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# Assessment of climate change policies in the context of the European Semester

## Country Report: Italy



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The report provides an overview of current emission trends and progress towards targets as well as policy developments that took place over the period May 2012 to January 2013.

The content of the report represents the state of knowledge in February 2013, specific updates were made adding the latest official greenhouse gas emission data by the European Environment Agency (EEA).

Please feel free to provide any comments or suggestions to the authors through the contacts listed above.

## Short summary

- **Background:** Italy is holding general elections at the end of February 2013.
- **GHG target:** The 2011 non-ETS emissions were below of the 2013 emission allocation but according to the latest national projections Italy is expected to meet its 2020 target only with additional measures.
- **Policy development:** New support schemes for RES are in place. A new Energy Strategy is currently under development – it will determine many of the instruments to be implemented in the coming years.

## I Background on climate and energy policies

Climate and energy are issues discussed frequently in Italian politics and media, though the focus is more on energy than on climate change. Renewable energy is a clear priority, as is promotion of energy efficiency in all parts of the economy.

The primary development in this area is currently Italy's new National Energy Strategy. First presented as a draft for public consultation on October 16, 2012 by the Ministry of Economic Development, the new strategy aims to bring Italy in a position to surpass Europe's 2020 targets with respect to renewables and efficiency, emphasising an agenda that can be characterized as having "green growth" elements due to its implications for jobs and economic improvement. Besides several goals related to emission reduction and expansion of the renewable energy sector, the proposed plan also aims to improve its handling of fossil fuels, by e.g. creating a competitive gas market and becoming the main Southern European gas hub, improving the country's refining industry and fuel distribution network, and sustainably raising national hydrocarbon production.

The new strategy underwent public consultation through 30 November, during which interest groups raised several points as problematic. Stakeholders are concerned about the plan's lack of sufficient focus on air quality and pollution, the inadequacy of its instruments to achieve its stated goals (AiCARR 2012, APER/ASSOSOLARE 2012, KyotoClub 2012, Legambiente 2012), and its aim of increasing domestic fossil fuel production while attempting to meet sustainability goals (ASPO 2012, Legambiente 2012). Consultation on the strategy closed at the end of 2012 and a final version is expected in the coming months. With Italy's general election being held on 24-25 February 2013, the plan is likely to undergo further changes – especially if there is a change of government.

While still in office, Italy's Environment Minister Corrado Clini recently prepared a "green agenda" for the country, with 8 recommended focus areas that emphasise decarbonisation of the Italian economy, increasing green technology development, and changing toward a tax system that taxes the use of natural resources as well as carbon rather than labour (Architettura Ecosostenibile 2013).

## 2 GHG projections

### Background information

Italy is the third biggest emitter of GHG in the EU (EEA 2013a). In 2011, Italy emitted 488.8 Mt CO<sub>2</sub>eq (UNFCCC inventory 2011, data excluding Land Use, Land-Use Change and Forestry - LULUCF), 6% less than in 1990. Energy use, energy supply and transport in the order accounted for the highest share of emissions. Emissions from energy use and supply decreased slightly since 1990 because oil was increasingly substituted by gas, energy efficiency improved, and the economy shifted to less energy-intensive industries. Emissions in the transport sector increased by 11% between 1990 and 2011 due to a growing number of vehicles. Emissions from industrial processes and agriculture both decreased by roughly 17% since 1990, reflecting reduced chemical production, reduced animal population, and reduced use of nitrogen fertilizer (EEA 2012c, UNFCCC 2012).

### Progress on GHG target

There are two sets of targets to evaluate: 1) the Kyoto Protocol targets for the period 2008-12 (which has just ended) and 2) the 2020 targets for emissions not covered by the EU ETS.

Under the Kyoto-Protocol the emission reduction target for Italy for the period 2008-2012 has been set to minus 6.5 % based on 1990 levels. An evaluation of the latest complete set of greenhouse gas data (for the year 2011) shows that Italy's emissions have decreased on average by 5.4% since 1990 (EEA 2013a). This shows that Italy may not meet its Kyoto target through domestic emissions reductions directly.

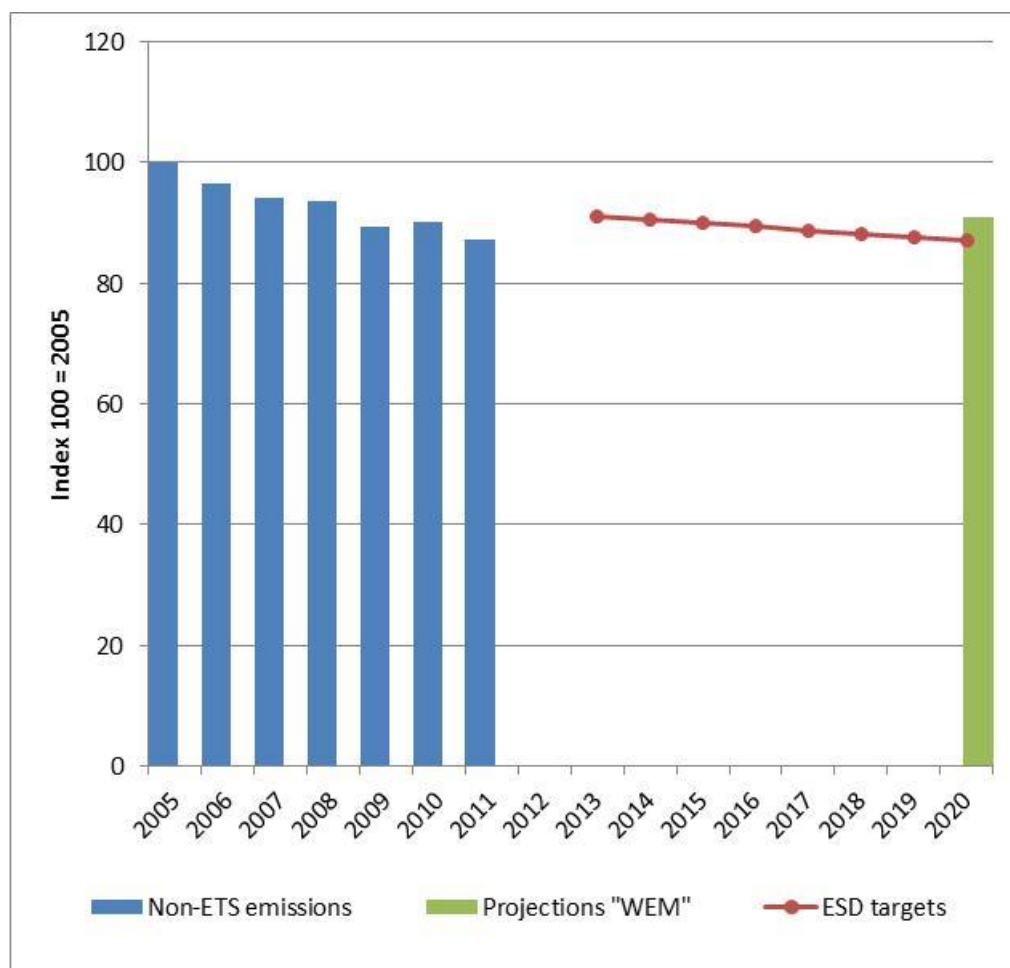
By 2020, Italy needs to reduce its emissions not covered by the EU ETS by 13% compared to 2005, according to the Effort Sharing Decision (ESD) <sup>(1)</sup>. The latest data suggests that Italy is on track at present to meeting its 2013 emission target of -9% by 2013 compared to 2005 (EEA 2013b): Emissions in 2011 were 4% below the Annual Emissions Allocation (COM 2013) for the year 2013. However, national projections <sup>(2)</sup> (EEA 2013b) show that Italy could fail to meet its 2020 target in a scenario with existing measures while in the projections with additional measures the target will be overachieved.

Figure 1 shows Italy's non-ETS emissions until 2011, its targets under the ESD for the period 2013-2020 and the projections with existing measures for 2020.

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<sup>1</sup> Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments by 2020.

<sup>2</sup> Calculations are based on domestic emissions only, without accounting for possible use of flexibility options. The 2020 targets and 2005 non-ETS emissions are all consistent with 2013-2020 ETS scope, i.e. they take into account the extension of the ETS scope in 2013 and the unilateral inclusion of installation in 2008-2012.

**Figure I: Non-ETS emission trends and projections compared to the ESD targets**

Source: EEA. Projections are based on 15/04/2013 draft GHG inventory submissions under the UNFCCC and MS projections submitted

**Table I: GHG emission developments, ESD-targets and projections (in Mt CO<sub>2</sub>eq)**

	1990	2005	2010	2011	ESD target*		2020 Projections**	
					2013	2020	WEM	WAM
Total	519.0	574.4	500.3	488.8				
Non-ETS emissions (% from 2005)		340.4	306.6	296.6 -13%	310.1 -9%	286.7 -13%	299.4 -9%	269.9 -18%
Energy supply (% share of total)	137.2 26%	160.6 28%	133.2 27%	131.2 27%				
Energy use (w/o transport) (% share of total)	165.5 32%	174.8 30%	155.0 31%	147.4 30%				
Transport (% share of total)	103.1 20%	127.5 22%	118.9 24%	117.9 24%				
Industrial processes (% share of total)	38.4 7%	42.6 7%	31.8 6%	31.6 6%				
Agriculture (% share of total)	40.7 8%	37.4 7%	33.7 7%	33.5 7%				

Source: UNFCCC inventories; EEA (2013b); COM (2013); Calculations provided by the EEA and own calculations.

\* The ESD target for 2013 and for 2020 refer to different scopes of the ETS: The 2013 target is compared with 2011 data and is therefore

consistent with the scope of the ETS from 2008-2012; the 2020 target is compared to 2020 projections and is therefore consistent with the scope of the ETS from 2013-2020. Non-ETS emissions in 2005 for the scope of the ETS from 2013-2020 amounted to 329.5 Mt CO<sub>2</sub>eq.

\*\* 2013 projections with existing measures (WEM) or with additional measures (WAM).

Legend for colour coding: green = target is being (over)achieved; orange = not on track to meet the target

Total greenhouse gas emissions (GHG) and shares of GHG do not include emissions and removals from LULUCF (carbon sinks) and emissions from international aviation and international maritime transport.

National projections of GHG emissions up to 2020, summarised by the EEA, need to be prepared by the Member States in accordance with the EU Monitoring Mechanism <sup>(3)</sup> every two years, and the latest submission was in 2013. The projections need to be prepared reflecting a scenario that estimates emissions reductions in line with policies and measures that have already been implemented (with existing measures, WEM), and an additional scenario that reflects developments with measures and policies that are in the planning phase (with additional measures, WAM) may also be submitted.

In the following two tables, these measures - as outlined by Italy as basis for the projections as of April 2011 <sup>(4)</sup> - have been summarised with a focus on national measures and those EU instruments expected to reduce emissions the most <sup>(5)</sup>. An update on the status of the policies and measures is included in order to assess the validity of the scenarios.

**Table 2: Existing and additional measures as stated in the 2011 GHG projections**

Existing Measures (only important national measures; w/o EU legislation)	Status of policy in January 2013
Third "Conto Energia" : photovoltaic (decree 6 august 2010): Supporting the expansion of photovoltaic plants through feed in tariffs	Phased out, Fifth "Conto Energia" is now in place to support photovoltaic through a feed-in premium tariff (Decree 5 July 2012):
Green Certificate - budget law 2008 (2007-2012)	Being phased out and substituted by the support schemes of decree 6 July 2012.
Energy	In force
White certificates - decree December 2007: (Reduction of electricity demand and) support of Combined Heat and Power (CHP) plants	In force
Supporting system for RES and CHP with Regional operative program (POR) and Interregional operative program (POIN)	Some of the individual programmes are in force
Building Regulation (Legislative decree 192/05 as amended by legislative decree 311/06): Minimum mandatory standards on new and existing buildings (RES)	In force

<sup>3</sup> Decision No 280/2004/EC of the European Parliament and of the Council of 11 February 2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol.

<sup>4</sup> The respective policies and measures were not available at the time of the preparation of this country report. Thus, policies and measures as outlined in April 2011 are given here.

<sup>5</sup> The implementation of the EU-ETS has not been included. Other EU Directives have only been considered if they have been outlined in the projections as one of the main instruments to reduce GHG emissions.

Energy Efficiency	Legislative decree 201/07 (transposition of directive 2005/32/EC- first regulations) (electric motors and inverters)	Phased out
	White certificates - decree December 2007: Reduction of electricity demand (and support of CHP plants)	In force
	Financial support of energy savings with POR and POIN	Some of the individual programmes are in force
	Building Regulation (Legislative decree 192/05 as amended by legislative decree 311/06): Minimum mandatory standards on new and existing buildings (Energy Efficiency)	In force
	Budget law 2007, 2008, 2009: Support energy saving in existing buildings through a tax deduction of 55%	In force
	Legislative decree 201/07 (transposition of directive 2005/32/EC- first regulations ): Mandatory energy efficiency standards for energy-using products	Phased out
Transport	Legislative decree 128/05 (transposition of directive 2003/30/EC): Mandatory use biofuels (target 4.5% to 2012) in the transport sector	In force
	Intermodal infrastructure projects: metropolitan railways (National Strategic Framework 2007-2013 - FESR)	Some of these regional programmes are in force

Source: Reporting of MS in accordance with Decision No 280/2004/EC about their GHG emission projections up to 2020, April 2011

Additional Measures: Still to be implemented (only important national measures; w/o EU legislation)		Status of policy in January 2013
Energy	Minimum quota of 50% of domestic hot water to be produced using renewable energy sources for end users who own newly-constructed buildings or buildings to be refurbished	The obligation entered into force on 30 September 2011. Since this date, RES must cover 50% of the consumption of hot sanitary water. (DL 28/2011)
	Minimum quota for electrical capacity installed using renewable sources for end users who own newly-constructed buildings or buildings to be refurbished	The obligation entered into force on 30 September 2011. Quotas are different depending on the date of construction of the building. (DL 28/2011)
	Support for the creation of district heating and district cooling networks	Local authorities for municipalities above 50,000 inhabitants are obliged to establish development plans for district heating networks (DL 28/2011)

	Further extension of the energy saving target (White certificates 2016-2020)	Temporarily extended until 2016.
Energy Efficiency	Directive 2010/31/EC - New building efficiency standards	On 24 January 2013, the EC sent Reasoned Opinions to Italy requesting the country to notify of implementation measures for the Energy Performance of Buildings Directive <sup>6</sup> .
Transport	Intermodal measures to be funded: Promotion of measures in the transport sector (infrastructure, intermodal and public mobility with electrical transport)	Some such measures are included in the proposed new energy strategy.
	Measures, incentives, and new CO <sub>2</sub> target more stringent than those indicated in Regulation (EC) No 443/2009 and proposed regulation COM(2009) 593/3	Included in the new energy strategy proposal

Source: Reporting of MS in accordance with Decision No 280/2004/EC about their GHG emission projections up to 2020, April 2011

### 3 Evaluation of National Reform Programme 2012 (NRP)

In April of each year, Member States are required to prepare their National Reform Programmes (NRPs), which outline the country's progress regarding the targets of the Europe 2020 Strategy. The NRPs describe the country's national targets under the Strategy and contain a description of how the country intends to meet these targets. For climate change and energy, three headline targets exist: 1) the reduction of GHG emissions, 2) the increase of renewable energy generation, and 3) an increase in energy efficiency (<sup>7</sup>).

In the following table, the main policies and measures as outlined in the NRP of April 2012 (<sup>8</sup>) have been summarised, and their current status (implemented, amended, abolished, or expired) is given, with specifics on latest developments.

**Table 3: Main policies and measures as outlined in the NRP, April 2012**

Update of national strategy for the reduction of GHG (CIPE Resolution n. 123/2002)	
Status as stated in the NRP	to be done
Status as per Jan 2013	Not implemented
Description of policy or measure	The aim is to continually increase the diversity of the portfolio of energy sources in order to maintain energy independence, including increasing the share of renewable energy sources and reduce the share of carbon-intensive energy sources.

<sup>6</sup> See [http://europa.eu/rapid/press-release\\_MEMO-13-22\\_en.htm](http://europa.eu/rapid/press-release_MEMO-13-22_en.htm)

<sup>7</sup> There are specific targets for all MS by 2020 for non-ETS GHG emission reductions (see section 2) as well as for the renewable energy share in the energy mix by 2020 (see section 4, renewable energies). Specific energy efficiency targets will be defined (or revised) by the MS until the end of April 2013 in line with the methodology laid out in Article 3 (3) of the Energy Efficiency Directive (Directive 2012/27/EU).

<sup>8</sup> All NRPs are available at: [http://ec.europa.eu/europe2020/documents/related-document-type/index\\_en.htm](http://ec.europa.eu/europe2020/documents/related-document-type/index_en.htm)



**Fund for Sustainable Mobility**

Status as stated in the NRP	Ongoing
Status as per Jan 2013	Continues
Description of policy or measure	DL 83/2012 introduced measures for sustainable mobility and devoted 170 million € to this aim.

**Kyoto Fund for reducing GHG emissions through public and private investments**

Status as stated in the NRP	Begin operation in 2012
Status as per Jan 2013	In operation
Description of policy or measure	The fund has a total amount of €600 million for three years (2012-2014) for financing measures that reduce GHG emissions.

**Prime Minister Decree on the use of revenues from auctioning (ETS)**

Status as stated in the NRP	Intention announced in early 2012, decree planned
Status as per Jan 2013	Draft available, undergoing parliamentary approval process
Description of policy or measure	<p>According to the draft,</p> <ul style="list-style-type: none"> <li>• 50% of the revenues will be devoted to the "Kyoto fund"</li> <li>• 25% will be devoted to co financing R&amp;D programmes for low emissions technologies for industry and transports</li> <li>• 10% will be devoted to contribute to cooperation programmes with developing countries as regards the goals of the Durban Conference;</li> <li>• 10% will be provided for co-financing programmes for carbon absorption through forestry and agriculture</li> <li>• 3% will be devote do the Euro-Mediterranean centre on Climate Change</li> <li>• 2% will be devoted to cover expenses connected to managing the system.</li> </ul>

**Extension for the entire year of 2012 of tax relief measures for energy requalification of buildings**

Status as stated in the NRP	To be implemented in 2012
Status as per Jan 2013	Implemented in 2012
Description of policy or measure	The tax relief has been extended up to June 2013.

**Revision of incentives for renewable sources to take into account technological advances and priorities for the most efficient technologies**

Status as stated in the NRP	To be implemented in 2012
Status as per Jan 2013	Implemented as part of DM 28/12/2012 and DM of 5 and 6 July 2012
Description of policy or measure	Revisions were introduced as part of the new "Conto Energia," which also contains a new renewables bidding scheme. The quota scheme involving green certificates is also being phased out.

**Measures for network infrastructure (storage systems and smart grids)**

Status as stated in the NRP	No specific timeline given
Status as per Jan 2013	Draft New Energy Strategy through 2020 (under development) mentions smart grids and network expansion
Description of policy or measure	Smart grids would cut energy use in the residential and industrial sectors, electricity storage allows for greater electricity supply variability inherent to renewables like wind and solar, thus, facilities increased use of renewable energy

**Reform of white certificates, new objectives for the obligated parties**

Status as stated in the NRP	planned
Status as per Jan 2013	Implemented in 2012
Description of policy or measure	White certificates are provided to energy distributors and to companies operating in the energy services sector to certify reductions of consumptions obtained through energy efficiency projects. Each certificate has a value of 1 toe. The reduction obligation for the 2013-2016 period is 29.52 million certificates (toe).

**Transposition of the Directive 2010/31/EU concerning the energy performance of buildings**

Status as stated in the NRP	to be transposed into Italian law by 9 July 2012
Status as per Jan 2013	Not implemented in time, infringement procedure is in progress. Commission sent Reasoned Opinions in January 2013. MS that do not comply with their obligation within two months may be referred to the Court of Justice.
Description of policy or measure	MS are required to establish and apply minimum energy performance requirements for new and existing buildings. Additionally MS need to assure that by 2021 all new buildings are 'nearly zero-energy buildings'.

## 4 Policy development

This section covers significant developments made in key policy areas between May 2012 and January 2013. It does not attempt to describe every instrument in the given thematic area. The time-frame was chosen based upon the release of the National Reform Programmes (in the section above) in April 2012, which contain the status quo for policy on most topics.

### Environmental Taxation

In 2009, Italy's economy was subject to the fourth-highest implicit tax rate on energy among EU MS at €211 (deflated value) per tonne oil equivalent. However, this value had dropped since 2005, compared to peaks in the late 1990s and early 2000s (Eurostat 2013a and 2013b). The energy intensity of the economy declined slightly over the same period, causing total receipts of energy taxes as a proportion of GDP to fall by 16.6% between 2003 and 2010 as well. Nonetheless, Italy still ranked 11<sup>th</sup> among EU MS in

terms of energy revenues as a percentage of GDP and 12<sup>th</sup> for all environmental taxes in 2010 (Eurostat 2012 and 2013a).

A carbon tax has been under discussion for years in Italy. The Environment Minister's aforementioned "green agenda" includes shifting taxation from labour to energy and natural resource consumption as one of its 8 major points. In late 2012, the minister even suggested the EU abandon its emissions trading scheme and instead institute a carbon tax at the international level. Details have not yet been made officially available. (Architettura Ecosostenibile 2013)

### **Energy Efficiency**

The energy intensity of the Italian economy was the fourth-lowest of all EU MS in 2010, having dropped 5.3% between 2005 and 2010 (Eurostat 2013a). Final energy consumption also fell over the same period, reversing a previous trend of growth and thus, reflecting the effects of the global economic crisis. Industrial energy use declined a full 22% between 2005 and 2010, with transport energy use seeing decreases as well (Eurostat 2013a).

The most important existing instrument to increase energy efficiency is Italy's white certificate scheme introduced in 2004. White certificates represent energy not consumed and are provided to companies operating in the energy services sector to certify reductions of energy consumptions obtained through energy efficiency projects. For each toe reduction in the consumption, one certificate is issued. The certificates currently have an average price of roughly €95.51 (GME 2013). A new regulation (DM 28/12/2012a) set the energy use reduction obligation for the 2013-2016 period to 29.52 million certificates (toe). Furthermore, additional measures such as the expansion of the programme to the transport sector are implemented by the Ministerial Decree and have been recalled in the National Energy Strategy (NES) published in March 2013. As regards energy efficiency in buildings, Italy did not implement the EU directive on energy performance in buildings on schedule last year and is therefore subject to an infringement procedure (MEMO 13/22).

The aforementioned draft national energy strategy prioritizes energy efficiency and foresees implementing several potential further measures to cut energy use in Italy. These include strengthening minimum efficiency standards in construction, for industrial facilities, and in the transport sector, as well as tax rebates for building energy efficiency upgrades. The proposed strategy also plans to introduce direct incentives for government and civil service positions so these act as examples. It also aims to increase the white certificates target and expand the scope of the programme to include the transport sector, so that there is a larger market for white certificate trading. In the proposed strategy the governments expects these measures to reach €15 billion in public support by 2020. An aggregated investment €50-€60 billion could be stimulated by these measures. Savings in annual fuel imports are estimated to be about €8 billion to 2020 (MSE 2012b).

### **Renewable Energy**

The proportion of final energy use in Italy covered by renewable sources more than doubled between 2006 and 2011, but at 11.4% in 2011 (Eurostat 2013c) still leaves plenty of room for improvement if the 17% goal for 2020 is to be reached. Developments in the electricity sector have been similar, with the 2010 value at 22.2% (Eurostat 2013a).

The "Conto termico" introduced in 2012 (DM 28/12/2012b) is a support scheme for investments that improve energy efficiency in buildings, replace inefficient heaters with

more efficient ones or install heating and cooling systems that use renewable energy. The subsidy is available to public entities for any kind of intervention among the ones mentioned above, while entities can only receive it for renewable heating and cooling installations. Depending on the type of project is to be financed, funds are provided in annual instalments for 2 to 5 years. This new programme has a total budget of €900 million annually.

The draft energy strategy aims to exceed Italy's existing renewable target within the EU (17% of gross final energy consumption) in 2020 and get to 20% renewable energy by that year (MSE 2012b). To that aim, the New Energy Strategy aims at bringing the yearly budget for the support of RES-E (renewable electricity) to 12.5 billion € per year, and 50-60 billion € of private investment is expected in the sector as a consequence of such measures. As for the RES-H (renewable heating) sector, investment from the private sector is expected to be attracted by the new energy strategy in an amount estimated in 15-20 billion € (MSE 2012b).

### **Energy Networks**

Apart from the existing and ongoing plans of the Transmission System Operator (TSO) to expand, manage, and reinforce the grid, no specific measures have been implemented from the policy side to expand the grid or integrate RES-E generation. The proposed new energy strategy does, however, contain specific goals in this area, including integrating power produced from renewable sources, expanding and reinforcing the grid, and managing potential overproduction at the local or national level (MSE 2012b).

### **Transport**

Greenhouse gas emissions from Italy's transport sector declined from 2005 to 2011, along with overall emissions, but they made up a larger percentage (24%) of total emissions (see Table 1). Taxation of transportation (excluding fuels) is relatively high, with revenues making up 0.6% of GDP - twelfth-highest in the EU in 2010 (Eurostat 2013b). Meanwhile, newly registered vehicles in Italy are getting more efficient each year since 2001. In 2011, average emissions were at 129.5 gCO<sub>2</sub>/km. This is about 7% above the EU average but Italy is not under the top five countries anymore such as in 2009 (EEA 2012e).

In June 2012, the Ministry of Economic Development issued a Legislative Decree (DL 83/2012) setting financial incentives for the purchase of low-emissions vehicles (maximum 120 g CO<sub>2</sub>/km) until 2015. The incentives vary depending on the year vehicle emissions level, but are offered in terms of a percentage (15-20%) of the vehicle price to a maximum of € 5000. The same decree also announces that to encourage electric vehicle use, a national infrastructure plan for electric vehicle chargers shall be drafted in 2013.

## 5 Policy progress on past CSRs

As part of the European Semester, Country Specific Recommendations (CSRs) for each MS are provided by the EU Commission in June of each year for consideration and endorsement by the European Council). The recommendations are designed to address the major challenges facing each country in relation to the targets outlined in the EU 2020 Strategy. In the following table, those CSRs that are relevant for climate change and energy that were adopted in 2012 are listed, and their progress towards their implementation is assessed.

Existing Country Specific Recommendations	Progress
Take further action to shift the tax burden away from capital and labour to property and consumption as well as environment	The Carbon Tax had been included in a draft law in April 2012 but has been erased in subsequent versions due to the fact the European Directive proposal (COM(2011)169) has not yet been fully approved (Camera 2013). As of now, still no implementation has taken place, although it was mentioned in a non-binding paper by the Minister of Environment.
Take further measures to improve market access in network industries, as well as infrastructure capacity and interconnections	No major progress yet, but some measures in this direction have been included in the national energy strategy, which is currently under development.

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