



An ethical approach to the formulation of EU energy policy

Introduction

The European Union has its origins in a common market for coal and steel¹, a project with its roots in the quest for world peace based on the affirmation of democracy and supra-nationalism. The control and use of energy continues as a focus of political concern, not just in Europe but globally, with the additional threats and complexities of climate change. This paper explores whether there are universally applicable foundation principles which could help the continuing formulation and adaptation of energy policy in a rapidly changing world. It will also briefly outline a methodology for establishing how decisions can be made which reflect the numerous trade-offs, technical, sectoral and national complexities in energy policy. Any decision about energy policy needs to reflect the most inclusive stakeholder base possible. It will involve a ‘total systems’ approach, a combination of technical and societal factors, and will be ‘values’-based. The key which will unlock progress on this complex issue is trust.

1. How we determine Founding Principles

- 1.1 As human beings we have an amazing ability to develop and change our world; energy is essential to this and in how we work and live. Most of us are now urban dwellers, but wherever we live we depend on long chains of supply for energy and most of our needs.
- 1.2 At the same time the human community has expanded numerically and geographically. This results in substantial current and potential impacts on health and the natural environment. Energy production and use have also had major effects. For example significant air pollution and legacy issues created by toxic and radioactive wastes. Perhaps the central symbol of such impacts are greenhouse gas emissions (GHG) and consequent global climate change.
- 1.3 The international community, in an attempt to reconcile GHG impacts with energy demands, has formulated a number of international agreements such as those to curb emissions and targets for reducing emissions. In a changing world the EU and its member states have been at the forefront of proposing ways to achieve the economic, social and environmental balance that will sustain a flourishing world.²
- 1.4 The EU is founded on values of peace, democracy, human dignity, pluralism, tolerance, and solidarity; the ethical and practical principles that are necessities for global community to prosper. These values specifically provide the foundation for the opinion “An ethical framework for assessing research production and use of energy” from the EGE.³ This opinion

¹ The European Coal and Steel Community; Treaty of Paris 1951

² This paper adopts the approach to and definition of sustainable development as set out by the OECD.

³ The European Group on Ethics in Science and New Technologies, January 2013.

also recognises safety, access, participation and research as pillars of the energy debate, which together with the cross cutting theme of justice, for example as exemplified in the Aarhus Convention, helps to put the discussion in the EU and its member states (MS) into a proper global context.

- 1.5 The EU is faced with several challenges, two of the most pressing being the necessity of energy security and the need for infrastructure investments of at least EUR 1 trillion by 2020 as part of a radical energy transition. Energy policy is shaped by the potential for future impacts of the energy mix, the need for a secure and safe supply and one which is affordable for citizens and competitive for industry.
- 1.6 Some long term targets relating to energy have been agreed by the EU. The goal of an energy system which would cut greenhouse gas emissions (GHG) by 80-95% by 2050 compared with 1990 is well established and provides a framework within which medium term targets and practical measures are being developed. For example, an interim target of a 40% reduction in GHGs by 2030 is now in place and the non-use of energy, through efficiency and reduction measures and the switch to renewable sources of energy are similar objectives.⁴
- 1.7 Although the EU treaty encourages collaboration and co-operation ‘energy sovereignty’ remains paramount. This is in spite of the active promotion of a single market and recognition of advantages from the collaborative optimisation of supply and distribution by the European Commission. Each MS is contributing to the targets and objectives in its own way. In particular, each country has the right under the EU treaty to choose its energy mix - every country has a different pattern of generation, distribution and use. Energy sovereignty might therefore be regarded as a political necessity but clearly can come into conflict with other principles.
- 1.8 It is also the case that energy resources and history vary. Therefore, when it comes to decisions about energy policy, each country will differ. Though the overall objective might be accepted the methods of achieving it will diverge and the balance between the three main generic sources of energy, fossil fuels, renewables and nuclear will be different.
- 1.9 Different energy mix strategies will emerge according to where the emphasis is placed relative to the values felt to be important to a particular society, a reality which will always ensure a degree of divergence between Member States and which inevitably creates difficulties in agreeing EU-wide policies. At the same time energy policy also needs to reflect the citizens’ desire for fairness and an increasing concern for their voice to be heard.
- 1.10 Energy policy is therefore a bridge between the hard facts of what is technically and economically possible and the realities of what is acceptable and capable of being practically implemented in a society. It is also charged with the responsibility of delivering agreed targets and objectives.

⁴ A policy framework for climate and energy in the period from 2020 to 2030 COM/2014/015 final

- 1.11 In this complex situation what structure is appropriate for EU-level, national, regional and local discussions about the energy mix and how can such dialogue assist in underpinning an effective and transparent governance mechanism which will deliver agreed objectives such as those proposed in the Climate and Energy Framework 2020-2030?

2. Transparency is needed for Trust

- 2.1 Trust between nations in the formulation and implementation of agreements is fundamental to progress in the energy debate. The trust of citizens in their governments, scientists, and technical experts in evolving policy which will determine the choice of energy supply types is also essential. Trust between governments, regulators and energy providers is necessary for companies to plan for long term investment and operation of energy supply systems.
- 2.3 Trust is vital between consumers and suppliers, especially in a competitive market situation. Current discussions in Europe concerning fracking, nuclear and some aspects of renewable energy bring this into sharp focus.
- 2.4 There can be no trust without transparency. Transparency makes the hidden visible. It is looking through the stated claims and commitments of participants in any discussion to ensure that they are genuine and comprehensive. It is closely related to the quest for scientific objectivity and is developed by asking penetrating questions of all parties to a discussion and evaluating the responses.
- 2.5 This process can transform and add value to a data-based approach such as multicriteria analysis (MCA) and can build a level playing field in which all energy forms can be assessed in their widest possible context. It also means that no energy form can be dismissed out of hand and that single outcome solutions can be scrutinised within an agreed methodical process.
- 2.6 Such a comprehensive process may overcome the limitations of existing approaches, especially when determining the energy mix at a national level. The three major energy sources (fossil fuels, renewables, nuclear) are, to a certain extent, not directly comparable with each other. A final decision on which to use will always need to be 'qualitative' in the sense that it will (need to) be a deliberate decision informed by knowledge (in the form of facts and opinions), but inspired by a 'moral consensus' that can only take shape in that deliberation itself.

3. A Questions Based Approach for the energy mix

- 3.1 When starting to create a dialogue, a well determined structure is needed and roles and responsibilities of different stakeholders in the dialogue need discussion and clarification. It is also important to determine what information is available and when, who is responsible for what information and how and when the stakeholders can participate. How the contributions are going to be made public should also be taken into account. A framework is essential for

this complex interrogation on energy but this will vary for the type of dialogue. It would involve:

- A series of issues, giving rise to questions, could be tabled, adapted to the forum, meeting or policy dialogue which was taking place. These, taken together, would give an **enquiry profile** for each energy source –identifying essential questions, both technical, economic and societal – to which answers need to be given or a position developed. A proposed list of such issues is offered in section 4 together with related queries which would go some way towards ensuring a quality assessment process.
- The responses from such an approach would enable policy makers and energy consumers to evaluate, within a given framework, the relative merits of each type of energy supply. It would also, potentially, give citizens, something like a level playing field on which to make their own assessment. Each of the stakeholders in the energy debate, policy makers, providers, and consumers, would also have to formulate and table their own questions, and responses, as part of the process.

3.2 This method implies that numerous interest groups use the framework to engage in a process which will vary considerably in its content and outcome. These interest groups can be seen as strands in the overall debate, for example energy providers, types of energy consumers, regional or local authorities, cities, rural communities etc. Rather than decision makers immediately having the task of synthesising responses these should be the basis of further dialogue between stakeholders which will identify consensus, divergence, possible trade-offs and areas of factual uncertainty.

3.3 Three stages can therefore be outlined:

- Identify principles and issues underlying a debate about energy and frame a response process.
- Set up mechanisms (forums, round-tables, virtual dialogues etc) where stakeholder responses can be compared, evaluated and discussed.
- Use outcomes from such mechanisms to inform, influence or stimulate further discussion with decision-makers and also underpin effective governance processes.

Concerning this last point it is important that stakeholder involvement processes should also become part of formal politics, recognised as a strong element in more inclusive formal political decision making.

3.4 It is proposed that one leading strand in this debate should be between seven generic groups of energy source providers, and also include energy savings and efficiency as an eighth reference group. These would therefore comprise energy savings and efficiency, intermittent renewables, non-intermittent renewables, nuclear, coal, gas, oil, and new (unproven/undeveloped) technologies.

3.5 Each group in this strand, through a response to the issues in section 4, using the MCA approach, will set the scene for an active debate relevant to EU energy policy.

4. Process principles for determining an energy policy profile

4.1 The following issues are suggested as the basis for evolving an 'enquiry profile' for energy source components of a future energy mix. Given the vital role of energy savings and efficiency in any future energy policy it is suggested that a similar profile is developed for this as a reference point, using the same issues, where applicable. Several of these issues can then be scrutinised using the MCA approach. MCA is a methodology which, applied to the energy sector looks, for example, at various means of producing electricity (the whole energy chains from original resources to distribution) through a number of factors pertaining to economic, environmental and societal aspects. Sufficient data and analysis are available from other energy sectors to feed a multi-criteria analysis of the whole electricity supply system (including generation, transport and distribution). At the European level the implementation of this methodology as one part of the process of dialogue could help define pertinent energy priorities at national and European level. Other issues, those less capable of quantitative analysis, will require different techniques.

4.2 Issues:

- Determining costs of energy production over the full lifecycle of the generating plant and associated ancillary facilities
- Identifying the role and importance of a stable, secure, non-interruptible energy source
- Research and development priorities
- Personal health and social impact
- Intergenerational health and safety and legacy issues
- GHG and other environmental impacts
- Other potential impacts – e.g. nuclear proliferation, land use priorities, ownership structure etc.
- Labour issues and working conditions
- Long term resource use and scarcity

4.3 Questions to provide a quality assurance process

- Have all relevant factors been included in the analysis?
- Have all disputed areas been identified?
- Has appropriate risk analysis been undertaken and uncertainties identified?
- Has data been assembled to reflect and cost the full range of related risk probabilities?

- Has the process been subject to both independent and adversarial scrutiny?
- Have the views of all relevant participants been heard?
- Have participants identified their own priority and ranking for the various issues under analysis?

5. The wider dialogue

- 5.1 Underlying societal values related to energy production and use require more discussion. Such values, articulated and accepted by the citizen, would enable greater policy coherence and develop greater trust. Decisions taken by a country on energy sources are ultimately derived from that society's value judgments, over and above technical and economic considerations. Decisions about energy policy are therefore based on a set of factors beyond a purely rationalist/scientific base. In these circumstances, particularly as national, regional, local and personal views about energy will vary, an appeal to a consistent, common, perspective can reach beyond a tendency to personal, local, short-term or national interest.
- 5.2 The journey towards a low-carbon future will follow many routes. The principles and associated discussion framework offer guidance on a general direction of travel but have to be translated and applied to specific policies and actions. To be effective this needs to involve public participation, engagement and action and will entail the development of 'knowledge-based and transition attitudes' by citizens as actors in the political process and as energy consumers.
- 5.3 'If I am affected I should be consulted.' As a citizen everyone plays a part in determining the future of the energy system. In addition there are numerous stakeholders with specific roles, some with statutory responsibilities, others acting within the market structure, as lobbyists, researchers, advisers etc. Decision-making on energy has a history of lack of clarity and transparency. The roles and responsibilities of the various stakeholders need clear definition as does their commitment to a fully transparent process.

6. Extending this approach to a governance framework

- 6.1 It is abundantly clear that a practical governance framework for the implementation of an EU energy policy is urgently needed. This is fully recognised in the 2015 Energy Union Package although it remains the least developed⁵ section of the proposal and is not supported by action points. Without agreed and effective governance the theoretical approach outlined in this paper, involving dialogue and public engagement, will be of little value. The nature and scope of such a governance framework lies beyond the immediate scope of this paper but a number of relevant points emerge from it, not least the need for a governance process which will step beyond national self-interest and enable European solidarity in the context of global

⁵ Energy Union Package COM(2015) 80 final

responsibility. Such a process can only draw strength from greater public involvement and understanding.

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