



EUROPEAN COMMISSION

Brussels, 14.9.2012  
SWD(2012) 262 final

**COMMISSION STAFF WORKING DOCUMENT**

**EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT**

*Accompanying the document*

**Communication to the Commission**

**on communicating outcome of the Impact Assessment related to requirements of Article  
3(4) of Directive 2009/28/EC**

{C(2012) 6287 final}  
{SWD(2012) 261 final}

## COMMISSION STAFF WORKING DOCUMENT

### EXECUTIVE SUMMARY OF THE IMPACT ASSESSMENT

#### *Accompanying the document*

#### Communication to the Commission

#### on communicating outcome of the Impact Assessment related to requirements of Article 3(4) of Directive 2009/28/EC

## 1. INTRODUCTION

Directive 2009/28/EC on the promotion of the use of energy from renewable sources (the "Renewable Energy Directive") establishes mandatory targets to be achieved by 2020 for a 20% overall share of renewable energy in the EU and a 10% share for renewable energy in the transport sector. For the transport sector each Member State has to ensure that the share of energy from renewable sources in all forms of transport combined in 2020 is at least 10%. All forms of energy from renewable sources can contribute to the target, including biofuels - liquid or gaseous - and electricity produced from renewable sources. Member States in the National Renewable Energy Action Plans estimate the contribution of the different forms of energy towards the 10% target as presented in Table 1.

**Table 1: Estimated contributions in final gross energy consumption in the transport sector**

Form of energy	Estimated contribution in transport by 2020 - mtoe	Estimated share in transport by 2020	Number of Member States expecting a contribution in 2020
Liquid biofuels	28.9-29.6	9.3-9.5%	27
Electricity from renewable sources (non-road)	2.4	0.8%	25
Electricity from renewable sources (road)	0.7	0.2%	27
Biomethane supplied through the gas grid	up to 0.7	up to 0.2%	up to 14
Hydrogen from renewable sources	0.002	0.001%	1

The Directive lays down the rules for the calculation of the contribution of the different energy forms towards the 10% target. For liquid biofuels, this is based on their energy content. For the contribution of electricity from renewable sources, the Directive prescribes that the average share of electricity produced from renewable energy sources has to be taken into account in the calculation. In addition, the Directive requires the Commission to present by December 2011, if appropriate, 'a proposal permitting, subject to certain conditions, the

whole amount of the electricity originating from renewable sources used to power electric vehicles to be considered' towards the 10% target.

For the contribution of hydrogen originating from renewable sources, the Directive does not include any specific rules on how to account this towards the 10% target. The Directive requires the Commission to present by December 2011, if appropriate, 'a proposal for a methodology for calculating the contribution of hydrogen originating from renewable sources in the total fuel mix'.

For the contribution of methane originating from renewable sources (biomethane) and supplied via the natural gas grid, the Directive does not include any specific rules for the calculation towards the 10% target. Since this is a matter similar to that of electricity from renewable sources, it seemed appropriate to consider this in parallel.

This impact assessment assesses whether it is necessary to add or change accounting rules for certain forms of renewable energy in transport and if so through which measure this would be best achieved. The report comes at this time because as indicated above the Directive requires the Commission by December 2011 to present, if appropriate, proposals with regards to the accounting of electricity and hydrogen from renewable sources towards the 10%. This report responds to these legislative requirements, while taking the opportunity of the requirement of this report also to look in the accounting of biomethane supplied via the grid.

## **2. WHAT IS THE PROBLEM?**

The 10% target is to a certain extent an imprecisely defined target since the Directive does not for all potential contributions towards the target contain calculation rules. In fact, the specific rules for the calculation of the contribution of the various forms of energy from renewable sources (different types of biofuels, renewable electricity, hydrogen from renewable sources, etc.) towards the 10% target for renewable energy in the transport sector address those forms and distribution systems that are expected to make the main contribution towards the target (liquid biofuels, renewable electricity), but do not comprehensively capture new forms and distribution systems of energy from renewable sources that can be used in the transport sector.

Further, for those types of energy from renewable sources that are distributed via a grid in which they are mixed with energy from non-renewable sources, the question arises as to which accounting rules can treat these types of renewable sources in an equal manner compared to other renewable sources that count toward the target.

The impact and scale of the above regulatory problems seem however minimal: Biomethane supplied through the gas grid is the only form of energy that is expected to be significant by 2020 for which the Directive does not contain accounting rules. Moreover, its contribution to the target is expected to be relatively small (see Table 1) and accounting rules are laid down elsewhere. The question of equality of accounting is limited to electricity from renewable sources and biomethane supplied through the gas grid and arises primarily because of the legislative requirement for the Commission to look into this question.

## **3. EU'S RIGHT TO ACT**

The targets of the Renewable Energy Directive were adopted under the Environment chapter of the Treaty<sup>1</sup>, requiring that each Member State ensures that the share of renewable energy in transport in 2020 is at least 10% of the final consumption of energy in transport in that Member State. The accounting rules for this target are the same for all Member States. Any change or addition to those rules should be the same for all Member States.

#### 4. POLICY OBJECTIVES

The Renewable Energy Directive and its implementation already contain an accounting framework for the 10% target for energy from renewable sources in transport. In addition, it was already shown that the problem is minimal. Even though the problem is not significant, the Directive requires the Commission to look into this matter. Therefore, the following specific/operational objectives for the accounting framework for the 10% target for energy from renewable sources in transport were established:

- to treat the accounting for electricity from renewable sources and biomethane distributed via the natural gas grid in an equal manner compared to others forms of energy counting towards the target;
- to contain accounting rules for biomethane distributed via the natural gas grid.

#### 5. POLICY OPTIONS

The impact assessment looks into both the options for the *content* of the intervention, i.e. the specific method for accounting of electricity from renewable sources and biomethane distributed via the natural gas grid, as well as the options for the *type of intervention*, i.e. the policy instrument to be used for changes or additions to the accounting framework.

Drawing on a study carried out to assist the work on the impact assessment<sup>2</sup>, four options, including the baseline scenario, were identified for the *content* of the intervention. Three options, including the baseline scenario, were identified for the *type of intervention* – one of which was discarded, leaving the options of amending the Directive or not. Since not all combinations of the options for the *content* and for the *type of intervention* are compatible, five combined options, as presented in Table 2, remain.

**Table 2 Options for assessment**

Option number	Renewable energy share on the basis of (in brackets type of intervention)
1A (baseline scenario)	share in production mix (do not amend directive; rules for electricity as defined in Directive; for biomethane as defined in the minutes of the 'Energy Statistics' Working Party of 8 December 2010)
1C	share in production mix (amend Directive to add this for biomethane)
2	information in contractual agreements (amend Directive)
3	combination of 1 and 2 with 2 applying in the case of specific metering (amend Directive)

<sup>1</sup> Ex-EC Treaty Article 175(1)

<sup>2</sup> "Shifting renewable energy in transport into the next gear: Developing a methodology for taking into account all electricity, hydrogen and methane from renewable sources in the 10% transport target" by research and consultancy firm *CE Delft*

4	combination of 1 and 2 with 2 applying in the case of additionality (amend Directive)
---	---

## 6. ASSESSMENT OF IMPACTS

In addition to the assessment of the options in relation to the objectives and to coherence with current statistics collection in the energy sector the following potential impacts were assessed:

- Economic impacts: Cost for private bodies and cost to public administration.
- Social impacts: Privacy risk related to collection and use of data.
- Environmental impacts: additional renewable energy generation.

## 7. COMPARISON OF OPTIONS

The policy options have been evaluated against the criteria of how effective they are in achieving the objectives, what they costs to public administration and economic operators, and whether they are coherent with current policies in the area of statistics collection and privacy. The comparison of the options in Table 3 shows that where it concerns the *content* of the intervention option 1 is the preferred option. Where it concerns the *type of intervention* option 1C of amending the Directive is more administratively burdensome than the baseline scenario, option 1A, whereas their practical effect is the same. Thus, this is not considered to be proportional. Therefore option 1A is preferred.

**Table 3 Comparison of the analysed options**

Options	Effectiveness	Efficiency	Coherence
1A: renewable share in production mix (baseline scenario)	Accounting rules for biomethane supplied via the grid are in place: in minutes of the Energy Statistics Working Party  Accounting rules treat all forms of renewable energy in equal manner	No additional administrative cost. No need to amend the Directive	Coherent
1C: renewable share in production mix (amend Directive to add this for biomethane)	Accounting rules for biomethane supplied via the grid are in place: in the Directive  Accounting rules treat all forms of renewable energy in equal manner	Administrative cost only in terms of the process for amending the Directive	
2: information in contractual agreements		Estimate cost for private sector: €0.2 - 1 million	

Accounting rules for

Not compatible with

	biomethane supplied via the grid are in place: in the Directive	Estimated cost to public authorities: €7.500 – 30.000	current statistics collection which reflects physical rather than administrative flows
3: combination of 1 and 2 with 2 applying on the basis of specific metering	Questionable whether the accounting rules treat all forms of renewable energy in equal manner	Estimate cost for private sector: €0.2 - 1 million	
		Estimated cost to public authorities: €10.000 – 40.000	
4: combination of 1 and 2 with 2 applying on the basis of additionality		Estimate cost for private sector: €0.2 - 2 million	
		Estimated cost to public authorities: €10.000 – 40.000	

## 8. FUTURE MONITORING AND EVALUATION

Monitoring and evaluation will be done in line with existing requirements for the Commission, in particular Article 23(8) of the Renewable Energy Directive which requires the Commission to present a report by 31 December 2014 addressing inter alia with respect to the 10% target for energy from renewable sources in transport a review of – as specified in indent (b)(iv) inter alia "the methodology chosen to calculate the share of energy from renewable sources consumed in the transport sector".