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## **Executive Summary**

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### Introduction

1. This report aims to estimate Malta's contingent liability in the event that renewable energy targets, outlined in Directive 2009/28/EC on the promotion of the use of energy from renewable sources, are not attained in 2020. This study was undertaken following a request raised by the Public Accounts Committee (PAC) during its deliberations on 28 October and 25 November 2009 relating to the performance audit report *Renewable Energy and Energy Efficiency in Malta*, published in September 2009.

2. The PAC also requested that the National Audit Office (NAO) follows up and updates the Parliamentary Committee on progress achieved regarding the implementation of Government programmes relating to the exploitation of renewable energy sources and energy efficient practices. In view that only a limited period elapsed following the publication of the NAO's report and the subsequent PAC discussions, the Office will embark on this task at a later date in order to be able to consider developments, at least over a twelve month period.

### Study approach

3. Through the consideration of different presumed scenarios and assumptions, this study aims to estimate Malta's contingent liability in the event that the current European Union's (EU) 2020 mandatory national 10 percent target is not attained. This target relates to the share of renewable energy sources in gross final energy consumption.

4. For the purpose of this study, three main approaches were adopted. In these cases, the contingent liability was assumed to be equivalent to:

- the costs that Malta will incur as a result of non-compliance with mandatory obligations, that is, the imposition of financial penalties by the European Court of Justice (Chapter 2 refers);

- the costs incurred through cooperation mechanisms, as indicated in the Directive to counter for the potential shortfall between the mandatory target and the level of renewable energy generated, through:

- the procurement of statistical transfers (Chapter 3 refers); and
- cooperation agreements in new renewable energy projects within EU Member States (Chapter 4 refers).

5. The NAO estimates relating to the three approaches considered in this report were undertaken on the basis of presumed best and worst case scenarios:

- The best case scenario presumes that Malta will only marginally fail to attain the relative renewable energy targets and thus will produce nine percent of the gross final consumption of energy from renewable sources in 2020. This implies that Malta's contingent liability will relate to one percent of gross final energy consumption.

- The worst case scenario presumes that in 2020 the exploitation of renewable energy sources would have reached one percent of total energy consumption.

6. The estimations carried out were based on various assumptions, which are noted in the relevant chapters of this report. Consequently, this report is subject to the following limitations:

- The limited availability of certain overseas data and information related to the subject under study.
- Due to data limitations, estimates were based on rates prevailing at different points in time.

- The duration of non-compliance with the relevant Directive and the seriousness assumed by the European Court of Justice (ECJ) in imposing financial penalties on Malta.
- Malta's future energy demand.
- The potential impact of future fossil fuel prices on statistical transfers.
- The impact on the statistical transfers market through the potential surplus or deficit of renewable energy generated by Member States in relation to the EU overall target.
- Future technological advancements.

7. In view of these limitations, the financial estimations and conclusions presented in this study are to be considered as hypothetical.

8. In addition to the renewable energy target, Directive 2009/28/EC establishes a minimum 10 percent target of renewable energy in the transport sector. Malta must therefore ensure that a minimum mandatory target of 10 percent of energy use in transport comes from renewable energy sources by 2020. In its most recent update of the National Renewable Energy Action Plan (NREAP), dated June 2010, the Malta Resources Authority (MRA) indicated that this target is envisaged to be met through various measures.

9. However, the EU is currently undertaking a number of studies related to the use of renewable energy sources vis-à-vis its transport policy. These studies were initiated by the European Commission (EC) in response to the Council's and Parliament's request to examine the indirect land use change effects of biofuels within the transport sector. Due to the potential impact of these studies, it was felt that the estimation of Malta's contingent liability related to renewable energy in transport obligations would be premature.

## Estimating Malta's Contingent Liability

### *Financial Penalties*

10. One of the approaches adopted to estimate the contingent liability was based on the assumption that such liabilities will be equal to the financial penalties imposed by the ECJ in the event that mandatory targets are not attained. Financial penalties calculations consider the seriousness of the infringement, the duration of infringement, and the need to ensure that the penalty acts as a deterrent to further infringements.

11. The imposition of a lump sum payment penalises Member States on failure to comply with the respective obligation between the first judgment on non-compliance and the judgment delivered by the ECJ under Article 260. Periodic penalty payments, meanwhile, induce Member States to end the breach of obligations after judgment in the least time possible.

12. The NAO estimated that in the presumed best case scenario, Malta may incur penalties ranging from the minimum applicable penalty of €180,000 to an annual periodic payment of €236,520. This level of fines implies that the penalty for the shortfall from the targeted amount in the generation of renewable energy will range from around €2.90 to €3.80 per MWh expected to be generated from Renewable Energy Sources (RES).

13. Conversely, the fines which may be imposed for the shortfall in the mandatory levels of generation of renewable energy would be around €23.7 million if a periodic penalty payment based on a five-year period is imposed. If the ECJ deems it appropriate to also impose an additional lump sum penalty payment based on the period of non-compliance between the first and second judgement, then the total penalties imposed would amount to €26.2 million. The foregoing suggests that in this presumed scenario, Malta may incur a fine ranging from €42.27 to € 46.97 per MWh which was not generated through renewable energy sources.

14. Additionally, the non-generation of renewable energy may also derail the attainment of carbon dioxide emissions obligations. A report commissioned by Government indicates that the potential penalties for failing the CO<sub>2</sub> emissions targets may range between €90 and €100 per tonne emitted above these targets (refer to Paragraph 2.5.3).

15. It is to be pointed out that the penalties imposed would have to be paid until the time Malta becomes compliant. Hence, the penalties would probably reflect the amount that Malta would have to invest to reach its obligations.

### *Statistical Transfers*

16. The non-attainment of renewable energy targets can be mitigated through the procurement of statistical transfers to make up for the potential shortfall in the generation of renewable energy. Since the first renewable energy trajectory is in two years time, no market for statistical transfers exists yet. Consequently, the NAO assumed that the price of Tradable Green Certificates (TGC) would reflect the cost of statistical transfers per MWh. It is to be noted that the purchase of statistical transfers does not encompass the physical delivery of energy. The purchasing of statistical transfers could, in

practice, only be considered as an interim measure until Malta manages to reach its renewable energy targets through other means. Such an option would only be available in the event that other Member States have ‘excess’ renewable energy on a year by year basis. This situation could change if the EU decides to increase the renewable energy targets, which in turn would also influence the relative pricing mechanism for statistical transfers.

17. The limited data available relating to the historic prices of green certificates hindered the NAO from attempting to forecast possible costs of statistical transfers. One reason for the limited availability of data relates to the fact that the green certificate market is still in its developing stage. Consequently, for the purpose of this study, the NAO assumed the TGC prices prevalent in the United Kingdom, Italy and Sweden up to end 2008. Additionally, the NAO also considered the price estimation arrived at through a Government commissioned report (Paragraph 3.1.10 refers), which fell within the higher end of the TGC pricing range related to these three Member States.

18. In the presumed best case scenario, it is estimated that the cost of purchasing statistical transfers would range between €1.1 million and €6.5 million. These figures are based on the prices of TGCs traded in Sweden and Italy at €18.23/MWh and €104.46/MWh respectively over the period 2002 to 2008.

19. In the presumed worst case scenario, it was assumed that Malta purchases the required amount of statistical transfers in order to fulfil its 2020 mandatory target obligations. In this case, it is estimated that the cost to purchase the statistical transfers would range from around €10.2 million to €58.5 million. In such circumstances, Malta would be obliged to justify the non-attainment of interim trajectory targets and submit plans to the Commission outlining the way forward to rectify the situation.

### *Cooperation Agreements in New Renewable Energy Projects*

20. The Renewable Energy Directive enables cooperation mechanisms between EU Member States in order to fulfil their renewable energy obligations. Such mechanisms can enable Member States to cooperate on any type of new projects that produce energy from renewable energy sources. The renewable energy generated through this project counts toward the respective national mandatory target according to the agreed proportion between the participating Member States.

21. Participation in such a project is based on the presumption that Malta would contribute towards greater generation and consumption levels of renewable energy within the EU, but not necessarily to consumption in Malta. Accordingly, Malta’s role through this flexible mechanism is considered to be solely limited to the fulfilment of the renewable energy obligations. If such an agreement was to be made (which would be a similar concept to ‘statistical transfers’) then it is being assumed that Malta would not contribute towards the capital expenditure necessary for the commissioning and implementation of such a project. Such a contribution would, however, be made indirectly through the green energy tariff paid.

22. Through this approach, Malta’s contingent liability is indicated by the potential costs incurred through the cooperation agreement to make up for the shortfall in attaining the mandatory renewable energy target. The green energy tariffs considered for this section of this report were based on 2010 prices of energy produced from offshore wind power. Such prices ranged between €50 MWh and €580 MWh.

23. In the presumed best case scenario, the potential costs incurred through such project are estimated to range from around €3.1 million to €36.1 million. In the presumed worst case scenario, the potential costs incurred by Malta through the participation in the joint project to comply solely with the 2020 targets would range from €28 million to €324.5 million. Since this option implies that interim trajectory targets would not be attained, then Malta would be obliged to submit revised NREAPs to the Commission, outlining the intended course of action which will enable obligations to be fulfilled.

### **Overall Conclusions**

24. This study aimed to provide estimates of Malta’s potential contingent liability in the event that renewable energy targets are not attained. The three approaches adopted led to varied results. However, it is to be noted that the renewable energy framework is still evolving at the EU and Member State levels, which thereby renders such estimates more complex and problematic. Although progress has been registered, Malta is still in the planning phases of major renewable energy projects, including one relating to an offshore wind-farm.

25. This report estimated Malta’s contingent liability on the bases of financial penalties, statistical transfers and cooperation agreements. At the top end of the range of the presumed worst case scenario, these approaches estimated that the contingent liability could amount to around €2.9 million<sup>1</sup>, €6.5 million, and €36.1 million respectively

<sup>1</sup> This estimate is based on a periodic penalty payment of five years of non-compliance following the ECJ’s second ruling and a lump sum payment based on a period of five years between the first and second ECJ judgment.

for every one percent shortfall from the renewable energy targets.<sup>2</sup>

26. In the event that renewable energy targets remain unattained, the risk exists that Malta would face further non-compliance costs, in terms of other EU Directives. One such example would be that if the practice of utilising conventional fuel for energy production persists, the risk that Malta would also fail to comply with its CO<sub>2</sub> emissions targets as stipulated in Directive 2001/81/EC increases.

27. Despite the inherent limitations, this study provided an indication as to the potential range of Malta's contingent liability under various scenarios. The competent Governmental entities responsible for the implementation of the Renewable Energy Directive evidently need to keep abreast of developments to ensure that the provisions of the Directive are fully respected while containing Malta's contingent liability to a minimum.

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<sup>2</sup> If the median scheduled price is assumed in calculating the cooperation agreement potential costs, then Malta's contingent liability would amount to €5.6 million for a one percent shortfall from the renewable energy targets.