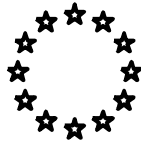


**2002 MONITORING REPORT ON THE
SPECIFIC PROGRAMME FOR
RESEARCH AND TECHNOLOGICAL
DEVELOPMENT**



**IN THE FIELD OF
NON-NUCLEAR ENERGY**

1 April 2003

This Report is part of the series of annual monitoring reports prepared for the EC Framework Programme and the Euratom Framework Programme and their constituent Specific Programmes as well as for European Research Area (ERA) related activities.

The Commission has over the years placed increasing emphasis on evaluation of Community RTD activities. Furthermore, with the overall Reform of the Commission, evaluation activities are placed at the heart of the decision-making process.

In line with this continuous effort for improvement, a revised programme monitoring scheme was introduced in 2001 based on the system launched in 1995 which involved independent external experts in the monitoring activities. The new mechanism aims at a better synergy between the monitoring of the ERA and specific programmes and of the Framework Programme.

The timely response by the Programme management to the recommendations produced by the experts will be enhanced, providing the basis for a quick response mechanism to programme developments, as the follow up of experts recommendations will be receiving still more attention.

This report is the fourth covering the Fifth Framework Programme; the report also highlights progress in implementation of the ERA, the launch of the Sixth Framework Programme, and the results and impact of previous Framework Programmes. The report should help reinforce establishment of best practices and identify the scope for further improvements in implementation of policy and the programmes.

The report consists of two parts:

Part A: *External monitoring report prepared by the following independent external experts:*

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Part B: *Responses of the Programme management to the external monitoring report.*

PART A

Report of the 2002 Non-Nuclear Energy Programme
Monitoring Group

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1. EXECUTIVE SUMMARY

This report presents the results of the external monitoring of the 2002 activities of the research Framework Programmes' specific programmes covering non-nuclear energy (NNE). The major activities of the year were the selection of the final projects to be funded through the Fifth Framework Programme (FP5) NNE programme, and the launch of the Sixth Framework Programme (FP6) specific programme on sustainable energy systems.

The objectives of the monitoring exercise were:

- To analyse and synthesise the recommendations of the 1999, 2000 and 2001 NNE programme monitoring groups, and the Commission Services' responses, and
- To examine the follow-up of the 2001 monitoring group's recommendations, the attainment of the objectives of the 2002 work programme, the efforts made to measure the impact of completed projects, the transition from FP5 to FP6, and the preparations for the latter.

The monitoring group's methodology included examining documents provided by the programme managers, holding detailed discussions with individual Commission staff, and surveying the Energy Programme Committee, members of advisory groups and National Contact Points (NCPs).

Examination of the recommendations of the 1999-2001 monitoring groups showed that a number of issues were raised year after year. The nature of an FP and the Commission organisation is such that it took several years for some of the recommendations to be implemented, while others could only be taken up in a new FP. One issue that recurred and has never been taken up adequately is the split in programme management between two DGs, and the consequent division of the work programme into two distinct parts, one (run by DG RTD) on medium- to long-term research and the other (run by DG TREN) on subjects expected to impact on the market in the short term.

The monitoring group found that the FP5 projects selected for funding during 2002 were fully in line with the objectives of the work programme. They filled outstanding gaps in subject coverage and paved the way for FP6 and establishment of European Research Areas (ERAs) in the different technological sectors of NNE.

A good start was made on measuring the impact of completed NNE projects, although for FP4 and FP5 projects it is difficult to do much more than list project results. Future projects will need to be designed to facilitate measurement of the relevant indicators if a more detailed analysis of primary and secondary impacts is to be achieved.

The work programme for the FP6 sustainable energy systems programme was completed just in time for the first FP6 calls published in December 2002. It is not in fact one work programme but two completely separate programmes, one managed by DG RTD and one by DG TREN. The split (which is even more distinct than for FP5) worried a number of Programme Committee and advisory group members. The 2002 monitoring group shares their concerns. It considers that only by having one programme that covers fundamental research through to demonstration and beyond can a research strategy be produced, results achieved and ERAs established, that support Europe's need for security of energy supplies and reduction of greenhouse gases.

The monitoring group's recommendations concerning the specific NNE/sustainable energy systems programme are as follows:

- Throughout the period of FP6, DG RTD and DG TREN should work together as equal partners to provide “joined-up” management for the sustainable energy systems programme. This means that:
 - For each technological sector within sustainable energy systems, the two DGs should work towards the same ultimate goals, agreed between them, and work out together their strategy to achieve these goals.
 - An overall integrated work programme should be prepared for the later FP6 calls.
 - Communication between the two sets of programme managers should be of the highest quality.
 - There should be good communication between the advisory groups, High Level Groups, etc., that have been established to provide strategic steers.
 - Reports that relate to strategy should include co-ordinated inputs from both DGs.
- For any future FP (e.g. FP7) sustainable energy systems programme, consideration should be given to:
 - Placing the management under one umbrella.
 - Having one common work programme that covers the whole range of activities from basic research, to applied research, to demonstration through to market introduction.
- Support the establishment of ERAs in the various technological sectors of sustainable energy systems by:
 - Doing more to explain the ERA philosophy (possibly with success stories) to the wider scientific community, and
 - Doing as much as possible to involve Member States' national programmes.
- Establish a network to encourage those working on conventional fuels through Member States' national programmes to communicate with each other and thus establish an ERA in this field.
- Develop and implement a combined strategy for both DGs for dissemination of project and programme outputs.
- Carry on with the planned impact assessment of FP3, FP4 and FP5 and plan the impact assessment work to be done on FP6 as part of the work programme. For FP6, ensure that each project is designed to permit measurement of the relevant indicators after the project has ended.
- Develop combined strategy for international co-operation in sustainable energy systems that includes not only work carried out through the co-operative scientific and technological agreements between the Commission and individual countries but also work carried out through the IEA programme, or through the initiatives of individual scientific officers. Avoid co-operation that does not bring positive benefits to the EU.

2. PANEL METHODOLOGY

The monitoring exercise was launched on 19 November 2002 when the monitoring group was given presentations, self-assessment fiches, and other documents and information on: the aims and procedures of the monitoring exercise; the 2002 activities of the Fifth Framework Programme (FP5) as a whole and the non-nuclear energy (NNE) part of FP5's specific programme on Energy, Environment and Sustainable Development (EESD); the European Research Area (ERA); and the plans and activities so far for the Sixth Framework Programme (FP6) and its specific programme on sustainable energy systems.

Separate information was provided by DG RTD and DG TREN since the management of the FP5 NNE programme and the FP6 sustainable energy systems programme is split between the two DGs.

Between the first and second meetings (which was held on 19 December 2002), the monitoring group familiarised itself with the development of the NNE programme by reading the 1999, 2000 and 2001 monitoring reports. It also prepared a draft analysis and synthesis of the recommendations made by previous monitoring groups and the Commission's responses, using standard headings and format provided by the Commission. During this period, too, the group requested additional documentation (including statistics) from the programme management.

The monitoring group also agreed the names of the DG RTD and DG TREN directors, heads of unit and technical and administrative officers concerned with the FP5 and FP6 energy programmes they wished to interview. It was decided to interview DG RTD and DG TREN staff with similar interests and responsibilities together, to identify common ground and different approaches. A set of standard questions was developed. This enabled the questions to be sent to interviewees in advance, allowed the monitoring group to split into two groups to conduct the interviews, and ensured discussion of all the required issues. The full set of questions is in Annex 6.3. The main issues are:

- Results from implementation of the 2002 NNE work programme
- Status of FP5 projects and of the FP4 projects that were still ongoing in 2002
- Dissemination of results, project monitoring and impact assessment
- Establishment of an ERA in NNE
- Transfer of the results and experiences from FP5 to FP6
- Launch of FP6
- Highlights and failures within the NNE 2002 programme
- Follow-up of the recommendations of the 2001 monitoring exercise.

The interviews, which were mainly conducted on 19 December 2002 and 14 January 2003, were open and constructive. Some telephone follow-up was carried out to clarify points. Altogether, 28 Commission staff were interviewed during the monitoring exercise (see Annex 6.5).

Additionally, questionnaires were developed for members of various committees and advisory groups dealing with the FP5 NNE programme and FP6 sustainable energy systems Programme. These questionnaires covered issues similar to those used in the Commission staff interviews but were shorter and focused on the committees' particular interests. They were emailed during 16-17 January 2003 to the NNE Programme Committee, the FP5 NNE programme External Advisory Group (EAG) and National Contact Points (NCPs), and the FP6 Advisory Group for Energy (AGE). Of the responses (see Annex 6.6), twenty three were detailed. A small amount of follow-up telephone discussion took place. Contractors were not formally approached as part of this exercise. However, brief discussions were held with the few contractors monitoring group members happened to meet during the monitoring period.

The information in the documentation and statistics provided by the Commission, the results of the interviews and the returned questionnaires were then analysed and reviewed. The report, with its conclusions and recommendations, was discussed and agreed at the monitoring group's 14 February and 7 March 2003 meetings. It was found that the two sets of statistical data given to the monitoring group by DG RTD and DG TREN, although extensive, were not compatible. With the agreement of the Commission project supervisor, it was decided not to include a statistical annex in the report but to present illustrative data, where it was available, at appropriate places in the main text.

3. INTRODUCTION

This monitoring report covers the 2002 activities of the three different research Framework Programmes' specific programmes on NNE that were running during the year – FP4, FP5 and FP6.

At the beginning of 2002, a number of FP4 NNE projects were still ongoing. Most were finalised by year-end. Of those that were not, most were completed from the technical – although not from the administrative – viewpoint. The remaining few had been granted time extensions or had above-average lifetimes.

2002 was the last year of FP5 EESD, Part B: Energie. Many of the FP5 NNE projects were still on-going, some shorter projects completed, and a number of new contracts negotiated and signed following proposal evaluations conducted in the first part of the year.

In 2002, too, major efforts were put to planning and launching the FP6 programme on sustainable energy systems.

The strategic objectives of the FP5 NNE programme are to develop sustainable energy systems and services for Europe and contribute to a more sustainable development world-wide, leading to increased security and diversity of supply, the provision of high-quality, low-cost energy services, improved industrial competitiveness and reduced environmental impact. The FP5 NNE programme budget for 1998-2002 is 1,042 M€ DG TREN is responsible for short-term work and DG RTD for medium- to long-term activities. Research activities are carried out under the following headings:

- Key Action 5: Cleaner energy systems, including renewables
- Key Action 6: Economic and efficient energy for a competitive Europe
- Research and technological development activities of a generic nature.

The aims are: to address complex societal-driven issues through integrated multidisciplinary and multisectoral activities involving where possible the principal stakeholders (e.g. public-private partnerships, business, industry and policy-makers); and to find solutions to strategic problems through work of substantial regional, European and global significance. In the work programme for 2001 and 2002, the research is divided between target actions and priorities of strategic importance to the EU. The short-term target actions are: application-driven fuel cells; bio-electricity; sustainable communities; clean urban transport; eco-buildings; gas power generation. The medium- to long-term target actions are: fuel cells and hydrogen; bio-energy; integration; cleaner fuels for transport; storage; photovoltaics. The priorities of strategic importance to the EU are: management of greenhouse gas emissions and climate change; exploitation of the potential for new Information and Communication Technologies (ICTs) in energy RTD; socio-economic research related to energy technologies and their impact; international co-operation, co-ordination with Member States research programmes and EU-wide research networks; pre-normative research of interest at EU level. The instruments are: shared-cost activities; co-ordination activities; Marie Curie training fellowships; accompanying

measures. There are a number of different types of calls for proposals: calls with fixed closing dates, continuously open calls, and dedicated calls.

The last calls for FP5 NNE proposals, and their final deadline dates, were as follows.

- 4th call for medium- to long-term target actions and priorities of strategic importance. Published 24 October 2000. Second deadline 14 December 2001.
- 5th call for short-term target actions and priorities of strategic importance. Published 24 October 2000. Second deadline 14 December 2001.
- Open call. Published 2000. Cut-off date for RTD activities of a generic nature, fellowships and accompanying measures 14 December 2001.
- NAS1 call to give organisations in the Newly Associated States (NAS) the opportunity to participate in existing projects. Published 28 August 2001. Deadline 14 December 2001.
- NAS2 call to support integration of the NAS in the ERA by means of specific accompanying measures. Published 18 September 2001. Deadline 31 January 2002.
- Open call. Published 2000. Cut-off date for accompanying measures and SME (CRAFT) projects 28 February 2002.

The proposal evaluations for these calls were conducted in the first few months of 2002, as follows. DG RTD managed the evaluations of proposals for medium- to long-term projects. DG TREN managed the evaluations of proposals for short-term projects.

- January 2002. Evaluation of DG RTD proposals from 4th, NAS1 and open calls with 14 December 2001 deadlines. 272 eligible proposals received; 106 funded.
- January 2002. Evaluation of DG TREN proposals from 5th, NAS1 and open calls with 14 December 2001 deadlines. 265 eligible proposals received; 68 funded.
- February 2002. Evaluation of DG RTD proposals from the NAS2 call. 16 proposals received; 12 funded.
- March 2002. Evaluation of DG TREN proposals from the NAS2 call. 15 proposals received; 11 funded.
- March 2002. Evaluation of DG RTD proposals for accompanying measures from the open call with 28 February 2002 cut-off date. 21 proposals received; 10 funded.
- April 2002. Evaluation of DG TREN proposals for accompanying measures from the open call with 28 February 2002 cut-off date. 47 eligible proposals received; 19 funded.
- April 2002. Evaluation of DG RTD and DG TREN SME (CRAFT) proposals from the open call with 28 February 2002 cut-off date. 63 proposals received; 14 DG RTD and 15 DG TREN funded.

Throughout 2002, effort was devoted to the preparation and launch of FP6. Indeed, many of the FP5 proposals selected for funding during 2002 were chosen because they helped the transition to the new programme. A key element of FP6 is harmonisation of tools and procedures (e.g. model contract, information and evaluation systems, information packs) across all the constituent specific programmes. Thus, many of the preparations took place at FP level with NNE staff contributions being confined to serving on the relevant working groups or commenting on draft documents. The focus of the NNE staff's efforts was on preparing the FP6 work programme on sustainable energy systems and encouraging key actors in the Member States, Candidate Countries and other countries able to participate to prepare to become involved.

The overall aim of all FP6 programmes is integrating and strengthening the European Research Area (ERA). To achieve this, requires the bringing together of people working in a particular area. Since the NNE field consists of a number of quite different technological sectors, there are many NNE ERAs. The strategic objectives of the FP6 sustainable energy systems programme are similar to those of the FP5 NNE programme. As with FP5, a clear

differentiation is made between activities that have the potential for exploitation in the short-term (managed by DG TREN) and those that have an impact in the medium- to longer-term (managed by DG RTD). The objective of the DG TREN programme is to bring forward and demonstrate the next generation of cost-effective technologies at full scale. The objective of the DG RTD programme is to develop new and renewable energy sources and new carriers such as hydrogen which are both affordable and clean and can be well integrated into a future sustainable energy supply both for stationary and transport applications. The total budget for 2003-2006 is approximately 810 M€- which is less than the FP5 NNE budget. In addition, a small amount of funding is available under Article 169 of the FP6 programme to effect linkage between the sustainable energy systems programme and Member States' programmes in that area.

The FP6 sustainable energy systems programme will be implemented using two new instruments – Integrated Projects (IP) and Networks of Excellence (NoE) – as well as the more traditional Specific Targeted Research Projects (STRP), Concerted Actions (CA) and Specific Support Actions (SSA). The aim of an IP is to support objective-driven research where the primary deliverable is new knowledge; involving a minimum of three partners from three different countries it may span the whole spectrum from basic to applied research. The aim of a NoE is to strengthen scientific and technological excellence in a particular research topic and overcome fragmentation through networking.

The analysis of the responses to the 20 March 2002 call (deadline 7 June 2002) for Expressions of Interest (EoI) for IPs and NoEs aided definition of the detailed work programmes for the sustainable energy systems programme adopted by the Commission on 9 December 2002. The DG TREN part of the programme covers: cost-effective supply of renewable energies (electricity from biomass, wind, photovoltaics, and other renewable energy sources, heat and cooling from renewable energy sources; production and processing of liquid and gaseous biofuels); large-scale integration of renewable energy sources into energy supplies; eco-buildings; polygeneration; and alternative motor fuels. The DG RTD part of the programme covers: fuel cells and their applications; new technologies for energy carriers/transport and storage, in particular hydrogen; new and advanced concepts in renewable energy technologies (photovoltaics, biomass, other renewable energy sources); capture and sequestration of carbon dioxide, associated with cleaner fossil fuel plants; socio-economic tools and concepts for energy strategy. The 2003 budgets will be 198 M€ for the DG RTD part of the programme and 82 M€ for the DG TREN part; the 2004 budgets will be 4 M€ and 107 M€ respectively.

The first calls for proposals were published on 17 December 2002 (deadline 18 March 2003 and funded by the 2003 budget). Separate calls were issued for the DG RTD and DG TREN parts of the programme.

During 2002, NNE staff were (according to their mandate) assisted by or could consult a number of committees and consultative bodies:

- the NNE Programme Committee of representatives of EU and associated states
- the External Advisory Group (EAG) – members selected by the Commission on the basis of their personal capacities to advise on the FP5 NNE programme. It met in January and November 2002.
- the Energy Working Group (EWOG) – selected members from the FP5 NNE, Fission and Fusion Programme Committees and EAGs
- the Advisory Group for Energy (AGE) – members selected by the Commission on the basis of their personal capacities to advise on the DG RTD FP6 work programmes in the non-nuclear, fission and fusion areas, and other strategic aspects. Established in September 2002. It met on 1 October and 5 November.
- the Forum for Transport and Energy – high-level stakeholders in energy and transport whom DG TREN can consult on strategic issues. Established through a

Commission Directive. The first meeting took place in October 2002 at which there was a presentation on the DG TREN FP6 work programme. An ad hoc Working Group will be established within the Forum to deal with research issues.

After several successive years which saw major reorganisations of the units responsible for managing the NNE programme, the situation in 2002 was relatively stable. In the Autumn, DG RTD moved some staff between units and changed some individuals' responsibilities to accommodate the priorities of the FP6 work programme. In DG TREN, responsibility for programme co-ordination and development of procedures was moved to another Directorate. In both DGs, staff continued to feel the effects of the Commission reform.

4. ANALYSIS AND FINDINGS

This Chapter is arranged in two sections. Section 4.1 presents an analysis of the recommendations of the 1999, 2000 and 2001 NNE programme monitoring groups, and the Commission Services' responses. Section 4.2 discusses the implementation of the programme in 2002.

4.1 ANALYSIS OF RECOMMENDATIONS FROM 1999-2001 MONITORING EXERCISES

A major part of the 2002 monitoring exercise was to analyse and synthesise the recommendations of the 1999, 2000 and 2001 NNE programme monitoring groups, and the Commission Services' responses. Annex 6.2 presents a matrix of summarised versions of the recommendations under a set of standard headings. For completeness, the recommendations of the current (2002) monitoring group have been included.

The content of the matrix for 1999-2001, together with the Commission Services' responses, are discussed in Sections 4.1.1-4.1.3 below. A consideration of how far the 2001 recommendations and the Commission Services' response have actually been implemented is in Section 4.2.1.

4.1.1 Strategy – objectives

Most of the recommendations under this heading were made by the 2001 group, largely because the brief for that year focused attention on this area. As a result, only a couple of themes recurred.

Overall strategy and objectives

The 1999 and 2001 groups recommended care should be taken to transmit the underlying philosophy of an FP to the outside world before its launch. The 2001 group considered professional advice was needed on how best to do this. They felt, moreover, that concepts new to an FP should be introduced gradually. Commission Services did not comment on the 1999 recommendations. Concerning the 2001 points, they supported the idea of a gradual evolution from FP5 to FP6 and referred to their efforts to inform the scientific community and the public about the FP6 sustainable energy systems programme through conferences and publications. They did not pick up on the recommendation to take professional advice.

In addition, the 2001 monitoring group recommended the FP6 sustainable energy systems programme budget be increased and work on conventional energy sources be included to support Europe's need to achieve security of supply and meet Kyoto targets. Commission Services considered decisions of this type should be made at FP level rather than at NNE programme level.

- Status: Explanation of FP6 philosophy did not begin early enough. Professional advice not sought. Budget remains low.

ERA

The 2000 monitoring group suggested establishment of ERAs in NNE might be helped (and the quality of FP5 projects improved) if the partners in successful FP5 projects were rewarded by admission to a European network of excellence in their area. Commission Services did not comment on this.

The 2001 group recommended professional effort be devoted to explaining and promoting the concept of the ERA. Commission Services explained that the ERA strategy at General Directorate level included promotion and explanation activities; NNE programme managers were participating in this when appropriate.

- Status: Continuing effort required to explain the concept of ERAs.

Candidate Countries

The 2001 group suggested projects be developed that met the Candidate Countries' specific needs and helped them develop good research infrastructures in the areas covered by the NNE programme. The Commission Services' response referred to: the NAS1 and NAS2 FP5 calls; the fact that FP6 will afford the Candidate Countries' equal rights alongside the Member States; and the specific facilities foreseen under the "stairway of excellence".

The 2001 group suggested a way should be found to help proposers from Candidate Countries find own funding for shared-cost FP projects. Commission Services did not pick up on this.

The 2001 group also recommended further ways be found to disseminate best practice to Candidate Countries. Commission Services referred to the OPET activities being initiated with FP5 NNE programme funding.

- Status: Recommendations partially implemented.

International co-operation

The 2001 group recommended: a strategy be developed for international co-operative activities in NNE; existing co-operative agreements be strengthened and more introduced; more NNE workshops be held; information flows be in both directions. Commission Services explained that, for FP6, DG RTD and DG TREN were: (1) tightening links with countries with high R&D potential or strategic importance (eg Russia and the USA) and holding workshops on specific topics with them; and (2) opening participation in FP activities to third countries.

The 2001 group also recommended international networks such as OPETs (Organisations for Promotion of Energy Technologies) be exploited to increase international co-operation.

Commission Services said that the OPET network was being streamlined to improve its role in energy dissemination and innovation. (The OPET network aims to promote the results of new energy technologies and their introduction in society. Its activities support Europe policy to improve energy efficiency, increase diversity of supply and broaden the use of renewable energy sources. The current network operates under the DG TREN part of the FP5 NNE programme. The network includes >100 partner organisations in 44 countries in the EU, Candidate Countries and Associated States. OPET Associates have been established in key world regions to identify local needs and help promote relevant European energy technologies there. Most OPETs are energy agencies with a public mandate.)

Concerning the 2001 group's recommendation that a link be established with UNESCO work on ethics in science and technology including energy, Commission Services responded that DG RTD had already planned to make this link and was preparing a reflection paper on ethics in energy to be completed in December 2002. Further, DG TREN had some on-going accompanying measures that involved UNESCO.

- Status: Goals and strategy for all NNE international co-operative work still needed.

SMEs

The 2001 monitoring group recommended: the special programmes related to SMEs be retained in FP6; scientific officers concerned with the NNE programme become better acquainted with the special SME programme to ensure better integration of projects funded through them into the NNE programme; and the heavy administrative procedures and delays that discouraged SME involvement be removed. Commission Services felt answers to these points had to be made at FP level.

- Status: Only time will tell whether recommendations implemented in FP6.

Gender awareness

The 2001 monitoring group recommended that the Commission: try to increase the number of women involved in the management of the NNE programme; encourage submission of proposals from associations that promote women scientists; hold seminars targeted at women in Member States and participating countries; use successful women scientists to promote the programme. While wanting to bear all these recommendations in mind in the future, Commission Services pointed out that the limited numbers of women involved in energy research would make it difficult to implement them fully.

- Status: Commission Services does all it can on this.

4.1.2 Management and processes

The area of management and processes was examined by each succeeding monitoring group. A number of points recurred among the recommendations.

Procedures and tools in general

The 1999 monitoring group pointed out the management structure was incompatible with the unified programme structure. The Commission Services responded by making a clearer demarcation between the short-term and medium- to long-term parts of the programme. Management of the former was with DG TREN to strengthen the link between research and energy policy. Management of the latter was with DG RTD. Although the 2000 monitoring group appreciated that this created a more business-like, task-oriented situation, they were still concerned. In addition, they worried that internal communication between the various levels in the DGs was not good. They recommended a strategic management communication be developed to ensure that everyone involved in a FP was aware of strategy and policy. In their response, Commission Services focused on the activities of DG RTD: they hoped the newly-created policy units in DG RTD would improve the situation; and they planned to increase the transparency of programme implementation and policy development. No mention was made of DG TREN in the response. The 2001 monitoring group remained concerned about the management structure, not only because of the split between the two DGs but also because of the many internal interfaces in DG TREN. It recommended that the two DGs investigate the communication flows within and between the DGs, identify those essential for efficient running of the programme and the interfaces that hinder this, and take steps to improve matters. In its response, Commission Services said that both DGs were reconsidering their structures in the light of FP6. Communication flows at management level had been helped by the meetings of the Groups of Directors. DG RTD and DG TREN intended to identify the interfaces and communication flows needed to run the FP6 programme and streamline co-ordination between them.

Both the 1999 and 2001 monitoring groups were concerned about the time-consuming procedures needed for proposal submission and contract negotiation. They recommended approvals be given at the lowest practicable level. In 1999, Commission Services explained that the then new Commission Reform meant Directors could now sign a number of decisions formerly taken by the DG. In 2001, they approved of the monitoring group's recommendations

but said that, as all FP6 procedures were to be harmonised across the FP, decisions had to be made at FP level.

The 2001 monitoring group recommended contacts with NNE National Contact Points (NCPs) be strengthened and networking between them encouraged. Commission Services said that a policy for enhancing the role of NCPs was being developed for FP6 by an interservice group. The 2001 monitoring group felt the programme managers should consider how to get the best value from the Programme Committee and the EAGs. It recommended meetings be prepared well in advance with focused papers that did not contain unnecessary detail. The Commission Services said they always aimed to get the best value from committees and advisory groups; they would take into consideration the recommendation to circulate focused papers prior to the meeting.

- Status: Management structure, communication flows and lengthy procedures still cause concern. Relations with Committee, etc., generally improved.

Launch of activities

In response to the 1999 monitoring group's recommendations that better use be made of internet technology to promote the programme, disseminate information on the calls, explain the evaluation process, and answer potential proposers' questions, real strides were taken during 1999-2001 to provide the necessary information on Cordis and answer queries through a NNE programme help-line. The 2001 monitoring group felt further improvements to the web site should be made. Commission Services agreed, but pointed out that decisions on that would be made at FP level.

All three monitoring groups recommended simplification of the Info Pack. The 2000 group advised restructuring. Commission Services successively supported these ideas. However, to avoid confusing users they decided that restructuring could not be introduced until the new FP – and the FP6 decision would be made at FP level.

The 2001 group was concerned that the calls might not be reaching researchers and companies who could make a real contribution to the programme. It recommended professional effort be put to identifying these people and encouraging them to submit proposals. Commission Services said information days are regularly organised by NCPs with participation from the NNE programme managers. The 1999 group had heard that local authorities and SMEs were hampered by the language barrier from participating in the programme; they recommended that information be provided to potential proposers in their local language. Commission Services explained that information days are generally held in local languages and the help-line usually responds to queries in the language of the correspondent.

Pre-screening of proposals through informal discussion between potential proposers and scientific officers, which was encouraged by the 1999 group, has increased over the years.

The 2000 monitoring group recommended that the closing dates of calls for short- and medium- to long-term research proposals should be the same to facilitate the shifting of proposals between the two parts of the programme when necessary. Commission Services agreed to undertake this and it has been implemented, although sometimes evaluations for the two parts of the programme have been carried out in different weeks.

- Status: Recommendations partially implemented, but Info Pack still too complicated.

Evaluation and selection of proposals

The 1999 monitoring group recommended evaluation guidelines be distributed during the briefing meeting and evaluators be taken through a sample evaluation at the beginning of the week. Although Commission Services made no formal response at the time, these suggestions were implemented.

The 2000 group raised the question of proposer anonymity. They felt evaluators should not know the names of proposers, at least during the first stage of the evaluation. Commission Services said internal consultations were being undertaken to assess the risks associated with absence of anonymity in the NNE field. Moreover, The European Research Advisory Board (EURAB) was establishing a Working Group to consider the evaluation procedure. Their opinion would be taken into account in FP6. The 2001 monitoring group was divided on the

question of anonymity: they felt knowing the names of proposers could help evaluators form a view on likely quality and success of a project. They were, however, concerned that different procedures were used by the extended panels for the different parts of the programme. They recommended that tighter guidelines for these panels be introduced. They felt the question of anonymity and place of evaluation (whether it be in Brussels or in the evaluators' offices) should be reconsidered for FP6. Commission Services pointed out that the decisions for FP6 would be made at FP level.

Regarding evaluation criteria, both the 1999 and 2000 monitoring groups asked for clearer definitions of European Added Value. The concept was still not fully understood in 2001.

- Status: FP5 recommendations generally implemented. Remains to be seen whether improvements suggested for FP6 taken up.

Management Information System

The lack of a user-friendly internal Management Information System that covered the life of all projects from proposal to completion and met the needs of scientific, contracts and finance officers and senior management concerned all three monitoring groups. The fact that DG RTD and DG TREN used quite separate (and incompatible) systems was also a worry. Because the situation was never really solved, individual units (indeed, individual scientific officers) created their own systems to help them manage their own projects. The 2000 monitoring group suggested that a central system be bought in and used by all DGs involved in the FP. This is what is being developed for FP6.

- Status: FP6 system not yet in place.

Specific cases

The 1999 monitoring group was concerned that proposers regarded demonstration projects as mere up-scaling exercises and recommended that the Commission take steps to improve the quality of proposals for demonstration projects. Commission Services supported this recommendation. The point was not raised again and there is evidence that, through encouragement from scientific officers, some excellent demonstration projects have now been funded.

- Status: Recommendation implemented.

Dissemination of information and results

Adequate and effective dissemination of information on the projects in the programme and of the results of completed projects is always of concern. The 1999 monitoring group recommended more should be done on this and DG RTD and DG TREN activities brought together. Commission Services described a number of activities such as improvement of the information on Cordis and publication of an FP4 overview which has been implemented to some extent. The 2001 group, however, was concerned that even summaries of all project findings were not always posted on Cordis, let alone final reports. They recommended that a clear strategy for communicating and disseminating project outputs to the market be developed and implemented. Commission Services said it would do this and outlined the roles of the Commission's website and the OPET network.

- Status: Still no overall strategy for disseminating NNE programme results.

Evaluation and monitoring

The 1999 monitoring group came up with a number of suggestions to improve the monitoring process, such as provision of a basic information pack early in the exercise. All these have been implemented. The 2000 group asked that future monitoring groups be provided with adequate statistics and suggested that the monitoring process (which is more in line with the FP4 programme than with FP5) be redesigned to fit the matrical structure of FP5. Commission Services recommended that monitoring groups pay more attention to making qualitative than quantitative comments, and from 2001 revised the overall monitoring system so that it did indeed fit the FP5 structure.

- Status: Some recommendations implemented but provision of statistics remains inadequate.

Human resources

The heavy workload of scientific officers worried all the monitoring groups. It resulted from over-heavy administrative procedures. It was not helped by reorganisation of the DGs in 1999 and 2000 which led to a certain amount of demotivation. All monitoring groups recommended that steps be taken to reduce the administrative burden so scientific officers could focus on scientific and policy-related issues and encourage submission of high quality projects that support the programme objectives. Commission Services sought to overcome the problem for FP5 by encouraging submission of larger projects, thereby reducing the number of projects scientific officers had to manage. They also hoped that the new instruments developed for FP6 would do much to overcome the problem.

- Status: Despite the measures taken, scientific officers are still having to concern themselves more with administrative matters than with scientific issues.

4.1.3 Impact of previous programmes

Succeeding monitoring groups asked for more to be done on impact assessment and, in response, Commission Services has taken a number of actions. These resulted in impact assessment reports on a pilot set of FP4 NNE projects being published and work on the whole of FP4 being put in place in 2002. Commission Services promised that similar exercises would be carried out for FP5, a general methodology being developed within DG RTD's evaluation and monitoring unit.

- Status: A good start has been made.

4.2 MONITORING OF THE IMPLEMENTATION IN 2002

This section (Section 4.2) deals with implementation of the programme in 2002. Section 4.2.1 considers how far the recommendations made by the 2001 monitoring group have been taken up. Section 4.2.2 discusses attainment of the FP5 NNE work programme objectives for 2002. Section 4.2.3 discusses 2002 activities to assess the impact of completed projects; it also considers the role of the Technological Implementation Plans (TIPs). Section 4.2.4 discusses use of the final phase of the FP5 NNE programme to pave the way for the FP6 sustainable energy systems programme. Section 4.2.6 discusses preparations of the FP6 sustainable energy systems programme procedures, work programme and calls that took place in 2002.

4.2.1 Follow-up of 2001 recommendations

The 2001 monitoring group presented five main recommendations and also made a number of other specific suggestions it would have liked to see implemented in 2002. The extent to which this has occurred is discussed below.

Comments on the main recommendations are as follows:

- ***Improve the management structure in order to achieve better communication between and within DG RTD and DG TREN***
Some internal reorganisation took place in 2002 – scientific staff were moved between units in DG RTD to match staff more closely to the subject themes of FP6, and a new cell was created in DG TREN to deal with co-ordination and procedures – but it did not bring closer the two parts of the NNE programme. However, there were systematic joint DG

RTD and DG TREN meetings to prepare for Programme Committee meetings. In addition, there were occasional ad hoc meetings at Director and Head of Unit level. There was also improved personal contact between officers in the two DGs with similar interests, where the key people had been identified. In some cases there was improved communication within a DG; in others the situation remained unsatisfactory. By and large, Commission staff are used to the situation and have learnt to live with it. However, the others surveyed as part of the monitoring exercise remain deeply concerned. They note that DG TREN seems totally disconnected from the FP and uses their part of the programme to advance their DG's own agenda. They feel that in both DGs the programme suffers from lack of strong and uniform leadership. They regret the different procedures, ways of presenting statistical and other information, etc., used in FP5 by the two DGs. They wonder how, in FP6, big IPs and NoEs that span the whole range of activity from basic research through to demonstration will be managed by Commission staff. They feel that, since the split of the programme is fixed for the duration of FP6, the situation can only be helped in the short-term by safeguarding the information flows within and between the two DGs. More radical changes will have to be left for FP7.

- ***Simplify and accelerate procedures***

Although attempts have been made to speed up matters, the overall situation remains unchanged. It can take a year or more from close of call to contract signature. The bottleneck is generally in contracts units. Again, Commission staff are used to the situation. Almost all the others surveyed as part of this exercise are deeply concerned by it. A few feel that negotiations have come to involve what appear to be arbitrary decisions by Commission staff that contractors find unjustified. They also regret the tendency of the Commission to remain silent on some matter for a long time, and then request clarification to be given within a few days. They feel that the aim for the future should be a contract negotiation procedure that is neither heavier nor longer than those in use by companies.

- ***Improve the management information system***

The new system for FP6 is under development. This will be used by all DGs involved in the FP. It will not be in place (let alone tested) in March 2003 when the first FP6 calls close. However, interim systems are being prepared to a common specification for use until the complete system is ready.

- ***Develop in a professional way a strategy for communicating and disseminating project outputs to the market***

In the response to the 2001 monitoring report, Commission Services said a strategy was under development. This was not evident to the 2002 monitoring group. Introduction of the energy research website on the Europa server is to be applauded, as is the preparation by DG RTD of brochures on project outputs in photovoltaics, biomass, carbon dioxide, hydrogen and fuel cells, integration of renewables and energy modelling for the Heysel conference in November 2002. However, there is as yet no automatic publication of all final reports on Cordis. The specific DG TREN contracts placed with OPETs in 2002 to create secretariats and use the units to channel the results of all DG TREN energy and transport programmes to Member States and other parts of the world will undoubtedly be useful. However, the generally poor dissemination of outputs by the programme managers, and the general nature of (i.e. lack of detail in) the brochures produced, worries those who responded to the survey. What is really needed is a combined dissemination strategy for the DG RTD and DG TREN parts of the NNE programme, professionally prepared and implemented. This should include a clearly defined role for OPETs in the overall game. Having said that, Commission staff and respondents to the monitoring group survey were agreed that greater attention is currently being paid by contractors to disseminating the outputs of their individual projects than happened in the past.

- ***Put serious effort into impact assessment***
The publication of the impact assessment reports on the pilot set of FP4 NNE projects published in 2002 and the study of all the completed FP4 NNE projects completed in early 2003 is a good start. The monitoring group hopes that the promised work to assess the impact of projects in the 3rd, 4th and 5th FP programme not examined before will be initiated shortly. If true primary and secondary impacts of the projects on participants and others in Member States, participating countries and elsewhere are to be measured, certain basic ideas have to be put in place at the beginning of projects. This was not done for FP3, FP4 and FP5 projects. Therefore, the impact assessment studies on FP4 NNE projects tend to record results, rather than measure impacts. It is hoped that FP6 projects will be designed with impact assessment in mind. It is also hoped that the work on energy technology scientific and technological indicators launched in 2002 to provide technical references to the scientific community (for which a progress report was issued in December 2002) and the European Research Evaluation and Impact Assessment (EREVIA) group report commenting on the energy research evaluation and impact assessment policy and methods will help here. The monitoring group understands that carrying out the FP4 study was hampered by the fact that a considerable number of contractors for the demonstration projects could not be traced. It recommends that Commission staff maintain an up-to-date contact list for past contractors to help future impact assessment.

Comments on the other recommendations are as follows:

- ***Put professional effort into explaining and promoting the concept of ERA***
This is no evidence that professional PR effort has been put to this and there remains the need to (1) define the ERA clearly and (2) explain that there needs to be a number of ERAs for the NNE field, each covering a specific technological area. However, the steps that have been taken to explain FP6 to Member States' representatives, NCPs and potential users have resulted in more people having a clearer concept of the ERA than a year ago. DG RTD's use of High Level Groups of interested stakeholders to agree strategies for future work in the areas of fuel cells/hydrogen and photovoltaics will undoubtedly help even more. However, even among Commission staff there are those who feel they do not understand the ERA concept well. Continuing effort will be needed since with a subject like this there will be moving targets.
- ***Develop goal and strategy for international co-operation in NNE research***
In response to the 2001 monitoring group recommendation, Commission Services explained that the strategy is (1) to tighten links with countries of high R&D potential or strategic importance (e.g. US and Russia) and hold workshops on specific topics with them and (2) open participation in FP6 to third countries. In practice, the situation is not quite so clear-cut. Some of the international co-operation takes place through a structured route created by the co-operative science and technology agreements, while other takes place under the aegis of the IEA sub-programmes on specific subjects, or through initiatives of individual scientific officers. For the structured programme there is a Steering Committee through which visits are organised, areas of common interest identified, and workshops held. For countries where there is a specific agreement on energy, there is funding for formal involvement in these activities by DG RTD, DG TREN and the JRC. For countries where there is only a general agreement, only DG RTD has access to funding. This is not unreasonable, given that international co-operation is more likely to be on research than on demonstration. However, it means that DG TREN international co-operation is often confined to exchange of written information whereas DG RTD can make visits. Since international co-operation is not a top priority for DG TREN, the staff officer responsible for providing DG TREN briefings for DG RTD visits often has difficulty obtaining inputs from his scientific colleagues. As part of their recommendations on international co-

operation the 2001 monitoring group suggested that the Commission should take care to ensure that information flows are in both directions. In this connection, it should be noted that in subjects related in some way to defence, it has proved difficult to come to mutual agreements with the US.

- ***Do more to meet Candidate Countries' needs***

The NAS1 and NAS2 calls were clearly successful in involving Candidate Countries' organisations in FP5. The NAS1 call enabled 17 projects (14 in the DG RTD part of the programme and 3 in the DG TREN part) to bring partners in the Newly Associated States into existing projects. The NAS2 call enabled 12 NAS proposals to be funded by DG TRD and 11 by DG TREN. There is also involvement from Candidate Countries in the successful consortia from the 4th and 5th general calls evaluated in January 2002. Of all the Candidate Countries, Poland has the greatest involvement. The 2001 monitoring group's recommendation that Candidate Countries' organisations be helped to find own-funding for shared-cost projects was not taken up by Commission Services. Commission staff report that academic standards in some subject areas in some Candidate Countries are already very high. Others would be helped by the forming of links with existing Member States, perhaps on a regional basis. By and large, Commission staff feel that the needs of the Candidate Countries will continue to be met through FP6 where participation rules make no difference between EU and Candidate Countries. Some of those from the Candidate Countries who responded to the monitoring group's survey, however, feared that this would not be so. They found it to be very difficult for organisations from the Candidate Countries to join other EU organisations in proposal preparation.

- ***Retain special SME programmes and remove obstacles to SME participation in NNE programme***

In the 4th call proposals (i.e. those in the DG RTD part of the programme) evaluated in January 2002, 361 SMEs requested 11% of the funding. Of these, 40 SMEs were project co-ordinators. In the projects recommended for support, 100 SMEs were involved (11 as project co-ordinators). The 100 SMEs would be receiving between them 10% of the total funding agreed. In the 5th call proposals (i.e. those in the DG TREN part of the programme) evaluated in January 2002, 482 SMEs requested 19% of the funding. Of these, 73 SMEs were project co-ordinators. In the projects recommended for support, 77 SMEs were involved (12 as co-ordinators). The 77 SMEs would be receiving 19% of the total funding.

The special SME (CRAFT) call evaluated in April 2002 produced a total of 63 proposals. 29 were accepted for funding – 14 to be managed by DG RTD and 15 by DG TREN. Some of those who responded to the monitoring group's survey regretted that two cut-off dates for the CRAFT call were consolidated into one. They felt that this was not helpful to SMEs.

Overall, however, it can be seen that in 2002 there was quite good involvement in the FP5 NNE programme by SMEs, despite the heavy FP5 procedures. For FP6, however, NNE staff in both DGs are concerned that it will be difficult to reach the 15% target for SME participation. SME involvement in traditional projects will, they suspect, continue as before. However, the new instruments were not designed for SMEs and SME involvement in them will probably be much lower. SME consultants will probably be involved in IPs and NoEs – although not as co-ordinators because SMEs are unlikely to have enough administrative staff and/or sufficiently large turnover to allow them to do this. SME industry is less likely to be involved, except perhaps through industry groupings. Only time will tell what actually happens and whether SMEs become fully integrated into NNE ERAs.

- ***Take steps to increase the number of women involved in programme management and encourage involvement of women scientists in proposals***
 The Commission clearly takes this seriously. However, until more women take up science careers it will be difficult for the Commission to implement its policy of strong involvement from women in the NNE programme. The numbers of women employed in the management of the programme remains low: 1 in DG RTD and 3 in DG TREN. The AGE has 3 women members: 5 were invited but 2 did not accept.
- ***Increase FP6 sustainable energy systems budget, include some work on conventional fuels, introduce new instruments gradually, do not exclude small projects on grounds of size, give timely briefings to NCPs and potential participants***
 The budget remains as planned last year – decisions on this are made at FP level. To the consternation of a substantial number of staff officers and others surveyed, work on the conventional fuels is still excluded. Care needs to be taken that expertise in these areas within the Commission is not lost, given their overall strategic importance to the EU. There is evidence that the new instruments are being introduced gradually. The specific FP6 work programme was not finalised until December 2002 and it was published in time for the 17 December 2002 calls. Briefings on the FP6 energy programme were given in Brussels and in specific Member States and other participating countries during the last few months of 2002 and the beginning of 2003. This was not as early as the monitoring group would have liked but throughout 2002 there was a steady build-up of the information available in preparation for the call. It remains to be seen whether small projects will be funded.
- ***Free scientific officers of administrative burden***
 Great efforts were made in DG TREN during 2002 to remove the backlog of contracts due for closure. By the end of 2002, many staff in both DGs felt less burdened – although there were exceptions, notably those concerned with procedures and co-ordination in DG TREN. Internal procedures for FP5 remain as heavy as ever. For a number of years FP5 will be run in parallel with FP6. Since it will take time to get used to the new procedures for FP6, there is no reason to suppose that workloads will be any easier in 2003. However, during 2002 both DG RTD and DG TREN appointed a number of external experts (Project Technical Assistants – PTAs) to monitor projects and otherwise assist scientific officers. Only time will tell how far this helps Commission staff.
- ***Speed up payment of invoices***
 As a rule, payments are still not being made within the time limits set out in contracts. 5-6 months after receipt of an invoice seems to be typical and the delay can be as long as a year. (There are, however, exceptions: one DG TREN Directorate claims their payments are made within 38 days on average.) The problem is generally either with the finance unit (where staff turnover is high) or as a result of correspondence following incorrectly-completed financial statements from contractors.
- ***Put professional effort into reaching potential participants, improve the website and simplify the Info Pack***
 The briefings held in Member States, etc., to publicise FP6 and the December 2002 calls, together with the activities of individual scientific officers, have helped reach potential participants. However, there is always the feeling that the same people are successful in gaining projects year after year and that professional help might overcome this. The website has definitely improved, but the Info Pack remains complicated. As long as proposal selection, contract negotiation and invoice payments remain long drawn-out, certain types of industrial participant will continue to be put off.

- Strengthen contacts with NCPs and encourage networking between them***

The role of NCPs is being enhanced in FP6. The new policy is being developed by an inter-service group. Commission staff involved in the NNE programme who have contact with NCPs (Heads of Unit and those concerned with the help-desk) report good relations with them. They regarded the training workshop to explain the new instruments to NCPs in October 2002 and the Heysel conference on FP6 in November 2002 as being successful. However, some of them felt that NCPs dedicated solely to energy should be appointed in each country (NCPs usually cover a number of subjects). Similarly, the holding of information days dedicated to the energy programme would be useful.

The NCPs who responded to the monitoring group's survey were generally satisfied with their contacts with the Commission and valued the training they had been given, which enabled them to network as well as learn more about the programme from Commission officers. However, some felt the need for more guidance in explaining the content of the work programme to intending proposers. They also considered it would be helpful if NCPs were given prior warning of Commission announcements, calls, etc., by email.
- Get the best value out of Programme Committee and advisory groups, prepare meetings well in advance with focused papers that do not contain unnecessary detail***

Contact with the Programme Committee and advisory groups is confined to the Secretariat (in DG RTD Unit J1), the co-ordination unit in DG TREN, and the Directors and Heads of Unit in both DGs who attend meetings.

Commission staff involved were generally very happy about their relations with the Programme Committee in 2002. Although (due to over-heavy workloads) DG TREN inputs to the Programme Committee were late in arriving in the first part of 2002, the situation was remedied by the end of the year. The Programme Committee delegates who took part in the monitoring group's survey appreciated this. Generally, they considered that the Secretariat had done a good job and that relations between the Committee and the Commission had improved over the year. Some, however, felt that they were not always adequately informed about the programme: they would have liked much more detail on the outputs of completed projects and their impacts.

EAG members regret the lack of contact between them and the Programme Committee in 2002 and feel that their advice on the FP6 programme was not been heeded by the Commission.

During 2002 DG RTD established the AGE to advise on the FP6 programme, while DG TREN established the Energy and Transport Forum.

AGE members were surveyed as a part of the current monitoring exercise. The Commission has told them that it wants a more strategic steer from AGE than it asked of the EAG. It is to take a long range view and provide vision not only at FP6 but also for FP7 and FP8. It remains to be seen how this will work and how AGE will interact with the Programme Committee. AGE members also wonder how the Commission sees them vis-à-vis the High Levels Groups established to develop platforms for fuel cells/hydrogen and photovoltaics. AGE members regretted that they were not given more than 9 days' notice of their first meeting on 1 October and that it was held too late to have any real impact on the content of the FP6 work programme or the first call.
- Ensure that at least a summary of all project findings is posted on Cordis***

Information about projects funded by the DG TREN part of the programme is systematically sent to Cordis every three months. For the DG RTD part of the programme notification is not done as a matter of course. It only happens when the relevant scientific officer remembers to send the final reports and other relevant information to the staff responsible for NNE inputs to Cordis.

- ***Give tighter guidelines to evaluation extended panels and reconsider anonymity issue and location of evaluation for FP6***

The last FP5 evaluation took place before the 2001 monitoring group's recommendations were made. The FP6 procedures are only just being finalised. It should be noted that some of the people surveyed as part of this monitoring exercise were concerned about the competence of the people chosen to evaluate proposals. They also worried about the relative weighting of the different criteria. They consider technical content and scientific quality to be much more important than, say, social objectives. They also report that unsuccessful proposers find the evaluation summary sheet sent to them at the end of the exercise confusing and unhelpful. The form itself is not the problem. The problem is that it is not completed in a way that helps proposers learn from their mistakes and put in better proposals in the future. They consider that, in FP6, there should be a clear and explicit communication of the outcome of evaluations to proposers.

4.2.2 Attainment of objectives of 2002 work programme

The objectives of the FP5 NNE programme and the specific topics covered in the 2001-2002 work programme are outlined in Section 3 of this report. The calls evaluated during 2002 were in line with the objectives and from the information provided to the 2002 monitoring group it would seem that the contracts negotiated were also in accord with them. As a result of dedicated efforts on the part of scientific officers who identified and talked to key researchers and companies, gaps in the programme were filled through the final calls. Only after all the projects have been completed, the results evaluated, and their impact assessed will it be possible to tell how far the objectives have been actually attained.

Commission staff were generally pleased with the quality of proposals evaluated in 2002, although in some sectors they felt improvements could have been made.

Some specific 2002 achievements are as follows:

- Realisation of Integrated Gasification Combined Cycle coal-based electricity projects in China, based on research partly funded by the programme
- Start of project on supercritical steam conditions
- Start of thematic networks on carbon dioxide sequestration, clean power (this includes a number of biomass projects) and hydrocarbons
- Dissemination activities in clean coal technology
- Progress in the clean urban transport projects
- Establishment by DG RTD of High Level Group on hydrogen and fuel cells and preparation of vision paper in this area
- Establishment of thematic networks on fuel cells, one on solid oxide fuel cells and one on testing
- Set up of clusters of projects on hydrogen storage, hydrogen production, and hydrogen reforming from diesel
- Bringing together 4 wind projects into a cluster on aerodynamics
- Achievement of a concerted action on common rules and procedures for new wind developments
- Development of a new wind turbine prototype
- Establishment of big wind project demonstrations
- Set up of clusters of projects on energy from waste, ethanol production from biomass by hydrolysis, and biogas
- Work in support of the liquid biofuels directive
- Work in support of the green electricity directive
- Progress towards development of standards for recovered biofuels and bioethanol

- Establishment by DG RTD of High Level Group on photovoltaics and start of preparation of vision paper in this area
- A good portfolio of photovoltaics projects
- Set up of cluster of projects on thin film (crystalline silicon) photovoltaics projects
- Thematic networks in the photovoltaics area, including one for Member States' officials and one for Candidate Countries
- Development of significant component (a trough collector) for solar thermal power generation
- Three solar thermal power projects shortly to be started
- Signature by the Commission of the IEA Implementing Agreement on ocean energy.

Given the number of projects in the programme a surprisingly tiny number have failed. This was generally because of non delivery of an innovative component needed for demonstration plant or bankruptcy of a key partner.

4.2.3 Legacy aspects

As indicated in the paragraph on impact assessment in Section 4.2.1, an impact assessment of a sample of FP4 projects was published in 2002, and a study on all the completed FP4 NNE projects completed in early 2003. Work to assess the impact of all the FPs (including FP5) is just starting.

FP5 partners are obliged to complete a Technological Implementation Plan (TIP) mid-way through their project and on completion. The aim of the TIP (which has to cover standard questions in a standard format used by all the FP5 specific programmes) is to encourage project partners to think about how they are going to implement their project findings. However, the NNE programme scientific officers and the few contractors consulted while the 2002 monitoring was being carried out were all agreed that the TIP format does not achieve the desired effect. Filling in the TIP electronically will make the mechanics of filling in the form easier, but it will not aid preparation of a meaningful plan. There is also the problem that, once a contract is finished, there has in the past been no legal obligation for a contractor to follow up the plan. DG RTD is initiating a study based on the data in all completed TIPs. The 2002 NNE monitoring group fears that, because the data in the TIPs is not necessarily meaningful, the study results will not be meaningful either. Moreover, only a fraction of projects produce a technology. In some cases, a project produces a result – for example, a standard, guidelines, code of practice, conference – for which a TIP is not practicable. A Results Implementation Plan might be a more appropriate tool.

4.2.4 Transition aspects

As indicated in Section 3, the majority of FP4 projects are now complete. Both DGs took pains to finish those FP4 projects that were due for completion in 2002 on time. Few time extensions were allowed. The files of some FP4 projects completed from the technical viewpoint are still open because a few administrative matters remain to be sorted out, but these are expected to be closed in the not too distant future.

The majority of FP5 projects, on the other hand, are still on-going. Only the unusually short projects have already been completed. Indeed, some of the contracts resulting from the calls evaluated in 2002 were not signed until December 2002, or even January 2003, and so have only just had their kick-off meetings. Since most projects last three years, FP5 projects will be on the books until 2006. Some longer projects may not be finished until 2007. The total number of FP5 NNE contracts agreed since the beginning of FP5 has been around 860

(roughly half for each DG). Of these, around 410 result from the calls evaluated in 2001 and 2002. Thus a stock of several hundred FP5 NNE projects will be ongoing during at least the first few years of FP6. Some of these will hardly be completed before FP7 (assuming there is an FP7) begins.

During the summer of 2002, DG RTD commissioned a study from an external expert on the relevance of all the present FP5 NNE activities in the DG RTD part of the programme to the ERA. The 2002 monitoring group was impressed by the quality of this work and sad that neither DG RTD nor the expert had been able to obtain inputs from DG TREN.

During the last couple of years, Commission staff in both DGs have taken pains to establish FP5 projects in each NNE subject sector that pave the way for FP6 and the establishment of NNE ERAs. The size of projects financed in 2002 was much higher than for previous years. Thematic networks have been formed and some project clustering has been achieved. In a few cases the clusters were created formally at proposal stage or during contract negotiation. This requires great effort on the part of the Commission scientific officer and is especially difficult where industrial companies with commercial interests are involved. More frequently, co-ordinators of individual projects in related areas were asked to establish informal links with each other, working out between them the best way of achieving this. Both the thematic networks and clustered projects should build the foundations for FP6 NoEs and IPs.

The monitoring group also applauds the establishment in 2002 by DG RTD of the High level Groups on fuel cells and hydrogen, and on photovoltaics and the preparation of vision papers in these areas. When these are completed they should do much to support formation of an ERA in these sectors. The monitoring group is unclear how far DG TREN is involved in these activities. It hopes that they will participate so that a true and mutually-agreed platform for the future programme is achieved.

All these activities to ease the transfer from FP5 to FP6 are highly laudable. However, some of those surveyed as part of this monitoring exercise (and the monitoring group members) are concerned about the periodic nature of the FPs with their 4-year duration. By the time programme managers and contractors have gained enough experience of an FP to reach the top of the learning curve, it is time to begin a new FP. With each new FP, there is a step change in philosophy and procedures. This poses serious planning problems for research teams in Europe since it is impossible for them to anticipate the nature of the step change before it occurs. To permit a longer planning period, it might make sense to think about prolonging the life of an FP from four to, say, seven years.

4.2.5 Preparations for Sixth Framework Programme

As indicated in Section 3, throughout 2002 effort was devoted to preparation and launch of FP6. Because the tools and procedures for FP6 are harmonised across all the constituent specific programmes, NNE staff contributions were confined to serving on the relevant working groups or commenting on draft documents. A number of scientific officers interviewed during the monitoring exercise regretted they were not given the opportunity to comment at an earlier stage. Often, they were told that their comments came too late to be taken into consideration.

Scientific officers interviewed and some of the others surveyed feel that the lessons learned concerning administrative procedures and documentation at the start of and during FP5 have not been taken on board sufficiently in the planning of FP6. Evaluation of FP5 should have been taken more into account in the preparation of FP6. For instance, the procedures and systems were not ready for the beginning of the FP5 – nor are they for FP6. The model contract, evaluation criteria, etc., were not finalised when the first FP6 call was published. The

Info Pack for FP5 was regarded as being too complicated. The Info Pack for FP6 is even more complex. The management information system was not be ready for FP5, so interim systems had to be put in place. The same is true for FP6. Further, it is not finally decided yet how the Commission is going to monitor IPs and NoEs – how many officers will be involved and what will be their individual responsibilities. As a result of all these uncertainties, many officers are worried about the implementation of the new programme.

The NNE programme managers' major activity concerning FP6 was preparation of the work programme and launch of the first call. In March 2002 the Commission issued a call (deadline 7 June 2002) for Expressions of Interest (EoI) for IPs and NoEs. These were analysed during the summer of 2002. EoIs on subjects of medium- to long-term interest were evaluated by DG RTD NNE staff with the help of external experts. EoIs on subjects of short-term interest were evaluated by DG TREN staff in-house. The EoIs analysis was used by programme managers to identify the areas which were sufficiently mature and had sufficient people working on them to warrant inclusion in the FP6 sustainable energy systems work programme for the first couple of years. Some of those interviewed and surveyed worried that too much credence was given to the EoI analysis in formulating the work programme, and that the EoI analysis procedures were too rough and ready. According to scientific officers, the DG RTD part of the work programme took the results of the EoI analysis more into account than did the DG TREN part. The latter was informed more by DG TREN's energy policy.

The Programme Committee also provided comment and input. Those who responded to the monitoring group's survey remarked that the whole procedure seemed rushed. They said that, while the first draft of DG RTD's work programme required little comment by the Programme Committee, the latter rejected the first draft of the DG TREN work programme and were required to approve a final version in less than two weeks. Their concern about the DG TREN work programme was that it did not seem to take into account the underlying philosophy of FP6 to create an ERA. They worried that no attempt was made to produce one co-ordinated work programme. They were merely presented with the two work programmes stapled together.

As stated earlier, AGE was established too late to have any real influence on the content of the work programmes.

The work programmes were finalised in December 2002, immediately prior to issue of the first calls.

As indicated in Section 4.2.1, a number of the programme managers (not only those who have been involved in the FP5 NNE clean fuels programme) and the non-Commission people surveyed remain concerned about the omission from the work programme of research on conventional fuels in view of the fact that fossil fuels will provide much of Europe's energy supply for years to come. They are anxious that the expertise which the Commission has in this area is not lost. Commission staff will be required to monitor the on-going FP5 projects in this area until they are completed in a few years' time but it will be difficult to keep them happy and motivated when they are not required for FP6. The monitoring group shares these concerns.

The two parts of the FP6 sustainable energy systems programme seem to be even more sharply separated than was the case in the NNE FP5 programme. The monitoring group is led to believe that DG TREN will focus on demonstration and will not be involved in short-term research. However, the monitoring group is concerned about what will happen with IPs and NoEs that span both programmes – that include the whole range of activity from fundamental research right through to demonstration. With the use of two separate advisory groups for the different parts of the programme it is only through the good will of the two sets of programme managers and discussions under the aegis of the Programme Committee that they can be pulled

together. The 2002 monitoring group regrets this, feeling that only by having a common understanding of the whole picture from long-term research right through to demonstration and production, and the energy policy that relates to this, can a coherent strategy and resultant programme be produced. Member States' and participating countries' national programmes, of course, constitute a major part of this whole picture. At 810 M€, the funding provided by the FP6 sustainable energy systems programme will be but a small part of the total expenditure made by governments, companies, research institutions, etc., throughout Europe on sustainable energy systems during 2003-2006. It will be important for the programme managers to work closely with Member States over the next four years if a true ERA is to be achieved.

The new programme and first call, and the underlying concept of an ERA, have been promoted to Member States and participating countries through workshops in Brussels and in individual countries. The latter have been organised by NCPs with inputs from programme managers. These were held in the last quarter of 2002 and early in 2003. The monitoring group regrets that they were not held earlier. It wishes that more had been done to explain the philosophy of the ERA to a wider public. Along with a number of those who responded to the monitoring group's survey, it feels that the scientific community needs real training, in advance, on how to manage and participate in one of the new large IPs and NoEs.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 SUMMARY AND CONCLUSIONS

- During 2002, Commission NNE staff worked extremely hard to select and initiate the final projects for the FP5 NNE programme. By the end of 2002 most new contracts were negotiated and signed. They were fully in line with the objectives of the FP5 work programme. They filled outstanding gaps in subject coverage and paved the way for FP6 and establishment of ERAs in the different technological sectors.
- Almost all the NNE FP4 projects have now been completed. Hundreds of the NNE FP5 projects will be on-going for the next few years. Their monitoring will present a challenge to Commission staff who, inevitably, will be obliged to focus their attention on the FP6 programme with its new philosophy, instruments and procedures.
- Commission staff put significant efforts in 2002 into developing the work programme for the FP6 sustainable energy systems programme and are generally content with the result. Not all of them are happy about the methodology used for the development. The programme was finally completed in a rush just in time for the first FP6 calls launched in December 2002. It is not in fact one work programme but two, one to be managed by DG RTD and one by DG TREN. The two are even more sharply split than was the case with the FP5 NNE programme and have their own aims and objectives. The Programme Committee and advisory groups are concerned about this. The monitoring group shares their concerns. It feels that only by having one programme that covers fundamental research through to demonstration and beyond in a co-ordinated way can a research strategy be produced, results achieved, and ERAs established, that truly support Europe's need for security of supply and reduction of greenhouse gases.
- The monitoring group recognises that work on conventional fuels is not to be included in FP6. It feels, however, that (since the subject is highly important from the viewpoint of future energy supplies and reduction of greenhouse gases) a network could be initiated to encourage those working on this subject through Member States' national programmes to communicate with each other and thus establish an ERA in this field.

- By and large, communication flows between and within DG RTD and DG TREN in 2002 were much the same as they were in 2001 – good on a personal basis but with not much formal structure to support it.
- Separate advisory groups have been established for the two FP6 programmes. AGE, which has a remit to give a long-term strategic steer, has as yet no formal contact with the High Level Groups established to develop platforms for future work on fuel cells/hydrogen and photovoltaics. As far as the monitoring group is aware, DG TREN does not provide inputs to the High Level Groups.
- Relations with the Programme Committee have generally improved over the year.
- Although many Commission staff concerned with the NNE programme were less overloaded with work in 2002 than they were in 2001, there were some exceptions, particularly in DG TREN. Moreover, all staff are still being obliged to concern themselves more with administrative issues than with scientific. Only time will tell how much procedures have genuinely been simplified in FP6 and how much time the management of FP6 projects will actually take.
- The periodic nature of FPs, with their 4-year duration, causes problems. By the time programme managers and contractors have gained experience of one FP, it is time for another to begin. The step change in philosophy and procedures from one FP to the next makes it difficult for research teams throughout Europe to plan their future work, since it is impossible for them to anticipate the nature of the change before it occurs.
- The preparations for the FP6 sustainable energy systems programme have not been helped by the fact that many of the procedures, documentation, tools and support systems that in FP6 will be harmonised across the whole FP are only just being completed or are still not ready. Proposers and contractors found the complex procedures used in FP5, the time it took the Commission staff to negotiate contracts and pay invoices unacceptable. Many fear that the situation will not be improved in FP6.
- The FP6 sustainable energy programme and first call, and the underlying concept of an ERA, were promoted to Member States and participating countries through workshops in Brussels and in individual countries held late-2002 or early-2003. It is a pity that some of them were not held earlier, and that more has not been done to explain the philosophy of ERAs to the wider scientific community. A clearer and more understandable definition of an ERA is required.
- Although the FP6 programme will go a fair way to establishing the foundation for ERAs in sustainable energy systems, thoroughly effective ERAs will not generally be achieved without the involvement of the Member States' national programmes. More should be done to involve Member States' programmes in ERAs.
- Relations with the NCPs seem to have improved in 2002, as a result of the need to promote FP6.
- The participation of SMEs in the FP5 NNE programme was not bad, despite the complex procedures and payment delays. There are fears that it may be difficult to achieve the target of 15% SME participation in the FP6 sustainable energy programme. Their involvement in the large IPs and NoEs may prove difficult. SME consultants may find they have a role to play in the large consortia, although they are unlikely to have enough resources to be able to serve as co-ordinators. However, SME industry may not be keen to be involved except as sub-contractors.

- The special NAS calls evaluated in 2002 were successful in bringing some Candidate Countries' organisations into the FP5 NNE programme. In FP6 they will be participating for the first time on equal terms with existing Member States. In selecting projects for FP6 it should be borne in mind that for some subjects some NAS might need help getting up the learning curve.
- DG RTD has an overall strategy for international co-operation activities and third countries will be able to receive funding through FP6. The situation in the sustainable energy systems field, however, seems to lack coherence. International activities take place under the aegis of the IEA programme, the general co-operative science and technology agreements between the Commission and individual countries, the specific agreements on energy, or as a result of the initiatives of individual scientific officers. Some involve meetings; others are at the level of information exchange only.
- Although efforts have been put during 2002 by both DG RTD and DG TREN to improve the NNE programme activities to disseminate project outputs to the wider scientific community, there is still no combined strategy for this or automatic posting of all final reports on the Cordis website. Most dissemination work is, of course, carried out by individual contractors as part of their project work programme.
- It is essential that contractors develop a clear idea of how they will implement the results of their research. In an attempt to help the process of developing the plan, FP5 contractors are obliged to prepare a draft TIP using standard headings mid-way through their project and a final version at the end. Scientific officers managing the NNE programme, and contractors consulted, do not find the TIP conducive to preparation of a meaningful plan. In many cases, the nature of the project is such that a TIP simply does not fit. The monitoring group considers that a Results Exploitation Plan might be more generally acceptable. It is understood that the Commission is planning to analyse the TIPs as part of their overall impact assessment exercise. The monitoring group feels that, given the difficulties contractors are having with the current form, this might not be a fruitful exercise.
- Considerable efforts were made in 2002 to assess the impact of the FP4 NNE programme and work on FP3, FP4 and FP5 is about to begin. The completed studies were unable to do much more than assess project results. They cannot be expected to do more because the way was not paved at the beginning of the projects for primary and secondary impacts to be measured later. However, indicators are being developed and other studies undertaken that might help future impact assessment.
- Each year the external monitoring groups make a number of recommendations aimed at improving the programme. In 1999-2001, the following issues were raised year after year:
 - the need to prepare the outside world for the underlying philosophy of a new FP prior to its launch
 - the split of programme management between DG RTD and DG TREN
 - the need to improve the Info Pack
 - the need for a better Management Information System
 - the need for better dissemination of project information and outputs
 - the need for more impact assessment.

It is clear that Commission Services understands the issues raised – indeed, did not require the monitoring group to point them out – and is often keen to implement them. However, the legal requirements of the FPs coupled with the inertia associated with large organisations means that certain types of change can only be introduced with a new FP while others can only be introduced gradually. Issues first raised in 1999 were frequently

not implemented until 2001 or even later. Moreover, recommendations are sometimes implemented in such a bureaucratic way that the required effect is not achieved. In addition, although succeeding monitoring groups have recommended steps aimed at bringing the short- and medium- to long-term parts of the programme together, it would not really be possible to implement this as a result of a comment in a monitoring report. Commission Services never make this point, but if anything were to be done about this, the decision would have to be made at a level higher than the two DGs. Monitoring groups (and the Programme Committee and advisory groups who observe what is going on) gain the impression that the Commission programme managers give priority to implementing those which coincide with what they want to do anyway.

5.2 RECOMMENDATIONS

5.2.1 Recommendations specific to the sustainable energy systems programme

The monitoring group's main recommendations are as follows.

- Throughout the period of FP6, DG RTD and DG TREN should work together as equal partners to provide “joined-up” management for the sustainable energy systems programme. This means that:
 - For each technological sector within sustainable energy systems, the two DGs should work towards the same ultimate goals, agreed between them, and work out together their strategy to achieve these goals.
 - An overall integrated work programme should be prepared for the later FP6 calls.
 - Communication between the two sets of programme managers should be of the highest quality.
 - There should be good communication between the advisory groups (e.g. AGE, Forum for Transport and Energy), High Level Groups, etc., that have been established to provide strategic steers.
 - Reports that relate to strategy should include co-ordinated inputs from both DGs.
- For any future FP (e.g. FP7) sustainable energy systems programme, consideration should be given to:
 - Placing the management under one umbrella.
 - Having one common work programme that covers the whole range of activities from basic research, to applied research, to demonstration through to market introduction.

Additional recommendations are:

- Support the establishment of ERAs in the various technological sectors of sustainable energy systems by:
 - Doing more to explain the ERA philosophy (possibly with success stories) to the wider scientific community, and
 - Doing as much as possible to involve Member States' national programmes.
- Establish a network to encourage those working on conventional fuels through Member States' national programmes to communicate with each other and thus establish an ERA in this field.

- Develop and implement a combined strategy for both DGs for dissemination of project and programme outputs.
- Carry on with the planned impact assessment of FP3, FP4 and FP5 and plan the impact assessment work to be done on FP6 as part of the work programme. The extent to which the studies can measure primary and secondary impacts (rather than merely listing project results) will depend on the objectives set at the time each project was set up. For FP6, ensure that each project is designed to permit measurement of the relevant indicators after the project has ended.
- Develop combined strategy for international co-operation in sustainable energy systems that includes not only work carried out through the co-operative scientific and technological agreements between the Commission and individual countries but also work carried out through the IEA programme, or through the initiatives of individual scientific officers. Avoid co-operation that does not bring positive benefits to the EU.

5.2.2 Recommendations of general significance for whole FP/ERA

- Put even more effort into explaining the new FP6 instruments (IPs and NoEs) to the scientific community.
- Do all you can to ensure that a role for SMEs is found in the FP6 programme.
- Turn the TIP into a Results Implementation Plan suitable for all project types. Design it so it helps contractors develop an effective implementation plan.
- Take care to ensure that the special needs of the Candidate Countries are taken into consideration.
- Stop annual monitoring exercises. Monitoring at mid-term and end of FP6 are all that is necessary.
- Start preparation of FP7 early enough for all the procedures, documentation and tools to be ready in good time. Make sure the lessons learned in FP6 are taken into account in design of FP7.
- The NNE monitoring group feels that, now that we have the new large projects, FPs should last longer than 4 years. It suggests FP7 should last 7 years, a thorough evaluation and monitoring exercise being carried out in year 5 to establish what has been learnt and how successful the various instruments have been. This would allow 2 years to be spent on the design of the next programme.

6. ANNEXES

6.1 Abbreviations

AGE	Advisory Group for Energy
CA	Concerted Action
DG	Directorate-General
DG RTD	DG Research
DG TREN	DG Transport and Energy
EAG	External Advisory Group
EESD	Energy, Environment and Sustainable Development
EoI	Expression of Interest
ERA	European Research Area
EU	European Union
EURAB	European Research Advisory Board
EREVIA	European Research Evaluation and Impact Assessment
EWOG	Energy Working Group
FP	Framework Programme
FP3	Third Framework Programme
FP4	Fourth Framework Programme
FP5	Fifth Framework Programme
FP6	Sixth Framework Programme
FP7	Seventh Framework Programme
FP8	Eighth Framework Programme
ICTs	Information and Communication Technologies
IEA	International Energy Agency
IP	Integrated Project
JRC	Joint Research Centre
M	million
NAS	Newly Associated States
NCP	National Contact Point
NNE	non-nuclear energy
NoE	Network of Excellence
OPET	Organisation for the Promotion of Energy Technologies
PR	public relations
PTA	Project Technical Assistant
R&D	research and development
RTD	research and technological implementation
SME	small and medium-sized enterprises
SSA	Specific Support Action
STRP	Specific Targeted Research Project
TIP	Technology Implementation Plan
UNESCO	United Nations Educational, Scientific and Cultural Organization
US	United States

6.2 Matrix of recommendations from 1999-2002 monitoring exercises

ISSUES	RECOMMENDATIONS			
	1999	2000	2001	2002
	1. STRATEGY AND OBJECTIVES			
Overall strategy and objectives	Do more to transmit philosophy of FP to outside world before launch.		If possible, increase proposed FP6 sustainable energy systems programme budget. Include some work on conventional fuels. Include research on coal and RES needed by Candidate Countries. Do not exclude small but important projects on grounds of size. Introduce concepts new to FP6 gradually. Publicise FP6 professionally. Brief NCPs and key potential participants on FP6 in good time.	Establish network to encourage those working on conventional fuels through Member States' programmes to communicate with each other and establish ERA in this area. Put even more effort into explaining the new FP6 instruments to the scientific community.
ERA		Support the ERA and reward participants in successful FP5 projects by admitting latter to European Networks of Excellence.	Devote professional effort to explaining and promoting the concept of the ERA.	Do more to explain ERA philosophy to wider scientific community. Involve Member States' programmes in establishment of ERAs in sustainable energy systems.
Policy/intervention instruments				
Candidate countries			Develop projects that meet Candidate Countries' specific needs and help them develop basic infrastructures in areas covered by NNE programme. Help proposers from Candidate Countries find own funding for shared-cost FP projects. Find further ways to disseminate best practice to Candidate Countries.	Make sure the special needs of the Candidate Countries are taken into consideration.

International cooperation			<p>Develop strategy for international cooperative actions in NNE.</p> <p>Strengthen existing cooperative agreements and introduce more. Hold more NNE-related workshops.</p> <p>Ensure information flows are in both directions.</p> <p>Make use of international networks (e.g. OPETs) to increase international cooperation.</p> <p>Establish link with UNESCO work on ethics in science and technology including energy.</p>	<p>Develop combined strategy for international co-operation in sustainable energy systems that includes not only work carried out through the cooperative agreements but also work carried out through the IEA programmes or through the initiatives of individual scientific officers. Avoid cooperation that does not bring positive benefits to EU.</p>
SMEs			<p>Retain special programme to support SMEs. Ensure NNE scientific officers fully acquainted with it to ensure good integration of SME projects into NNE programme.</p> <p>Remove obstacles to SME participation in NNE programme by streamlining procedures, creating help-desk, introducing simpler type of contract, and speeding up contract negotiation and payment of invoices.</p>	<p>Do all you can to ensure that a role for SMEs is found in the FP6 programme.</p>
Innovation (including patenting)				
Gender awareness			<p>Try to increase numbers of women in NNE programme management. Encourage submission of proposals from associations that promote women scientists. Hold seminars targeted at women in Member States and participating countries. Use successful women scientists to promote programme.</p>	

Public awareness				
Socio-economic aspects				
	2. IMPLEMENTATION, MANAGEMENT AND PROCESSES			
Procedures and tools in general	Put in place a management structure that is compatible with the unified programme structure.	Improve internal communication between various levels in DGs so top management policy is executed properly by staff. Develop strategic management communication to ensure everyone involved in a FP is aware of strategy and policy.	Investigate communication flows within each DG and and between the two DGs, identify the communications flows needed for efficient running of the programme, identify the interfaces that hinder this, and take steps to improve matters.	For FP6, provide “joined-up” management by the two DGs, with mutually-agreed goals/strategy. Prepare overall integrated work programme for later FP6 calls. Make sure groups established to give strategic steer talk to each other. Make sure reports relating to strategy have inputs from both DGs. For FP7, consider placing programme management under one umbrella. Develop common work programme that covers whole range of activities from basic research to market introduction.
				Start preparation of FP7 early enough for all the procedures, documentation and tools to be ready in good time. Make sure lessons learned in FP6 are taken into account in design of FP7.

Procedures and tools in general (cont.)	Bring signature rights as near as possible to the staff who are applying the rules.		Simplify procedures required for submitting proposals and negotiating contracts, make them more pragmatic and (in the case of contract negotiation) reduce time duration. To achieve latter, allow Commission approvals to be given at the lowest (rather than the highest) responsible level. Consider using fixed-fee type of contract where payment is made on delivery of agreed outputs, where practicable. Make strenuous efforts to pay invoices within time limits set out in contracts.	
			Strengthen contacts with NNE NCPs and encourage networking between them.	
			Try to get best value from Programme Committee and EAG. Prepare meetings well in advance with focused papers that do not contain unnecessary detail.	
Launch of activities (calls for proposals, information to proposers, application tools ...)	Encourage pre-screening of proposals. Revise Info Pack so it is simpler and explains the work programme, what is required of proposers and the evaluation process more clearly. Improve access to calls and provide better feedback to potential proposers. Make good use of up-to-date technologies: mailing lists, email distribution, suggestion boxes, etc. Where helpful, provide oral and written information to potential proposers in local language, where possible.	Reduce size of Info Pack and simplify it. Make sure closing dates of short-term and medium- to long-term proposals are on same date.	Put professional effort to identifying researchers and companies that can make a real contribution to programme and encourage them to submit proposals. Improve the web site. Simplify the Info Pack.	

Evaluation and selection of proposals (evaluation manual, time to contract...)	Notify evaluators well in advance. Distribute evaluation guidelines during briefing meeting. Take evaluators through guided evaluation exercise. Balance time spent on evaluations between evaluators.	Introduce proposer anonymity into evaluation procedure.	Give extended panels tighter guidelines. Maintain rest of existing evaluation procedures for remainder of FP5. For FP6, reconsider place of evaluation (whether this should be in Brussels or in evaluators' offices), proposer anonymity and evaluators' daily rates and make changes as appropriate.	
	Provide guidance on meaning of "European Added Value".	Provide guidance on meaning of "European Added Value".		
Management Information System/Internal IT System	Put in place a management information system that is user-friendly, reliable and comprehensive. It should include the existing evaluators' database.	Put in place a user-friendly management information system. Involve users in system specification. Buy standard system from the marketplace and ensure it is usable by all DGs and all specific programmes in FP so consistent consolidated data can be provided to management from different calls, etc. Ensure system is flexible enough to meet requirements of consecutive FPs.	Improve internal information systems so they are effective tools for scientific, contract, finance officers and managers. Make outputs from DG TRD and DG TREN compatible. Have FP6 system in place from beginning of that programme.	
Specific cases/ programmes	Take steps to improve quality of proposals for demonstration projects. Ensure that demonstration is not mere up-scaling exercise.			
Dissemination of information and results	Bring the DG RTD and DG TREN dissemination exercises together. Ensure there is equal dissemination from the two parts of the NNE programme.		Develop and implement in a professional way a strategy for communicating and disseminating project outputs to market. Ensure that at least a summary of all project findings is posted on Cordis.	Develop and implement combined strategy for both DGs for dissemination of project and programme outputs.

Evaluation and monitoring	Current monitoring procedures were devised to fit FP4. Modify them so they fit the more matrical structure of FP5. Conduct monitoring during Dec-March, rather than Oct-Jan. At beginning of monitoring, present panel with basic information pack of the two previous monitoring reports, the core indicators of year in question, the work programme with a qualitative overview of progress, a synthesis document explaining management structures, and up-to-date organograms. Ensure compatibility between broad guidelines and technical annex of contracts.	Provide monitoring panel with the statistics necessary for conducting the rigorous analysis needed to follow the broad guidelines. Adapt the monitoring process to fit the matrical structure of FP5.		Stop annual monitoring exercises. Monitor at mid-term and end of FP6. Make FP7 last 7 years, a thorough evaluation and monitoring exercise being carried out in year 5 to establish what has been learnt and how successful the various instruments have been. This would allow 2 years to be spent on design of the next programme.
Human resources	Take steps to prevent the staff demotivation that is emerging as a result of internal reorganisation, over-heavy procedures, loss of pin-pointed responsibilities and indefensible time-delays.	Relieve scientific officers of administrative tasks so they can concentrate on tasks requiring technical excellence and expertise, such as impact assessment. Provide training needed to carry out quickly and effectively the DGs' managements' desire to shift focus of scientific officers' work from scientific work to project management and policy preparation and implementation.	Simplify internal procedures so scientific officers can devote more time to encouraging the submission of and managing high quality projects that support an ERA and help Europe meet its energy supply and Kyoto targets.	

3. IMPACT OF POLICY AND PROGRAMMES				
Impact assessment (incl. TIP)	Develop and install quality control system, knowledge management and necessary ad hoc techniques to assess project impact and establish bank of historical knowledge.	In the short term, complete the FP4 pilot impact assessment by extending existing work on a sample of Joule projects to include a sample of Thermie projects too, Carry out full qualitative and quantitative analysis of all FP4 projects in order to gain proper insight into the effects of FP4 and develop structured procedures for impact assessment of FP5 and FP6. In the longer term, set up a structure for assessing the impact of FP6. Ensure the requirements for this are taken into account in the specification of the new management information system.	Put serious effort into measuring the impact of work funded by the programme so far.	Carry on with planned impact assessment of FP3, FP4 and FP5 and plan work to be done on FP6. Ensure that each FP6 project is designed to permit measurement of relevant indicators after project end. Turn the TIP into a Results Implementation Plan suitable for all project types. Design it so it helps contractors develop an effective implementation plan.
4. OTHERS				
5. GENERAL REMARKS				

6.3 Questionnaire

1. Preliminaries
Date and time of interview:
Interview team:
Your names:
Brief description of your areas of responsibility:
2. What are the main results (technological and other achievements and/or failures) in your areas of responsibility regarding implementation (and attainment of objectives) of the NNE work programme for 2002?
3. Are all the FP4 projects in your area now completed? If not, give details. How many FP4 projects in your area were completed in 2002?
4. In your area, how many FP5 projects were completed in 2002? How many FP5 projects will still be on-going at end-December 2002? How many FP5 projects will be initiated in 2003? When do you expect the last of them to be completed?
5. What has been done during 2002 to ensure dissemination of results from and monitor and follow-up the impacts from:
 - (a) the completed FP4 projects in your area?
 - (b) the completed FP5 projects in your area?
 - (c) the on-going FP5 projects in your area?Do you check how far the Technological Implementation Plans for individual projects in your area are exploited? What do you think about the TIPs as a tool?
6. What proportion of the ongoing and soon-to-be-initiated FP5 projects in your area will contribute to establishment of an ERA in your area?
What in your opinion are the prospects for creation of an ERA in your area?
What are the main obstacles?
Do you feel the measures provided by FP6 are sufficient to create an ERA in your area, or are additional measures required? If so, give details.
7. How are the experiences gathered from FP5 being transferred to FP6? What are the main lessons learned from FP5? Are the experiences gathered in your area in FP5 adequately included in FP6?
Are there any other points you want to make about the transition from FP5 to FP6 in your area? Comment on management and other aspects.
Do you expect the transition to be a smooth one? If not, what steps could be taken to improve the transition?
8. Please give details of the actions taken in your area during 2002 to prepare for implementation of FP6. Cover the following and say how successful the actions have been.
 - (a) Steps taken regarding the new instruments. In your answer, tell us how the new big Integrated Projects will be monitored and managed by the Commission.
 - (b) Preparation of the work programme.
 - (c) Preparation and publication of calls.
 - (d) Preparation of model contract.
 - (e) Development of evaluation and selection criteria.
 - (f) Establishment of advisory panels.
 - (g) Provision of information to Member States.

9. Of all your activities in 2002, please tell us about the three of which you are most proud, and the three of which you are most worried.

10. It is part of the Monitoring Group's responsibility to follow up the expert recommendations for the 2001 exercise. The 2001 recommendations focused on the following. Please could you help us monitor progress by answering the following questions.
 - (1) The flow of information within and between the two DGs (RTD and TREN). Please tell us how the flow of information related to your area is organised within your Unit, your Directorate, and between the two DGs. How have matters improved in 2002? Will they be better in FP6?
 - (2) The procedures (and time durations) for submitting proposals and negotiating and signing contracts. Please tell us about any changes that have taken place during 2002 regarding FP5 proposals/contracts. Have matters improved? What has been the time duration in 2002 between the deadline for proposal submission and the signing of an agreed contract by the Commission. Where are the delays, bottlenecks, etc.? Are you satisfied with the plans in this area for FP6?
 - (3) The internal information system. Have improvements taken place during 2002? Are you satisfied with the plans in this area for FP6?
 - (4) The need to develop a strategy for communicating and disseminating project outputs to the market. What happened in 2002 to develop this for your area? Are you satisfied with what has been done? Will matters be better in FP6?
 - (5) The need to put serious effort into measuring the impact of the work funded by the programme so far. Are you satisfied with what was done in this area in 2002? Will matters be better in FP6?
 - (6) The need to put professional effort to explaining and promoting the concept of the ERA. Do you consider this has been done adequately?
 - (7) International co-operation. Please tell us what activities have taken place in 2002 in your area. What are the plans for the future?
 - (8) Candidate countries. How far have the Candidate Countries been involved in projects in your area in 2002? How do you overcome the language problem? How are the special needs of the Candidate Countries – to enhance their research capabilities, bring standards to the level of the West, develop infrastructures, find own-funding, etc. – being met? Will things be better for them in FP6?
 - (9) SMEs. How far have SMEs been involved in FP5 projects in your area in 2002? Will things be better for them in FP6?
 - (10) Women and Science. How many women were involved in managing the NNE FP5 programme, serving as external proposal evaluators, serving on the various advisory etc panels for the NNE programme in 2002?
 - (11) Human resources. Are scientific officers still overloaded with administrative matters? Will things be better in the future?
 - (12) Payment of invoices. What has been the time delay in 2002 for paying invoices for which all the relevant paperwork has been received? Will matters be better in FP6?
 - (13) Access to potential applicants. Do you feel you are reaching the right people in your area?
 - (14) Relations with NCPs. Were you happy with the relations with the NCPs in 2002? What will happen with FP6?
 - (15) Relations with the Energy Programme Committee. Was this satisfactory in 2002? What will happen with FP6?
 - (16) Relations with the EAG. Was this satisfactory in 2002? What will happen with FP6?
 - (17) Proposal evaluation. Were you happy with the proposal evaluation in 2002? Do you feel the FP6 procedures will be good?

6.4 Information provided to the experts by the programme management

Documents related to monitoring:

- Broad Guidelines for the 2002 Monitoring of the Implementation of the European Research Area (ERA) and of the Community Research Framework Programmes and Specific Programmes
- Composition of the 2002 Monitoring Panel and Experts Groups
- Monitoring Reports on the Specific Programme for Research and Technological Development in the Field on Non-Nuclear Energy for the years 1999, 2000 and 2001
- Slide presentation on the 2001 Monitoring of the Non-Nuclear Energy programme given by the Monitoring Expert Group chairman to the Programme Committee
- Monitoring Reports on the Framework Programme for Research and Technological Development for the years 1999, 2000 and 2001
- Monitoring Report on European Research Area Activities (ERA) for the year 2001

Information provided by DG RTD and DG TREN on the NNE programme, its results and management:

- Self-assessment of Programme Implementation 2002: Energy, Environment and Sustainable Development – Part B: ENERGIE. DG RTD and DG TREN staff.
- Presentation given to Monitoring Experts on 19 November 2002 by Pablo Fernández Ruiz, Director of DG RTD Directorate J on the NNE programme
- Presentation given by Pablo Fernández Ruiz to the Heysel conference on 11 November 2002 on the FP6 specific programmes on environment, transport and energy
- Leaflet giving presentation on DG TREN and its activities; August 2002
- Organisational chart for DG TREN giving names of Heads of Units; June 2002
- Contact details of all officers in DG TREN Directorates A, B, C and D concerned with the Non-Nuclear Energy demonstration programme; November 2002 (updated version)
- Responsibilities of officers in DG RTD Directorate J; November 2002
- Organisational chart for DG RTD giving names of Heads of Units; November 2002
- Slides used for presentation given to Monitoring Experts on 19 November 2002 by José Laranjeira Anselmo on the work of the DG TREN B2 Cell for Dissemination and Valorisation of Results.
- Statistical information and other data on DG RTD NNE projects 2002
- Statistical information and other data on DG TREN NNE projects 2002
- Graph showing the reduction in TREN Directorate D's ongoing projects over the period July 2000 to November 2002
- Energy, Environment and Sustainable Development (FP5) Work Programme Update, Part B: Energy. Priorities and roadmaps 2001-2002. August 2001.
- Texts of the FP5 NNE-related Calls evaluated in 2002:
 - The open Call for RTD activities of a generic nature, training, accompanying measures and SME measures. Published 24 October 2000. Cut-off dates 14 December 2001 and 28 February 2002.
 - The Call for proposals to include partners from the NAS. Call published 28 August 2001. Closing date 14 December 2001.

- The Call for proposals to support the integration of NAS in the European research area. Call published 18 September 2001. Closing date 31 January 2002.
- Work Programme for FP6 Part 6.1 Sustainable energy systems. 17 December 2002.
- Text of FP6 NNE-related Calls:
 - Invitation to submit Expressions of Interest for Networks of Excellence and Integrated Projects. Call published 20 March 2002. Deadline 7 June 2002.
 - Periodic call in the area of “Sustainable energy systems”. Published 17 December 2002. Closing date 18 March 2003. (Relates to DG TREN part of programme.)
 - Thematic call in the area “Sustainable development, global change and ecosystems, 1) Sustainable energy systems, ii) Research activities having an impact in the medium and longer term”. Published 17 December 2002. Closing date 18 March 2003. (Relates to DG RTD part of programme.)
- Report on the analysis of FP6 Expressions of Interest 2002. Section 1.1.6(i). Analysis report on Sustainable Energy Systems. September 2002.
- Names and contact details of Programme Committee members in 2002
- Minutes of the Energy Programme Committee meetings held in 2002
- Names and contact details of the External Advisory Group in 2002
- Names and contact details for of members of the Advisory Group on Energy (AGE) appointed in 2002
- Minutes of the AGE meetings held in 2002
- Names and contact details of the National Contact Points dealing with the NNE programme in 2002
- Information on DG TREN CIVITAS (Cleaner and better transport in cities) projects
- Information on DG TREN CUTE (Clean urban transport for Europe) projects
- Gender in research: gender impact assessment of the specific programmes of the Fifth Framework Programme. Energy sub-programme. Executive summary. October 2001.
- Assessment of the development of the European Research Area (ERA) in non-nuclear energy (NNE) research. Heather Greer. September 2002.
- Information on (and related to) the European Commission website on Energy Research
- Progress report on scientific and technological references – energy technology indicators. ESTIR. Working document. December 2002. DG RTD Unit J1.
- Impact assessment of the 4th Framework Programme – Non Nuclear Energy Projects. Sector: RES-Renewable Energies (Joule and Thermie A). December 2002.
- Best practice projects yearbook, 1997-2000. Description of selection of demonstration projects in EU and Norway implemented in 1997-2000 involving different types of renewable energy technologies. Report prepared with funding from DG TREN FP5 NNE programme. Published in 2002.
- Fuel cells – powering the future. Brochure produced by DG RTD in 2002.
- Photovoltaics – an energy resource for the European Union. Brochure produced by DG RTD in 2002.
- Integration of renewable energy sources and distributed generation in energy supply systems. Brochure produced by DG RTD in 2002.
- Biomass – an energy resource for the European Union. Brochure produced by DG RTD in 2002.

- Eurobarometer. Energy: issues, options and technologies. Science and Society. Report produced by The European Opinion Research Group for DG RTD. EUR 20624. December 2002.

Other relevant documents:

- Council Decision of 22 December 1998 concerning the rules for the participation of undertakings, research centres and universities and for the dissemination of research results for the implementation of the fifth framework programme of the European Community (1998-2002).
- Council Decision of 25 January 1999 adopting a specific programme for research, technological development and demonstration on energy, environment and sustainable development (1998-2002).
- Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions. Towards a European research area. 18 January 2000.
- Communication from the Commission to the Council and the European Parliament. The Framework Programme and the European Research Area: application of Article 169 and the networking of national programmes. COM(2001)282 final. 30 May 2001.
- Decision No 1513/2002/EC of the European Parliament and of the Council of 27 June 2002 concerning the sixth framework programme of the European Community for research, technological development and demonstration activities, contributing to the creation of the European Research Area and to innovation (2002 to 2006)
- Communication from the Commission. More research for Europe: towards 3% of GDP. COM(2002)499 final. 11 September 2002.
- Council Decision of 30 September 2002 adopting a specific programme for research, technological development and demonstration: 'Integrating and strengthening the European Research Area' (2002-2006).
- Council Decision of 30 September 2002 adopting a specific programme for research, technological development and demonstration: 'structuring the European Research Area' (2002-2006).
- Communication from the Commission. The European Research Area: providing new momentum, strengthening – reorienting – opening up new perspectives. COM(2002)565 final. 16 October 2002.
- Support to the participation of SMEs in the Sixth Framework Programme. Working document dated 4 Nov 2002.
- Regulation of the European Parliament and of the Council concerning the rules for the participation of undertakings, research centres and universities in, and for the dissemination of research results for, the implementation of the European Community Sixth Framework Programme (2002-2006) adopted on 5 November 2002.

6.5 List of officials interviewed

Directors:

Mr Pablo Fernandez Ruiz	DG RTD	Directorate J
Mr Pedro de Sampaio Nunes	DG TREN	Directorate C

Heads of Unit:

Mr Michel Poireau	DG RTD	Unit J1
Mr Angel Perez-Sainz	DG RTD	Unit J2
Mr Wiktor Radlow	DG RTD	Unit J3
Mr Karl Kellner	DG TREN	Unit D2
Mr Gonzalo Molina	DG TREN	Unit D3

Scientific, Technical and Policy Officers:

Mr Jerome Poussielgue	DG RTD	Unit J1
Mr Frederick Marien	DG RTD	Unit J1
Mrs Garbine Guiu	DG RTD	Unit J3
Mr Pierre Dechamps	DG RTD	Unit J2
Mr Antonio Paparella	DG RTD	Unit J2
Mr Manuel Sanchez-Jimenez	DG RTD	Unit J2
Mr Thierry Langlois d'Estaintot	DG RTD	Unit J3
Mr Juergen Greif	DG RTD	Unit J3
Mr Barry Robertson	DG RTD	Unit J3
Mr Philippe Schild	DG RTD	Unit J3
Ms Doris Schroecker	DG TREN	Unit A1
Mr Massimo Mina	DG TREN	Unit A1
Ms Monica Menapace	DG TREN	Unit A1
Mr Jose Laranjeira Anselmo	DG TREN	Unit B2
Mr Nikolaos Koukouzas	DG TREN	Unit C3
Mr Roberto Gambi	DG TREN	Unit D2
Mr Henri Pauwels	DG TREN	Unit D2
Mr Alexandros Kotronaros	DG TREN	Unit D2
Mr Kyriakos Maniatis	DG TREN	Unit D2
Mr Jan Eric Hanssen	DG TREN	Unit D3
Mr Marcel Rommerts	DG TREN	Unit D4

6.6 List of others surveyed

Questionnaires were sent to Member States' and Participating Countries' delegates to the Energy Programme Committee, members of the EAG and AGE, and the NCPs dealing with the NNE programme. By 11 March 2003, responses had been received as follows, of which twenty three were detailed.

Energy Programme Committee delegates from:

Austria
Belgium
Bulgaria
Cyprus
Czech Republic
Denmark
France
Germany
Latvia
Malta
Netherlands
Norway
Poland
Portugal
Slovakia
Spain
Sweden
Switzerland
UK

EAG members from:

Norway
Portugal
Slovakia
UK

AGE members from:

Czech Republic
Finland
France
Germany
Ireland

NCPs from:

Belgium
Cyprus
Finland
Israel
Italy
Lithuania
UK

PART B:

**Responses of the Programme Management to the
external Monitoring Report**

RESPONSES BY COMMISSION SERVICES TO THE 2002 NON NUCLEAR ENERGY MONITORING REPORT

Experts Recommendations 2002	Commission Services' Responses	Services' Commitments (if any)	Deadline
1. Strategy and objectives			
<p>Establish network to encourage those working on conventional fuels through Member States' programmes to communicate with each other and establish ERA in this area.</p> <p>Put even more effort into explaining the new FP6 instruments to the scientific community. Do more to explain ERA philosophy to wider scientific community.</p>	<p>The establishment of networks in the area of conventional fuels is not a Community priority under the Sixth Framework Programme (the subject can only be considered under CO2 sequestration activities). Therefore the work will be limited to the follow-up of existing network projects (ongoing for 3 more years), and encouraging and facilitating any MS initiatives for using other areas of the Sixth Framework Programme such as ERAnets.</p> <p>In addition to the efforts made at framework programme level to promote the European Research Area (see response to the first recommendation of the Framework Programme Monitoring report), specific initiatives have already been taken. Thus, info days for the scientific community and a larger public were organised by DG Research and DG TREN on a regular basis, in Brussels and in the Member and Associated States.</p> <p>Other measures are also currently foreseen:</p> <ul style="list-style-type: none"> - Links with European Commission Delegations in third countries will be established in order to promote their participation in the Sixth Framework Programme. - The information on CORDIS and Energy Research website will be improved and, special attention will be put to guarantee the focus, quality and readiness of EC Energy RTD Publications in view of a better understanding from the public. 	<p>Specific promotion of information on the Sixth Framework Programme and European Research Area</p>	<p>End 2003, beginning 2004</p>

RESPONSES BY COMMISSION SERVICES TO THE 2002 NON NUCLEAR ENERGY MONITORING REPORT

Experts Recommendations 2002	Commission Services' Responses	Services' Commitments (if any)	Deadline
Involve Member States' programmes in establishment of ERA in sustainable energy systems.	It is intended to develop this task in the framework of the Energy configuration of the Programme Committee 'Sustainable Energy Systems', as a regular activity.	Increased involvement of Members States	Regular activity
Make sure the special needs of the Candidate Countries are taken into consideration.	Candidate Countries are subject, under the Sixth Framework Programme, to the same rights and obligations as European Union Member countries. Specific information activities should be organised together with NCPs and European Commission Delegations in those countries with guidance from EC headquarters. The specific needs of Candidate Countries will be taken into consideration in the adaptations of the work programme on an ad hoc basis. Specific actions aimed at enhancing participation are planned, including specific calls for proposals (see also the response to recommendation 7 of the Framework Programme Monitoring report).	Specific measures, including calls for proposals	2003
Develop combined strategy for international co-operation in sustainable energy systems that includes not only work carried out through the co-operative agreements but also work carried out through the IEA programmes or through the initiatives of individual scientific officers. Avoid co-operation that does not bring positive benefits to EU.	A general international co-operation strategy has been introduced in the work programme and is currently being implemented. It includes political, administrative and technical work. Thus, a legal basis and technical framework for facilitating EU partners cooperation with third countries and the participation of organisation from these countries in Framework Programme activities exists.		
Do all you can to ensure that a role for SMEs is found in the FP6 programme.	An interservices Task Force on SMEs was established in December 2002 to monitor SME participation in the Sixth Framework Programme, to define targets of SME participation per thematic area priority and to develop new measures to facilitate SME participation whenever appropriate. Special emphasis was given to SME participation in 'Sustainable Energy Systems' by DG Research and DG TREN during the info days and in the briefing to the proposals' evaluators and moderators In addition some activities have been designed to address specific SME needs, by means of co-	Follow-up of the Inter-services Task Force on SMEs	Regular activity

RESPONSES BY COMMISSION SERVICES TO THE 2002 NON NUCLEAR ENERGY MONITORING REPORT

Experts Recommendations 2002	Commission Services' Responses	Services' Commitments (if any)	Deadline
	operative research projects (Fifth Framework Programme CRAFT) and the new collective research activities (see also the response to recommendations 8 of the Framework Programme Monitoring report).		
2. Implementation, management and processes			
For FP6, provide 'joined-up' management by the two DGs, with mutually agreed goals/strategy.	The close co-operation between the two DGs in the management of the Programme has been strengthened during the start-up of the Sixth Framework Programme and will be maintained in future. All activities (info days, Programme Committee meetings, Advisory Group meetings as well as the actual project management) are carried out with the close interaction and collaboration between DG Research and DG TREN.		
Prepare overall integrated work programme for later FP6 calls.	A common work programme has been developed for the first call of the Sixth Framework Programme and will be reviewed jointly in the Framework of Programme Committee activities.	Being carried out	
Make sure groups established to give strategic steer talk to each other. Make sure reports relating to strategy have inputs from both DGs.	The Commission services take note of the questions concerning inter-services consultation and will implement Panel recommendations and make sure that DG Research and DG TREN co-operation mechanisms - already established - work smoothly at every level.	Enhance co-operation between services involved	Regular activity
For FP7, consider placing programme management under one umbrella. Develop common work programme that covers whole range of activities from basic research to market introduction.	The current responsibilities in programme management reflect the distinct objectives of research and energy policy. Any decision about changing such approach have to be discussed and analysed well in advance. The development of a common work programme covering activities from basic research to market introduction will be considered.	Re-examine the programme management	For further consideration in the context of the preparation of the next Framework Programme

RESPONSES BY COMMISSION SERVICES TO THE 2002 NON NUCLEAR ENERGY MONITORING REPORT

Experts Recommendations 2002	Commission Services' Responses	Services' Commitments (if any)	Deadline
Start preparation of FP7 early enough for all the procedures, documentation and tools to be ready in good time. Make sure lessons learned in FP6 are taken into account in design of FP7.	Next Framework Programme preparation will start early enough to respect deadlines, but also to take into account the first lessons from the Sixth Framework Programme, particularly those resulting from different sources (monitoring and assessment exercises carried out during the Sixth Framework Programme period, results of calls for proposals, midterm review of the impact of new instruments...).		
Develop and implement combined strategy for both DGs for dissemination of project and programme outputs	A new RTD information and communication strategy is being designed: it will integrate this recommendation.	Renewed communication strategy	2003
Stop annual monitoring exercises. Monitor at mid-term and end of FP6. Make FP7 last 7 years, a thorough evaluation and monitoring exercise being carried out in year 5 to establish what has been learnt and how successful the various instruments have been. This would allow 2 years to be spent on design of the next programme.	Those recommendations will be duly taken into consideration in the new monitoring and evaluation policy proposed for all RTD areas. The monitoring will be reconfigured as an essentially - but not exclusively - internal management process. The implementation of the Annual Management Plan and its regular follow-up, possibly accompanied by the opinion of external experts, could be major components of such a revised process. In addition, a focussed external review of the implementation could take place at midterm of a Framework Programme's life cycle. (see also the response to recommendation 10 of the Framework Programme Monitoring report).	Set up of a reconfigured monitoring system	2003

RESPONSES BY COMMISSION SERVICES TO THE 2002 NON NUCLEAR ENERGY MONITORING REPORT

Experts Recommendations 2002	Commission Services' Responses	Services' Commitments (if any)	Deadline
3. Impact of policy and programmes			
<p>Carry on with planned impact assessment of FP3, FP4 and FP5 and plan work to be done on FP6.</p> <p>Ensure that each FP6 project is designed to permit measurement of relevant indicators after project end.</p> <p>Turn the TIP into a Results Implementation Plan suitable for all project types. Design it so that it helps contractors develop an effective implementation plan.</p>	<p>Third, Fourth and Fifth Framework Programme's impact assessment exercises are being carried out.</p> <p>Under the Sixth Framework Programmes, projects shall be measured periodically and at their end against the criteria used for their selection. Failure to match the required score might lead to the termination of the project.</p> <p>According to the results of the study 'Methodological analysis of TIPs as a tool for impact assessment and evaluation' commissioned by the Commission services, the TIP in its present form is not the best suited tool for impact and evaluation studies. However, TIPs have a good range of uses related to exploitation of results (their original purpose), and may contribute to impact studies as one amongst other inputs. To enhance the overall use of this tool, it is recommended that guidelines are established to help Fifth Framework Programme project coordinators in filling in the TIPs in a more efficient and standardised way.</p> <p>Under the Sixth Framework Programme; it is foreseen to implement a plan for the valorisation and diffusion of knowledge (annexe 1 of contracts), which will have to exist already at the origin of the projects and will be subject to a follow up during the project's life and at its end. It must also be underlined that the costs linked to the valorisation of results are now eligible for financing.</p>	<p>Impact assessments</p> <p>Methodological study on TIPs: final report June 2003</p> <p>Plan for the valorisation and diffusion of knowledge</p>	<p>Being carried out</p> <p>Achieved</p> <p>Being carried out</p>