Malta's Report to the European Commission on the Implementation of Directive 2009/72/EC, Directive 2009/73/EC and Directive 2005/89/EC

31 JULY 2018

1 Foreword

This report was prepared by the Regulator for Energy and Water Services(REWS) pursuant to the annual reporting obligations under Articles 37(1)(e) and 41(1)(e) of Directives 2009/72/EC and Directive 2009/73/EC, respectively.

The report, as far as applicable, follows the reporting structure recommended by the European Council of Energy Regulators (CEER).

The report describes the recent developments in the electricity and natural gas market, energy infrastructure, security of supply, relevant legislation and 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 2017.

In 2017, a number of significant changes occurred in the local fossil fuel generation sector which includes new generation capacity coming online, changes in ownership structure of the generation plants and the shift from heavy fuel oil to natural gas as the main fuel for electricity generation.

2 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 2017.

Major Developments

Main changes in legislation

The Electricity Market Regulations were amended to introduce an obligation on the distribution system operator to cooperate on a non-discriminatory basis with any person establishing or operating recharging points for electric vehicles accessible to the public. Another amendment introduced an obligation on the electricity supplier or the operator of any recharging point accessible to the public to provide for the possibility for electric vehicle users to recharge on an *ad hoc* basis without entering into a contract.

The REWS actively contributed to the drafting of the Competitive Bidding Rules for Renewable Sources of Energy Installations Regulations which were eventually published in March 2017 through Legal Notice 76 of 2017. This piece of legislation establishes the framework for competitive bidding processes for the approval of operational aid to generators from renewable energy sources with a capacity of 1MW or more. The method and amount of support for solar photovoltaic installations with a kWp capacity lower than 1000kWp continue to be determined administratively under the Feed-in Tariffs Scheme (Electricity Generated from Solar Photovoltaic Installations) Regulations.

Electricity generation and security of supply

In July 2017, D3 Power Generation Ltd took over, from Enemalta plc, the operations of the Diesel Engine Combined cycle plant ("DPS 3") with a nominal capacity of 152.6MW after its conversion to natural gas. In August 2017, ElectroGas Malta Ltd started to operate its newly constructed combined cycle gas turbine plant ("DPS 4") of nominal capacity 215MW. A total of 210MW of oil based steam plant capacity was completely phased out.

In view of the above mentioned changes the total local installed fossil fuel generation capacity as at the end of 2017 was 588.6MW, of which, 367.6MW running mainly on natural gas with the rest of the exsiting capacity running on gas oil.

The highest system demand for the year occured on 10th August at 15:00 when the demand peaked at 488 MW, this is the highest peak ever recorded.

The role of Enemalta plc in the electricity generation sector who until recently was the main local producer of electricity (with the exception of small producers generating electricity from renewable energy sources) has since been reduced to that of provision of reserve capacity.

In the year under review, the total amount of electricity sent out to the grid from all local generators, including RES and imports was 2,434.50 GWh, an increase of 7% over the previous year. The physical imports from Italy (Sicily) measured on the Maltese side amounted to 864.37GWh, a reduction of 42% over the previous year. The contribution to the demand from all local generation increased to 64% from the 35% of the previous year. During the year under review, an amount of 35.69 GWh was physically exported to Italy.

Development of renewable energy

By the end of the year under review the installed electricity generation capacity from renewable energy sources was 112.37MWp. Solar Photovoltaic installations make up for over 96% of the renewable electricity generation capacity installed. The REWS continue to administer grant schemes for the purchase of solar photovoltaic installations targeting households. The allocation of the feed-in tariff for electricity exported to the grid from solar photovoltaic installations with a capacity of less than 1MWp is also administered by the REWS.

Electricity distribution and retail

The retail of electricity is not open to competition.

Enemalta plc continues to perform the functions of distribution system operator and that of the sole supplier of electricity to final customers. Meter reading, billing and the handling of customer relations are performed by ARMS Ltd., which is a subsidiary company owned and controlled by Enemalta plc and the Water Services Corporation.

All customers of electricity remain on a regulated retail tariff. During the year under review, there were no changes in the electricity retail tariff structure.

Smart meter rollout

The electricity meters replacement program continues with the total number of smart meters installed and commissioned reaching 243,712 by the end of the year. Overall, 76.7% of the active electricity meters were replaced by smart meters with Automatic Metering Management (AMM) capability by the end of the year under review.

Natural gas infrastructure

The LNG terminal constructed by ElectroGas Malta at Delimara (located in the south of Malta) was commissioned and started its operations during the year under review. The capacity of the LNG terminal is fully contracted to supply natural gas to the power plants owned by D3 Power Generation Ltd and by the same ElectroGas Malta, a total of 367.6MW generation capacity. By the end of 2017, the LNG terminal delivered a total of 3123.57GWh of natural gas.

The natural gas pipeline between Malta and Italy (Gela) was confirmed as a project of common interest and included in the third PCI list. The project implementation timeline has been revised after the conclusion of the studies on the route identification and basic design, which indicate that the project can be implemented earlier than what was declared in the 'Feasibility Study' of 2015 and TYNDP 2017. The natural gas pipeline is planned to come into operation by 2024.

There were no changes to the duties of the Regulator in the year under review.

3 The Electricity Market

3.1 Network Regulation

3.1.1 Unbundling

- Articles 10,11 2009/72/EC and Article 3 Regulation (EC) 714/2009
- Article 26

Directive 2009/72/EC and Directive 2005/89/EC were transposed into national law through the Electricity Market Regulations (S.L.545.13). These regulations take into account the derogations granted to Malta by virtue of Article 44 of Directive 2009/72/EC from the requirements of Article 9 (Unbundling of transmission systems and transmission system operators) and Article 26 of Directive 2009/72/EC (Unbundling of distribution system operators). Therefore, these two articles do not apply to Malta.

There are no transmission systems or transmission system operators in Malta. The REWS did not receive any requests for the designation and/or certification of transmission system owners or operators, in the year under review.

The electricity distribution system covering the whole country remains under the responsibility of one distribution system operator which forms part of a vertically integrated company, Enemalta plc. Unbundling is required at internal management accounts level only.

3.1.2 Technical functioning

The Maltese electricity system is synchronised with the Italian electricity grid since April 2015 through the 200MW HVAC 220kV electricity interconnector. The interconnector is operated by Enemalta plc in coordination with the transmission system operator in Italy, Terna. According to this arrangement the Maltese electricity system is being treated as a virtual consumption and production point connected to the Italian transmission grid.

- Balancing services (Article 37(6)(b), Article 37(8)

The electricity system balancing is carried out by Enemalta plc in coordination with transmission system operator in Italy, Terna. Any imbalances on the interconnector are settled in accordance with AEEGSI (Decision 549/2015/R/EEL) issued on the 20th November 2015[1].

Independent power producers connected to the distribution system do not have balancing responsibilities.

- Security and reliability standards, quality of service and supply (Article 37(1)(h),)

Enemalta plc is required to provide the REWS with information related to the quality of service. This information includes the SAIDI based on supply interruptions (planned and unplanned) data at 11kV level and which is used as an indicator of average minutes lost per customer per annum.

[1] Deliberazione 20 Novembre 2015 549/2015/R/EEL-Disciplina degli sbilanciamenti effettivi applicabile all'interconnessione Italia-Malta

Table 1 shows the estimates provided by Enemalta plc for the average minutes lost per customer per annum for the years 2012 to 2017 due to planned and unplanned interruptions at 11kV or higher voltages. The overall figure for the average minutes lost per customer for the year 2017 was 482.40 minutes; this represents a marked increase over 2016. The increase in customer minutes lost is mainly due to a number of failures of the Italy-Malta interconnection attributed to weather related issues on the Sicilian side.

Table 1: Average minutes lost per customer per annum (minutes per year) 2012-2017

Year	2012	2013	2014	2015	2016	2017
Planned interruptions(customer minutes lost):	80.4	61.04	207	54.6	62.8	64.8
Unplanned interruptions(customer minutes	286.2	360.04	570.6	172.8	101.02	417.60
Overall (customer minutes lost):	366.6	421.08	777.6	227.4	163.83	482.40

Source: Enemalta plc

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

For the year 2017, the number of planned interruptions per customer due to interruptions affecting the 11kV level was 4.69 and the number of unplanned interruptions per customer was 0.59.

Table 2: Average number of interruptions per customer (2012-2017)

Year	2012	2013	2014	2015	2016	2017
Planned interruptions(number):	0.77	0.63	0.76	0.63	0.61	4.69
Unplanned interruptions(number):	4.28	4.13	4.59	2.49	1.99	0.59

Source: Enemalta plc

The average number of planned and unplanned interruptions per customer is shown in Table 2.

In 2017, the average duration of a planned interruption was 1.84 hours and that of an unplanned interruption was 1.48 hours. Based also on the information provided by Enemalta plc, 86.3% of customers affected by an unplanned interruption had their supply restored within 3hrs while 79.2% of customers affected by a planned interruption had their supply restored within 3hrs.

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

- Monitoring of time taken to connect and repair (Article 37(1)(m)

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 either the possibility to import and/or export through the metering equipment provided by the distribution system operator.

During the year 2017, 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 days. This represents an improvement over the previous year, when the average for the time taken to provide the same type of service was 14.9. Table 3 shows the developments in the average time taken by the distribution system operator to provide a new service between the year 2012 and 2017.

Table 3: Average time for the provision of a new service connection (2012-2017)

Year	2012	2013	2014	2015	2016	2017
Number of days	30	20.7	21.3	20.3	14.9	12

According to the information 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 of 8.6 days for the year 2017. The RES generators have 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.

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

- Monitoring safeguard measures (Article 37(1)(t))

No crises in the energy system occurred in Malta in 2017 which would have required the implementation of safeguard measures as described in Article 37(1)(t) and Article 42 of Directive 2009/72/EC.

Enemalta plc is also required through the licence conditions to prepare and submit to the REWS Emergency Response and Security Plans for the distribution system and the power stations.

- RES regulatory framework: Report on connection, access and dispatching regimes for RES-E, in particular on priority issues. Report also on the balancing responsibility for RES-E. (Article 11 Regulation (EC) 713/2009)

The Electricity Market Regulations (S.L.545.13) subject to fulfilment of the requirements related to the maintenance of the reliability, safety and stability of the distribution system and based on transparent and non-discriminatory criteria as defined by the REWS, state that the distribution system operator (DSO) is obliged to:

(a) guarantee the distribution of electricity produced from renewable energy sources wherever technically feasible and with regard to system stability;

(b) provide for priority access to the distribution system of electricity produced from renewable energy sources;

(c) give priority to generating installations using renewable energy sources in so far as the secure operation of the national electricity system permits and based on transparent and non-discriminatory criteria;

(d) ensure that appropriate distribution system and market-related operational measures are taken in order to minimise the curtailment of electricity produced from renewable energy sources;

(e) report to the Regulator if any significant measures are taken to curtail the renewable energy sources in order to guarantee the security of the national electricity system and security of energy supply and indicate corrective measures that will be taken to avoid inappropriate curtailment.

Generators producing electricity from renewable energy sources do not have balancing responsibilities.

The distribution system operator did not report any curtailment of renewable energy sources during the year under review.

Administratively determined support for solar photovoltaic installations includes a grant of up to 50% of the eligible initial capital cost capped at 2300€ coupled with a feed-in tariff for households and a feed-in tariff for any PV system not benefitting from any investment support and with a capacity of less than 1MWp. The amount of capacity that may be allocated a feed-in tariff is capped. The feed-in tariffs, terms and conditions for the allocation and payment of feed-in tariffs are established by the Feed-in Tariffs Scheme (Electricity Generated from Solar Photovoltaic Installations) Regulations(S.L.545.27)

The first competitive bidding process for the award of support to solar photovoltaic installations with a capacity of 1MWp or more was launched during the year under review.

The export of electricity from combined heat and power plants, irrespective of the type of fuel used, is regulated through the Sale of Electricity generated from Cogeneration Units Regulations, and is paid by the distribution system operator at the proxy of the market price. The proxy of the market is also paid for exports from small wind turbines.

For all renewable energy generators and cogeneration plants the electricity may either be consumed on site or sold to the distribution system operator at the applicable tariff.

3.1.3 Network tariffs for connection and access

- Article 37(1)(a), Article 37(6)(a), Article 37(8), Article 37(10), Article 37(12) , Article 37(3)(c) and (d)

The REWS is responsible for the fixing or approval of the connection and access tariffs to the distribution system, including distribution tariffs or their methodologies. The Regulator may require the distribution system operator, if necessary, 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. The charges for connecting to the network and/or methodologies for the determination of such charges are established by the Electricity Supply Regulations. These provisions apply for all users wishing to connect to the network. There were no changes in the year under review.

In view of the derogation granted to Malta from Article 32 (Third Party Access) of Directive (2009/72/EC), any independent power producer connected to the distribution network is obliged to sell all the electricity produced and not consumed on site, to the sole supplier of electricity, Enemalta plc.

The retail tariff paid by consumers for electricity covers the costs and revenues pertaining to the operation of the distribution network apart from those related to the imported electricity, generation and supply activities. There are no separate tariffs for the use of the network.

- Prevention of cross-subsidies (Article 37(1)(f))

As already explained earlier on in this report, the network costs are covered by the retail tariff and there are no separate tariffs for the network. The method used for tariff regulation is based on the full cost recovery method.

The Electricity Market Regulations (S.L.545.13) require electricity undertakings 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, auditing of the published corporate accounts of such electricity undertakings has to 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 license monitoring reports include the requirement for the submission by Enemalta plc of separate profit and loss accounts and balance sheets for each of the three activities.

3.1.4 Cross-border issues

- Access to cross-border infrastructure, including the procedures for the allocation of capacity and congestion management (Article 37(6)(c), Article 37(8), Article 37(9), use of revenues for interconnectors (article 37(3)(f)),

  The Regulator was not involved in specific cooperation activities with other NRA's in relation to capacity allocation and congestion management.

- Monitoring technical co-operation between Community and third-country TSOs (Article 37(1)(s))

  Not applicable.

- Monitor TSO investment plans in view of TYNDP art 37(1)(g), PCIs, also national development plans

As previously stated in section 3.1.1, there is no TSO in Malta. The development of the distribution network and interconnections with other countries is currently under the responsibility of the distribution system operator.

The distribution system operator is required to provide information regarding the development of the network assets and new connections to the network of users.

The Regulator continues to monitor the development of the distribution network through specific reports required by the licence.

There are no PCI (European Projects of common interest) related to electricity infrastructure involving Malta.

- Cooperation (Article 37(1)(c))

Nothing to report.

3.1.5 Compliance

- Compliance of regulatory authorities with binding decisions of the Agency and the Commission (Article 37(1)(d)) and with the Guidelines (Article 39))

There were no binding decisions of the Agency or the Commission that required specific actions to be taken by the Regulator.

- Compliance of transmission and distribution companies, system owners and electricity undertakings with relevant Community legislation, including cross-border issues (Article 37(1)(b), Article 37(1)(q), Article 37(3)(a),(b),(e) and Article 37(5) all but (a) and (c) + imposing penalties (Article 37(4)(d))

No non compliance issues were identified in 2017.

3.2 Promoting competition

3.2.1 Wholesale markets

The electricity generation sector was liberalised in 2005, however, until recently the local electricity generation was predominantly the responsibility of Enemalta plc, with the exception of a number of small RES producers. The entry into the generation market of D3 Power Generation Ltd and ElectroGas Malta Ltd reduced the dominance of Enemalta in the generation sector. Between them these two IPP's accounted for 52% the electricity sent to the grid from all sources during the year 2017. Enemalta remains the sole supplier of electricity sources the electricity from the IPP's generating mainly from natural gas, RES generators (mainly solar photovoltaic systems) and from imports through the interconnector Italy (Sicily)-Malta. Enemalta is obliged to dispatch the available sources on economic merit order basis with electricity from renewable energy benefitting from priority of dispatch.

All independent power producers may either consume on site the electricity generation and/or sell to Enemalta plc.

Table 4 shows the development in the contribution of local generation sources and imports to electricity send to the Maltese grid.

Table 4: Electricity Sent Out to the Maltese grid by Source (GWh) in 2017

Electricity Sent Out to the Maltese grid by Source (GWh)	
Enemalta plc (own generation)	171.85
Local Fossil fuel IPP's	1,268.56
RES	129.72
Interconnector(import)	864.37
Total Electricity System Demand	**2,434.50**

Source: Enemalta plc

During the year under review 35GWh were exported from Malta to the Italian grid.

3.2.1.1 Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition

- Article 37(1)(i),(j) (k), (l) (u) and Article 40 (3)

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 fifteen year bilateral agreement for the supply of electricity between Enemalta plc and D3 Power Generation Ltd was concluded in conjunction with the transfer of ownership of DPS 3 from Enemalta plc to D3 Power Generation in 2014. The bilateral agreement came into effect in 2017 when D3 Power Generation took over from Enemalta plc the operation of the DPS 3 after its conversion to natural gas.

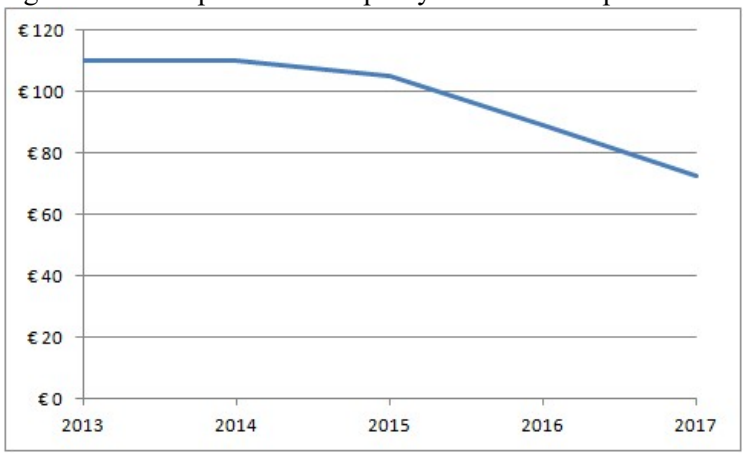
The eighteen year bilateral agreement for the supply of electricity between ElectroGas Malta Ltd and Enemalta plc was concluded pursuant to a tendering procedure for single project aimed to secure a supply of natural gas and electricity to Enemalta plc.

The sale of electricity from PV installations connected to the grid is governed mainly by the Feed-in Tariffs Regulations. 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 co-generation plants is paid by Enemalta plc at the proxy of the market price by Enemalta plc.

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

In the absence of a liquid wholesale market the REWS determines the proxy of the wholesale market price on an annual basis. This price is the reference used to determine the amount of operational aid paid to PV installation benefitting from a feed-in tariff and is also the rate paid to generators exporting electricity to the grid and not eligible for any 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 will exclude that portion of the forecast demand which is not expected to be met by conventional and imported electricity. The methodology was included in the State Aid decision of CION[2] issued in relation to the notified competitive bidding process for the granting of operational aid to generators producing from renewable energy sources with capacity of 1MWp or more. Figure 1 shows the developments in the proxy of the wholesale market price between 2013 and 2017.

Figure 1: Developments in the proxy of the market price



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

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 which in terms of the Electricity Market Regulations. In terms of the aforementioned regulations, in view of the derogations from the application of Articles 32 and 33 of Directive 2009/72/EC granted to Malta pursuant to Article 44 of Directive 2009/72/EC and until such time as the aforesaid derogations remain in force, the licence for the supply of electricity shall be issued only to the distribution system operator, designated under same regulations.

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

3.2.2.1 Monitoring the level of transparency, including compliance with transparency obligations, and the level and effectiveness of the market opening and competition

- Article 37(1)(i),(j),(k),(l),(u) and Article 40 (3)

The electricity retail market is not open to competition. All consumers of electricity are on regulated retail tariffs approved by the REWS.

3.2.2.2 Recommendations on supply prices, investigations and measures to promote effective competition

- Article 37(1)(o)
- Article 37(4)(b)

The supply market is not open to competition. The procedure for the approval is established by regulation 36 of the Electricity Supply Regulations.
The principles underlying the determination and approval of the retails tariffs are published on the Regulator's website[3]. 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 Automated Revenue Management Services Ltd (ARMS Ltd) respectively.

The regulated electricity retail tariffs are composed of a fixed annual service charge and a kWh consumption tariff structure.

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 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 a number of tiers of consumption with the corresponding kWh tariff. The tariffs are based on a cumulative consumption per annum and are applied pro rata on basis of 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:

[3] REWS website: **www.rews.org.mt**

- 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 750 kWh 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.

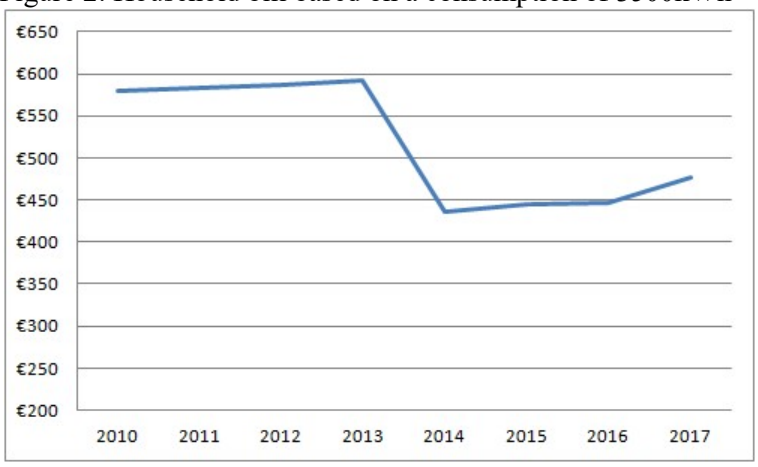
The domestic premises tariffs are applicable for electricity consumed in premises intended for domestic use and which are not registered as a primary residence.

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 (5.5kGVAh)

There were no changes in the retail tariffs for household and non-household customers.

Figure 2 shows the developments in the household bill between 2012 and 2017 based on a consumption of 3500kWh and the national average 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.

Figure 2: Household bill based on a consumption of 3500kWh



The household tariffs are inclusive of 5% value added tax.

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

3.3 Security of supply

3.3.1 Monitoring balance of supply and demand

- Article 4 72/2009

The REWS is responsible for monitoring the security of supply and is required to prepare a report (at least every two years) on electricity operational network security and security of supply. During the year

under review the REWS was not required to implement any safeguard measures in terms of Article of Directive 2009/72/EC.

The report related to security of supply of electricity 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 total system demand in 2017 was 2434.5GWh of which 59% was supplied from local fossil generation plants, a total of 1,440GWh. The local fossil fuel electricity sent out mix for the year 2017 consisted of 22.09% heavy fuel oil, 1.85% gasoil and 76.06 % natural gas. The contribution to the demand of imports from the interconnector with Italy (Sicily) decreased to 36% of the demand from the 69% of the previous year, this as a result of the increase in local production.

The electricity generated and sent out to the grid from generators producing from renewable energy sources (mainly solar photovoltaic installations) increased to 129.72GWh[4]. This figure does not include electricity generated by RES and consumed on site by the producers.

During the year 2017, the system demand reached a maximum of 488MW which represents an increase of 14.4% over the previous year. This peak, as reported by Enemalta plc, occurred on the 10th August. The figure for the peak demand includes the internal consumption of the local fossil fuel power stations. The peak demand was met by 261MW provided by local fossil fuel generation capacity, 168MW imported through the Italy-Malta interconnector and a contribution from solar photovoltaic installations estimated at 59MW.

3.3.2 Monitoring investment in generation capacities in relation to SoS

- Article 37(1)(r)

Operational network security

- Article 7 2005/89/EC

Investment in interconnection capacity for the next 5 yrs or more

- Article 7 2005/89/EC

Expected future demand and envisaged capacity for the next 5 years and 5-15 years

- Article 7 2005/89/EC

During 2017, the Regulator issued the licence to generate electricity to D3 Power Generation Ltd who took over the operation of the DPS3 electricity generation plant with a nominal capacity of 152.6MW in view of its conversion to natural gas. The DPS3 plant was originally commissioned in 2012 and was operating on heavy fuel oil and gas oil. Its ownership changed from Enemalta plc to D3 Power Generation Ltd in 2014.

ElectroGas Malta Ltd owns and operates a newly constructed combined cycle gas turbine plant (CCGT) DPS 4 of nominal capacity 215MW running on natural gas. The licence to generate electricity from this plant was issued by the Regulator to ElectroGas Malta Ltd in August, 2017. The CCGT plant was constructed as a part of a single electricity and natural gas supply project awarded to ElectroGas Malta after a tendering procedure. The scope of the project is to enhance security of supply of electricity, replace inefficient generation plants and switch to natural gas as the main source of local fossil fuel generation. The project and the underlying agreements were subject to an assessment by the European Commission under the services of general economic interest (SGEI) framework which led to State Aid Decision SA.45779 (2016/NN) – Malta Delimara Gas and Power Energy Project. In its decision, the

[4] The figure is provisional

European Commission recognised the importance of the Project for the security of electricity supply in Malta. The European Commission concluded that ElectroGas Malta Ltd has been entrusted with a PSO to make available electricity and gas to Enemalta when dispatched and nominated by Enemalta, and this entrustment constitutes a SGEI in terms of the Article 106 TFEU. The Commission has therefore recognised the Project to be for the exclusive purpose of supplying natural gas and electricity to Enemalta plc.

The remaining 90MW steam plant in Marsa Power Station was completely dismantled by the end of 2017 and the 120MW steam plant in Delimara Power Station is earmarked for complete decommissioning and dismantling by the end of 2018.

In view of the above mentioned changes in the generation plants capacity, the total local fossil fuel nominal generation capacity at the end of 2017 was 588.6 MW and as shown in Table 5. All the fossil fuel generation capacity is located at the Delimara Power Station site except for a 37MW open cycle gas turbine located in the Marsa Power Station.

Table 5: Local fossil fuel capacity per technology as at the end of the year 2017

Technology	Licensee	Installed Nominal Capacity(MW)
Combined Cycle Gas Turbine	ElectroGas Malta ltd	215
Open Cycle Gas Turbine	Enemalta plc	111
Combined Cycle Gas Turbine	Enemalta plc	110
Combined cycle diesel engines	D3 Power Generation Ltd	152.6
Total nominal capacity installed		**588.6**

Source: Enemalta plc and other sources

The 111MW Open Cycle Gas Turbine capacity and the 110MW Combine Cycle Gas Turbine, owned by Enemalta plc, as from 2017, are used as backup reserve capacity.

Half of the combined cycle diesel engines capacity DPS 3 is dual fuel (natural gas/gas oil) while the other half is single fuel, natural gas.

Table 6: Installed capacity renewable energy as the end of the year 2017

Renewable energy technology	Capacity installed (MW)
Solar photovoltaic systems	112.37MWp
Micro wind	0.0698MWp
Biogas plants	4.56MWe
Total capacity installed	**117MWp**

Source: REWS and Enemalta plc records

The total electricity generation capacity from renewable energy sources installed by the end of 2017 was 117MWp. As may be deduced from the breakdown in Table 6, the renewable energy generation capacity installed consists mainly of solar photovoltaic installations.

During the year under review, the installed solar photovoltaic installation capacity increased by 18.7MWp. The largest solar photovoltaic installation is 2MWp while 97% of the PV installations connected to the grid by the end of 2017 have a capacity of 11kWp or lower.

A CHP of 0.049MW was also installed running on Liquid Petroleum Gas (LPG).

No fossil fuel generation capacity is expected to come into operation in the near future.

The distribution system operator did not report any plans for new investments concerning electricity interconnectors and therefore in terms of electricity interconnections Malta will continue to rely on the 200MW[5] HVAC interconnector with Italy commissioned in 2015 for the foreseable future.

The peak system demand is expected to reach 540MW by 2020, to around 600 MW by 2025 and 630MW by 2030.

The forecasted electricity demand in MWh for the years 2018, 2020 and 2030 is shown in Table 7.

Table 7 – Demand forecast 2018-2030

Year	Estimated Demand(MWh)
2018	2,615,261
2020	2,800,000
2025	3,200,000

Source: Enemalta plc

3.3.3 Measures to cover peak demand or shortfalls of suppliers

There is only one supplier of electricity in Malta and the onus to meet all the demand including the peak demand is on Enemalta plc as the Distribution System Operator and sole supplier of electricity to final customers.

[5] The net maximum importation capacity of electricity to the interconnector is actually 192MW due to losses in the interconnector.

4 Gas Market

The Natural Gas Market Regulations (S.L.545.12) establish that the execution of a number of operations and activities require a licence or an authorisation issued by the Regulator. This includes the following activities:

- the carrying out of the functions of a storage system operator;
- the carrying out of the functions of an LNG system operator;
- the carrying out of any of the functions of a distribution system operator;
- the operation of a direct line; and
- the supply of natural gas.

During the year 2017, the Regulator for Energy and Water Services issued an authorisation for the carrying out of the activity of supply of natural gas and a license for the carrying out of the functions of an LNG system operator under these regulations.

The licence for the carrying out of the functions of a liquefied natural gas LNG system operator was issued to ElectroGas Malta Ltd with respect to an LNG terminal constructed by the same company in Delimara (South of Malta).

The LNG facility consisting of a floating LNG storage (FSU) and onshore re-gasification plant on the Delimara site. The FSU has an LNG storage capacity of 125,000m^3 and the re-gasification plant with a maximum natural gas output rate of 89,000 Nm^3/hr of natural gas.

The capacity of the LNG terminal is fully contracted to supply natural gas to DPS3 (owned by D3 Power Generation Ltd) and DPS4 (owned by Electrogas Malta Ltd) electricity generation plants. The re-gasification plant is designed to meet simultaneously the full load natural gas requirements of DPS 3 and DPS 4. Natural gas was first supplied to the DPS 3 plant in February 2017 and to the DPS 4 plant in March 2017.

ElectroGas Malta Ltd was also issued with an authorisation to import LNG and to supply natural gas to the two electricity generation plants.

4.1 Network regulation

4.1.1 Unbundling

- Articles 10,11 2009/73/EC Article 3 Regulation (EC) 715/2009
- Article 26

There are no natural gas transmission systems or distribution systems in Malta. The LNG terminal constructed by ElectroGas Malta Ltd. forms part of a single project which includes the construction of the combine cycle gas turbine by the same company with the sole scope of supplying electricity and natural gas to Enemalta plc. ElectroGas Malta Ltd is required to keep separate accounts in its internal accounting for the LNG terminal, supply of natural gas and generation of electricity.

4.1.2 Technical functioning

- Balancing services (Article 41(6)(b), Article 41(8))
- Security and reliability standards, quality of service and supply (Article 41(1)(h))
- Monitoring time taken to connect and repair (Article 41(1)(m))

Not applicable since there is no distribution of natural gas other than to the two power plants DPS 3 and DPS 4.

- Monitoring access to storage, linepack and other ancillary services (Article 41(1)(n))
- Monitoring correct application of criteria that determine model of access to storage (Article 41(1)(s))
- Monitoring safeguard measures (Article 41(1)(t))

4.1.3 Network and LNG tariffs for connection and access

- Article 41(1)(a), Article 41(6)(a), Article 41(8), Article 41(10) and Article 41(12)

The capacity of the LNG terminal is fully contracted to supply natural gas to the power plants DPS3 and DPS4 and LNG terminal tariffs form part of the fees payable by Enemalta to ElectroGas Ltd in terms of the gas and electricity supply agreements concluded pursuant to a tendering procedure.

- Prevention of cross-subsidies (Article 41(1)(f))
  Not applicable
- Regulated and negotiated access to storage 41(1)(s)
  Not applicable

4.1.4 Cross-border issues

- Access to cross-border infrastructure including allocation and congestion management (Article 41(6)(c), Article 41(8), Article 41(9), Article 41(10) and Article 41(12))

There are no natural gas interconnectors.

- Cooperation (Article 41(1)(c))
- Monitoring investment plans and assessment of consistency with Community-wide network development plan Article 41(1)(g), PCIs and national development plans

The proposed natural gas pipeline that will connect Malta to the Italian natural gas grid at Gela was confirmed as a Project of Common Interest (PCI). The floating LNG storage and re-gasification unit (FSRU), previously forming part of Malta's gas infrastructure PCI was removed from the PCI list and included under the TEN-T projects. Further details on the PCI may be found at https://ec.europa.eu/energy/en/topics/infrastructure/projects-common-interest.

The Malta's natural gas pipeline project is also included in the TYNDP list of projects of ENTSO-G.

In the meantime, the work by the Maltese project promoter on natural gas pipeline continued. In June 2017, the studies for the basic design of the pipeline, route identification and the scoping reports for planning permits were finalised. During the third quarter of 2017 an application for a planning permit was submitted to the competent authority in Malta, where it was decided that the project was mature enough for the permitting process to be initiated. An application was submitted to tap the Connecting Europe Facility (CEF) funding to finance the related EIA studies, marine surveys, investment requests and cost benefit cost allocation (CBCA) studies. The completion of the natural gas pipeline is expected by 2024.

During 2017, the Regulator for Energy and Water Services continued to cooperate with ACER, ENTSO-G and the Maltese project promoter in relation the selection process leading to the establishment of the third list (this list is reviewed every two years) of energy projects of European common interest (PCI) in the north-south gas interconnections in western Europe ("NSI West Gas"), which list was published in November 2017.

4.1.5 Compliance

- Compliance of regulatory authorities with binding decisions of the Agency and the Commission (Article 41(1)(d)) and with the Guidelines (Article 43))

Nothing to report.

- Compliance of transmission and distribution companies, system owners and natural gas undertakings with relevant Community legislation, including cross-border issues (Article 41(1)(b), Article 41(1)(r), Article 41 (3) and Article 41(5)) + imposing penalties (Article 41(4)(d))

Nothing to report.

4.2 Promoting Competition

4.2.1 Wholesale markets

LNG is imported by ElectroGas Malta Ltd re-gasified onshore and supplied to the power plants DPS 3 and DPS 4 by the same company.

4.2.1.1 Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition

- Article 41(1)(i) , (j), (k) (l) (u) and Article 44(3)

Not applicable since there is no natural gas market.

4.2.2 Retail market

No retail market for natural gas.

4.2.2.1 Monitoring the level of prices, the level of transparency, the level and effectiveness of market opening and competition

- Article 41(1)(i),(j) (k), (l) (u) and Article 44 (3)

Not applicable

4.2.2.2 Recommendations on supply prices, investigations and measures to promote effective competition

- Article 41(1)(p)

Not applicable

- Article 41(4)(b)

Not applicable

4.3 Security of supply

4.3.1 Monitoring balance of supply and demand

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. The REWS is not however 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 nor it is responsible for the forecasting of gas demand.

There are no gas distribution networks and the LNG terminal has been constructed and being used for solely to supply the electricity generation plants DPS 3 and DPS 4.

The data for LNG imports and consumption of natural gas is collected from ElectroGas Malta.

4.3.2 Expected future demand and available supplies as well as envisaged additional capacity

The first LNG cargo arrived in Malta in January 2017 and a total of 3290.05GWh LNG was imported during the year. The total amount of natural gas delivered to the electricity generation plants during 2017 was 2993.24GWh.

The importation of LNG started in 2017 and 97% of the LNG was imported from non-EU Member States.

The forecasted demand of natural gas for electricity generation for the years 2020, 2025 and 2030 is shown in Table 8.

Table 8: Forecast for the natural gas daily consumption for electricity generation

Year	Estimated Demand(MWh/day)
2020	12,000
2025	12,500
2030	13,000

Source: Enemalta plc

4.3.3 Measures to cover peak demand or shortfalls of suppliers

ElectroGas Malta, the LNG system operator and importer of LNG and supplier of natural gas is contractually bound in terms of a gas supply contract to maintain a minimum stock of LNG of 20,000m^3 at all times. The average daily consumption of LNG is 82GWh.

The DPS 3 and DPS 4 plants are expected to consume between them, a maximum of approximately 14 to 16 million MMBTU (HHV) of LNG per annum.

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

5 Consumer protection and dispute settlement in electricity and gas

5.1 Consumer protection

- Compliance with Annex 1 (Article 37(1)(n)) and (Article 41(1)(o))

The Electricity Market Regulations transpose the measures related to customer protection provided in Annex I of Directive 2009/72 and establish the obligation to provide universal service to all household customers by the distribution system operator. The Electricity Market Regulations require also that electricity suppliers provide customers, in or 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 as regards 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.

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

In general, the terms and conditions for the electricity supply service are currently implemented through legislative instruments, in particular 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. During the year under review, Enemalta plc published a customer charter which follows the provisions of the regulations however describing in detail the rights and obligations of consumers and is now the basis of the deemed contract of consumers with Enemalta plc.

In view of the fact that there is only one supplier the contract of supply is automatically of an indefinite nature. In the absence of an open electricity supply market, customer switching is not possible to implement.

Customer Complaints

In terms of the Electricity Market Regulations and the Natural Gas Market Regulations the Regulator to carries out the function of an energy ombudsman in order to ensure the efficient treatment of complaints and out-of-court dispute settlements.

Customer complaints have to 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 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 Dispute Resolution (Procedures) Regulations published during the year 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.

The REWS received 25 complaints related to electricity from customers that were not satisfied with the solution provided by the supplier. Most of the complaints were related to billing issues and were resolved without the need of a formal decision procedure being initiated and concluded.

Disconnections for non-payment

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 2017 was 2977 of which 2053 were household customers and 924 non-household customers. Table 9 shows the number of disconnections for non-payment between the years 2014 and 2017.

Table 9 – Number of disconnection for Residential/ Non-Residential consumers (2014-2017)

Year	2014	2015	2016	2017
Residential/domestic	2,327	7,162	5,695	2,053
Non residential	1,237	4,538	6,082	924

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 and the length of time for which the debt has been due and takes into account 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, so as to avoid disconnection.

Vulnerable consumers

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 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 2017, the consumers that received energy benefits amounted to 20,488 which amount to 8.3% of all household consumers.

- Ensuring access to consumption data (Article 37(1)(p)) and (Article 41(1)(q))

Electricity bills issued to customers include contact details of ARMS Ltd who 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.

By the end of 2017, 79% of the 269,025 active electricity meters supplying households were replaced by smart meters complete with Automatic Metering Management (AMM) function capability. In the case of non-households sector, the percentage of smart meters is 64% out of 48,722 active electricity meters.

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 CO_2 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 possibility to register on the ARMS Ltd portal to have access to a detailed breakdown of unpaid bills and history of previous bills and payments.

5.2 Dispute Resolution

Article 37(11), 37(5)(c), Article 37(4)(e)
Article 41(11) and Article 41(4)(e)

The Electricity Market Regulations (S.L.545.13) and the Natural Gas Market Regulations (S.L.545.12) provide that complaints against the distribution system operator may be referred to the Regulator for Energy and Water Services. The Regulator for Energy and Water Services 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 are allowed to make any submissions that they deem necessary.

Any decision taken 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.

No binding decisions related to the disputes or refusals related to connection to the network and/or network tariffs were issued by the REWS during 2017.