New governance imperatives for energy planning in liberalised European markets?

Authors: Hélène Connor, Robert Gould, Rod Janssen, Christophe Rynikiewicz
HELIO International
56, rue de Passy,
F-75016 PARIS
T: 33 1 - 42 24 51 48
F: 33 1 - 42 24 86 33
helene.connor@helio-international.org,

Keywords

Governance, public participation, policy-making, electric utilities, decision-making, civil society, energy efficiency, renewable, sustainable energy systems

Abstract

Traditionally in the past, energy suppliers, utilities and governments used to decide alone on energy investments. The consequence is that environment, society and health, the public welfare, have been sadly neglected: worldwide pollution, desertification, global climate change, pauperisation and social problems are the result. Nowadays, utilities and governments are fond of saying that energy savings are everybody's business and recently they have been promoting multi-stakeholders' processes in line with the requirements of the Aarhus Convention[1] and other European and international consensus concerning energy and environmental strategy and policy. This approach, however, has its limitations and improved energy investments have not always resulted from these consultations. Obviously genuine citizens' involvement is required and civil society organisations have to be phased in officially into the energy decision-making process via some sort of users' councils.

In this paper, we briefly summarise the challenges that energy planners face and recall why the transition to sustainable development inevitably requires a 'knowledge transition' among various actor groups to enable them to better understand the available policy options.

We outline that these users' councils would allow citizens, as energy users: 1) to be better informed; 2) to be prepared to contribute to rational energy decision-making; and 3) to promote more actively climate stabilisation and sustainable development by favouring energy efficiency and renewable energy.

Conclusive experience in citizens councils and several interesting cases for the United States' Citizens Utility Boards (CUB), Denmark and the United Kingdom, is then presented.

Finally, we conclude with the research needed to create these institutions. The liberalisation of the energy market and the increasing role of local authorities in climate change issues make it all the more important to initiate the creation of such citizens' councils in each country and at the European level.

[1] The UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters was adopted on 25th June 1998 in the Danish city of Aarhus at the Fourth Ministerial Conference in the 'Environment for Europe' process. UNECE is the United Nations Economic Commission for Europe.

"Without local institutions, a nation has not got the "spirit of liberty" and might easily fall victim to despotic tendencies". Alexis de Tocqueville.

Introduction

Ever since the first oil shock in 1973, energy efficiency has been touted as being the best solution for our seemingly endless energy needs. Consensus emerged that this type of decision could bring double or even triple bottom-line gains: saving energy also preserves both resources and the environment, and consequently in the process lowers financial outlays. Progressively, it was also realised that since energy efficiency and conservation decisions have to be taken by numerous demand-side actors, it was logical and necessary to inform energy users. In the years after the Brundtland Report, introducing sustainable development (1987), and the Rio Earth Summit (1992), energy consultations started to occur and to officially involve civil society, NGOs and local communities. Nowadays, sustainable development reports and venues include very clear provisions regarding public participation and transparency, e.g. the provision of Agenda 21 and Local Agenda 21 aiming at planning sound measures to progress towards sustainability.

Numerous good energy policies were designed over the years, but very few were implemented as intended. It is as if after these good policies had been officially announced, they also evaporated into thin air. Retrospectively, it has looked like an ice hockey game where the puck launched with full force rebounds a few times on the sideboards and finally stops because nobody followed suit. The players are still around, but seem to have lost their purpose, as if an inaudible whistle had signalled the end of the game. And nobody is interested anymore or seemingly entitled to grab the puck and run. The good energy policies appear to have fallen to the same fate. Once they had been elaborated, nobody followed suit, nobody seemed to "own" these decisions even after having discussed and taken them in all objectivity. The result has been that environmental degradation has continued almost unabated.

Given the seriousness of global challenges such as long-range pollution and climatic destabilisation, most governments have become aware of the dimensions of the problem, but still seem unable to cope properly. They grasp for supply-side solutions and call them "security of supply". There have been several international conferences, but governments still only deal with suppliers and big business, even in the "partnerships" as called for by the Johannesburg Summit in 2002. Civil society is kept at bay, powerless and penniless, and most governments can still evade their responsibilities and refuse to take the proper commitments.

We have nevertheless seen some governments turn to the private sector to promote energy efficiency and renewable energy, but progress has been varied from country to country. Socially-conscious liberalisation and privatisation may be acceptable to some people, but they cannot succeed without a concurrent re-regulation and tight monitoring. Countries that neglected these aspects, have witnessed a definite regression of their economy and of their well-being as was seen in New Zealand, when private foreign investors decided to export the benefits from electricity sales[2]. In short, globally, public and private energy investments are still being misdirected[3].

[2] Molly Melluish, Sustainable Energy Forum, Wellington, New Zealand, 2002, "Energy and Sustainable Development, a report to HELIO International", available at: www.helio-international.org

[3] IEA Report, November 4, 2003.

At the moment, and in most countries, in the North as well as in the South, therefore, there is a missing link, or a missing institution, indeed a need for an intervener to catalyse and to validate the energy game, an institution designed to monitor the development and implementation of good energy efficiency and conservation policies. Considering the different economic and cultural situations as well as institutional frameworks, our paper deals mainly with an enlarged Europe Union and its neighbours. This institution would ensure that these policies are able to take shape and to develop fully, with appropriate measures, and with citizens' involvement and appropriate funding. Citizens' involvement is required if there is to be some solution. Citizens organisations, not just individual citizens[4], have to be phased into the energy decision-making process.

In this paper, we first summarize briefly the major challenges and the requirement for a broader participation by energy users. Secondly, we outline the roles citizen's councils can play and thirdly how efficient they are in countries where they already exist under different names. We conclude on the research and local experimentations that could be implemented to see how such a civil institution could operate with the input of existing citizens' and consumers' organisations, as well as environmental groups who have shown the most concern, and are faced with the impacts of energy developments.

Meeting energy system's challenges: the imperative to involve stakeholders

Lack of investment incentives in the emerging European market

As stated by many utilities companies, replacement of a large number of existing energy production capacities will have to occur in a few decades. Investors face uncertainty vis-à-vis the emerging, liberalised market and environmental constraints as well as the Emissions Trading Scheme. Mid-term and long-term energy demand projection call for increasing production capacity. However, with existing institutional framework, there are few incentives to invest in supply capacities in a liberalised market in Europe. Rates of return and risks are not presently compatible with private sector. Demand side management is then of great interest as it will diminish the total cost of investment.

Beyond energy efficiency at the local level

Our demand for energy threatens to unbalance global climatic systems and most IPCC scientists project a need for 60-80% CO2 cuts on 1997 levels by 2050 globally. Tackling the problem represents a two-thirds reduction of present per capita primary energy use of industrialised countries, implying at least factor of five in energy efficiency improvement. The Swiss Board of the Federal Institutes of Technology promoted the vision of a '2000 Watt per capita society' by the middle of the 21st century as early as 1998. Detailed evaluation suggests that this vision is technically feasible within half a century.

Indeed, any reduction goal compatible with climate stabilisation will have considerable effects on economic activities, markets and behaviours. Emission reductions of a factor of 4 or of 10 require a combination of major technical change, societal change and also that innovation arises out of a more integrated sector.

It is only when concerned citizens are organised "systematically" and have official standing, that, in our experience, sustainable solutions can be found to remove barriers to energy efficiency and to solve some persistent problems. A sustained intersectoral collaboration can therefore be orchestrated for the adoption of sensible energy policies. Such a measure could progressively induce what is called "triple loop learning" as coined by the Dynamics of

[4] In France, some conférence de citoyens (Citizens' conference) are sometimes organised. They are a good means of information for the public and the media. Unfortunately they have no official standing

Societal Learning[5], i.e. when changes occur in the perceptions and the attitude of all the stakeholders vis-à-vis the other stakeholders and vis-à-vis the problem at stake, thus leading to a totally new situation, are making genuine long-term solutions possible. First loop learning happens within current structures with the coordination of organisations and resources. Double-loop learning occurs with a shift in mental models and the development of new structures and processes, which mobilises the creative synergies of all parties involved and leads to innovative approaches. Triple loop learning involves rethinking the way people actually think about an issue, thus bringing about sustainable system-wide changes.

Local and national capacity-building, or rather in this case institution-building, are in order. Some countries have recently started filling this void and have also legislated and created councils of users, which work side-by-side with their national energy boards or regulatory bodies. Acknowledgement of energy as a public good obviously requires provision of public services under the users' guidance. It also argues that purposeful change and innovation in socio-technical systems involves the participation and collaboration of many actors in the networks that surround these systems.

Sustainability in these situations is as much a matter of local stakeholder involvement as it is the selection of the best technology option. Therefore, making progress will require a greater focus on city, district and neighbourhood energy planning[6].

[5] Steve Waddell, "Societal learning: Creating big systems change", in The Systems Thinker. Building shared understanding, Vol. 12, n° 10, December 2001-January 2002.
[6] See the work done by associations of cities like Energie-Cités, headquartered in Besançon, France ,or ICLEI (International Council for Local Environment Initiatives, based in Toronto, Canada.

Exploring the benefits of an integrated local energy planning.

> *"The Purpose of this Act is to promote the health, welfare and prosperity of all the citizens of this State by insuring effective and democratic representation of utility consumers… Such purpose shall be deemed a state-wide interest and not a private or special concern."*
> *Citizens Utility Board Act, Illinois Revised Statutes, Ch. 111 2/3, Sec. 902.*

Can technological developments be influenced according to society's goals? or does technological development follow its own dynamic? or a market dynamic? These questions are even harder to answer in a deregulated market as is evolving in Europe, where utilities face difficult short term imperatives. A. Grunwald [2002] suggests that after decades of deregulation, a need for re-regulation can be observed, which may be a prerequisite for the social shaping of the future. The issue is not to return to hierarchical decision-making but to engage in social dialogues with broad participation from all sectors. That would require allowing enough time for in-depth deliberation and careful assessment[7]. Then a normative framework based on rule of law and respect for human rights could emerge.

Many actors are involved in the juggling and distribution of our natural resources, each probably with the best (personal or social) intentions in mind. These actors, which can be corporations, governments, local authorities and/or civil society, tend to follow set series of procedures to carry out these decisions, using tools such as economics, politics, scientific analysis, or simple public pressure. The success of the ultimate decisions depends to a large extent on how the problem is defined.

There are various examples how inappropriate definitions of problems can lead to the set-up of wrong socio-technical systems, possibly leading to the harming of humans or nature, or both despite an altruistic motive toward humans and nature. One way to improve the processes of defining problems and making decisions is to use an adaptive approach that is able to foresee and create the desired sustainable system that will efficiently manage the resources.

Importance of the local level

Cities and regions are the core settings of cultural discourse. They also construct the administrative frameworks for development: local government, planning structures and the powerful civic organisations that are so important in many cultural contexts. Institutions can play a key role in triggering local change towards sustainable energy systems, supporting implementation of the relevant policies and activities to save energy and sharing the best practice.

A reformed and integrated local energy planning agenda promises to yield benefits in key performance dimensions of good government [Peter Droege 1999] :

- scaleable responses
- market development
- fit with local traditions
- urban competitiveness

---

7 See Grunwald, A. (1999): Technology Assessment or Ethics of Technology? Reflections on Technology Development between Social Sciences and Philosophy. Ethical Perspectives 6 (1999)2, S. 170-182

- greater accountabilities
- technological innovation
- distributed responsibilities
- quality of life improvements
- economic and regional development
- enhanced individual choice and empowerment
- social benefits (poverty alleviation by reducing energy bills, local employment opportunities)
- support of other urban environmental dimensions (water, food, biodiversity, rural anchoring, urban sustainability) and concrete actions towards local Agenda 21 strategies
- outcome-geared reform and strengthening of local governance

Civil society has a crucial role to play if any of those endeavours are to succeed: too often civil society is unprepared. Organised efforts, therefore, have to be made to put in place informed civic structures whose members should be elected democratically by the citizens. The activities of these independent elected users' councils could extend in at least three directions, as outlined in the paragraphs below, and can be adapted to national and local contexts, as needs be.

Dissemination of information and transparency enhancement

The first and most important role of a users' council is the dissemination of reliable energy information and utility's scorecards to all consumers. The best and cheapest way to reach all users is by including the council's pamphlets in the envelope which is used by the electric utility to deliver energy bills to consumers. Having access to all the information they want on energy facilitates citizens to become conscious of their rights and responsibilities. Hence they will have a better grasp of the impacts of energy policies (and hence energy investments) on environment, society and health, as well as what can be done to prevent negative externalities, in terms of modifying or re-formulating existing energy policies.

Well-informed citizens are better able to understand and comply with the requirements of energy policies, especially when they require some behavioural changes (that is, in the energy use patterns), the most difficult changes to achieve.

Citizens' mobilisation can also trigger interesting new ideas for utilities: For instance, in 2003, the Ontario Energy Board (the regulatory body) decided to link the profit of Enbridge Gas Distribution to its success at reducing its customers' bills by making them more energy efficient. As a result, Enbridge developed Canada's best utility-sponsored energy conservation programmes at the time. Overall, better information on energy policy and pricing will provide transparency and credibility in the energy sector. Users' councils can help build confidence and can restore trust in an energy system[8]. More importantly users feel some sense of ownership. This will ensure that users and other stakeholders will subscribe to and support energy policies, to the extent of making a commitment to change their consumption patterns or energy end-use techniques and technologies, as required.

Specific research geared for users

The second role of the users' council is to help develop specific research to investigate energy options so as to allow users to contribute to energy debates and decision-making in a more constructive way. For example, the Long Island Sustainable Energy Alliance, representing 100,000 citizens, authored its own Citizens Energy Plan after research that

[8] To regain the trust of their clients, the UK Association of Energy Suppliers had to issue a 16-pages code of good conduct in 2003, under pressure from the citizens' council Energywatch, in *Enerpresse*, 30 May 2003. The members of the Energy Charter Treaty also have adopted an Energy Code of Conduct (see www.encharter.org).

extended to the following fields: trends in electric capacity and energy supply; health, environment and economic impacts; legal and regulatory issues; conservation and efficiency; renewables and alternatives; light pollution; re-powering of existing plants; public education and outreach. Such expertise within users' councils can bring about more rational energy recommendations and decisions allowing long-term efforts and possible local economic revival[9] in cases where new equipment is then manufactured locally.

Moreover, user's council and consumer involvement will be needed if envisaged solutions imply a change in consumption patterns and in thinking about categories of ownership and consumption.

The idea of shifting from products to services is more than 40 years old (Becker 1962). In the last decade, it has resurfaced and a growing literature deals with theoretical concepts and practical examples. A more systematic perspective on the combination of products and services is needed. The provision of use is at the forefront and its aim is to satisfy consumer's needs to increase. It is also consistent with current emerging notions of functional society or sufficiency.

Sufficiency is based on the notion of moving from selling product [with its material/energy throughput philosophy] to providing performance, managing the material content of products together with their asset value. The challenge is to help in constructing and implementing new ways to meet social needs. Table 5 outlines six main transitions that can deliver environmental benefits and that are needed at the consumer's level to opt for product service system [Manzini 1996].

Table 1: Six main transitions and challenges Tukker, Tischner [2003] and Oosterhuis [1996]

Focus	Service transformation	
Design	from planned obsolescence	to sustainable product design
After sales support	from short term guarantee	to comprehensive after-sales support
Form of contract	from ownership	to eco-leasing
Mode of consumption	from individual consumption	to collective consumption
Need	from dependence	to reduced need
Sales revenue	from output maximisation	to least cost supply

Sufficiency strategies are more dependent on the choices of final consumers than on eco-efficiency strategies, and usually include sharing and pooling of products. Consumers are hesitant towards alternatives of consumption without ownership, such as sharing and renting. Many obstacles exist, some are cultural and educational, but most are probably psychological and need to be better analysed,

Driving effect towards climate stabilisation

Finally, these councils can play a major role in the fight against global pollution and warming trends, even if their own governments are not fully committed. It is important that social and technical solutions emerge from field experience and analysis to enable the implementation of the climate policies because: 1) energy uses are often decentralised; and 2) concern all citizens and all kind of organisations. Some studies show that current local government abatement policies are primarily created from a top-down approach rather than by public pressure, but other references emphasise the need for developing bottom-up strategies. More public pressure is to be expected if impacts of climate change are more frequent and damaging.

A good set of policies and measures are being implemented at a local scale by municipalities across the globe. Citizens are potentially active promoters of climate stabilisation and

[9] See the roadmaps for economic revival prepared by the Rocky Mountain Institute at: www.rmi.org

sustainable development by favouring energy efficiency and renewable energy. Even if a government or business is reluctant to fulfil Kyoto targets, users' councils can exert influence. The Citizens Advisory Panel of Long Island issues alerts to ratepayers, pressuring the State of New York to put a cap on carbon pollution from power plants to combat global warming. Hence, even though the United States has refused to ratify the Kyoto Protocol, there will be progress in some parts of the country[10].

Even if economic and cultural conditions as well as institutional frameworks are different between northern and southern countries, there is a growing body of literature and experiences from the ground on the role of community-based management. In developing countries, as well as in Eastern Europe, these councils could conceivably help fill one of the most sensitive -but crucial- recommendations made last December 2004 in The Netherlands by the Conference Energy for Development (E4D)[11]. Users' councils could be important actors of the "sustainable energy for development" projects by helping to direct the flows of foreign direct investment, climate projects and aid monies via the proper channels and to the places where they are authentically needed.

The important initiative started in November 2003 by the Caucasus NGO Network (CENN) in Tbilisi is worth mentioning. The project called "Development of Local Capacities and Public Awareness for Better Energy Governance", is implemented by the CENN and partner NGOs, Green Alternative and Eco-Vision, with the financial assistance of the United States Agency for International Development (USAID). "The project aims to increase the transparency and efficiency of performance and consumption in the energy sector, through community mobilisation, confidence building, increasing public awareness and citizens' responsibilities over the resources' use, creation of ESCAs (Energy Services Consumers' Association), increasing public participation in the decision-making processes at all levels and launching a nation-wide constructive dialog between all stakeholders on energy sector governance"[12]. The CENN project has vision and is far-reaching. It deserves to be monitored by their Western counterparts who are not so well-off strategically and indeed need to initiate their own citizens' council project, especially within the context of liberalisation of the energy market.

In order to learn from success and failures, it is worth looking at past experiences on energy efficiency.

3 Learning from the past experience on energy efficiency

Some of the best examples of citizens' councils are in the United States.

North America

The Citizens Utility Board in Illinois[13].

The Illinois Legislature in the State of Illinois in the United States formed the Citizens Utility Board (CUB) in 1983 to serve as a voice for residential and small-business utility ratepayers. CUB is a non-partisan, non-profit state-wide organisation funded by Illinois

[10] See Learning From State Action On Climate Change, (2004), Pew Center on Climate In Brief, Number 8.

[11] The E4D recommendation for action actually reads: "Use ODA (Official Development Aid) and multilateral assistance, such as the EU and World Bank facilities, strategically to improve the terms on which FDI (Foreign Direct Investment) flows to the energy sector by refining and accelerating the use of their guarantees for energy investments, along with social and environmental requirements". 14 December 2004.

[12] CENN e-mail announcing the project in November 2003.

[13] "The Purpose of this Act is to promote the health, welfare and prosperity of all the citizens of this State by ensuring effective and democratic representation of utility consumers… Such purpose shall be deemed a state-wide interest and not a private or special concern." *Citizens Utility Board Act Illinois Revised Statutes, Ch. 111 2/3, Sec. 902.*

consumers and a grant from the Illinois Clean Energy Community Trust. Though created by the state, CUB receives no state tax dollars. CUB is guided by a 20-member board of directors, with one director elected by due-paying CUB members in each of Illinois' Congressional Districts. Working as volunteers, board members determine CUB's policy and budget and serve as local representatives for the organisation. When the Illinois General Assembly created CUB in 1983, it gave the non-profit, non-partisan organization a clear mission: to represent the interests of residential utility customers across the state. The statute directs CUB to carry out that mission by intervening in ratemaking proceedings before the Illinois Commerce Commission (ICC), in the courts and before other public bodies and by providing consumers with information and assistance regarding their utility companies. Since its inception in 1984, CUB has been doing just that—working for lower rates and better service from the state's investor-owned electric, gas and telephone companies. Over the last 17 years, CUB has saved consumers more than $5 billion by blocking rate hikes and winning consumer refunds.

The Citizens Utility Board in Wisconsin

This body was created in the same spirit as the one in Illinois.

The purpose of this organisation is to 1) ensure effective and democratic representation of residential, farm and small business utility customers before regulatory agencies; 2) ensure effective and democratic representation of residential, farm and small business utility customers before the legislature and other public bodies; and 3) provide education on utility service costs and on the benefits and methods of energy conservation for consumers. CUB fought and stopped the proposed USD 6 billion merger between Wisconsin Electric Power and Northern States Power, a Minnesota-based utility. The merger would have been the largest in US history, caused higher rates, fewer good Wisconsin jobs, and poorer service. CUB saved WEPCO ratepayers USD 75 million by hiring a nuclear expert that proved to the PSC [Public Service Commission] that WEPCO mismanagement caused the lengthy shutdown of the Point Beach nuclear plant in 1997. The PSC denied 75% of WEPCO's request to increase rates by USD 100 million to pay for nuclear cost overruns. CUB was the leading consumer advocate for the passage of Wisconsin's 1998 Electric Reliability Act.

There are other CUBs in the USA, in particular in Oregon. The acts creating these CUBs are very straightforward, giving all the details necessary for the creation of other CUBs.

Europe

In Europe, several efforts are worth mentioning: Denmark and the United Kingdom, in particular.

In Denmark, in May 2000 a new Energy Conservation Act (Act 450) was approved by Parliament as part of a political agreement for the reform of the electricity sector. This Act provides a framework for co-ordination and the priority to be given to both centralised and decentralised initiatives in the future and introduces some new elements. Act 450 called for the creation of local energy savings committees that are designed to be a framework for co-operation and co-ordination at the local level. Energy companies are responsible for their creation. Energy companies are encouraged to include the recommendations of these committees as much as possible in their energy savings plans. Mandatory members include representatives of the energy distribution and grid companies. Municipalities and other organisations (private companies, consumer and environmental groups, building and housing associations) are encouraged to participate. To date, 32 local committees have been established[14].

In the United Kingdom, the 2000 Utilities Act created "Energywatch" to be an advocate for consumers in the gas and electricity markets. Energywatch has a a statutory duty to protect and promote the interests of existing and future gas and electricity consumers in England, Scotland and Wales by: making proposals, or providing advice and information about consumer matters and representing the views of consumers on such matters; investigating and seeking to resolve consumer complaints; giving advice and information to Ministers, regulatory authorities, licence holders, and any other body whose activities may

[14] Energy Charter Review of 2003.

affect the interests of consumers; and publishing information on performance of energy utilities, complaints and where it is felt to be in the consumer interest.

France may present a specificity due to many historical factors and its energy sector structure. At present, the French public utility Electricité de France (EDF) does not seem willing to fulfil its obligation of informing the public. Its relationship with civil society leaves a lot to be desired as attested by the numerous campaigns to denounce EDF's alleged high-handedness and lack of transparency. Prices of electricity are still slightly below those of other European countries, but the privatisation process has started and prices are likely to rise further while the quality of service may well not be preserved. Many externalities are not yet included and the cost of nuclear electricity is kept confidential. French consumers need to know what is going to happen once the domestic market is open to the competition. Will EDF competitors offer genuine alternatives, clean energy, efficiency and conservation programmes? Who will pick up the cost of decommissioning aging nuclear plants? There are a multitude of questions which are not being answered at the moment.

The proposal to create the French Conseil d'Usagers des Biens Energétiques (CUBE), presented by the energy NGOs involved in the World Summit for Sustainable Development (WSSD, Johannesburg, 2002) was included by the French National Committee for Sustainable Development (Comité National de Développement Durable, or CNDD), in its recommendations to the government for the National Strategy of Sustainable Development. It was subsequently selected as one of the most interesting CNDD recommendations to be implemented by the French Government. The CUBE is viewed as a critical instrument for sustainable economic, environmental and social development in the French energy sector. The members of the CNDD, including EDF and ADEME (French energy efficiency and environment agency), and their partners in civil society have expressed hope that the recommendation for establishing a CUBE in France will be implemented as rapidly as possible, particularly due to 1) the absence of independent information on energy in France; 2) the opening of energy markets; and 3) to the importance of the energy sector in guaranteeing sustainable development. Financing is of course a critical point, specially when dealing with the issue of independent information. One possibility is that this process could be financed from a percentage of electricity sales

The CUBE would have to make a link with the Commission de régulation de l'énergie (CRE), the regulatory agency for the French energy sector. **At the European level**, a CUBE-like body should be present at the side of the European Regulators Group for Electricity and Gas and such a body will certainly be established, but this will take time. CUBs should also be included in the proposed energy services Directive. There is presently a debate on Services d'Intérêt Général (SIGs), or public interest services, at the European level, and electricity is included in the discussions. Improved governance should be seen as a necessary step.

Conclusion

There is a need for an institution that would enable rational stakeholder to input into: 1) the selection of energy supply and investment in electric generation; 2) the determination of full-cost pricing; 3) the maintenance of the quality of service; 4) the design of energy efficiency measures and 5) the promotion of renewable energy and other issues of interest to the users and to all citizens. The environmental challenges facing us require the active and informed participation of all.

These users' councils will allow the development of greater expertise among users with regard to energy conversion and end use. Their input will be particularly critical in light of the liberalisation of the electricity market within the EU. The CUBs would be a point of diffusion of information to users, in particular through gas and electricity bills. These inserts might include details on energy efficiency measures and energy prices, information on environmental externalities, on renewable energy sources and information on the impacts of energy investments. The information provided will allow energy users to make informed choices regarding their preferences (technology, housing, type of fuels used, etc.) and help

them initiate renewable energy projects which could trigger more sustainable development. CUBs could be the indispensable guide to help EU Member Countries fulfil their commitments for the Kyoto Protocol and EU energy and environment directives.

CUBs could represent energy users and ensure that their rights are respected. They would be the conduit through which users (civil society) can participate in an informed and independent way to facilitate the transition to a new energy policy that is sustainable and environmentally sound. The creation of such CUBs is necessary, especially in countries where energy markets are already liberalised or are in the process of becoming so.

Bibliography

Becker G.S., (1962), Irrational behaviour and economic theory, The Journal of Political Economy 70 : 1-3

Behrendt, S., C. Jasch, J. Kortman, G. Hrauda, R. Pfitzner and D. Velte (2003), Eco-service development: reinventing supply and demand in the European Union, Sheffield, Greenleaf Publishing Ltd

Biermann F., Campe S., Jacob K., eds., (2004), Proceedings of the 2002 Berlin Conference on the Human Dimensions of Global Environmental Change "Knowledge for the Sustainability Transition. The Challenge for Social Science", Global Governance Project: Amsterdam, Berlin, Potsdam and Oldenburg, pp. 1-11.

Confrontations Europe, (2003), Objectif SIG, coordonné par André Ferron, numéro 18, Juin 2003.

Droege, P. (1997). Intelligent Environments. Amsterdam; New York: Elsevier. (See especially p. 245 ff. Tricia Kaye, Stewart Noble and Wayne Slater. Environmental Information for Intelligent Decisions.)

Girardet, H. (1999). Creating Sustainable Cities. Schumacher Briefings 2. Devon: Green Books.

Grunwald, A. (1999): Technology Assessment or Ethics of Technology ? Reflections on Technology Development between Social Sciences and Philosophy. Ethical Perspectives 6 (1999)2, S. 170-182

Hubbard A., Fond C., (1995), Community Energy Workbook: A Guide to Building a Sustainable Economy, Rocky Mountain Institute http://www.rmi.org/sitepages/pid307.php

IEA, (2003),World Energy Investment Outlook.

IEA Report, November 4, 2003

Jochem, E., Spreng, D., Favrat, D., Rudolph von Rohr, P., Hungerbühler K., Wokaun, A., Zimmermann M., (2002), Steps towards a 2000 Watt Society a White Paper Swiss Board of the Federal Institutes of Technology

Kousky C., Schneider S., Global climate policies : will cities lead the way ?, (2003, Climate Policy 359-372

Manzini, Ezio and Carlo Vezzoli - Product-Service-Systems and Sustainability, opportunities for sustainable solutions United Nations Environment Programme, Paris and Politecnico di Milano University, 2002

Montt O., (1999), PSS : shifting corporate focus from selling products to selling product service system, a new approach to sustainable development, AFR report 285, Lund University.

Mont, O., (2002), Functional Thinking. The role of functional sales and product service systems for a function-based society. Stockholm, Swedish EPA, Naturvårdsverket Rapport 5223: 64,.

Oosterhuis F., Rubik F., Scholl G., (1996), Product policy in Europe : new environemental perspectives. London : Kluwer.

PEEREA, (2004), In-depth Review of Energy Efficiency Policies and Programmes of Denmark, Energy Charter Secretariat, Brussels.

Pew Climate onClimate Change, (2004), Learning From State Action On Climate Change, Pew Center on Climate Change, In Brief, Number 8 http://www.pewclimate.org

Tukker A., Tischner U., (2003), first report of PSS review, Suspronet Report. http://www.suspronet.org

Under Construction: Helpful Tools and Techniques for Local Planning, Minnesota Planning Agency, September 2002 http://www.mnplan.state.mn.us/Report.html?Id=2910

Waddell S., "Societal learning: Creating big systems change", in The Systems Thinker. Building shared understanding, Vol. 12, n° 10, December 2001-January 2002.

White A.L., Stoughton M., and Felg L., (1999), Servicizing : the quiet transformation to extended producer responsibility, Boston, Tellus Institute

Relevant websites

- Caucasus NGO Network, info@cenn.org
- Citizens Advisory Panel, Long Island's Energy Watchdog, New York,

http://www.energymatters.org

- Energie-Cites, http ://www.energie-cites.org/
- EnergyWatch, http://www.energywatch.org.uk/
- Citizen Utility Board in Chicago, Illinois, http://www.citizensutilityboard.org/
- HELIO International, http://www.helio-international.org
- Utility Reform Network, http://www.turn.org
- NorthWest Energy Coalition, http://www.nwenergy.org
- Citizen Works, http://www.citizenworks.org/issues/justice/justice-issue-utility_dereg.php