REFORM OF LEGAL AND REGULATORY IMPEDIMENTS TO FOREIGN INVESTMENT AND CROSS- BORDER ENERGY TRADING BY NEPAL AND OTHER SOUTH ASIAN NATIONS

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Synopsis: Nepal, endowed with water resources, has vast potential for hydropower development, including through foreign direct investment (FDI) and cross-border trade. At the same time, however, Nepal is facing an energy crisis due to the shortage of readily available power and petroleum products. This article explores options to develop Nepal's energy sector through two main theses: (1) foreign energy investment in Nepal may be improved by removing regulatory obstacles, including resolving the inherent tensions between federal, provincial, and local legal regimes; and (2) despite continuing challenges, bilateral and multilateral agreements in South Asia may continue to contribute to increased interest in foreign direct investment and cross-border energy trade.

First, this article examines the tension between the current federal energy regulatory regime in Nepal and the sometimes conflicting provincial and local laws and regulations. These tensions are exacerbated by the lack of an institutional mechanism to govern the allocation of responsibilities between national, provincial, and local governments. Specifically, the authors recommend reforms that would minimize these conflicts by strengthening national authority over li-

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censing, tariff, and fee determinations, preventing anti-competitive practices, and improving compliance monitoring, consumer protection, and capacity building. Nepal is in a much more politically stable place currently as compared to the early 2000s during the Maoist insurgency period, and the power generation business market in Nepal is potentially lucrative, so much so that beginning in 2015, Nepal started attracting foreign direct investment. Continuing political stability, combined with the implementation of consistent legal and regulatory frameworks for energy sector development, will allow Nepal to continue attracting investors in the future.

Secondly, this article aids potential investors in making informed decisions about how the energy market in Nepal and cross-border trade between Nepal and other countries operates. Nepal is surrounded by two of the most populous nations in the world, China to the north, and India to the east, west, and south. Expanding economies and rising population in Nepal and its surrounding countries have driven growing demand for more reliable and sustainable supplies of electricity in the South Asian region. Nepal's hydropower resources present significant opportunities for cross-border electricity trade. But challenges exist, including how current regional frameworks fail to address conflicting national laws adequately, the implications of uneven negotiating power between countries in the region, and the difficulty of implementing reforms in developing countries like Nepal.

I. INTRODUCTION

Nepal is rich in hydropower resources, with a development potential of about 83,000 Megawatts (MW) and a commercially exploitable hydropower generating potential of about 42,000 MW.[1] In total, Nepal possesses 6000 rivers most of which flow from the Himalayas, including rivulets and tributaries offering multi-dimensional uses including hydropower development. Perennial rivers have an estimated annual runoff of approximately 170 billion m^3 that flow from steep-gradient and rugged topography with an estimated potential for supporting 45,610 MW of hydropower generation, which is equivalent to 50% of the total theoretical potential.[2] However, due to a combination of several major challenges present in the energy sector, as of 2016, the country only had a total-installed hydropower generation capacity of 13,853 MW,[3] which is less than 2% of the country's commercially exploitable hydropower generation potential.[4] While hydroelectric imports from India supplement Nepal's low domestic generation

1. Asian Development Bank, *Technical Assistance for the South Asia Economic Integration Partnership - Power Trading in Bangladesh and Nepal (Subproject 1), Manila (TA 8658-REG)* (2021), https://www.adb.org/projects/45396-009/main.

2. Ramesh Prasad Bhatt, *Hydropower Development in Nepal - Climate Change, Impacts and Implications* (2017), https://www.intechopen.com/chapters/53350.

3. Prithivi Man Shrestha, *Once Power-starved, Nepal now aims to export electricity*, THE KATHMANDU POST (Aug. 10, 2021), https://kathmandupost.com/money/2021/08/10/once-power-starved-nepal-now-aims-to-export-electricity.

4. NEPAL ENERGY SECTOR ASSESSMENT, STRATEGY, AND ROADMAP 5-6 (Asian Development Bank, 2017).

capacity, Nepal's current aggregate energy supply is inadequate to meet the ever-increasing demand of electricity by the nation's residential and industrial sectors.[5] Outside of hydropower, Nepal relies on petroleum imports from countries including India to meet 11 percent of its energy needs, a number expected to rise to 12 percent by 2035, if there are no changes in current law.[6] Biomass, oil products, coal, hydro, and electricity have become Nepal's main sources of primary energy.[7] However, these sources of energy are insufficient to meet the demand for energy in Nepal, and this energy shortfall has seriously constrained economic and social development in the country.[8]

II. FOREIGN DIRECT INVESTMENT (FDI) IN NEPAL'S ENERGY SECTOR HAS BEEN LIMITED BY NUMEROUS CHALLENGES, INCLUDING POLITICAL UNCERTAINTY AND A LACK OF SEAMLESS FUNCTIONING OF FEDERAL, PROVINCIAL, AND LOCAL AUTHORITIES

Foreign energy investment in Nepal has been limited by regulatory challenges. These include inefficiencies and unresolved tensions inherent in the smooth and seamless functioning of federal, provincial, and local legal and regulatory regimes that discourage FDI in Nepal's energy sector. Implementation of targeted regulatory reform may reduce these tensions and broaden investment opportunities in Nepal.

A. Overview of Nepal's Energy Investment Regime

1. Historical and Current Status of Foreign Direct Investment in Nepal

Nepal's energy sector would benefit from additional FDI investment, but historically, potential investors have been wary of investing in a country with an unstable and conflict-driven political environment. During, and immediately after, the Maoist political conflict in 2004,[9] Nepal had negative inflow of FDI.[10] A gradual improvement in political stability through 2014 led to a sharp increase of the flow of FDI from 2015 to 2018.[11] Nepal's more recent focus on and commitment towards attracting FDI was illustrated at the Investment Summits[12] in

5. *Id.*

6. *Id.*

7. *Id.*

8. NEPAL ENERGY SECTOR ASSESSMENT, STRATEGY, AND ROADMAP, *supra* note 4, at 9.

9. The Comprehensive Peace Accord (CPA) declared that the conflict period started in 1996 and ended 2006. This CPA has been reached between the Nepal Government and the CPN (Maoist) with a commitment to transform the ceasefire between the Nepal Government and the CPN (Maoist) into long-term peace; *see* Comprehensive Peace Accord, Nepal-Communist Party of Nepal (Maoist), Nov. 22, 2006, https://peacemaker.un.org/nepal-comprehensiveagreement2006.

10. Rajesh Bastola, *Investment trends in Nepal*, THE KATHMANDU POST (Mar. 5, 2020), https://kathmandupost.com/columns/2020/03/05/investment-trends-in-nepal.

11. *Id.*

12. The Investment Summit, hosted by Nepal, acts as a platform for investors to understand the investment environment and opportunities in Nepal through prominent national and international speakers, dignitaries, sector-specific experts, and high- ranking government representatives; GOVERNMENT OF NEPAL, NEPAL INVESTMENT SUMMIT 2019 3, https://my.nepalembassy.gov.np/wp-content/uploads/2019/02/NIS2019.pdf.

2017 and 2019.[13] Also, in an effort to address the absence of concrete laws in Nepal regarding FDI, Nepal enacted the Foreign Investment and Technology Transfer Act (FITTA) of 2019,[14] which incorporated the major principles of most-favored-nation treatment, limitations on expropriation, and an investor-focused dispute settlement mechanism. Introduction of a one-stop service center[15] for foreign investors to overcome administrative hurdles further helped to create a favorable environment for investment. In 2018, FDI in Nepal amounted to $161 million.[16] In the World Bank 'Doing Business' Report of 2019, Nepal ranked 94th among 190 countries for having a favorable environment for foreign investment.[17]

2. Challenges Facing Foreign Direct Investment in Nepal

Although there is great potential market for FDI investment in the energy sector in Nepal, there are several significant hurdles that must be overcome. First, FDI in Nepal has been hampered by infrastructure limitations and other political challenges. According to the World Bank, "Nepal ranks 130th out of 190 countries in terms of infrastructure availability -- the worst in South Asia."[18] The lack of adequate energy infrastructure prevents investor access to rural areas, making energy investment in this sector less attractive.

Second, lack of political commitment, difficulties in transferring profits of investment to the investors' home countries, lack of transparency, and endemic corruption are some of the key factors that discourage foreign investors in Nepal.[19] Corruption laws limit the operations of foreign banks, the repatriation of profits, currency exchange facilities, and provide for the government's virtual monopoly over certain sectors of the economy, such as electricity transmission.[20] All these factors act to frustrate greater foreign investment in Nepal.[21] Due to the

13. Editorial, *Investment Summit Progress Report Card*, THE KATHMANDU POST (Apr. 21, 2019), https://kathmandupost.com/national/2019/04/21/investment-summits-progress-report-card-48-applications-for-31-projects.

14. The Foreign Investment and Technology Transfer Act, 2019 (2075) (Act No. 34/2075).

15. The Industrial Enterprises Act, 2020, has provisions for establishment of a One Stop Service Center, through which foreign investors can avail themselves of the full range of services provided by the various government entities involved in investment approvals, including the Ministry of Industry, Commerce, and Supplies (MOICS), the Labor and Immigration Departments, and the Central Bank; The Industrial Enterprises Act, 2076 (2020) (Act No. 19/2076) § 37.

16. Prithivi Man Shrestha, *Why has Nepal failed to attract enough foreign direct investment?*, THE KATHMANDU POST (Nov. 7, 2019), https://kathmandupost.com/money/2019/11/07/why-has-nepal-failed-to-attract-enough-foreign-direct-investment.

17. Sujan Dhungana, *Nepal Rank's 94th in Doing Business Index*, THE HIMALAYAN TIMES (Oct. 2019), https://thehimalayantimes.com/business/nepal-ranks-94th-in-doing-business-index.

18. World Bank Group, *Nepal: Systematic Country Diagnostic* 10 (Feb. 2018), https://documents1.worldbank.org/curated/en/361961519398424670/pdf/Nepal-SCD-Feb1-02202018.pdf.

19. Hari Bansha Jha, *Nepal's FDI challenges* (2020), https://www.orfonline.org/expert-speak/nepals-fdi-challenges/.

20. *Id.*

21. Republica, *US State Department sees significant barriers to investment in Nepal* (2020), https://myrepublica.nagariknetwork.com/news/us-state-department-sees-significant-barriers-to-investment-in-nepal/?categoryId=81.

dimming profit outlook for hydropower, two foreign companies from China and Norway pulled out of two hydropower projects in the span of four years (2016-2019).[22] Historically, projects that have been abandoned by foreign investors have remained abandoned or have been downsized significantly when taken over by domestic interests.[23]

Furthermore, as Nepal has undergone major changes resulting from the introduction of federalism in 2015, legal and regulatory tensions among the three tiers of government in regulating the energy industry have discouraged direct foreign investment in Nepal.

Significantly, provincial and local governments are not yet firmly established.

Federal regulation over the energy sector remains the most relevant for foreign investments and businesses.[24] The Industrial Enterprises Act strictly prohibits the nationalization or expropriation of industry registered under the Act.[25] Nepal, moreover, does not have a history of expropriations: there have been no cases of nationalization in Nepal, nor are there any official policies that suggest expropriation should be a concern for prospective investors.[26] The Foreign Investment and Technology Transfer Act also enables foreign investors to repatriate all forms of investment after paying all applicable taxes.[27]

3. Constitutional Provisions Establishing Federalism in Government

A full understanding of the legal tensions between Nepal's federal, provincial and local level governments requires an understanding of Nepal's federalism structure. Nepal had been practicing a unitary form of government until federalism was introduced in 2015.[28] Nepal's Constitution introduced a three-tier structure of government – federal, provincial, and local – with each level having power to enact laws and providing each with the responsibilities, revenues, and expenditures intended to enable each tier to perform its duties efficiently and effectively.[29]

The Constitution of Nepal is divided in various Parts, Articles and Schedules. Separate powers have been allocated to federal,[30] provincial,[31] and local

22. Deepak Adhikari, *Nepal Power Export Plans in Doubt as India Reviews Options* (2019), https://asia.nikkei.com/Politics/International-relations/Nepal-power-export-plans-in-doubt-as-India-reviews-options.

23. *Id.*

24. U.S. Dep't of State, *2020 Investment Climate Statements: Nepal* (2020), https://www.state.gov/reports/2020-investment-climate-statements/nepal/.

25. Industrial Enterprises Act, 2076 (2020) (Act No.19/2076) art. 34.

26. ELECTRICITY REGULATORY COMMISSION RULES, 2018, 18 (Sept. 6, 2018), http://erc.gov.np/storage/listies/April2020/erc-rules-2018.pdf.

27. Foreign Investment and Technology Transfer Act, 2019 (2075) (Act No. 34/2075) § 20(2).

28. Regmi K, Upadhyay M, Tarin E. et al., *Need of the Ministry of Health in Federal Democratic Republic of Nepal*, JNMA J NEPAL MED ASSOC. (2017), https://pubmed.ncbi.nlm.nih.gov/28746331/.

29. Constitution of Nepal 2015, art. 59 § 1.

30. Constitution of Nepal 2015, Schedule 5.

31. Constitution of Nepal 2015, Schedule 6.

levels[32] in the respective Schedules 5, 6, and 8; concurrent power between provincial and federal governments has been allocated in Schedule 7[33]; and concurrent power among all three tiers has been allocated in Schedule 9.[34] The federal parliament passed the Act Relating to the Management of Interrelationship and Coordination between the Federation, Province, and Local Level.[35] The Act was formulated in accordance with Part 20 of the Constitution to maintain relations among the three tiers of the government based on the principles of cooperation, coexistence, and coordination.[36] This Act provides greater clarity of the functional responsibilities of the three tiers of the government.

As an example of concurrent power sharing, the power to provide services such as electricity, water supply, and irrigation is provided on a power sharing basis to all three tiers of government.[37] The federal level is responsible for the formation of policies relating to conservation and multiple uses of water resources.[38] The provincial government has power over province-level generation, transmission, and distribution of electricity, irrigation and water supply services, navigation, and water resources infrastructure development.[39] In this instance, the power reserved to the provincial government overlaps with the power of the federal level in regards to "multiple uses of water resources."[40] The local level has power over small hydropower, water supply to local communities, and irrigation, and is mostly responsible for access and distribution of water resources.[41] The major challenge of federalism is the implementation of federalism principles like equal allocation and efficient mobilization of resources, while formulating laws and policies in all three tiers that address the specific needs of each level of government in a manner that lessens contradictions between the laws as much as possible.

4. Legal Provisions and Contradictions

Contradictory laws among the three tiers pose a major challenge in the effective implementation of federalism, thereby creating ambiguity in the application of laws. The Draft Water Resources Act (hereinafter, the Draft Act) illustrates a recent example of tensions between the various levels of government.[42] The Draft Act sets out the distribution of power among the three tiers of gov-

32. Constitution of Nepal 2015, Schedule 8.

33. Constitution of Nepal 2015, Schedule 7.

34. Constitution of Nepal 2015, Schedule 9.

35. *Id.*

36. *Id.*

37. Constitution of Nepal 2015, Schedule 9.

38. Constitution of Nepal 2015, Schedule 5.

39. Constitution of Nepal 2015, Schedule 6.

40. Manohara Khadka et al., *Understanding barriers and opportunities for scaling sustainable and inclusive farmer-led irrigation development in Nepal*, CIMMYT (2021), https://repository.cimmyt.org/bitstream/handle/10883/21683/64317.pdf?sequence=1&isAllowed=y.

41. Constitution of Nepal 2015, Schedule 8.

42. Draft Water Resources Bill 2074, https://www.moewri.gov.np/storage/listies/August2020/water-resources-bill-2077.pdf.

ernment.[43] The Draft Act provides that the power and responsibility for the development, implementation, and management of water-resources-related projects is to be allocated to the federal government in the cases of large and inter-provincial projects, to the provincial government for medium or inter-local level projects, and to the local level for other projects.[44] Under the Draft Act, a large project means a hydropower generation project exceeding a capacity of 100 MW, and a medium project consists of a hydropower generation project ranging from 1 MW up to 100 MW.[45] By implication, the local level has authority for projects *below* 1 MW,[46] directly contradicting the local level's power over hydropower projects of 3 MW as expressly set by the National Planning Commission.[47] Further complicating jurisdictional responsibility, the National Planning Commission Standard of 2018 on distribution and classification of project development for federal, provincial, and local levels, states that: both hydro and solar energy projects of more than 20 MW fall under federal jurisdiction; projects having a capacity of 3 to 20 MW are under the jurisdiction of the province; and projects less than 3 MW are under the jurisdiction of the local government.[48] This is not the only source of confusion. The Local Government Operation Act of 2017 Act states that the power of the Village Committee and Municipal Assembly to plan, set standards, inspect, and implement a hydroelectricity project is limited to 1 MW only,[49] which contradicts what has been provided in the National Natural Resources and the Fiscal Planning Directive. Plainly, greater harmonization of jurisdictional lines of authority needs to occur.

Further contradiction exists. The Local Alternative Energy Development Related Directive of 2017 has been formed under the provision of the Local Governance Operation Act, 2017, and mandates that the power of local level government to produce, survey, and transmit electric power is limited to 1 MW.[50] Subsequently, however, the Alternative Energy Development Committee Order, 1996,[51] was given the authority and directed to develop alternative energy up to 10 MW.

Additionally, the Draft Electricity Bill of 2019 provides the local government power to produce, distribute, or transmit electricity of development projects having a capacity up to 3 MW and the provincial level government to have pow-

43. Manohara Khadka et al., *supra* note 40.

44. Draft Water Resources Bill 2074 § 20(4), https://www.moewri.gov.np/storage/listies/August2020/water-resources-bill-2077.pdf.

45. *Id.*

46. *Id.*

47. National Planning Commission (NPC) Standard on Distribution and Classification of Project Development for Federal, Province and Local level (2019), https://npc.gov.np/images/category/Mapadanda,_2076.pdf.

48. *Id.*

49. Local Government Operation Act § 3(11) (2017), www.moljpa.gov.np/wp-content/uploads/2018/02/.pdf.

50. LOCAL ALTERNATIVE ENERGY DEVELOPMENT RELATED DIRECTIVE: BACKGROUND (2018), https://www.mofaga.gov.np/model-law/133.

51. Alternative Energy Development Committee Order § 2(b) (1996), https://www.aepc.gov.np/uploads/docs/l-uu-aa-1543137949.pdf.

er over projects having a capacity from 3 MW to 20 MW.[52] Projects above 20MW are subject to federal jurisdiction.[53] This draft bill is consistent with this balanced and distinct power allocation among federal-provincial-local levels. However, the Province Electricity Act of Province 1 states that electricity generation projects having a capacity above 1 MW fall under the jurisdiction of provincial governments under federal law.[54] It further states that for projects having a capacity of less than 1 MW, the province may assert jurisdiction over the project or, upon the request of local level government, hand over the project for construction and operation to the local government.[55] Thus, the Province Act and the Electricity Bill are contradictory.

The many contradictions that exist among the relevant laws and jurisdictional authority of the three tiers show the critical need for harmonization in order for federalism to function properly and efficiently in Nepal. Confusion will also likely seriously frustrate meaningful FDI investment.

5. Need for Coordination by Government and Harmonization of Laws

The multi-dimensional nature of water energy resource development in Nepal makes hydropower legislation complicated. Because the Constitution requires legislation at all three tiers of Nepal's federal system, hydropower policies across the three tiers must avoid contradictions for projects to succeed.[56] Provincial governments play an important role and act as a bridge between the federal and local level.[57] Local governments then formulate their laws to be consistent with provincial laws. Consistent laws, in turn, ensure the strengthening of interrelationships among the governmental tiers. Delays in legislation in the other tiers have crippled potential development at the local level because local levels cannot work in isolation and must coordinate with the other tiers of government. Sharing of costs and revenues between the federal, provincial, and local governments must also be negotiated carefully.

Third party institutional assessment of law-making bodies is required for timely formulation of laws and effective implementation of projects. It is extremely important for law-making bodies of the respective tiers to consider the possible conflicts and contradictions that may arise among the three tiers and formulate laws to address possible conflicts.

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52. Draft Electricity Bill 2076 § 3 (2021), https://www.moewri.gov.np/storage/listies/July2020/electricity-bill.pdf.

53. Draft Electricity Bill 2076 § 8 (2021), https://www.moewri.gov.np/storage/listies/July2020/electricity-bill.

54. Electricity Act 2076 § 3(1) (2021), http://moial.p1.gov.np/post/pa-ratha-sha-va-thha-ta-aina-1.

55. AASHISH PRADHAN, ELECTRICITY PROJECT LICENSING IN NEPAL- EXPECTED CHANGES IN THE MANDATES OF ELECTRICITY ACT AND TRANSITION OF RESPONSIBILITIES 6 (2021).

56. Constitution of Nepal 2015, Part 5.

57. DEMOCRACY RES. CTR. NEPAL, THE INTERRELATIONSHIP BETWEEN THREE LEVELS OF GOVERNMENTS IN NEPAL'S FEDERAL STRUCTURE: A STUDY REPORT 21 (2020), https://www. democracy resource. org/wp-content/uploads/2020/10/Inter-Government-Relation_EngVer_13October2020.

B. The Continuing Development of Legal, Regulatory and Institutional Reforms May Encourage Foreign Investment in Nepal's Energy Sector

1. Principles of Cooperation, Coexistence, and Coordination Must Advance to Avoid Conflicts and Improve Coordination Among the Different Tiers of Government

Article 232 of the Constitution provides that the three spheres of the government in Nepal (federal, provincial, and local) are not hierarchically related; rather, their relationship should be based on the "principles of cooperation, coexistence, and coordination."[58] However, because Nepal has limited experience with federalism, all three levels of government face the burden of transforming the legal, administrative, political, and fiscal structures previously established under the unitary system into a federal system.[59] Uncertainties and ambiguities exist regarding the distribution of resources, jurisdiction of each level of government, potentially overlapping legislative powers, and the administrative management of provincial and local governments.[60] Although each level of government has generally independently exercised its exclusive powers without major complications, resolution of conflicts relating to their concurrent powers has become one of the most significant challenges. Improved cooperation and coordination is clearly needed to avoid such conflicts and tensions between the different tiers of government, and the resulting efficiencies in governance may in turn attract more investment into the country.

One of the essential components of these principles is the interdependence of the three tiers of governance while keeping intact the distinctiveness of each tier. Each tier of the government is considered to be autonomous and independent, and it is the constitutional duty of the tiers to respect each other's powers, functions, and institutions.[61] The cooperative federal system adopted by Nepal represents the basic values of both the 'shared rule' and 'self-rule' in the government structures and institutions. This governing model is premised upon partnership and collaboration among the three tiers of government where each tier has a specific role to fulfill and, hence, promote constructive relationships with the other tiers.[62] Laws at the sub-national level are supposed to respect and be consistent with the principles, institutions, and processes of cooperative federalism; the federal government is also expected to respect the constitutional principles of self-rule so as not to influence or override functions assigned to sub-national levels.[63] This combination of interdependence and distinctiveness, in turn, is intended to play a significant role in avoiding conflicts between the three tiers of government.

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58. *Id.* at 1.

59. *Id.*

60. *Id.*

61. Federation, Province and Local Level (Coordination and Interrelation) Act, Section 4 (2020) (Nepal).

62. Mukti Rijal, *Issues of Cooperative Federalism*, THE RISING NEPAL (Mar. 5, 2020), https://risingnepaldaily.com/opinion/issues-of-cooperative-federalism.

63. *Id.*

To manage the relationships between the three tiers of government under the principles of coexistence, coordination, and mutual cooperation, Nepal has recently enacted the Federation, Provincial, and Local Levels (Coordination and Interrelation) Act.[64] The Act sets forth the matters to be considered by the federal, provincial, and local levels of government while formulating law or policy under the exclusive and concurrent jurisdiction.[65] Consistent with the principles of cooperative federalism, the Act has demarcated the matters to be governed by the federal, provincial, and local level and requires each tier of the government to avoid encroaching upon the exclusively assigned functions of other tiers.[66]

Similarly, provisions within the Act relating to coordination and consultation, project planning, implementation, and collaboration have provided increased clarity and predictability for the tiers of government. The Act establishes a National Coordination Council[67] in order to manage the coordination and relationships between the three tiers of government. The Act also establishes the Provincial Coordination Council[68] in each province for coordinating relationships between provincial and local levels or between local levels in more than one district within a province, and the District Coordination Committee[69] at each district for coordinating between local levels in the district, regulating developmental work, and coordinating between offices of the federal and provincial governments in the district and the local levels. Although the Act is newly enacted and yet to be tested for effectiveness, the Act may help direct Nepal towards the path of economic prosperity by making it more hospitable and rewarding for investment.

2. Electricity Regulatory Commission as an Independent Regulator Established to Show Prospective Investors an Effectively Regulated System Operated With Good Governance and Competitive Market:

The Energy Regulatory Commission[70] was established to maintain balance between the demand and supply of electricity by making the generation, transmission and distribution of electricity[71] subject to oversight – creating a transparent electricity market, regulating electricity tariffs, providing consumer protection and making electricity service safe, reliable and accessible to all.

In the context of Nepal's energy sector, where competition exists at all or at least at some level of activities (generation, operation, transmission, distribution, trading), a well-defined regulatory framework legally backed up by the powers

64. Federation, Province and Local Level (Coordination and Interrelation) Act, Preamble (2020) (Nepal).

65. *Id.*

66. *Id.* at 6.

67. *Id.* at 11.

68. Federation, Province and Local Level (Coordination and Interrelation) Act, Section 24 (2020) (Nepal).

69. *Id.* at 15-16.

70. ELEC. REGULATORY COMM., FUNCTIONS, https://erc.gov.np/pages/functions?lan=en.

71. NEPAL GAZETTE, ELECTRICITY REGULATORY COMMISSION ACT, 2074 1 (2017), https://erc.gov.np/storage/listies/April2020/erc-act-2017-english.pdf.

of supervision and oversight serves as an essential tool to ensure fair competition, limit market abuse, and protect the rights and interests of all the stakeholders. Governmental oversight of different aspects of energy market regulation, such as in the areas of licensing, tariff and fees determination, prevention of anti-competitive practices, compliance monitoring, establishment of performance norms and consumer protection will serve to improve predictability for consumers and investors. Building the capacity of the Commission to perform these functions will also increase confidence in the Commission as a reliable institution.

The continuing development and strengthening of the Electricity Regulatory Commission will provide certainty on major regulatory matters. Increased effectiveness of the Electricity Regulatory Commission can assist in reducing the gaps that can arise under Nepal's federal system, which will aid in attracting additional FDI. Greater clarity in some of the major regulatory powers, functions and duties of the Electricity Regulatory Commission has made it a vital part of institutional reform in the energy sector in Nepal that is anticipated to bring about needed regulatory reforms that will help to attract FDI in Nepal.

The Grid Code and Distribution Code for electricity service is formed, executed, and monitored by the Electricity Regulatory Commission, which regulates the electric grid's connection to the transnational distribution system and the international level grids.[72] The tariff establishing regulated services rates is determined by the Electricity Regulatory Commission based on an application submitted by the distribution licensee.[73] The Electricity Regulatory Commission issued the Electricity Tariff Fixation Directive in 2019, specifying the principles under which a tariff is determined.[74]

Transmission and distribution charges (wheeling charges) are also set by the Commission.[75] The Commission conducts a public hearing prior to deciding on matters relating to fixation of electricity tariffs and power purchase/sales rates, fixation of transmission charges and power trading in accordance with the methods, procedures, and format specified by the prevailing laws and by the Electricity Regulation Commission's past decisions.[76] The Electricity Regulatory Commission has also issued the Public Hearing Operation Directive of 2020[77] to make the work of public hearings conducted by the Commission simple, systematic and uniform, and to ensure the right of stakeholders to information and the

72. *Id.* at 10.

73. *Id.* at 11; *See also* ELECTRICITY REGULATORY COMMISSION RULES, 2018, 4 (Sept. 6, 2018), http://erc.gov.np/storage/listies/April2020/erc-rules-2018.pdf.

74. MYREPÚBLICA, ELECTRICITY REGULATORY COMMISSION PROPOSES NEW DIRECTIVE FOR ELECTRICITY TARIFF, (2019), https://myrepublica.nagariknetwork.com/news/78780/.

75. *See* NEPAL GAZETTE, *supra* note 71, at 11.

76. ELECTRICITY REGULATORY COMMISSION RULES, 2018, 18 (Sept. 6, 2018), http://erc.gov.np/storage/listies/April2020/erc-rules-2018.pdf.

77. Electricity Regulatory Commission Act, 2018 (Nepal). *See also* ELECTRICITY REGULATORY COMMISSION RULES, 2018, 8 (Sept. 6, 2018), http://erc.gov.np/storage/listies/April2020/erc-rules-2018.pdf.

right to a fair, fair hearing as per the Act's[78] mandate to implement as binding instrument.

The Electricity Regulatory Commission is empowered to make provisions for competition in the electricity tariff rate over the purchase and sale rate of the electricity and subsequently protect the interest of the consumers.[79] The Nepal Electricity Authority (NEA) is a state-owned, vertically integrated utility that is responsible for generation, transmission, and distribution of electricity in the country along with the development and operation of the national grid.[80] The Commission's recent enforcement of its Consumer Tariff Directive of 2019[81] aims to curb NEA's monopoly power and ability to unilaterally revise tariffs. It turned back NEA's tariff hike proposal, asking the utility to come up with a better justification consistent with the criteria set forth in the Directive.[82] Previously, NEA-would revise its tariffs unilaterally, subject only to the non-binding recommendation of the now defunct Electricity Tariff Fixation Commission.[83] The Electricity Regulatory Commission Act of 2017 gave the Commission power to order changes to NEA's tariff and establish regulations governing the trading of. electricity.[84] Due to the lack of multiple buyers in the market, the Act has also empowered the Commission to maintain a competitive environment over the purchase and sale rates of electricity and to prevent NEA from exercising monopoly power over the sellers of electricity.[85] To this end, the Electricity Regulatory Commission has issued the 'Directive for Merger, Purchase of Shares, Purchase, Sale or Transfer of Infrastructure, Acquisition or Takeover Licensees of 2020[86] for facilitating merger and acquisition between/among Licensees.

The Electricity Regulatory Commission also regulates and limits the ability of any company or institution licensed to carry out functions related to electricity generation, transmission, distribution, or trade to issue or sell securities.[87] The working capacity of the of applicant for license to be evaluated as per prescribed standards.[88] The Electricity Regulatory Commission also sets and implements the Code of Conduct to be adhered to by the licensed parties, including integrat-

78. *Id.*

79. *See* NEPAL GAZETTE, *supra* note 71, at 12.

80. Nepal Electricity Authority Act, 2041, (1984) (Nepal).

81. CONSUMER TARIFF DIRECTIVE OF 2019, https://erc.gov.np/storage/listies/April2020/consumer-tariff-directive-2076.pdf.

82. Rajesh Khanal, *NEA Mulls 15% Power Tariff Hike*, MYREPUBLICA (Nov. 14, 2019, 7:35 AM), https://myrepublica.nagariknetwork.com/news/nea-mulls-15-power-tariff-hike/.

83. Prahlad Rijal, *Regulatory Body Rejects Nepal Electricity Authority's Tariff Proposal*, THE KATHMANDU POST (Nov. 12, 2019), https://kathmandupost.com/money/2019/11/12/regulatory-body-rejects-nepal-electricity-authority-s-tariff-proposal.

84. *See* NEPAL GAZETTE, *supra* note 71, at 11.

85. *Id.* at 12.

86. DIRECTIVE FOR MERGER, PURCHASE OF SHARES, PURCHASE, SALE OR TRANSFER OF INFRASTRUCTURE, ACQUISITION OR TAKEOVER (2020), https://erc.gov.np/storage/listies/August2020/merger-acquisition-transfer-related-directive-2077.pdf.

87. *See* NEPAL GAZETTE, *supra* note 71, at 12.

88. *Id.* at 13

ing internal controls, accounting systems, and auditing methods for licensees.[89] The Commission provides essential directives to amend the standards in order to maintain good governance by licensees.[90]

The Commission inspects and monitors licensees' compliance with applicable laws, and is entrusted with the power to impose fines for non-compliance.[91] If required, the Commission gives orders and directives to the relevant to licensee holder, pursuant to a report prepared and submitted by an officer or employee of the Commission[92] to resolve non-compliance issues.

The Commission also has the broad authority to resolve any electricity-related disputes between the licensees, including compensation claims.[93] The Commission is authorized to exercise hearing powers, including calling parties before the Commission to provide statements or other information, questioning witnesses, ordering the submission of documents by any Nepal governmental body or public institution, and examining proofs.[94]

3. Unbundled Structure of Nepal Electricity Authority (NEA)

The Nepal government has recognized that the Nepal Electricity Authority (NEA) must be unbundled to improve efficiency through competition and commercialization.[95] –The draft Electricity Bill[96] of 2020 (Draft Bill) has proposed transforming the electricity industry by creating restrictions on vertically integrated entities.[97] Under the Draft Bill, an entity currently undertaking more than one of each of the service responsibilities pertaining to generation, transmission, and distribution of electricity must form different entities to carry out the various responsibilities three years after the act becomes effective.[98] Unbundling pursuant to the Draft Act is expected to pave the way for institutional reform in the power sector by reducing inefficiencies and promoting competition at a time when the country has experienced tremendous growth in the private power sector. In the meantime, and in anticipation that the Draft Bill will become law, the NEA has already internally unbundled and restructured itself into three major segments: generation, transmission and substation services, and distribution and consumer services.[99]

The Commission determines the terms and conditions of the tariff and regulates both NEA's sales and purchases of electricity.[100] Thus, it reviews and regu-

89. *Id.*

90. *Id.*

91. *See* NEPAL GAZETTE*, supra* note 71, at 14.

92. *Id.*

93. *Id.*

94. *Id.*

95. PRIYANTHA WIJAYATUNGA, ENERGY DIV., TECHNICAL ASSISTANCE COMPLETION REPORT (2009), https://www.adb.org/sites/default/files/project-document/60376/37196-012-nep-tcr.pdf.

96. Draft Electricity Bill, 2076 (2021).

97. *Id.* at § 13.

98. *Id.*

99. NEPAL ELEC. AUTH., ABOUT US, *https://www. nea. org. np/aboutus.*

100. *See* NEPAL GAZETTE, *supra* note 71, at 11.

lates the terms of Power Purchase Agreement (PPA) between NEA and its suppliers and also determines the applicable transmission and distribution fees (wheeling charges).[101] Additionally, NEA released its first comprehensive corporate development plan for the utility and the[102] overall energy sector. This Plan sets out much needed transmission and distribution reforms by providing greater clarity and certainty for the NEA, investors in electricity generation, development partners, and electricity consumers.[103]

III. BILATERAL AND MULTILATERAL AGREEMENTS IN SOUTH ASIA HAVE CONTRIBUTED TO INCREASED INTEREST IN FOREIGN DIRECT INVESTMENT AND CROSS-BORDER ENERGY TRADE

Bilateral and multilateral energy agreements in the South Asian Region have been formed, which have contributed to increased interest in FDI. However, they remain cumbersome and must be reformed to allow for more efficient cross border energy exchange.

A. There are Increasing Opportunities For Cross-Border Trade and Regional Collaboration in Energy Investment

1. Needs, Benefits, and Prospects of Cross-Border and Regional Energy Trade in South Asia

Electricity deficits suffered by many of the South Asian countries, heightened demand for electricity, and a mismatch between seasonal availability have resulted in increased opportunities for cross-border electricity trade in the region.[104] Diverse natural resources ranging from large coal reserves in India, gas reserves in Pakistan and Bangladesh, hydropower potential in Nepal and Bhutan, and alternative resources (including solar and wind) in India, the Maldives, and Sri Lanka are broadly available in the region.[105] While countries like Nepal and Bangladesh currently have insufficient generation resources to meet their domestic power demand throughout the year, countries like India and Bhutan have a surplus of power generation sources available.[106] Power generation variations also arise in each country as a result of weather differences and each country's ability to respond to their domestic energy needs in these circumstances is unique. For example, in Nepal and Bhutan, water sources freeze during winter - resulting in a reduction of hydropower generation, while during the same period

101. *Id.*

102. ASIAN DEV. BANK, PROPOSED LOAN NEPAL: ELECTRICITY GRID MODERNIZATION PROJECT 1 (2020), https://www.adb.org/sites/default/files/project-documents/54107/54107-001-rrp-en.pdf.

103. *Id.* at 5-6.

104. 38 PRIYANTHA WIJAYATUNGA ET AL., ASIAN DEV. BANK, CROSS-BORDER POWER TRADING IN SOUTH ASIA: A TECHNO ECONOMIC RATIONALE 1 (2015), https://www.adb.org/sites/default/files/publication/173198/south-asia-wp-038.pdf.

105. 19 PRIYANTHA WIJAYATUNGA & P.N. FERNANDO, ASIAN DEV. BANK, AN OVERVIEW OF ENERGY COOPERATION IN SOUTH ASIA 2 (2013), https://www.adb.org/sites/default/files/publication/30262/overview-energy-cooperation-south-asia.pdf.

106. *See id.* at 2, 7.

of time, in India the domestic power demand is lower enabling it to export its excess generation to hydro-dependent countries.[107] India is one of the most densely populated countries in the region and faces difficulties in planning for new large hydropower plants without risking large-scale population displacement and ecological impacts, problems which are less extensive for less densely populated countries like Bhutan and Nepal.[108] In this context, cross-border energy trade in South Asia facilitates trade between surplus-to-deficit countries, resulting in the potential for greater optimization of generation asset utilization and availability of electricity across the region with reduced adverse environmental impact.

The economic shift of developing nations in South Asia from traditional agriculture to industrial and service sectors has increased the demand for commercial energy like transportation fuels and electricity.[109] However, the natural resources required to meet the evolving patterns of increased energy demand are either limited or are largely untapped.[110] This mismatch can discourage domestic as well as foreign direct investments and impede economic growth. Cross-border trade provides these countries an opportunity to take advantage of their own unique comparative advantage to export resources while meeting the needs of their respective national markets. Furthermore, regional collaborations formed to facilitate cross-border energy trade may also allow countries to share the costs and benefits of the energy projects, ultimately reducing immediate financing burdens and reducing project risks for individual countries.[111] Larger economies in the region can provide substantial portions of the investments needed to develop regional energy infrastructure, which lessens the burden of smaller economies, eases supply constraints, and reduces energy costs.[112] Additionally, regional cooperation platforms bring countries together to mitigate climate change through improvements in energy efficiency and promotion of renewable energy within the region.[113] For example, hydropower trade between Bhutan and India reduces the need for coal power generation in India and contributes to climate change mitigation.[114]

Currently, Bhutan, Bangladesh, and Nepal conduct cross-border transactions of electricity with India.[115] For example, Nepal, which is facing power shortages despite its hydro-electric power potential, imports electricity from India, including under a commercial trade arrangement.[116] Nepal has a hydro-dominated power system that relies mainly upon run-of-river schemes for power

107. *Id.* at 11-12.

108. SULTAN HAFEEZ RAHMAN ET AL., ASIAN DEV. BANK, ENERGY TRADE IN SOUTH ASIA: OPPORTUNITIES AND CHALLENGES 6, 16-17 (2011), https://www.adb.org/sites/default/files/publication/29703/energy-trade-south-asia.pdf.

109. *Id.* at 8.

110. *Id.* at 8-9.

111. *Id.* at 4-5.

112. *See* SULTAN HAFEEZ RAHMAN ET AL., *supra* note 108, at 66-67.

113. *Id.* at 12.

114. *Id.* at 38.

115. *See See* WIJAYATUNGA & P.N. FERNANDO, *supra* note 105 at 2.

116. *Id.* at 2, 11-12.

generation.[117] Hydropower generation peaks during the April–October wet season in Nepal, requiring hydropower projects to manage excess generation that arises.[118] This excess energy currently is exported during the same wet season to India, which faces acute power shortages at this time due to the difficulty of processing and transporting coal in wet conditions.[119] Conversely, during Nepal's October–March dry season, the country faces shortages of power and imports some of its supply from India.[120]

Existing cross-border electricity trade under bilateral electricity trade agreements and other prospective projects, have set the foundation for furthering cooperation and sharing of cross-border infrastructure, establishing regional power producers, and enhancing competition across the regional market. All these developments will potentially lead to the formation of a common grid between these South Asian countries, which will help optimize the utilization of coal resources in India and Pakistan, hydropower resources in Nepal and Bhutan, and gas resources in Bangladesh.[121] "Cross-border electricity trade in the South-Asian region has the potential to grow to 60,000 MW through 2045 with the likely strengthening of regional power cooperation among India, Bhutan, Bangladesh, Nepal, Pakistan, Sri Lanka, and Myanmar."[122]

B. Bilateral or Multilateral Agreements Have Made Nepal and Other South Asian Countries More Hospitable to Energy Investors.

1. Aspects of Power Trade Agreement with India

Currently, Nepal only "has interconnecting transmission lines with India."[123] Power exchange between these two countries takes place at over twenty interconnections through 11 kV, 33 kV, and 132 kV transmission lines, but these connections are not adequate to accommodate the transfer of summer excess power generating capacity from Nepal to India.[124] The total electricity flow across these cross-border transmission lines is about 488MW.[125] With these existing cross-border transmission lines, electricity trade with India has been domi-

117. SULTAN HAFEEZ RAHMAN ET AL., *supra* note 108, at 41.

118. *Id.* at 41.

119. *Id.*

120. *Id.*

121. DR. ANOOP SINGH ET AL., PROSPECTS FOR REGIONAL COOPERATION ON CROSS-BORDER ELECTRICITY TRADE IN SOUTH ASIA, INTEGRATED RSCH. ACTION FOR DEV. 12-13 (2018), https://irade.org/Background%20Paper%20revised,%20Write%20Media,%20Oct18.pdf.

122. Ankush Kumar, *Electricity Trade in South Asian Could Grow Up to 60,000 Mw Through 2045*, ETENERGYWORLD (Nov. 9, 2018), https://energy.economictimes.indiatimes.com/news/power/electricity-trade-in-south-asian-could-grow-up-to-60000-mw-through-2045/66477793.

123. PRAKASH GAUDEL, CROSS-BORDER ELECTRICITY TRADE: OPPORTUNITIES AND CHALLENGES FOR NEPAL 2 (2018), https://www.academia.edu/37278969/Cross_Border_Electricity_Trade_Opportunities_and_Challenges_for_Nepal.

124. *Id.*

125. *Id. See* HON. BARSHAMAN PUN, PRESENT SITUATION AND FUTURE ROADMAP OF ENERGY, WATER RESOURCES AND IRRIGATION SECTOR 6 (2018), https://cip.nea.org.np/wp-content/uploads/2020/09/KMS-6-white-paper-on-energy-water-resources-and-irrigation-sector.

nated mainly by increasing imports.[126] "Nepal's allowable import of electricity from India is 800 MW."[127] Nepal, in 2021, imports a total of 250 MW of electricity from India and has agreed to import an additional 100 MW.[128] Nepal has never had a surplus in energy trading with India in the past two decades.[129]

Cross-border electricity trade agreements between India and Nepal include agreements regarding the development of projects on trans-boundary rivers which flow from Nepal to India, including the 'Treaty Between the Government of Nepal and the Government of India.'[130] These agreements were primarily established to develop irrigation and control floods, but because electricity is produced as a byproduct, these agreements include provisions for cross-border electricity trade.[131]

For example, under Article 4 (ii) of the amended Koshi Agreement, Nepal is entitled to use "up to 50% of the total hydroelectric power generated by any powerhouse situated within 10-mile radius from the [Koshi Barrage]"[132] upon payment of certain tariffs fixed by mutual understanding.[133] Similarly, under the Gandak Agreement, the Government of India agreed to construct both a "powerhouse with an installed capacity of 15,000 KW-hour in Nepali territory on the Main Western Canal" and a transmission line from that powerhouse to the Bihar border[134] in order to facilitate supply of power to any point in the Bihar Grid up to and including Raxaul.[135] Under Article 2 of the Mahakali Treaty, Nepal is entitled to an annual supply of "70 million KW-hour of energy on a continuous basis, free of cost, from" Tanakpur Hydropower Plant located in India.[136] This year, India opened the energy exchange market, NEA from Nepal can sell surplus energy to the Indian market via India Energy Exchange Limited (IEX), [137]

126. GAUDEL, *supra* note 123, at 2.

127. *India Agrees to Add 100 MW to Nepal's Electricity Import,* SOUTH ASIA SUBREGIONAL ECON. CORP. (Jan. 31, 2021), https://www.sasec.asia/index.php?page=news&nid=1228&url=nepal-adds-100mw-import.

128. *Id.*

129. *Nepal's Export of Electricity Surpasses Imports from India*, MY REPUBLICA (Aug. 25, 2021), https://myrepublica.nagariknetwork.com/news/nepal-s-export-of-electricity-surpasses-imports-from-idia/#:~:text=KATHMANDU%2C%20August%2025%3A%20Nepal's%20export,imports%20stood%20at%2023%20MW.

130. Revised Agreement between His Majesty's Government of Nepal and The Government of India on The Koshi Project, Nepal-India, Dec. 19, 1966, available at https://www.moewri.gov.np/storage/listies/May2020/revised-agreement-on-nepal-and-india-koshi-river-1966.

131. *Id.*

132. *Id.* at art. 4(ii). The Koshi Barrage, located near the Indian border with Nepal, is a water channel traversing the Koshi River used to move vehicles, bicycles and pedestrian traffic.

133. *Id.* at art. 4(iv).

134. Nepal shares a boundary with Indian states Bihar and Raxaul.

135. Agreement Between His Majesty's Government of Nepal and the Government of India on the Gandak Irrigation and Power Project, Nepal-India, art. 8(i)-(ii), Dec. 4, 1959, https://www.moewri.gov.np/storage/listies/May2020/aggrement-on-nepal-and-india-gandak-river-1959.

136. Treaty Between His Majesty's Government of Nepal and the Government of India Concerning The Integrated Development of the Mahakali Barrage Including Sarada Barrage, Tanakpur Barrage and Pancheshwar Project, Nepal-India, art. 2 (2)(b), Feb. 12, 1996, https://www.moewri.gov.np/storage/listies/May2020/treaty-between-nepal-and-india-on-mahakali-rive-1996.pdf.

137. Prithvi Man Shrestha, *Delhi Opens Door for Nepal to Sell Power in India's Energy Exchange Market*, KATMANDU POST (Nov. 2, 2021), https://kathmandupost.com/national/2021/11/02/delhi-opens-door-for-

based on the Power Trading Agreement[138], which was signed in 2014 between Nepal and India. In addition, Indian Ministry of Power Guidelines for Import/ Export (Cross Border) of Electricity- 2018[139], which mandates the "import/ export of electricity between India and the neighboring country(ies) may be allowed through mutual agreements between Indian Entity(ies) and Entity(ies) of the neighboring country(ies) under the overall framework of agreements signed between India and the neighboring country(ies)."[140] In the result, Nepal could sell surplus energy or tradeable energy to India and by having tri-parties mutual agreement energy trade to the Bangladesh in near future.[141]

2. Memorandum of Understanding between the Government of Nepal and the Government of the People's Republic of Bangladesh on Cooperation in the Field of Power Sector

Recent bilateral agreements may accelerate energy trade and cooperation between countries in the South Asian region. In August 2018, Nepal signed a Memorandum of Understanding (MoU) between The Government of Nepal and The Government of The People's Republic of Bangladesh on Cooperation in the Field of Power Sector, 2018. This agreement involves the investment, development, and trade of hydroelectricity between the two countries, strengthening the bilateral Bangladesh/Nepal relationship.[142] Under the MoU, "Bangladesh will import up to 9,000 MW of surplus hydropower from Nepal by 2040," consistent with Nepal's plan to reach certain economic goals by 2041.[143] Reaching those goals requires (1) "sustained production of energy to feed the ever-growing energy demand" from the . . . industrial sector and (2) the replacement of "non-renewable natural gas [that comprises] 75 percent of [Bangladesh's] total fuel consumption."[144] The agreement can play a positive role in making Nepal more attractive to energy investments from Bangladesh.

The MoU is the framework for electricity "trade between Nepal and Bangladesh at mutually agreed-upon prices," and both countries have agreed to ex-

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nepal-to-sell-electricity-in-india-s-energy-exchange-market?fbclid=IwAR32PQ_4-HYZLd73O6PRwspDR3qgX1-uQ2c9Y2f1h98hAZfP5Bvsubfy_kk.

138. Agreement Between the Government of Nepal and the Government of the Republic of India on Electric Power Trade, Cross-Border Transmission Interconnection and Grid Connectivity, Nepal-India, Oct. 21, 2014, https://www.moewri.gov.np/storage/listies/May2020/pta-english-21-oct-2014.

139. Ministry of Power, Guidelines for Import/ Export (Cross Border) of Electricity-2018 (Issued Dec. 5, 2016).

140. *Id.* at § 3.1 .

141. Memorandum of Understanding (MoU) between the Government of Nepal and the Government of the People's Republic of Bangladesh on Cooperation in the Field of Power, Nepal-Bangl., Aug. 10, 2018, https://www.moewri.gov.np/storage/listies/May2020/mou-between-nepal-and-bangladesh[hereinafter Nepal-Bengl. MOU].

142. *Id.*

143. Muhammad Hasanujzaman & Umesh Raj Rimal, *Bangladesh-Nepal Energy Cooperation; The Horizon of New Possibilities*, HIMALAYAN TIMES, (Sep. 7, 2020), https://thehimalayantimes.com/business/bangladesh-nepal-energy-cooperation-the-horizon-of-new-possibilities.

144. *Id.*

change power "when it is possible and feasible."[145] The parties have expressed their commitment to enhance cooperation in the field of electric power, including through investment and development of power generation projects for mutual benefit.[146] The agreement requires the parties to encourage and facilitate joint cooperation in developing power generation projects, providing consultancy services and training programs, encouraging cooperation between the public and private sector players of each country, and supporting joint venture investments in the energy sector.[147]

The MoU has faced barriers to its full implementation, however, India is located between Nepal and Bangladesh and electricity from Nepal can only be exported to Bangladesh using Indian transmission lines.[148] Delays in concluding a trilateral agreement between Nepal, India, and Bangladesh, have prevented the finalization of an agreement between Nepal and Bangladesh for electricity trade.

3. South Asian Association for Regional Cooperation (SAARC) Framework Agreement on Energy Cooperation (Electricity)

Multilateral agreements also have the potential to improve the flow of electricity traded across the South Asian nations. The SAARC Framework Agreement for Energy Cooperation (Electricity) (SAARC Framework Agreement) was signed by all Member States of SAARC, including Nepal, on November 27, 2014, during the 18th SAARC Summit held in Nepal.[149] The preamble to the agreement affirms that the Member State signatories recognize "the importance of electricity in promoting economic growth and improving the quality of life," and understand how the" common benefits of cross-border electricity exchange and trade among the SAARC Member States" enhance grid security and address problems arising from the "diversity in peak demand and seasonal variations" among the Member States.[150] The Parliament of Nepal ratified the SAARC Framework Agreement on August 30, 2016.[151]

The Agreement emphasizes cooperation in the electricity sector, in part, because all Member States lack sufficient hydrocarbon fuels to meet their domestic needs.[152] "All SAARC Member States are dependent on petroleum imports,

145. Nepal-Bangl. MOU, *supra* note 141, at art. 1. *See* Dr. Dhrubajyoti Bhattacharjee, *Growing Synergy in Energy Cooperation Between Bangladesh and Nepal*, INDIAN COUNCIL OF WORLD AFFAIRS (Sep. 23, 2021), https://www.icwa.in/show_content.php?lang=1&level=3&ls_id=6379&lid=4392.

146. Nepal-Bangl. MOU, *supra* note 141, at art. 2.

147. *Id.*

148. Prahlad Rijal, *Nepal-India-Bangladesh Talks on Power Trade Long Overdue*, KATHMANDU POST (Dec. 9, 2019), https://kathmandupost.com/money/2019/12/09/nepal-india-bangladesh-talks-on-power-trade-long-overdue.

149. SAARC Framework Agreement for Energy Cooperation (Electricity), Afg.-Bangl.-Bhutan-India-Maldives-Nepal-Pak-Sri Lanka, Nov. 27, 2014, https://www.moewri.gov.np/storage/listies/May2020/saarc-framework-agreement [hereinafter SAARC Framework Agreement].

150. *Id.*

151. Bibek Subedi, *Saarc Energy Cooperation Pact Gets Parliament Nod*, KATMANDU POST (Aug. 30, 2016), https://kathmandupost.com/money/2016/08/30/saarc-energy-cooperation-pact-gets-parliament-nod.

152. ASIAN DEV. BANK, HARMONIZING ELECTRICITY LAWS IN SOUTH ASIA; RECOMMENDATIONS TO IMPLEMENT THE SOUTH ASIAN ASSOCIATION FOR REGIONAL COOPERATION FRAMEWORK AGREEMENT ON

[and] some even import up to 100%" of their petroleum needs.[153] Natural gas cannot be traded between the Member States because, with the exception of Bangladesh, countries in the region that use natural gas, including India and Pakistan, are unable to meet their gas demand using solely domestic sources.[154] India, despite having significant coal-based generating capacity, also imports coal for power generation and other uses to meet high domestic demand.[155] Given the limited possibilities for regional trade in petroleum, natural gas, and other hydrocarbon fuels, electricity generated from large renewable energy sources in South Asia, including hydropower, wind, solar, biomass, and geothermal resources, can be harnessed for both domestic use and to meet energy shortfalls through regional power trade.

The Agreement acts as the foundation for electricity trade in South Asia and has opened up opportunities for energy investment in the region. It sets the guiding principles for enabling cross-border trade of electricity on a voluntary basis, between "Buying and Selling Entities"[156] of the SAARC Member States, "subject to the laws, rules, and regulations of the respective Member States, and based on bilateral or [multilateral agreements] between the concerned states."[157]

Consistent with its objective to facilitate and promote cross-border energy trade, the Agreement sets forth roles, powers, and responsibilities of Member States, Buying and Selling Entities, National Grid Operators, Transmission Planning Agencies of each member state's government, Transmission Service Providers, and the SAARC Arbitration Council.[158] For example, the Member States have committed to enable Buying and Selling Entities to engage in cross-border electricity trade, to develop procedures for that trade, to enable nondiscriminatory access to transmission grids, to promote competition, to coordinate on reliability and security of Member States' grids, and to coordinate the procedures and practices of Member States' grid operators, including dispatch procedures.[159] Moreover, Member States have considerable opportunities for negotiation and cooperation, including working toward exempting import and export duties and fees, enabling the Buying and Selling Entities to negotiate their terms of payment, assisting the transmission planning agencies of the Member States in

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ENERGY TRADE (ELECTRICITY) 4 (2017), https://www.adb.org/sites/default/files/publication/375496/harmonizing-electricity-laws-sasia [hereinafter HARMONIZING ELECTRICITY LAWS WHITE PAPER].

153. *Id.*

154. *Id.*

155. *Id.* at 19-20.

156. SAARC Framework Agreement, *supra* note 149, at art. 3. Article 1 of the SAARC Framework Agreement for Energy Cooperation (Electricity) defines "Buying and Selling Entities [as] any authorized public or private power producer, power utility, trading company, transmission utility, distribution company, or any other institution established and registered under the laws of any one of the Member States having permission of buying and selling of electricity within and outside the country in which it is registered." *Id.* at art. 1.

157. *Id.* at art. 2.

158. *Id.* at art. 7, 9, 11, 16.

159. *Id.* at art. 6, 10-12.

building and maintaining cross-border interconnections, and enabling knowledge sharing and information exchanges between Member States.[160]

One of the most important features of the Framework Agreement is that its articles are generally subject to "laws and regulations of the concerned Member States."[161] But this is also one of the Agreement's weaknesses. As the Asian Development Bank (ADB) notes in its 2017 study:

> Few of the countries in the region—Bangladesh, Bhutan, and Nepal—made requisite provisions in their laws to recognize and regulate the cross-border electricity trade within. As a result, the prevailing electricity laws, regulations, and policies of other SAARC member states (SMSs) are designed to govern sector operations within the country only.[162]

Therefore, ADB notes, Member states each need both a strong legal and regulatory framework and to "[h]armonize their electricity laws, regulations, and policies with those of the other countries in the region" to maximize interregional trade benefits. ADB's report has identified a number of ways in which this can be accomplished.[163] Therefore, a strong legal and regulatory framework in each of the Member States by harmonizing regulatory environment are vital for proper implementation of the provisions of the Framework Agreement.

4. Remaining Challenges Require That the Regional Regulatory Framework Consider the Difficulty of Implementing Reforms in Developing Countries Like Nepal

Although bilateral and multilateral agreements have increased opportunities for cross-border energy trade, significant challenges remain. Developing countries like Nepal might place a higher priority near term on satisfying domestic consumption rather than on exporting power. Moreover, developing countries might have limited and inefficient energy infrastructure which may reduce the effectiveness of these regional agreements, or they may have limited negotiating power against more developed nations.

Despite having abundant hydropower potential, Nepal has been struggling to meet its own energy demands.[164] Hydropower development policy in Nepal assumes that electricity may be exported to foreign countries. But satisfying internal consumption and increasing per capita electricity consumption domestically may be a higher priority. Moreover, Nepal is losing potential revenue from electricity export sales because of its inadequate and unreliable power system infrastructure.[165] Hydropower generation remains inadequate due to limited government resources, lack of foreign direct investment, and inadequate domestic

160. SAARC Framework Agreement, *supra* note 149, at art. 3-4, 8, 14.

161. *Id.* at art. 13.

162. HARMONIZING ELECTRICITY LAWS WHITE PAPER, *supra* note 152, at 47.

163. Id.

164. *Power-Less to Powerful,* WORLD BANK, (Nov. 25, 2019), https://www.worldbank.org/en/news/feature/2019/11/25/power-less-to-powerful.

165. ASIAN DEV. BANK, COUNTRY PARTNERSHIP STRATEGY, NEPAL, 2013-2017, at 2 (2013), https://www.adb.org/sites/default/files/institutional-document/34001/files/cps-nep-2013-2017.pdf.

private financing. In addition, Nepal's reliance on underperforming assets—with poor operation and maintenance of those assets—have led to high technical losses and inefficient power systems.[166]

Nepal and other developing countries in South Asia face four general areas in which barriers inhibit robust energy infrastructure. These involve impediments in the policy, technical, institutional, and financial areas.[167] For example, the lack of adequate infrastructure to deliver electricity from generation plants to load centers has been a significant challenge.[168] This lack of infrastructure may be attributed in part to weak institutional capacity, the weak financial position of the NEA, and limited human resources and management experience within the NEA.[169] Other challenges include limited energy sector planning, policies, and regulations, as well as a lack of coordination on strategies by institutions involved in the energy sector.[170]

Nepal's energy development is also hampered in its ability to negotiate effectively in cross-border electricity trade with India, a more developed nation. As an example of Nepal's weaker negotiating power vis-à-vis India, India's Guidelines on Cross-Border Trade of Electricity in 2016 contained clauses that appeared contradictory with the SAARC Framework Agreement and the Indo-Nepal Power Trade Agreement by "provid[ing] preferential *one-time* approval for all entities with 51% or more Indian ownership wishing to export electricity from Nepal to India" while stating that all other entities need to be considered on a case-by-case basis.[171] While such unilateral actions may be the preferred *modus operandi* of India,[172] they are inconsistent with the spirit of the operative bilateral and multilateral cooperative agreements on energy trade.

Hydropower projects are increasingly facing environmental concerns that can create additional development problems. For example, water diversion for hydropower generation, particularly in run-of-river projects, can make the downstream stretch of the river completely dry, which has adverse impacts on the aquatic and terrestrial ecosystem as well as livelihood of the people dependent on those systems.[173] Similarly, construction of dams in larger hydropower projects necessitates complex and expensive structures that can give rise to multiple environmental problems.[174] Other negative impacts, including involuntary dis-

166. *Id.*

167. P.R. Khadka & P. Adhikari, Regional Power Trading; In: Proceedings of 6th International Conference on Development of Hydropower- A Major Source of Renewable Energy (2005).

168. ASIAN DEV. BANK, *supra* note 102, at 2.

169. *Id.* at 10.

170. *Id.* at 9.

171. Santa Bahador Pun, *Reflections on SAARC Framework Agreement for Energy Cooperation (Electricity) Vis-à-vis India's "Guidelines on Cross-border Trade of Electricity"* 22 HYDRO NEPAL: J. OF WATER, ENERGY AND ENV'T 1 (2018), https://www.nepjol.info/index.php/HN/article/view/18989.

172. *Id.*

173. Ramesh Prasad Bhatt, Hydropower Development in Nepal - Climate Change, Impacts and Implications, *in* RENEWABLE HYDROPOWER TECHNOLOGIES (Basel I. Ismail ed., 2017), https://www.intechopen.com/chapters/53350.

174. *Id.*

placement and loss of fertile land, affect the microclimate of the region and the people living within it. Despite the potential for cross-border trade in hydropower, national plans for hydropower development and export have failed to include sufficient socio-environmental considerations.[175]

IV. CONCLUSIONS AND LESSONS LEARNED

Although foreign energy investment in Nepal has been limited by regulatory challenges, including the tensions between federal, provincial, and local legal regimes, there are concrete solutions for regulatory reform and additional opportunities to encourage foreign direct investment in generation and energy infrastructure. These solutions include legal regulatory and institutional reforms, such as establishment of an independent Electricity Regulatory Commission for coherent technical management, tariff determination, regulation of power purchase, ensuring competition and protection of consumers, enhancement of capacity of licenses and corporate governance, inspection and monitoring of compliance, dispute resolution, enactment of law to promote cooperation, co-existence and coordination between different levels of government and an unbundled structure of the Nepal Electricity Authority to promote competition and commercialization.

Recent bilateral and multilateral agreements in South Asia have also contributed to increased interest in foreign direct investment and cross-border energy trade. Despite their potential, at this time these regional frameworks do not yet successfully address conflicting national laws, uneven negotiation power between countries, or the difficulty of implementing reforms in developing countries like Nepal. Assuming those challenges can be overcome, these agreements can be the bases for improved energy systems across the South Asian region that will improves the lives of those living in Nepal and its neighboring countries.

175. GAUDEL, *supra* note 123, at 8.