

Forecast document pursuant to Article 4(3) of Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009

Summary

In order to achieve the objectives assigned to it by Directive 2009/28/EC, Italy intends to develop, as far as possible, its national potential and resources and, in the context of growing integration of the European and Mediterranean market, also use means other than domestic production.

This document does not cover imports of biofuels or biomass for the production of biofuels. However, it is envisaged that it will be necessary to make use of these in order to achieve the overall objective and the specific objective in the transport sector.

However, the document does illustrate why the estimates for imports of electricity from renewable sources, which Italy expects to use at a total level of around 1.1 Mtoe/year in 2020, are plausible.

In this connection we would point out that, while there is an interest in fostering cooperation initiatives for statistical transfers and joint projects with the Member States, there is not currently enough information to assess the contribution of these mechanisms. The forecast documents to be sent by the other Member States will give useful information for updates in this connection, which will be provided in the biennial reports referred to in Article 22(1) of the Directive.

On the other hand, by virtue of the possibility in Italian law, under certain conditions, to grant the Italian incentives to electricity from renewable sources produced in third countries and imported to Italy, there are various initiatives in this area. On the basis of these initiatives and the ongoing dialogue with various countries, it is estimated that, for the period until 2020, Italy will be able to satisfy its requirement for energy from renewable sources by means other than domestic production to the extent set out in the table below.

Year	2014	2016	2018	2020
Imports (cumulative figures, Mtoe/year)	0.086	0.860	1.170	1.170

1. Introduction

Article 4(3) of Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC lays down that, by 31 December 2009, each Member State shall publish and notify to the Commission a forecast document indicating:

- a) its estimated excess production of energy from renewable sources compared to the indicative trajectory that could be transferred to other Member States, as well as its estimated potential for joint projects, until 2020;

b) its estimated demand for energy from renewable sources to be satisfied by means other than domestic production until 2020.

This information may include elements relating to costs/benefits and financing. The forecasts are to be updated in the reports of the Member States referred to in Article 22(1)(l) and (m) of the Directive.

2. Required use of means other than domestic production

Article 8-bis of Law No 13 of 27 February 2009 lays down that a measure must be issued defining how the minimum quota for increasing energy production from renewable sources is to be broken down between the regions so as to achieve the objective of 17% of gross domestic consumption by 2020.

A study was carried out in order to implement this provision. This revealed the need for a 'foreign' contribution of around 4.0 Mtoe, made up of around 2.9 Mtoe from biofuels produced abroad or produced in Italy from imported biomass (including any contribution from bioliquids used for electricity production) and around 1.1 Mtoe from foreign contributions in various forms (e.g. electricity imports, joint projects with EU and non-EU countries, statistical transfer), as provided for by the Directive.

It is clear from the above that there is not expected to be any excess production of energy from renewable sources that could be transferred to other Member States, even under joint projects.

It is intended instead to use means other than domestic production at the overall level set out above.

Given that imports of biofuels and biomass for the production of biofuels can occur through the normal market channels, they are not counted for the purposes of this document.

Instead, it sets out below the elements on the basis of which the estimate of electricity imports of around 1.1 Mtoe/year in 2020 is plausible.

3. Means envisaged to supplement domestic production

In order to obtain the envisaged contribution from means other than domestic production, the Government intends to foster cooperation initiatives for statistical transfers and joint projects with Member States and third countries, including through the involvement of the regional authorities and private operators, according to efficiency criteria and with the aim of full achievement of the national objectives.

With regard to cooperation with Member States, a memorandum of understanding is in place with the Republic of Poland, under which the parties have, among other things, stressed their intention to promote renewable sources by developing joint projects and joint support schemes in accordance with the provisions of Directive 2009/28/EC.

At present, however, the conditions are not yet in place to assess whether, and to what extent, joint projects with other Member States or statistical transfers will be able to contribute to the achieving Italy's objectives.

Italian rules make it possible to issue green certificates – the main instrument for supporting electricity production from renewable sources in Italy – also to physical imports of electricity from renewable sources from third countries which have tools for promoting and incentivising renewable sources that are analogous to those in place in Italy and which grant the same possibility to installations located in Italy. This is done on the basis of agreements entered into between the Ministry of Economic Development and the Ministry of the Environment and the Protection of Natural Resources and the Sea, on the one hand, and the relevant Ministries in the foreign country from which the energy from renewable sources is being imported. Such an agreement (currently being updated) has already been entered into with the Albanian Government, while another is currently being finalised with Serbia.

It would be technically possible to import electricity from renewable sources produced in third countries to Italy thanks to the existing electricity links, and even more so with those that are planned. Indeed, Directive 2009/28/EC provides that electricity from renewable energy sources produced in a third country may be taken into account for the purposes of measuring compliance with the national requirements if, among other criteria, the electricity is produced by a newly constructed installation that became operational after 25 June 2009. Accordingly, the use of existing electricity links to import electricity from such new installations is not ruled out. It seems even more plausible, for these purposes, to exploit new links, some of which are currently being developed with countries or areas offering interesting opportunities in this field. The existence of a strong public policy to support renewable sources, combined with the provisions of the Directive and the Government's intention to also promote the use of means other than domestic production, will act as stimuli to translate this possibility into reality.

4. Estimate of contributions other than from domestic production

The situation regarding plans for new electricity links with third countries for which applications for construction/operation authorisation have been submitted to the Ministry of Economic Development is set out in the table below, which also gives estimates of imports of electricity from renewable sources.

Project	Characteristics	Terminus points		Specific agreements between States concerning electricity from renewable sources	Notes
		In Italy	Abroad		
'Italy-Switzerland' merchant line	400 kV HVDC, 1000 mW	Verderio (LC)	Sils	Agreement in force for mutual recognition of GOs and procedures for exemption from the requirement for green certificates	Investigation has been completed. Agreement of the regional authority has not been obtained.
'Italy-Croatia' merchant line	400 kV HVDC, 1000 mW	Candia (AN)	Konjsko (Split)	There are no agreements.	Investigation has been completed. Agreement of the regional authority has not been obtained.
'Italy-Montenegro' interconnection	500 kV HVDC, 1000 mW (including a reserve quota equal to a further 1000 mW)	Villanova (PE)	Tivat	An agreement is being drawn up. At present it covers only support for carrying out the work.	Investigation activity has just begun.
'Italy-Albania' merchant line	400 kV HVDC, 500 mW	Brindisi	Vlora	The agreement is currently being updated and concerns: a) mutual recognition of procedures for certifying electricity from renewable sources; b) reciprocity of the related incentivisation systems; c) in consequence, the possibility to grant Italian incentives to electricity from renewable sources produced in Albania and imported to Italy.	Authorisation obtained. Procedure underway for assigning the exemption quota.
'Italy-Albania' merchant line	480 kV HVDC, 1000 mW	Manfredonia (FG)	Kallmet		Investigation activity has just begun.
'Italy-Albania' merchant line	500kV HVDC, 500 mW	Casamassima (BA)	Porto Romano (Durrës)		Investigation activity underway.
'Italy-Tunisia' merchant line	400 kV HVDC, 600 mW	Partanna (TP)	Cap Bon	See below.	Investigation activity underway.
'Italy-Tunisia' interconnection	400 kV HVDC, 1000 mW	Partanna (TP)	Cap Bon	A joint declaration has been signed for construction of the interconnection. It examines the issue of the share of capacity for energy from renewable sources.	Investigation activity underway.

There are two interconnection projects proposed by Terna, the transmission system operator (TSO) for electricity throughout Italy, while the other projects concern merchant lines proposed by private undertakings other than the TSO.

Notwithstanding the rules on neutrality for access to electricity grids, it can be observed that the national provisions on the recognition of Italian incentives to electricity from renewable sources produced in third countries and imported to Italy mean it is plausible that a significant share of the transport capacity of both the Terna projects and the merchant line projects will be used to import electricity from renewable sources. Firstly, some of the merchant line projects have been proposed by groups and undertakings in the renewable energy sector and are aimed at transporting electricity from renewable sources using the share of transport capacity covered by the exemption from the rules on the right of third-party access to interconnection lines (with direct or alternating current and linking nodes with voltage greater than or equal to 120 kV) belonging to electricity grids from other States and built by parties not holding electricity transport and distribution concessions. Under Italian law, such an exemption application may be made only after authorisation has been issued (Decree of the Minister for Production Activities of 21 October 2005): this has already happened for one of the Italy-Albania merchant lines for which authorisation for construction has already been obtained.

For each of the projects, let us now briefly examine the possible contributions of imported electricity from renewable sources.

Italy-Switzerland merchant line project

This is a project to build a power cable capable of transporting 1 000 mW, which would add to the links that are already in operation and allow over 12 TWh/year of electricity to be imported to Italy.

The investigation prior to authorisation has been successfully completed in Switzerland and it is at an advanced stage in Italy too. At present, some concerns of an environmental nature have been encountered in the region which the cable crosses (Lombardy). However, it appears that these can be overcome thanks to some technological innovations which should make it possible to place the line inside an existing oil pipeline. In addition, an agreement is in place between Italy and Switzerland under which the parties mutually recognise the guarantees of origin issued to electricity produced from renewable sources, as listed in Article 2 of Directive 2001/77/EC, and lay down the procedures for the exemption from the requirement to obtain green certificates for electricity produced by installations in Switzerland and exported to Italy. There are no obstacles in principle to extending this agreement so as to allow imports into Italy of electricity from renewable sources for the purposes of achieving the objectives set in Directive 2009/28/EC, and indeed there have been some initial expressions of interest.

In the light of the still unexplored potential of renewable sources, it is estimated that the use of the new interconnection and the existing ones could provide growing imports of electricity from renewable sources, increasing from 1 TWh/year in 2008 (0.086 Mtoe/year) to 4 TWh/year in 2018, the equivalent of 0.344 Mtoe.

Italy-Croatia merchant line project

The aim of the project is to build a merchant line with transport capacity of 1 000 MW.

At present, construction has not been authorised on the Croatian side. As far as Italy is concerned, the investigation carried out has revealed possible interferences, at the landfall point, between the facilities for the new electricity line and Terna's existing facilities. In addition, the region concerned (Le Marche) has not given its agreement, a necessary precondition for a positive outcome in the authorisation procedures.

While we do not rule out the possibility that these difficulties will be overcome, as a precaution we do not feel it would be appropriate to include any contribution coming from this project.

Project for an interconnection with Montenegro

This project involves building a power cable capable of transporting 1 000 mW.

The initiative is supported by the Governments of the two countries which, in 2007, signed a statement by means of which they undertook to provide full institutional backing to the feasibility study for the work and for the development and upgrading of the Montenegrin grid concerned. The positive findings of the feasibility study led to submission by Terna to the Italian authorities of an application for authorisation for construction. At the same time, a specific agreement is being drawn up, the aim of which is currently to support the respective TSOs (Terna in Italy and Prenos in Montenegro) in construction and operation of the interconnection, together with the construction of any infrastructure from the two operators' development plans that may be necessary for full use of the new interconnection.

The new interconnection appears capable of making a contribution to achievement of the Italian objectives on renewable sources, since Montenegro and the entire Balkan area are rich in renewable sources, particularly water. The line could also be used to import electricity from renewable sources produced in Serbia, with which an agreement is being finalised concerning the issuing of Italian incentives to electricity from renewable sources produced there and imported to Italy.

While it is necessary to investigate further the possibility of involving Montenegro in an agreement similar to that previously entered into with Albania, it is considered plausible that this interconnection will allow the import, from 2016 onwards, of around 6 TWh/year of electricity from renewable sources, the equivalent of 0.516 Mtoe/year.

Projects concerning merchant lines between Italy and Albania

Back in 2002, an agreement was entered into between Albania and Italy laying down conditions to be met in order for electricity from renewable sources produced in Albania and imported to Italy to benefit from the Italian incentives.

Following the legislative changes in Italy after transposal of Directive 2001/77/EC, the agreement was updated in 2006. With the new agreement, the two countries recognised the procedures for certifying electricity from renewable sources and the reciprocity of their certification systems and regulated the procedures for verifying compliance with the requirements and the necessary checks for imports into Italy of electricity produced in Albania from renewable sources. Additional changes to Italian legislation concerning the incentivisation of renewable sources prompted the updating of the 2006 agreement in the context of a wider agreement dated March 2009 and aimed at promoting interconnection and

the integration of the two countries' energy systems and the pursuit of harmonisation of the relevant rules, including through the development of projects of joint interest.

In actual fact, the earlier 2002 and 2006 agreements on renewable sources have not yet produced effects owing to the absence of (direct) electricity links between the two countries.

Nevertheless, these agreements attracted the interest of many operators in the sector of renewable sources, who have gradually become aware of the need for the simultaneous development of projects for installations using renewable sources and projects for electricity links.

This new awareness was reflected in the aforementioned comprehensive agreement of March 2009, which points out, *inter alia*, that:

- an operator has developed a project for building a 500 mW wind farm in Albania. This was authorised by the Albanian authorities in October 2008 and has sufficient transmission capacity to have access also to the international market, and in particular the Italian market. The authorities of the two countries concerned have already issued authorisation to build and operate the interconnection cable between the grids;
- the Albanian authorities have authorised a second project for building a biomass power station and two wind farms with sufficient transmission capacity to have access also to the international market, and in particular the Italian market.

In the March 2009 agreement, the two countries agreed to provide support for cooperation projects in the energy field, in compliance with the Community rules on the exemption from the right of third-party access and allocation of the transmission capacity.

These interconnections have become technically and operationally feasible, as regards the capacity of the grids and in particular the Albanian one, through the introduction of special innovative systems.

In the light of the above, and bearing in mind also that one of the merchant line projects is aimed at transporting electricity produced from coal, it is estimated that, from 2016, it will be possible to import to Italy around 3 TWh/year of electricity from renewable sources, the equivalent of 0.258 Mtoe/year.

Projects for electricity links between Italy and Tunisia

The projects are:

- the Terna and Steg (Tunisian electricity company) interconnection project;
- a project for a merchant line put forward by an operator other than the TSOs.

The Terna-Steg interconnection project is part of a wider cooperation and exchange initiative in the electricity sector under the joint declaration signed in Tunis on 7 August 2009 by the Tunisian Minister of Industry, Energy and Small and Medium-Sized Enterprises and the Italian Minister for Economic Development.

This wider initiative involves:

- construction in Tunisia of a 1 200 mW production centre intended for the Tunisian and Italian markets by a contractor for production rights in Tunisia selected by means of an international procedure;
- construction of a 1 000 mW submarine electrical link between Italy and Tunisia to be used to transmit energy from the new production centre and for additional flows of electricity from renewable sources.

Terna and Steg have signed a partnership agreement and established the joint enterprise EIMed Etudes, which is already up and running.

The 'call for expressions of interest' has already taken place and saw replies from 16 different parties including electricity producers, institutional investors (private and sovereign funds) and developers.

The merchant line project originated in connection with investments in the wind power sector that the same group intends to carry out in Tunisia.

Technical comparisons are underway on some areas of partial overlapping between the two projects.

On the basis of the data set out above, we can cautiously estimate that, with effect from 2018, it will be possible to import from Tunisia 0.6 TWh/year of electricity from renewable sources, which is equivalent to 0.052 Mtoe/year.