

# Chapter 1

## What Is Energy Law?

### 1.1 Introduction: What Is Energy Law?

Energy law concerns the management of energy resources. This is a simple definition, and disguises that it is arguably one of the more complex areas of law. It demands that a scholar in the area engage with other disciplines to some degree, such as politics, economics, geography, environmental sciences and engineering.

In 2015, energy law is still considered a new area of law. It appears not to have the established academic literature base of other legal areas. However, this is to misunderstand what energy law is. It has been in existence in different forms for over a century. In the 1800s and early 1900s, there was legislation to manage energy sectors such as coal and oil. These energy sources are known as fossil fuels (along with gas) and form one of the two main categories of energy sources. The other category is low-carbon energy sources which have been in development since after the Second World War (1945) and consist of nuclear energy, hydropower, wind, solar, biomass and several other minor renewable energy sources.

Energy law has now come to the fore. It is viewed with a holistic approach today whereas before it was divided into many parts—in general in terms of each type of energy source. There is a realisation in the twenty-first century of the fundamental role that the energy sector plays in the economy of a country. It is an important sector for employment, future economic development and the personal health of a nation's citizens. In particular, it has been pushed high up the political agenda with the advent of climate change and policies concerning energy security. For example, the impacts of Russia's ability to affect gas prices in the majority of the European Union (EU) have highlighted the importance of the energy sector at both EU and Member State level. Further, politicians can be credited with pushing the agenda, in part, because high energy prices—mainly electricity prices—have an influence on election outcomes.

It is no surprise therefore that, as a legal speciality, energy law has returned to prominence. The area is now growing at an accelerated pace, with journals, textbooks and practitioner books all appearing in numbers. Commercially, there is widespread

growth of energy law divisions in the majority of medium to large legal practices. Legal training in energy law has also increased, with a proliferation of continuing professional development (CPD) summer courses and dedicated Masters courses, and a number of undergraduate law programmes in the EU and US have introduced it as a core and optional subject.

The European Union itself represents an example of the subject status of energy law. The EU was founded upon two treaties—the European Coal and Steel Community Treaty and the Euratom Treaty—that were used to manage the natural resources and energy assets of countries within the initial group of Member States. Indeed, the initial aim was to prevent—or at least limit—the possibility of future outbreaks of war by having a common management scheme for energy resources and assets. The two treaties that formed the EU—with one of these, the Euratom Treaty, unchanged since—are one reason why specific energy law did not appear in individual Member States until the last decade.

The next decade will be particularly important for the energy sector globally. The energy infrastructure built and policy concerning future energy infrastructure development during this period will determine whether many countries will meet the climate change targets that they set for the period 2020–2050 (considering the life-span of new energy infrastructure is generally 25 years plus), and they will set in place the physical and legal frameworks within which energy policy will have to function for many years.

A vital purpose of current energy law is to encourage, incentivise and/or initiate new energy infrastructure. For example, nearly a decade ago the United States enacted the Energy Policy Act 2005. The key aim of this piece of legislation was to initiate several hundred billion dollars worth of new energy infrastructure projects. While initially it was slow in its application, the Act has since 2012 resulted in almost \$30 billion of energy projects beginning construction—in particular, the nuclear energy projects in the states of Georgia and South Carolina.

Similarly, the UK government declared that the goal of its Energy Act 2013 was to initiate £110 billion of new energy infrastructure. Across Europe, many countries plan to follow the UK approach to energy law in encouraging investment in energy infrastructure, and as such developments in energy law will be of considerable value and interest to policy-makers, practising lawyers and scholars across Europe. The development of energy infrastructure is seen as not only a method of increasing economic growth through spending, but also a key means of achieving future economic growth through developing energy infrastructure supply chains and exportable expertise and technology in the sector.

## 1.2 Scope of the Text

This chapter is a general introduction to energy law. It will provide a useful background to energy law for new students and is also accessible to those from other disciplines such as the social sciences, environmental sciences and engineering.

The text is formed of four parts. The first covers what energy law is, and includes an analysis of its key components, the key organisations and the key influences on the subject. The second part provides a background to the three levels of energy law, from international to national to local energy law. The third section of the text delves into more detail and examines energy law in the context of energy policy concepts and the overlap with environmental law. The section concludes with an examination of the law for different energy sources, both fossil fuel and low-carbon energy sources.

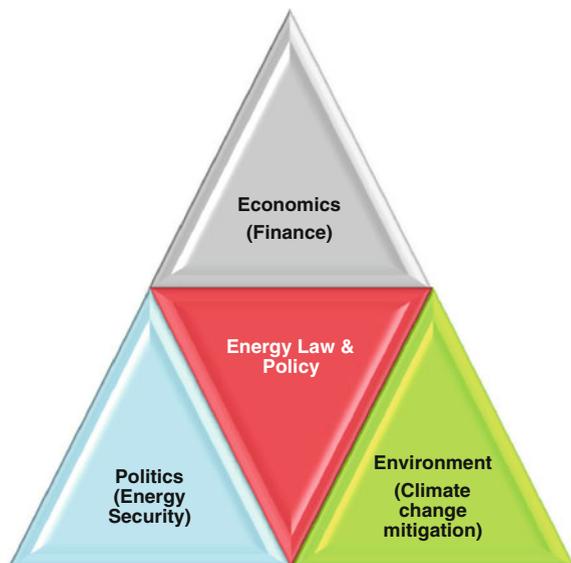
The fourth and final part of the chapter engages with the key research focus in the area of energy law, comparative energy law analysis and an introduction to some key case law in the area. The text concludes with a summary of potential future directions of energy law.

## 1.3 Elements of Energy Law

### 1.3.1 *The Energy Law and Policy Triangle*

It is hard to separate the study of energy law from energy policy. In many ways they are intertwined. The main theory in energy law and policy that this text offers can be seen simplistically in Fig. 1.1. Here this is referred to as the Energy Law and Policy Triangle and it is also known in other cases as the Energy Trilemma; either name can be used in the literature. However, it is advanced that there is a

**Fig. 1.1** The energy law and policy triangle—The ‘energy trilemma’. *Source* Constructed by Author (2014)



distinction, as the challenge of balancing the energy law and policy triangle raises the question of the energy trilemma and how does society resolve it.

Energy law and policy is in the centre of the triangle and on the three points of the triangle are economics (finance), politics (energy security) and environment (climate change mitigation). These three issues are each trying to pull energy law and policy in their direction. In essence, effective and efficient energy law and policy will balance these three aims to deliver the best outcome to society. However, if one examines energy law and policy in more detail, often it is just one of these issues that dominates the energy agenda.

### 1.3.2 Energy Law Legislators

Energy law is derived from three levels of law, international, national and local. The first level can initially take the form of international treaties. These are global agreements signed by a number of countries on particular issues. Examples of some of these are listed in Table 1.1. These set out certain standards for a variety of activities in the energy sector.

The United Nations (UN) driven agreements on climate change have been ongoing since the Declaration of the United Nations Conference on the Human Environment, (adopted at Stockholm on 16 June 1972). Often these and following agreements are seen as international environmental treaties but they can also be described as energy-related. These international agreements now heavily influence what new energy infrastructure is built in countries that are signatories to the treaties. For example, many countries signed the Kyoto Protocol, which meant

**Table 1.1** International treaties for energy issues

International treaties for energy issues
• Vienna convention for the protection of the ozone layer (Vienna, 22 March 1985)
• Montreal protocol on substances that deplete the ozone layer (Montreal, 16 September 1987)
• United Nations framework convention on climate change (Rio, 9 May 1992)
• Kyoto protocol to the United Nations framework convention on climate change (Kyoto, 11 December 1997)
• Aarhus convention on access to information, public participation in decision-making and access to justice in environmental matters (Aarhus, 25 June 1988)
• Convention on environmental impact assessment in a transboundary context (Espoo, 25 February 1991)
• Lugano convention on civil liability for damages resulting from activities dangerous to the environment (Lugano, 21 June 1993-not yet in force)

Source Constructed by Author (2014)

having to reduce their greenhouse gas emissions. In the UK, this in part prompted the move over the past decade to introduce legislation to promote more renewable energy development, with new development in fossil fuels not being a key feature of this new legislation.

The next level of energy law development can be seen in supranational administration. The EU and US are the prime examples here. In the EU, the EU Commission sets policy and legislative goals in the energy sector that are followed by 28 Member States, with a combined population of 507 million (Eurostat 2014). Similarly the US sets Federal policy and law for its 50 states and has a population of 316 million (US Census Bureau 2013). While these two essentially federal governments represent a minority of the world's population, they lead the international community in setting energy law and policy. Many other countries look to these two regions for guidance in establishing new energy law and policy in their respective states.

The key source of energy law and policy is national governments. Governments set the energy policy in their country and then introduce the legislation to meet those goals. Many Member States in the EU and states in the US have to take into account federal law and policy but these states have a large amount of autonomy as to how they meet their energy needs. Other countries outside the EU and US are generally free to set their own energy law and policy but have to take into account whatever international treaties they may be signatories to. For many countries, issues such as international political and trade relationships with other countries also influence their energy law and policy formulation.

The final place where energy law and policy is developed is at a local level. This is where local legislators from regions to small counties (or districts) set certain energy goals and may offer local incentives for companies that plan to develop energy infrastructure in their region. These usually take the form of tax breaks, grants and the transfer of land. An example is Victoria County in the state of Texas in the US where Exelon was given benefits for initially developing its plans to build a new nuclear plant there.

### ***1.3.3 Energy Law and Policy Organisations***

There are a number of energy law and policy organisations that provide analysis, new approaches and perspectives on energy policy in an international context. Table 1.2 lists these key organisations.

Table 1.2 is not a complete listing of all the key energy law and policy organisations. However, it is a list of the most influential organisations, which also make a significant amount of published material available free to all readers. The EU, UN and US Department of Energy produce numerous policy documents and hold copies of legislation and international treaties. The energy research centres at the Universities of Oxford and Cambridge are very strong at producing publications on issues across the energy sector and with an international context. The energy centre

**Table 1.2** The main energy law and policy organisations

Energy law and policy organisations
1. International Energy Agency <a href="http://www.worldenergyoutlook.org/">http://www.worldenergyoutlook.org/</a>
2. International Atomic Energy Agency <a href="http://www.iaea.org/">http://www.iaea.org/</a>
3. United Nations Environmental Programme <a href="http://www.undp.org/content/undp/en/home/ourwork/environmentandenergy/overview.html">http://www.undp.org/content/undp/en/home/ourwork/environmentandenergy/overview.html</a>
4. European Commission Energy Department <a href="http://ec.europa.eu/energy/index_en.htm">http://ec.europa.eu/energy/index_en.htm</a>
5. Department of Energy, US <a href="http://www.energy.gov/">http://www.energy.gov/</a>
6. Oxford Energy Institute, University of Oxford, UK <a href="http://www.oxfordenergy.org/">http://www.oxfordenergy.org/</a>
7. Energy Policy Research Group, University of Cambridge, UK <a href="http://www.eprg.group.cam.ac.uk/">http://www.eprg.group.cam.ac.uk/</a>
8. MIT Center for Energy and Environmental Research, US <a href="http://web.mit.edu/ceepr/www/">http://web.mit.edu/ceepr/www/</a>
9. Centre for Energy, Petroleum, and Mineral Law and Policy, University of Dundee, UK <a href="http://www.dundee.ac.uk/cepmlp/">http://www.dundee.ac.uk/cepmlp/</a>

*Source* Constructed by Author (2014)

at MIT has long had an influence in providing input into US energy policy, and it is noticeable that one of its members, Professor Ernest Moniz, was appointed as the Secretary of State for Energy in the Barack Obama administration in May 2013. There are many other energy research centres in other countries but they have not yet the capacity and volume of publications that these aforementioned centres have.

### ***1.3.4 Influences on Energy Law***

Numerous other areas of the law influence energy law. It is vital for the energy law student to be aware of the effect of changes in these other areas of law that affect the energy sector; a brief overview will be provided here, and this will be explored in more detail in Chap. 3.

The first of these areas is environmental law. Energy law and environmental law are intertwined and both have similar characteristics, and are concerned with legislating for the effective management of natural resources. However, in the case of energy law, the natural resources with which it is concerned are those that can yield energy directly, or possess the potential to do so, and thereby contribute to electricity production. Hence, major concerns of environmental law, such as forestry, habitat and wildlife, are not a focus of energy law. Nevertheless, the link between

them is obvious given the potential of energy assets to threaten forestry, habitat or wildlife, either by their location or as a result of their pollution.

The importance of energy law and environmental law is in providing legislation to manage the natural resources of a country, and in their potential for changing human and societal behaviour; another important characteristic is that of policy formulation. Both energy and environmental law demonstrate to a greater extent than other areas of the law the interchange between law and policy and the importance of policy-makers. Policy development drives forward energy and environmental law. Environmental law has at its core an international agenda that informs and pushes regions to implement the various international treaties and consequently to legislate for these. Energy law too is affected by national energy policy, which in turn is driven by international agreements or targets.

Related to the influence of environmental law are planning and construction law. Both these areas of law affect the development of energy infrastructure. For example, many countries have specific planning law relating to energy infrastructure development. This legislation will in general call for accelerated decision-making on planning applications for new energy infrastructure. In addition, the scale of energy projects has implications for local communities, and as a result there is applicable planning law regarding public participation in the planning process. Construction law is more standard as legislation and will apply similarly to energy projects as it does to other large infrastructure projects, such as transport and other public infrastructure.

Energy law is also influenced increasingly by other disciplines. These include, in particular, strategy, project management, finance and economics. These subjects influence, in essence, the ambition of the energy sector and what it can achieve given the constraints imposed by these disciplines. The level of their influence is determined by the strength of the actor groups associated with each discipline. Economists are influential in terms of differentiating the respective costs and benefits of building different energy infrastructure for the different energy sources—using, in general, cost benefit analysis (CBA). Economists have also played a key role in determining the structure of the electricity market, and therefore which type of energy infrastructure has been developed.

Energy law is beginning to be more holistic in its approach. For example, included in energy law legislation now are various issues previously associated with these other areas of law, such as subsidy mechanisms, health and safety issues, and liability issues.

### ***1.3.5 International Drivers of Change in Energy Law***

As well as understanding the key influences on energy law and policy it is important to know why energy law may change. The drivers of change in energy law can be complex and arise mainly at international and national levels.

Change begins with *international treaties*. Many of these are well established (examples of some of these appear in Table 1.1) and when they are updated they prompt change in national energy law.

*International agencies* also drive change. An example of this is the International Atomic Energy Agency (IAEA). The IAEA can set new law and policy guidelines for the international nuclear energy sector, and countries that are members have to change their nuclear energy law and policy as a result. An example of this is safety practices and insurance (liability) in the nuclear energy sector (which will be discussed later at Sect. 3.3). Similarly there are agencies (for example, the International Association of Oil and Gas Producers) responsible for offshore oil and gas safety practices, and, again, countries change their national energy law to take into account new policies proposed by these agencies.

*International politics (relations)* is also a driver of change. Countries often have highly developed political relationships that lead to cooperation on energy infrastructure development. This can take many forms but usually involves one country selling its energy expertise or technology to another country. An example of this is the developing international political relationship between Russia and Turkey. In the context of energy, this has resulted in Russia being given approval to build a four reactor nuclear plant at Akkuyu in Turkey. Russia will build and then own and operate the plant for 20 years before selling it to Turkey. Similarly, Romania built a nuclear power plant in a consortium with a Canadian nuclear energy company and availed itself of Canadian expertise during the project and after the plant was operational.

Linked with international politics as a driver of change in energy law is *international business and trade*. Often energy projects such as the ones mentioned above result from and include agreements on other international business and trade between two countries. These agreements for the sale of other products (usually non-energy products) can see one country being given the contract to build energy infrastructure, and energy law and policy will change as a result.

### ***1.3.6 National Drivers of Change in Energy Law***

There are a number of drivers of change at national level. These are related to some degree to the international drivers. The *Aim of Government* is the first of these. This is of importance as, depending on the political party in government, energy policy may be subject to change. From the examples in Table 1.3, it is evident that the election of a new government can result in significant changes in energy law and policy.

Related to the *Aim of Government* are *Availability of Finance*; *Advances in Technology*; and *Societal Preferences*. These are issues a government has to consider when formulating its own energy policy. However, they are also issues in their own right. The *Availability of Finance* has been particularly important since the beginning of the financial crisis in 2007. Obtaining finance for a project has become

**Table 1.3** New governments and new energy law

Germany
With the election of Angela Merkel's government in 2005, energy policy in Germany changed. The energy policy promoted by her party and government involved a significant emphasis on renewable energy development and the closure of nuclear energy plants—which did receive an impetus after the Fukushima accident in Japan in 2011
United Kingdom
The indecision of the UK coalition government elected in May 2010 has delayed new investment in the UK energy sector. It took the first few years of the government for both parties (the Conservatives and the Liberal Democrats) to agree a way forward. This indecision has reduced the interest from investors in the UK energy sector, and there has been little interest in developing new energy infrastructure
France
Since the election of François Hollande of the French socialist party as president of France in May 2012, French energy policy has changed. The previous dominance of nuclear energy within the French energy policy is being reduced and a new emphasis has been placed on renewable energy development, with a planned limit on the use of nuclear energy to 50 % of the country's energy mix by 2025
<i>Source</i> Constructed by Author (2014)

increasingly difficult and investors are looking for a guaranteed return on their investment. Energy projects can be seen as risky. Some suffer from long construction times and others from long planning processes, and this increases the risk profile of each project. In a time of recession, investors will look for more secure projects. There have been many cases where investors have pulled out from completing major energy projects—see Table 1.4 for examples.

In many cases where the *Availability of Finance* is an issue, new energy law and policy will be formulated that will have as one of its objectives to increase the investment in the energy sector. For example, and as stated previously, the specific aim of the UK Energy Act 2013 was to stimulate £110 billion in investment in the energy sector. Its success in achieving this will determine when new legislation will be introduced in the future.

*Advances in Technology* will also contribute to change in energy law. Advances in the technology for wind turbines and solar energy are having a major effect in many countries. This has resulted in many countries changing their energy law in part to capture these technological benefits from more efficient technology—Denmark and Germany are good examples of this. This is also currently evident in relation to Carbon Capture and Storage (CCS) technology. The advances made in this technology may see a return of new coal-fired plants that use this technology. Energy law has been changed to promote the use of CCS technology, for example, in the US and the UK.

**Table 1.4** Energy projects and investor withdrawal

Romania
Originally there were six investors involved in building Romania's third and fourth nuclear reactors; however, in 2009 three of these withdrew. Another investor withdrew in 2012, and the final two had done so by December 2013
United Kingdom
Numerous wind energy projects have been cancelled (for example, the Atlantic Array £4 billion wind farm project). The investors RWE stated that there were financial considerations in their decisions
<i>Source</i> Constructed by Author (2014)

A final related driver of change in energy law is *Societal Preferences*. Different countries have different societal structures which contribute in part to different societal preferences. In many cases, this emanates from how the culture has developed over time. For example, the Republic of Ireland has a very anti-nuclear stance. For the Republic of Ireland to build a nuclear reactor, there would have to be a referendum on the issue in which every individual would have a vote. This is in contrast to the UK where the majority of the population still see nuclear energy as part of the UK energy mix and a solution to reducing CO<sub>2</sub> emissions (Pidgeon et al. 2008; Poortinga et al. 2013). In France nuclear expertise and technology was developed to the degree that engineers had a dominant role in energy policy formulation for several decades. In Denmark there has been cross-party political support for the development of wind energy since the 1970s and this has resulted in a society that sees wind energy as the solution to its energy problem and a way to reduce its reliance on fossil fuels, and also as a contributor to economic development. In the US certain states have a culture that has developed around their coal-mining industry. It is hard in such communities to break the preference of some citizens to continue with coal mining and coal-fired plants.

### 1.3.7 Local/Individual Theory of Change in Energy Law

In examining the drivers of change for energy law and policy, it is possible to construct a theory of change in energy law and policy from an individual perspective. This can be seen in Fig. 1.2 where there are three intertwining perspectives: a world perspective, a national perspective and a local perspective. The world perspective is supported by a cosmopolitan philosophy where individuals view themselves as world citizens and view prospective change as enabling change for the better of humanity. This takes the form of the development of international treaties and is led by international institutions. The national perspective is where the individuals have voted politicians into government, and governments in turn apply their political mandate to bring in new energy law and policy—as such, this



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