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International renewable energy policy—between marginalization and initial approaches

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ABSTRACT

This article undertakes an analysis of renewable energy policy at the international level. So far, such policy efforts have been carried out in a fragmented manner across various fields and without the benefit of any specific international agreements or organizations. In the two key policy areas of energy and climate, in which one would expect to find direct approaches at the international level, there have been only marginal efforts to promote renewable energy and with little direct impact—something which at first glance is rather remarkable. Initiated in the wake of the Second World Summit on Sustainable Development, in 2002 in Johannesburg, there exists for the first time a specific policy process – set in motion by the German government – which has led to some initial "soft" instruments and institutional forms; this multilateral process, which, although parallel and independent in its approach, is proceeding nonetheless in a consensual manner similar to the UN negotiations. At the same time, several countries have taken the lead to form an international organization for renewable energy; this is presently being developed. This article examines the various policy levels as well as the roles of the significant national and international actors on the basis of a multilevel governance approach.

1. Introduction

In 2006, the share of the global end-energy supply provided by renewable energy was already 18%. This is a remarkable number when compared to that of atomic energy – once more a much-discussed international policy topic – with its contribution of only 3% (REN21, 2008, p. 9).[1] A closer look, however, puts this in perspective: of the 18%, 13% is due to traditional biomass, which does not utilize modern, energy-efficient conversion methods (ibid). A further 3% can be attributed to predominantly large hydroelectric power stations, many of which rely upon controversial reservoir dams. Thus, on a global scale, to date only a very small remainder can be attributed to "new renewable energy technologies"[2] in the areas of electrical power, thermal energy, and motor fuels—with nonetheless strong growth in all three markets.[3] Even so, these are still small niche markets, whose further development, as a rule, requires support.

The growth of new renewable energy technologies at the global level can, in particular, be attributed to promotion policies in individual lead countries and/or lead markets[4] (REN21, 2008). The key reasons behind this national support lie in the three essential advantages of renewable energies—whose relevance continues to increase: renewable energy reduces our dependence on the import of ever scarcer and more expensive fossil fuels and at the same time provides an effective contribution to climate protection. The third advantage is the creation of lead markets through the early development of green industries and sustainable jobs that also brings high export potentials in growing international markets.

Closely linked to these observations of primarily national developments in renewable energies is the key question to be addressed in this article: how does the support and promotion of renewable energies rank as an international policy issue; how is it being carried out – or not – and why? It is to be assumed that initially, at least, at the international level, the topic of renewable energy is primarily addressed in the functionally related ranking fields of energy and climate policy; these will thus be examined more closely. Furthermore, since the Second World Summit for Sustainable Development (WSSD), an initial specific policy

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[1] Even looking exclusively at the electricity market, the 18.4% global share of renewable energy for 2006 was already higher than the 14% share of nuclear power (REN21, 2008).

[2] "Technologies for the utilization of renewable energy resources" will hereafter be referred to as "renewable energy".

[3] Here, too, if one looks at only the electricity markets, the share of new renewable energy technologies was already 3.4% (REN21, 2008); this is primarily

(*footnote continued*)
wind power, followed by biomass facilities and, much further down, photovoltaic arrays (ibid).

[4] On the concept of lead markets see Beise et al. (2005).

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process at the international level has begun to evolve—pushed along primarily by the German government. Thus, it is desirable to look at the form of institutionalization that was chosen as well as the role of the German government, in particular, as initiator of the process.

A consideration of renewable energy's role at the level of international policy, together with the knowledge that its development to date has mainly been driven by the individual nation-states, leads in turn to the question of whether we are dealing here with a political multilevel system (see Marks, 1993; Grande, 2000; Bache and Flinders, 2004). A political multilevel system, according to Edgar Grande (2000, p. 14), is characterized by various levels of political space and a problem- or policy-specific functional context. Taking such an approach, those developments in international policy have to be analyzed that directly or indirectly relate to the promotion of renewable energy; this includes developments in energy and climate policy as well as the initial policy efforts that specifically address renewable energy. Also, the roles and importance of selected governmental as well as non-governmental national and international actors, grouped in interest or advocacy groups (see Jenkins-Smith and Sabatier, 1994; Sabatier, 1998, 1987) have to be regarded.

In the following, we will, therefore, first examine the importance and handling of renewable energy – and its political support – in the context of energy policy negotiations at the international level, followed by a similar investigation with respect to international climate policy. This will be followed by a detailed analysis of EU-specific renewable energy policy at the international level, which, in light of the decisive role they play, will particularly focus on the German actors. In addition to the secondary literature, the empirical basis for this work is provided by content analyses of numerous official documents as well as information obtained through interviews with various experts.

2. Renewable energy sources in international energy policy

As mentioned, growth in the renewable energy markets is taking place on a global scale, although this growth is still occurring at a very low level. Yet if one takes into account the overall growth in the demand for energy that many studies predict will occur due to development in the large newly industrialized countries as well as in the USA, then regardless of any further growth, the relative share of renewable energy may very well remain level or even decline (see, for example, OECD and IEA, 2006)—unless the political situation significantly changes.

The fact that conventional energy system technologies—centralized large-scale power plants utilizing fossil fuels and atomic energy—are still dominant today is a result of previous political decisions of the economically strongest countries influenced by the conventional energy industry. This is especially true for atomic energy, which without the sizable financial subsidies for research and development would not have been able to establish itself in any of the industrial nations.

Subsidies thus play an important role in the establishment of newer technologies and their market development—as they do in the advancement of the still nascent renewable energy technologies. However, substantial subsidies are also still being employed for the further propagation and preservation of conventional energy systems based on fossil fuels and nuclear energy sources—and this is a main obstacle in the introduction of renewable energy. Not only are fossil fuels being subsidized, but also to varying degrees the conversion technologies and infrastructure, and particularly the external effects, e.g., negative environmental impacts and the risks to personal and public health (UNEP and IEA, 2002); this also includes the effects of climate change as shown in the reports of the Intergovernmental Panel on Climate Change (IPCC) (IPCC, 2007) and the Stern Report (Stern, 2006).

Studies by the World Bank, the International Energy Agency (IEA), and UN Environmental Program (UNEP) found annual energy subsidies in the 1990s of 230–240 billion dollars worldwide (UNEP and IEA, 2002; Pershing and Mackenzie, 2004; Kjellingbro and Skotte, 2005). According to Kjellingbro and Skotte (2005), the majority of these subsidies – approximately 216 billion dollars – are so-called "perverse subsidies"—subsidies exhibiting a negative effect on the environment as well as on the economy and society as a whole.[5] With a less than 4% share, renewable energy technologies and efficiency measures combined comprised only a small share of such subsidies (de Moor, 2001). Missing from these observations, moreover, are the economic contortions and subsidy impacts of various import duties: as an example, the duties placed on steel (the main raw material for wind energy installations) are as a rule much higher than those on fossil fuels (Steenblik, 2005). Likewise many environmental impacts – those, for example, associated with climate change – are difficult to quantify or properly attribute to specific technologies or sectors according to causality.

In the areas for which numbers are available, however, the ongoing negligible importance of renewable energy on a global scale can be seen—for example, in worldwide expenditures for renewable energy research and development. In the OECD countries, for example, this was about 8% of all R&D expenditures in the energy sector and showed a downward trend in recent years. The greatest share of the funding still went into atomic energy research (IEA, 2004, p. 54).

At the global level, this practice of subsidies has contributed greatly to the establishment and expansion of fossil-fuel and nuclear energy systems based on large-scale power plants and the corresponding infrastructures. The main actors in the propagation of these systems have been not only the global technology and energy corporations, but also the World Bank and the IEA—the main consultants and funding agencies of the OECD countries. The practice of the World Bank (but also of a number of other international and national lenders) has been to provide priority funding for centralized large-scale power plants utilizing fossil fuels (Pershing and Mackenzie, 2004).[6]

This development has been largely helped along by the energy and foreign trade policy of the OECD countries and cannot be attributed to any specific international agreements. Today, still, there is no ongoing multilateral energy policy process in place at the international level, as there is in the case of climate policy. The main reason for this is that the supply of energy, being a key aspect of the national economy, traditionally has been viewed as a national, sovereign supply task. Therefore, it has only been during times of crisis, such as the two oil-price crises in the 1970s, that the issue has led to increased coordination of the international energy policy activities of the oil-dependent industrial nations. Thus, it was in reaction to the oil-price policies of the OPEC states that international agreements were drawn up by the affected OECD states. In 1974, on the occasion of the first oil crisis, the majority of the OECD states founded (relatively quickly and with

[5] See Kent and Myers (2001) for the concept of "perverse subsidies".

[6] The proposals for a change of this practise more in the direction of decentralized renewable energy systems, as expressed in the Salim-report (Salim, 2003)—does not correspond with the ongoing practise of the World Bank. This could be a consequence of the immense level of administrative expertise built-up in recent decades as well as long-standing contacts and cooperation along the "old energy supply path", which to a large extent stand in the way of a change of course to, for example, small cash loans for decentralized energy supply systems utilizing renewable energy (Pershing and Mackenzie, 2004).