>	Energy Efficiency Directive
<b>EEZ</b>	Exclusive Economic Zone
<b>EV</b>	Electric Vehicle
<b>EWA</b>	Energy and Water Agency
<b>ENTSO-E</b>	European Network of Transmission System Operators for Electricity
<b>EPBD</b>	Energy Performance of Buildings Directive
<b>ERDF</b>	European Regional Development Fund
<b>EU</b>	European Union
<b>FiT</b>	Feed-in Tariff
<b>FSU</b>	Floating Storage Unit
<b>GDP</b>	Gross Domestic Product
<b>GHG</b>	Greenhouse Gas
<b>GIS</b>	Geographic Information System
<b>GSA</b>	Gas Supply Agreement
<b>HFO</b>	Heavy Fuel Oil
<b>HVDC</b>	High Voltage Direct Current
<b>IC1</b>	First Malta–Sicily Interconnector
<b>IC2</b>	Second Malta–Sicily Interconnector
<b>IC3</b>	Third Malta–Sicily Interconnector
<b>ICM</b>	Interconnect Malta
<b>IEA</b>	International Energy Agency
<b>LiDAR</b>	Light Detection and Ranging
<b>LNG</b>	Liquefied Natural Gas
<b>LTRS</b>	Long-Term Renovation Strategy
<b>MED9</b>	Alliance of nine Southern EU Mediterranean member states
<b>MIA</b>	Malta International Airport
<b>MW / MWh / MWp</b>	Megawatt / Megawatt-hour / Megawatt-peak

<b>NECP</b>	National Energy and Climate Plan
<b>NM</b>	Nautical Miles
<b>NSO</b>	National Statistics Office
<b>NZEB</b>	Nearly Zero-Energy Building
<b>OPP</b>	Organic Processing Plant
<b>PMC</b>	Preliminary Market Consultation
<b>PQQ</b>	Pre-Qualification Questionnaire
<b>PV</b>	Photovoltaic
<b>RED</b>	Renewable Energy Directive
<b>RES</b>	Renewable Energy Sources
<b>RES-E</b>	Renewable Electricity
<b>REWS</b>	Regulator for Energy and Water Services
<b>SME</b>	Small and Medium-sized Enterprise
<b>TEN-E</b>	Trans-European Energy Infrastructure (Regulation)
<b>TTF</b>	Thermal Treatment Facility
<b>TYNDP</b>	Ten-Year Network Development Plan
<b>UN</b>	United Nations
<b>V2G</b>	Vehicle-to-Grid
<b>WSC</b>	Water Services Corporation



## 2 EXECUTIVE SUMMARY

*Malta's Energy Shift* sets forth an ambitious vision to transform the island's electricity generation, importation, distribution, and consumption systems towards carbon neutrality by 2050. This transition is not incremental – it is a decisive shift, tailored to Malta's unique geographical, economic, and social context. Our goal is to secure an energy system that is affordable, reliable, resilient, and sustainable for every consumer and sector.

This transformation is supported by five interdependent pillars – the foundations of Malta's sustainable power transition:

- **Affordability** – Guaranteeing accessible and competitively-priced energy, with targeted support for vulnerable households and businesses to strengthen economic resilience throughout the transition.
- **Security of Power Supply** – Safeguarding national energy security and resilience by diversifying power sources, enhancing interconnections with neighbouring countries, modernising the grid, and deploying energy storage solutions to balance renewable supply.
- **Sustainability of Power Supply** – Accelerating the deployment of renewable energy, driving efficiency, exploiting energy from waste and scaling emerging technologies such as offshore wind, thereby reducing greenhouse gas emissions and environmental impact.
- **Diversification of Power Supply** – Broadening the energy mix beyond an imported fossil-fuel dependence by expanding renewables, advancing hydrogen-ready infrastructure, and forging regional cooperation to position Malta as a central player in a future Mediterranean Green Energy Hub.
- **A Consumer-Centric Approach** – Empowering consumers through smart technologies, smart tariff structures, and equitable access to renewables, and ensuring a just and socially inclusive energy transition.

These pillars are supported by Malta's National Energy and Climate Plan, Low Carbon Development Strategy, and a robust legal and investment framework aligned with European directives and funding mechanisms. Our Government's commitment is unequivocal. Continuous stakeholder engagement, strategic investment, and adaptive policymaking underpin this roadmap to a climate-neutral, economically vibrant, and socially inclusive energy future.

The journey to 2050 demands adaptive policies, bold cross-sector collaboration, and enduring dedication to balancing environmental goals with Malta's economic and social progress. Through this holistic approach, Malta will build a power system that not only enhances quality of life and drives prosperity but also meets its climate commitments head-on.

This is Malta's pledge: to lead by example, turn challenges into opportunities, and deliver a decarbonised power sector that is resilient, affordable, and sustainable for generations to come.

### VISION STATEMENT

To pioneer a sustainable energy future for Malta – one that enhances quality of life, achieves deep carbon reductions, and ensures energy is delivered with efficiency, security and fairness.

## 3 INTRODUCTION

### 3.1 The Global Context

The global energy landscape is shaped by a complex interplay of long-standing trends and fast-emerging factors that continue to redefine how energy is produced, consumed, and distributed. Global demand for energy continues to rise, driven by lifestyle changes, economic and population growth, and electrification. This increasing demand is met with limited supply, triggering repeated mismatches between energy demand and supply, and volatility in global energy prices.

Unprecedented disruptions, such as the COVID-19 pandemic and the Russian-Ukrainian conflict, have intensified these challenges, driving up energy costs and sparking renewed fears over energy security. Geopolitical instability in energy-rich regions, particularly the Middle East, has further magnified the fragility of global energy markets.

These pressures have accelerated the urgent need to rethink energy systems and accelerate the shift to renewable energy sources (RES). At the same time, the global movement to combat climate change, promote energy sustainability, cut greenhouse gas (GHG) emissions, and secure reliable energy supplies is gaining unstoppable momentum. Governments worldwide are scaling up investments in renewable energy and energy efficiency, determined to build robust, sustainable energy systems. This reality underscores the importance of strengthening regional energy cooperation and investing in cross-border infrastructure to ensure stable, affordable energy for the future.

### 3.2 The EU Context

The EU has set itself a historic goal: to become the world's first climate-neutral continent by 2050. Through the European Green Deal<sup>1</sup> and by adopting the EU Climate Law<sup>2</sup>, the EU has placed climate ambition at the heart of its economic strategy, setting legally-binding targets to cut GHG emissions by 55% by 2030 (compared to 1990 levels) and to achieve climate neutrality by mid-century.

Building on this, the European Commission launched the Clean Industry Deal<sup>3</sup> – a framework designed to accelerate the deployment of clean technologies and transform energy-intensive industries for Europe's transition to be both green and competitive.

To deliver on these commitments, the EU adopted the 'Fit for 55'<sup>4</sup> package, comprising 13 revised laws and 6 new legislative proposals that together chart a decisive course towards decarbonisation. These measures span climate, energy, and transport, reinforcing the EU's leadership in climate action by energy efficiency, expanding renewable energy use, and accelerating the transition to a carbon-free economy.

At the same time, the unprecedented events of recent years – soaring energy prices, global market volatility, and geopolitical crises – prompted the EU to act decisively. In response, it unveiled the REPowerEU plan<sup>5</sup> – a continent-wide plan to cut its dependence on Russian fossil fuel imports, diversify energy supplies, and scale up clean energy production. Backed by financial and legal measures, this plan aims to enhance and expand energy independence and resilience.

Amongst its strategic building blocks towards a climate-neutral Europe, the EU aims to:<sup>6</sup>

- maximise the benefits of energy efficiency, including zero-emission buildings;
- maximise the deployment of renewables and the use of electricity to fully decarbonise Europe's energy supply;

1 [https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal\\_en](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en)

2 *European Parliament & Council of the European Union. (2021, July 9). Regulation (EU) 2021/1119 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 (European Climate Law). Official Journal of the European Union, L 243, 1–17. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R1119>*

3 [https://commission.europa.eu/topics/competitiveness/clean-industrial-deal\\_en](https://commission.europa.eu/topics/competitiveness/clean-industrial-deal_en)

4 *European Parliamentary Research Service. (2022). Fit for 55 package (EPRS Briefing No. PE 733.513). European Parliament. [https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/733513/EPRS\\_BRI\(2022\)733513\\_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/733513/EPRS_BRI(2022)733513_EN.pdf)*

5 *European Commission. (2026, February 18). REPowerEU. [https://commission.europa.eu/topics/energy/repowereu\\_en](https://commission.europa.eu/topics/energy/repowereu_en)*

6 *European Commission, Directorate-General for Climate Action. (2019). Going climate-neutral by 2050: A strategic long-term vision for a prosperous, modern, competitive and climate-neutral EU economy. Publications Office of the European Union. <https://doi.org/10.2834/508867>*

- embrace clean, safe, and connected mobility;
- develop a competitive EU industry coupled with rapid transformation into a circular economy;
- develop an adequate smart network infrastructure and interconnections;
- reap the full benefits of bioeconomy and create essential carbon sinks; and
- tackle remaining CO<sub>2</sub> emissions with Carbon Capture and Storage (CCS).

### 3.3 The Local Context

Malta is not immune to the global disruptions reshaping the energy sector. But for us, these challenges are not only external pressures – they are also a strategic opportunity. By decisively aligning with European and global trends, Malta can position itself as a regional pioneer of clean and resilient energy solutions.

Our vision is clear: to transform Malta’s power generation, distribution networks, and consumption patterns through a forward-looking strategy that evolves in line with international best practices. This will deliver a cleaner energy system, one that is more affordable and sustainable, while remaining resilient to shocks. This is essential for Malta to achieve its commitment to climate neutrality by 2050.

Malta’s geographical realities – its limited land area and reliance on a single interconnector – present unique challenges. These challenges, however, also act as catalysts for innovation, smarter networks, further interconnections, and advanced storage solutions. By continuing to invest in these areas, Malta will ensure stability while also embracing a rapid integration of renewables.

This transition is a unique opportunity to redefine Malta’s energy landscape by strengthening economic and environmental resilience, ensuring security for households and businesses, and placing the consumer at the heart of this evolution. To deliver on this ambition, the Government is driving action across the following key priorities:

- Accelerate renewable energy adoption from solar power and heat pumps to emerging technologies like floating offshore wind and solar.
- Bolster energy security through new interconnections with neighbouring countries.
- Expand electrical supply capacity and infrastructure for power generation and distribution to meet the required demand all year round.
- Develop advanced large-scale battery storage solutions to enhance resilience and integrate more renewables.
- Deploy distributed localised battery systems to balance and supply efficiently.
- Shift indigenous power generation to greener sources while securing sustainable and affordable imports.
- Drive energy efficiency across all sectors to reduce overall energy use.
- Leverage sources of funds, financial instruments, and partnerships to foster innovation and regional energy cooperation.
- Champion behaviour changes by citizens, industry, and the Government alike.

Malta’s rapid economic growth over recent years has proven our national ability to build towards a future of long-term prosperity. The energy transition is Malta’s next frontier – a bold investment towards lasting resilience and climate leadership.



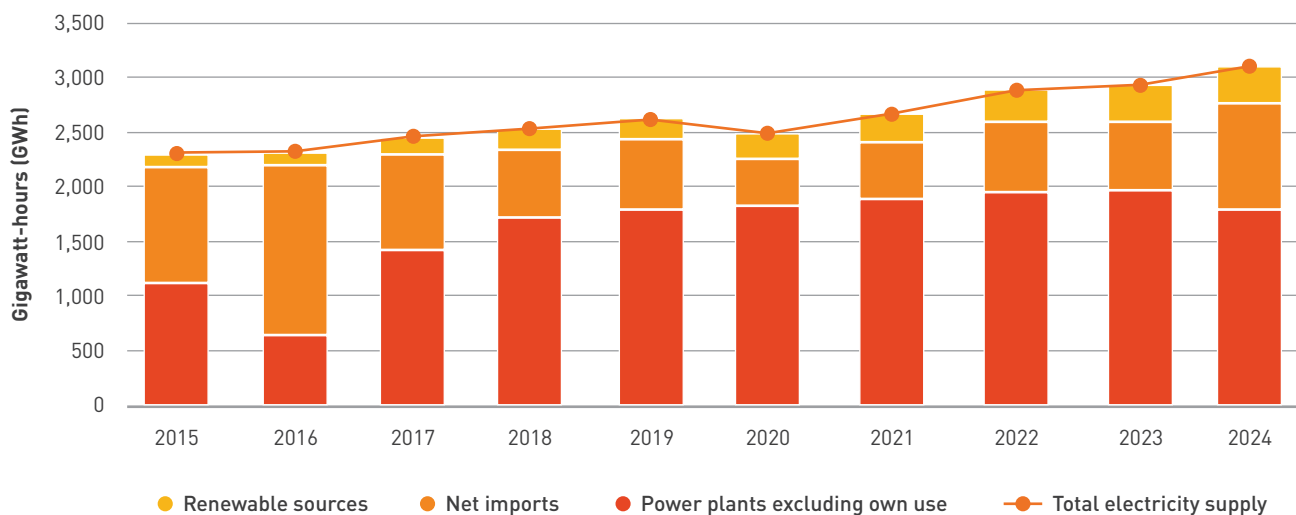


Figure 1: Historic electricity supply in Malta (Source: NSO<sup>7</sup>)

The Government is committed to ensuring that this rapid economic success is sustained by a vision that transcends conventional measures of power-generation growth. It achieves this by embracing a holistic approach that strikes a balance between economic prosperity, social wellbeing, and environmental sustainability.

Our vision for a sustainable power transition is built on five guiding pillars:

- Affordability
- Security of Power Supply
- Sustainability of Power Supply
- Diversification of Power Supply
- A Consumer-Centric Approach

These pillars form the foundations for a cleaner, stronger, future-proof Malta.

### 3.4 The Mediterranean as a Green Energy Hub

Our sustainable power transition vision extends well beyond our shores. Malta's strategic location at the heart of the Mediterranean gives it a unique role as a bridge between Europe and its neighbouring non-EU partners. We are determined to turn this position into an advantage, making Malta a catalyst for cross-border energy cooperation.

Malta has already demonstrated such leadership. In May 2023, the Maltese Government took the initiative to convene the first-ever meeting<sup>8</sup> of MED9<sup>9</sup> energy ministers, with the aim of ensuring energy affordability in the region. This landmark event brought together nine Mediterranean countries, which collectively committed to accelerating the renewable energy transition and enhancing security of supply. The Malta Statement<sup>10</sup>, signed at the meeting, laid the foundation for a vision of the Mediterranean as a corridor of onshore and offshore RES, powered by new interconnections between the EU and its non-EU neighbours. This vision is bold: to make the Mediterranean a centre of renewable investment and innovation, and a driving force towards a decarbonised, secure, and affordable energy future.

Despite its small size, Malta has consistently played a prominent and influential role on the international stage. The island has never shied away from bold, strategic initiatives to drive forward strategic opportunities. Our resolve is clear: Mediterranean cooperation must facilitate and drive cross-border projects that will make this long-term ambition a reality.

<sup>7</sup> National Statistics Office Malta. (2025). Electricity supply: 2024. <https://nso.gov.mt/energy/electricity-supply-2024/>

<sup>8</sup> Government of Malta, Department of Information. (2023, May 18). Med9 energy ministers reach agreement establishing a Mediterranean Green Energy Hub [Press release]. <https://www.gov.mt/en/Government/DOI/Press%20Releases/Pages/2023/05/18/pr230740en.aspx>

<sup>9</sup> The MED9 is an alliance of Southern EU countries, namely Malta, Croatia, Cyprus, France, Greece, Italy, Portugal, Slovenia, and Spain, that was informally established in 2013 to create coordination on issues of common interest within the EU, including the green transition and secure energy supplies.

<sup>10</sup> MED9. (2023, May 18). MED9 energy ministerial summit [Meeting document]. Parliament of Malta. <https://parlament.mt/media/122422/med9-energy-ministerial-summit.pdf>

## 4 PILLAR 1 – AFFORDABILITY

### 4.1 Introduction

Affordable electricity is the foundation of Malta's energy transition. A decarbonised power system must never come at the expense of households or businesses. For the Government, affordability is a core principle that ensures every citizen, especially the most vulnerable, is protected, and that every business has the opportunity to remain competitive and thrive. This Government is firmly committed to shielding citizens and businesses from volatile energy prices, while promoting responsible energy use. Through targeted interventions, investment, and innovation, we shall continue to absorb external shocks, encourage smarter consumption, and ensure that this energy transition strengthens – not weakens – our economy. For Malta, affordability is also about resilience. As a small island-state at the periphery of the EU, we cannot take stability for granted. That is why we invest in upgrading, expanding, and diversifying the island's energy sources to make sure that electricity remains accessible at a fair and stable price while supporting the system's long-term sustainability. Affordability, therefore, is not only about keeping costs down today, but about building confidence in the future. By guaranteeing that the clean energy transition is fair and inclusive, we promise that no family, worker, or business is left behind.

### 4.2 Strategic Capital Investments

Bold choices and decisive investment have always backed Malta's commitment to energy affordability. In 2013, we took the historic step to end the use of heavy fuel oil (HFO) for indigenous power generation, shifting instead to liquefied natural gas (LNG) technology, which is cleaner, more efficient, and a more sustainable solution. This transition stabilised tariffs, lowered emissions, and delivered real benefits for families and businesses, putting money back in people's pockets while giving companies the confidence to invest and grow.

The results spoke for themselves: economic growth surged, unemployment fell to record lows, and Malta outpaced many of its European peers. What began as a bold policy decision became the foundation for long-term stability. For over a decade, our energy tariffs have remained stable and affordable. This leadership has positioned Malta among the EU's most affordable countries for electricity, both for domestic<sup>11</sup> and commercial<sup>12</sup> consumers, as confirmed by Eurostat.

11 Latest Eurostat data ([https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Electricity\\_price\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Electricity_price_statistics)) shows that Malta had the second lowest electricity prices for household consumers in the EU in 2025 and was the least expensive when adjusted for differences in income and cost of living as per Purchasing Power Standard.

12 European Commission, Eurostat. (n.d.). Electricity prices for non-household consumers — bi-annual data [Data set]. Eurostat Data Browser. [https://ec.europa.eu/eurostat/databrowser/view/nrg\\_pc\\_205/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/nrg_pc_205/default/table?lang=en)

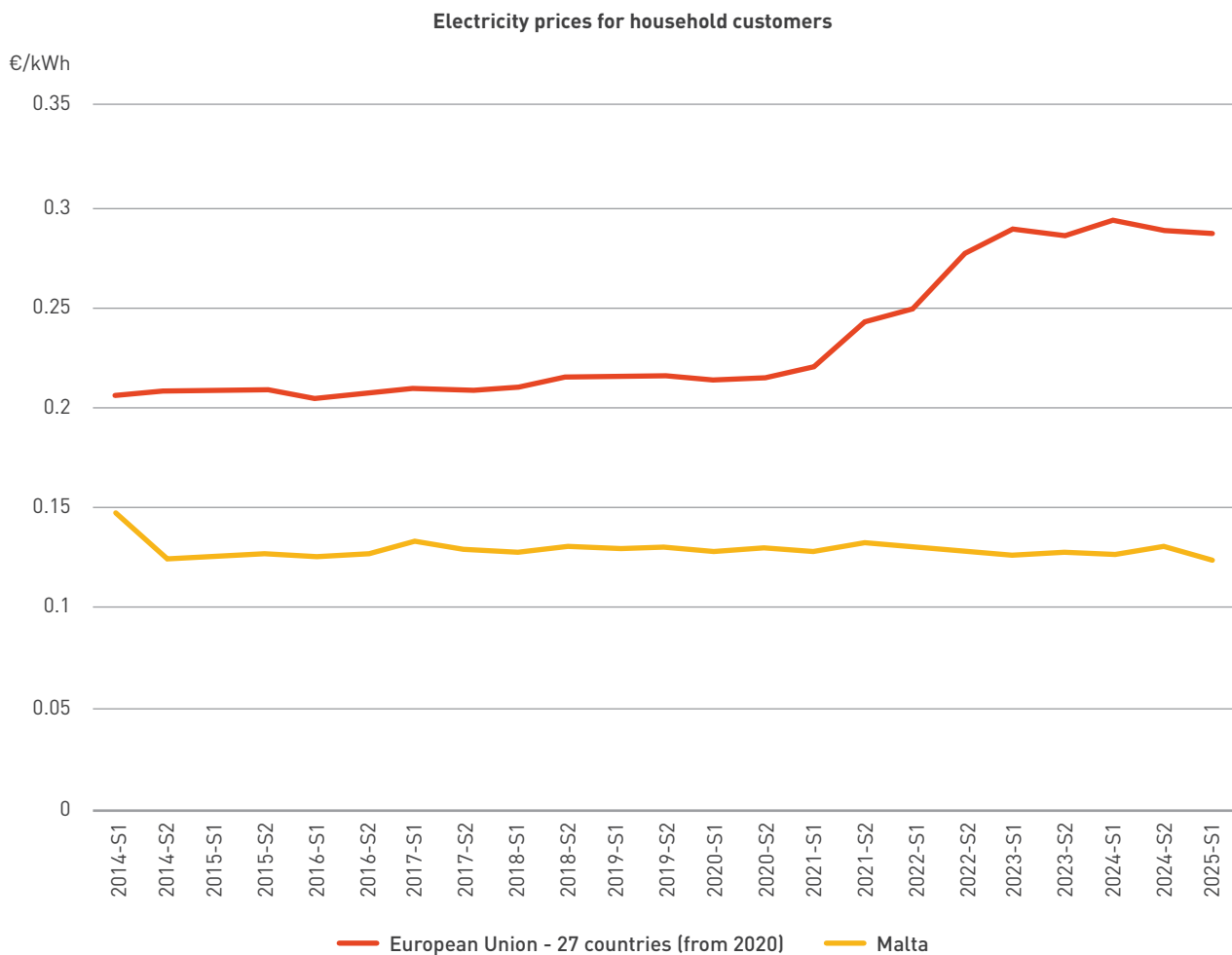


Figure 2: Household electricity prices in Malta 2008–2022, €/kWh (Source: Eurostat<sup>13</sup>)

Unlike other nations, we refused to burden households and industry with volatile energy costs, nor did we resort to polluting fuels to keep prices down. Instead, the Government intervened strategically, absorbing global shocks and cushioning the impact of external price hikes. This approach proved that sustainable investment, not austerity, is the right path forward.

Today, that vision continues. Thanks to unprecedented capital investment, we are upgrading and modernising Malta’s entire energy system through the following initiatives:

- Building a second electrical interconnector (IC2) – an investment of €300 million, securing greater stability and resilience;
- Allocating the necessary budget for grid-connected Battery Energy Storage Systems (BESS) to integrate more renewables and support household photovoltaic (PV) adoption;
- Investing extensively in renewables towards a steady shift to a sustainable power transition; and
- Launching through Enemalta a national nine-year plan to further strengthen and modernise the electricity distribution system across the Maltese islands, through strong investment in infrastructure, new distribution centres, and additional connections to increase the flexibility and resilience of the national grid. The plan includes 15 new distribution centres, a new 132kV link between Malta and Gozo, and specific projects for Gozo, while preparing the system for economic growth and increased demand in the coming years.

This wave of investment in Malta’s energy infrastructure is intended to future-proof the island’s economy. By reinforcing the country’s energy foundations, we are laying the groundwork for accelerated renewable deployment and greater interconnections that can deliver a fairer energy system to protect families and empower businesses.

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Eurostat. (2025, October 29). Electricity price statistics. Statistics Explained. European Commission. Retrieved April 12, 2026, from [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Electricity\\_price\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Electricity_price_statistics)

In turn, Malta will continue to champion sustainable investment over austerity, stability over volatility, and tangible progress over complacency.

### 4.3 A Power Paradigm Shift

Malta's energy transition is shaping a new paradigm, thanks to a vision that goes beyond short-term fixes and instead embraces bold medium and long-term investments to redefine what could be made possible for a small island-state. Undeterred by the geographical constraints of our island's landmass, we are making great efforts to harness the renewable energy potential of our surrounding waters – yet another opportunity Malta seeks to draw from its limitations. While the Mediterranean Sea's body of water immediately falls to large depths within a relatively short distance from our shores, making it unsuitable for traditional fixed-bottom structures, the Government launched a call for proposals for Malta's first offshore wind farm based on floating turbine technology. A Pre-Qualification (PQQ) call has so far been issued, focusing on the financial and technical capabilities of interested operators.

With an expected installed capacity of 300MW, located inside Malta's Exclusive Economic Zone (EEZ), this project represents a historic step forward. Although floating technology may still be an emerging technology, especially in the Mediterranean, Malta has chosen to lead, once again showing that ambition can overcome limitations. Despite our size, we are once more punching above our weight, taking this step as a commitment to generating an unprecedented amount of renewable energy over the coming years.

This is just the beginning. Alongside offshore wind, we are actively exploring avenues to harness other RES, particularly floating solar technology. We have issued a Preliminary Market Consultation (PMC) to test investor interest and market-readiness for the deployment of floating solar technology projects, such as PV farms, within the zone up to 12 nautical miles (NM) off the Maltese coast.

The response to the PMC has revealed that while some technologies have already undergone offshore testing, floating solar technologies evidently still require further development before reaching commercial maturity. However, these initiatives position Malta at the cutting edge of renewable innovation, where the Government, academia, and industry work hand in hand to accelerate deployment, manage risks, and balance innovation with financial prudence.

Malta will continue exploring the possibility of floating technologies, such as solar energy, within the 12NM zone to assess the potential of areas suitable for eventually hosting pilot projects that can also be scaled up at a later stage. Floating technology could eventually provide an alternative for Malta to scale renewables, without compromising the character of its islands. In this sense, Malta will continue supporting research and development to remain at the forefront in this field.

Even as Malta transitions towards a higher share of intermittent renewables and increased electrification, maintaining affordability will require the right balance between infrastructure investment, grid efficiency, and market design. At the same time, the Government is expanding its support for households. From personalised energy-efficiency advice to financial grants for solar water heaters, roof insulation, PV systems, and battery storage, we are reaching every citizen with the benefits of the energy transition.

We continue to reinforce the importance of energy efficiency and of improving the energy performance of the building envelope, as this not only ensures energy affordability but also that our homes are adequately heated and cooled, contributing to the overall health and well-being of our citizens. Since 2014, we have had a dedicated team of professionals who, upon request, visit homes, analyse electricity bills and consumption patterns, and freely provide tailored energy conservation advice.

For vulnerable households, we have taken a step further – replacing old, inefficient appliances and upgrading their building-envelope insulation, thereby guaranteeing that no one is left behind. We are empowering our citizens to continue reducing their electricity bills without compromising their quality of life. The automatic adjustment of the eco-reduction benefit, serves to deter unnecessary waste by offering consumers a staggered discount based on average annual consumption. This measure alone results in annual savings of around €8.5 million<sup>14</sup> for Maltese families. With bi-monthly issuance of water and electricity bills, consumers can monitor their consumption closely and take prompt action to curb unnecessary usage.

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14 <https://finance.gov.mt/wp-content/uploads/2024/02/fe24-20-Energy.pdf>

Moreover, an energy benefit is available to very low-income earners or on humanitarian grounds to reduce utility bills and prevent anyone from being left behind.

Malta will retain this social aspect prominently in its power transition.

We will continue to make schemes available to facilitate citizens' investment in renewable energy and energy efficiency. Over the past five years alone, families have received around €68 million in support, with nearly €16.5 million allocated in 2025 through direct PV, inverter and/or battery grants. The support was provided through a mix of upfront grants and long-term feed-in tariffs (FiT) for PV systems of less than 40kW. Between 2021 and 2025, support allocated through FiT to be paid over 20 years amounted to over €31 million, while grants for PV installations, including batteries and inverters, totalled more than €32 million. Additional support was also provided for PV systems installed with grants, which benefit from a 10.5c/kWh FiT paid over 20 years, amounting to a further €4.2 million across the same period.

Overall, this sustained level of investment clearly demonstrates a long-term national commitment to supporting families in adopting renewable energy solutions, reducing energy costs, and accelerating the transition towards a more sustainable and resilient energy future.

To further incentivise energy-efficient properties and a more sustainable building stock, initiatives such as the 'Ixtri Proprietà Sostenibbli'<sup>15</sup>, and 'Irrinova Darek'<sup>16</sup> offer financial grants to buyers of properties that meet set sustainability standards.

This is the essence of Malta's power paradigm shift: turning constraints into catalysts, innovation into action, and ambition into concrete projects that deliver cleaner, fairer, and more secure energy for all.

## 4.4 Business Incentives

Malta's economic success is driven by its people – by entrepreneurs, innovators, and businesses that continue to adapt and lead. This Government's vision is to ensure that every enterprise, from micro-SMEs to large industrial players, can be an active partner in Malta's green transition. We believe that sustainability and competitiveness must go hand in hand. That is why we continue to support businesses in adopting cleaner, more efficient practices through direct incentives, targeted grants, and strong research and innovation policies.

Micro and small enterprises are being empowered through national schemes<sup>17</sup> to reduce waste and improve their energy and water efficiency for lower operating costs. These businesses receive expert guidance on sustainability and gain access to funding helping them to modernise their operations. SMEs are eligible for grants up to €6,000 to conduct certified energy audits – a practical first step that helps identify energy-saving opportunities and results in lower bills and stronger competitiveness.

Still, our ambition goes beyond this. Through the *National Strategy for Research and Innovation in Energy and Water*<sup>18</sup>, launched specifically for the critical sectors of research and innovation, we are bringing together a myriad of stakeholders from the public sector, academia, and industry to collaborate in creating a dynamic ecosystem that nurtures local talent, accelerates innovation, and drives the development of unique solutions for Malta's realities. Since its launch in 2020, this strategy has already channelled over €2.6 million into 18 projects, directly addressing Malta's energy and water challenges. Such investments are helping Maltese researchers pioneer energy solutions that enhance affordability, optimise resource use, and strengthen Malta's resilience.

Our approach is clear: we see businesses not just as participants in the energy transition, but as catalysts for it. Through the Smart and Sustainable Investment Grant Scheme<sup>19</sup>, businesses can benefit from grants

15 Building and Construction Authority. (2025). *L-iskema ixtri proprjetà sostenibbli 2025 [Buy sustainable property scheme 2025]*. <https://bca.gov.mt/mt/skemi-magħluqa/l-iskema-ixtri-proprjeta-sostenibbli-2025/>

16 Building and Construction Authority. (2026). *Irrinova Darek: Residential renovation grant scheme 2026*. <https://bca.gov.mt/open-schemes/irrinova-darek-residential-renovation-grant-scheme-2026/>

17 Government of Malta, Energy and Water Agency. (n.d.). *Promotion of energy audits in small and medium sized enterprises scheme*. [https://www.servizz.gov.mt/en/Pages/Environment\\_-Energy\\_-Agriculture-and-Fisheries/Energy/Energy-and-Water-Services/WEB2224/default.aspx](https://www.servizz.gov.mt/en/Pages/Environment_-Energy_-Agriculture-and-Fisheries/Energy/Energy-and-Water-Services/WEB2224/default.aspx)

18 Energy and Water Agency. (2025, July 11). *R&I grant scheme 2025*. <https://energywateragency.gov.mt/ri-grant-scheme-2025/>

19 Government of Malta, Malta Enterprise. (n.d.). *Smart and sustainable investment grant*. [https://www.servizz.gov.mt/en/Pages/Economy\\_-Business-and-Trade/Business-and-Trade/Industry/WEB-06387/default.aspx](https://www.servizz.gov.mt/en/Pages/Economy_-Business-and-Trade/Business-and-Trade/Industry/WEB-06387/default.aspx)

covering up to 50% of eligible costs, with a maximum grant of €100,000 per project. When combined with available tax credits, total aid can reach up to 70%, significantly reducing the burden of investment in cleaner technologies, machinery, and processes that reduce emissions and improve energy efficiency. This support extends across the business landscape by helping enterprises decouple economic growth from energy consumption, adopt circular economy principles, and innovate towards achieving carbon neutrality. By leveraging energy efficiency and renewable energy, Maltese businesses are building a competitive, low-carbon economy that grows stronger and greener.

This Government remains committed in its vision to make sustainability a core pillar of economic prosperity. Through updated policies and continued financial incentives, we will ensure that Maltese businesses can lead the way, proving that environmental responsibility and economic success are two sides of the same coin.

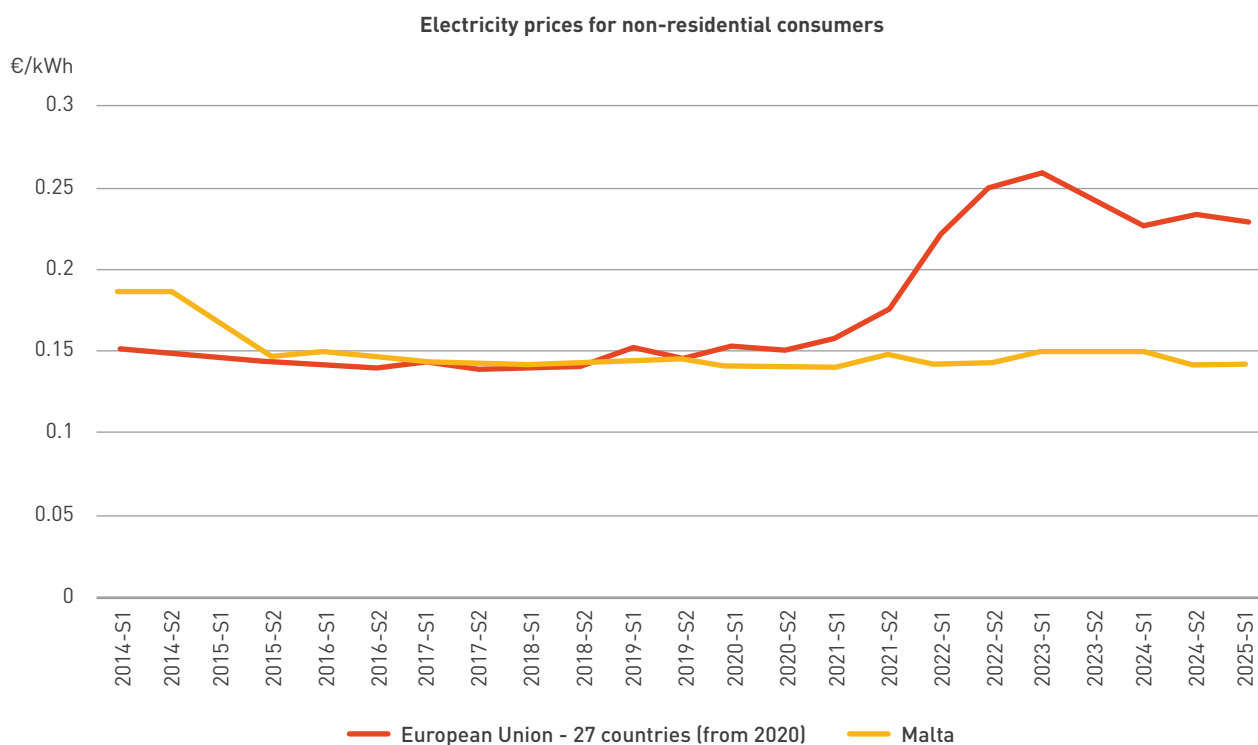


Figure 3: Non-residential electricity prices in Malta 2008–2022, €/kWh (Source: Eurostat<sup>20</sup>)

## 4.5 Malta’s Electricity Market

Malta’s electricity market is built on a framework that balances security, affordability, and sustainability – three pillars that continue to define our national approach to energy policy. Guided by EU legislation and shaped by our island’s specific realities, Malta’s system is not just a product of necessity but a strategic model of resilience and adaptability.

Since its liberalisation in 2004, Malta’s power generation landscape has evolved into a mix of public and private operators with a reliable and diversified electricity supply. Enemalta, the national energy provider, remains central to this system, operating emergency back-up assets, the national grid, and the island’s existing electricity interconnector with Sicily. Alongside private operators, Enemalta is the anchor to the stability of the Maltese energy market – enabling a seamless integration of energy infrastructure.

Despite its small size and peripheral geography, Malta has leveraged its strategic flexibility to guarantee energy security while insulating consumers from the volatility of international energy markets. While many EU member states have faced sharp fluctuations in electricity prices, Malta’s tailored framework has enabled the island to maintain stability for households and businesses alike since 2014. This stability has had a tangible impact on people’s lives. For over a decade, energy tariffs have remained stable – a record unmatched across the EU. This achievement shielded Maltese families and businesses from global energy

<sup>20</sup> Eurostat. (2025, October). Electricity price statistics. Statistics Explained. European Commission. [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Electricity\\_price\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Electricity_price_statistics)

shocks that followed the pandemic and geopolitical crises. The benefits are visible across our economy: strong job creation, low inflation, and one of the lowest unemployment rates in Europe, coupled with the lowest risk of poverty or social exclusion.

Our unique market structure, permitted under EU derogations, enable Malta to safeguard its citizens as it transitions towards cleaner energy. This structure allows Enemalta to operate as a single, integrated system operator, ensuring coherence in generation, transmission, distribution, and supply. This integration has been key to maintaining efficiency, protecting consumers, and enabling strategic investments in renewable energy and interconnections. It is precisely because of the proven success of this model that the Maltese Government intends to extend the existing derogation, for a single-supplier framework by a further eight years, effectively until 2035. This will enable an economically stable transition towards a carbon-neutral power sector that can prioritise affordability for all households and enterprises.

At the same time, Malta remains fully aligned with the broader EU vision for a sustainable, interconnected electricity system. As part of our long-term strategy, we are exploring new instruments, such as dynamic pricing and enhanced consumer participation, to keep our energy system modern, fair, and adaptive. We will continue evaluating opportunities for expanded supplier choice and market evolution, in line with EU objectives and technological progress. In this regard, Malta is pursuing a path that prioritises efficiency, renewable integration and innovation.

Our vision is to sustain a market that combines the flexibility of a small system with the ambition of a continental one. As we move towards carbon neutrality, we will keep Malta's electricity market shielded from external turbulences, offering citizens and businesses the stability and affordability that have become the hallmarks of Malta's energy success story.

## 4.6 MED9 Steering Committee

The 2023 Malta Statement, signed during the first-ever meeting of MED9 Energy Ministers, marked a defining moment in Europe's collective drive towards a more secure energy future. It set in motion a series of transformative actions, foremost among them, the establishment of the MED9 Steering Committee, which brings together nine EU member states united by a shared purpose: to shape and establish the Mediterranean Green Energy Hub – a space where countries align vision with strategy to unlock the full renewable potential of the Mediterranean basin. Through high-level collaboration and the guidance of leading technical and scientific experts, the committee serves as a catalyst for cross-border cooperation. As the initiator of this initiative, Malta is a driving force in this process, actively working with the European Commission to quantify the vast potential of the Mediterranean as a powerhouse of clean energy – from solar and wind, to green hydrogen and strategic interconnections. Our ambition is to drive the Mediterranean region as Europe's southern gateway to sustainability, a bridge linking continents through shared energy security and opportunity.

We profoundly believe in Malta's strategic role. Leveraging our location at the heart of the Mediterranean, we are determined to instigate a regional energy ecosystem that transforms the Mediterranean Sea into a corridor of green growth. Through this initiative, Malta is laying the groundwork for future access to diversified, affordable renewable sources, ensuring that the benefits of clean energy extend beyond borders, reaching citizens and industries across the region. Our commitment is for Malta to remain at the forefront of Mediterranean cooperation, advancing a sustainable energy transition that delivers tangible results – lower consumer costs, stronger energy security, and a greener, more resilient tomorrow.

# 5 PILLAR 2 – SECURITY OF POWER SUPPLY

## 5.1 Introduction

Security of electricity supply lies at the heart of Malta's energy strategy – it is the backbone of a thriving economy and a resilient society. For an island state like Malta, physically detached from mainland Europe, the uninterrupted availability of affordable and reliable power is not just a necessity but a national imperative. We are committed to build an energy system that is as resilient as it is forward-looking, one that adapts seamlessly to short-term disruptions while remaining robust against long-term challenges. This requires more than infrastructure – it demands foresight, investment and innovation.

Energy security for Malta is being strengthened through a diversified and flexible power mix that integrates traditional sources with a growing share of indigenous renewables and cutting-edge technologies. Further electrical interconnections, floating offshore wind, solar expansion, battery energy storage, and off-grid backup systems are not merely additions to our grid; they represent a strategic evolution towards energy resilience. Together, they reinforce Malta's ability to remain stable, even during high seasonal demand peaks or external supply fluctuations.

We are equally committed to continuing to modernising and strengthening our distribution system to withstand shocks, adapt to new realities, and operate with the flexibility required in the age of renewables. This is the foundation of our energy independence – an intelligent grid, capable of balancing security with sustainability.

Recognising the centrality of power generation to Malta's economy, we continue to assess vulnerabilities and strengthen preparedness. Our Vulnerability Risk Assessment highlights the importance of safeguarding our interconnected grid – the lifeline of our economy. To this end, we are embedding resilience planning into every layer of our energy policy. Regular risk assessments and preparedness plans ensure Malta remains proactive, not reactive, to emerging threats.

## 5.2 Malta's Power Infrastructure

Malta's power infrastructure is a finely balanced system designed to deliver reliability today while preparing for the energy realities of tomorrow. Our baseline power generation currently relies on a mix of local power plants, land-based RES, and our existing interconnector with Sicily (IC1). In addition, backup generation plants remain available to safeguard a continuous supply during emergencies.

Yet, we are not content with stability alone – we need to redefine resilience.

Our ambition is to significantly increase the share of renewables in Malta's power mix, raising the renewable energy contribution from the current 17.2% to 25% by 2030, to move steadily towards carbon neutrality by 2050.

To achieve this, we are diversifying across multiple fronts, onshore and offshore. We are expanding land-based solar installations, incentivising innovation in the blue economy, and unlocking the potential of floating offshore wind. This strategic integration of RES beyond Malta's territorial waters will create a balanced, complementary energy profile that improves upon the intermittency of renewables while maintaining a more stable and sustainable electricity supply.

Diversification is the cornerstone of this sound and secure power mix. By preventing any single energy source from holding a disproportionate share, we are protecting Malta from external shocks and guaranteeing that our citizens and businesses enjoy reliable, affordable, and cleaner energy. Our next-generation power system will also rely on strategic interconnections and advanced storage capacity. Large-scale Battery Energy Storage Systems (BESS), together with distributed battery networks, will play a crucial role in mitigating the variability of additional renewables and in maintaining grid stability as our renewables share expands.

Evolution of electricity generation in Malta since 2000

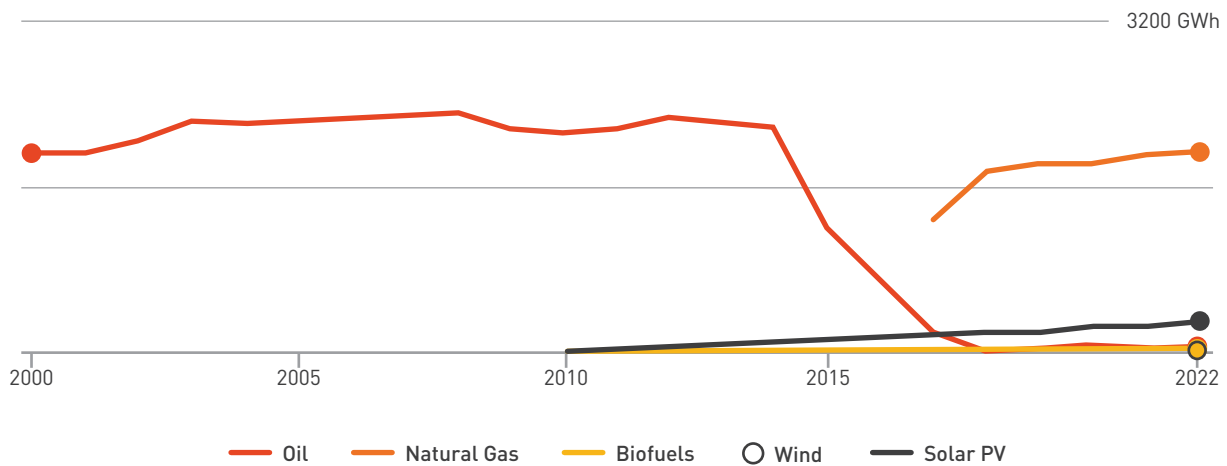


Figure 4: Evolution of electricity generation in Malta (Source: IEA<sup>21</sup>)

We recognise that this transition comes with challenges, but we are prepared to meet them. While the global hydrogen market continues to evolve, Malta has already acted decisively by upgrading the design of its gas pipeline to be hydrogen-ready. This forward-thinking decision ensures that when the market conditions are right, we can integrate green hydrogen into our system, adding a new, transformative dimension to Malta’s energy future.

At the same time, we value the importance of local generation capacity. While interconnectors strengthen our ties to the European grid, indigenous power plants provide the strategic resilience essential for an island nation. In times of crisis or volatility, these backup plants – capable of operating with long-term stored fuels – serve as a reliable safeguard, ensuring Malta never loses its energy independence. Through this carefully orchestrated balance of diversification and preparedness, Malta is shaping a future-proof power infrastructure that is also flexible and self-reliant – one that ensures security of supply while propelling our country towards carbon neutrality.

### 5.3 Malta’s Distribution Network

Beyond generation, Malta’s power distribution network serves as the nervous system of our energy transition – a dynamic, evolving grid designed to deliver stability and resilience amid changing demands. Over the past years, Malta has undertaken transformative investments to reinforce and modernise its power distribution network. Through extensive upgrades, new substations, cable replacements and reinforcement, and advanced grid technologies, we are keeping our infrastructure robust enough to meet growing energy needs, and flexible enough to accommodate the rapid rise of renewable generation. Our commitment remains to build a next-generation grid that can seamlessly integrate diverse energy sources – from traditional, baseload plants to distributed renewables and energy storage systems. This modernisation effort not only enhances reliability for households and businesses but also lays the foundation for Malta’s transition to a smarter, digitally-connected energy system.

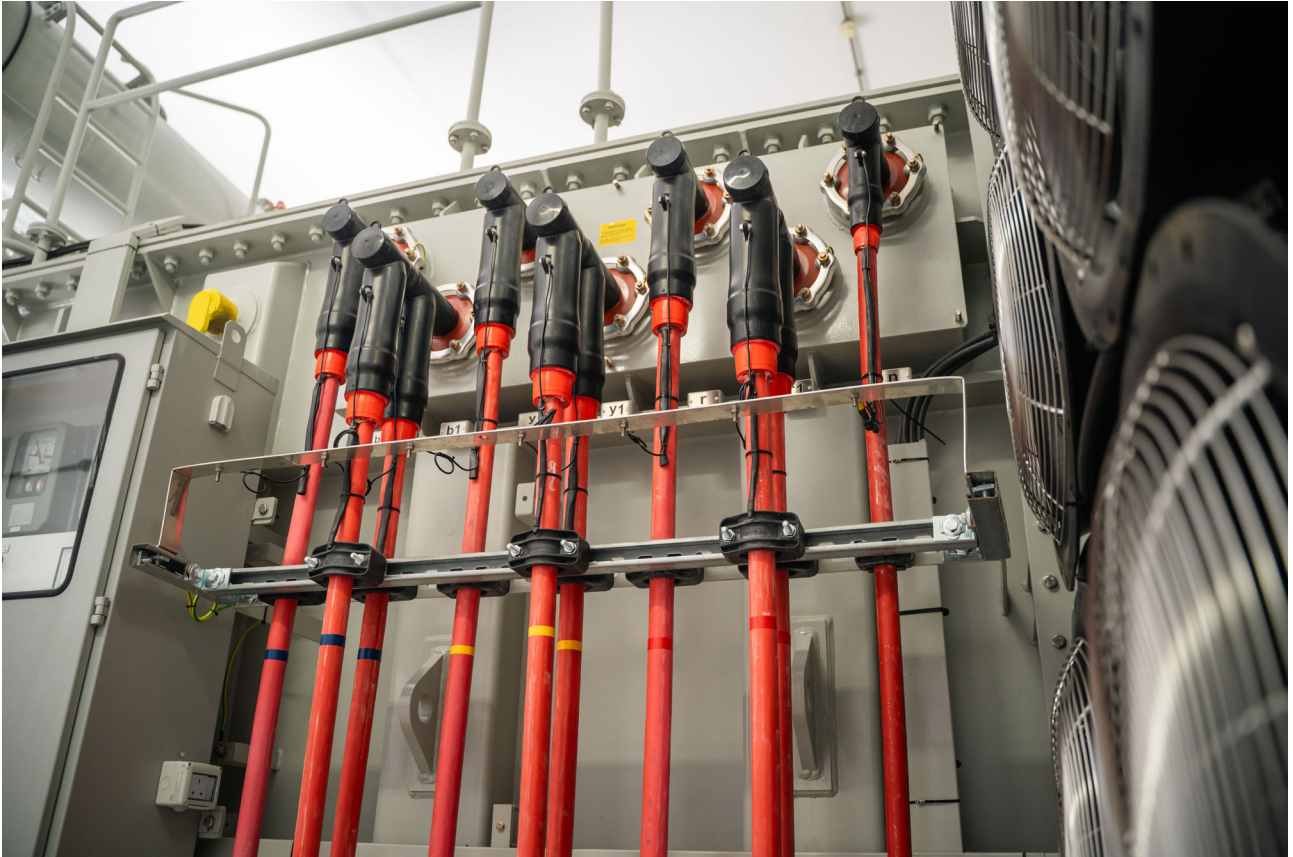
In parallel, we continue to invest in grid automation and monitoring technologies. These advancements enable quicker detection and resolution of network issues, enhance efficiency and reduce the risk of power interruptions, particularly during high seasonal demand or extreme weather conditions. Through such innovation, Malta’s grid is evolving from a passive infrastructure into an intelligent system capable of anticipating, adapting, and responding to the challenges of the future.

Long-term plans include the construction of new distribution centres (DC) in areas like Naxxar and Siggiewi. Upgrades are completed at St Andrews and Mosta, and underway at Msida and at a new 132KV link between the terminal station in Maghtab and Mosta distribution centre in preparation of the second Malta-Sicily interconnector. In this regard, Enemalta has launched a national nine-year plan to further strengthen and modernise the electricity distribution system in Malta and Gozo, through strong investment in infrastructure.

21 International Energy Agency. (n.d.). Malta: Energy mix [Data profile]. <https://www.iea.org/countries/malta/energy-mix>

Crucially, Malta's grid upgrades are also being aligned with our broader climate adaptation and resilience strategies. By embedding flexibility and redundancy across the system, we are keeping our energy supply secure and uninterrupted, even under stress conditions or global supply shocks.

Our distribution network is expected to support higher renewable integration, electrified mobility and the smart technologies that will define the next generation of Maltese energy use. In doing so, we are reimagining reliability by transforming Malta's grid into a model of security, sustainability and innovation for the region.



*Newly installed transformer at St. Andrew's DC following increase in capacity*

## 5.4 Large-Scale Battery Energy Storage Systems

Large-scale Battery Energy Storage Systems (BESS) are central to Malta's vision of a smarter, more secure and more sustainable energy future. These systems play a vital role in strengthening the country's energy resilience to preserve a steady and reliable power supply while unlocking the full potential of renewable energy generation.

For Malta – an island state isolated from continental grids – BESS represent a game-changing solution. These systems not only bridge the gap between periods of high renewable generation and high demand but provide also a powerful tool to stabilise the grid, enhance efficiency, and reduce dependence on fossil fuels. By alleviating congestion within the distribution network and mitigating grid bottlenecks, large-scale BESS installations enable the seamless integration of renewable energy projects. They level out fluctuations caused by solar intermittency and cloud variability, thereby improving plant reliability and ensuring a more consistent supply. This translates directly into lower emissions, enhanced operational efficiency and improved grid stability.

Beyond this, the capacity of BESS to store energy produced during peak renewable output and discharge it during demand surges, allows Malta to flatten the curve between day and night generation. The result is a more balanced system – one that reduces strain on conventional plants, and therefore cutting emissions, while increasing the overall efficiency of national power generation. This strategic deployment provides a critical safeguard during emergencies or sudden drops in frequency. The rapid response capability of

BESS means that power supply remains stable even under stress conditions. Moreover, BESS plants are far more than energy storage units – they are active enablers of grid intelligence. These plants provide ancillary services such as voltage control and frequency regulation, acting as stabilisers that keep the system balanced and responsive. In essence, they have the potential to transform Malta’s grid from a traditional power network into an adaptive energy system.

Recognising their strategic importance, the Government has entrusted Interconnect Malta (ICM) with implementing two flagship BESS projects, co-financed by the EU. The first – an 8MW, 20MWh project – will be located near the Marsa North Distribution Centre in the former Power Station known as A-station. The second – a 32MW, 64MWh system supported through the ERDF programme – will be located within the Delimara Power Station precincts.

Together, these projects mark a transformative step forward for Malta’s energy infrastructure, enhancing grid resilience and energy flexibility but also serving as a foundation for future expansion in the evolving energy landscape. These initiatives will inform Malta’s long-term strategy for energy storage integration, ensuring that any future deployment is optimised in sync with national needs and the continued evolution of Malta’s innovation-driven energy system. To support short-term demand peaks and facilitate the continued integration of further RES into Malta’s energy mix, the Government is planning further investment in BESS, recognising their role in enhancing security of supply and strengthening grid resilience in a sustainable way.

## 5.5 Malta-Sicily Second Interconnector

The second Malta-Sicily Interconnector (IC2) marks a decisive step in Malta’s long-term strategy to strengthen its energy resilience and deepen its connection with the European electricity network. It is a project that embodies foresight, collaboration and progress, allowing Malta to remain securely powered as it transitions towards a cleaner, more diversified energy future.

Following the successful commissioning of IC1 in 2015, which for the first time linked Malta’s electricity grid to mainland Europe, the Government embarked on developing a second subsea interconnector. This new link, nominally rated at 225MW, is included in the European Ten-Year Network Development Plan<sup>22</sup> 2022. It will be laid in parallel to IC1 but separated by a safe distance, providing an essential route in the unlikely event of cable disruption or damage. The project is being led by ICM, which has meticulously coordinated all technical, environmental, and permitting processes for both Malta and Italy. Environmental Impact Assessments and permitting studies have been successfully concluded in both countries, with ensuing permit approvals in January 2024 for Malta and December 2024 for Italy.

Valued at around €300 million, IC2 has been recognised as a project of strategic importance for the country. It has successfully secured €261 million in ERDF funding allocation under the 2021–2027 Operational Programme, reflecting Malta’s commitment to investing in infrastructure that underpins both energy security and sustainability.

The implementation phase for IC2 is well underway. The 220kV land cable has been manufactured and cable-laying operations have commenced simultaneously in Malta and Sicily. The manufacture of the subsea cable is also progressing at a steady pace. Detailed engineering for the remaining components, including 220kV reactors and transformers, has been completed, with production underway to ensure timely delivery. Once operational, IC2 will serve multiple national objectives, including:

- meeting the projected growth in electricity demand driven by economic growth and electrification;
- further diversifying Malta’s energy mix, allowing greater access to renewables imported from the European grid;
- enhancing system stability and reliability, reducing vulnerability to fluctuations in local generation;
- helping to increase local RES and balance intermittent renewable energy; and
- enabling a more efficient balance between renewable integration, storage capacity and conventional generation.

Beyond its technical merits, IC2 represents a symbol of Malta’s integration within the European energy family – a tangible link delivering electricity but also one that strengthens cooperation, solidarity, and collective resilience. By expanding interconnection capacity, Malta is reinforcing its energy resilience while positioning itself as a responsible partner contributing to the EU’s broader climate and energy goals. Interconnectors

22 *ENTSO-E. (2022). Project sheet 1085: Malta-Sicily second cable interconnector [TYNDP 2022 project sheet]. <https://tyndp2022-project-platform.azurewebsites.net/projectsheets/transmission/1085>*

such as IC2 are at the core of Malta's energy transition. They ensure that as we diversify, decarbonise, and sustainably transform our energy systems, our supply remains uninterrupted, secure and competitive.

Looking ahead, IC2 will play an increasingly critical role in reducing reliance on fossil fuels, and safeguarding Malta's position as a forward-looking island nation, leading the way in sustainable energy integration. IC2 will be complemented by additional interconnections to the European grid as the country pursues diversification through a third interconnector (IC3), which will connect to a different location in Sicily and operate at a different voltage level than IC1 and IC2, thereby providing resilience.



*The second interconnector significantly strengthens security. With a nominal capacity of 225MW, development permits in Malta and Italy have been achieved, and construction is underway.*

## 5.6 The Mediterranean as a Green Energy Hub: Malta's Role

An intrinsic benefit of transforming Malta into a Green Energy Hub lies in strengthening the diversity and sustainability of our energy supply. By leveraging Malta's strategic location at the centre of the Mediterranean, this Government seeks to create a network of interconnections linking North Africa and Southern Europe – turning Malta into a regional crossroads for clean energy exchange.

Our ambition is to harness Malta's position as a gateway for renewable power and green hydrogen. Through an array of energy partnerships and interconnectors, we are laying the foundations for a Mediterranean grid capable of channelling renewable electricity across continents, while securing Malta's own energy independence.

A major step towards this vision was achieved in June 2023, when Malta and Libya signed a Memorandum of Understanding to collaborate on the development of a subsea interconnector linking the two countries. Libya's vast potential for renewable energy – from concentrated solar power to large-scale wind generation and vast areas for energy storage – offers significant opportunities for clean energy exports. Harnessing this potential through interconnections could deliver renewable power to Malta, whilst enabling surplus energy to flow onwards to Southern Europe. By facilitating the two-way exchange of sustainable power, Malta may assume a pivotal role as an energy bridge between Africa and Europe.

This regional vision is further strengthened by ongoing cooperation with Tunisia, where renewable energy and interconnectivity feature prominently on the bilateral agenda. Such discussions are intended to pave the way for a Memorandum of Understanding that will formalise energy collaboration and enhance the prospects for delivering renewable energy and utilising storage infrastructure from Tunisia.

In parallel, Malta has deepened its cooperation with Egypt through a Memorandum of Understanding signed in 2024 to enhance collaboration on renewable energy, energy efficiency, and emerging technologies. This agreement supports joint research, exchange of expertise, and public-private initiatives in clean energy development. It also places strong emphasis on green hydrogen cooperation, aligning with EU objectives for renewable diversification and long-term supply security. Following the signing, a joint technical committee was established to drive forward this agenda, exploring new avenues for interconnection and technical collaboration across the Mediterranean.

These cooperations will provide the possibility to unlock large-scale access to renewable energy, bolstering energy security, expanding import diversity, and reducing vulnerability to supply disruptions or system shocks.

Through these strategic partnerships, Malta is positioning itself as an enabler of regional green connectivity. As a result, the Government of Malta has issued a PMC to gauge the interest of reputable, prospective project proponents in generating renewable electrical energy in North Africa and transmitting it to Malta via a dedicated cable link. This information will assist Malta in shaping and updating its future energy policy regarding the mix of power sources.

Our long-term vision is to establish corridors for renewable electricity and green hydrogen across the Mediterranean, using Malta as a central transit point. In pursuit of this role, Malta is embracing its responsibility as a proactive Mediterranean partner – facilitating cooperation across neighbouring regions, linking the renewable-rich potential of North Africa with the energy needs of Southern Europe. In the process, Malta is not only enhancing its national resilience but also contributing tangibly to Europe's green transition and the global shift towards clean energy.

## **6 PILLAR 3 – SUSTAINABILITY OF POWER SUPPLY**

### **6.1 Introduction**

Sustainable energy lies at the heart of Malta's vision for a cleaner, more resilient future. It is the key to combating climate change by reducing GHG emissions and achieving climate neutrality by 2050. In the field of electricity, sustainability means producing and consuming energy responsibly in a way that minimises environmental impact, optimises resource efficiency, and supports Malta's transition towards a net-zero energy system.

Malta has one of the lowest per capita energy consumption rates and one of the lowest energy intensities in the EU, accounting for less than 0.1% of total EU GHG emissions<sup>23</sup>. Yet, despite this low contribution, Malta remains deeply committed to taking decisive action: true leadership is surely not measured by size or scale, but by conviction and a determination to generate and consume energy in ways that can also safeguard our environment, improve quality of life, and empower future generations.

So as Malta continues to grow economically and socially, our focus remains on decoupling economic development from environmental degradation. Each kilowatt of clean energy generated, every efficiency measure adopted, and every innovation strengthens our collective path towards a sustainable future. Our citizens deserve nothing less than a higher standard of living – one that is powered by renewable energy, sustained by smart systems, and aligned with the broader European Green Deal vision.

### **6.2 Onshore Renewable Energy**

Over the past decade, Malta has made significant progress in its renewable energy journey. Onshore solar PV systems have formed the backbone of the steady increase in renewables, reflecting the country's growing commitment to harnessing its natural potential for clean, homegrown energy.

23 European Environment Agency. (n.d.). Greenhouse gases viewer [Data viewer]. <https://www.eea.europa.eu/en/analysis/maps-and-charts/greenhouse-gases-viewer-data-viewers>

The expansion of PV deployment – from small-scale residential systems to large commercial installations – is supported by targeted investment schemes, a dedicated solar farm policy, and a clear regulatory framework. These measures have encouraged innovation, provided legal certainty for investors, and unlocked previously untapped solar potential across the islands. As a result, Malta’s renewable energy landscape is now driven by a mix of both individual citizens and enterprises contributing to the national effort. In recent years, commercial PV installations have surpassed domestic ones, driven by competitive incentives and the strategic allocation of funds. This growth marks a pivotal shift from small distributed systems to more coordinated, high-impact projects capable of contributing meaningfully to Malta’s electricity supply.

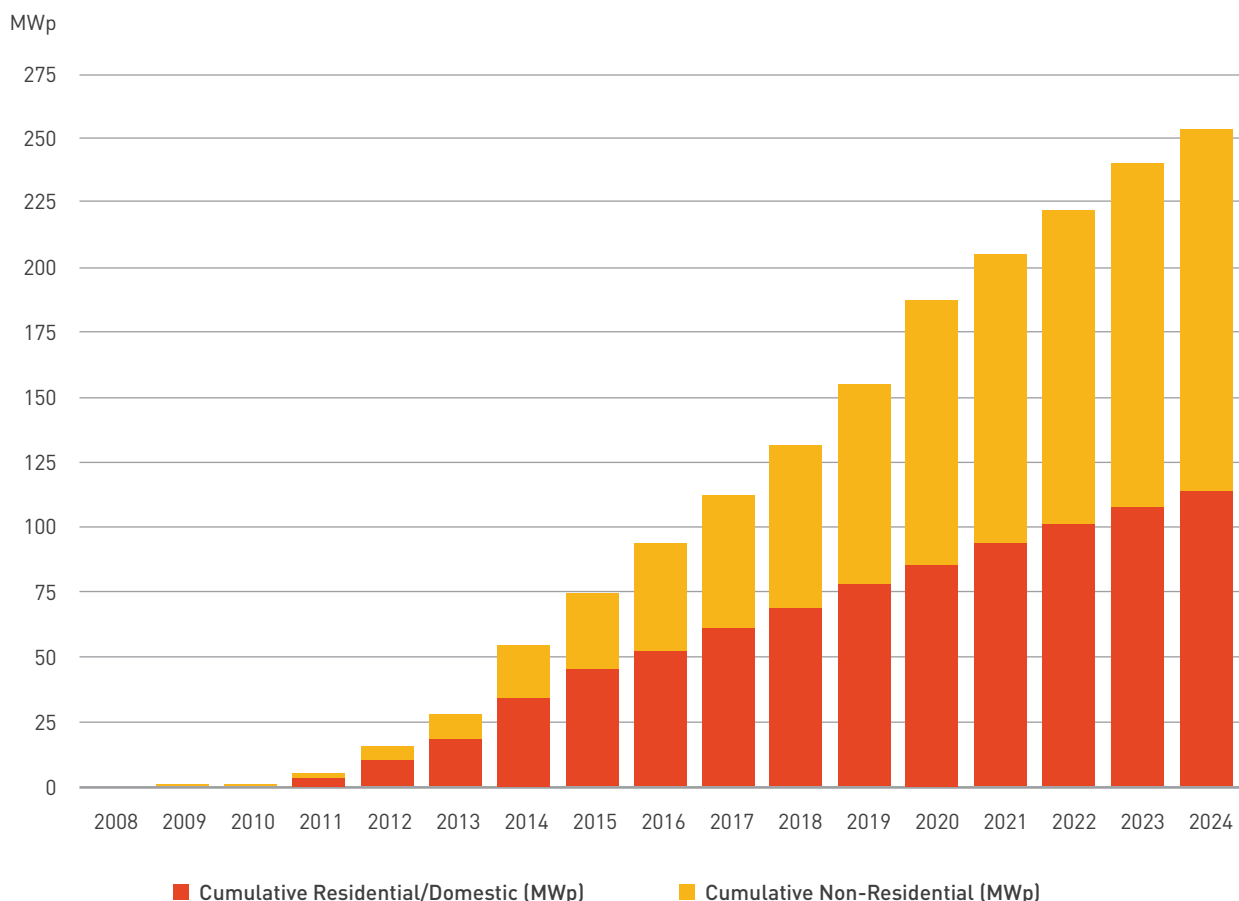


Figure 5: Historic PV Generation Capacity for Malta (Source:EWA)

However, this success is only the beginning. Malta must continue to maximise its onshore renewable energy generation, ensuring that this indigenous RES remains a key pillar of the national energy mix. We aim to expand our solar capacity and complement it with offshore wind energy, together forming a more balanced and diversified renewable portfolio.

Their differing generation patterns – solar during daylight and wind-producing energy at night or during heavy cloud overcasts – will help mitigate intermittency, creating a more stable and resilient renewable system. To accelerate deployment, the Energy and Water Agency, in collaboration with the University of Malta, has undertaken an extensive technical assessment to quantify Malta’s untapped PV potential across various land uses – from rooftops and industrial zones to agricultural holdings, car parks, and quarries. Using advanced Geographic Information System (GIS), Artificial Intelligence (AI) modelling and LiDAR mapping technologies, this study identified further technical potential for substantial additional PV capacity.

While rooftops in developed areas account for the largest share of this potential, car parks have emerged as an underutilised yet high-value opportunity. Dual-purpose solar canopies can generate clean energy while providing shaded, modern parking spaces, advancing both Malta’s renewable energy and sustainable mobility goals.

The Climate Action Authority (CAA) together with Transport Malta (TM), are now leading efforts to pilot PV projects on government-owned land. These projects will serve as models for broader national rollout, accelerating the uptake of solar canopies, increasing access to EV charging points, and further strengthening Malta’s commitment to a low-carbon transport system. Beyond generating renewable power, these

initiatives contribute to urban resilience – reducing heat island effects, improving the functionality of public spaces, and enhancing energy efficiency in line with Malta’s broader vision to promote sustainable urban development. The Building and Construction Authority’s *Technical Document F Part 1: Dwellings Minimum Energy Performance and Building Envelope Requirement*<sup>24</sup> establishes minimum onsite generation thresholds, encouraging households to adopt a share of renewable energy tailored to dwelling type.

Furthermore, the CAA is coordinating cross-ministerial efforts to unlock additional PV deployment potential on public buildings, ensuring that the Government continues to lead by example. By integrating solar systems into both existing and newly constructed facilities, the public sector is not only reducing its carbon footprint but also setting a precedent for private sector adoption.

Together, these actions reflect Malta’s commitment to maximising renewable energy generation. Each new solar panel installed is not just a step towards cleaner energy, but a building block in a future where Malta stands as a model of sustainable island energy transformation.

### 6.2.1 Domestic Battery Energy Storage Systems

As Malta accelerates its transition towards a more resilient energy system, the next frontier in our sustainability journey lies in energy storage – enabling citizens to capture, store, and use renewable energy more efficiently. To promote the optimal use of renewable power generated across the country, the Government has introduced a dedicated grant scheme<sup>25</sup> supporting the installation of domestic battery storage systems. This initiative has proven instrumental in empowering households to take an active role in the country’s green transition.

Over the past five years, around 5,600 households have benefited from the Renewable Energy Scheme, with over €32 million invested and approximately 34MWh of storage capacity installed in homes across the island. Each system represents a small but powerful contribution to Malta’s collective energy independence – enabling families to store surplus solar power, reduce grid demand during peak hours, and rely less on non-renewable sources. This initiative reflects the Government’s commitment to building a smarter energy future by fostering distributed storage solutions and transforming individual households into active participants in Malta’s energy ecosystem – turning consumers into prosumers, who generate and manage their own clean energy. BESS also enhance grid stability, smoothing the intermittent nature of renewables and ensuring a reliable electricity supply. As more renewable energy is integrated into Malta’s grid, such systems become essential for balancing supply and demand, maintaining system flexibility, and supporting further renewable expansion. The scheme aligns with Malta’s long-term strategy to promote energy autonomy in the domestic sector, reducing household electricity costs, improving energy efficiency, and enhancing national resilience against global energy market fluctuations.

Looking ahead, this initiative will continue to evolve – driving wider adoption of renewable energy technologies, encouraging innovation in storage capacity, and fostering a culture of shared responsibility and active participation in Malta’s sustainable energy transformation. Every battery installed represents not just stored electricity, but stored opportunity – the power to shape a greener, more secure and more self-sufficient Malta, securing long-term economic and environmental benefits.

## 6.3 Energy Use in Transport

The transport sector is a dominant energy consumer in Malta, with road mobility accounting for the vast majority of this use, relying primarily on liquid fossil fuels. In 2022, transport activities accounted for approximately 42.6% of Malta’s final energy consumption, making it the largest energy-consuming sector locally<sup>26</sup>. Road transport, in particular, remains primarily powered by petrol and diesel, with cars and vans accounting for about 89.7% of road transport energy consumption. In terms of emissions, energy-related

24 Building and Construction Authority. (2023). *Technical document F, part 1: Dwellings – minimum energy performance requirements and building envelope*. <https://bca.gov.mt/wp-content/uploads/2025/02/Technical-Document-F-Part-1-Dwellings-Minimum-Energy-Performance-requirements-and-building-envelope.pdf>

25 Government of Malta, Regulator for Energy and Water Services. (n.d.). *A grant on the purchase of renewable energy systems in the domestic sector – Call 2024/RES*. [https://www.servizz.gov.mt/en/Pages/Environment\\_-Energy\\_-Agriculture-and-Fisheries/Energy/Energy-and-Water-Services/WEB-0409/default.aspx](https://www.servizz.gov.mt/en/Pages/Environment_-Energy_-Agriculture-and-Fisheries/Energy/Energy-and-Water-Services/WEB-0409/default.aspx)

26 National Statistics Office (NSO), *Energy Balance for Malta 2022*.

transport activities accounted for around 32% of Malta's total emissions in the same year, underscoring the sector's central role in national decarbonisation efforts.<sup>27</sup>

The electrification of transport is therefore a critical component of Malta's power transition and wider decarbonisation strategy, directly linking emissions reduction in the transport sector with the progressive decarbonisation of electricity generation.

Malta's small geographical scale, compact urban form, and limited modal diversity have historically constrained options for reducing emissions in transport. Nevertheless, substantial progress has been achieved in recent years. Government policy has consistently prioritised electric mobility through a combination of direct financial incentives, smart and preferential electricity tariffs for electric vehicle (EV) charging, and targeted investment in enabling infrastructure. These initiatives are delivering measurable outcomes: by the end of 2025, the number of battery electric and plug-in hybrid EVs registered in Malta amounted to nearly 24,000, compared to just 842 in 2016.<sup>28</sup>

In line with Malta's *National Energy and Climate Plan*<sup>29</sup>, the deployment of EV charging infrastructure is being scaled up to support the electrification of road transport.

The integration of electric mobility within the power system is being supported through the rollout of second-generation smart meters. These enable more precise consumption monitoring, facilitate the introduction of smart and time-differentiated tariff structures, and support the future deployment of vehicle-to-grid (V2G) technologies. V2G solutions enable EVs to operate as distributed energy storage, providing flexibility to the power system by supporting demand management, peak shaving, and the integration of variable RES. Beyond road transport, electrification initiatives are also progressing in the maritime sector. A €33 million<sup>30</sup> shore-side electricity project is already operating at the Grand Harbour, enabling berthed passenger vessels to connect directly to the electricity grid, reducing reliance on onboard fossil-fuelled engines. This project has drastically cut emissions from berthed cruise liners, reducing overall ship-generated air pollution by about 90 % in one of Malta's most densely populated and commercial area. With 17 onshore power connection points installed along key quays, it enables vessels to shut down their engines and plug into the local grid. Since becoming operational, the system has supplied around 3.7 million kWh of electricity across more than 80 ship calls, contributing to improved air quality for approximately 17,000 residents in the harbour area. By allowing up to five cruise ships to connect simultaneously, the project supports a cleaner, quieter port environment and significant year-on-year emissions savings.

A similar project, estimated at €44 million<sup>31</sup>, to electrify the rest of the Grand Harbour and extend this facility to other vessel types, such as Ro-Ros and container ships is also well underway. A further €29 million<sup>32</sup> investment at the Freeport terminal will provide high-voltage shore connections for container ships using this important transshipment hub in Malta. Together, these projects are expected to deliver significant reductions in emissions, noise, and air pollution in coastal and harbour areas.

In the aviation sector, the Malta International Airport has started civil works to electrify ground operations. This will progressively reduce dependence on auxiliary power units powered by fossil fuels. Enemalta is investing in a 132kV distribution centre close to MIA to supply electrification for aviation and increase the capacity for the shore-to-ship supply within Malta Freeport Terminals.

As electric mobility continues to scale, sustained investment in grid reinforcement, smart energy technologies, and consumer participation will be needed. The shift towards clean electricity will play a decisive role in reducing transport-related emissions and supporting Malta's long-term objective of achieving carbon neutrality by 2050.

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27 *EU Greenhouse Gas Inventory 1990–2022, submitted by Malta under Regulation (EU) 2018/1999, transport sector emissions*

28 *Transport Malta, Vehicle Registrations Statistics, Electric Vehicle Registrations 2016–2024*

29 *Government of Malta. (2025, January 7). Malta — Final updated national energy and climate plan 2021–2030. European Commission. [https://commission.europa.eu/publications/malta-final-updated-necp-2021-2030-submitted-2025\\_en](https://commission.europa.eu/publications/malta-final-updated-necp-2021-2030-submitted-2025_en)*

30 *Farrugia. (2024, November 21). On-shore power supply: Malta's experience [Conference presentation]. Infrastructure Malta. [https://www.kombiconsult.com/wp-content/uploads/2024/11/5\\_2024-11-21\\_CoFo-1\\_OPS-Malta\\_Farrugia.pdf](https://www.kombiconsult.com/wp-content/uploads/2024/11/5_2024-11-21_CoFo-1_OPS-Malta_Farrugia.pdf)*

31 *Ibid.*

32 *Ibid.*



## 6.4 Energy Efficiency

Energy efficiency lies at the very core of Malta's clean energy transition, a guiding principle in our journey towards sustainability, resilience, and economic strength. By improving how energy is used across all sectors, Malta seeks to embed efficiency as a national mindset: a way of living, and even a design philosophy that maximises every unit of energy produced. Continuous improvement in energy efficiency delivers a dual benefit – protecting the environment while empowering citizens.

Using energy more intelligently reduces GHG emissions, lowers household energy bills, and supports sustainable growth throughout the economy, ensuring progress is not achieved at the expense of the planet, but in harmony with it. To unlock these benefits, energy efficiency must extend across the entire energy value chain from production to final consumption. This holistic approach ensures that power generated from RES is used as effectively as possible, minimising waste and strengthening overall system performance.

Over recent years, the Government has introduced a range of tangible initiatives designed to accelerate energy efficiency improvements within households. These include the roof insulation and double-glazing schemes<sup>33</sup>, through which applicants receive financial support covering up to 50% of eligible costs up to a maximum of €1,000. These measures make it easier for families to retrofit their homes with energy-saving solutions that reduce heat loss, cut emissions, and enhance comfort. Over 3,300 households have benefitted from Energy Efficiency schemes over the past four years, resulting in total grant disbursements exceeding €4.28 million.

Given Malta's mild climate, such targeted support is essential to make energy efficiency upgrades feasible and affordable for the average household, ensuring this transition to sustainability is inclusive and equitable.

33

Government of Malta, Regulator for Energy and Water Services. (n.d.). 2023 roof insulation and double glazing (retrofitting) scheme. [https://www.servizz.gov.mt/en/Pages/Environment\\_-\\_Energy\\_-\\_Agriculture-and-Fisheries/Energy/Energy-and-Water-Services/WEB-00344/default.aspx](https://www.servizz.gov.mt/en/Pages/Environment_-_Energy_-_Agriculture-and-Fisheries/Energy/Energy-and-Water-Services/WEB-00344/default.aspx)

Building on this success, several water heating grants have been developed to further reduce household consumption. For example, solar water heaters have long been supported through Government assistance schemes, covering up to 75% of the eligible costs, to a maximum of €1,400 per system, with an additional €500 grant after 5 years to cover maintenance costs. More recently, grants were extended for heat-pump water heaters, with applicants eligible for up to 50% of installation costs. A new €700 grant also supports households installing standalone PV panels connected directly to water heaters, helping families use solar energy to meet daily needs efficiently. Together, these initiatives have benefitted nearly 4,000 households, with disbursements exceeding €3.6 million in the past decade. Each of these efforts brings Malta one step closer to its vision of a truly sustainable and energy-conscious society.

In parallel, the Government is supporting the transition to more energy-efficient buildings through schemes such as the 'Ixtri Proprjeta Sostenibbli'<sup>34</sup> and 'Irrinova Darek',<sup>35</sup> administered by the Building and Construction Authority. These initiatives provide financial assistance of up to €9,000 and €16,000, combining property-related benefits with sustainability-linked grants. These schemes incentivise the purchase of energy-efficient homes and renovation processes directly linking property value with environmental performance. This approach promotes a more sustainable built environment and enhances resident wellbeing.

Looking ahead, improving energy efficiency will remain a central pillar of Malta's strategy to phase out fossil fuels and reduce the need for additional generation capacity. As part of this long-term commitment, the Government continues to set clear standards, targets, and regulations that drive improvements across sectors. Through these measures, households and businesses alike are supported in investing in modern systems and adopting responsible energy practices, making meaningful changes that reduce their energy use.

Our Government will lead by example in this regard: the CAA is actively collaborating with various government entities to identify and implement decarbonisation pathways across the public sector. The CAA is working to mainstream climate action across all levels of administration, with ongoing efforts to establish energy-efficiency standards that can be consistently applied in every government building. This approach paves the way for accelerated progress, ensuring that sustainability becomes embedded in the everyday functioning of the Government and its public entities.

A striking example of entities taking the lead in this transformation is the Water Services Corporation's recently inaugurated Net Zero Warehouse – a landmark project that integrates advanced, energy-efficient construction methods with cutting-edge mechanical systems. Every feature of this facility was carefully designed to minimise energy consumption and reduce environmental impact. It stands as a tangible symbol of responsible resource-use and forward-looking public infrastructure – a lasting commitment to sustainable operations.

Another national effort is the Street Lighting Retrofitting Project, currently being implemented across Malta. This ambitious initiative involves replacing approximately 34,000 existing luminaires with highly efficient, state-of-the-art LED lighting systems, equipped with smart dimming technology for off-peak optimisation. The transformation of Malta's lighting network represents one of the most extensive energy-efficiency upgrades ever undertaken locally. Once fully completed, the project – valued at approximately €13 million – is expected to deliver energy savings of over 60%, equating to annual reductions of around €2 million in energy costs, marking another decisive step in the Government's strategy to modernise national infrastructure while conserving resources.

A further example of this commitment is the development of a new Thermal Treatment Facility (TTF) to replace the Marsa incinerator, funded by a €50 million investment. Energy efficiency is embedded at the heart of the TTF's design philosophy: heat generated during waste treatment will be recovered and reused, drastically reducing the facility's overall energy consumption; electricity usage will be optimised through high-efficiency motors, an advanced cooling system, and automation technology with frequency converters. These systems will be coordinated through a state-of-the-art Burner Management System – a central intelligence system that ensures operations remain efficient, reliable, and environmentally responsible. The results are transformative: the new facility is projected to consume only 70kWh per tonne of waste – an 86% improvement over the current consumption rate of 500kWh per tonne – positioning Malta among the best-performing waste treatment plants in Europe. This improvement translates to annual savings of approximately 2.4GWh of electricity, while simultaneously cutting emissions and operational costs. In

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34 Building and Construction Authority. (2025). *L-iskema ixtri proprjeta sostenibbli 2025 [Buy sustainable property scheme 2025]*. <https://bca.gov.mt/mt/skemi-magħluqa/l-iskema-ixtri-proprjeta-sostenibbli-2025/>

35 Building and Construction Authority. (2026). *Irrinova Darek: Residential renovation grant scheme 2026*. <https://bca.gov.mt/open-schemes/irrinova-darek-residential-renovation-grant-scheme-2026/>

addition to energy efficiency, the TTF's design includes rainwater harvesting and plant drain treatment systems for a more holistic approach to sustainability.

All of these measures reaffirm Malta's commitment to infrastructure that sets new standards for environmental stewardship and energy performance. At the policy level, Malta's energy efficiency drive is a robust legislative framework that is aligned with the EU's ambitious 'Fit for 55' package. Central to this is the Energy Efficiency Directive (EU/2023/1791)<sup>36</sup>, which strengthens the 'energy efficiency first' principle that prioritises energy saving across all sectors.

#### 6.4.1 Malta's Long-Term Renovation Strategy

Alongside the EED, the Energy Performance of Buildings Directive (EU/ 2024/1275)<sup>37</sup> outlines a clear vision for Europe's built environment: to make all buildings highly energy efficient and decarbonised by 2050.

Malta's *Long-Term Renovation Strategy*<sup>38</sup> (LTRS), developed in accordance with Article 2a of the Energy Performance Buildings Directive, provides a forward-looking framework for transforming the energy performance of the country's building stock. The strategy is rooted in data-driven analysis and sets ambitious objectives for enhancing efficiency across residential, commercial, and public buildings.

By leveraging robust energy performance data and modelling anticipated energy savings, Malta's LTRS seeks to modernise and decarbonise the country's built environment while supporting a more sustainable, resource-conscious way of living. These efforts reaffirm Malta's long-standing dedication to sustainable development and energy conservation, aligning the building sector with the country's national climate ambition.

In the residential sector, the strategy sets tangible, people-focused goals to reduce average energy demand per square metre through smarter heating, cooling, water heating and lighting systems, while encouraging the integration of onsite renewable energy generation. Key measures under Malta's LTRS include:

- reducing energy demand in dwellings by promoting best practices in energy-efficient design, construction, and retrofitting that focus particularly on insulation, heating, and cooling performance;
- enforcing Nearly Zero-Energy Building (NZEB) standards for new constructions and redevelopment projects, ensuring that innovation in materials and systems keeps pace with technological progress;
- offering energy efficiency packages for homes, incentivising upgrades such as roof insulation, heat pumps, solar water heaters, and high-efficiency glazing tailored to the unique characteristics of each property;
- implementing deep renovation programmes targeting older and less efficient buildings, particularly those of historical value, where careful restoration can achieve significant gains in energy performance; and
- providing incentives for onsite energy generation and storage through schemes that support PV systems and domestic battery installations, creating a more self-sufficient and resilient housing stock.

These measures are underpinned by Malta's Minimum Performance Requirements, which came into force in July 2024, through the adoption of *Technical Guidance Document F*<sup>39</sup>. This comprehensive standard establishes minimum performance levels for building envelopes, glazing, and mechanical systems, ensuring that energy efficiency becomes a defining feature of all future developments. The new guidelines go beyond technical compliance; they embody a philosophy of responsible design. By focusing on reducing heat loss, optimising daylight use, and integrating renewable energy systems such as PV panels and heat pumps, Malta's construction sector can be redefined around sustainability innovation and long-term value.

The Technical Guide also highlights the importance of efficient control systems – from smart thermostats to automated lighting and ventilation – which together can drastically reduce primary energy consumption in buildings. These requirements support Malta's shift towards smarter infrastructure, one that blends technology with environmental consciousness to deliver cleaner, more comfortable living spaces.

36 European Parliament & Council of the European Union. (2023, September 13). Directive (EU) 2023/1791 on energy efficiency (recast). Official Journal of the European Union, L 231, 1–111. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023L1791>

37 European Parliament & Council of the European Union. (2024, April 24). Directive (EU) 2024/1275 on the energy performance of buildings (recast). Official Journal of the European Union, OJ L 2024/1275. [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L\\_202401275](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202401275)

38 Government of Malta, Ministry for the Environment, Climate Change and Planning. (2021). Long term renovation strategy 2050. <https://sustainabledevelopment.gov.mt/wp-content/uploads/2021/10/longTermRenovationStrategy2050.pdf>

39 Building and Construction Authority. (2025, February). Technical Document F, Part 1: Minimum energy performance requirements for buildings in Malta – dwellings. <https://bca.gov.mt/wp-content/uploads/2025/02/technical-document-F-part-1-1.pdf>

## 6.4.2 The Water Production Sector

Another sector having a central role in energy efficiency is the water production and wastewater management system – a foundation of Malta’s essential services. Given the country’s reliance on seawater desalination, energy efficiency in water production is an economic and environmental imperative.

Continuous technological upgrades in desalination plants have already led to savings exceeding 53GWh, while network optimisation and leak reduction initiatives have saved an additional 80GWh. Malta’s latest reverse osmosis plant in Hondoq ir-Rummien, Gozo, has achieved a 23% reduction in energy use compared to traditional systems and was awarded the Energy Globe Award<sup>40</sup> 2023 for its innovative design and operational excellence. This achievement underscores Malta’s capacity to lead by example, setting new European benchmarks in energy-efficient desalination.

Building on these achievements, the Government launched a 10-year *National Investment Plan for the Water and Wastewater Sector*<sup>41</sup>, committing €310 million, of which €126 million was co-financed by the EU. The plan lays down a strategic framework for greater efficiency, sustainability, and resilience in the management of Malta’s water resources, ensuring that the sector continues to evolve in tandem with the country’s wider decarbonisation goals. Through this plan, Malta aims to reduce Non-Revenue Water year after year, with network efficiency already improving from 52% in 2011 to 78.8% in 2025. This remarkable progress highlights how sound governance can drive measurable change even in resource-constrained contexts.

In parallel, the New Water Programme<sup>42</sup> continues to provide reclaimed water for agricultural use, reducing the strain on natural groundwater sources. By promoting reuse and circularity, this initiative exemplifies the principles of responsible water management – conserving ecosystems while ensuring farmers have access to sustainable irrigation.

Moreover, the Water Services Corporation has upgraded Malta’s entire distribution network, improving both reliability and water quality as well as standardising taste quality. Thanks to major infrastructure improvements and a 37% reduction in chlorine content, consumers now enjoy cleaner, better-tasting tap water, reducing reliance on bottled options.

Complementing this, the Regulator for Energy and Water (REWS) offers household water filtration schemes<sup>43</sup>, covering up to 60% of costs, to further promote trust in tap water and decrease plastic waste. These coordinated actions demonstrate a nationwide transformation where innovation and sustainability intersect to create systems that work in harmony with the environment.

In the broader context of water production and wastewater management, Malta remains committed to ongoing investment. With each step forward, the country reaffirms its pledge to achieve unprecedented levels of operational efficiency and sustainability, ensuring that every drop of water, every kilowatt-hour of energy, and every investment made contributes meaningfully to a more resilient horizon.

## 6.5 Offshore Renewable Energy

As a small island nation at the heart of the Mediterranean, Malta faces unique spatial and geographical constraints that limit the deployment of large-scale onshore RES. With a land area of just 316km<sup>2</sup>, opportunities for expanding land-based solar or wind infrastructure are naturally limited. Yet Malta’s position as an archipelago surrounded by a vast maritime territory offers the possibility of unlocking a transformative potential – one that could redefine our renewable energy landscape.

Malta’s EEZ, spanning over 70,000km<sup>2</sup>, offers a horizon of opportunity for the development of offshore renewable energy. Harnessing even a fraction of this potential could be a game-changer for Malta’s blue

<sup>40</sup> The Energy Globe Award, involving over 180 countries, annually honours projects that significantly contribute to environmental conservation. These contributions are through innovative solutions, sustainable projects, and initiatives that raise awareness about environmental sustainability.

<sup>41</sup> Water Services Corporation. (2024). *High-level national investment plan for the water and wastewater sector 2023–2033*. [https://www.wsc.com.mt/wp-content/uploads/2024/01/WSC\\_NIP.pdf](https://www.wsc.com.mt/wp-content/uploads/2024/01/WSC_NIP.pdf)

<sup>42</sup> Water Services Corporation. (n.d.). *New Water*. <https://www.wsc.com.mt/information/new-water/>

<sup>43</sup> Government of Malta, Regulator for Energy and Water Services. (n.d.). *A grant on the purchase of water purifying equipment – Call 2024/Reverse Osmosis*. [https://www.servizz.gov.mt/en/Pages/Environment\\_-Energy\\_-Agriculture-and-Fisheries/Energy/Energy-and-Water-Services/WEB-02422/default.aspx](https://www.servizz.gov.mt/en/Pages/Environment_-Energy_-Agriculture-and-Fisheries/Energy/Energy-and-Water-Services/WEB-02422/default.aspx)

economy, enabling the country to generate clean, secure and indigenous energy at an unprecedented scale. Recognising this opportunity, the Government of Malta launched a PMC in May 2022 titled *The Proposal of Economic Activities within Malta's Exclusive Economic Zone*<sup>44</sup>. The consultation served as a vital step in identifying viable models and partnerships for developing offshore renewable projects.

Building on these insights, in July 2023, the Government introduced the *National Policy Framework for the Deployment of Offshore Renewable Energy Generation*<sup>45</sup> – a landmark initiative that strengthened Malta's strategic vision for a sustainable energy future. This policy framework lays the foundation for a new chapter in Malta's renewable energy journey – one that extends beyond its shores to embrace the vast clean energy potential of the sea. It aims to position Malta as a regional frontrunner in offshore renewable energy, thereby contributing to a more balanced relationship between energy production and environmental protection.

Recent global advances in floating offshore wind technologies have improved the realisation and attractiveness of such systems. Economies of scale in manufacturing and the emergence of high-capacity floating structures have also reduced costs, making offshore projects both technologically and economically more promising. These systems, located farther from the Maltese coastline, can harness strong, consistent offshore winds while maintaining minimal visual or environmental impact. Such projects not only preserve Malta's terrestrial and coastal spaces but also complement other maritime activities by occupying non-competing areas of the EEZ. Offshore renewables thus offer a sustainable, space-efficient solution for expanding Malta's clean energy mix without encroaching on land or nearshore activities.

In the short to medium term, floating offshore wind energy stands out as the most technically feasible and cost-effective floating technology solution for large-scale renewable energy in Malta. By diversifying Malta's renewable energy portfolio – which today remains dominated by onshore PVs – offshore projects can ensure a more balanced and secure electricity supply.

Looking further ahead, if costs continue to decrease, these investments could even pave the way for green energy exports, turning Malta into a net contributor of renewable power within the Mediterranean region. While the path towards large-scale offshore deployment is ambitious and complex, Malta remains resolute in its aspirations and proactive in its actions despite its small size, pursuing innovative technologies and forward-thinking collaborations that expand the boundaries of what is possible for a small island-state. In line with Article 14(1) of the TEN-E Regulation (EU 2022/869)<sup>46</sup>, Malta has set a non-binding goal of achieving 350MW of offshore renewable energy capacity by 2050. Although not legally binding, this target reflects a clear and credible commitment to meaningfully contribute to Europe's collective objective of climate neutrality. The *National Policy Framework for the Deployment of Offshore Renewable Energy Generation*<sup>47</sup> aligns closely with the EU Strategy on Offshore Renewable Energy, reinforcing Malta's role within the European Green Deal and supporting the EU's ambition to upscale offshore renewables as a central pillar of the continent's clean energy transition.

Through this vision, Malta seeks to position itself as a trailblazer in the Mediterranean's offshore renewable frontier – a country ready to innovate and lead by example. Our offshore renewable energy strategy is a commitment to maximise economic and environmental benefits for the Maltese people, with each step bringing us closer to an inclusive, affordable, and green transition that secures energy independence, while protecting the beauty and vitality of our marine environment for generations to come.

## 6.6 Producing Energy from Waste

Malta's commitment to sustainable power generation is being transformed into tangible action through substantial investment in recovering energy from waste – a sector that was in its infancy only a decade ago. Today, energy recovery from waste is one of the main pillars of the country's transition towards a circular, low-carbon economy, where waste is no longer viewed as an end-product but as a valuable resource for renewal.

44 Government of Malta. (n.d.). *Prior market consultation: Economic activities in Malta's exclusive economic zone — offshore opportunities* [Prior market consultation]. eTenders — Electronic Public Procurement System. <https://www.etenders.gov.mt/epps/pmc/viewPmc.do?resourceId=8628319>

45 Government of Malta, Ministry for the Environment, Energy and Public Cleanliness. (2024). *National policy for the deployment of offshore renewable energy*. [https://sustainability.gov.mt/wp-content/uploads/2024/11/MEE-National-Policy-23\\_-DIGITAL-\\_final-5.pdf](https://sustainability.gov.mt/wp-content/uploads/2024/11/MEE-National-Policy-23_-DIGITAL-_final-5.pdf)

46 European Parliament & Council of the European Union. (2022, May 30). *Regulation (EU) 2022/869 on guidelines for trans-European energy infrastructure (TEN-E Regulation, recast)*. *Official Journal of the European Union*, L 152, 45–111. <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022R0869>

47 Government of Malta, Ministry for the Environment, Energy and Public Cleanliness. (2024). *National policy for the deployment of offshore renewable energy*. [https://sustainability.gov.mt/wp-content/uploads/2024/11/MEE-National-Policy-23\\_-DIGITAL-\\_final-5.pdf](https://sustainability.gov.mt/wp-content/uploads/2024/11/MEE-National-Policy-23_-DIGITAL-_final-5.pdf)

At the heart of this transformation lies ECOHIVE – the largest and most ambitious investment ever made in Malta’s waste management sector. Designed to treat recyclable, organic, and residual waste streams, ECOHIVE reduces landfilling but chiefly turns non-recyclable materials into a new source of green energy. This integrated approach is reshaping the way Malta manages its resources, ensuring that every fraction of waste contributes to a more sustainable, self-efficient future.

A key component is the Waste-to-Energy plant, one of the four pillars of the ECOHIVE complex, capable of processing around 192,000 tonnes of non-recyclable waste annually. The facility will generate approximately 126GWh of green energy each year, equivalent to the annual electricity consumption of nearly 29,000 households. With a planned capacity of 20MW, the plant is a significant step in Malta’s efforts to reduce its reliance on landfilling while maximising energy recovery from waste. Once operational, it will stand as a symbol of innovation, operating for an expected lifespan of 20 years.

Complementing this effort is the Organic Processing Plant (OPP), which will treat around 74,300 tonnes of organic waste per year. Through advanced bioconversion processes, this facility will produce high-quality compost for agricultural use and generate approximately 18.4GWh/year, enough to power 2,500 households. This approach embodies the essence of the circular economy, transforming discarded materials into valuable outputs that serve multiple sectors while minimising environmental impact.



*WasteServ is investing in an Organic Processing Plant to treat organic waste*

## 6.7 Renewable Energy from Wastewater

Malta’s wastewater infrastructure also contributes to this ecosystem of recovery and reuse. Through a network of bio-digesters and cogeneration units, the country is harnessing renewable energy from wastewater streams. The biogas generated from anaerobic digestion provides heat and power for the plants themselves, covering over 20% of their total energy requirements.

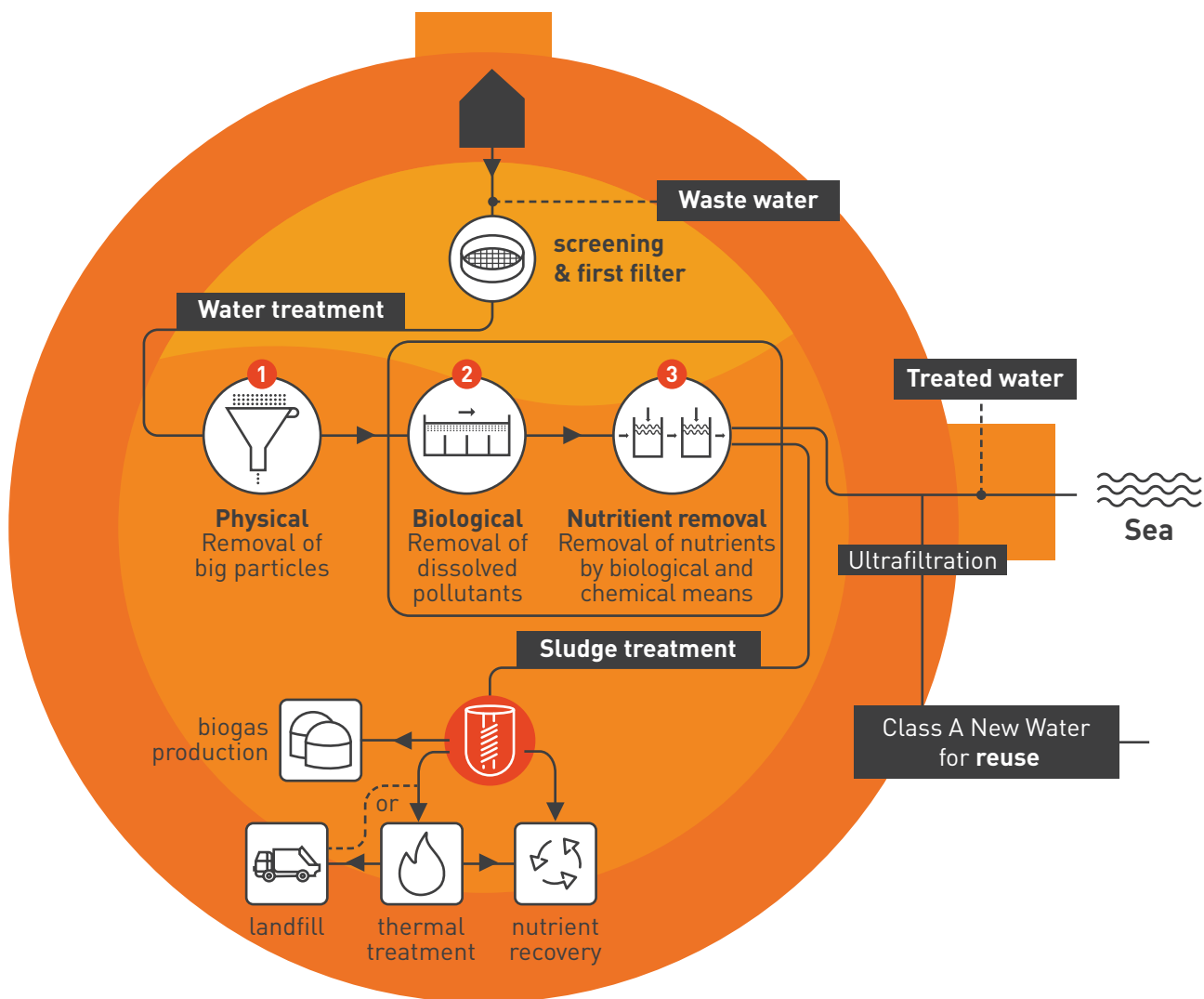


Figure 6: Sewage Treatment Process (Source Water Services Corporation<sup>48</sup>)

This additional renewable energy generated through the waste streams will help reduce our reliance on non-RES. It serves as a vivid testament of how an independent energy landscape can align with the country's broader efforts to combat climate change, enhance resource efficiency, and promote energy security. This integrated approach demonstrates Malta's determination to extract maximum environmental and economic value from every resource and significantly reduce GHG emissions and reliance on imported fossil fuels.

## 6.8 Hydrogen-Ready Gas Pipeline

Despite its economic progress, Malta is steadfast in its ambition to advance towards a carbon-neutral energy system by 2050. The Government recognises LNG as a transitional fuel, serving today as a bridge towards a fully decarbonised energy future where renewable gases and green hydrogen will play a central role. While GHG reductions in the power sector are remarkable, Malta is preparing for the next great leap in its energy transition: integrating green hydrogen as a future fuel source once it becomes sustainably available. Preliminary studies led by ICM confirm that, given the current technologies, large-scale green hydrogen production from renewable energy within Malta is limited by spatial constraints, water scarcity, and economies of scale. Consequently, Malta's most viable path to securing green hydrogen at scale lies in strategic interconnection and importation.

In this context, Malta has finalised the design of a 159km hydrogen-ready gas pipeline, known as the *Melita TransGas Hydrogen-Ready Pipeline*<sup>49</sup>, connecting Malta to Sicily, and by extension, to the trans-European gas

48 Water Services Corporation. (n.d.). Wastewater. <https://www.wsc.com.mt/about-us/wastewater/>

49 Melita TransGas Co. Ltd. (n.d.). The project. <https://melitatransgas.com.mt/>

network. This infrastructure has been engineered to transport blends of renewable gases and natural gas, and will be capable – once markets mature – of transmitting up to 100% pure hydrogen.

Fully aligned with the European Green Deal<sup>50</sup> and the EU's climate neutrality objectives, this project represents one of Malta's most significant investments in future-proofing its energy infrastructure. Once implemented, the hydrogen-ready pipeline will provide Malta with a secure, flexible, and sustainable energy link to Europe, ensuring long-term energy diversification and resilience while reducing exposure to volatile fossil-fuel markets.

ICM has obtained the development permits in both Malta and Italy for the construction of the Melita TransGas Pipeline and has submitted the required documentation to the EU Commission to maintain the project's status as a Project of Common Interest. This designation recognises the pipeline as part of the EU's core cross-border energy infrastructure, connecting national systems, enhancing market integration, and supporting Europe's transition towards cleaner fuels.

At the EU level, hydrogen is expected to contribute approximately 15% of the EU's total energy mix by 2050, with ambitious intermediate goals targeting 10 million tonnes of domestic hydrogen production and 10 million tonnes of imports by 2030<sup>51</sup>. Malta's pipeline would position the country to participate in this emerging European hydrogen economy. As technology evolves and green hydrogen becomes commercially competitive, Malta will be ideally placed to determine the most effective pathways for adoption, opening new possibilities for fuel switching across multiple sectors, from electricity generation to industrial processes, heavy transport, marine bunkering and aviation – sectors traditionally considered hard to decarbonise.

The front-end engineering design of the hydrogen-ready pipeline was completed in 2022, ensuring complete compatibility with future European infrastructure standards once full hydrogen transmission can be accommodated, serving not only as an import route for renewable gases but also as a catalyst for innovation and regional cooperation in the emerging hydrogen market.

By embracing hydrogen as part of its long-term strategy, Malta is laying the foundation for the next generation of energy transformation.

## 6.9 The Green Electricity-centric Dimension

In the longer term, a key pillar in realising the Government's vision of Malta as a Green Energy Hub in the heart of the Mediterranean is the strategic diversification and interconnection of the country's electricity system. By establishing multiple links with North Africa and Southern Europe, Malta will be able to import, utilise, and export renewable energy as required, capitalising on its geographical position at the crossroads of regional energy networks. These interconnections will grant Malta access to multiple gateways for renewable energy flows, enabling the integration of cleaner power sources from beyond its shores in a diversified and flexible manner. Such a system will help mitigate volatility in energy prices, address intermittency challenges, and strengthen Malta's overall energy resilience.

Through this strategy, Malta can evolve from an energy importer into an active participant within the Euro-Med clean energy vision, capable of balancing supply and demand while facilitating the wider uptake of renewables. This initiative reflects the Government's broader commitment to a secure energy future, where electricity generation and distribution align with the country's climate neutrality objectives. Malta's network of interconnections – both existing and planned – forms the backbone of this transition. By ensuring reliable access to renewable electricity from the region, Malta is ready to serve as a bridge for clean energy exchanges between Europe and Africa.

## 6.10 The Green Hydrogen-centric Dimension

In parallel, Malta recognises that the global energy transition will increasingly depend on the versatility and potential of green hydrogen. Hydrogen stands at the frontier of clean energy innovation – a fuel, energy carrier, and storage medium that can enable the decarbonisation of sectors that are difficult to electrify, such as heavy industry, maritime transport, and aviation.

<sup>50</sup> European Commission. (n.d.). European Green Deal. [https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal\\_en](https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en)

<sup>51</sup> European Commission. (2022, May 18). REPowerEU plan (COM(2022) 230 final). <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52022DC0230>

When produced from renewable sources, green hydrogen generates no carbon dioxide and negligible air pollution, offering a transformative solution for reducing emissions while fostering new economic opportunities. Its capacity to provide clean energy for power generation, industrial feedstock, and mobility systems makes it a cornerstone of the EU's strategy to achieve climate neutrality by 2050.

Under the REPowerEU Plan<sup>52</sup>, the EU aims to import millions of tonnes of renewable hydrogen over the coming years, through both pipeline and maritime routes, as part of its commitment to a clean and just energy transition. This will ensure that European countries, including Malta, have access to secure and sustainable clean fuels, diversifying the continent's energy mix while reducing dependence on fossil fuels. The Mediterranean region will play a pivotal role in this vision. Blessed with abundant solar resources, North Africa is emerging as a key production hub for renewable hydrogen, where it can be generated cost-effectively. The North Africa–Southern Europe energy corridor has already been identified as one of the EU's five priority hydrogen import backbones, positioning the Mediterranean as a natural transit and trade region for green hydrogen flows.

In this context, Malta's role takes on new strategic importance. Through its MED9 energy partnership, launched in Malta in 2023 and reaffirmed in Cyprus in 2024 and in Slovenia in 2025, Malta joined eight other Mediterranean countries in committing to deeper cooperation and shared investment in green infrastructure. The MED9 Malta Statement underscores a common goal: that no country in the region should be left behind in seizing the opportunities presented by the hydrogen economy. Malta will therefore continue to work towards future interconnections that strengthen its integration with both EU member states and third-country partners.

Building on this, Malta is setting itself as a potential transit hub for green hydrogen. This means receiving as well as transferring renewable hydrogen from North Africa to Southern Europe once hydrogen markets mature. This forward-looking vision aligns with Malta's proactive decision to upgrade the Melita TransGas Pipeline to hydrogen-ready status – an infrastructure that will ultimately enable the transmission of up to 100% hydrogen.

## **7 PILLAR 4 – DIVERSIFICATION OF POWER SUPPLY**

### **7.1 Introduction**

Diversification stands as one of the fundamental pillars of Malta's strategy for a resilient energy system. In the context of electricity, diversification refers to the strategic expansion of generation and import sources across a spectrum of fuels, suppliers, and geographies – reducing dependence on any single energy asset or supply chain while enhancing system flexibility and reliability. For Malta, an island country with limited natural resources and physical constraints, this approach is essential to safeguard the country against market volatility, supply disruptions, and geopolitical instability, and to maintain energy security and affordability even in times of uncertainty.

A balanced energy mix lies at the heart of Malta's climate-neutral economy. By maintaining diversity in its supply base, Malta gains the versatility to manage short-term risks while enabling long-term investment in cleaner technologies. This equilibrium between stability and innovation keeps energy costs predictable, even as the nation continues to invest heavily in sustainability through RES, large-scale and distributed battery storage systems, and the modernisation of grid infrastructure. Strengthened interconnections with neighbouring countries open the door to cross-border cooperation, positioning Malta as an active player in the Euro-Med energy network.

### **7.2 Transition Towards Greener Fuel Sources**

As stated earlier, Malta's journey towards cleaner power generation has been defined by bold decisions, such as the transition from HFO to LNG – a watershed moment in Malta's energy history. Supported by state-of-the-art combined cycle gas turbine, and dual-fuel engine plants, and by the establishment of the LNG Floating Storage Unit (FSU) and its onshore regasification terminal, this investment laid the foundation for Malta's modern energy transition.

52 European Commission. (2022, May 18). REPowerEU plan (COM(2022) 230 final). <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52022DC0230>

As a result, Malta has become a frontrunner in efficient electricity generation, achieving 80% lower emissions per kilowatt-hour compared to 1990<sup>53</sup> levels. The move to gas drastically reduced both carbon dioxide and particulate matter emissions, reflecting a nationwide shift towards cleaner, more efficient, and technologically advanced power generation.

This achievement is particularly notable given Malta's small size and geographical isolation at the periphery of Europe. Unlike larger EU member states, Malta cannot easily deploy land-intensive technologies such as carbon capture or nuclear power. Yet, through strategic foresight and innovation, the country has forged a pathway towards sustainability that is both ambitious and adaptive. Natural gas, supplied as LNG, serves as a critical transition fuel in Malta's power system, ensuring stability, supporting baseload and reserve capacity, and complementing the gradual increase in renewable energy penetration. This transition role will persist until Malta achieves a sufficient share of renewables and energy storage capacity to meet demand reliability through clean sources alone, as well as multiple interconnections.

The Gas Supply Agreement (GSA), established at a time when global LNG markets were still maturing, was instrumental in ensuring price stability and security of supply. Its value was made evident during the height of the Ukraine-Russia conflict, the COVID-19 pandemic, and the escalations in the Middle East, when Malta's energy security remained protected amid widespread market volatility across Europe. Through prudent planning, Malta successfully reduced reliance on interconnector imports, shifting towards local energy generation and shielding the country from continental supply shocks.

Looking ahead, Malta's LNG FSU setup provides flexibility to enter into new long-term supply agreements or access global LNG spot markets, depending on prevailing economic or geopolitical conditions. The existing GSA also includes flexibility provisions that enable Malta to transition to pipeline-based imports – particularly through the future Melita TransGas Hydrogen-Ready Pipeline – once market conditions align favourably. This forward-looking infrastructure ensures that Malta will remain connected and adaptable as the European energy landscape evolves.

This agenda has been proactively advanced through ICM's upgrading of the gas pipeline design to be hydrogen-ready, that is, a system capable of transmitting natural gas blended with renewable gases, and eventually up to 100% hydrogen. This investment not only ends Malta's isolation from the trans-European gas network but also creates new opportunities to import and export renewable gases, including hydrogen, once these become commercially viable. These developments open a new energy dimension for Malta. Security, innovation, and environmental priorities are integrated into a single cohesive strategy, not only through infrastructural projects but also through research and innovation.

Through the Energy and Water Agency, the Government is conducting extensive studies to assess energy use across industry and services and to identify the most cost-effective and feasible pathways for electrification and alternative green fuels. While electrification remains the most direct route to decarbonisation, certain hard-to-abate sectors, such as heavy transport, maritime and specific industrial processes, will require other solutions. Here, biofuels and green hydrogen will play an increasingly important role, providing the flexibility to decarbonise activities where direct electrification is technically or economically challenging.

While the EU's hydrogen sector develops at varying speeds, Malta's pragmatic approach will be an adaptive one, focusing not just on hydrogen but on an integrated model that prioritises electrification first and is supported by renewable gases and alternative low-carbon fuels as complementary enablers. The Melita TransGas Hydrogen-Ready Pipeline, designed to operate in bidirectional mode, epitomises this flexibility by enabling not only the importation of renewable gases but also their transfer across the Mediterranean, reinforcing Malta's position within the Euro-Mediterranean clean energy corridor. This approach builds on Malta's leadership role within the MED9 Energy Ministerial Forum. By spearheading these initiatives, Malta is helping shape a shared regional pathway towards carbon neutrality by 2050.

### 7.3 Bolstering Renewable Energy sources

Since 2012, Malta has witnessed a remarkable 12-fold increase in renewable electricity (RES-E) generation – a milestone that underscores our country's capability to turn vision into action. This growth, driven primarily by the widespread deployment of land-based PV systems, has transformed Malta's renewable energy landscape to one of steady, tangible progress.

53 European Environment Agency. (n.d.). Greenhouse gas emission intensity of electricity generation in Europe [Indicator]. <https://www.eea.europa.eu/en/analysis/indicators/greenhouse-gas-emission-intensity-of-1>

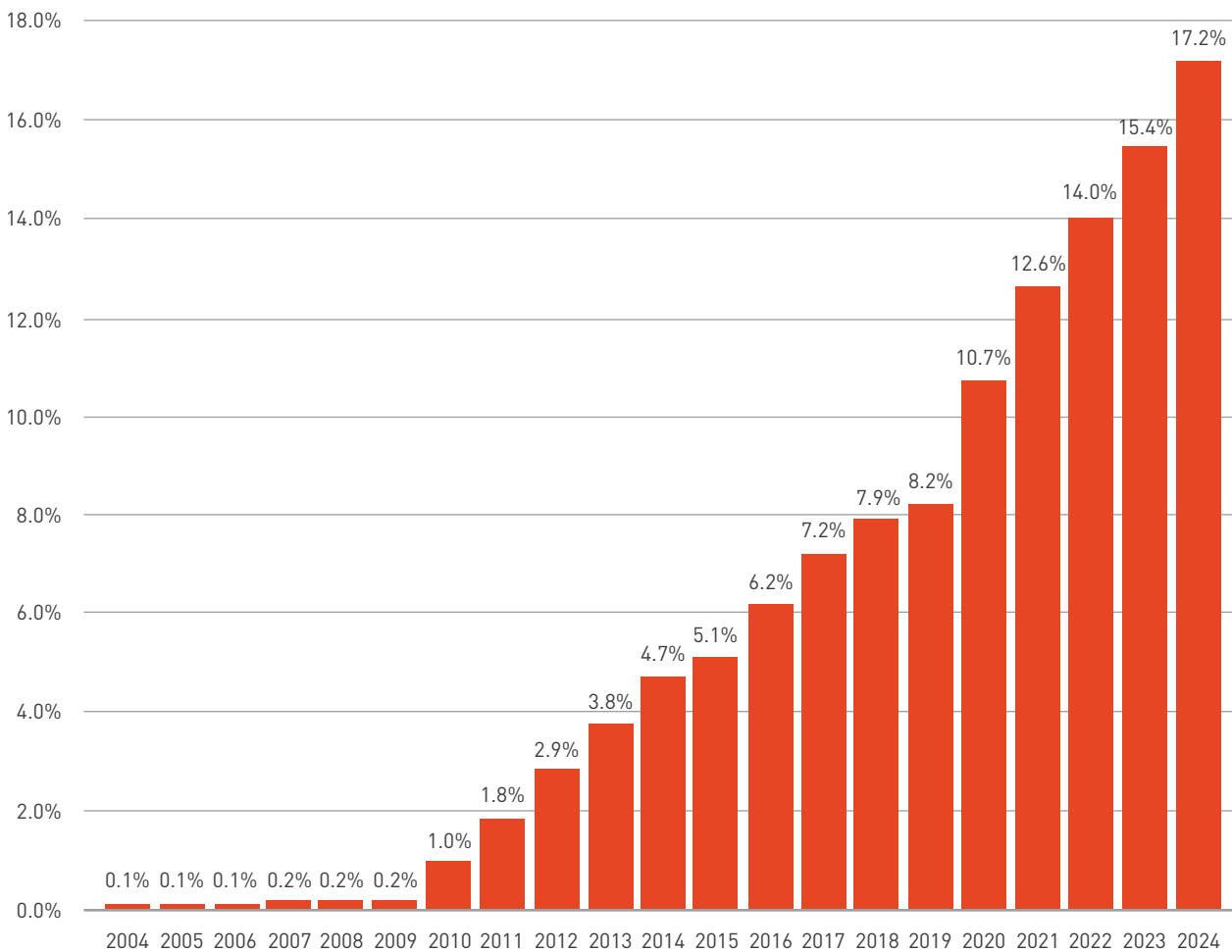


Figure 7: Malta Trend in Renewable Energy in Final Energy Consumption (Source: Eurostat<sup>54</sup>)

The sustained expansion of a diversified, indigenous renewable energy portfolio lies at the core of Malta’s long-term power strategy. Strengthening domestic renewable capacity is vital for Malta to meet its environmental commitments and to support strategic investment in the country’s energy security and economic resilience. Every additional megawatt generated locally translates into greater independence from volatile international markets and strengthens our position within a cleaner, more self-sufficient energy future.

Yet, as an island-nation with limited land resources, Malta’s next chapter of renewable growth must unfold beyond its shores. The vast surrounding sea presents an opportunity to unlock a new frontier in sustainable power generation: offshore renewable energy, and particularly offshore wind, represents the logical ambitious evolution of Malta’s renewable energy journey.

Through determined policymaking, scientific groundwork and the establishment of the necessary regulatory framework, Malta is now positioning itself to make offshore renewable energy an important pillar of its blue economy. Following preliminary geophysical and environmental studies, two promising areas – each around 100km<sup>2</sup> in size and located beyond the 12NM range – have been identified for the development of offshore floating wind farms. These areas were carefully selected to minimise conflicts with environmentally sensitive zones, maritime traffic, aquaculture, tourism, and military operations.

The successful launch of a Pre-Qualification Questionnaire that evaluated the technical and financial credentials of prospective investors is a significant milestone. The next step, the Invitation to Participate in Dialogue, will pave the way for a shortlist of qualified operators who will shape the next stage of Malta’s offshore wind vision. Our final goal is the establishment of an offshore floating wind farm with an installed capacity of around 300MW, to be designed, built, operated, and maintained under a two-way Contract for Difference (CfD) mechanism.

<sup>54</sup> Government of Malta. (2025, January 7). Malta – Final updated national energy and climate plan 2021–2030. European Commission. [https://commission.europa.eu/publications/malta-final-updated-necp-2021-2030-submitted-2025\\_en](https://commission.europa.eu/publications/malta-final-updated-necp-2021-2030-submitted-2025_en)

Once realised, this project will represent a historic leap forward for Malta's clean energy ambitions. For the first time, a renewable source other than solar will form a key part of our energy mix – marking a true milestone. Wind power, complementary to solar, offers a distant advantage: it can generate electricity even when sunlight is absent, particularly during evening and nighttime hours. This synergy between solar and wind power will enable a more balanced and sustainable generation profile. By expanding into offshore renewables, Malta will reduce pressure on its limited land areas, tap into vast new energy potential and decrease exposure to the price volatility of international energy markets – a diversification that redefines Malta's energy landscape.

Given our confined geography and population density, Malta cannot accommodate land-intensive renewable technologies such as onshore wind, hydropower, or large-scale hydrogen electrolysis. However, our EEZ offers immense untapped potential for floating wind technology, which does not impinge on the natural landscape, while boosting our national RES-E share. This expansion will be reinforced by the deployment of further large-scale BESS strategically located within our distribution network. These systems will be essential to balance renewable fluctuations, ensuring that Malta's grid remains stable, flexible, and resilient even as renewable penetration deepens.

Through this combined approach – offshore renewables, energy storage, and intelligent grid integration – Malta is charting a clear and confident path towards a clean energy future.

## 7.4 The Third Electrical Interconnection with Sicily (IC3)

Malta's power vision looks beyond national boundaries, towards a future of interconnected strength and regional collaboration. Enabling further electrical interconnections is central to transforming Malta's energy landscape into one that is diversified and future-proof. These interconnections will define our concept of electrical connectivity, ensuring that Malta is both securely supplied and actively engaged within an evolving Euro-Mediterranean energy network.

At present, the existing IC1 serves as a vital import route, safeguarding supply adequacy and complementing local generation. The soon-to-be commissioned IC2 will significantly enhance system reliability and flexibility, enabling Malta to import and balance electricity while increasing its integration with the wider European grid. Together, these links are pathways of energy solidarity, connecting Malta to a shared vision of regional sustainability.

Building on this foundation, Malta is now preparing to take the next decisive step: developing the IC3. This new high voltage direct current (HVDC) link – designed for an initial 200MW between Malta and Sicily – will further strengthen our electrical backbone. Unlike IC1 and IC2, which connect to the Sicilian 220kV grid, IC3 will be connected to the 380kV transmission circuit, thereby diversifying Malta's connection points and enhancing overall resilience against potential disruptions. The IC3 project will also include the construction of new HVDC converter stations at each end of the interconnection. This will improve system flexibility and ensure seamless operation within both Malta's and Italy's power networks. Similar to IC1 and IC2, IC3 will be able to operate in bidirectional mode, allowing electricity to flow both ways, enabling Malta to import energy as needed and, when energy markets are favourable, export clean, renewable power to the European grid.

Recognising the importance of planning, IC3 has been designed with scalability in mind. Its configuration allows for a second-phase expansion to 400MW, ensuring that future increases in demand or renewable generation can be accommodated without the need for entirely new infrastructure. This project, led by ICM, is now advancing through the preparatory stages. Technical and environmental studies will be carried out in both Malta and Italy, encompassing marine and onshore surveys to determine optimal cable routing and converter station locations to trigger permitting applications. Once completed, these findings will inform subsequent design, procurement, and construction phases. IC3 was also successfully included in the 2026 ENTSO-E Ten-Year Network Development Plan – a key step towards securing its designation as a Project of Common Interest, making it eligible for EU funding.

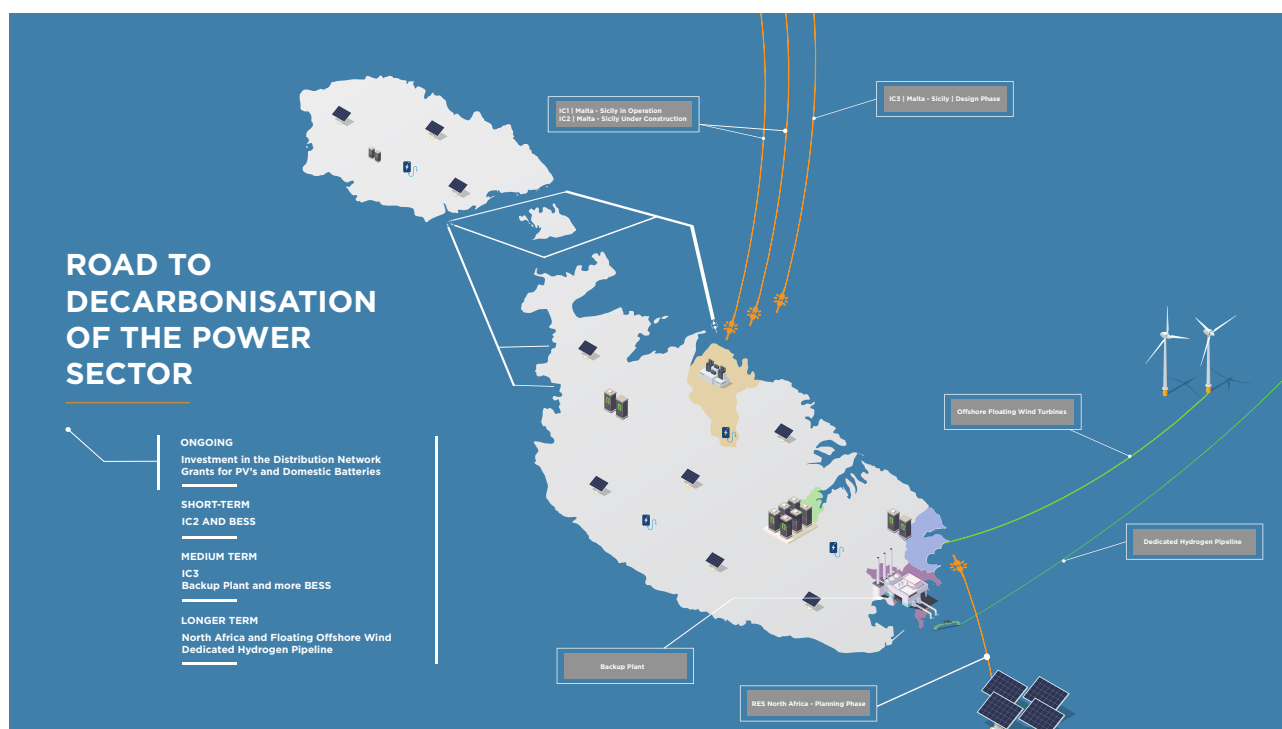
Malta's long-term ambition is to position the island at the crossroads of green electricity in the Mediterranean, linking Europe and Africa in a shared network of clean energy exchange. We are actively working towards a future where Malta serves as a transition point for renewable electricity flows, enabling energy generated from the abundant solar and wind resources of North Africa and Southern Europe to transit through Malta to various destinations across the region.

In this scenario, Malta would become a critical node in a broader Mediterranean green energy corridor, connected northwards to Italy and southwards to North Africa. Such a configuration would create a flexible and diversified network that can respond dynamically to fluctuations in supply and demand, stabilising regional markets and advancing Europe’s collective decarbonisation goals. The benefits for Malta would be far-reaching. Acting as a centre-point for multiple electrical interconnectors would enhance our security of supply through redundancy and geographical diversification, while also mitigating the risk associated with localised or regional disruptions.

Moreover, participation in an integrated Mediterranean energy market would offer economic opportunities through competitive pricing, cross-border energy trading, and the creation of new green jobs and investment streams.

As a hub within the network, Malta could generate additional revenue from transmission fees, which could then be reinvested in further energy infrastructure, research, and innovation. The country would also attract Foreign Direct Investment in renewable energy, as international developers and technology companies establish a strategic presence in Malta to serve regional markets.

Ultimately, by being at the centre of a connected, cooperative Mediterranean energy network, Malta would gain privileged access to affordable, stable, and sustainable electricity, benefitting households, industry, and the broader economy alike.



## 8 PILLAR 5 – A CONSUMER-CENTRIC APPROACH

### 8.1 Introduction

Our vision for a future-proof transition places the consumer – every household, business, and citizen – firmly at its heart. The energy transition is about people and about making sure that the benefits of smarter, more sustainable energy reach every corner of Maltese society.

As we transform our energy system, we remain firm in our belief that no one should be left behind. The shift towards sustainability must also be a shift towards fairness, inclusivity, and empowerment. We aim to build an energy future where affordability and environmental responsibility exist together so that the Maltese consumer continues to thrive in a greener economy.

To achieve this, our energy policies and instruments are designed with a clear purpose: to enable progress without compromising the protection of domestic and industrial energy users. Every measure introduced, from infrastructure investments to efficiency incentives, is aimed at delivering direct value to the consumer, strengthening socioeconomic wellbeing. Our transition plans, tailor-made for Malta by virtue of our unique national context, are designed to maximise opportunity from our geographical realities. We take into account market size, location, geographical isolation, and local energy demands, while keeping in mind the specific needs of our households, industries, and communities. This integrated approach lies at the heart of our *National Energy and Climate Plan*<sup>55</sup>, our *Low Carbon Development Strategy*<sup>56</sup>, and the *Policy for the Deployment of Offshore Renewable Energy*<sup>57</sup>. These frameworks set a clear direction for Malta to achieve a just and equitable energy transition where sustainability does not come at the expense of affordability, and where innovation serves the people.

Our consumer-centric approach is a principle and also a commitment that ensures Malta's clean energy transformation empowers consumers and protects livelihoods, ultimately leading to a better quality of life for all.

## 8.2 Continuous Investment for Consumer Protection

Our continuous investment in energy infrastructure, technology, and efficiency is driven by a simple principle: consumers should avail themselves of an efficient, stable network. We hold firm to an efficiency-first approach, ensuring that Malta's generation plants and distribution systems always reflect the best available technology on the market.

Just a decade ago, Malta still relied on an HFO steam plant in Marsa, operating at around 27% efficiency. That chapter is now firmly closed. With the commissioning of the LNG-to-power facilities at Delimara, the country achieved generation efficiencies of around 50% a transformation that cut national electricity bills by 25% and ushered in an era of cleaner, more reliable power. Today, Maltese households enjoy electricity at an average price of €0.13/kWh<sup>58</sup> – less than half the Eurozone average of €0.31/kWh. This places Malta among the lowest-priced electricity markets in the EU while also delivering the lowest domestic prices in Europe when adjusted for purchasing power parity. Industry too has reaped the benefits.

Whereas in 2013 Maltese non-household consumer tariffs were 25% above the EU average, a similar comparison today shows that they are substantially lower than that average<sup>59</sup>. These gains represent tangible relief for families and enterprises. Government investment in the energy sector has expanded dramatically to uphold our consumer-first vision. Expenditure on energy provision and distribution, including energy infrastructure, efficiency, and grid modernisation, now amounts to around 6% of GDP – a sixfold increase over the past decade.

55 Government of Malta. (2025, January 7). *Malta's national energy and climate plan 2021–2030 (Final updated NECP, submitted 2025)*. European Commission. [https://commission.europa.eu/publications/malta-final-updated-necp-2021-2030-submitted-2025\\_en](https://commission.europa.eu/publications/malta-final-updated-necp-2021-2030-submitted-2025_en)

56 Government of Malta, Ministry for the Environment, Climate Change and Planning. (2021, November). *Malta low carbon development strategy*. United Nations Framework Convention on Climate Change. [https://unfccc.int/sites/default/files/resource/MLT\\_LTS\\_Nov2021.pdf](https://unfccc.int/sites/default/files/resource/MLT_LTS_Nov2021.pdf)

57 Government of Malta, Ministry for the Environment, Energy and Public Cleanliness. (2023, August). *National policy for the deployment of offshore renewable energy*. Energy and Water Agency. [https://energywateragency.gov.mt/wp-content/uploads/2023/08/MEE-National-Policy-23\\_-DIGITAL-.pdf](https://energywateragency.gov.mt/wp-content/uploads/2023/08/MEE-National-Policy-23_-DIGITAL-.pdf)

58 European Commission, Eurostat. (2024, October 28). *Tax hikes hinder gas price drop, raise electricity costs [News article]*. <https://ec.europa.eu/eurostat/en/web/products-eurostat-news/w/ddn-20241028-1>

59 European Commission, Eurostat. (2026, February 9). *Electricity prices for non-household consumers — bi-annual data (from 2007 onwards) [Data set]*. Eurostat Data Browser. <https://ec.europa.eu/eurostat/databrowser/bookmark/c4cce8be-72b5-463b-9d47-751046c8b9e2?lang=en>

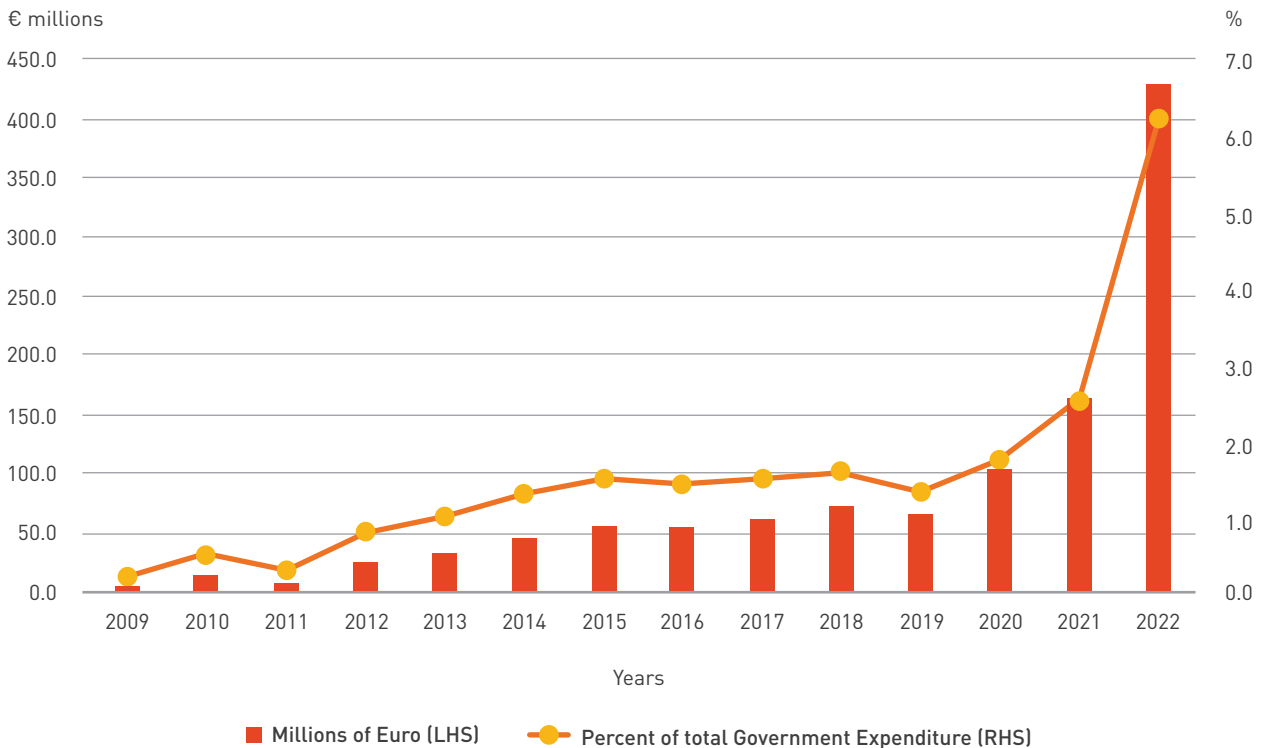


Figure 8: Government Expenditure on Energy and Fuel (Source: Pre-Budget Consultation Document 2025<sup>60</sup>)

Beyond LNG facilities and IC1, we are pursuing strategic capital investments that strengthen the reliability and flexibility of our power network: €300 million dedicated to Malta’s IC2, a strong budget for BESS to facilitate renewable energy integration into our grid – all investments that form the backbone of a resilient and diversified infrastructure mix that shields consumers from the turbulence of global markets.

Our vision extends further. The world has faced successive crises – from the post-COVID-19 to the geopolitical tensions in Europe and the Middle East - triggering energy shocks and disrupted gas supplies. During these turbulent times, Malta chose stability over uncertainty. By subsidising energy prices and maintaining fixed tariffs, the Government absorbed the external shocks, sparing households and industries from unbearable cost pressures. In the last four years, Malta invested over €1 billion to keep energy prices stable – a conscious choice to protect livelihoods and preserve purchasing power. This decision sustained economic momentum, helping to restrain inflation and ensuring that the most vulnerable households benefited the most from stability and support.

Our consumer protection measures also embrace the new generation of prosumers. Households that invest in PV systems are shielded from market volatility through a 20-year FiT, providing secure, predictable returns across the system’s lifetime. Furthermore, all consumers are shielded from variations in household electricity consumption. The billing structure smooths out seasonal variations by averaging consumption over a 12-month cycle – ensuring a fairer, steadier cost of electricity without distorting tariff design. Through these policies, Malta continues to demonstrate that energy transition and social justice are not opposing goals. They are two sides of the same mission – to build a clean energy future that is affordable and fair for all.

### 8.3 Informing and Empowering the Consumer

For Malta’s energy transition to succeed, it must not only be supported by infrastructure but must also be understood and embraced by the people. A truly sustainable energy future depends on informed, empowered prosumers who can make smart, conscious choices about how they use and produce energy. With over 99% smart meter coverage, Malta stands among the most advanced countries in Europe for smart meter deployment. This technological foundation marks a decisive step towards an energy system that is both

60 Government of Malta, Ministry for Finance. (2024, September). Pre-budget consultation document 2025. <https://finance.gov.mt/wp-content/uploads/2024/09/PRE-BUDGET-2025-DOC.pdf>

intelligent and participatory. We are now rolling out the second generation of smart meters, which have new functionalities and are more capable, more connected and more empowering than ever before. These next-generation meters give consumers real-time insight into their energy consumption, enabling them to understand, control, and optimise their electricity use with unprecedented accuracy. We see smart meters evolving into interactive energy companions – powerful digital tools that not only help service providers manage networks more efficiently, but also give citizens the data and confidence to take control of their energy decisions. Through advanced analytics and digital platforms, consumers will be able to visualise their consumption, monitor their renewable generation, and make informed choices that contribute directly to Malta’s clean energy goal.

By integrating specialised software, these smart meters can collect highly precise data to detect outages, anticipate grid congestion, and enhance the overall resilience of the national grid. This intelligence can reduce downtime, improve energy reliability, and create a more agile system capable of adapting to growing electrification and renewable integration.

Our commitment is to continue empowering consumers by transforming them from passive users to active participants. With the help of smart metering and responsive tariffs, consumers can better align their usage with periods of lower demand or higher renewable energy availability, saving money while reducing emissions.

Government policy also recognises the importance of incentivising this behavioural shift. Substantial grants – up to €9,000 for EV purchases<sup>61</sup> and €6,000 for domestic battery storage systems<sup>62</sup> – encourage households to adopt technologies that reduce reliance on fossil fuels and diversify indigenous security of supply. Much like EVs, domestic standalone battery systems can be charged through PV installations during periods of excess renewable generation. This energy can later be used for self-consumption or exported back to the grid during high-demand hours, turning consumers into contributors towards national energy security.

For non-residential consumers, differentiated day and night tariffs promote demand shifting and efficiency, particularly for medium and large consumption. These measures not only support business competitiveness but also enhance overall grid stability.

As Malta continues its digital and environmental transformation, the Government will further encourage consumers to understand and optimise their behaviour. By rewarding flexibility and awareness, these policies will nurture a new generation of energy-conscious citizens that would be active partners in shaping this intelligent energy future.

## 8.4 Ensuring an Inclusive Power Transition

A just and sustainable energy transition must be inclusive by design. Our vision places consumers as active participants in Malta’s evolving transition, and not just as end-users. The transition towards renewable energy should empower every citizen – not only those with the physical means or roof space to install solar panels, but all who share in the country’s ambition for a cleaner and fairer energy future.

Over the past years, the Government has invested millions of euros in grants and FiT for domestic and commercial PV systems. Recognising that many Maltese families live in apartments without access to rooftop space, we have extended this opportunity through communal PV farm schemes. These enable households to co-invest in shared solar installations, receiving returns proportional to their contribution – as if they had installed a system of their own. The Ministry for Energy has other similar projects in the pipeline. In this way, we ensure that renewable energy is not a privilege for the few, but a collective asset from which all can benefit. The recently launched Panelli Bla Bejt community-solar initiative, led by the Water Services Corporation (WSC), enables households that cannot install rooftop photovoltaic systems, such as residents of apartments, shared buildings, or properties with structural or heritage constraints, to participate directly in renewable-energy generation. Through a one-time investment of €6,000, participants can acquire a share of solar capacity installed on WSC-owned infrastructure, including reservoirs, operational buildings, and utility land. WSC will manage all the aspects from installation, to maintenance, grid connection, monitoring,

61 *Transport Malta. (2026). Grant schemes on new electric vehicles and pedelecs 2026. <https://www.transport.gov.mt/land/sustainable-transport/grant-schemes-on-new-electric-vehicles-and-pedelecs-2026-7655>*

62 *Government of Malta, Regulator for Energy and Water Services. (n.d.). A grant on the purchase of renewable energy systems in the domestic sector – Call 2024/RES. [https://www.servizz.gov.mt/en/Pages/Environment\\_-Energy\\_-Agriculture-and-Fisheries/Energy/Energy-and-Water-Services/WEB-04096/default.aspx](https://www.servizz.gov.mt/en/Pages/Environment_-Energy_-Agriculture-and-Fisheries/Energy/Energy-and-Water-Services/WEB-04096/default.aspx)*

and revenue collection, selling the generated electricity through Malta's Feed-In Tariff mechanism and distributing 85% of the resulting income to participants while retaining 15% to cover operational costs. The scheme is projected to deliver an average annual return of approximately €855 and a cumulative 20-year return of around €17,094, with all technical risks and equipment upkeep absorbed by WSC. Initially scaled for roughly 500 households, Panelli bla Bejt expands national photovoltaic capacity, supports citizens' participation in Malta's energy transition regardless of their housing circumstances, and is expected to generate approximately 4 GWh of clean electricity in its first year, equivalent to a reduction of about 1,500 tonnes of CO<sub>2</sub>. This initiative forms part of WSC's broader sustainability strategy and complements Malta's wider efforts to strengthen its renewable-energy mix through increased domestic generation, enhanced grid resilience, and long-term decarbonisation measures. In this way, we ensure that renewable energy is not a privilege for the few but a collective asset available to all.

In parallel, Malta is pioneering innovative green financing to support this shift. In 2023, the Water Services Corporation launched the country's first Green Bond on the Malta Stock Exchange – a landmark moment for environmental ambition and financial innovation. With a €25 million pledge, a ten-year maturity and a 2.45% interest rate, the bond stands as a beacon of Malta's commitment to global sustainability goals, including the UN Sustainable Development Goals and the EU Green Deal. Proceeds from this framework are financing transformative green projects, including cutting-edge reverse-osmosis technology, solar farms, wastewater treatment upgrades, and enhancements to our national water network – all designed to improve operational efficiency and increase renewable generation.

Equally significant is the public engagement this initiative has inspired. Maltese retail investors have emerged as the primary participants, reflecting growing national confidence in the country's green transition. A dedicated transparency platform<sup>63</sup> now enables the public and shareholders alike to monitor project progress, ensuring accountability and trust in how every euro of the Green Bond is put to work.

Our ultimate goal is to dramatically reduce the carbon footprint required to power important national projects, while giving consumers a tangible stake in shaping this transformation. We will continue fostering a new sense of shared ownership where the benefits of sustainability reach every household and business.

This journey has proven that collective participation is not only possible but also powerful. Malta's citizens are showing they are ready to invest in and co-drive the country's green transformation. Moving forward, we will continue championing initiatives that unite environmental progress with economic opportunity, and individual empowerment with collective gain. We envision a future where green initiatives become the norm – where inclusivity, innovation, and environmental stewardship define Malta's leadership in sustainability. In this shared endeavour, every citizen becomes a partner in building an equitable and truly sustainable Malta.



63

ClearFlowPlus p.l.c. (n.d.). Green bonds investor reporting [Dashboard]. <https://www.clearflowplus.com/bi>

## 8.5 Bolstering Consumer Experience

A future-ready energy system is not only built on technology – it is built on trust, accessibility, and simplicity. In Malta, our vision for the consumer experience is one that removes barriers and empowers participation, enabling a seamless transition to renewable energy. To this end, REWS has launched a digital one-stop shop that redefines how citizens and businesses engage with the renewable energy ecosystem. This platform simplifies the process of obtaining permits for renewable energy projects – from initial application to final grid connection – transforming what was once a complex, multi-layered procedure into a smooth, integrated journey. By consolidating this process across entities, including REWS, Enemalta, and ARMS, the digital platform streamlines workflows for clients, suppliers, and professionals, eliminating unnecessary bureaucracy and accelerating approvals. It allows consumers and professionals to apply for, track, and manage projects in real time, saving valuable time and reducing administrative burdens. This streamlined approach marks a significant milestone in Malta's digital transformation of the energy sector. Consumers installing PV systems of up to 40kW capacity can now benefit from a fully digital application process, reflecting our national commitment to render this adoption as easy and accessible as possible. Looking ahead, Malta's goal is to fully integrate renewable energy projects of all scales into this digital platform – creating an agile, data-driven interface that not only simplifies processes but actively supports policy development and network planning – a digital ecosystem that connects citizens, regulators, and energy providers. The REWS remains committed to continuous improvement, guided by customer and stakeholder feedback. Through regular dialogue and consultation with industry professionals, the regulator ensures that the platform evolves to meet emerging needs, enhance service quality, and reflect technological advances. Ultimately, our vision is clear: to deliver an efficient, transparent, and consumer-centric experience that encourages more Maltese households and businesses to embrace renewable energy. By simplifying access and reducing friction, we are creating a better customer journey and, more importantly, a quicker, more inclusive, and future-proof energy system that embodies the spirit of innovation at the heart of Malta's transition.

## 9 CONCLUSION

Malta's journey towards a sustainable, secure, and inclusive power system is more than a policy objective. It is a national transformation. The success of this transition depends on a shared commitment – one that unites the Government, regulators, industry, businesses, and citizens towards a common purpose: to build an energy future that is clean, reliable, and fair for all.

The Government of Malta embraces its role as the principal enabler and facilitator of this change, recognising that achieving climate neutrality by 2050 is not only an obligation to future generations but also an opportunity to strengthen our economy and enhance wellbeing. Through strategic leadership, targeted investment, and inclusive participation, Malta is setting the foundation for a resilient, consumer-focused, and forward-looking energy system.

This document is part of a strategic framework defining a clear direction for a sustainable power system that is both resilient and affordable. The continued evolution of the *National and Climate Plan*, the *Low Carbon Development Strategy* and complementary policy and legislative instruments will ensure that the transition remains adaptive, evidence-based, and aligned with our national priorities.

At the heart of this transformation lies investment in modern infrastructure and technological innovation. From interconnectors, network distribution upgrades, domestic and large-scale BESS, local PV installations, to offshore renewables, off-grid backup plants, and advanced smart metering, Malta is establishing a flexible and diversified power system portfolio capable of integrating higher shares of renewable energy while maintaining both security and affordability.

Our approach rests on five interconnected pillars – **Affordability, Security of Power Supply, Sustainability of Power Supply, Diversification of Power Supply**, and a **Consumer-Centric Approach**. Together, they ensure that this transition delivers tangible benefits to every segment of society. Affordability safeguards vulnerable consumers and competitiveness; diversification and sustainability reduce reliance on external markets; and placing consumers at the centre empowers households and businesses to participate directly in the green transition.

This transformation is not merely a response to climate change but also a catalyst for sustainable growth and social progress. By leveraging European partnerships, embracing digitalisation, and fostering

regional cooperation – particularly through Malta’s active role in the MED9 alliance and its vision of becoming a Mediterranean Green Energy Hub – we are positioning our country as a regional leader in the energy transition.

As Malta’s society and economy continue to evolve, our policies must remain grounded in justice, inclusiveness, and solidarity – ensuring that no one is left behind. Through ongoing stakeholder engagement, transparent communication, and targeted support, we will uphold the principles of shared prosperity and collective responsibility that define our vision for the future.

In conclusion, Malta’s clean power transition is a long-term, dynamic journey – one that demands firm commitment, determination, adaptability, and unity of purpose. With clear direction, prudent investment, and collaborative action, Malta will achieve a resilient, consumer-driven power system by 2050 – delivering improved quality of life, economic vitality, and environmental stewardship for current and future generations.







**MALTA'S  
ENERGY SHIFT:  
A SUSTAINABLE  
POWER TRANSITION**

