

List of Figures

Figure 1.1	Electricity Trade in the Greater Mekong Subregion	3
Figure 1.2	Cross-Border Energy Trade between Norway, Sweden, Denmark, and Finland	5
Figure 2.1	Geographical Coverage of the Study	13
Figure 2.2	Electricity Consumption per Capita in Each Region (2015)	14
Figure 2.3	Rate of Electrification (2015)	15
Figure 2.4	Electricity Demand and Supply (2015)	16
Figure 2.5	Power Supply Capacity and Peak Demand (2015)	17
Figure 2.6	Electricity Balance (2015)	17
Figure 2.7	Framework of the Model Analysis	18
Figure 2.8	Load Curve of Electricity Demand (in the North Eastern Region of India)	20
Figure 2.9	Annual Electricity Demand Forecast	21
Figure 2.10	Generation Expansion Plan of India	22
Figure 2.11	Power Development Plan of Bangladesh	22
Figure 2.12	Projected Power Generation Fuel Mix in Myanmar (2013–2030)	23
Figure 2.13	Rates of Maximum Output to Installed Hydropower Capacity in Nepal	25
Figure 2.14	Estimated Capacity of Cross-Border Grids	26
Figure 2.15	Estimated Fossil Fuel Prices	26
Figure 2.16	Estimated Investment Cost of Power Plants	27
Figure 2.17	Estimated Thermal Efficiency of New Thermal Power Plants	27
Figure 2.18	Electricity Demand and Supply in 2030 (Reference Case)	30
Figure 2.19	Power Supply Capacity in 2030 (Reference Case)	31
Figure 2.20	Electricity Balance and Trade in 2030 (Reference Case)	31
Figure 2.21	Electricity Demand and Supply in 2030 (Enhanced Grid Case)	32
Figure 2.22	Power Supply Capacity in 2030 (Enhanced Grid Case)	33
Figure 2.23	Electricity Balance and Trade in 2030 (Enhanced Grid Case)	33
Figure 2.24	Electricity Demand and Supply in 2030 (Enhanced Hydropower and Grid Case)	34

Figure 2.25	Power Supply Capacity in 2030 (Enhanced Hydropower and Grid Case)	35
Figure 2.26	Electricity Balance and Trade in 2030 (Enhanced Hydropower and Grid Case)	35
Figure 2.27	Average Annual Costs of the Electricity Supply in the Reference Case (2015–2030)	36
Figure 2.28	Changes in Average Annual Costs against the Reference Case	37
Figure 2.29	Annual Carbon Dioxide Emissions in the Reference Case	38
Figure 2.30	Changes in Annual Carbon Dioxide Emissions against the Reference Case	38
Figure 3.1	India’s Power Trade with Neighbouring Countries (₹’000,000)	51
Figure 3.2	Interstate Power Supply Scenario (2021–2022)	61
Figure 3.3	Inter-Regional and Cross-Border Power Demand–Supply Scenario (2026–2027, 2031–2032, 2035–2036)	62
Figure 3.4	India–Bangladesh Interconnection for Power Transfer (100 Megawatts)	64
Figure 3.5	India–Nepal Cross-Border Transmission Line Intersections	67
Figure 3.6	India–Bhutan Cross-Border Transmission Line Intersections	67

List of Tables

Table 1.1	Electricity Trade amongst the South African Power Pool Members	7
Table 1.2	Energy Balances in India and the Association of Southeast Asian Nations Countries	8
Table 2.1	Population and Gross Domestic Product of Each Region (2015)	14
Table 2.2	Hydropower Development Plan of Bhutan	23
Table 2.3	Power Development Plan of Nepal	24
Table 2.4	Estimated Cost of Major Cross-Border Grids	28
Table 2.5	Case Settings	29
Table 3.1	Electricity Import/Export by India from/to Neighbouring Countries	51
Table 3.2	Intended National Development Contribution Commitments of Bangladesh, Bhutan, India, Nepal, and Myanmar	55
Table 3.3	Development Status of Potential Hydroelectricity (June 2014)	57
Table 3.4	Demand for and Supply of Power in Bangladesh, Bhutan, the North Eastern Region of India, and Nepal (2021–2022)	61
Table 3.5	The North East Industrial Development Scheme—Subsidies and Incentives Extended to Eligible Industrial Units by Category	71
Table 4.1	Bangladesh, Bhutan, India, and Nepal Initiative Countries – Tariff Layout	91