

BOOK REVIEW

A FUNCTIONAL LEGAL DESIGN FOR RELIABLE ELECTRICITY SUPPLY by Hamilcar Knops*

Only recently, the proposed privatisation of New South Wales' electricity market led to significant public and political debate. This debate drew attention to a globally controversial question, namely, whether supply networks, such as energy, gas, water or telecommunication networks, should be liberalised and open to competition. Of course, any proposed liberalisation raises a host of subsidiary questions, including how such network markets should be regulated, for example, to ensure that consumers have secure network supplies. And considering the special importance of supply security, it is not surprising that Hamilcar Knops chose to introduce his doctoral thesis *A Functional Legal Design For Reliable Electricity Supply* by reminding readers of the severe 2006 energy supply breakdown in northern continental Europe.

Having a background in physics and law, Knops subtitled his thesis appropriately *How technology affects the law*. His thesis presents a detailed analysis of this specific supply market, giving particular consideration to the technical and economic peculiarities of electricity and the networks that supply it, develops a complex design method that is capable of being informed by a number of crucial parameters, and assesses key supply market functions to propose hallmark features of a legal framework regulating that market.

The Content of the Book

Knops's starting point is deceptively simple: electricity is different and will not react to regulation. Rather, any legal regulation must take into consideration the peculiar physical properties of electricity. Knops, with considerable depth, uses the initial chapters of his thesis to introduce the reader to these properties. The introduction is an important overture to Knops's thesis which aims to extrapolate the hallmark features of a regulatory framework that allows an energy market to develop from a vertically structured, quasi-monopolistic or monopolistic network market into a predominantly liberalised competitive market that requires only limited vertical structures. However, it is also a fundamental pillar upon which Knops's design method rests.

The second fundamental pillar of his design method is the analysis, at various levels, of the functions performed by various aspects of the electricity market. Knops further demonstrates that these functions are informed by several key factors that influence network markets and introduces the reader to "legal organisation", including various forms of government control, "legal restraints" such as competition or environmental laws, as well as "public policy goals" such as supply security, economic efficiency and the provision of socially responsible supply methods. To test and validate the design method, Knops finally applies this method to a range of case studies, focusing on electricity generation, maintenance of the energy balance, generation adequacy, the operation of networks, congestion management, transport adequacy and investment in the electricity sector.

* Thomas John.

Conclusion

Intersentia publications are firmly embedded in the tight supra-jurisdictional web of EU law that informs the national laws of EU Member States. Thus, *prima facie*, their application to Australia appears to be very limited in scope. However, I indicated in previous reviews that, divorced from their underlying legal framework, these publications espouse doctrines, principles and applications that are easily transferable to other jurisdictions, including to Australia.

Knops's thesis is no exception. Whilst written against the background of EU law, Knops's analysis, his design method as well as the factors, functions, principles, doctrines and rules he extrapolates, develops and applies, are of broad application and can easily be transferred to the Australian context.

Knops develops his models and methods in some considerable depth. The reader benefits from this in three ways. First, it is easy to follow Knops's steps and decisions as they are tested against his propositions. Second, his focus on technology, rarely at the forefront of consideration of law makers, provides the reader with a different angle when considering this issue. Many regulatory schemes are paradigms for frameworks built with limited technical expertise. Knops is in an enviable position to demonstrate how law and technology intersect. And, third, Knops's thesis, whilst dealing specifically with the energy market, is of much broader application and translates readily to other supply networks such as telecommunication or water.

Hamilcar Knops's thesis *A Functional Legal Design For Reliable Electricity Supply* will be very valuable for any Australian lawyer or policy maker concerned with the regulation of complex network markets.