



Madrid SESSA Conference “Investment for sustainability”

Press Release

SESSA, a program financed by the European Commission, is a European forum on electricity reforms involving researchers and stakeholders. The first SESSA Conference, *Refining Market Design*, was held in Cambridge in July 2004, followed by conferences in Stockholm in October on *Addressing Market Power and Industry Restructuring for Consumer Benefits*, in Berlin in December on *Perspectives and Challenges of EU Electricity Enlargement*, and in Bergen in March 2005 on *Harmonizing Effective Regulation* respectively.

The fifth SESSA Conference, *Investment for Sustainability*, was held at Madrid, Spain, on 19-20 May 2005. The conference gathered almost 200 participants, from research institutions, regulatory bodies, electric utilities and the general industry.

European energy policy is trying to address a number of main concerns: security of energy supply, presently and in the future; guarantee of the freedom of choice by consumers at affordable prices; efficiency in energy production and consumption; acceptable environmental impact; maintenance of the competitive position of the EU, while fixing, when needed, possible market failures.

But all these objectives only make sense if obtained in a sustainable manner. That means that there should be a lasting and dependable access to primary energy sources; adequate infrastructure to generate the required amount of electricity in a reliable way; energy-related activities performed so that no irreparable environmental damage is caused; compatibility with an adequate economic development; and finally a guarantee that fair universal access to modern forms of energy supply will take place, in Europe and also worldwide.

In short, environmental care and human development are two inextricably linked concepts, and no durable advances are possible in one front without proper consideration of the other one. Sustainability subsumes both kinds of considerations under a single name.

The first day of the conference was devoted to an assessment of the sustainability problems of the current energy model. Prospective evaluation considers both the continuation of current policies as well as some alternative scenarios. On the positive side, it was recognized that energy consumption is increasingly decoupled from economic growth, and that it seems that there is no pressing problem of resource limitation for about 20 years. On the negative side, if current policies are continued, the European Union will have an increasing dependence of (mainly foreign) fossil fuels, which brings concerns on security of supply, high carbon emissions and energy price increases. Alternative scenarios make a difference, but present inertia is large and strong actions in several directions are required.

The discussion on the second day was focused on the analysis of possible alternatives for a sustainable future, mainly in the European context. Several mechanisms of response were analyzed:

1. Demand-side measures can promote the efficient use of energy. In the long run, about 40% of energy consumption will be spent in buildings, 35% in transportation and only 25% in the

- industry. Therefore, appropriate regulation of the right sectors (i.e. building codes or car efficiency standards) can be very effective. However, there are concerns related to the effect on competitiveness of certain measures, and in particular on energy price taxes or subsidies to energy-intensive industries. In order to deal with these cases, closer coordination (at least at European level) is required.
2. The development and deployment of renewable energy sources is a major ingredient of all strategies aimed to a sustainable energy supply. Wind generation of electricity is presently growing at an impressive rate, and although there are discrepancies on the precise figures, there is not doubt that at present there is still ample room for additional penetration in Europe (although there are challenges concerning massive wind generation integration in the electricity power network). It was also recognized the importance of solar energy, although some essential technological developments are to take place before its very high full potential can be tapped. Biomass potential is also very high, although its recent development in Europe has been much slower than initially expected. In any case, and even if most specific renewable energy support measures can be left to subsidiarity, a modicum of coordination among the State Members must be established in order to avoid conflicting measures and improper accounting.
 3. Nuclear energy is a controversial issue. Both strong positive (lack of carbon emissions, widespread and abundant resources) and negative (safety concerns regarding both reactor operation and waste disposal, and nuclear proliferation issues) points score high when analyzing its future. In any case, it is extremely difficult to abandon nuclear power in the short-term. It is very important to organize expertise in such a way that controversies and contradictions are manifest, in order that officials and, in the end, the public can make informed decisions on this topic.
 4. Our future hinges on the possibility of achieving a sustainable energy system, and therefore our R&D effort should be commensurate with it. We do not know which one of the present technological options can be brought to actuality, and even less at what cost, and, in any case, breakthroughs can not be delivered quickly. So, an R&D effort must be carried on across a wide range of options, and the present 25 years long trend of decreasing investment in energy R&D must be reversed.
 5. Finally, it should not be forgotten that 1.6 billion people lack access to modern energy forms, severely hindering their efforts in search of a better lot. In particular, there is a strong link between electricity access and economic development, and it is generally acknowledged that extending energy access to rural areas only requires moderate amounts of money when compared to global energy expenses.