



Policy Instruments for Chinese Sustainable Future:
Environmental Policy Integration and
Strategic Environmental Assessment
for the Energy and Transport Sectors

An Action under the
European Union's Asia Pro Eco II Programme
Project No. 122184

CHINA-EPI-SEA Paper No. 7_EN

**Proposal for the integration of the
planning and assessment
processes**
(Xichang Energy Plan)

Olivia Bina (Stockholm Environment Institute)
With input from
Andrea Ricci (ISIS)

Wuppertal Institute, Wuppertal, 2007

22 November 2007

Project outline

Policy Instruments for Chinese Sustainable Future focuses on the integration of the environment into transport and energy planning in China, both at the policy level and in terms of concrete measures for the two administrative levels of provinces and municipalities. The implementation of this project will help to build transportation and energy-use systems that are environmentally sound and capable of achieving sustainable development in China. As part of the Asia Pro Eco II Programme the project contributes to the programme's main themes for China: energy savings, improved air quality and reduced emissions of GHGs.

At the heart of this project are two closely related mechanisms that are central to the EU efforts to promote sustainability: Environmental Policy Integration (EPI) and Strategic Environmental Assessment (SEA).

The action targets the inadequate reflection on environmental policy objectives and the weakness of the environment as a cross-sectoral priority and the need for information and knowledge of technical/practical solutions that can lead to immediate improvements in the development of sectoral plans. The 30 months Action consists of four work packages and multiple activities.

For further information please look at:

http://www.epi-in-china.com/project_information/summary.html

How to cite this CHINA-EPI-SEA Paper:

Bina, O. (2007) *Proposal for the integration of the planning and assessment processes (Xichang Energy Plan)*, CHINA-EPI-SEA Paper No. 7_EN, Wuppertal Institute: Wuppertal.

Contents

| | |
|---|----------|
| PURPOSE OF THIS REPORT | 4 |
| CURRENT PROPOSALS FROM CHINESE THE COLLEAGUES | 4 |
| <i>A) Proposed Energy Plan contents (summary):</i> | <i>5</i> |
| <i>B) Planning process - from the draft EPI report:</i> | <i>6</i> |
| <i>Windows of opportunity – a proposal</i> | <i>7</i> |
| <i>Legend for the table headings:</i> | <i>7</i> |
| <i>Assumptions:</i> | <i>8</i> |

Purpose of this report

In our report “*Comments on the Energy Scoping Report Oct. 07*” of 8 November 2007, we stressed the importance of Chapter 3- setting out the ‘windows of opportunity’ that the process of planning will provide. The idea is to use such ‘windows’ to integrate environmental objectives and overall environmental concerns *during* the planning process, and critically – before a full draft of the plan is produced.

In an email (16/11/07) it was confirmed that a full draft of the energy plan is due at the beginning of 2008. For such a draft to be ready, it is assumed that the planning process is ongoing and will be well advanced by early 2008. This has major implications for the SEA process design and timing. Therefore, in this report we make suggestions on possible ‘windows of opportunity’ that could ensure the effective integration of SEA and planning (so called ‘process integration’).

Given the importance of this issue, and the tight deadlines, we welcome comments and suggestions by the Chinese partners as soon as possible (ideally within two weeks from receipt of this report).

Current proposals from Chinese the colleagues

Based on the available material, and the recent email exchange (16 November 2007) relating to the status of the energy plan draft, there are two proposals:

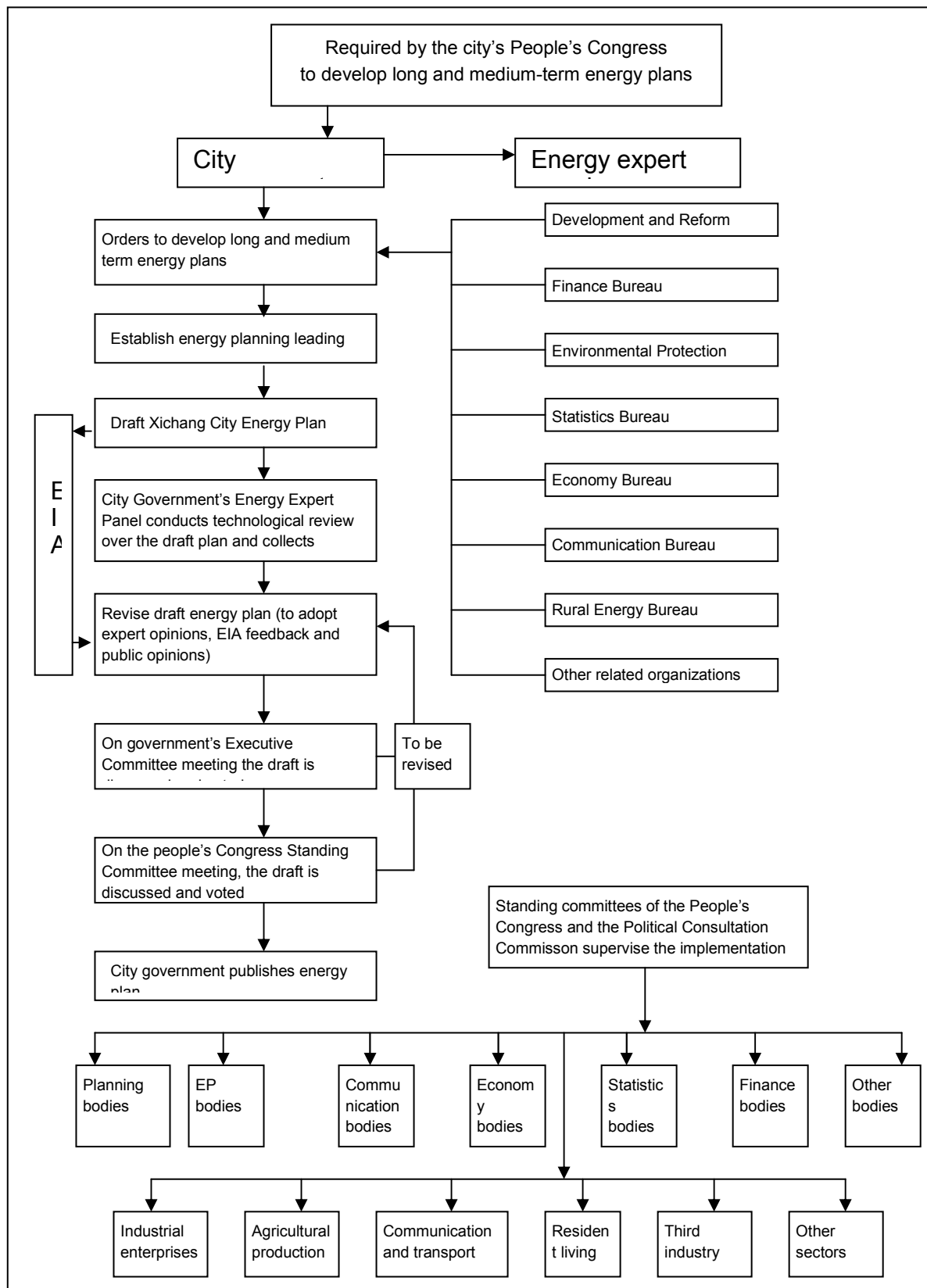
- A) contents for the energy plan
- B) draft planning process.

I reproduce these below.

A) Proposed Energy Plan contents (summary):

- 1. Current situation of energy use in Xichang City**
 - 1.1 City and townships**
 - 1.2 Rural**
 - 1.3 Industry**
- 2. Energy Development Plan of Xichang City (2010-2020)**
- 3. Planned Priority Projects of the Energy Plan**
 - 3.1 Priority Projects in the city and township area**
 - 3.1.1 Energy efficient buildings
 - 3.1.2 Green street lighting
 - 3.1.3 Energy efficiency in the public sector
 - 3.2 Priority Projects in the rural areas**
 - 3.2.1 Rural biogas plan
 - 3.2.2 Popularisation of solar thermal water heaters
 - 3.2.3 Ecological Protection
 - 3.3 Priority Energy Efficiency Projects in industry**
 - 3.3.1 Analysis of typical industry branches (I think this means identification of...)
 - 3.3.2 Energy consumption and energy savings plan for the steel sector
 - 3.3.3 Energy consumption and energy savings plan for the cement sector
 - 3.3.4 Energy consumption and energy savings plan for the metallurgy sector

B) Planning process - from the draft EPI report:



Windows of opportunity – a proposal

The concept of windows of opportunity draws on the work by Caratti et al. (2004). It is meant to provide a theoretical and practical support to the integration of planning and assessment tasks. A definition of 'windows of opportunity' is given in our report "*Comments on the Energy Scoping Report Oct. 07*" of 8 November 2007 (p.11):

Identify the main stages in planning (windows of opportunity) that should be informed and influenced by the SEA, and specify the approximate timeline for each stage so as to ensure that the SEA can contribute to it in a timely and effective way. Such stages have been defined as: 'moments in the decision-making process where critical choices are made, which have an environmental implication' (Bina *et al.* 2004:88).

A table format is proposed below – note that this section of the report should be constantly UPDATED as new, more precise information is made available. Also, some of the information for this section will come from the sections below (such as Lead organisation). This is meant as a detailed elaboration of the example shown in the presentations.

The aim is to combine the planning process (in the draft EPI report) and the SEA process (in the draft scoping report). The greater the level of detail, the greater the opportunity to integrate environmental concerns into the planning. Early integration is possibly the most important criteria for good practice SEA.

Below is a proposal of 'windows of opportunity' based on the information we have to date. **It serves as an illustration only** and many of the suggestions may not be accurate, including dates (first column), which are just guess work. They present an almost ideal sequence of events. We hope this will help our Chinese partners to develop an accurate version of the table: the table below needs to be checked and amended by the Chinese partners based on their knowledge of the actual situation and progress to date.

Legend for the table headings:

- a = Many of these tasks, as well as the specific actions (inputs, analysis and outputs) could represent a 'window of opportunity' for SEA to influence and guide planning. You should highlight these with a colour.
- b = Collecting either qualitative or quantitative data and information (INPUTS);
- c = Analyse the data using formal or informal tools, techniques and assumptions (ANALYSIS/DISCUSSION);
- d = The outcomes of the analysis are expressed as outputs: they can be a report, a tool, a seminar etc. They are then discussed either implicitly or explicitly in order to inform the decision (DISCUSSION/OUTPUTS).

Assumptions:

Dates:

It is assumed that a full draft of the energy plan will be completed by end of February 2008. This may not be correct hence dates will need to be changed accordingly.

a Planning tasks:

It is assumed that the City DRC would lead any planning tasks with a higher political dimension to it. The Expert Group would lead tasks that are primarily technical.

Table - Windows of Opportunity for integrating SEA into planning

| Dates (specific pls!) | Planning task (a) | Lead organization | Input required (b) | Analysis proposed (c) | SEA integration opportunity | Outputs expected (d) from planning |
|-----------------------|---|-------------------------|---|--|--|--|
| Autumn 2006 (?) | 1) Set up an energy expert group responsible for drafting the energy plan | City DRB | Overview of the main issues to be discussed during planning (based on previous energy plans, annual progress reports, assessments etc). | Could include a stakeholder analysis | Ensure that the environmental perspective is represented within the group. For example, by including the EPB as a member. IS THIS WHAT ACTUALLY HAPPENED? If so it should be recorded as part of the early stages of the SEA process. | A formal decision (approved by the City Government) which lays out the list of organisations and actors member so the Group, with details of their role. |
| Autumn 2006 | 2) Identification of the main issues surrounding energy planning: priorities, concerns, problems, expectations etc. | City DRB - Expert Group | Same as above, with additional level of detail. Major policy documents relating to energy (international, national, provincial and municipal sources). Selected stakeholders and NGOs are invited to submit data, analyses and other inputs for consideration by the Group. | Analysis of background data (status quo) on: Energy production (sources, quantity) Energy demand (sources, quantity) Efficiency levels Impacts (economic, social, environmental) Supply forecasts Demand forecasts Etc... Group discussions. | Include a summary of the main policies and laws relevant to energy planning (input (b)). Include information to highlight the environmental and sustainability dimension of the issues being discussed (analysis (c)). | A list of main issues to be addressed in the new energy plan. A list of additional data and analyses that need to be gathered and produced for subsequent detailed planning stages. |
| Spring 2007 | 3) Identification of a <i>preliminary</i> list of objectives and indicators for the draft plan | City DRB - Expert Group | Outputs from task 2. Main trends in: Energy consumption Emission levels per sector Air quality Other... | Discussion of significance of current trends. | Ensure that the environmental and sustainability dimension of the preliminary objectives (and indicators) is included (inputs (b) and analysis (c)). | <i>Preliminary</i> list of objectives and indicators for the draft plan (agreed by the group and approved by the City Government) |
| Spring 2007 | 4) Establish and interpret the current energy balance for Xichang | Expert Group | Input/analysis/output from task 2. Additional level of detail. | Analysis of trends. | Include information to highlight the environmental and sustainability dimension of the current energy balance (inputs (b) and analysis (c)). | Report outlining the current energy balance. |
| Spring 2007 | 5) Establish and describe | Expert Group | Input/analysis/output from | Projected estimates of | Include information to highlight | Report describing the |

Proposal for the integration of planning and assessment processes

| Dates (specific pls!) | Planning task (a) | Lead organization | Input required (b) | Analysis proposed (c) | SEA integration opportunity | Outputs expected (d) from planning |
|-----------------------|--|-------------------------|---|---|--|--|
| | the 'reference/do nothing' scenario | | tasks 2 and 4. Overview of: Use in city/townships Use in rural areas Use by Industry Other | variables/indicators measuring the performance of such scenario against the preliminary objectives (task 3) The "reference/do nothing" scenario is strongly dependent on exogenous variables such as e.g. (i) population growth, climate conditions (e.g. particularly cold winters...), (ii) significant changes in the energy prices, (iii) availability of energy supply from other regions, (iv) changes in lifestyles and associated consumption patterns, etc. Sensitivity of the reference scenario to such variables should be tested, with particular attention to those variables that may be subject to unexpected extreme variations. Ultimately, at least three variants of the reference scenario should be presented: • optimistic (e.g. with respect to the total effect on expected energy balance), • most probable and pessimistic. | the environmental and sustainability dimension of the reference scenario (inputs (b) and analysis (c). This step of planning is closely linked to the baseline task under 'scoping' in SEA. | reference scenario and highlighting the major performance gaps – that is, what will happen (in terms of the preliminary objectives – task 3) if no measures are planned and implemented. |
| Winter 2007 | 6) Consultation to finalise the definition of the problem and objectives | City DRB | Outputs from tasks 1-5 | Stakeholder analysis. Discussion. May involve written comments, interviews, seminars etc. | Ensure that representatives of the environment and sustainability interests are present / participate. | Report summarising the results of the consultation process. List of stakeholders consulted. |
| Winter 2007 | 7) Final definition of the problem and final list of objectives and indicators | City DRB - Expert Group | Outputs from tasks 1-6 | Discussion within the Expert Group | Ensure that the definition of the problem and list of objectives take into account the environmental perspective. | Report outlining the problem definition and the agreed objectives for the Draft Plan. |
| Winter 2007 | 8) Identification of specific sectoral targets for the | Expert Group | National and provincial sectoral targets (from policies | Discussion within the Expert Group | Include information to highlight the environmental and | Identification of specific sectoral targets for the |

Proposal for the integration of planning and assessment processes

| Dates (specific pls!) | Planning task (a) | Lead organization | Input required (b) | Analysis proposed (c) | SEA integration opportunity | Outputs expected (d) from planning |
|-----------------------|---|-------------------------|---|--|---|---|
| | achievement of the objectives (task 7) | | and legislation). Outputs from tasks 1-7 | | sustainability dimension of the objectives and targets (inputs (b) and analysis (c)). | achievement of the objectives (task 3) |
| | Path involving SCENARIOS followed by MEASURES | | | | | |
| Winter 2007 | 9) Preliminary outline of energy scenarios for Xichang | City DRB - Expert Group | Outputs from tasks 1-8 Scenarios: Alternative scenarios corresponding to alternative overall strategies should be devised, including both supply side and demand side energy strategies/asures. For instance: <ul style="list-style-type: none"> • Scenario A could be focusing on maximising endogenous energy supply (irrespective of environmental priorities) to reduce external dependency. • Scenario B would be focusing on energy efficiency and renewables in the building sector, etc. | Each alternative scenario should be assessed against the reference scenario, at least in terms of their qualitative impact (e.g. + or -) on the main performance indicators. This can be for instance derived from causal chain analysis, which determines the direction of change of the indicators as a result of changes in the input variables characterising the scenarios (for instance, Scenario A is likely to entail a better economic performance (less imports) at the expense of the environmental performance (wider recourse to fossil fuel sources), etc. Clearly, more detailed, quantitative analysis, at least for the most important indicators, is preferred, where for instance the final , overall performance of all scenarios is expressed in terms of (i) total consumption by source (and variations Vs the reference scenarios), (ii) total emissions etc. | Contribute to the definition of scenarios. Influence the range and type of extreme events considered. Include information to highlight the environmental and sustainability dimension of the scenarios (inputs (b) and analysis (c)). | Report outlining three alternative scenarios for Xichang |
| Winter 2007 | 10) Preliminary impact assessment of the energy scenarios for Xichang | Expert Group | Outputs from tasks 1-9 | Identification of likely impacts: Economic Social Environmental and sustainability | Include information to highlight the environmental and sustainability impacts (inputs (b) and analysis (c) – both positive and negative impacts! | Report outlining the range of likely impacts of the scenarios for Xichang |
| Winter 2007 | 11) Public participation invited to discuss alternative scenarios and impacts | City DRB | Reports from Task 9-10 | Discussion. May involve written comments, interviews, seminars, events, conferences etc. | Ensure that representatives of the environment and sustainability interests are present / participate. Ensure that the material is | Report summarising the results of the public participation process. |

Proposal for the integration of planning and assessment processes

| Dates (specific pls!) | Planning task (a) | Lead organization | Input required (b) | Analysis proposed (c) | SEA integration opportunity | Outputs expected (d) from planning |
|-----------------------|--|-------------------------|---|---|---|--|
| | | | | | presented in a way that communicates adequately with the audience (i.e. non technical where needed). | |
| Winter 2007 | 12) Revision of proposed scenarios based on the response of the public | Expert Group | Report from Task 11 | Revision of the scenarios with a view to propose the most desirable scenario as a base for detailed proposition of measures (next tasks) | Review the final report (d) to ensure due account was given to the public's comments. | Revised report on energy scenarios. |
| Winter 2007 | Path involving only the definition of MEASURES | | | | | |
| Winter 2007 | 13) Preliminary outline of measures for the supply and demand sides | City DRB - Expert Group | <p>Outputs from tasks 1-8</p> <p>SUPPLY SIDE – explore: -actions increasing energy efficiency of individual energy processes and sources -actions that will modify the structure of supply - actions that will improve the energy trade balance</p> <p>DEMAND SIDE – explore: -actions increasing efficiency of the energy end uses -actions reducing energy demand.</p> | <p>The contribution of each analysed measure to improving the performance of the main indicators should be evaluated (in absolute or/and % terms)</p> <p>Cost benefit analysis of individual measures could be carried out, possibly including a monetary evaluation of social and environmental effects (Social Cost Benefit Analysis SCBA)</p> <p>Identification of likely environmental and sustainability impacts</p> | <p>Contribute to the definition of measures.</p> <p>Include information to highlight the environmental and sustainability dimension of the measures and their likely impacts (inputs (b) and analysis (c) – both positive and negative impacts!</p> | Report outlining possible measures for the supply and demand sides |
| Winter 2007 | 14) Consultation on the range of possible measures | City DRB | Report from Task 13 | Stakeholder analysis (see task 6) Discussion. May involve written comments, interviews, seminars etc. | Ensure that representatives of the environment and sustainability interests are present / participate. | Report summarising the results of the consultation process. |
| Early 2008 | 15) Detailed development of the energy plan measures | Expert Group | <p>Outputs from tasks 1-10</p> <p>SUPPLY side...</p> <p>DEMAND side (based on draft plan contents list – email 16/11/07):</p> <p>Priority Projects in the city and</p> | Sensitivity analysis of the finally selected measures and actions could be ultimately carried out to verify that the adopted policy (here intended as a package of measures) is sufficiently robust (i.e. that its expected overall performance is not seriously at risk if major changes of exogenous variables should occur, such as extreme events in demography, | <p>Contribute to the definition of measures.</p> <p>Include information to highlight the environmental and sustainability dimension of the measures (inputs (b) and analysis (c).</p> | Report outlining detailed measures for the supply and demand sides |

Proposal for the integration of planning and assessment processes

| Dates (specific pls!) | Planning task (a) | Lead organization | Input required (b) | Analysis proposed (c) | SEA integration opportunity | Outputs expected (d) from planning |
|-----------------------|---|-------------------|---|--|--|---|
| | | | township area - Energy efficient buildings - Green street lighting - Energy efficiency in the public sector Priority Projects in the rural areas - Rural biogas plan - Popularisation of solar thermal water heaters - Ecological Protection Priority Energy Efficiency Projects in industry - Analysis of typical industry branches (I think this means identification of...) - Energy consumption and energy savings plan for the steel sector - Energy consumption and energy savings plan for the cement sector - Energy consumption and energy savings plan for the metallurgy sector. | climate, etc.) | | |
| Early 2008 | 16) Technical review and Plan EIA (SEA) | Expert Group | Report from Task 15 (and all other supporting documents Tasks 1-14) | Identification of likely impacts: Economic Social Environmental and sustainability Proposal of mitigation. | Include information to highlight the environmental and sustainability impacts (inputs (b) and analysis (c) – both positive and negative impacts! Try to adopt mitigation as a last resort. The aim should be to ensure that the plan is environmentally consistent. | Report outlining the range of likely impacts of the measures for Xichang's Energy Plan. A separate Plan EIA report should be prepared, including a non technical summary. |
| | 17) Revision of the draft plan | City DRB | Report from Task 16 | Discussion and redrafting | Ensure that the key findings from the Plan EIA report are taken into consideration | Revised Draft Energy Plan. |

Proposal for the integration of planning and assessment processes

| Dates (specific pls!) | Planning task (a) | Lead organization | Input required (b) | Analysis proposed (c) | SEA integration opportunity | Outputs expected (d) from planning |
|--------------------------|---|-------------------|-----------------------------|---|--|---|
| ? | 18) Public participation invited to discuss the detailed measures and their impacts | City DRB | Reports from Task 16 and 17 | Discussion. May involve written comments, interviews, seminars, events, conferences etc. | Ensure that representatives of the environment and sustainability interests are present / participate. Ensure that the material is presented in a way that communicates adequately with the audience (i.e. non technical where needed). | Report summarising the results of the public participation process. |
| ? | 19) Revision of the draft Energy Plan based on the response of the public | Expert Group | Reports from Tasks 16-18 | Discussion and redrafting | Review the final report (d) to ensure due account was given to the public's comments. | Final Energy Plan |
| | 20) Other?? | | | | | |

Bibliography

- Bina, O., MacGillivray, A., Caratti, P., Tamborra, M., Tarquini, R. and Nilsson, M. (2004) The ANSEA Approach. In *Analytical Strategic Environmental Assessment: Towards Better Decision-Making* (Eds, Caratti, P., Dalkmann, H. and Jiliberto, R.) due in 2004, Edward Elgar Publishing Ltd., Cheltenham.
- Caratti, P., Dalkmann, H. and Jiliberto, R. (Eds.) (2004) *Analytical Strategic Environmental Assessment: Towards Better Decision-Making*, Edward Elgar Publishing Ltd, Cheltenham.