

The Law of Nuclear Energy, 3rd edn, by Helen Cook, (London: Sweet and Maxwell, 2022), 672 pages, hardback, £344.00, ISBN: 978-0-414-09120-7.

Helen Cook's *The Law of Nuclear Energy* is a comprehensive and useful guide to understanding the policy and legal framework for the adoption and implementation of nuclear energy programs. Her work provides an excellent reference not only for legal practitioners, but also for policymakers, technical experts and others involved in the development of nuclear energy

projects. To her credit, Ms Cook has built upon the work in the earlier editions of her book to give us fresh perspectives on the challenges and opportunities faced by the nuclear sector in the coming years. The first edition was published nearly a decade ago, soon after the accident at the Fukushima Daiichi plant in Japan which caused a serious reflection on the role of nuclear power in the energy mix. The latest edition presents itself at a time when nuclear energy is seen as a contributor to reducing carbon emissions, expansion of nuclear energy is being widely considered across the globe, and new nuclear technologies are presenting themselves for deployment.

Nuclear energy law has evolved over the past seven decades since the focus turned to peaceful uses of the atom and the deterrence of proliferation of nuclear weapons. The framework is built upon a complex mix of international instruments and guidance ("hard" and "soft" law), as well as implementing national legislation and regulations, all of which largely focus on the core principles of safety, security, safeguards, and liability. In Pt 1 of the book, Ms Cook unpacks these overarching principles by first introducing us—in a chapter new to this edition—to the considerations bearing on selection of energy policy and then by walking us through the development of a nuclear power programme with particular reference to the seminal guidance under IAEA's "Milestones" approach. In this context, she introduces us to the key international conventions and treaties related to each of the core principles, and then to the key components necessary in national nuclear legislation and to the approaches to nuclear regulation. The reader benefits from her thorough references to important international guidance documents as well as particular examples of legislative and regulatory approaches in several countries.

Beyond the key nuclear law concepts covered in Pt 1 of the book, Ms Cook examines, in Pt 2, the practical aspects of undertaking a nuclear project. Understanding the roles of various participants in the project, the procurement process, and the challenges faced in financing and construction require close consideration. Those embarking on a project will also need to consider the nuclear fuel cycle at both its front and back ends—i.e. obtaining fuel supply and services as well as planning for the management of used fuel and radioactive waste.

In Pt 3, Ms Cook reflects on the future of nuclear law, thoughtfully addressing trends and challenges in the deployment of new nuclear technology. She elaborates on the increasing interest in small modular reactors of varying technical designs and their deployment within the existing international and national frameworks. Adapting transportable designs to the existing framework

⁶² Koonin, *Unsettled?*, pp.245–246.

⁶³ Koonin, *Unsettled?*, p.251.

⁶⁴ Koonin, *Unsettled?*, p.16.

⁶⁵ M. Boslough, "A critical review of Steven Koonin's 'Unsettled'" *Yale Climate Connection* 25 May 2021. Anticipating the criticism of his credentials, Koonin states early on that he is not formally trained in the earth sciences, even though he has published several papers in the field. But as points out, the study of climate and energy "[is] the ultimate multidisciplinary activity. No single researcher can be an expert in more than two or three of its aspects ..." at p.14.

⁶⁶ See, e.g. M. Lavelle, "A New Book Feeds Climate Doubters, but Scientists Say the Conclusions are Misleading and Out of Date" *Inside Climate News* 4 May 2021; and K. A. Barry, "Review of Steven Koonin's *Unsettled*" (2022) 10(1) *Energy Regulation Quarterly*.

and focusing on greater harmonisation across regulatory systems are noted as objectives. In the final chapter, Ms Cook highlights the future developments to which we should continue to give our attention. These topics include the drivers and challenges to nuclear power deployment, the continued focus on nuclear safety and security, technological innovation, waste management, green and sustainable finance, and fostering human resources.

Although the depth and excellence of the exploration of nuclear energy law alone make this book a valuable reference, Ms Cook should be complimented, too, for its organisation. The detailed Table of Contents and its Index allow the reader to easily explore a particular topic of

interest covered in the book. The book's appendices include the major nuclear law treaties and conventions for easy reference.

Drawing on her seasoned practice of nuclear law and experience with the challenges of new nuclear power deployment, Helen Cook continues to make an important contribution to the understanding of nuclear law by building on her earlier work in this excellent and comprehensive third edition of *The Law of Nuclear Energy*.

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