Book Review

Reviewed Work: Renewable Energy Law: An International Assessment by Penelope Crossley
Publisher: Cambridge University Press, 2019.
Length: 270 pages
ISBN 9781107185760

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Some readers may have missed the announcement of Penelope Crossley's book[1] "Renewable Energy Law." That is understandable given the impact of Covid 19, but I would say that this is not a book to be missed, albeit my review is a little late. I say this because I believe that as the concept of renewable energy has grown quite quickly, this book provides a substantial foundation upon which to base your future renewable energy law personal sources.

As part of my review, I have decided to refer to some important developments which have occurred since publication of the book, and it is rather useful to see these recent subsequent developments in the context of Crossley's initial foundation stone.

Penelope Crossley is currently the Senior Industry Advisor to the Australian Energy Storage Alliance on regulatory and policy issues and is the Chair of the Product Listing Review Panel for the Clean Energy Council. Prior to entering academia, Penelope practised as a solicitor in London and Beijing, specialising in Global Energy and Infrastructure Law. I think that private practice as a solicitor in both, UK and China, has undoubtedly given Crossley an edge in pulling together this multi-faceted text.

Crossley's book is the first research to analyse the primary piece of national renewable energy legislation from each of the 113 countries that had such a law on 1st August 2018, as well as the EU Directive and the Statute of the International Renewable Energy Agency (IRENA Statute) quite appropriately, on page 1 of her book,

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Crossley raises the Paris Agreement, when '145 Parties included domestic action to support renewable energy to help mitigate and adapt to climate change as part of their Nationally Determined Contributions.'

Crossley's book, notwithstanding the book's title, is not a legal textbook, but is a research work that will be very helpful for lawyers who work (or those who want to work) in the renewable energy law sector because of Crossley's very significant range of foundation areas. If there is a particular weakness, the book contains no world country maps showing country location. Most lawyers look for an effective date, and this book's effective date is 1st August 2018 and 'changes in the law over time' are not addressed. Compared with law books, the book's structure is not standard, but here you will find 'renewables' learning, information and data which you will not find in other books on this subject.

Because it is a research book, Crossley sets out her research questions (this book was created for her own doctoral thesis) at the outset, but paying attention to her research questions and answers should not be the sole purpose for the reader of this book. This book represents a great opportunity to become knowledgeable in 'renewables' generally. However, you need to read what are Crossley's research questions: 'Which countries have a national framework law to govern or promote the accelerated deployment of renewable energy? (Crossley's book sets out the list, in English language, of the 113 national renewable energy laws). Which energy sources are recognised as renewable energy sources within the legislative definitions in the national renewable energy laws of different countries? What is the theoretical rationale for governments legislating to support the accelerated deployment of renewable energy? What are the stated legislative objectives for supporting the accelerated deployment of renewable energy in the primary legislation? How have regulatory support mechanisms been designed to accelerate the deployment of renewable energy in different countries? Given the benefits of national renewable energy laws becoming more similar, how will regulatory support mechanisms likely develop in the future? Will they be unified, harmonized, converge, diverge or actively compete through regulatory competition? Be sure that you understand Crossley's own chosen key terminology in the book such as: 'accelerate legislative objectives,' 'harmonised',

‘converge’, ‘diverge’ and ‘regulatory support mechanisms.’

Crossley explains her methodology and she shares some of the snags along the way. Her key challenge was 'identifying and locating the national renewable energy laws in every country that possessed them.’ Crossley found applicable laws in 47 different languages. English was chosen as Crossley's research language. Each law was 'coded', focusing on two terms 'renewable energy' and 'legislative objectives' in order, as she says, to make sense of all the data. 'Codes' were used 'to examine the similarities, differences and frequency of key concepts and themes'. Crossley would have preferred to translate the entirety of all the laws into English, to obtain more accurate interpretation but this was not feasible.

Crossley takes us carefully through what turns out to be 9'renewable energy sources used for electricity generation'. Wind and solar are at the front of renewable energies. 'Wind Energy is the second fastest growing form of renewable energy' and 'Solar radiation is the largest and most accessible resource on Earth'. Crossley makes judicious choice of academics’ existing work with full footnote references to strengthen her entire research. If you want to look up the earlier literature, then you might find it easier to use Crossley's e-book rather than the hard back text.

Crossley reports that 80 of the 113 countries with national renewable energy laws provide for resources as 'renewable' as follows: wind energy, solar energy, biomass, landfill gas, sewage treatment gas and biogas, small-scale hydropower and geothermal energy. Crossley offers a view that decisions as to what is 'renewable' are not based solely on science or legal principle but rather highlight the political nature of defining renewable energy. Crossley highlights the debate of whether certain energy should be deemed renewable and receive government support or be excluded for environmental or other reasons. Large scale hydropower, woody biomass and peat are part of the environmental discussion and geothermal and nuclear rely on energy sources and therefore maybe, should not be counted, as renewable.

Crossley reviews in detail the economic justification for regulating renewable energy. We are talking about large percentages of the countries of the world. At the time of her book, 146 countries had renewable power targets and 138 countries had support policies

directed at 'renewables' and it becomes important to understand the economic rationale.

Electricity is proudly a secondary source of energy. It has traditionally been generated from fossil fuels such as coal, natural gas and oil, with an increasing quantity generated from renewables. Electricity is essential for society with major stakeholders including governments, industrial and domestic consumers, employees, electricity distribution/supply companies, corporate shareholders andregulators.

Crossley tells us that electricity pricing does not reflect economic and societal costs of generation, due to the presence of 'externalities' and 'information asymmetries': both terms you need to become familiar with.

The electricity sector always has to cope with balancing demand with supply. Consumers need cost information and Crossley argues strongly for 'smart grids and meters.' Energy markets can experience market failure without regulatory intervention and yet this calculation is not a straightforward task. No single model of government intervention in the renewable energy sector for either market failures and or market barriers works. Crossley suggests a variable approach towards intervention should be adopted taking into account politics, technology, resources and economics. Social welfare and living standards make intervention highly politicised. Major market shifts or accidents can suddenly add to the calculation (Fukushima nuclear disaster in Japan, energy security concerns rising out of Russia/Ukraine (highlighted in 2018) and civil unrest in Nigeria, Iraq and Libya). Many countries, says Crossley, have failed to implement a coordinated and integrated national energy policy. In addition, electricity use is uneven and unresponsive to short term price spike and affected by weather, time of year, economic cycle, transmission /distribution and varying amount of electricity use with- out notice. Crossley's research shows that there is broad consensus as regards at least three different 'market failures' ('negative externalities' associated with fossil fuels, positive 'spillovers' full return on investments not recovered, 'information asymmetries: for example, uncertainty around future market developments). In effect says Crossley, there should be national regulatory intervention in the electricity sector. I can add a definition

of 'Information asymmetry' being an imbalance between two negotiating parties in their knowledge of relevant factors and details. Government policy and regulation should provide more support to new market entrants.

Crossley discusses 'market barriers' within the renewable energy sector, specifically 5 categories: policy, institutional, economic, technological and infrastructure. Crossley takes a tough view as regards 'subsidies' to fossil fuels and their use in electricity generation. It is most important for governments to support electricity generation from renewable sources by removing 'subsidies' that they provide to fossil fuel and nuclear generation. I will address 'subsidies' later in my post-publication comments, driven by the publication of Crossley's book.

Planning permission applications tend to be the area of greatest political interest and interference within the renewable energy sector.

Crossley reports that the majority of economists believe that regulatory intervention within the renewable energy sector is warranted.

Crossley reports her research findings as to why countries legislate to accelerate the deployment of renewable energy. As of 1st August 2018, more than 40% of countries (86 of 199) did not have a primary framework piece of national renewable energy law. Quite a large gap, I think. 'Environmental protection' is more often addressed (55 countries) than energy security (49). But then, as part of her analysis, Crossley shows that the weighted rank of environmental protection' is actually given a lesser priority. Crossley ventures to guess that countries may simply be tacking important objectives as a means of capturing the diversity of political opinion in the community.

There was broad consensus that relying on environmental or competition law alone would be an insufficient means to achieve the desired end. Countries support renewable energy in an attempt to overcome a wide range of problems and to achieve a variety of objectives. There is a role for separate laws promoting renewable energy that contain 'regulatory support mechanisms' to help countries meet their 'legislative objectives.'

Crossley is critical of earlier rationale for 'legislative objectives.' Crossley says that existing literature have made generalisations based on a few select case studies, but Crossley reports that her research demonstrates that fallacies are being perpetuated. She asserts quite authoritatively that it is the wide-spread presence of misconceptions in the existing literature that highlights the need for a comprehensive study of the 'legislative objectives' in national renewable energy laws.

It was necessary to categorise the legislative objectives by theme due to the overlapping nature and often, quite similar outcomes of various categories. The need to ensure a secure supply of energy in light of diminishing reserves of fossil fuels is a central concern. A number of geopolitical and economic factors have led to an increased emphasis on energy security in recent years. Growing concerns expressed were the vulnerability of Europe given their heavy dependence on Russian gas and past and more recent conflicts with Ukraine, sectarian violence in parts of the Middle East such as Iraq and Syria, concerns about Iran's nuclear programme, Arab spring and grab for resources, as well as India and China to secure access to foreign sources of supply to meet their rising energy demand. Diversifying supply was the second most common category within security.

Crossley addresses international treaty obligations and international agreements with an effect on the renewable energy sector. Only 11 countries sought to use their renewable energy laws to help them meet their international treaty obligations and international agreements, but possibly many countries directly incorporate the principles of international treaties and agreements.

Crossley tries to persuade the reader of the benefits of harmonising or converging laws. Countries must have similar objectives for intervening in the market and must be committed to achieving those goals. Crossley reports that this is unlikely to be achieved through national renewable energy laws at least in the short to medium term, such a consensus is lacking in the renewable energy sector because different legislative objectives were identified in the primary framework pieces of renewable energy legislation of the 113 countries with renewable energy laws. Legal harmonisation or convergence may also impose significant costs while legal divergence may offer some advantages.

In terms of economic objectives, China, Japan, the EU, USA, India and Brazil aggressively target renewables as a means of achieving their economic and other goals.

Crossley confirms that this is the first comprehensive study as to why countries seek to accelerate the deployment of renewable energy. Surprisingly, we are told that, as of 1st August 2018, more than 40% of countries did not have primary framework piece of national renewable energy law. Crossley suggests two reasons for this situation: (1) some countries do not have the need or desire to support renewable energy (2) some countries do not have the skills, capacity or resources to develop the legislation. These two conclusions are drawn from Crossley's available evidence.

The question why the countries make renewable energy law at all is found, says Crossley, in their "legislative objectives." The prime role of legislative objectives is "to act as a guide for the statutory interpretation of ambiguous legislative provisions. We find out what is the 'legislative objective' by initially by finding the section in the legislation which might summarise the purpose of the legislation.Or we might read the legislation as a whole. We might also look at extrinsic materials to the legislation, however, in the context of this book, 80 out of 113 countries had an 'objectives' section and another 8 countries together with IRENA and the EU had a preamble. Whereas earlier research had concluded that there was almost uniformity in countries as to objectives, Crossley reports that this uniformity conclusion was not consistent with Crossley's research, who reports numbers of variable objectives. Crossley goes as far as saying that the conclusions drawn by other analysts may not all be correct. In effect, Crossley concludes that there are misconceptions amongst existing analysts that highlight the need for a comprehensive study of 'legislative objectives'.

Therefore, Crossley spends some considerable time and analysis to show the result of her own analysis. Crossley therefore finds that there are 28 categories of legislative objectives, representing a much broader range, than previously identified. After finding 28 categories, Crossley then invents the concept of' primary theme'. She reports the finding of 8 key themes in the legislative objectives, 1. Security, 2. The environment, 3 Industrial policy 4. The economy 5. Society 6. International and regional 7. Sectoral and 8. Education and training. Crossley says that this

conclusion might be useful to uncover trends about how legislative priorities are shifting as countries amend their legislation or new countries enact legislation. Greater, says Crossley, in national renewable energy laws should lead to lower transaction costs, greater competition and ultimately lower prices for the ultimate consumers.

Being topical, myself, right now in light of the Russian/Ukraine war 2022, 4 legislative objectives were found under 'Security: 1. Energy security 2. Diversify supply 3. Reduce use of fossil fuels or nuclear imports 4. Encourage great use of indigenous energy sources. 'Security' received the highest weighted rank. Crossley's conclusion for this 'ranking' is that these legislative objectives are seeking to address a source of' market failure', that is, the unpriced cost of ensuring a secure supply of energy. Crossley says that there is a need to ensure a secure supply of energy, in light of diminishing reserves of fossil fuels.

Crossley explains the future development of regulatory support mechanisms as regards which direction the law is likely to go. The direction is focused on 'unification', 'harmonisation' 'convergence,'divergence' or 'regulatory competition'. She refers to international organisations, IRENA, lEA, Energy Charter Treaty and EU. There has not been a comprehensive analysis of the scale and impact of 'market failures' in every country. Crossley argues that over time countries with similar social and economic development should gravitate towards similar policies and instruments. She sets out the arguments for and against 'harmonisation.' Crossley reports that the degree of 'unification' within 'regulatory support mechanisms' in 'national renewable energy laws' is not currently known. The benefits of the "regulatory support mechanisms" within national renewable energy laws becoming more similar are clearly evident, Crossley argues, especially for international market participants.

The issue of whether regulatory support mechanisms are growing more similar or more divergent over time requires further research. From case studies, the starting position for most countries seems to be one of substantive divergence with different regulatory support mechanisms being designed and implemented in different countries.

Crossley observes that there has never been an attempt to 'unify' the renewable energy laws of two countries. Two, possibly three attempts, to 'harmonise' 'regulatory support mechanisms' at the EU level have failed. Please read reports towards the end of this book review as events, which have unfolded in the EU and elsewhere, since publication of Crossley's publication.

Some countries are adhering to a policy of regulatory competition and some significant national differences still exist within national framework pieces of legislation governing the promotion or accelerated deployment of renewable energy. The national differences are largely explained because many countries use their renewable energy laws to address national problems (energy security, dependence on fossil fuels and nuclear imports, need to diversify supply, encouraging economic growth, supporting sustainable development, system safety and reliability, industrial policy objectives.

It is not surprising that national laws have differing priorities and have developed divergently, especially among those countries that prioritise energy security.

I would like now to turn to certain important international events since the publication of Crossley's book. These are certainly not the only critical events, but with hindsight, they illustrate quite vividly what can happen in a relatively short period of time since the publication of Crossley's book.

I do not include Covid-19, but Covid-19 itself had a particular negative impact on the progress of 'renewables'.

1. Russia/Ukraine war

I refer to the 'lEA Report' on Renewables, May 2022 with the following relevant extract:

> "The current global energy crisis has added new urgency to accelerate clean energy transitions and, once again, highlighted the key role of renewable energy. For renewable electricity, pre-crisis policies lead to faster growth in our updated forecast. Notably, wind and solar PV have the potential to reduce the European Union's power sector dependence on Russia's natural gas by 2023."

> "While looming market uncertainties increase challenges, the new focus on energy security – especially in the European Union – is also triggering an unprecedented policy momentum towards accelerating energy efficiency and renewable s. Ultimately, the forecast of renewable markers for 2023 and beyond will depend on whether new and stronger policies will be introduced and implemented in the next six months."[1]

I also quote from Schroder's report of 30th June 2022:

> "Following the Russian invasion of Ukraine, The EU has committed to phasing out its dependency on Russian fossil fuels. A sustained policy effort across multiple sectors is needed.
>
> The EU is seeking to diversify its gas supplies, while speeding up the introduction of renewables. Reducing energy consumption and improving energy efficiency will also be important,given the tight supply and current energy infrastructure constraints. While the plan can fast-track the clean energy transition and fight the climate crisis, this is no easy task. The task is made harder still given the bloc is already battling elevated inflation caused by bottlenecks as economies have re-opened."[2]

2. Directive (EU) 2018/2001 11 December 2018 on the promotion of the use of energy from renewable sources

> "Renewable forms of energy are one of the goals of EU energy policy. The increased use of energy from renewable sources is an important part of the package of measures needed to reduce greenhouse gas emissions and to comply with the 2015 Paris Agreement on Climate Change and the

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1 IEA, Renewable Energy Market Update (IEA, 2022) <https://www.iea.org/reporrs/renewable-energy-market-update-may-2022> accessed 29 September 2022.

2 Irene Lauro, 'Will Russia-Ukraine war disrupt Europe's energy transition?' (Schroders, 30 June 2022) <https:I/www.schroders.com/en/us/institutional!insights/economic-views3/will-russia-ukraine-war-disrupt-europes- energy-transition/ > accessed 29 September 2022.

EU policy framework for climate and energy (2020 to 2030). This recast directive – along with the revised energy efficiency directive (Directive (EU) 20 18/2002), which amended Directive 2012/27/EU on energy efficiency, and a new governance regulation (Regulation (EU) 2018/ 1999) –is part of the clean energy for all Europeans package, which aims to provide new, comprehensive rules on energy regulation for the 2020-2030 period."[3]

3. European Union (EU)-July 2022

"The European Parliament's industry committee voted on 13th July 2022 in favour of an EU-wide objective to more than double the Bloc's production of renewable energy'- from the current 22% to 45% by 2030 – in reaction to the war in Ukraine. The new 2030 objective is a substantial increase compared to the 40% target tabled by the European Commission only a year ago as part of its 'Fit for 55' climate plan. Bur following Russia's invasion of Ukraine, lawmakers from all political sides rallied behind proposals to raise this objective to 45%. The updated target is also in line with European Commission plans tabled on 18 May 2022, which sought to eliminate all imports of Russian fossil fuels "well before" 2030 and accelerate the energy transition in response to Russia's war of aggression in Ukraine".[4]

4. PPAs Renewable energy in Europe

Ukraine War has boosted renewable energy PPAs in Europe.

"Power purchase agreements (PPAs) for renewable energy have grown fivefold in five years in Europe. The European PPA market has rapidly expanded, with a five-fold increase from 2016 until2021. Solar is the fastest-growing renewable energy source internationally, and this is beginning to be reflected in the PPA market. In Europe, 33 of97 PPAs signed in 2021 were for solar. Wind accounts for nearly two- thirds

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3 EU Directive 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (recast) [2018] OJL328/ 82.

4 Frederic Simon, 'EU lawmakers sign up to 45% renewables target in response to Ukraine war (EURACTIV, 13 July 2022)

of the market. Europe's renewable PPA leader has been Spain, which contracted more than 2.3 gigawatts (GW) in 2021 alone including 1.2GW of solar and over 500 megawatts (MW) of wind PPAs"[5]

5. "Fit for 55 Package"

   "At a glance The Fit for 55 Package consists of a set of inter-connected proposals, which all drive to- wards the same goal of ensuring a fair, competitive and green transition by 2030 and beyond. Where possible existing legislation is made more ambitious and where needed new proposals are put on the table. Overall, the package strengthens eight existing pieces of legislation and presents five new initiatives, across a range policy areas and economic sectors: climate, energy and fuels, transport, buildings, land use and forestry."[6]

6. ESG AND Renewable Energy

   ESG is not discussed by Crossley. ESG growth has occurred since publication of Crossley's book. Now, in2022, ESG is a key topic: Orsted, a leading renewable energy company stated in March 2022 that "the renewable energy buildout will soon reach a scale at which it can fundamentally reshape the way our societies look and operate. It is vital that the E, S and G of renewable energy become core aspects of the buildout".[7]

   International Sustainability Standards Board and Environmental, Social and Governance (ESG) "International

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5 Mirela Petkova, 'Weekly data : Ukraine War boots renewable energy PPAs in Europe' (Energy Monitor, 16 August 2022) <https://www.energymonitor.a i/secrors/power/ukraine-war-boosts-renewable-ppas> accessed 29 September 2022.

6 European Commission, 'Communication From The Commission To The European Parliament, The Council , The European Economic And Social Committee And The Committee Of the Regions: 'Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality COM (2021) 550 final.

7 Ira Krabek, 'Why it's viral to consider the E, Sand G of renewables' (Orsted, 30 March 2022).
< https :/orsted .com/ en/ insights/expert-take /why- it-is-vital-to-consider-the-e-s-and -g-of-renewables > accessed 29 September 2022.

investors with global investment portfolios are increasingly calling for high quality, transparent, reliable and comparable reporting by companies on climate and other environmental, social and governance (ESG) matters.

On 3 November 2021, the IFRS Foundation Trustees announced the creation of a new standard-setting board-the International Sustainability Standards Board (ISSB)-to help meet this demand.

The intention is for the ISSB to deliver a comprehensive global baseline of sustainability-related disclosure standards that provide investors and other capital market participants with information about companies' sustainability-related risks and opportunities to help them make informed decisions."[8]

7. Energy Charter Treaty 2022 and Renewable Energy

In June 2022, there was the conclusion of 2 years of negotiations between 53 contracting parties to modernise the outdated ECT. The treaty provides the framework for international trade and in- vestment on energy matters but was drafted and first published in 1994, in a world when fossil fuels dominated power generation.

The modernised treaty, which is due to be signed in November 2022, will have a much stronger focus on promoting clean, affordable energy. It will protect the UK government's sovereign right to change its own energy systems to reach emissions reductions targets in line with the Paris Agreement.

For the first time, it will ensure legal protections for overseas investments into the UK in green technologies, such as Carbon Capture, Utilisation and Storage and low-carbon hydrogen production, alongside other renewables. This will help give private investors in these types of technologies

8 IFRS, 'About the International Sustainability Standards Board ' < https:// www.ifrs.org/groups/ international-sustainability-standards-board/ #about> accessed 29 September 2022.

increased confidence as the technologies develop.[9]

8. 27th session of the 'Conference of the Parties' (COP 27) to the UNFCCC will take place in Sharm El-Sheikh, Egypt, November 2022

At COP 27, there will no doubt be further discussion of section 20 of the Glasgow Climate Pact 2001, and in particular the phasing-out of inefficient fossil fuel subsidies.

Decision -/CP.26 Glasgow Climate Pact The Conference of the Parties, Recalling decisions 1ICP.19, l/CP.20, l/CP.21, 1/CP.22, 1/CP.23, l/CP.24 and 1/CP.25, Noting decisions l/CMP.16 and 11 CMA.3,

> "20. Calls upon Parties to accelerate the development, deployment and dissemination of technologies, and the adoption of policies, to transition towards low-emission energy systems, including by rapidly scaling up the deployment of clean power generation and energy efficiency measures, including accelerating efforts towards the phasedown of unabated coal power and phase-out of inefficient fossil fuel subsidies, while providing targeted support to the poorest and most vulnerable in line with national circumstances and recognizing the need for support towards a just transition".[10]

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9 Department for Business, Energy & Industrial Strategy 'UK strengthens protections for taxpayers in energy treaty negotiations' (GOV UK, 24June 2022) <https ://www.gov.uk /government/news/uk-strengthens-protections-for-taxpayers-in-energy-treaty- negotiations> accessed 29 September 2022.

10 United Nations Framework Convention on Climate Change, 'Glasgow Climate Pact' (2022) UN Doc FCCC/PA/CMA/2021/10/Add.1 para 36.

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