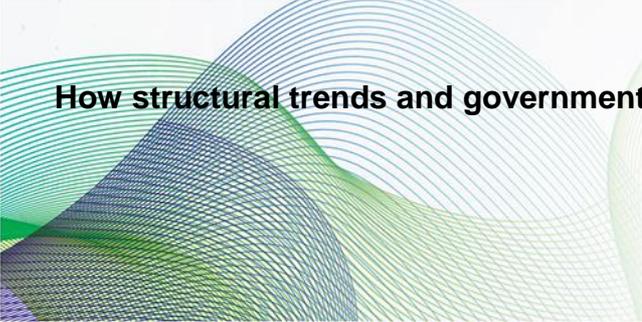


August 2015



THE OXFORD
INSTITUTE
FOR ENERGY
STUDIES



How structural trends and government intervention are damaging the major European electricity companies and affecting consumers

The Scissors Effect:

Executive Summary

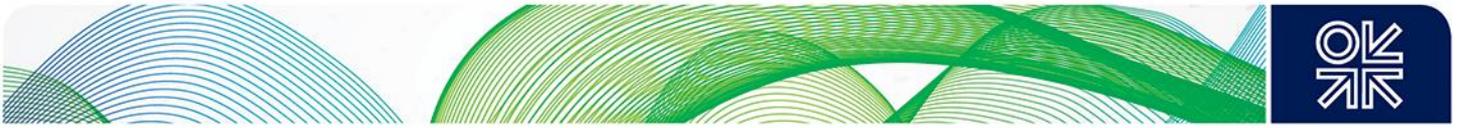
Dr David Robinson*

The major electricity companies (the 'majors') in Europe have not recovered from a significant decline in their combined market value that began in early 2008. Although the situation obviously differs by company, the difficulties faced by the majors as a group raise questions about whether the causes are temporary or structural, whether they reflect fundamental flaws in market design, regulation, and corporate strategy, and what the prospects are. If the problems are structural, as argued here, these companies may be unable or unwilling to finance the investments required to meet the EU policy goals of energy security, environmental sustainability, and acceptable costs (economic efficiency).

This research paper by David Robinson argues that the problems facing the European majors reflect a 'scissors effect', which has two interpretations. On the one hand, it is a dynamic process whereby certain revenue streams fall, while costs rise, literally cutting profitability in certain European markets and business segments. The scissors metaphor extends to a second interpretation: that profitability is being hit (or will be) both upstream and downstream. It is widely reported that wholesale market prices are falling, reducing upstream margins for conventional power generation. This reflects a growing gap between the costs of new generation capacity and the prices in the wholesale energy market; this is discouraging investment in generation that does not receive out-of-market payments, which are revenues in addition to those earned in the energy market. But it is less well understood that while wholesale prices are falling, final retail prices are rising. This poses, or will pose, another problem for the majors. The higher final prices reflect rising taxes and the costs of supporting public policies (relating to, for example, renewable power and co-generation) that contribute to excess generation capacity and lower wholesale prices. Higher final prices also create incentives for consumers to curtail demand, generate their own electricity, sell it back to the grid, and even to disconnect altogether from the system.

What explains the scissors effect? This paper emphasizes the external effects originating from underlying structural trends and public policy. On the one hand, there are three structural trends that help to explain the scissors effect: stagnant or falling electricity demand growth; increasing renewable electricity at the expense of conventional fossil fuel-fired generation; and the growing importance of final consumers and decentralized energy resources, such as demand response and autogeneration. On the other hand, governments have encouraged these trends and in some cases have initiated them. This intervention has distorted electricity markets and raised costs for final consumers, at least in the short term. However, it has also facilitated entry by new agents, notably renewable generators, and promoted greater consumer participation in electricity markets in the form of demand response and autogeneration. This combination of structural trends and government intervention helps to explain the problems now faced by the majors.

What are the implications? Although these structural trends seem now to be irreversible, the future of the sector still depends importantly on government decisions. This paper argues that current electricity regulations and market design are unsustainable. To address this, it is necessary to clarify the respective roles of government and markets and to design regulations and markets for a



decarbonized electricity model and for the transition to the new model. Where markets do have a role to play, it is essential that they be left to play that role. The proposal draws on the original spirit of liberalization, but reflects the importance of decarbonization and the technological changes that make active consumer participation in electricity markets a reality. While the majors have to rethink corporate and regulatory strategy, their first priority should be to engage in the debate about the future role of government and competitive markets in a decarbonizing electricity sector where consumers will be increasingly active.

*Dr David Robinson, Senior Research Fellow OIES, is an economist specializing in public policy and corporate strategy in the energy sector. His research and publications at the Institute cover US energy and climate policy, Sino-EU collaboration in renewable energy, and more generally the process and implications of electricity sector decarbonization. David is an Academic Advisor of The Brattle Group of economic and financial consultants. He is on the Board of Regents of St. Louis University in Madrid. Previously he was a Director at NERA and an advisor to the International Energy Agency. He wrote his doctoral dissertation at Oxford University on the vertical disintegration of the international petroleum industry. He joined the Institute in July 2007.