

ROADMAP

Title of the initiative: Roadmap for low carbon energy system by 2050
Type of initiative (CWP/Catalogue/Comitology): CWP
Lead DG: ENER.A.1
Expected date of adoption of the initiative (month/year): early 2011
Date of modification:
Version No: 1

Initial IA screening & planning of further work

A. Context and problem definition

(i) What is the political context of the initiative? (ii) How does this initiative relate to past and possible future initiatives, and to other EU policies?

(i) In the 2nd Strategic Energy Review (November 2008), the Commission undertook to prepare a roadmap towards a 2050 energy policy, flagging in particular the decarbonisation of the electricity sector. The Europe 2020 strategy (March 2010) includes a general commitment to establish a vision of structural and technological changes required to move to a low carbon, resource efficient and climate resilient economy by 2050. (ii) The proposed Roadmap will be coordinated with the planned Energy Action Plan for the period from 2011 onwards. It will be developed in cooperation with other 2050 work of the Commission, notably in the climate and transport fields.

What are the main problems identified? Decision makers in the energy sector and in energy policy have to take a long-term perspective as their decisions have implications for decades to come (eg carbon lock-in). The context for energy investment and energy policy decisions is increasingly an EU/internal energy market context. While it is clear that decarbonisation of energy by 2050 is essential, there are many degrees of freedom in what a low-carbon energy system might look like and how it might be developed in Europe, beyond the 2020 targets. Thus, decision makers have to deal with a wide range of uncertainties, far into the future. To improve information for policy makers and investors, a broad discussion is needed now on possible ways forward, supported by EU-level scenario analyses and enabling stakeholder views to be shared. The proposed roadmap, based on scenario analyses and public and stakeholder consultation, will not fix on a single route. It will present a range of possible development paths, which should allow implications of today's decisions to be better assessed and decisions needed today of strategic importance (eg infrastructure planning) to be better understood. This sharing of perspectives and building of consensus around possible development paths and how they interact should diminish uncertainties for all.

Who is affected?

The very wide range of stakeholders, including consumers, who make decisions relating to energy with long-term implications

(i) Is EU action justified on grounds of subsidiarity? (ii) Why can the objectives of the proposed action not be achieved sufficiently by Member States (necessity test)? (iii) As a result of this, can objectives be better achieved by action by the Community (test of EU Value Added)?

(i)-(iii) The context for energy investment and energy policy decisions is increasingly an EU/internal energy market context. Shared information and discussion is needed.

B. Objectives of EU initiative

What are the main policy objectives?

To improve information for policy makers and investors on possible development paths to a low-carbon energy system by 2050, supported by EU-level scenario analyses and enabling stakeholder views to be shared and uncertainties diminished.

To allow implications of today's decisions to be better assessed and decisions needed today of strategic importance (eg infrastructure planning) to be better understood.

To clarify options for the energy sector as a main sector in the EU's climate strategy.

Do the objectives imply developing EU policy in new areas or in areas of strategic importance?

EU energy policy is well-established (Lisbon Treaty, a range of legislation and programmes). Achievement of the objectives will strengthen the implementation and further development of EU energy policy, within the bounds set by the Treaty. This focus on possible development paths towards a low-carbon energy system will similarly support implementation and further development of EU climate policy.

C. Options

(i) What are the policy options? (ii) What legislative or 'soft law' instruments could be considered? (iii) Would any legislative initiatives go beyond routine up-date of existing legislation?

In all scenarios which achieve an 80% reduction in EU greenhouse gas emissions by 2050, a key part of the 80% comes from **energy efficiency** measures. **Switching to low carbon fuels** then comes into play, notably electricity and biomass. In many scenarios, the **electricity sector** has to make a large contribution - the generation mix therefore has to **allow close to zero GHG emissions**. **Grid developments** are also needed. The development of the 2050 Energy Roadmap will look particularly at possible development paths for the **EU's electricity demand and supply**.

Policy options would be (i) do nothing; (ii) prepare an EU 2050 energy roadmap; (iii) rely on such roadmap exercises by individual Member States; (iv) rely on such roadmap exercises by stakeholders.

Does the action proposed in the options cut across several policy areas or impact on action taken/planned by other Commission departments?

Yes. Comparable 2050 work is being undertaken in other sectors.

Explain how the options respect the proportionality principle:

The costs of doing this 2050 work will be minimal. The benefits, in terms of better understanding of possibilities and stakeholder concerns, also better understanding of the evolving EU context by stakeholders, will be felt in energy policy proposals for years to come.

D. Initial assessment of impacts

What are the significant impacts likely to result from each policy option (cf. list of impacts in the Impact Assessment Guidelines pages 32-37), even if these impacts would materialise only after subsequent Commission initiatives?

(i) do nothing:

- possibility to improve investment and policy planning not used

(ii) prepare an EU 2050 energy roadmap:

- added value of an EU perspective, important in investment and policy decisions, made available;
 - improvement in energy policy proposals for years to come.
- (iii) rely on such roadmap exercises by individual Member States:
- added value of an EU perspective, important in investment and policy decisions, not made available;
 - information basis to improve EU energy policy proposals for years to come not developed.
- (iv) rely on such roadmap exercises by stakeholders:
- for a solid basis for EU proposals, roadmaps of a sufficient range of stakeholder groups would have to be considered together; thus information basis to improve EU energy policy proposals for years to come not developed.

Could the options have impacts on the EU-Budget (above 5 Mio €) and/or should the IA also serve as the ex-ante evaluation, required by the Financial Regulation?
No

Could the options have significant impacts on (i) simplification, (ii) administrative burden or on (iii) relations with third countries?
Not relevant to the Roadmap

E. Planning of further impact assessment work

When will the impact assessment work start?
Work, particularly on scenario analyses, should start in Spring 2010.

(i) What information and data are already available? (ii) Will this impact assessment build on already existing impact assessment work or evaluations carried out? (iii) What further information needs to be gathered? (iv) How will this be done (e.g. internally or by an external contractor) and by when?
(v) What type and level of analysis will be carried out (cf. principle of proportionate analysis)?
Scenario analyses will be based on the Commission's PRIMES energy system model for which information and data are largely available. This will be done by an external contractor from June 2010. Scenarios of stakeholders will also be used. Issues papers and reports will be developed in-house.

Which stakeholders & experts have been/will be consulted, how and at what stage?
A wide range of stakeholders and the public will be consulted on the basis of an issues paper, from June 2010 until well into the Autumn.. Experts, notably on scenario analyses, will be consulted. Scenario analyses based on the Commission's PRIMES energy system model will be carried out by a contractor