

ABSTRACT

This thesis aims to demonstrate the intensive use of quantitative tools, mainly Economy-Energy-Environment models (Top-down and Bottom-up) in the European decision-making process.

Five case studies highlight the influence of scientists in up-stream Community policies: energy taxation, fight against climate change, renewable energy promotion, energy efficiency and internalisation of external costs.

The European Commission, the European legislative engine, defends the credibility of its policy initiatives by independent scientific reports. These concern for example medium-term targets for reducing greenhouse gas emissions and for increasing the share of renewable energy, or cost-benefit analysis of a future regulation or of an innovative market mechanism.

The Commission is facing strong stakeholders, a democratically elected European Parliament and a Council representing the national interests. In this context, the Commission founds its legitimacy in the supposed objectivity of the figures.

From the middle of the eighties, most of the Commission proposals in the field of energy and environment were submitted internally (Commission Staff Working Documents) to energy and macro-economic modelling runs. Since 2002, the Impact Assessment obligation assumes the same role for the White Papers, the Communications and the Proposals for a Directive.

Scientific results are used by the Commission - technocracy by excellence - in its non legally binding and soft legislation to economically justify and politically support its initiatives.