

Analysis of Application of Energy Law in Nepal

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1. Introduction

The concept of energy law is a recent origin. It is considered as a part of environmental law. In the history of legal development, the energy law and its scope is realized widely with the evolution of science and technology. In international arena, the energy law has a set of core principles that guide energy law, in essence, a treatise for energy law. The advocacy on energy law has shifted a paradigm with the changed context of the society for its understanding and operation. The subject of energy law revolved around its set of guiding principle. However, we acknowledge that to some extent it is perhaps not a paradigm shift due to the current absence of any core principles of energy law. Hence, Energy law is a new dimension of the legal theory which aims at the changing of what constitutes energy law and to meet the challenges of existing global society. Government of Nepal has initiated to formulate the National Energy Strategy (NES) to address the challenges as well as for the development and utilization of energy resources in sustainable manner. The preparation of National Energy Strategy was started in 2007 and completed in two phases. The first phase of the study assessed and analyzed the energy sector issues at national and regional level. Five regional consultative workshops were organized in five development regions of the country represented by energy sector stakeholders including supply side and demand side.

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In physics, **energy** is the quantitative property that must be transferred to an object in order to perform work on, or to heat, the object. Energy is a conserved quantity, the law of conservation of energy states that energy can be converted in form, but not created or destroyed. Living organisms require energy to stay alive, such as the energy humans get from food. Human civilization requires energy to function, which it gets from energy resources such as fossil fuels, nuclear fuel, or renewable energy. The processes of Earth's climate and ecosystem are driven by the radiant energy Earth receives from the sun and the geothermal energy contained within the earth. The word *energy* derives from the Ancient Greek: Ἔνεργια, romanized: *energeia*, means 'activity, operation' ¹ which possibly appears for the first time in the work of Aristotle in the 4th century B.C. In contrast to the modern definition, *Energeia* was a qualitative philosophical concept, broad enough to include ideas such as happiness and pleasure. In 1807, Thomas Young was possibly the first to use the term "energy" instead of *vis viva*, in its modern sense.²

2. The Concept of Energy Law

Energy Law is concerned with the management and application of the energy resources for the existence human being. It is related with the proper management and application of energy resources. There are many reasons for the development of energy law both in legal practice and in research. The development of the concept of privatization and liberalization of energy markets across the globe and the ongoing 'energy transition' and internationalization with changes in energy markets, energy law is developed as a legal discipline. In practice, energy law has flourished as a subject of legal practice becoming one of the major practice areas. Energy law from a practice perspective, governments have identified the importance of energy and put it high on the political agenda due both to its environmental impact and its economic consequences.

The 'Energy Departments' and energy regulators in many countries for a long time spurred by the oil crisis during the 1970s and the liberalization trends in the 1980s and 1990s for the latter. Further, now legal job and its advertisements of the utilization in the energy sector have increased both in

¹ Harper, Douglas. "Energy". Online Etymology Dictionary. Archived from the original on October 11, 2007. (Retrieved July 1, 2019).

² CRISBIE SMITH, THE SCIENCE OF ENERGY- A CULTURALHISTORY OF ENERGY PHYSICS IN VICTORIAN BRITAIN, The University of Chicago Press, (1998).

academia and practice. Private law firms across the globe have created specific energy practice areas focusing on all facets of energy markets, from extraction to production to transportation and end use. As noted elsewhere, 'there are hundreds of different industries, and only a few have, so far, given rise to a particular professional and academic sub-discipline', and energy is one where this has happened.³ In academia, while a debate of what constitutes energy law has continued for three decades this has only occurred to a very limited extent. It is only recently, however, that academics are moving to analyze this in more detail again and advance energy law as an academic field.⁴ In other areas of the law and in energy studies this is completed on a more regular basis. In contrast, energy law has suffered from attempts at splintering it further with some scholars suggesting separate legal areas for oil and gas (*lex petroliā*), and for mining (*lex mineralia*); however, recently Daintith has critiqued extensively the aim of scholars to state there should be such an energy law area as *lex petrolea*⁵ and the same can be said for *lex mineralia*. We argue that in our advancing of guiding principles we set out a new path for the study and practice of energy law and thus we aim to shift what constitutes energy law and assist in challenging and developing current assumptions of existing researchers. This is of vital importance as globally countries are transitioning to low-carbon economies.⁶

3. Sources of Energy

There are nine major areas of energy resources. They fall into two categories, nonrenewable and renewable. Nonrenewable energy resources, like coal, nuclear, oil, and natural gas, are available in limited supplies. This is usually due to the long time it takes for them to be replenished. Renewable resources are replenished naturally and over relatively short periods of time. The five major renewable energy resources are solar, wind, water (hydro), biomass, and geothermal. Fossil fuels make up a large portion of today's energy market, although promising new renewable technologies are emerging. Careers in both the renewable and nonrenewable energy industries are growing, however, there are differences between the two sectors. They each have benefits and challenges, and relate to unique technologies that play a role in our current

³ K Talus, *EU Energy Law and Policy: a Critical Account* (OUP 2013).

⁴ RJ Heffron & K Talus, 'The Development of Energy Law in the 21st Century: A Paradigm Shift?' *JOURNAL OF WORLD ENERGY LAW AND BUSINESS*, (2016), 189.,

⁵ T Daintith, 'Against "lex petrolea"' *JOURNAL OF WORLD ENERGY LAW AND BUSINESS*, (2017), 1.

⁶ Raphael J Heffron et.al, "A Treatise for Energy Law" *JOURNAL OF WORLD ENERGY LAW AND BUSINESS*, Volume 11, Issue 1, (March 2018), 34.

energy system. For a range of reasons, from the limited amount of fossil fuels available to their effects on the environment, there is increased interest in using renewable forms of energy and developing technologies to increase their efficiency. This growing industry calls for a new workforce.⁷ Renewable energies generate from natural sources that can be replaced over a relatively short time scale. Examples of renewable energies include solar, wind, hydro, geothermal and biomass. Nonrenewable energies come from resources that are not replaced or are replaced only very slowly by natural processes. The primary sources for nonrenewable energies in the world are fossil fuels — coal, gas and oil. Nuclear energy is also considered nonrenewable because there is a limited supply of uranium in the Earth's crust. When planning the energy profile for various communities, the advantages and disadvantages of renewable vs. nonrenewable energies need to be considered.⁸

4. Types of energy

Non-renewable energy includes coal, gas and oil. Most cars, trains and planes use non-renewable energy. They are made by burning fossil fuels to create energy. **Renewable** energy includes solar, hydro and wind energy. Wind energy is made when the wind moves the blades on a wind turbine. This movement creates wind energy which is converted into electrical energy.⁹ Knowing whether a source of energy is renewable or non-renewable is important when considering energy and or sustainability. Renewable energy is defined by the U.S. Environmental Protection Agency: "Renewable energy includes resources that rely on fuel sources that restore themselves over short periods of time and do not diminish". Non-renewable energy is energy that *cannot* restore itself over a short period of time and *does* diminish.

Energy laws govern the use and taxation of energy, both renewable and non-renewable. These laws are the primary authorities (such as case law, statutes, rules, regulations and edicts) related to energy. In contrast, energy policy refers to the policy and politics of energy. Energy law includes the legal provision for oil, gasoline, and "extraction taxes." The practice of energy law includes contracts for sitting, extraction, licenses for the acquisition and ownership rights in oil and gas both under the soil before

⁷ Nonrenewable and Renewable Energy Resources | QUEST | KQED ...<https://ww2.kqed.org/quest/2014/02/.../nonrenewable-and-renewable-energy-resources-> (accessed on 12 June 2019)

⁸ <https://sciencing.com/renewable-vs-nonrenewable-energy-resources-12071170.html>, accessed on 28 May 2019

⁹ What is renewable and non-renewable energy? - BBC Bitesize <https://www.bbc.com/bitesize/articles/ztxwqty> (accessed on 25 June 2019)

discovery and after its capture, and adjudication regarding those rights. Energy law is the field of law concerned with creating, enforcing and challenging laws that regulate energy use. Laws exist that regulate the creation and harvesting of energy. There are laws that regulate taxation of energy use. Energy companies and the public alike must navigate energy laws as they relate to the sale, use and conservation of energy resources.

Many people don't realize how much energy laws and regulations impact their daily life. Each time you put gasoline in your vehicle, you're paying energy taxes. When you sell a vehicle or renew your license plate, you pay fees to the state you live in. When you use power in your home, you're using energy from a power plant that complied with regulations to conduct business. There are energy laws at federal, state and even local levels. Energy laws and policies even impact international relations.¹⁰ 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 2019, 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 realization 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.¹¹

¹⁰ <https://legalcareerpath.com/what-is-energy-law/> accessed on July 5 2019

¹¹ Raphael J Heffron et.al, JOURNAL OF WORLD ENERGY LAW AND BUSINESS, Volume 11, Issue 1, (1 March 2018), 34, <https://doi.org/10.1093/jwelb/jwx039> (Published:08 January 2018)

5. Principles of Energy Law

The evolution of energy law is guided by certain influences, one of which is 'energy justice'. Energy justice has its own conceptual basis, which is recognized in several early and now more influential articles. However, energy justice has its own principles and this prompted what would be energy law's guiding principles. Energy justice is a concept and its principles have an interdisciplinary focus.¹² Energy law has to concern itself also with what law is and what it should be and this prompted a need to examine and identify what the guiding principles of energy law should be and the role that law can have in the development of the concept of energy justice.

The Seven Principles of Energy Law

1. The Principle of National Resource Sovereignty
2. The Principle of Access to Modern Energy Services
3. The Principle of Energy Justice
4. The Principle of Prudent, Rational and Sustainable Use of Natural Resources
5. Principle of the Protection of the Environment, Human Health & Combatting Climate Change
6. Energy Security and Reliability Principle
7. Principle of Resilience

The principle of sovereignty over onshore and offshore energy resources: The principle of permanent sovereignty over natural resources is closely connected with energy resources. The discussion over sovereignty over natural resources, petroleum in particular, emerged after the end of the colonial period. For example, UNGA Res 1803 (XVII) 1962 proclaimed '[t]he right of peoples and nations to permanent sovereignty over their natural wealth and resources.' For an interpretation, see *Texaco Overseas Petroleum Company and California Asiatic Oil Company v The Government of the Libyan Arab Republic awards*. Prior to this, the international oil companies controlled exploration and production of petroleum resources in many of the colonial and post-colonial states and, by default, the government's revenue by regulating production. This placed severe constraints of national sovereignty and the wealth these energy resources could mean for a country. Likewise, the principle of national sovereignty was agreed as a specific principle in the

¹² RJ HEFFRON & D MCCAULEY, 'THE CONCEPT OF ENERGY JUSTICE ACROSS THE DISCIPLINE 658', (2017).

Stockholm and Rio Declarations of 1972 and 1992, respectively.¹³ Today permanent national sovereignty over resources is recognized under international law and its exercise is established under national constitutions.¹⁴

The principle of access to modern energy services: It has been belatedly recognized in recent decades that in order for sustainable development to occur in developing nations it is essential that modern energy services are available to the general community. The importance of this issue was first recognized in 1986 in the Report of the World Commission on Environment and Development (the Brundtland Report).¹⁵ ‘The increasing recognition of the importance of access to energy services is apparent from a comparison between the UN General Assembly’s Millennium Development Goals (MDGs), declared in the 2000 Millennium Declaration¹⁶, and the Sustainable Development Goals (SDGs), also declared by the General Assembly in *Transforming Our World: The 2030 Agenda for Sustainable Development*.³⁸ The magnitude of the issue is apparent from the fact that according to the most recent international report on the issue, the 2016 report on the realization of the SDGs, there are still 40 per cent of people living in developing countries still relying on polluting and unhealthy fuels for cooking or gas supplies. The majority of these people live in Africa and south Asia. At present over 65 per cent of the population of sub-Saharan Africa is without electricity.¹⁷

There is currently active legal debate on four related issues:

- Does a right of access to energy services exist in human rights law?
- If not, what other international law strategies exist to provide for universal access to energy services?
- What role can domestic law play in promoting and/or guaranteeing universal access to energy services?
- Is there a role for the judiciary to play in this context?¹⁸

¹³ Declaration of the UN Conference on the Human Environment 1972 and Declaration of the UN Conference on the Environment and Development 1992, Principle 21.

¹⁴ E Smith et.al, *International Petroleum Transactions*, Rocky Mountain Mineral Law Foundation, (2010) or E Pereira and K Talus, *Upstream Law and Regulation: A Global Guide*, GLOBE LAW AND BUSINESS, (2017).

¹⁵ *Our Common Future*, UN Doc A/42/427 (1987) 8.

¹⁶ GA Res 55/2, UN Doc A/Res 55/2 (2000).

¹⁷ UN 2017. Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all <<http://unstats.un.org/sdgs/report/2016/goal-07/>> (accessed 30 September 2017)

¹⁸ M Cleson, *Human Rights and Environment: Access to Energy*, NEW ZEALAND JOURNAL OF ENVIRONMENTAL LAW, (2012), 16, A Bradbrook and J Gardam, ‘Placing the Access to Energy Services Within a Human Rights Framework’, HUMAN RIGHTS QUARTERLY, (2006) 28,389.

6. The Principle of Energy Justice

Energy justice is a growing moral, philosophical and ethical movement that developed in the late 20th and early 21st centuries. It has been defined as achieving a global energy system that fairly disseminates both the benefits and costs of energy services, and one that contributes to more representative and impartial energy decision-making. This social justice issue looks beyond traditional government and industry concerns regarding energy security, economic development and technology to consider morality in decision-making. It is relevant to both international issues such as the right of people in developing countries to escape the poverty trap by the provision of universal access to energy services and to avoid environmental damage resulting from exploitation from multinational energy corporations

The energy justice movement emerged out of and has the same philosophical background as the more general issues of environmental justice and atmospheric and climate justice. The existing literature divides energy justice into three core themes: distributional justice, procedural justice and recognition justice.¹⁹

The principle of prudent, rational and sustainable use of natural resources: Sustainable use of natural resources is a term referred to in several conventions either directly or by using alternative expressions like 'conservation'²⁰, 'sustainable management'²¹, 'optimal, efficient and rational use' or 'reduce and eliminate unsustainable patterns of production and consumption' as stated in the Rio Declaration on Environment and Development (1992), Principle 8.²² Examples of the EU policy implementation may be found in the Sixth Environment Action Programme⁵² where sustainable use and management of resources are referred to as one of the priority areas and called for the preparation of 'a thematic strategy on the sustainable use and management of resources...' and in practical terms reducing the environmental impact of resource use.²³ Further, all the mentioned international agreements and resolutions recognize that there are limits on the utilization of land, water and ocean, and natural resources if irreversible damage is to

¹⁹ These issues are considered in detail in D McCauley and others, 'Advancing Energy Justice: The Triumvirate of Tenets' (2013) 3 *International Energy Law Review* 107.

²⁰ The World Charter for Nature 1982, Principle 3; UNCLOS 1982, Preamble and art 61 (living resources); and UNFCCC 1992, art 4 (d).

²¹ UNFCCC, *ibid*.

²² Rio Declaration on Environment and Development, adopted 14 June 1992.

²³ Thematic Strategy on the sustainable use of natural resources, COM (2005) 670.

be avoided. Whether international law today imposes upon states a customary obligation of sustainable use of natural resources may be arguable but it is beyond doubts that sustainable use of natural resources are accepted as a global objective and has an increasing recognition internationally in treaty law. As far as shared and common resources are concerned there has been established a clear practice endorsing the existence of a general obligation to ensure conservation and sustainable use of the high seas, the deep seabed, the Antarctica and the Moon²⁴ and that these resources are the common heritage of humankind.

The principle of the protection of the environment, human health and combating climate change: Energy and the environment are physically linked in the natural fuel cycle. From exploration and extraction through processing and transportation and then to distribution, consumption, and disposal of the natural resources that are used to produce energy, environmental consequences follow. Consequently, energy law and policy and environmental law and policy cannot be treated as distinct areas of regulation.

Climate change has structural characteristics such that it has been described as a super wicked problem that now demands a new form of regulation, one linking energy law and policy with environmental law and policy. Regulators can no longer rely on their ability to implement *ex post* regulations that address and fix a problem, such as an oil spill or even a nuclear plant malfunction that has occurred in the past. Instead, forward-thinking *ex-ante* regulations are necessary to reduce carbon emissions in an effort to forestall further climate damage.²⁵

Energy security and reliability principle: Energy security is at the heart of any modern energy policy system and is reflected in a large number of national energy laws and regulations. Its significance is connected with the general importance of energy for the society (Emphasized, eg in the case law of the Court of Justice of the EU, Case 72/83 *Campus Oil v Minister for Industry* [1984] ECR 2727). It also refers to security of demand, which means

²⁴ Birnie, Boyle and Redgwell (n 8) 199ff. A Boyle and D Freestone (eds), *National Law and Sustainable Development* (OUP 1999) 9, 29. The Delhi Declaration, ILA Expresses a Duty of States to Ensure Sustainable Use of Natural Resources, cf MC Cordonier Segger 'Sustainable Development in International Law' in *Sustainable Development in International and National Law* by Bugge and Voigt (n 8), 187.

²⁵ SA SHAPIRO & JP TOMAIN, *ACHIEVING DEMOCRACY: THE FUTURE OF PROGRESS REGULATION*, Ch.8, (2014).

the continuous demand for energy products produced within the country in question. Traditionally this refers to hydrocarbons, but it also includes energy from renewable energy sources like hydropower. For energy importing country or region security of supply relates to, among other things, import security. This is sought through import diversification, both in terms of sources of supply and transportation routes, sufficient investment into the import infrastructure, mandatory storage obligations and so on. It also translates into an interest in alternative energy sources, including unconventional sources of oil and gas as well as renewable energy. For an energy producing country, security of supply objective can be sought through very different measures. In cases where the national demand can be met, at least partially, by national supply, the security of supply policy is not always based on securing sufficient imports but by preventing exports. This can be achieved through a national petroleum supply reservation policies.²⁶

Principle of resilience: The energy sector of the economy can be assessed in two parts—transportation and electricity although fossil fuels dominate both systems. The crucial difference between the two, however, is that they each have their own particular physical characteristics. Transportation fuels, for example, can be easily identified and stored. Electricity is fungible and storage only possible short term at best. More importantly, the electricity system must be in balance at all times as well as readily available. In fact, resilience is now become a major concern to the electricity sector as a result of a series of disruptive weather events that have shut down the delivery of electricity at great economic costs. Consequently, the energy future must pay close attention to the concept of resilience. In addition to climate change, though, concerns about resilience also involve cyber security threats. US Department of Energy, for example, acknowledges that the electricity system faces imminent danger from cyber-attacks which are, in fact, growing more frequent and sophisticated.

7. International Instruments on Energy Law

1. CISG: The United Nations Convention on Contracts for the International Sale of Goods (CISG) has been the most successful unification of procedures for commercial law at an international level.
2. Energy Charter Treaty, 1994: The Energy Charter Treaty (ECT) is an international agreement which creates a multilateral framework for cross-

²⁶ K Talus & E Pereira, 'National Petroleum Supply Reservations: Background and Comparison' JOURNAL OF WORLD ENERGY LAW AND BUSINESS, (2014), 7(6).

border co-operations in the energy industry. Includes all avenues of commercial energy use.

3. Geneva Convention on the Execution of Foreign Awards, 1927: The Geneva Conventions comprise four treaties, and three additional protocols, that establish the standards of international law for the humanitarian treatment of war.
4. Geneva Convention: European Convention on International Commercial Arbitration
The Geneva Conventions comprise four treaties, and three additional protocols, that establish the standards of international law for the humanitarian treatment of war.
5. Geneva Protocol on Arbitration Clauses: The Geneva Conventions comprise four treaties, and three additional protocols, that establish the standards of international law for the humanitarian treatment of war.
6. Hague Convention on the Taking of Evidence Abroad in Civil or Commercial Matters: The Convention on the Taking of Evidence Abroad in Civil or Commercial Matters (the Hague Evidence Convention), is a multilateral treaty which was drafted under the Hague Conference on Private International Law. It allows transmission of letters of request from one signatory state to another signatory state without recourse to consular and diplomatic channels.
7. Hague Convention: The Hague Conventions of 1899 and 1907 are a series of international treaties and declarations negotiated at two international peace conferences at The Hague in the Netherlands. In addition to the Geneva Conventions, the Hague Conventions were among the first formal statements of the laws of war and war crimes in the body of secular international law.
8. International Centre for Settlement of Investment Disputes (ICSID): The ICSID Convention is a multilateral treaty established under the Convention on the Settlement of Investment Disputes between States and Nationals of Other States (the ICSID or the Washington Convention) formulated by the Executive Directors of the International Bank for Reconstruction and Development (the World Bank), which was entered into force in 1966.
9. Multilateral Investment Guarantee Agency (MIGA): A member of the World Bank Group, MIGA was established “to promote foreign direct investment

(FDI) into developing countries to help support economic growth, reduce poverty, and improve people's lives.”

10. New York Convention: The Convention on the Recognition and Enforcement of Foreign Arbitral Awards, also known as the “New York Arbitration Convention” or the “New York Convention,” is “one of the key instruments in international arbitration.” It applies to the enforcement and recognition of arbitral awards and to arbitration courts.
11. Statute of the International Court of Justice: The Statute of the International Court of Justice is annexed to the Charter of the UN. It is designed to organize the composition and the functioning of the Court.
12. UNCITRAL; The United Nations Commission on International Trade Law (UNCITRAL) is the core legal body for the United Nations system as it relates to trade law, and has been reforming the system for over 40 years.
13. Vienna Convention on the Law of Treaties: This Convention was adopted in 1969 by the United Nations Conference on the Law of Treaties²⁷

The Legal instruments and mechanisms relevant to international renewable energy regulations play an important role in governing unified action and enhancing collaboration and information-sharing on effective policies and investment frameworks aimed at reducing barriers and risks to investments in renewable energy. These mechanisms are the International Renewable Energy Agency (IRENA) Statute, the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol and related international climate change negotiations and declarations, the Energy Charter Treaty (ECT), various sector-specific treaties, the Nairobi Program of Action for the Development and Utilization of New and Renewable Sources of Energy, International Energy Agency, Development Banks, and the Renewable Energy and Energy Efficiency Partnership.²⁸

8. Nepalese Legal Provisions on Energy Law

Electricity Act, 1992: In order to develop electricity power by its generation, distribution as well as to standardize and safeguard the electricity services, the Electricity Act 1992 has come into force since then.

²⁷ <https://law.indiana.libguides.com/internationalcommercialarbitration/convention>, (accessed on 9 June 2019)

²⁸ International Law and the Renewable Energy Sector - Oxford ...[https://www.oxfordhandbooks.com/view/10.../law/...001.../oxfordhb-9780199684601-\(accessed on 26 June 2019\)](https://www.oxfordhandbooks.com/view/10.../law/...001.../oxfordhb-9780199684601-(accessed on 26 June 2019))

Company Act, 2007: The Company Act 2006 was amended and enacted in August 2007. The act aims to foster dynamic economic development by promoting investment in industry, trade and business.

Money Laundering Prevention Act, 2008" The Asset (Money) Laundering Act was last amended in 2011 and is in full force. The act covers all types of assets, including those that are: tangible and intangible, movable and immovable, or any object or instrument which has monetary value. The act also covers documents, evidence, interest, claim, or any other instrument establishing ownership or right over such assets.

Bank and Financial Institutions Act, 2006: The Bank and Financial Institution Act came into force in August 2006. This act applies to all offices, regardless of location, opened by a bank or financial institution. The goals of this act are to promote the trust of the general public in Nepal's banking and financial system, protect and promote the rights of depositors, provide quality and reliable banking and financial intermediary services.

Competition-Promotion-and-Market-Protection Act, 2007: The Competition, Promotion, and Market Protection Act was established in 2007 to promote an open, liberal, and competition-friendly national economy. This act not only applies to the whole of Nepal, but also extends to Nepalese investors investing outside of Nepal.

Consumer-Protection Act, 1999: The Consumer Protection Act, enacted in April 1999, protects consumers from irregularities relating to quality, quantity, and price of goods and services.

Copyright Act, 2002: The Copyright Act 2002 was amended and enacted in 2005. The act provides a legal provision relating to copyright work in the fields of literature, art, science, and others.

Environment Protection Act, 1997: Clean and healthy environment by minimizing unwanted interference from various factors is important, to maintain the environment from adverse impacts and to protect environment with proper use and management of natural resources, the Environment Protection Act 1997 has commence on force.

Foreign Exchange Regulation Act, 1962: The Foreign Exchange (Regulation) Act, 1962 was most recently amended in 2009. This act

regulates the foreign exchange as it pertains to monetary instruments, including currency notes, postal orders, money orders, cheques, drafts, travelers cheques, letters of credit, bills of exchange, promissory notes, and credit cards.

Foreign Investment and Technology Transfer Act, 1992: The Foreign Investment and Technology Transfer Act, 1992 was formulated to promote the maximum mobilization of limited capital to increase the competitiveness of Nepal's human capital and natural resources. The act was amended and enacted in August 2000.

Income Tax Act, 2002: The Income Tax Act 2002 addresses the charges, taxes, duties, and fees relating to revenue administration of the GON.

Insurance Act, 1992: The Insurance Act 1992 established the Insurance Board, which is responsible for regulating, and developing the insurance industry in Nepal.

Investment Board Act, 2010: The Investment Board was established to accelerate industrialization and develop a strong, dynamic and competitive economy through increased infrastructure. The board is regulated by the Investments Board Act, 2010, and it aims to mobilize national and foreign private sector investment.

Labor Act, 2017: Labor Act, 2017 addresses provisions relating to labors rights, interests, facilities and safety of workers. Other Relevant legal Provisions on Energy law are Electricity Regulation Commission Regulation, 2075, Electricity Regulation Commission Act, 2074, Electricity Leakage Control Rules, 2059 (2002), Electricity Theft Control Act, 2058 (2002), Irrigation Rules, 2056 (2000), Electricity Tariff Fixation Rules, 2050 (1994), Electricity Rules, 2050 (1993), Water Resources Rules, 2050 (1993), Water Resources Act, 2049 (1992), Nepal Electricity Authority Act, 2041 (1984) and Hydropower Development Policy¹ in 1992.

9. Conclusion

Energy law is related to environmental and climate law have many set core principles and 'Energy law's seven principles'. These two areas have been defining and developing them for close to several decades now. One of the reasons energy law has not followed environmental and climate change law in having its own principles is because of the lack of consensus of what

energy law is. As the definition of energy law scholarship has evolved to some degree since Brad brook's seminal article in 1986, in more recent scholarship it reads as 'energy law is the regulation of energy related rights and duties of various stakeholders over energy resources over the energy life-cycle'. These principles should act as a guide to policymakers, academics, lawyers, judges and arbitrators when adjudicating, enforcing, making or formulating documentation, laws, regulations, judgments, etc. on energy law. The majority of these are already in operation to varying degrees in practice and the aim of this article is to advance these principles as the guiding principles of energy law for both research and practice.

Energy is one of the essential drivers for social and economic development. A sustainable energy supply, both in the short and the long term, is needed for enhancing economic development, people's quality of life and protecting the environment. Availability of quality energy could augment the productivity and the effective supply of physical or human capital services. Advanced industrialized countries are able to use modern machinery and techniques for increasing the capital-labor ratio and productivity of the workers because of the availability of required amount of energy. Per capita energy consumption of Nepal is low. It is only about 15 Gigajoule and used mainly in non-productive sectors. Present practices of energy consumption are neither sustainable nor economical. Country is suffering with the acute shortage of reliable energy supply. Energy supply is managed by separate entities which are working with different principles, objectives, regulatory and institutional mechanism. About two third of the total national energy comes from fuel wood that are managed by the Ministry of Forests and Soil Conservation. National Grid Electricity supply is being managed by Nepal Electricity Authority under the Ministry of Energy. Ministry of Environment looks after the promotion and development of alternative energy resources. Nepal Oil Corporation, under the Ministry of Commerce and Supply manage the petroleum imports and sales within the country. Ministry of Industry is responsible for exploring and developing the coal resources. That has created challenges to establish effective coordination mechanism among the institutions for integrated planning of the energy sector and also in implementing the planned activities.

Government of Nepal has initiated to formulate the National Energy Strategy (NES) to address the challenges as well as for the development and utilization of energy resources in sustainable manner. The preparation of National Energy

Strategy was started in 2007 and completed in two phases. The first phase of the study assessed and analyzed the energy sector issues at national and regional level. Five regional consultative workshops were organized in five development regions of the country represented by energy sector stakeholders including supply side and demand side. The identified energy sector issues were grouped into different category such as general issues, specific issues, issues of traditional, commercial and renewable energy etc. The second phase of the energy strategy preparation included the analysis of future energy supply and demand side by fuel types and economic sectors. Future energy demand was assessed for three possible economic growth scenarios of the country. The designed programme and activities were finalized by incorporating the suggestions from regional consultation workshops held in five development regions and national consultation workshop held in Kathmandu.

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