



Energy, Environment and Sustainability in the European Context: Policy Issues and Research Agenda

Minutes

The workshop was held in Brussels (Université libre de Bruxelles)
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Attendance list

Paul Ekins	Principal Investigator
Jim Watson	Principal Investigator
Paul Drummond	Coauthor
Marianne Paasi	EC Research Programme officer, case officer
László Mátyás	Coordinator of COEURE
Andrei V. Belyi	Massimiliano Mazzanti
Elisabetta Cornago	Appolonia Miola
Verena Fennemann	Øystein Noreng
Steven Fries	Radmilo Pesic
Sergio Giaccaria	Gerd Schönwälder
Renan Goetz	Mordechai Shechter
Thomas Gries	Mohamed Mounir Sraieb
Christine Gutekunst	Aviel Verbruggen
Zoltán Illés	Alessandro Vercelli
Marc Ivaldi	Jean-Arnold Vinois
Tiziana Luisetti	
Andrea Kiss	minutes taker
Melinda Molnar	administrator

1. Introduction

Professor László Mátyás, in his opening remarks, emphasized the main goals of the COEURE project. Then Mariann Paasi introduced the project from the view of the European Commission, including its motivation and contribution.

2. Cutting Edge Economic and Policy Issues

Paul Ekins, Jim Watson and Paul Drummond presented their preliminary survey.

3. Comments from Researchers

Øystein Noreng pointed out that the draft survey is difficult to read, yet is fascinating and ambitious. His main comments were: 1) The survey has a slightly neo-Malthusian view. 2) Human behavior cannot be predicted. 3) Energy is a necessity for growth, hence the need for energy is high for economies aspiring to catch up. The developed world cannot intervene in this process by limiting the overall energy consumption. 4) The “peak oil” phenomenon is false; even markets do not expect the oil price to increase. 5) The costs and benefits of the green economy are missing from the survey. 6) The redistribution effect of high energy prices should be added since sustainability should include social and economic concerns as well. 7) Renewable sources have limitations and non-renewable sources might be more plentiful than previously thought. 8) An energy policy should provide clean, secure and affordable energy to people; in this sense, the EU policy is not sustainable.

Alessandro Vercelli, from a political economy perspective, summarized his observations both about environmental and energy policy. Talking about environmental policy, Professor Vercelli suggested adding the microeconomic aspects of sustainability to the survey. He then expressed the need to integrate market regulations with instruments to use the market forces correctly. In terms of energy policy, he focused on the IPAT model, which he recommended be elaborated on in the survey more extensively. For example there should be more discussion on the tradeoff between the GDP growth and intensity of the impact. Based on his view, after the crises a new

development model and new sustainable technological trajectories have to be developed, while the state should have a catalyst role, not an entrepreneurial one. He found potential synergy between environmental and ecological economics and urged policy makers to green both sides of the budget (i.e. the income and expenditure side), to seek public support, to eliminate subsidies for fossil fuels and nuclear energy, and authorize free trade institutions to safeguard sustainability. Finally, he mentioned that the necessary preconditions of these steps (supervision of financial markets, fight against inequality and reviving democracy and participation) are not discussed sufficiently in the survey.

The survey proposed interdisciplinarity, which was very much welcome by Andrei Belyi. He further asked that the role of sociology be emphasized in the survey. First of all, perceptions define the willingness to pay to public goods, which is relevant in environmental and energy issues. Second, the concept of energy security is a social phenomenon, and third, norms contribute to policies. Therefore turning toward sociology is justified and more research is needed in this area. Then Dr. Belyi suggested using the predator-prey model for energy prices: when the price of oil increases, the competitiveness of the alternative energy sources will increase as well as energy security and vice versa.

Aviel Verbruggen advised the authors to include the thoughts from the “Special Report on Renewable Energy” and “Our common future” [a.k.a. the Brundtland Report] (1987) in the survey. He would incorporate three things into the analysis: the fourth pillar of sustainability (i.e. governance and politics), the line of decision making under uncertainty, and the definition of reversibility together with its practical usage. His preferred policy is neither uniform nor too complex: he advocated rational policies with optimal specificity and rolling baseline years. Instead of a trilemma between sustainability, security and affordability, Professor Verbruggen proposed a cascade of them based on defined priorities. Then he mentioned the Magritte Group and summarized its aims. Professor Verbruggen also said that nuclear power is a fake reality with old promises and regarding the policies, uniformity is still the standard. Finally, he concluded by arguing for the need of double transformation in the energy sector (transformation towards renewable energy and towards renewable electricity).

4. Comments from Policy Makers

Steven Fries made the following points about the economic approach of sustainability. First, the context of the survey should be well chosen (long run or medium run); for policy recommendations medium term is probably better. However, the long run and medium run policies can complement each other, they are not necessary separate (eg: UK energy policy). Second, in the part of the energy trilemma the difficulty of negotiation between the trilemma could be illustrated. Third, the role of energy in development is underplayed. Fourth, the evidence based discussion from the study is missing, especially in the part of temperature change targeting. Fifth, energy security is dealt with rather one dimensionally in the survey, even though it is a more complex issue.

After this, he commented on the part about transition to the low carbon state. Among the factors determining the transition, he advised that the technology development and the policies section be extended. About the first he thought that the directions could be the implication of different learning processes and their right mix. In case of the policy aspect, he recommended appending past policy evaluations (eg: STERN, EU-ETS, 2020 target, vehicle regulations) and the cost-benefit analyses of sustainability.

Turning to green growth, Dr Fries noted that the motivation and the basic problem were not clear. Also, in the corresponding policy recommendation, it was uncertain how one can get the price of technologies right in case of governmental planning. He preferred the market mechanism to select among technologies. Finally, he added some policy relevant future research questions. In the measurement questions, the valuation of natural capital, the marginal cost of environmental damages would be promising. About non-policy drivers, he found the environmental Kuznets curve to be a narrow view; he recommended adding a political economy perspective to it. He also thought that it is still unknown how people make choices about resources, including energy. Supplementary questions about policies included evidence based evaluations, the interaction of policies and distributional impacts.

Jean-Arnold Vinois had the impression that the survey was too economic-driven and wanted policy makers' view added to the discussion. He declared that the gap between policy makers and scientists was still huge, despite several attempts to bridge it. He then shared his experience

about the first energy and climate package for the EU. He stressed that the first common policy was a climate policy urged by the Stern report, not an energy policy. He also emphasized that in the EU programs instead of affordability, competitiveness is the third element of the trilemma. Mr Vinois then shared his vision about the future energy union within the EU and evaluated the EU energy policy as a necessary learning mechanism which could lead to this union. He identified three trends in energy policy: 1) There is a shift from supply driven to demand driven approach. 2) The energy transition to a low carbon economy is accepted, the question is its speed. 3) Intelligence is about to evolve in the future due the digital innovations of the ICT sector, education and EU level administrative agency. He ended with a few policy questions addressing the costs and benefits of (not) having an energy union; the risks of European security of supply; the benefits of green growth; competitiveness of the (renewable) industry in EU; necessary investments; and the interaction of the 20% objectives.

Zoltán Illés expressed the need for scientific evidence, which could serve as a basis to create uniform goals. As a former politician he noted that even when scientific evidence and political interests pointed in the same direction, policies are often not implemented due to human greediness. In terms of the survey, he disagreed that the importance of environmental protection and other related phenomena are universal. He gave some examples from his experience. Dr Illés also asked for strengthening the section about “The politics of moving towards a green economy”. Moving to the topic of energy security, he pointed out technological barriers (as in the case of incompatible elements of power plants, causing countries to be locked in partnership and technology combinations and weaken their security). He then questioned the statement whether new policies really drive innovation with a counter example. Dr. Illés would add more about the role of corruption into the survey, and was pleased to see the opinion of the survey about the importance of education.

5. Open Discussion

During the open discussion participants exchanged views not just about the survey, but about open questions as well, including:

- Global warming is a global problem, meaning that it should be dealt on the global level, with special attention to the developing world and the poor.
- The scenarios are uncertain, hence the research agenda should look at large uncertainties.
- A global solution can be an international market for pollution permits managed by the WTO instead of the idea of carbon taxation.
- Further research about the health effects of environmental policies are required.
- New lifestyles should be developed and offered to the developing world to prevent them from the mistakes of the developed world.
- Data should have a more important role in the survey, and the type of data needed, data collection (at EU level) and its framework for further research should be emphasized.
- Building good models (econometric and CGE) is crucial for policy makers. In the survey the authors should state which ones are recommended and what the suggested directions are. Moreover, models dealing with competitive technologies should be considered.
- Institutions and policy implementations has not been analyzed yet, though in light of the CO₂ fraud it is relevant as well as possible ways to limit these institutions.
- The level of the recommendations should be clearly expressed in the survey (global/EU/country level).
- A network of researchers within the EU is needed.

Researchers should learn how to communicate to policy makers and to the people. There are practitioners between researchers and policy makers, who can help in this respect.

6. Agenda for European Research

Apolloni Miola introduced the EC Joint Research Center (JRC) and explained its focus. She first set up the EU policy context via introducing the ten priorities established by the European Commission. Then she explained the role of environmental economics within those priorities and demonstrated that green growth and energy security are indeed priorities. She also proposed 300 indicators to monitor the new sustainable development goals. Among these indicators most of them are non existent, which would be a further step for research to create them. Lastly, she emphasized again the importance of data, especially the reliable, open source, public domain and transparent data. After her presentation a discussion started about finding the possible synergies between JRC and COEURE.

Massimiliano Mazzanti collected questions in the European context and offered some recommendations. He supported 1) the political economic approach; 2) broadening the economic outcome variables while evaluating environmental policy; and 3) constructing more and robust indicators possibly at firm/sector level for applying micro/meso and macro models. Based on his experience there are serious data issues. The first is that, although many efforts have been made to data collection, there are not structural and therefore the created data have limited usage (eg: cross-sectional Eurobarometer). Longitudinal, panel datasets are needed. The second issue is data availability: there are often limitations and constraints to use a specific dataset. Third, data have regional aspects and it is usually not possible to trace back provincial level data from country aggregates. For future work Dr Mazzanti recommended to investigate 1) how different climate policy schemes work and how can they be linked; 2) the role of the financial sector; 3) the regional aspects with attention to corruption, decentralized management, convergence etc.; and 4) the replication of the study of Vona et al. (2015)¹ for Europe. As for the future, he asked for structural surveys covering micro, meso and macro levels, and with the ability to link them to already existing datasets. In addition, he summarized the modelling needs (adding more sector details) and econometrics needs (e.g., flexible semi parametric methods).

Following Dr Mazzanti's comments the workshop has been closed by Professor Mátyás.

¹ Vona, Francesco, et al. Green Skills. No. w21116. National Bureau of Economic Research, 2015.