



2024 National Report of the Regulator for Energy and Water Services to the European Commission on the Electricity and Natural Gas sectors in Malta

Fulfilling the provisions of Article 59.1(i) of Directive 2019/944 and Article 41.1(e) of Directive 73/2009.

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1- FOREWORD

This report was prepared by the Regulator for Energy and Water Services (REWS) pursuant to the annual reporting obligations under Article 59.1(e) of the Directive (EU) 2019/944 of the 5th of June 2019 on common rules for the Internal Market for Electricity (Directive (EU) 2019/944) and Article 41.1(e) of the Directive 2009/73/EC of the 13th of July 2009 concerning common rules for the Internal Market in Natural Gas (Directive 2009/73/EC). The report, as far as applicable, follows the reporting structure recommended by the Council of European Energy Regulators (CEER) published on the 2nd of March 2020.

The report describes the recent developments in the electricity and natural gas market, energy infrastructure, security of supply, relevant legislation as well as tasks carried out by the Regulator with respect to renewable energy and consumer protection.

The analysis and statistical data presented in this report relate essentially to the year 2023.

2 - MAIN DEVELOPMENTS IN THE GAS AND ELECTRICITY MARKETS

This section provides a summary of the key developments in the Electricity and Gas Markets in Malta during the year 2023.

2.1 Evaluation of the market development and regulation

- **Development of electricity demand level and sources of generation**

The volume of electricity injected into the Maltese distribution network in 2023 increased by 1.7% when compared to the previous year, reaching a total amount of 2837.90 GWh¹.

The renewable energy capacity installed at the end of 2023 reached a total of 243.99 MW, a net increase in installed capacity of 8.32 % over the previous year.

The electricity generated from renewable energy sources in 2023 is estimated at 317.93 GWh², representing an increase of 6.9% compared to the generation from renewable sources in 2022.

The energy mix of the electricity supplied to end customers remained in line with that for 2022, with 69.09% of the electricity sourced by local natural gas plants. There was a decrease in the share of electricity generated locally from diesel, from 2.01% to 0.58%, which is mainly used for security of supply issues. The emission factor for electricity supplied to final customers in 2023 was calculated at 396 gCO₂/kWh, with a 1.2% increase over the previous year caused by a growth of the emission factor of the electricity imported.

- **Peak demand**

In 2023, the peak demand on the Maltese electricity distribution network reached 663.3 MW, representing an increase of 14.1% over the previous year. This peak demand occurred on the 25th of July at 15:00 and represents a historical record for the country. PV systems are estimated to have covered 19.60% of the peak demand. The distribution system operator was not required to operate any of its own backup power plants to meet the peak demand. On the same day, the distribution system operator recorded an unprecedented evening peak of 621MW.

¹ The figure does not include electricity generated mainly from renewable energy sources and consumed on site by producers but includes units exported to Italy.

² The figure consists of 309.345 GWh of PV generation reported by NSO and 8.481 GWh generation reported by CHP operators for 2023.

- **Continuity of supply**

All the continuity of supply indicators (analysed in section 3.1(d)) shows a worsening of the quality of service with respect to the previous year: the SAIDI³ increased by 135%, the CAIDI⁴ by 35.9% and the SAIFI⁵ increased by 74.7%. The main reason for these performances is to be attributed to several unplanned interruptions caused by faults in the medium voltage network that occurred after the third week of July.

The prolonged high ambient temperatures combined with an increase in the demand from the distribution network may have contributed to the failure of several underground cables in the medium voltage distribution network. Despite the n-1 redundancy design of the distribution network, the reliance on alternative sources strained healthy sections, resulting in occurrence of multiple failures on the same circuits. Due to the resulting cable failures some customers experienced prolonged power interruptions until the repairs on these cables were completed.

After this event, Enemalta plc planned an extraordinary infrastructure upgrade taking into account anticipated load growth due to electrification in mobility and climate control, considering demand-side management as a short to medium-term solution until the network reinforcement is completed. A tender for the lease and operation of a 60 MW diesel generator plant was also issued by Enemalta plc.

- **Tariff methodology for shore-side electricity supply**

In 2023, the Regulator issued the Decision No. 9 on the 26th of October setting the tariff methodology for electricity supplied from shore-side facilities to ships berthed in Maltese ports. This methodology establishes a flat rate per kWh valid for a three-month period.

- **Cross-border projects**

The REWS continues to monitor the regulatory aspects of the cross-border projects that involve Malta, that is, the Melita TransGas Pipeline (MTGP) and the Italy-Malta electricity link.

During 2023, significant progress was made on the design and permitting of the Italy-Malta electricity link. The onshore and offshore routes, cable sizing, and ampacity were determined, and the design of transformers, shunt reactors, and switchgear was completed. The first EPC tender was published. The Environmental

³ System Average Interruption Frequency Index, see paragraph 3.1(d).

⁴ Customer Average Interruption Duration Index, see paragraph 3.1(d).

⁵ System Average Interruption Duration Index, see paragraph 3.1(d).

Impact Assessment (EIA) for Malta was approved in August 2023, and the Maltese development permitting procedure reached its final stage. The Italian Single Authorisation Decree application, including environmental studies, was submitted in August 2023. A proposal for ERDF funding was submitted in September 2023 and is under evaluation.

The Melita TransGas Pipeline (MTGP) was included as a Project of Common Interest in the 6th PCI list (PCI 15.1). In 2023, the pipeline’s design and financial engineering studies were updated and finalized to accommodate a hydrogen-ready pipeline. This aligns the project with the EU Green Deal objectives and the transition to a carbon-neutral economy, enabling future import of renewable gases like green hydrogen as the market develops.

On the 28th of September 2023, the Board of the Regulator approved the Methodology and Criteria for Evaluating Investments in Energy Infrastructure Projects, as per Article 17 of Regulation (EU) 2022/869. This new methodology, that replaces the previous 2016 document, applies to evaluating incentives for investments in cross-border energy infrastructure projects that qualify as Projects of Common Interest (PCIs) or Projects of Mutual Interest (PMIs).

2.2 Report on the implementation of the Clean Energy Package⁶

The EU Clean Energy Package is the European energy legislative framework developed to facilitate the transition away from fossil fuels towards cleaner forms of energy and to deliver towards the EU's commitments under the Paris Agreement on the reduction of greenhouse gas emissions. The package includes eight legislative instruments covering among other the electricity market and consumers, Energy Efficiency, Energy Performance in Buildings, Renewable energy and biofuel sustainability, risk preparedness in the electricity sector as well as governance of the Energy Union.

The Clean Energy package is composed primarily of the following elements:

- a) **Energy efficiency first:** a revamped directive on energy efficiency setting a new, higher target for reduction in energy use by 2030 of 32.5%, and a new Energy performance of buildings directive maximises the energy saving potential of smarter and greener buildings.
- b) **More renewables:** an ambitious new target of at least 32% share of renewable energy by 2030 has been fixed, with specific provisions to foster public and private investment, in order for the EU to maintain its global leadership on renewables.
- c) **A better governance of the Energy Union:** Under the Regulation (EU) 2018/1999 on the governance of the energy union and climate change, each Member State had to prepare a National Energy and Climate Plan (NECP) covering 2021-2030 setting out how to achieve its energy union targets, and in particular the 2030 targets on energy efficiency and renewable energy. The draft NECPs were analysed by the EU Commission who published country-specific recommendations in June 2019. Member states had to submit their final NECPs, considering the recommendations of the EU Commission, by 31st of December 2019. A progress report on the NECP must be submitted to the Commission every two years. An updated version of the NECP is expected to be published in 2024.
- d) **More rights for consumers:** the new rules make it easier for individuals to produce, self-consume, store or sell the energy they produce, and strengthen consumer rights with more transparency on bills, and greater choice flexibility.
- e) **A smarter and more efficient electricity market:** the new laws will increase security of supply by facilitating the integration of renewables into the grid and management of risks, and by improving cross-border cooperation.

⁶ Article 59.1(u) Directive: Roles and responsibilities of market participants pursuant to Regulation (EU) 2019/943.

Directive (EU) 2019/944 on common rules for the internal market for electricity has been transposed into national law through the Electricity Regulations (S.L.545.34) which replaced the Electricity Market Regulations (S.L.545.13) in 2021.

The Electricity Regulations (S.L.545.34) reflect the derogations granted to Malta under the Directive (EU) 2019/944. In particular, Article 66(3) of this Directive, provides that the following Articles shall not apply to Malta:

- Article 6 on Third-party access,
- Article 35 on Unbundling of Distribution System Operators, and
- Article 43 on Unbundling of Transmission System Operators.

Moreover, Article 66(5) of the Directive (EU) 2019/944 specifies that Article 4 (Free Choice of Supplier) is not applicable to Malta. This derogation is time-limited until 5 July 2027, however, may be extended by a maximum period of eight years by a decision of the EU Commission pursuant to paragraph 1 of Article 66.

During the year 2023, the legal notice 44 introduced the obligation on Enemalta, as the sole supplier of electricity in Malta, to purchase electricity generated from renewables locally at the proxy of the market price determined under these regulations until a liquid wholesale market is established in Malta. Another amendment introduced was related to the establishment of the proxy price of electricity generation.

3 - THE ELECTRICITY MARKET

3.1 Network regulation and technical functioning

3.1(a) Unbundling⁷

Unbundling is the separation of the electricity supply and generation activities from the operation of distribution and/or transmission networks. Directive (EU) 2019/944 retains the same unbundling principles of Directive 2009/72 EC with respect to transmission system operators (TSOs). Unbundling of TSOs, in general, may take the form of any of the following basic models: Ownership Unbundling, Independent System Operator and Independent Transmission Operator.

Article 35 of Directive (EU) 2019/944 requires that “*where the distribution system operator is part of a vertically integrated undertaking, it shall be independent at least in terms of its legal form, organisation and decision making from other activities not relating to distribution*”. However, in terms of Article 66 of Directive (EU) 2019/944, Article 43 (Unbundling of transmission systems and transmission system operators) and Article 35 (Unbundling of distribution system operators) of this directive do not apply to Malta.

In Malta, there are no TSOs since there are no electricity transmission systems.

The electricity distribution system covering the whole country remains under the responsibility of one Distribution System Operator (DSO), which forms part of a vertically integrated company, Enemalta plc. This company is also licensed to generate and supply electricity to final customers.

Under the Electricity Regulations (S.L. 545.34) electricity undertakings are required to keep within their internal accounting, separate accounts for each of their generation, distribution and supply activities as if these activities were being carried out separately in view to avoid discrimination, cross-subsidization and distortion of competition. In addition, the auditing of the published company accounts of such electricity undertakings must verify compliance with the requirement to avoid cross-subsidisation and non-discrimination.

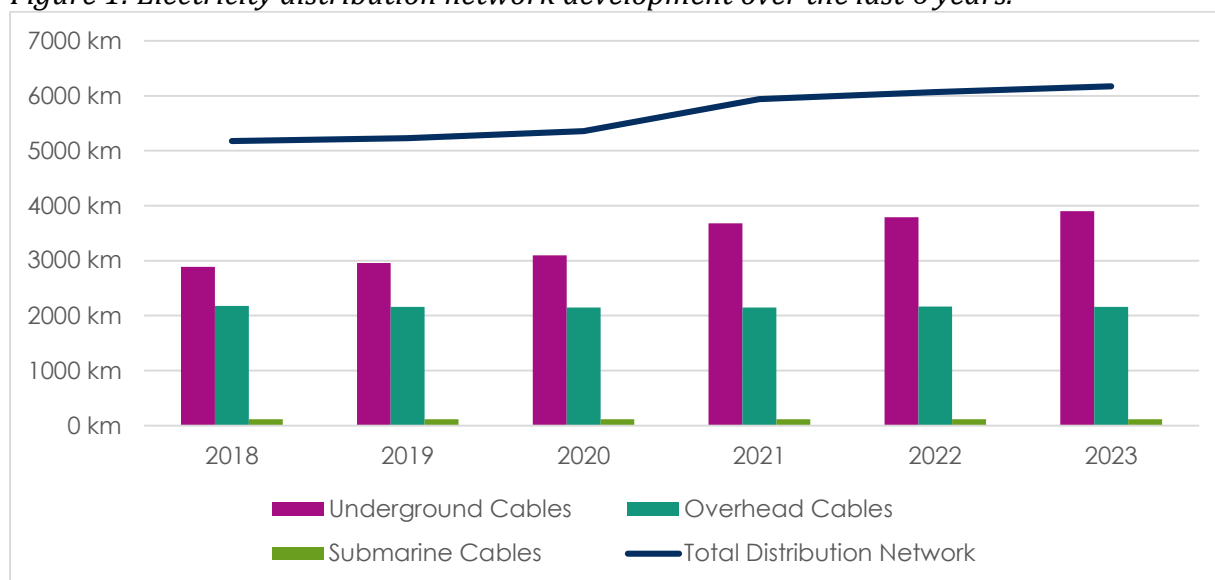
Enemalta plc is the only undertaking licensed to carry out all the three activities of generation, distribution, and supply together. The licence conditions issued to Enemalta plc require the submission of licence monitoring reports which include the submission by Enemalta plc of separate profit and loss accounts and balance sheets for each of the three activities.

⁷ Article 59.1(j) Directive 2019/944: Cross-subsidization.

3.1(b) Network extensions and optimisation⁸

The electricity distribution system consists of a network of 6,175.17km (+1.8% over 2022) and is composed of 3,900.29km of underground cables (+2.9% over 2022), 2,161.68km of overhead cables (-0.1% over 2022) and 113.2km of submarine cables. The voltage levels of the distribution system are 220kV, 132kV, 33kV, 11kV and 400/230V. The low voltage network at 400/230V is mostly overhead whereas the network at higher voltages is mostly underground.

Figure 1: Electricity distribution network development over the last 6 years.



The Maltese electricity system has been synchronised with the Italian electricity grid since April 2015 through the 200MW HVAC 220kV electricity link. This interconnection is operated by Enemalta plc in coordination with the Italian transmission system operator, Terna S.p.A. Under this arrangement, the Maltese electricity system is being treated as a virtual consumption and production point connected to the Italian transmission grid.

The Regulator determined on yearly basis the power losses of the Maltese electricity network, basing on figures provided by the distribution system operator Enemalta plc. The methodology adopted determines the total volume of losses as a difference between the units injected into the grid by all sources (power stations, prosumers and interconnector) and the units withdrawn from the distribution system over the year. Since 2021, the determination of the electricity injected and absorbed by consumers is based on an extensive use of smart meters data.

Following the indication of CEER⁹, power losses are categorised according to their cause in technical and non-technical losses. Technical losses are caused directly by the laws of physics while non-technical losses refer to unaccounted electricity that can have heterogeneous causes (theft, tampering, metering or administrative errors, etc.). The REWS

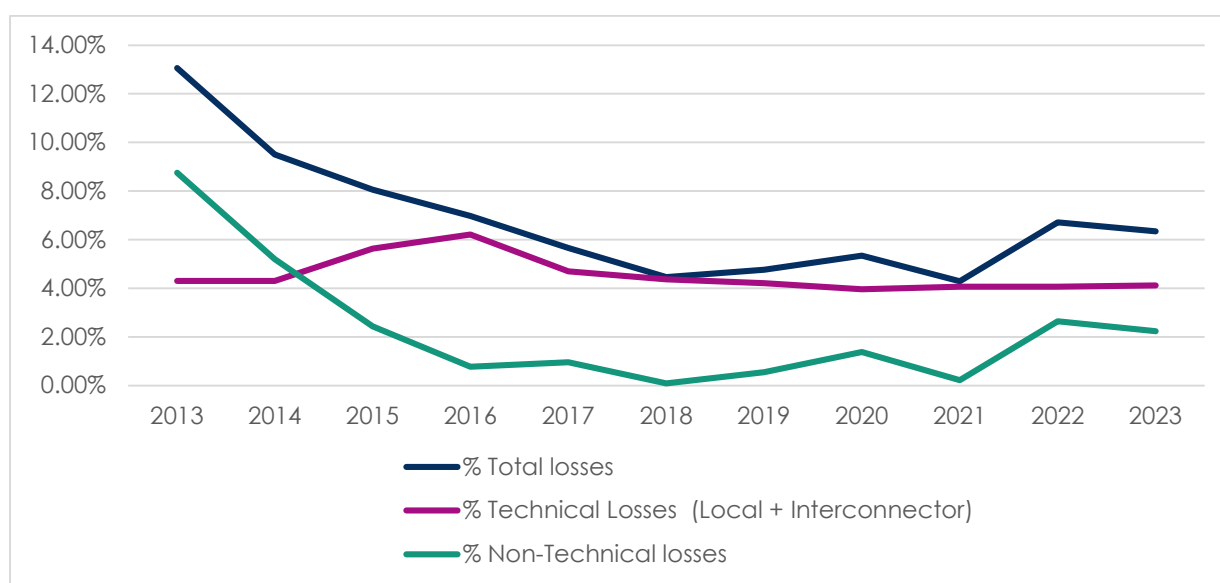
⁸ Article 59.1(k) and Article 59.1(l) Directive 2019/944: Investment plans and Smart grid development.

⁹ 2nd CEER Report on Power Losses, 23 March 2020, page 11.

determines the technical losses using the methodology provided by Enemalta in its Technical Losses Study 2017 and using fiscal meter readings at Ragusa and Maghtab terminal stations to obtain the interconnector losses, both for import and export functionality. The non-technical losses are estimated as a difference between the total losses and the technical losses.

During the year 2023 the total losses in the Maltese distribution network amounted to 6.34% of the total energy injected, of which 4.11% were attributed to technical losses and 2.23% to non-technical losses. In Figure 2 is reported the power losses over the past 10 years that shows a general trend of increasing efficiency in electricity distribution.

Figure 2: Trend of power losses in the Distribution Network between 2013 and 2023.



3.1(c) Network tariffs¹⁰

Under the Electricity Regulations (S.L.545.34) the REWS has the duty to fix or approve in accordance with transparent criteria, transmission or distribution tariffs or their methodologies, or both. The Regulator is also responsible for fixing or approving sufficiently in advance of their entry into force at least the national methodologies used to calculate or establish the terms and conditions for connection and access to national networks. These tariffs or methodologies shall allow the necessary investments in the networks to be carried out in a manner to ensure the viability of the networks. If necessary, the Regulator may require the distribution system operator to modify the terms and conditions, including tariffs or methodologies referred to in this regulation, to ensure that they are proportionate and applied in a non-discriminatory manner.

¹⁰ Article 59.1(o) Directive 2019/944: Evolution of network tariffs and levies.

The Maltese distribution system is not open to Third-party access, as Malta has been granted a derogation from Article 6 of Directive (EU) 2019/944 pursuant to Article 66 of the said Directive.

The charges for connecting to the network and/or methodologies for the determination of such charges are established by the Electricity Supply Regulations (S.L.545.01). These provisions apply for all users wishing to connect to the network.

With the Deliberation ARERA 576/2021/R/EEL11 concerning charges applicable to certain interconnections with foreign states, the Italian Regulator ARERA determined that, as from 2023, a transmission fee (€/MWh) applies to cover transport costs and dispatching fees on electricity withdrawn from the Italian system to Malta over the Malta-Italy electricity link. The afore-mentioned transmission fee applies until an Inter-TSO-Compensation mechanism is implemented in terms of Regulation (EU) 838/2010. ARERA's Deliberation also determined that no dispatching services fee (uplift fee) should apply since Malta does not depend on the electrical connection with Italy to cover its load.

For the year 2023, the abovementioned transmission fee applied determined by ARERA to the electricity imported through the Italy-Malta electricity link was 8.7 €/MWh

3.1(d) Security and reliability regulation¹²

According to the Electricity Regulations (S.L. 545.34), "security" means both security of supply and provision of electricity, and technical safety.

Enemalta plc is required by the REWS, as part of the licence obligations, to prepare security and planning standards defining quality of supply objectives, together with minimum security objectives to be met.

Enemalta plc is also required to provide to the REWS information related to the quality of service. This information includes the System Average Interruption Duration Index (SAIDI). This parameter is determined using the data for the duration of supply interruptions (planned and unplanned) occurring at 11kV level or higher voltages and dividing this by the number of customers served in the year of reference. Therefore, the SAIDI is an indication of the average minutes lost per customer per annum.

Table 1 shows the estimates provided by Enemalta plc for the SAIDI for the years 2017 to 2023 due to planned and unplanned interruptions at 11kV or higher voltages. As may be seen from *Table 1*, the average minutes lost per customer per annum for 2023 increased compared with the previous year. The relevant increase in unplanned interruptions

¹¹ Deliberazione 14 dicembre 2021, 576/2021/R/EEL, Definizione della regolazione delle partite economiche relative all'energia elettrica destinata agli stati interclusi nel territorio italiano e per i quali non e' attuato il controllo degli scambi programmati.

¹² Article 59.1(m) Directive 2019/944: Network security and reliability issues;
Article 59.10 Directive 2019/944: Congestion Management.

(+183%) is mainly due to faults in the medium voltage distribution network attributed to the effects of a heat wave that occurred between July and August. This incident is described in more detail at the end of this section.

Table 1: SAIDI (Average minutes lost per custom per year) between 2017 and 2023.

Year	2017	2018	2019	2020	2021	2022	2023
Planned interruptions	64.8	44.06	44.71	32.38	32.49	42.83	47.28
Unplanned interruptions	417.60	69.32	457.2	96.24	89.58	112.98	319.61
Overall interruptions	482.40	113.38	501.91	128.62	122.07	155.80	366.88

Source: Enemalta plc.

Enemalta plc submits to the REWS information related to number of interruptions, average duration of an interruption and supply restoration time.

In 2023, the average duration of a planned interruption (CAIDI, Customer Average Interruption Duration Index) was 1.79 hours while the average duration of an unplanned interruption was 1.95 hours. Values for the CAIDI for the past 7 years are reported in *Table 2*. Based also on the information provided by Enemalta plc, in 2023 58.27% of customers affected by an unplanned interruption had their supply restored within 1 hour; while 88.69% of customers affected by an unplanned interruption had their supply restored within 3 hours.

Table 2: CAIDI (Customer Average Interruption Duration Index) between 2017 and 2023.

Year	2017	2018	2019	2020	2021	2022	2023
Planned interruptions	1.84	1.36	1.27	1.16	1.19	1.62	1.79
Unplanned interruptions	1.48	0.62	1.69	0.66	0.94	1.36	1.95
Overall interruptions	1.52	0.78	1.64	0.74	0.99	1.42	1.93

Source: Enemalta plc.

Enemalta plc is also bound to report the System Average Interruption Frequency Index (SAIFI); this is defined as the total number of interruptions divided by the number of customers served. The average number of planned and unplanned interruptions per customer is shown in *Table 3*.

Table 3: SAIFI (Average number of interruptions per customer) between 2017 and 2023.

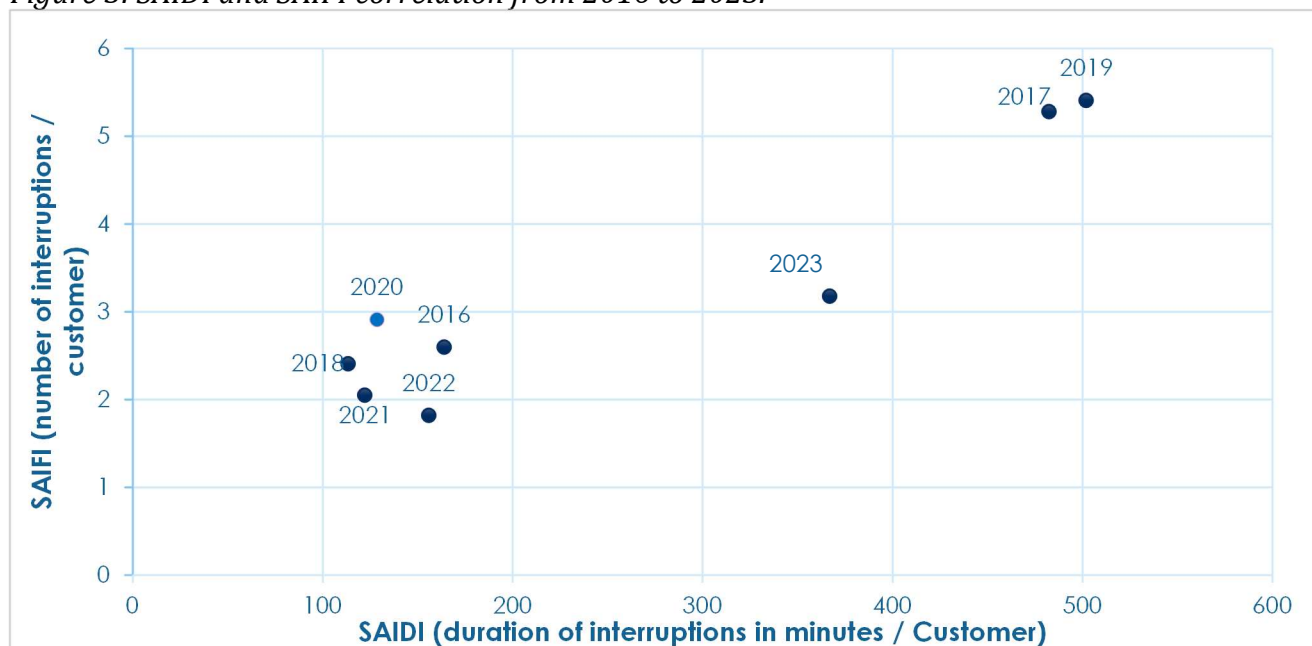
Year	2017	2018	2019	2020	2021	2022	2023
Planned interruptions	4.69	0.54	0.59	0.47	0.46	0.44	0.44
Unplanned interruptions	0.59	1.87	4.55	2.44	1.59	1.38	2.74
Overall interruptions	5.28	2.41	5.14	2.91	2.05	1.82	3.18

Source: Enemalta plc.

For the year 2023, the number of planned interruptions per customer due to interruptions affecting the 11kV level was on average 0.44 and the number of unplanned interruptions per customer was on average 2.74.

As shown in Figure 3, the continuity of electricity supply indicators for 2023 were higher than those reported in the previous 3 years.

Figure 3: SAIDI and SAIFI correlation from 2016 to 2023.



As per the [National Risk Preparedness Plan 2022 – Electricity Sector](#), the REWS is responsible to collect information related to energy security of supply situation and report them to the Energy Crisis Coordinator (the Permanent Secretary of the Ministry responsible for Energy) and the National Designated Competent Authority (NDCA)[the Ministry responsible for Energy].

This security of supply report is prepared in collaboration with the distribution system operator, Enemalta plc. In addition, on a monthly basis, Enemalta plc submits to the REWS

information related to local generation capacity availability, faults on the generation side, peak demand and amounts of electricity locally generated and imported.

The REWS also assists the Energy Crisis Coordinator and NDCA in taking the necessary informed decisions in case of electricity crisis.

During the year 2023, 17 major incidents affected the continuity of supply. An event is considered to be a major incident if it affects adversely or could potentially affect adversely the security and quality of supply including unavailability of a circuit, transformer, or switchgear at 33kV level or higher voltages.

In the third week of July, the Maltese Islands experienced a 10-day intense heatwave, leading to record-high temperatures and an unprecedented demand for electricity, notably driven by the extensive use of air conditioning. Malta faced a peak early afternoon electricity demand of 663 MW during this period, surpassing the previous record set in 2022 by over 14%. During the same period the evening system demand reached a record of 621MW.

The prolonged high temperatures combined with the increase in the demand from the distribution network are deemed to have contributed to the failure of several underground cables in the medium voltage distribution network. Despite the n-1 redundancy design of the distribution network, the reliance on alternative sources strained healthy sections, resulting in occurrence of multiple failures on the same circuits. Due to the resulting cable failures some customers experienced prolonged power interruptions until the repairs on these cables were completed.

Enemalta plc responded by halting planned reinforcement works and dedicating all teams to repairs on a 24-hour basis. A subsequent decrease in temperature alleviated peak load, enabling repairs and restoring the network's redundancy.

While the distribution system operator (Enemalta plc) does not expect the yearly annual peak demand to continue to increase with the same rate experienced in 2023, the planning infrastructure upgrades take into account anticipated load growth due to electrification in mobility and climate control, considering demand-side management as a short to medium-term solution until the network reinforcement is completed.

The Regulator monitors the time taken by the distribution system operator to provide new electricity service connections and the time taken to connect RES generators to the distribution system.

There is no definition established by law for the 'time to connect' customers and producers to the network. However, in general, in case of non-complex services, the time to connect customers and producers is taken to be the time that elapses between the submission of an application to the distribution system operator for connecting to the network and the date of the provision of the service connection and electricity meter. Normally, the activation of the service occurs on the same day on which the electricity meter is installed. Activation of the service is understood to be the possibility to either import and/or export through the metering equipment provided by the distribution system operator.

During the year 2023, based on the information provided by the distribution system operator, the average time for the provision of a new non-complex service connection, not requiring any type of extension of the network or new substation, was of 12.1 days. *Table 4* shows the developments in the average time taken by the distribution system operator to provide a new service between the year 2017 and 2023.

Table 4: Average time for the provision of a new service connection (2017-2023).

Year	2017	2018	2019	2020	2021	2022	2023
Number of days	12	9.6	9.2	11.9	13.6	13.7	12.1

Source: Enemalta plc.

Based on data provided by the distribution system operator, the average time taken for connecting RES generators (average for capacities less than 41kWp) to the distribution system, which includes the provision of the necessary metering equipment, was 17.6 days for the year 2023 as shown in *Table 5*. RES generators with a capacity of less than 41kWp are normally connected to existing services or involve a non-complex new service. As a norm, the metering configuration used for RES generators includes a generation meter and an import/export meter. To note that more than 97.6% of the PV systems newly connected to the distribution system during the year 2023 have a capacity of less than 41kWp.

Table 5: Average time for the connection of RES generators less than 41kWp (2017-2023).

Year	2017	2018	2019	2020	2021	2022	2023
Number of days	8.6	8.7	10.9	20.0	16.5	18.6	17.6

Source: Enemalta plc and REWS.

In general, the re-activation of supply by the distribution system operator after disconnection due to non-payment of electricity bills takes place within 24 hours of the settlement of debts.

3.1 (e) Monitoring balance of supply and demand¹³

According to Article 59(v) of Directive (EU) 2019/944, the REWS is responsible for monitoring investment in generation and storage capacities in relation to Security of Supply (SoS).

As shown in *Table 6*, the total local fossil fuel nominal generation capacity as at the end of 2023 was 582.6MW. All the fossil fuel generation capacity is located at the Delimara Power Station site except for a 35MW open cycle gas turbine, denominated as GT9, located in the Marsa Power Station.

Since 2017, DPS-2A Open Cycle Gas Turbine, MPS-GT9 Open Cycle Gas Turbine and DPS-2B Combined Cycle Gas Turbine, all owned by Enemalta plc, have been mainly used as backup reserve capacity. The total available capacity of these power plants is normally around 150MW.

Table 6: Local fossil fuel generating plants figures for the year 2023.

Generating plant name	Technology	Fuel	Licensee	Installed Nominal Capacity (MW)
MPS-GT9	Open Cycle Gas Turbine	Gas Oil	Enemalta plc	35
DPS-2A	Open Cycle Gas Turbine	Gas Oil	Enemalta plc	70
DPS-2B	Combined Cycle Gas Turbine	Gas Oil	Enemalta plc	110
DPS-3	Combined cycle diesel engines converted	Natural Gas / Gas Oil	D3 Power Generation Ltd	152.6
DPS-4	Combined Cycle Gas Turbine	Natural Gas	ElectroGas Malta Ltd	215
				582.6

Source: Enemalta plc and other sources.

To note that around half of the combined cycle diesel engines capacity (DPS-3) is dual fuel (natural gas/gas oil) while the other half runs on natural gas only.

In addition to the above-mentioned fossil fuel generating plants, there is also one CHP (Combined Heat and Power) 0.049 MWe plant licensed by the REWS and connected to the grid running on Liquid Petroleum Gas (LPG).

¹³ Article 59.1(v) Directive 2019/944: Investment in generation and storage capacities in relation to security of supply.

The total electricity generation capacity from renewable energy sources installed by the end of 2023 is 243.99MW. As may be deduced from the breakdown in *Table 7*, the renewable energy generation capacity installed consists mainly of solar photovoltaic installations.

Table 7: Installed capacity renewable energy as the end of the year 2023.

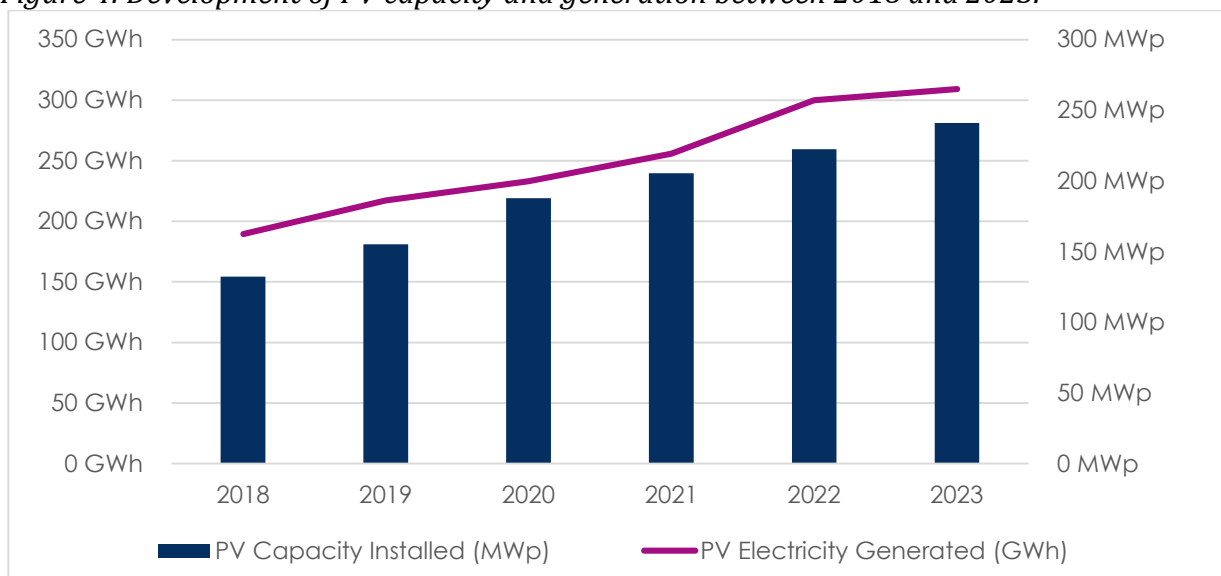
Renewable energy technology	Capacity installed (MW)
Solar photovoltaic systems	241.104MWp
Micro wind	0.0598MW
Biogas CHP plants	2.823MWe
Total capacity installed	243.99MW

Source: REWS and Enemalta plc.

In 2023, 19.032MW of new solar photovoltaic capacity was connected to the public grid while 0.506MW was decommissioned (this means a net increase of 8.4% in the total solar photovoltaic capacity connected to the grid over the previous year, taking into account decommissioned capacity). The 241.104MWp DC solar photovoltaic capacity corresponds to 226MW AC nominal capacity. *Figure 4* shows the development in the uptake of PV capacity and electricity generation since 2018.

The largest solar photovoltaic installation is 5.4MWp while 95.1% of the PV installations connected to the grid by the end of 2023 have a capacity of 11kWp or lower.

Figure 4: Development of PV capacity and generation between 2018 and 2023.



Source: REWS, Enemalta plc and NSO¹⁴.

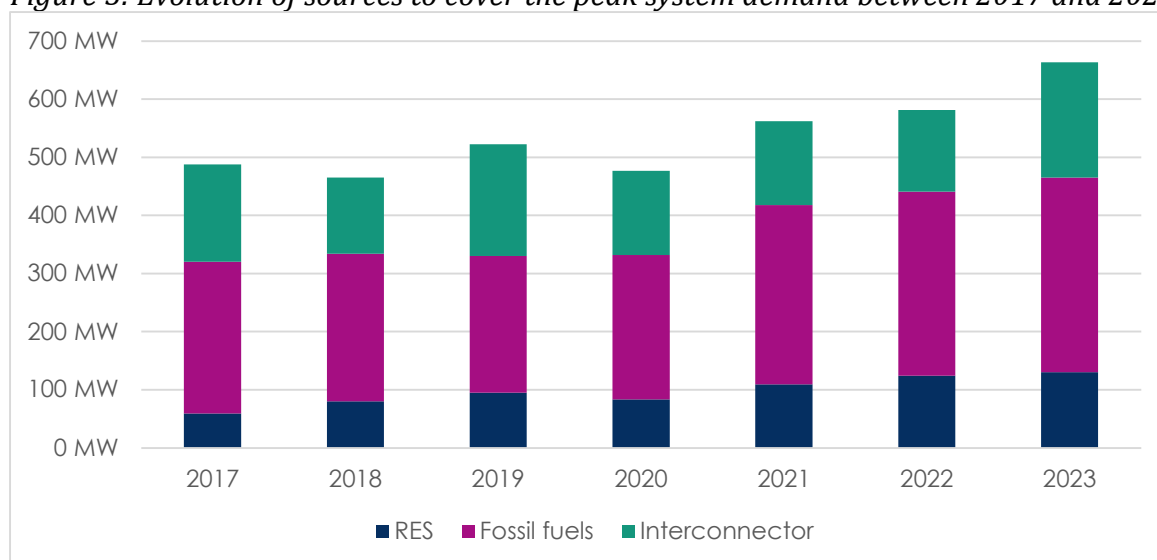
¹⁴ <https://nso.gov.mt/renewable-energy-from-photovoltaic-panels-pvs-2023/>

There is only one supplier of electricity to final customers, Enemalta plc; this entity is also the distribution system operator, with the obligation to meet all the demand including the peak demand.

The units sent out to the grid in 2023 (these units include losses in the grid and exports to Italy and exclude self-consumption on site by producers) was 2,837.90 GWh¹⁵, of which 1,977.31GWh (69.67%% of the total) was supplied from local fossil generation plants. The fuel mix contribution of petroleum products from local generation for the year 2023 was 0.58% while the share of natural gas was 69.09%. The contribution to the demand of imports from the electricity link with Italy (Sicily) during 2023 attested to 22.85%. The electricity sent out to the grid from local renewable energy sources is estimated at 212.23GWh¹⁶.

A number of renewable energy producers self-consume on-site at least a part of the electricity produced without it being exported to the public grid. It is estimated that in 2023 the total electricity generated from renewable energy sources was 317.83 GWh¹⁷ (with an increase of 6.9% over the previous year).

Figure 5: Evolution of sources to cover the peak system demand between 2017 and 2023.



Source: Enemalta plc.

Figure 5 shows the evolution of the system peak demand that normally occur in the morning or early afternoon in summer. The peak system demand, as reported by the distribution system operator for 2023, occurred on the 25th of July at 15:00. The system demand at that time reached the level of 663.3 MW which represents an increase of 14.1% over the previous year and is the highest peak load ever recorded. The peak demand was covered by 50.54%

¹⁵ This figure refers to the units sent out to the grid from all sources and does not include exports to Italy and self-consumption on site by producers.

¹⁶ The figure is provisional and estimated from Enemalta smart meters data for 2023.

¹⁷ The figure consists of 309.345 GWh of PV generation reported by NSO and 8.481 GWh generation reported by CHP operators for 2023.

of local fossil fuel generation, 29.87% by the Italy-Malta electricity link and the contribution from solar photovoltaic installations estimated at 19.60%. No DSO owned backup power plants were used to cover the afternoon peak demand in 2023.

The electricity system experienced also the highest ever evening peak demand of 621MW hourly average on the 25th of July between at 22:00 representing an increase of 15% over the previous year. The evening peak demand was met by the distribution system operator for 54.8% through D3 and D4 power stations, for 20.8% through DSO owned backup power plants and for 24.4% through imports via the Italy-Malta electricity link.

The morning and evening peak demand occurred during a heatwave that spanned over 10 days with temperatures levels consistently around 40°C and with peaks of 42.7°C.

No investment in fossil fuel generation or energy storage capacities in relation to security of supply has been carried out during the year under review and the Regulator did not receive any request to authorise or license any new generation plants other than solar photovoltaic installations.

The distribution system operator reported in 2024 the plan to procure a 60MW generation emergency services through the issue of tender. The diesel emergency plant is expected to be available in August 2024.

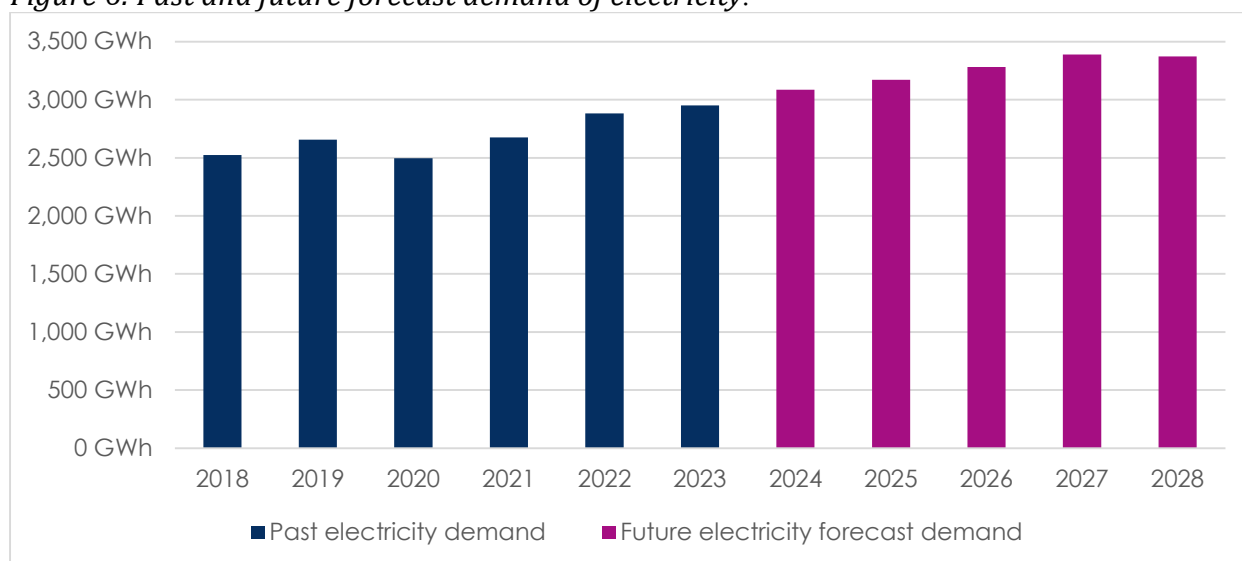
The DSO projections for the annual electricity demand from 2024 until 2028, as provided to the Regulator, are shown in *Table 8*, and a comparison of the forecasted demand with past demand is shown in *Figure 6*.

Table 8: Demand of electricity forecast 2024-2028.

Year	Estimated Annual Electricity Demand (MWh)
2024	3,084,157
2025	3,171,532
2026	3,280,301
2027	3,388,002
2028	3,373,277

Source: Enemalta plc.

The storage capacity installed in Malta consists mainly of small battery storages installed by households through investment grant schemes. According to the data in the possession of the Regulator, the total capacity of the battery installed at the end of 2023 is 6,687.434 kWh, distributed across 848 installations. In addition, a battery storage installation of 1 MW (2MWh) is installed in the Xewkija Distribution Centre for the purpose of research and development.

Figure 6: Past and future forecast demand of electricity.¹⁸

Source: Enemalta plc. and REWS.

3.1(f) Cross-border issues¹⁹

There are no TSOs in Malta. The development of the distribution network and interconnections with other countries is currently under the responsibility of the distribution system operator.

The Regulator was not involved in specific cooperation activities with other regulatory authorities in relation to capacity allocation and congestion management.

In 2021, the Government of Malta announced the decision to construct a second electricity cable link between Malta and Italy. This new 118km long 225MW 220kV HVAC electricity link, consisting mainly of sub-sea cable between Malta (Magħtab) and Sicily (Ragusa), will be laid in parallel but at a safe distance to the existing HVAC cable link which was commissioned in 2015. The implementation of this project has been entrusted to the public owned company Interconnect Malta Ltd (<https://icm.mt/>).

Over the year 2023, works on the design and permitting have advanced considerably, whereby the route, both onshore and offshore, have been determined, and the cable sizing and ampacity were designed according to the route length and its physical properties. The design of the transformers, shunt reactors and switchgear have also been completed and the first EPC tender was published. The EIA for Malta was submitted and approved in August 2023 by to the Environmental Resources Authority. The Maltese development permitting procedure has reached its final stage (Planning Application No: PA/04448/22). The

¹⁸ Figures for electricity past demand include electricity produced by small producers and consumed on site.

¹⁹ Article 59.1(w) Directive 2019/944: Technical cooperation between Union and third-country transmission system operators.

application for the Italian Single Authorisation Decree, including the environmental studies, was submitted in August 2023. A proposal for ERDF funding for the Project was submitted in September 2023 and is currently being evaluated by the Managing Authority. The State Aid Notification process is underway.

This project has been included in the TYNDP 2022 list with the name “Malta-Italy Cable Link No.2”. More detailed information and the project sheet is available at the following link <https://tyndp2022-project-platform.azurewebsites.net/projectsheets/transmission/1085>. The expected commissioning date of this project is 2026.

There are no Projects of Common Interest (PCIs) related to electricity infrastructure involving Malta.

3.1(g) Implementation of Network Codes and guidelines²⁰

- *Commission Regulation (EU) 2015/1222 establishing a guideline on Capacity Allocation and Congestion Management (CACM GL).*

This Regulation is not applicable to Malta since there are no cross-border interconnectors subject to capacity allocation and congestion management.

- *Commission Regulation (EU) 2016/1719 establishing a guideline on Forward Capacity Allocation guideline (FCA GL).*

This Regulation is not applicable to Malta since there are no cross-border interconnectors subject to capacity allocation and congestion management.

- *Commission (Regulation (EU) 2017/2195) establishing a Network Code on Electricity Balancing (BAL NC).*

This Regulation lays down guidelines on electricity balancing, including the establishment of common principles for the procurement and the settlement of frequency containment reserves, frequency restoration reserves and replacement reserves and a common methodology for the activation of frequency restoration reserves and replacement reserves.

In the absence of a liquid wholesale market, only the DSO bears balancing responsibility in Malta, as established by the Electricity Regulations (S.L. 545.34). Independent power producers and active customers connected to the distribution system do not have responsibilities in this aspect. The DSO is therefore responsible to balance the Maltese distribution system in coordination with the Italian transmission system operator, Terna S.p.A. Any imbalances that occur on the Malta-Italy electricity link are settled in accordance with AEEGSI (Decision

²⁰ Article 59.7 Directive 2019/944: Network Codes (Demand Connection Code, Requirements for Generators, High Voltage Direct Current Connections, Operations, Emergency and Restoration, Forward Capacity Allocation, Capacity Allocation & Congestion Management, Electricity Balancing).

549/2015/R/EEL)²¹ issued on the 20th of November 2015 and amended by ARERA Decision 576/2021/R/EEL issued on the 14th of December 2021.

- *Commission Regulation (EU) 2016/631 establishing a Network Code on Requirements for Generators (RfG NC)*

This network code establishes requirements for grid connected power-generating facilities, namely synchronous power-generating modules, power park modules and offshore power park modules, connected to the interconnected system. The network code aims to set out harmonised rules for grid connection for power-generating modules to ensure a clear legal framework for grid connections, facilitate Union-wide trade in electricity, ensure system security, facilitate the integration of renewable electricity sources, increase competition, and allow more efficient use of the network and resources, for the benefit of consumers.

The Electrical Installations Regulations (S.L.545.24) require that the interface protection system of generators connected at low voltage level should comply with MSA EN 50549-1 or an equivalent standard. As noted earlier on in this report, the new generators that are being connected to the grid are inverter-based generators (solar photovoltaic installations) mainly rated 11kWp or less.

- *Commission Regulation (EU) 2016/1388 establishing a Network Code on Demand Connection (DCC NC)*

The Network Code on Demand Connection sets harmonised requirements for the connection to the transmission grid of new demand facilities, distribution facilities, distribution systems and demand units that provide demand response services to relevant system operators and relevant TSOs. In Malta, there are no transmission systems and no new distribution systems.

- *Commission Regulation (EU) 2016/1447 Establishing a Network Code on Requirements for grid connection of High Voltage Direct Current systems and direct current-connected power park modules (HVDC NC)*

There are no high voltage direct current networks or direct current-connected power park modules in Malta.

- *Commission Regulation (EU) 2017/2196 of 24 November 2017 establishing a Network Code on electricity Emergency and Restoration (NC ER).*

The aim of this regulation is the safeguarding of operational security, prevention propagation or deterioration of an incident to avoid a widespread disturbance and the blackout state and facilitating efficient and rapid restoration of the electricity system after an emergency or blackout incident.

²¹ Deliberazione 20 Novembre 2015 549/2015/R/EEL-Disciplina degli sbilanciamenti effettivi applicabile all'interconnessione Italia-Malta.

There are no transmission systems in Malta and hence no need for a designation of a transmission system operator. The electricity link Italy-Malta, an HVAC 220kV 200MW cable, is treated as part of the distribution system in Malta and is not open to third party access. The DSO/supplier is the sole user of the electricity link Italy-Malta and mainly to purchase electricity from the Italian market and supply final customers in Malta. On the local generation side, there are three main fossil fuel generators and over 32,000 independent renewable energy producers.

The Maltese electricity system is not a transit system but a small peripheral system which qualifies as a “small interconnected system” under Directive (EU) 2019/944, since the demand in 1996 was less than 3,000GWh. Electrically, Malta is treated as a load connected to the Italian system.

Therefore, the Maltese system does not have the coordination complexities of large systems with one or multiple TSOs that manage large interconnected systems with a large number of generators and various DSOs connected to them, which may present coordination challenges in particular during an emergency. The role of the DSO is to implement the requirements determined by the TSO. It is in view of this, that certain concepts in the Commission Regulation (EU) 2017/2196 are not deemed to apply to the Maltese system.

The contractual agreement with Terna S.p.A requires only that the DSO implements low-frequency demand disconnection settings that are consistent with the corresponding settings for the Italian grid.

Nevertheless, in view of the objectives of Regulation (EU) 2017/2196, the REWS is working to ensure that the existing defence and restoration procedures implemented at the DSO level are fully documented and aligned as far as applicable with the requirements of the Regulation.

3.2 Competition and market functioning

3.2.1 Wholesale markets

There are no liquid wholesale markets in Malta. The electricity generation sector was liberalised in 2005, however significant Independent Power Producers (IPPs) entered the sector in 2017. Other independent power production are small producers generating electricity from renewable sources. The fossil fuel IPPs, namely D3 Power Generation Ltd and ElectroGas Malta Ltd, accounted for 69.36% of the electricity sent out to the grid from all sources during the year 2023. The involvement of Enemalta plc in the electricity generation sector is mainly limited to the provision of backup generation service. This is evident from the fact that while Enemalta plc owns 20.9% of the production capacity, only 0.32% of the electricity sent out to the grid during 2023 was produced by its own plants.

Enemalta plc remains the sole supplier of electricity to final customers. The demand for electricity is met from the IPPs generating mainly from natural gas, RES generators (mainly solar photovoltaic systems) and from imports through the Italy-Malta electricity link. Enemalta plc is obliged to dispatch the available sources on economic merit order basis with electricity from renewable energy benefitting from priority of dispatch.

Since the retail market is not open to competition, all independent power producers may either consume on site the electricity generation and/or sell to Enemalta plc. The trading arrangement between Enemalta plc and the fossil fuel independent power producers for the supply of electricity is based on long term bilateral contracts.

The sale of electricity from PV installations connected to the grid is governed mainly by Feed-in Tariffs Scheme (Electricity Generated from Solar Photovoltaic Installations) Regulations (S.L. 545.27) or contracts for operating aid concluded pursuant to a competitive bidding process. As from 2023, the competitive bidding process is regulated by the Competitive Bidding Rules for Installations Producing Electricity from Renewable Energy Sources Regulations (S.L. 545.39) and the contracts concluded pursuant to this process are contract for difference.

During the year 2023, the Feed-in Tariffs Scheme Regulations (S.L. 545.27) provided for the allocation of feed-in tariffs to new solar photovoltaic installations rated below 40kW. A total capacity of 8MWp was made available for the allocation of a feed-in tariff under this scheme, of which 4.44MWp were subscribed. The feed-in tariff allocation process is administered by the REWS.

Support for RES generators with a capacity of 40kW or more is allocated through a competitive bidding process. During the year under review, the Regulator administered a new scheme consisting of four calls for the award of financial aid for electricity produced from new installations producing electricity from renewable energy sources with an electricity generation capacity ranging from 40kW up to less than 200kW and from 200kW up to less than 1000kW. Each of these calls consists of two separate Invitations to Bid (ITB), one ITB for each capacity category running concurrently. The bidding sessions were held between the 4th of January 2023 and the 11th of October 2023. A total capacity of 9.64MW was made available for the allocation of support. In addition, one ITB bidding session for the award of support to renewable energy generators with a capacity of 1MW or more was also held, a total capacity of 19MW was made available for this size RES generators.

The Sale of Electricity generated from Cogeneration Units Regulations regulate the sale of electricity from co-generation plants irrespective of primary energy source. The electricity exported to the grid from approved cogeneration plants is paid by Enemalta plc at the proxy of the market price.

Electricity imported through the electricity link is mainly traded in the Italian day-ahead market.

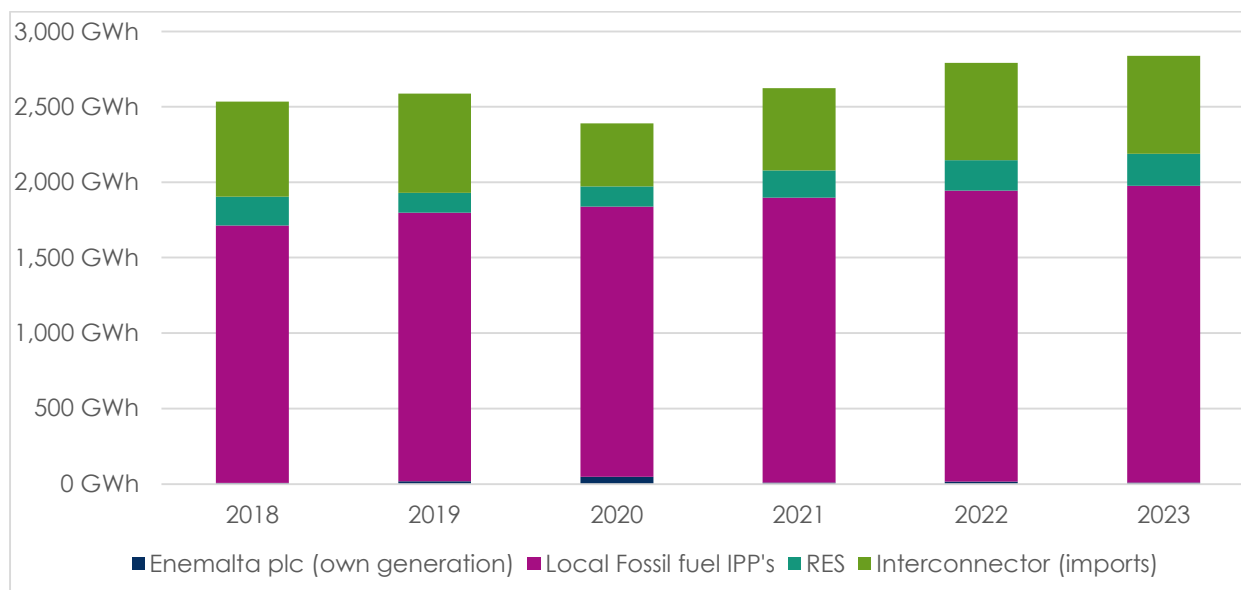
Table 9: Electricity Sent Out to the Maltese grid by contributors (GWh) between 2018 and 2023.

[GWh]	2018	2019	2020	2021	2022	2023
Enemalta plc (own generation)	6.58	16.62	47.34	9.26	15.35	9.09
Local Fossil fuel IPPs	1706.71	1782.57	1790.83	1887.96	1929.96	1968.23
RES ²²	190.67	131.00	133.41	180.37	200.78	212.23 ²³
Electricity Link (imports)	631.29	656.76	419.81	547.25	646.14	648.35
Total Electricity Sent Out	2535.25	2586.94	2391.38	2624.84	2791.62	2837.90

Source: Enemalta plc, NSO and REWS.

Table 9 and Figure 7 shows the development in the contribution of local generation sources and imports to electricity sent to the Maltese grid.

Figure 7: Electricity Sent Out to the Maltese grid by source between 2018 and 2023



Source: Enemalta plc, NSO and REWS.

During the year under review, 26.226GWh were exported from Malta to the Italian grid.

22 As of 2019 the units sent out from RES do not include the electricity generated and consumed on-site (self-generated units) by producers. The total electricity generated by RES is estimated as 222.64GWh in 2019, 242.73 GWh in 2020, 263.11 GWh in 2021, 297.18 GWh in 2022 and 317.83 GWh in 2023.

23 The figure is estimated and provisional.

The Fuel Mix indicates the share of the different primary energy sources used to produce the electricity available for consumers from the public grid. Under the Electricity Regulations (S.L. 545.34) suppliers of electricity are required provide final customers with information concerning the Fuel Mix and environmental impact of the electricity supplied by them. Given that there is only one electricity supplier in Malta, the Fuel Mix and environmental impact in term of CO₂ direct emissions factor are the same of all customers in Malta. Fuel Mix data is updated on annual basis and is also published on website of Enemalta plc, link: <https://www.enemalta.com.mt/environment/fuel mix for energy distribution/>.

The Regulator monitors the process of determination and disclosure of the Fuel Mix and of the CO₂ emissions factor in accordance with regulation 5 of the First Schedule of the Electricity Regulations (S.L.545.34).

Figures 8 and 9 shows the Fuel Mix for the years 2022 and 2023. To note that electricity self-generated by producers (most of them having photovoltaic installation) has not been included given that this electricity is not injected into the distribution network.

Figure 8: Fuel Mix Composition 2023.

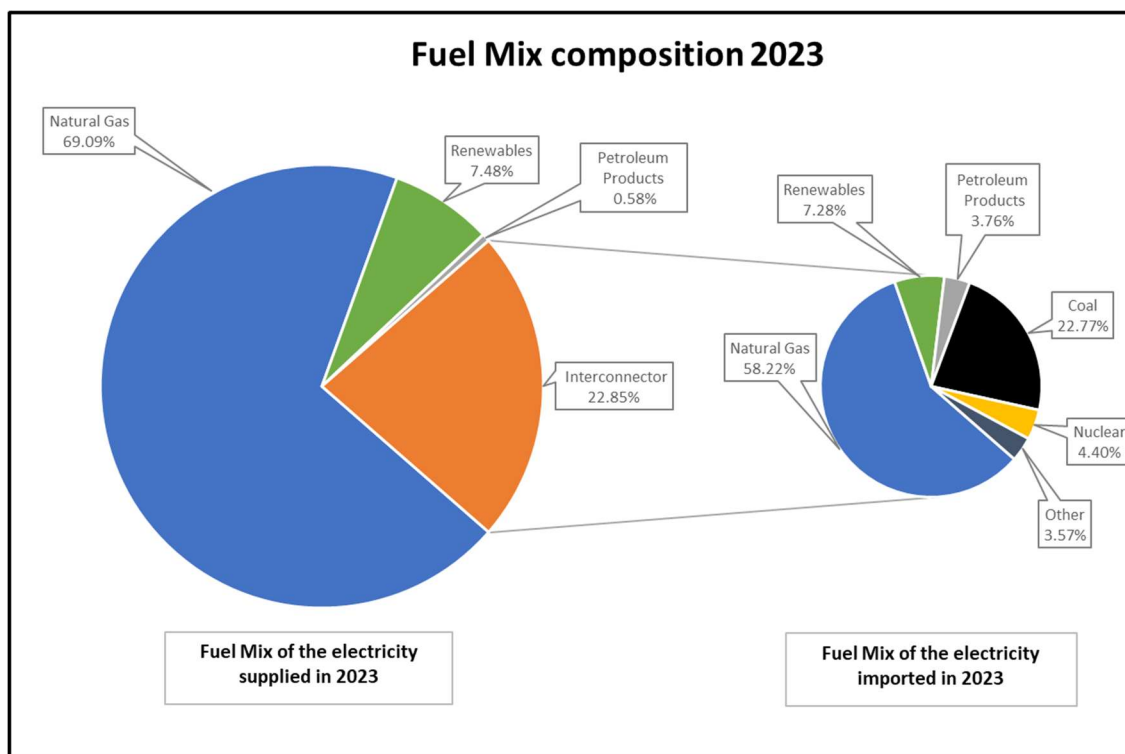


Figure 9: Fuel Mix Disclosure Table for 2022 and 2023.

Fuel mix composition of the electricity supplied by Enemalta in accordance with regulation 5(a) of the First Schedule of the Electricity Regulations (S.L.545.34)		
Primary sources:	2022	2023
▪ Natural Gas	67.65%	69.09%
▪ Renewables	7.19%	7.48%
▪ Petroleum Products	2.01%	0.58%
▪ Interconnector*	23.15%	22.85%
*Interconnector sources:		
▪ Natural Gas	68.92%	58.22%
▪ Renewables	9.04%	7.28%
▪ Coal	12.22%	22.77%
▪ Petroleum Products	4.47%	3.76%
▪ Nuclear	2.62%	4.40%
▪ Other	2.73%	3.57%
Environmental impact of the electricity supplied by Enemalta in accordance with regulation 5(b) of the First Schedule of the Electricity Regulations (S.L.545.34)		
	2022	2023
▪ CO ₂ emission factor	391 g/kWh	396 g/kWh

3.2.1(a) Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition²⁴

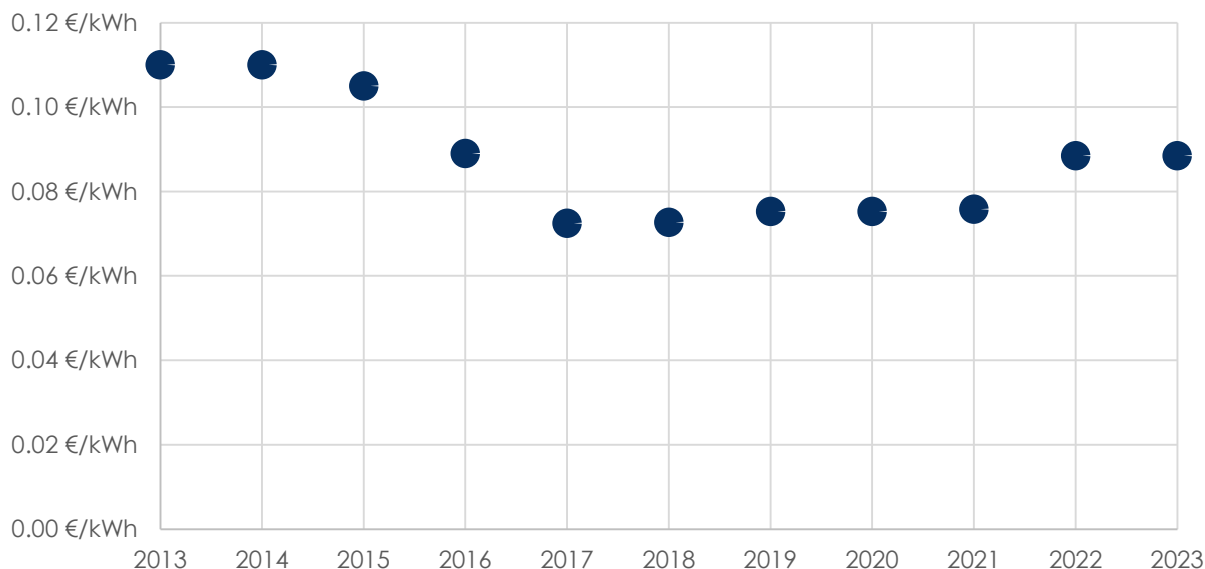
In terms of regulation 54A of the Electricity Regulations (S.L.545.34), in the absence of a liquid wholesale market, the distribution system operator is required to offer to purchase all the electricity generated and exported to the grid from approved renewable energy generation installations and high efficiency co-generation plants and retribute it at the proxy for the market price. The proxy of the market price is therefore the reference used to determine the amount of operational aid paid to renewable energy installations benefitting from operational support. The REWS determines the proxy of the market price by estimating the variable cost of meeting the demand forecast for a given year from local fossil fuel generation and imported electricity; and then uses the average of this estimate as a proxy for the market price. The demand assumption excludes that portion of the forecasted demand which is not expected to be met by conventional and/or imported electricity. The methodology was included in the State Aid decision of CION²⁵ issued in relation to the notified competitive bidding process for the granting of operational aid to generators producing electricity from renewable energy sources with capacity of 1MWp or more. In 2023 a rate for the proxy of the market price was published through the Applicable Rate in

²⁴ Article 59.1(n) and 59.1(o) Directive 2019/944: Transparency Obligations and Market opening and competition.

²⁵ State Aid SA. 43995 (2015/N) – Malta Competitive Bidding Process for Renewables Sources of Energy Installations, Brussels, 26.8.2016 C(2016) 5423 final.

lieu of the Proxy for the Market Price Regulations S.L.545.40. *Figure 10* shows the developments in the proxy of the wholesale market price between 2013 and 2023.

Figure 10: Developments in the proxy of the market price for 2013-2023.



3.2.2 Retail market

The situation in the electricity retail market remains unchanged. The activity of supply of electricity must be performed under a licence issued by the REWS in terms of the Electricity Regulations (S.L. 545.34). In view of the derogation from Article 4 (Free choice of supplier) of Directive (EU) 2019/944 granted to Malta pursuant to Article 66(5) of the said Directive, the licence to supply electricity may only be issued to the distribution system operator designated under the aforementioned regulations.

Therefore, Enemalta plc remains the only undertaking in Malta holding a licence to supply electricity to final customers and given this market set-up customer switching cannot be implemented in Malta.

All the customers pay regulated retail tariffs. Retail tariffs featuring also an off-peak tariff component are available specifically for electric vehicle (EV) charging. Operators of publicly accessible EV charging points may add a premium for the charging service on top of the regulated electricity tariff.

The Regulator issued the Decision No. 9 of the 26th of October 2023 to Enemalta plc with regards to the tariff methodology for the supply of electricity from shore-side electricity supply facilities to ships berthed in maritime ports. The methodology concerns the determination of a flat rate kWh applicable for electricity supplied to sea vessels berthed in

the Maltese harbours. Enemalta must publish the applicable tariff at least three months in advance of the three-month period to which it refers²⁶.

Further details on electricity tariffs applicable in Malta may be found on the Regulator's website:

<https://www.rews.org.mt/#/en/a/13-regulated-electricity-tariffs> .

The retail tariff paid by consumers for electricity covers the costs and revenues pertaining to the operation of the distribution network. In addition to this, the paid tariff also covers costs and revenues relating to the imported electricity, generation, and supply activities. There are no separate tariffs for the use of the network.

3.2.2(a) Monitoring the level of transparency, including compliance with transparency obligations, and the level and effectiveness of the market opening and competition²⁷

3.2.2(a)i Market opening and competition

The electricity retail market is not open to competition. The procedure for the approval of the electricity retail prices is established by Article 36 of the Electricity Supply Regulations (S.L.545.01).

The principles underlying the determination and approval of the retail tariffs are published on the Regulator's website²⁸. In the event of a review of the electricity retails tariffs, the REWS publishes the documents related to the review process.

Electricity tariffs are established through legislation which is published in the Government Gazette (the official Government publication for the promulgation of laws), the REWS's website and the websites of Enemalta plc and of Automated Revenue Management Services Ltd (ARMS Ltd) respectively.

3.2.2(a)ii Prices for household customers

The regulated electricity retail tariffs are composed of a fixed annual service charge and a kWh consumption tariff structure. For non-residential consumers a maximum demand charge also applies. No tariffs specifically for the use of the network are applied.

The fixed annual service charge differentiates between a single-phase service and a three-phase service, and between residential/domestic premises and non-residential premises. In

²⁶ <https://www.enemalta.com.mt/shore-to-ship/>

²⁷ Articles 59.1(o), 59.1(s) and 5.1 of Directive 2019/944.

²⁸ REWS website: www.rews.org.mt

addition, all consumers with a service connection capacity rating exceeding 60Amps/phase are required to pay a maximum demand tariff.

The kWh consumption tariff structure consists of tiers of consumption with the corresponding kWh tariff. The tariffs are based on a cumulative consumption per annum and are applied *pro rata* based on the number of days covered by the bill. The kWh tariff structure applicable for the consumption of electricity differentiates between registered primary residence premises, domestic premises, and non-residential premises.

Household consumers may benefit from a percentage reduction of electricity rates, referred to as an ‘eco reduction’ on their electricity consumption bill on one registered primary residence as follows:

- households composed of two or more persons may benefit from a two tier eco reduction mechanism provided that the consumption per person does not exceed 1750kWh per annum. A reduction of 25% in the consumption bill is possible if the consumption does not exceed 1000kWh per person for the first tier. The second tier consists of a reduction of 15% in the bill on the next 750kWh per person/household,
- single person households enjoy a reduction of 25% in their consumption bill if their annual electricity consumption does not exceed the 2000kWh/annum.

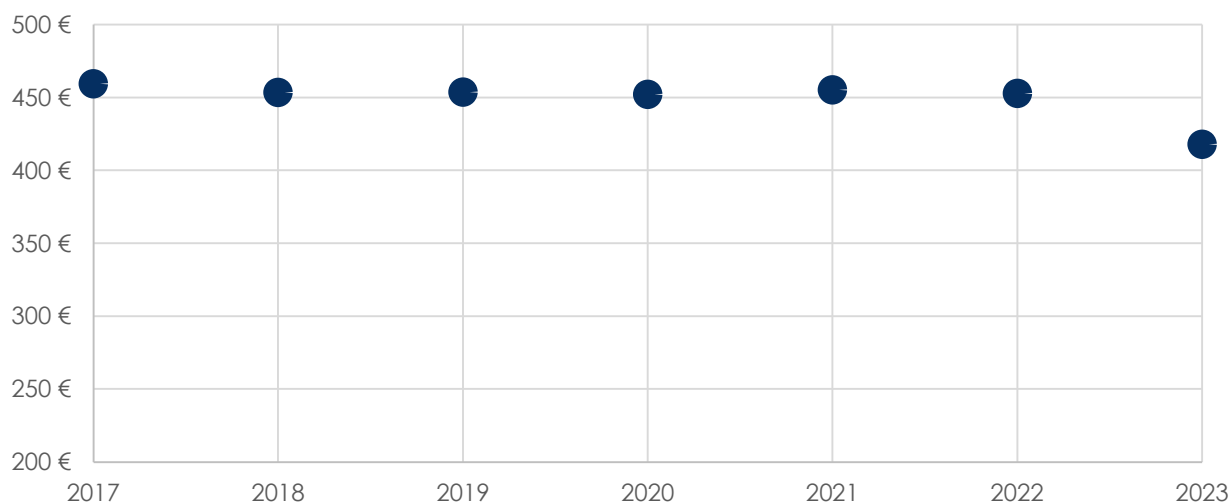
The domestic premises tariffs are applicable for electricity consumed in premises intended for domestic use and which are not registered as a primary residence.

The non-residential premises tariffs are applicable for electricity consumed in all the other premises which are not registered either as a primary residence or as domestic premises.

Non-residential consumers with a service rating above 100A/phase may choose to be billed on a kVAh tariff. A night and day tariff is available for non-residential consumers with annual consumption exceeding of 5GWh (5.5GVAh).

During the year under review there were no changes in the retail tariffs for household and non-household customers.

Figure 11: Average end-user price of households consuming in the band 2500 - 5000 kWh (based on a consumption of 3500kWh per year).



Source: REWS elaboration based on EUROSTAT data.

Figure 11 shows the developments in the average household bill between 2017 and 2023 based on a consumption of 3500kWh and the national average end-user electricity price per kWh for the reference band of consumption DC (2500kWh<consumption<5000kWh) as reported by the Maltese National Statistics Office to Eurostat. It should be noted that tariffs and tariff bands are applied pro rata according to the days covered by the bill and therefore a change in the billing period may affect the average price per kWh.

The household tariffs are inclusive of 5% Value Added Tax and 0.0015€/kWh excise duty.

Presently there are no plans for the phasing out of regulated prices.

3.2.2(a)iii Prepayment systems

Prepayment contracts are not available to customers in Malta.

3.2.2(a)iv Dynamic price contracts

In Malta dynamic price contracts are not available. All customers, both household and commercial, are on regulated tariffs and the energy component does not vary with wholesale prices. To note that in Malta there are no liquid wholesale markets.

3.2.2(a)v Smart meter use

Smart meters rolled out by the Maltese DSO, Enemalta plc., have the following functionalities:

- Remote spot readings for import and export registers, maximum demand, load profiles;
- Time-of-use consumption reading;
- Remote activation and deactivation;
- Remote power limit curtailment;
- Voltage variations data collection;
- Remote meter diagnostics (to detect if meter is healthy or faulty).

Data related to the rollout of Smart Meters in Malta are reported in section 3.2.2(b)vi (Customer consumption data provision).

3.2.2(a)vi Switching rate

Enemalta plc. Is the only undertaking in Malta holding a licence to supply electricity to final customers and therefore, customer switching cannot be implemented in Malta.

3.2.2(a)vii Charges for maintenance services

The regulated electricity retail tariffs in Malta are composed of a fixed annual service charge and a kWh consumption tariff structure. For non-residential consumers a maximum demand charge also applies. No specific charges for maintenance services are applied.

3.2.2(a)viii Relationship between household and wholesale prices

Not applicable since there is no liquid wholesale market in Malta.

3.2.2(a)ix Distortion or restriction of competition

The electricity retail market is not open to competition.

3.2.2(a)x Competitive prices

Not applicable since the electricity market in Malta is not open to competition and all consumers are on regulated tariffs.

3.2.2(b) Consumer protection and dispute settlement²⁹

The Electricity Regulations (S.L.545.34) transpose the measures related to customer protection provided in Annex I of Directive (EU) 2019/944 and establish the obligation to provide universal service to all household customers by the distribution system operator. The Electricity Regulations require also that electricity suppliers provide customers with the bills and promotional materials, information related to the energy sources mix and environmental impact of the electricity supplied.

In addition, customers are to be provided with:

- information concerning their rights regarding the means of dispute settlement available to them in the event of a dispute; and
- contact information of consumers' organisations, energy agencies or similar bodies, including website addresses from which information may be obtained on available energy efficiency improvement measures, comparative end user profiles and, or objective technical specifications for energy-using equipment.

²⁹ Articles 59.1(o), 59.1(p), 59.1(s), 59.1(t), 59.1(y), 59.1(z), 5.2, 5.3, and 5.4 Directive 2019/944: Complaints by household customers, Disconnection rates, Restrictive contractual practices, Protection of energy poor and vulnerable household customers, Intervention in price setting for vulnerable household customers, Customer consumption data provision, Availability of comparison tools, Obstacles to and restrictions of consumption of self-generated electricity and citizen energy communities.

The requirements emanating from the Electricity Regulations related to customer protection and provision of information are included in the licence conditions of Enemalta plc as supplier of electricity.

In general, the terms and conditions for the electricity supply service are currently implemented through legislative instruments, mainly, the Electricity Supply Regulations (S.L.545.01) which specify *inter alia* the services and maintenance provided, applicable tariffs, and conditions for termination and renewal. The rights and obligations of customers are detailed in the Customer Charter published by Enemalta plc which constitute the basis of the deemed contract of customers with Enemalta plc. The Enemalta Customer Charter is available at the following link

<https://www.enemalta.com.mt/wp-content/uploads/2018/03/Enemalta-plc-Customer-Charter-EN.pdf>

Since there is only one supplier, the contract for the supply of electricity is automatically of an indefinite nature. In the absence of an open electricity supply market, customer switching is not possible to implement. The Electricity Regulations (S.L.545.34) provides that complaints against the distribution system operator may be referred to the Regulator for Energy and Water Services. The REWS is obliged to issue a decision within four months from the date that a complaint is lodged. The timeframe for the issue of the decision may be extended by a further two months with the agreement of the complainant. Before a decision is issued, the REWS discusses the complaint with the parties involved who may make any submissions that they deem necessary.

Any decision issued by the Regulator for Energy and Water Services under the Act is binding unless overruled on appeal.

An appeal on a decision issued by the Regulator for Energy and Water Services may be lodged to the Administrative Review Tribunal.

During 2023 the Regulator issued two decisions, the Decisions no. 5 of 2023 and the Decision no.6 of 2023 respectively relating charges for connection to the network.

3.2.2(b)i Complaints by household customers

In terms of the Electricity Regulations (S.L.545.34) the Regulator carries out the function of an energy ombudsman to ensure the efficient treatment of complaints and out-of-court dispute settlements.

Customer complaints must be addressed at the first instance by Enemalta plc or by its contractor ARMS Ltd.

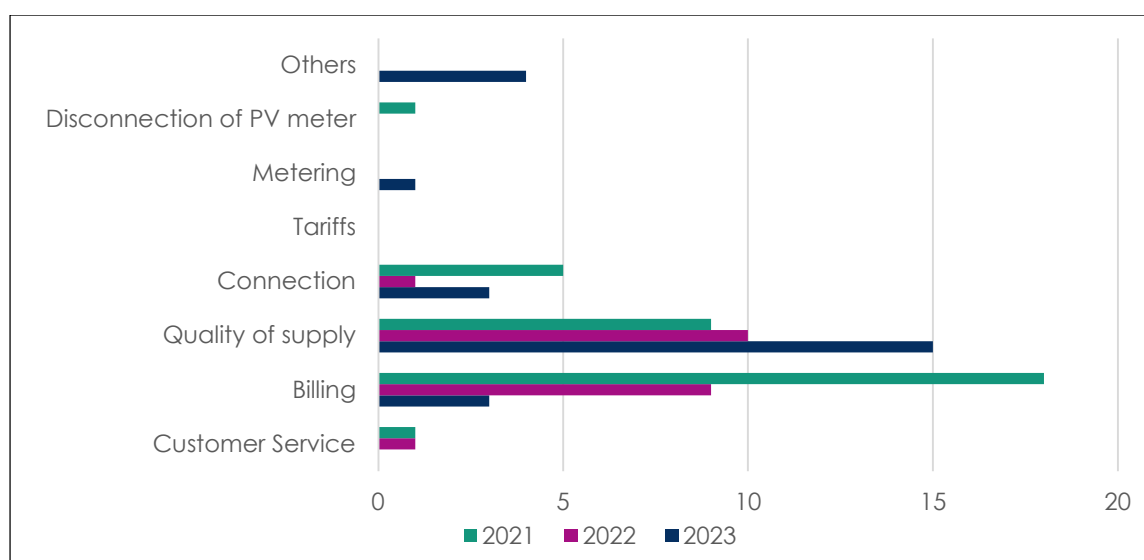
ARMS Ltd deals with issues related to billing or meter reading, while Enemalta plc deals directly with issues related to connection to the grid and voltage quality. Enemalta plc is required to retain and update a register of all complaints related to the electricity service and to submit information on an annual basis related to the complaints received and time to respond to such complaints as part of the licence monitoring reports. Currently the complaints register held by Enemalta plc does not distinguish between households and non-household customers.

Customers that cannot resolve their complaint with Enemalta plc., following the completion of their complaints handling process, may refer their complaint to the REWS for consideration.

The dispute resolution procedures to be followed by the Regulator are established by the (S.L.545.30) Dispute Resolution (Procedures) Regulations published in 2016. Generally, the Regulations require that the REWS is to issue a determination to resolve the dispute within four months from the date on which the dispute is notified to it by a party to the dispute.

During 2023, the Regulator received 26 complaints related to electricity, 11 of them submitted by email or post or via our customer care office and 15 of them submitted through a formal dispute resolution online form. Most of the complaints were related to quality of supply issues, as shown in *Figure 12*.

Figure 12: Customer complaints in the electricity sector between 2021 and 2023.



Source: REWS.

At the end of 2023, 20 complaints were resolved through mediation with the distribution system operator/supplier without the need for a formal dispute resolution decision, 2 dispute resolutions request led to the issue of a formal decision by the Board of the Regulator and 4 disputes were still open.

The Office of the Ombudsman informed the Regulator that it had received 3 complaints related to the energy sector during 2023.

3.2.2(b)ii Disconnection rates

As part of the conditions of its licence, Enemalta plc is required to report to the REWS data related to disconnections of customers for non-payment. The total number of disconnections for non-payment of electricity consumption that was reported to the Regulator for 2023 was 1,190 of which 912 were household customers and 278 non-household customers. To note

that during the year under review 962 customers were reconnected after the disconnection for non-payment. *Table 10* shows the number of disconnections for non-payment between the years 2018 and 2023.

Table 10: Number of disconnections for non-payment (2018-2023).

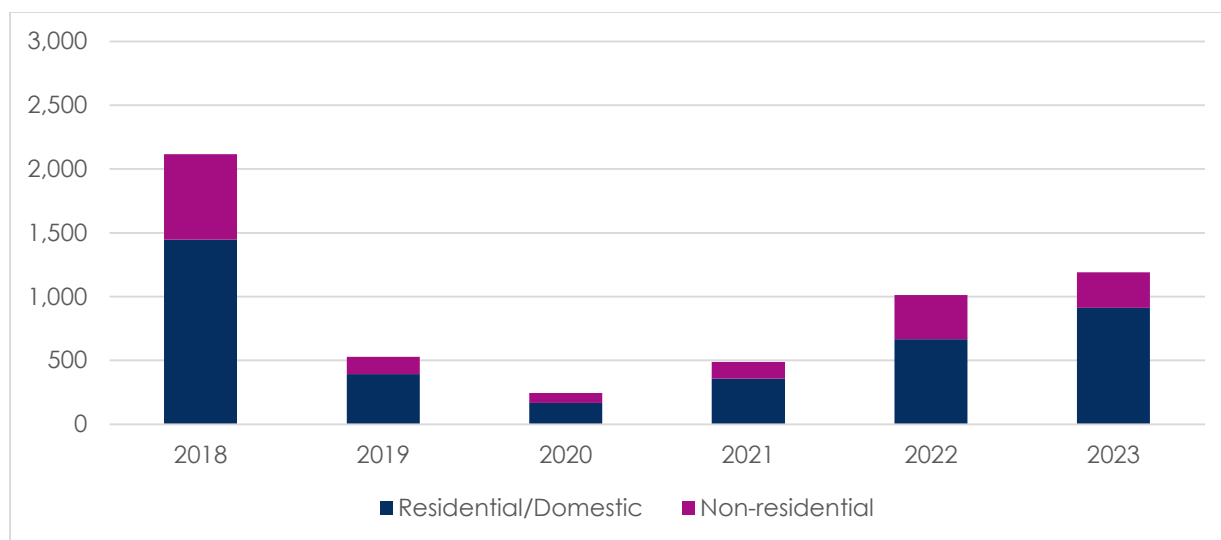
Year	2018	2019	2020	2021	2022	2023
Residential/Domestic	1447	393	167	357	667	912
Non-residential	668	135	79	132	345	278
Total	2115	528	246	489	1012	1190

Source: Enemalta plc.

In general, a customer failing to pay a bill within 45 days recognised from the date of issue of the bill, receives a reminder requesting the settlement of the outstanding amounts within 10 days. In the event of non-payment, the customer receives a final notice to settle amounts due within 7 days; otherwise, the supply could be suspended. The actual suspension of supply depends on the amount due, the length of time for which the debt has been due while considering established thresholds.

In addition, customers who are unable to pay their bills are afforded the facility to enter into an agreement with Enemalta plc to pay their bill by instalments, to avoid disconnection.

Figure 13: Number of disconnections for non-payment that occurred between 2018 and 2023.



Source: Enemalta plc.

3.2.2(b)iii Restrictive contractual practices

According to regulation 47(1)(p) of the S.L. 545.34, the Regulator has the duty to monitor the occurrence of restrictive contractual practices, including exclusivity clauses which may prevent large non-household customers from contracting simultaneously with more than one supplier or restrict their choice to do so. Furthermore, the Regulator has the authority to inform the national competition authorities of such practices. The exercise of the duties emanating from the regulations must be seen in the context of a market with one supplier of electricity.

3.2.2(b)iv Protection of energy poor and vulnerable household customers

Vulnerable electricity customers are catered for within the social policy framework. The Department of Social Policy has established the criteria whereby certain categories of energy consumers may be eligible to receive energy benefits. The energy benefit amounts are deducted directly from the electricity bills.

Consumers that may benefit from energy benefits include families with low incomes, households having a family member with a disability, families on social assistance or special unemployment benefit, and persons on a pension or a carer's pension.

During the year 2023, the consumers that received energy benefits amounted to 26,574 which represents 10.37% of all household consumers, as shown in *Table 11*.

Table 11: Vulnerable customers and their share over household customers (2018-2023).

Year	2018	2019	2020	2021	2022	2023
Number of vulnerable customers	23,638	23,560	23,666	23,657	23,790	26,574
Share of vulnerable customers	9.48%	8.55%	9.35%	7.78%	7.59%	10.37%

Source: Enemalta plc.

3.2.2(b)v Intervention in price setting for vulnerable household customers

Eligible household customers, as determined by the ministry responsible for social welfare on the basis of a number of published criteria, are assisted in the paying their bills through energy benefits. Otherwise, there are no specific tariffs for these customers.

3.2.2(b)vi Customer consumption data provision

Electricity bills issued to customers include contact details of ARMS Ltd which is responsible for meter reading, billing, debt collections, and the provision of customer relations services on behalf of Enemalta plc, the electricity supply licence holder.

Table 12: Smart Meter (SM) installation development between 2018 and 2023.

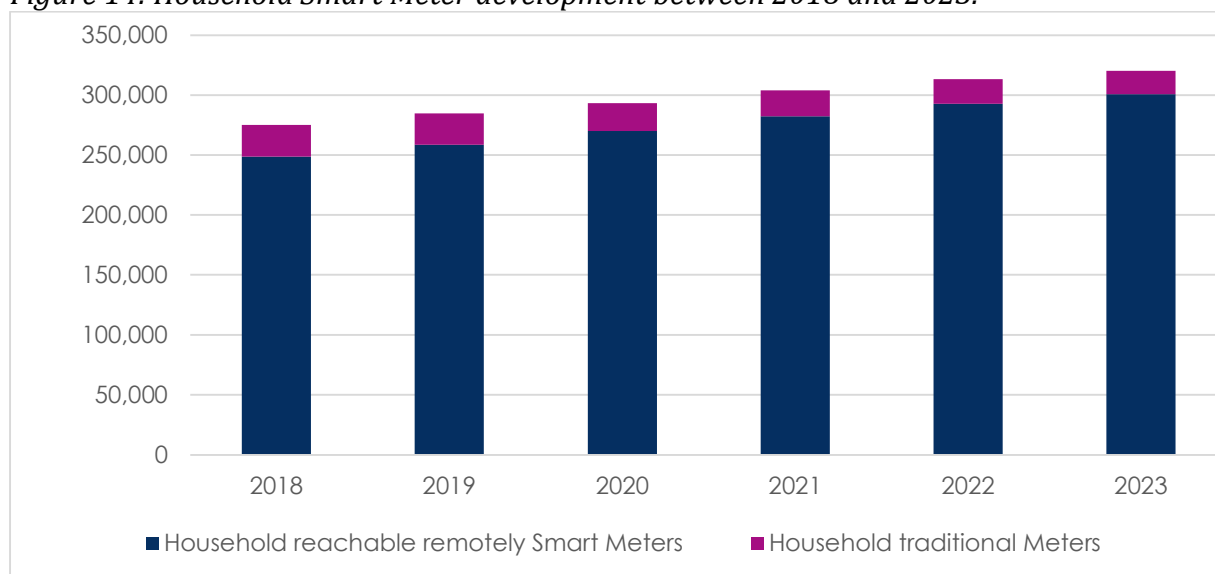
Year	2018	2019	2020	2021	2022	2023
Total SM reachable remotely	259,822	297,626	310,128	324,095	337,922	339,600
Total Active meters	314,942	336,254	344,232	356,646	367,195	377,311
Share of SM reachable remotely	82.50%	88.51%	90.09%	90.87%	92.03%	90.01%
Household SM reachable remotely	248,672	258,536	270,032	282,344	292,614	300,750
Household Active Meters	275,106	284,572	293,257	303,892	313,386	320,295
Share of Household SM reachable remotely	90.39%	90.85%	92.08%	92.91%	93.37%	93.39%

Source: Enemalta plc.

In the year 2023, 339,600 electricity meters supplying households and non-households were smart meters with Automatic Metering Management (AMM) function capability, this is an increase of 0.50% in the number of meters with AMM over the past year.

Table 12 and Figure 14 report the data relating the smart meters roll out over the past years. It is possible to highlight that at the end of 2023 this technology represents 93.39% of household meters active in Malta.

Figure 14: Household Smart Meter development between 2018 and 2023.



Source: Enemalta plc.

In general, households not yet provided with a smart meter, receive bills calculated on actual consumption at least every six months, while households provided with a smart meter connected to the Automatic Metering Management (AMM) receive bills based on actual readings on a bimonthly basis. The frequency of actual bills for non-household consumers varies from one month to six months.

The bill includes a breakdown of the bill calculations, total electricity consumption for the period covered by the bill, the average consumption per day, applicable tariffs, and CO₂ emissions. The bill also includes the consumption related to the previous year and projections for electricity annual consumption.

Where the customer is also a producer of renewable electricity, the bill includes the number of units generated and exported to the grid together with a breakdown of the calculation of the revenue due from the sale of the electricity to Enemalta plc. Most of the electricity generated from renewable energy and exported to the grid is produced by solar photovoltaic installations. In general, the metering set-up used in the case of customers who are also producers consists of a generator meter and import-export meter, thus, customers who self-consume the electricity produced can keep track of their consumption.

Customers have the option to register on the ARMS Ltd portal to access the detailed breakdown of unpaid bills and history of previous bills and payments.

3.2.2(b)vii Availability of comparison tools

There is no scope for comparison tools since electricity tariffs in Malta are regulated and there is only one electricity supplier.

3.2.2(b)viii Obstacles to and restrictions of consumption of self-generated electricity and citizen energy communities

The consumption of self-generated electricity has always been an option available to owners of generators. The specific provisions of the Directive (EU) 2019/944 related to self-generated electricity and citizen energy communities have been transposed to national legislation in the Electricity Regulations (S.L.545.34), taking into consideration the derogations under Article 66 of Directive (EU) 2019/944.

4 - THE GAS MARKET

Since the year 2017, LNG (Liquified Natural Gas) is imported through an LNG facility consisting of a floating LNG Floating Storage Unit (FSU) and an onshore Regasification Unit (RU) on the Delimara site. The FSU has an LNG storage capacity of 125,000 m³ and the regasification plant with a maximum natural gas output rate of 89,000 Nm³/hr of natural gas.

The capacity of the LNG terminal is fully contracted to supply natural gas to two electricity generation plants, DPS-3 (owned by D3 Power Generation Ltd) and DPS-4 (owned by ElectroGas Malta Ltd). The regasification plant is designed to meet simultaneously the full natural gas load required by DPS-3 and DPS-4.

ElectroGas Malta Ltd has a licence to carry out the functions of an LNG system operator and an authorisation to import LNG and to supply natural gas to the two electricity generation plants, issued under the Natural Gas Market Regulations (S.L. 545.12).

At present in Malta there is no transmission or distribution of natural gas, and therefore no TSO or DSO is operating in the gas sector.

During 2023, the REWS continued to monitor the regulatory aspects related to the proposed Melita TransGas Pipeline (MTGP) - Project of Common Interest (PCI) 15.1 that is planned to connect Malta to the European gas transmission network in Gela (Italy).

4.1 Network Regulation

4.1.1 Network and LNG tariffs for connection and access³⁰

The capacity of the LNG terminal is fully contracted to supply natural gas to the power plants DPS-3 and DPS-4; and LNG terminal tariffs form part of the fees payable by Enemalta plc to ElectroGas Malta Ltd in terms of the gas and electricity supply agreements concluded pursuant to a tendering procedure.

4.1.2 Balancing³¹

Not applicable since there is no gas transmission system established in Malta.

³⁰ Articles 41.(1)(a), 41.6(a), 41.1(s), 41.1(n) Directive 2009/73: Tariff regulation methodology, Connection and Access to national network access tariffs methodology, Access to storage facilities, linepack and other ancillary services.

³¹ Articles 41.(6)(b) Directive 2009/73.

4.1.3 Cross-border issues³²

During 2023, the Regulator continued to monitor the work on the planned connection of Malta to the European gas network – pipeline interconnection with Italy at Gela. The Melita TransGas Pipeline (MTGP) was identified as a Project of Common Interest (PCI 15.1) in the 6th PCI list, as one of projects that maintained their status of project of common interest due to the derogation granted under Article 24 of the updated TEN-E Regulation (Regulation (EU) 2022/869)³³.

During the year under review, the pipeline’s design and financial engineering studies, which were updated to reflect a hydrogen ready pipeline, were finalised. In this manner, the Project of Common Interest has become fully aligned to the EU Green Deal objectives and the transition to a carbon neutral economy, as the pipeline may provide a future possibility to import renewable gases including green Hydrogen once the market develops.

The REWS has been involved in providing feedback to the ACER PCI Monitor report 2023 published in June 2023 (details of the MTGP are available in the Annex II³⁴).

On the 28th of September 2023 the Board of the Regulator approved the Methodology and Criteria for Evaluating Investments in Energy Infrastructure Projects in accordance with Article 17 of Regulation (EU) 2022/869. The methodology and criteria are applicable for the evaluation of requests for incentives in relation to investments in cross-border energy infrastructure projects that qualify as Projects of Common Interest (PCIs) or Projects of Mutual Interest (PMIs) as defined by the TEN-E Regulation (Regulation (EU) 2022/869).

This document, that replaces the previous one published in 2016, is available on the Regulator website³⁵.

4.1.4 Implementation of Network Codes and guidelines³⁶

No updates or developments to report.

³² Articles 41.6(c), 41.9, 41.10, 41.11, 41.1(c), 41.1(g) Directive 2009/73: Access to cross-border infrastructure including allocation and congestion management, Cooperation agreements/activities between NRAs regarding cross-border issue, Monitoring Community-wide network development plans, PCIs and national development plans.

³³ https://ec.europa.eu/commission/presscorner/detail/en/IP_23_6047

³⁴ <https://www.acer.europa.eu/gas/infrastructure/ten-e/pci-monitoring>

³⁵ <https://www.rews.org.mt/#/en/a/118-methodology-and-criteria-for-evaluating-investments-in-energy-infrastructure-projects>

³⁶ Capacity Allocation Mechanisms (CAM NC, Regulation (EU) 2017/459), Balancing (BAL NC, Regulation (EU) 312/2014), Interoperability and Data Exchange (INT NC, Regulation (EU) 2015/703), Tariff (TAR NC, Regulation (EU) 2017/460).

4.2 Competition and market functioning

4.2.1 Wholesale market

At present there is no wholesale gas market in Malta and no transmission or distribution gas system is present. The only gas infrastructure available is an LNG terminal that was developed by ElectroGas Malta Ltd as part of a gas and power supply contract, with its full capacity dedicated to supply natural gas for electricity generation to two power plants (one owned by ElectroGas Malta Ltd, the other owned by D3 Power Generation Ltd) located adjacent to the terminal.

4.2.1(a) Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition³⁷

ElectroGas Ltd reports Urgent Market Messages on the GME portal. This information is accessible at the following electronic address: <https://pip.ipex.it>. This disclosure of inside information is done in accordance with Article 4(a) REMIT Regulation and with ACER Guidance on the REMIT application and covers the unavailability of electricity and gas facilities (namely the Re-gasification Plant and D4 Power Station) that are likely to significantly affect wholesale energy prices and other relevant market information.

4.2.2 Retail Market

4.2.2(a) Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition³⁸

Not applicable since there is no retail market for natural gas.

4.2.3 Consumer protection and dispute settlement³⁹

Not applicable since there is no retail market for natural gas.

³⁷ Articles 41.1(i), 41.1(j), 41.1(k), 41.1(l), 41.1(u) Directive 2009/73: Monitoring transparency, market opening and competition, Restrictive contractual practices, Contractual freedom of supply contracts, Data exchange processes.

³⁸ Articles 41.1(i), 41.1(j), 41.1(k), 41.1(l), 41.1(u) Directive 2009/73: Monitoring transparency, market opening and competition, Restrictive contractual practices, Contractual freedom of supply contracts, Data exchange processes.

³⁹ Annex 1, Articles 41.1(o), 41.1(q), 41.11, 41.4(e) Directive 2009/73: Measures on Consumers protection, Ensuring access to consumption data, dispute settlement and rights of investigation.

4.3 – Security of Supply⁴⁰

Under the Natural Gas Market Regulations, the REWS has the responsibility to monitor the balance between supply and demand of natural gas, the level of expected future demand and available supplies, envisaged additional capacity being planned or under construction, quality and level of maintenance of the networks, as well as measures to cover peak demand and to deal with shortfalls of one or more suppliers.

Data for LNG imports and consumption of natural gas is collected from ElectroGas Malta Ltd. During the year 2023, no major incident affecting the Security of Supply were reported.

REWS is not the competent authority for security of natural gas supply within the meaning of Regulation (EU) 2017/1938 concerning measures to safeguard the security of gas supply. However, as prescribed by the Preventive Action Plan and by the Emergency Plan submitted to the EU Commission in January 2020, the Regulator provides to the Crisis Manager (the Permanent Secretary of the Ministry for the Environment, Energy and Regeneration of the grand harbour) a monthly report addressing gas supply/ demand/stock levels and forecast use, collecting information provided by gas facility operators and the electricity system operator.

4.3.1 Monitoring balance of supply and demand

LNG import in Malta started in 2017. The total amount of LNG imported to Malta during 2023 was 4,091GWh (HHV). The total amount of natural gas delivered to the electricity generation plants during 2023 was 4,383GWh (HHV), corresponding to 661,336m³ of LNG, with an increase of 5.0% over 2022.

During 2023, all the importation of LNG was from non-EU Member States (Trinidad and Tobago and the U.S.A.).

The demand of natural gas for electricity generation for the next 5 years is reported in *Table 13* and it is compared with past demand in *Figure 15*.

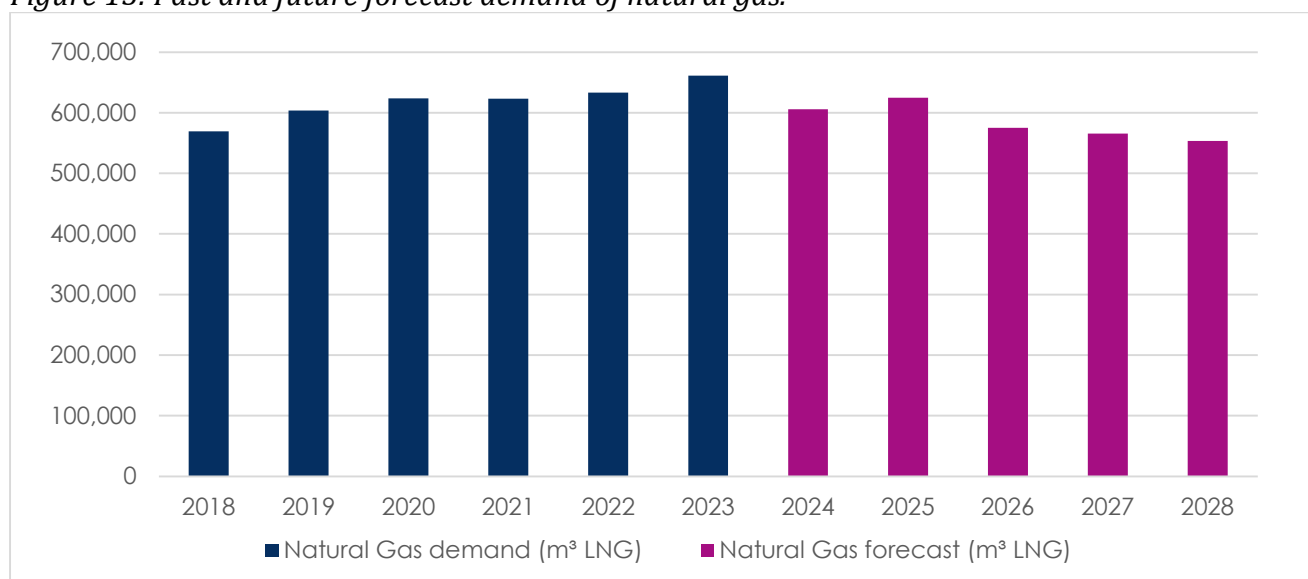
Table 13: Projected LNG consumption 2024-2028.

Year	Projected Annual Consumption (m ³ of LNG)
2024	606,031
2025	625,000
2026	575,087
2027	565,643
2028	553,792

Source: Enemalta plc.

⁴⁰ Articles 41.1(t) and 41.1(h) Directive 2009/73: Safeguard measures and Security and reliability standards.

Figure 15: Past and future forecast demand of natural gas.



Source: ElectroGas Ltd and Enemalta plc.

4.3.2 Measures to cover peak demand or shortfalls of suppliers

The average daily consumption of LNG during the year 2023 was 12.01 GWh, while the peak daily consumption occurred on the 23rd of August and reached a value of 17.4 GWh.

Presently, in the event of a shortage of natural gas, the oil-based generation plants owned by Enemalta plc, the dual fuel part of DPS-3 and the electricity cable link to Italy are expected to act as a backup reserve capacity to meet the electricity demand.