

Annexures

How Secure is India’s Energy Future?

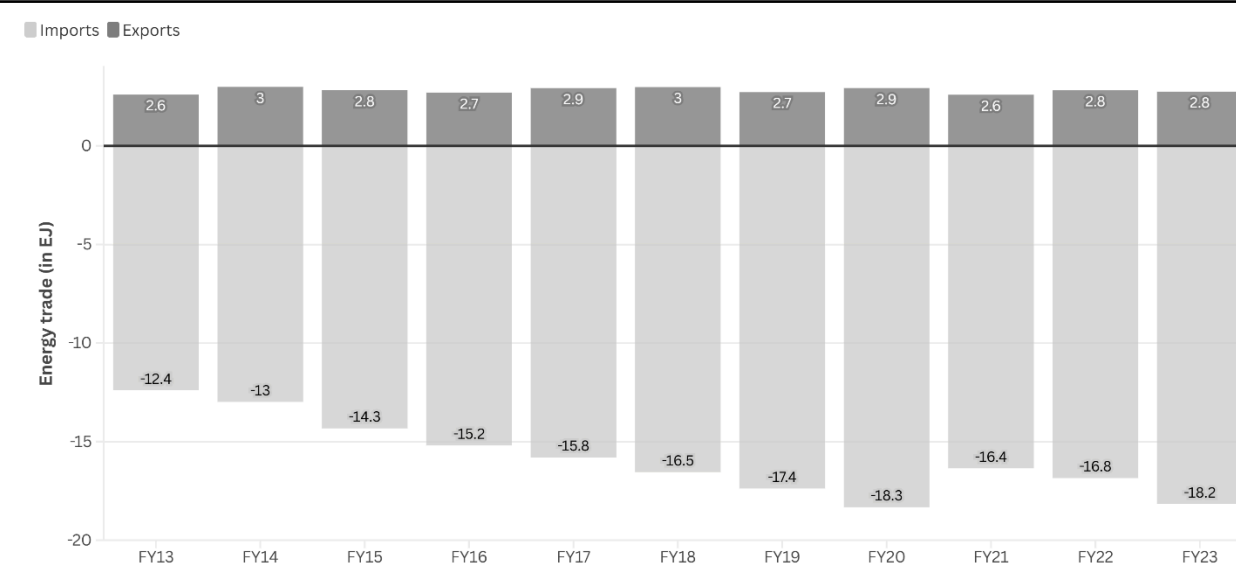
Assessing Accessibility, Reliability, and Affordability

Authors: Dharshan Siddarth Mohan, Karthik Shetty, Hemant Prakash Singh, Sabarish Elango, and Hemant Mallya

Annexure 1 | June 2026

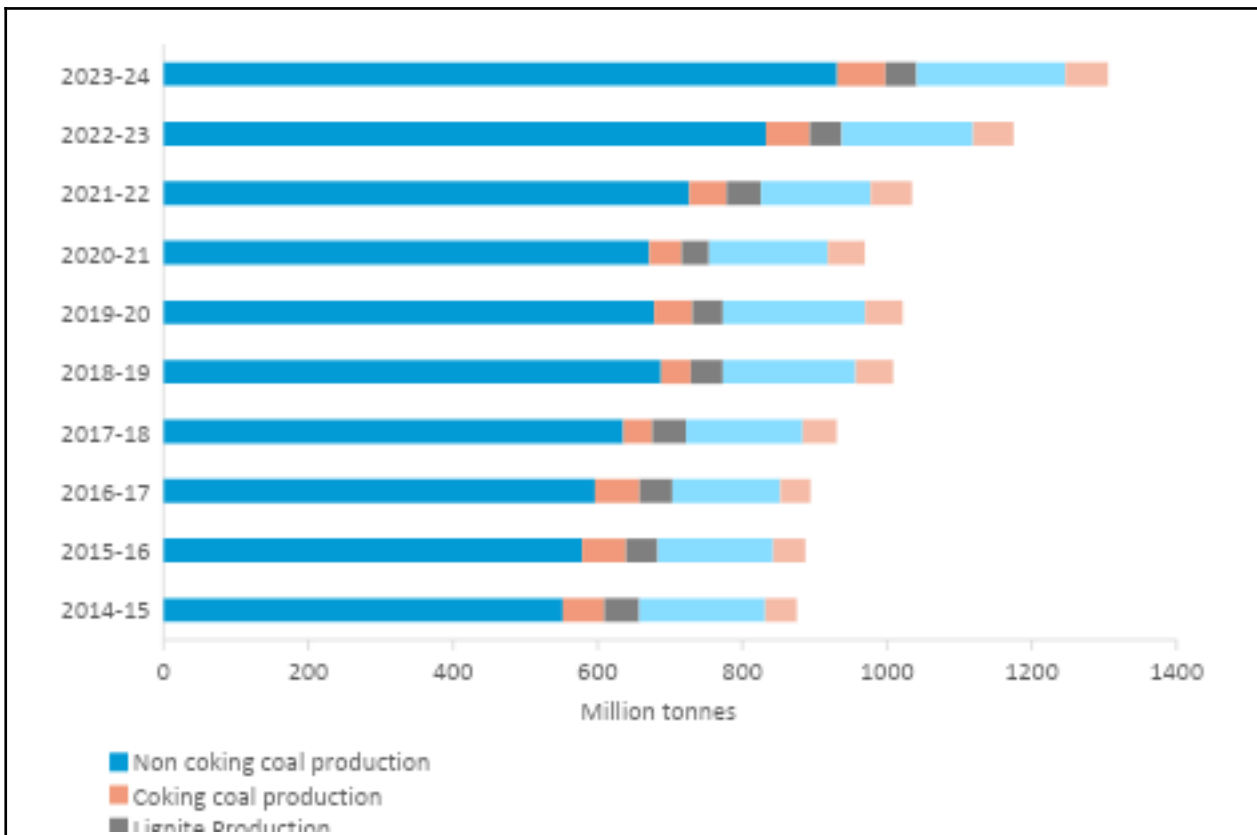
Annexure 1: Supplementary data and trends

Figure A1: Rising energy imports are widening India’s energy trade deficit



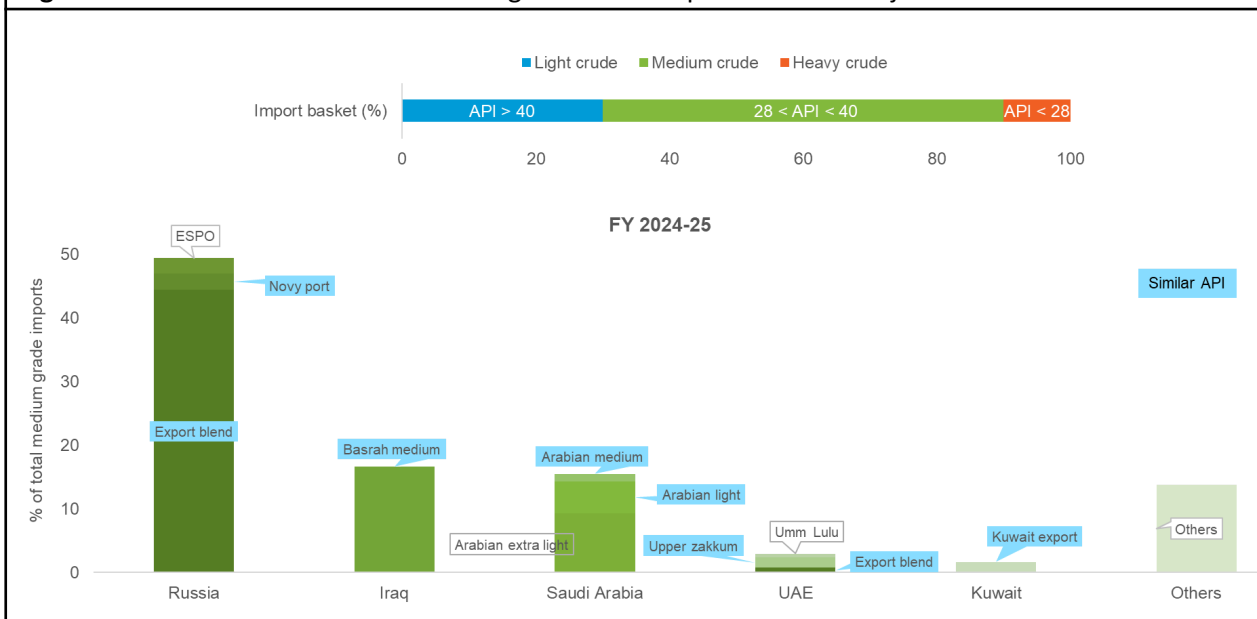
Source: Authors’ adaptation from MoSPI (Ministry of Statistics and Programme Implementation). 2025. Energy Statistics India 2025. Ministry of Statistics and Programme Implementation, Government of India.

Figure A2: Despite growth in domestic coal output, reliance on imported coal persists



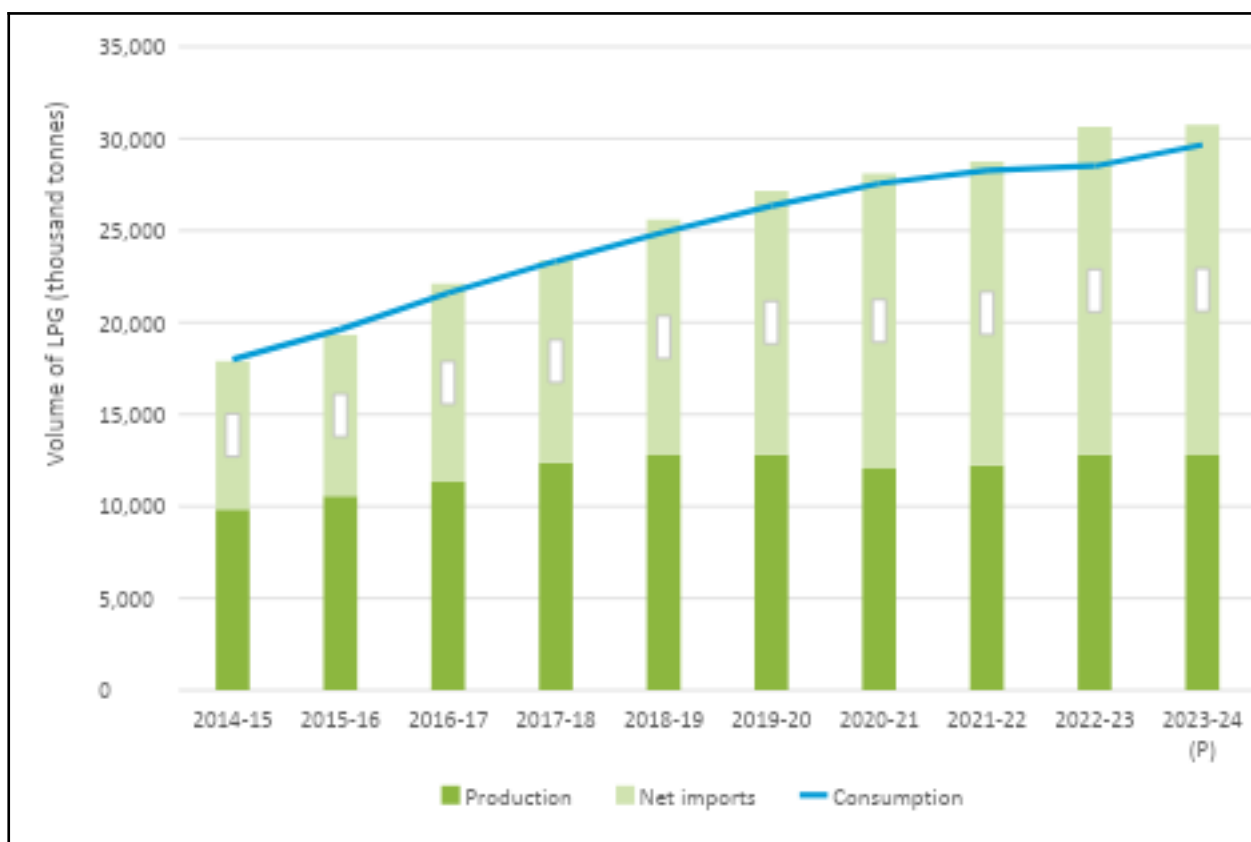
Source: Authors' adaptation from CCO (Coal Controller Organisation). 2024. Coal Directory of India 2024–25. Ministry of Coal, Government of India.

Figure A3: About 50% of India's medium-grade crude imports came from just Russia



Source: Authors' analysis

Figure A4: India meets over half of the LPG domestic demand through direct imports



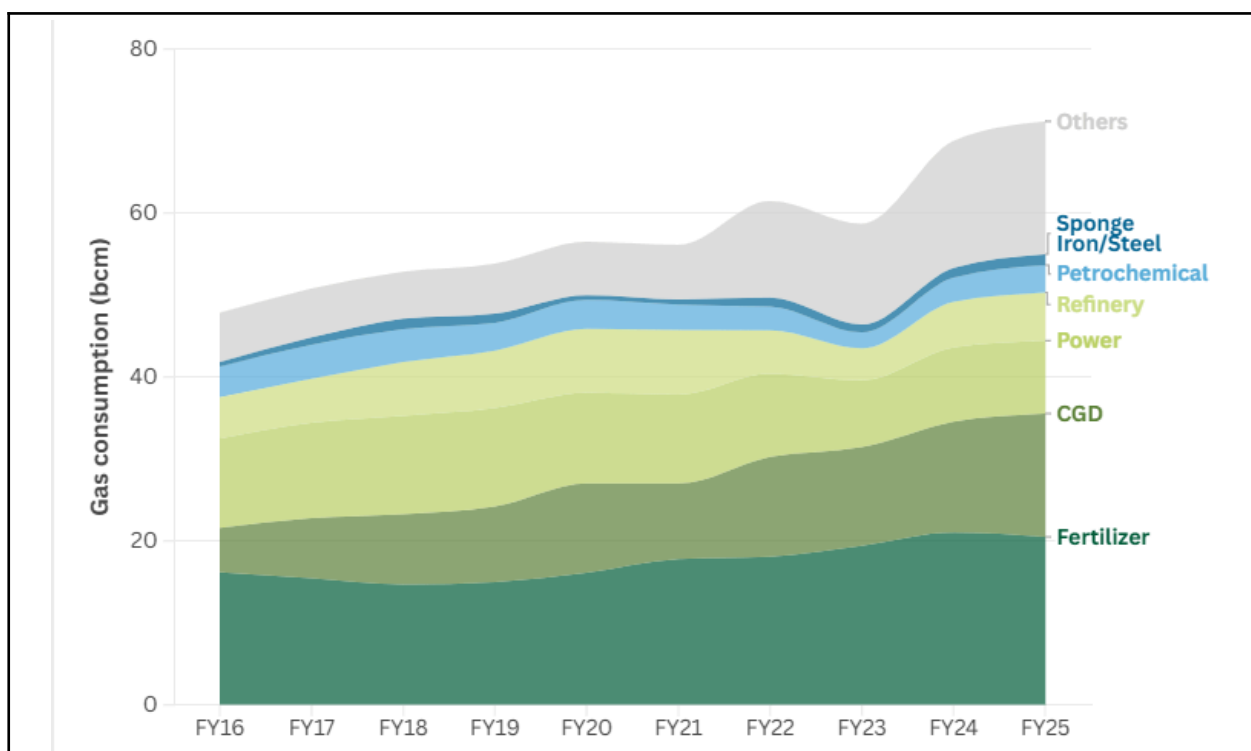
Source: Authors’ adaptation from MoPNG (Ministry of Petroleum and Natural Gas). 2021. Indian Petroleum & Natural Gas Statistics 2019–20. Ministry of Petroleum and Natural Gas, Government of India and MoPNG (Ministry of Petroleum and Natural Gas). 2025. Indian Petroleum & Natural Gas Statistics 2023–24. Ministry of Petroleum and Natural Gas, Government of India

Table A1: India’s LNG import terminals and capacity utilisation

Terminal	Capacity (Mtpa)	Utilisation (2024–25) (in %)
Dahej	17.5	96.6
Hazira	5.2	32.5
Dabhol	5.0	45.1
Kochi	5.0	22.6
Ennore	5.0	25.1
Mundra	5.0	22
Dhamra	5.0	41
Chhara	5.0	3.2

Source: PPAC (Petroleum Planning and Analysis Cell). 2025. India’s Oil & Gas Ready Reckoner 2024–25. Ministry of Petroleum and Natural Gas.

Figure A5: Gas demand growth is driven primarily by CGD and fertilisers



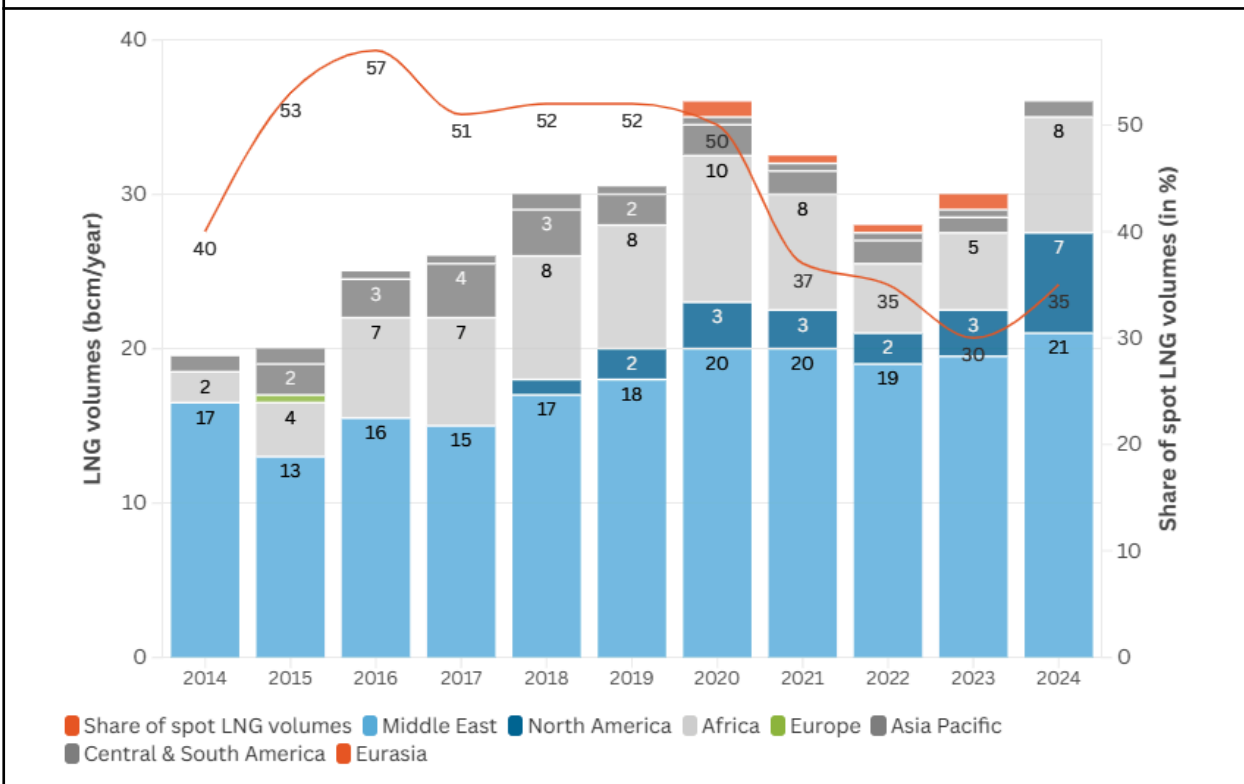
Source: Authors' adaptation from PPAC (Petroleum Planning and Analysis Cell). n.d.b "Sectoral Consumption." Petroleum Planning and Analysis Cell.

Table A2: Annual coal production and import statistics

Year	Coal Production (MT)	Coal Imports (MT)	Total Coal (Prod + Imp)	Lignite Production (MT)	Lignite Imports (MT)	Total Lignite (Prod + Imp)	Non-Coking coal imports	Coking coal imports	Coking coal production	Non-coking coal production	Coal products	Coal Products Imports (MT)
2014-15	609.2	217.8	827.0	48.3	0.00	48.3	174.1	43.7	57.4	551.7	46.1	3.3
2015-16	639.2	203.9	843.2	43.8	0.00	43.8	159.4	44.6	60.9	578.3	43.2	3.1
2016-17	657.9	191.0	848.8	45.2	0.02	45.2	149.3	41.6	61.7	596.2	45.1	4.3
2017-18	675.4	208.2	883.7	46.6	0.01	46.7	161.2	47.0	40.1	635.3	37.3	4.6
2018-19	728.7	235.3	964.1	44.3	0.02	44.3	183.5	51.8	41.1	687.6	42.6	4.9
2019-20	730.9	248.5	979.4	42.1	0.05	42.2	196.7	51.8	52.9	677.9	42.6	2.9
2020-21	716.1	215.3	931.3	37.9	0.02	37.9	164.1	51.2	44.8	671.3	40.5	2.5
2021-22	778.2	208.6	986.8	47.5	0.01	47.5	151.5	57.1	51.7	726.5	26.5	2.5
2022-23	893.2	237.7	1130.9	44.0	0.02	44.1	181.6	56.1	60.8	832.4	27.5	3.6

Source: Authors' compilation from CCO (Coal Controller Organisation). 2024. Coal Directory of India 2024–25. Ministry of Coal, Government of India.

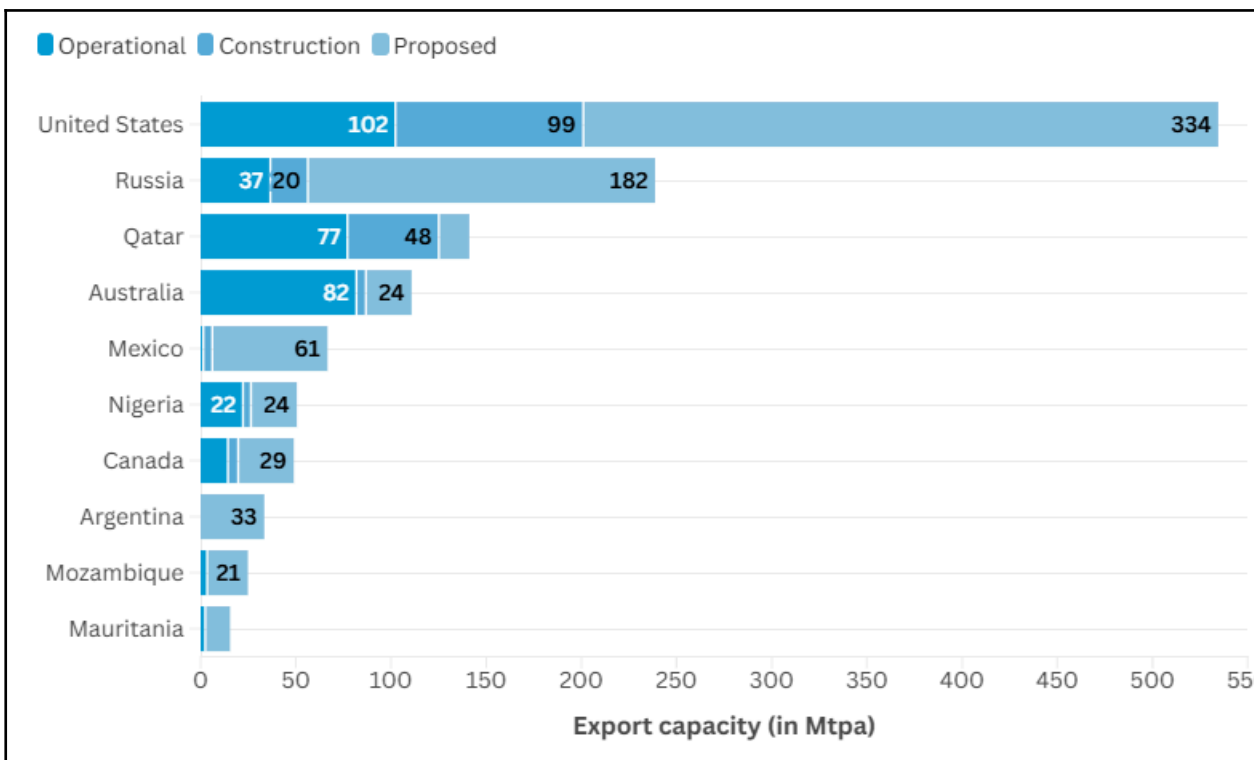
Figure A6: India’s LNG purchases are increasingly shifting from spot purchases towards long-term contracts



Source: Authors’ adaptation from IEA (International Energy Agency). 2025b. *India Gas Market Report: Outlook to 2030*. International Energy Agency.

Note: Data digitised from published figure; values are approximate

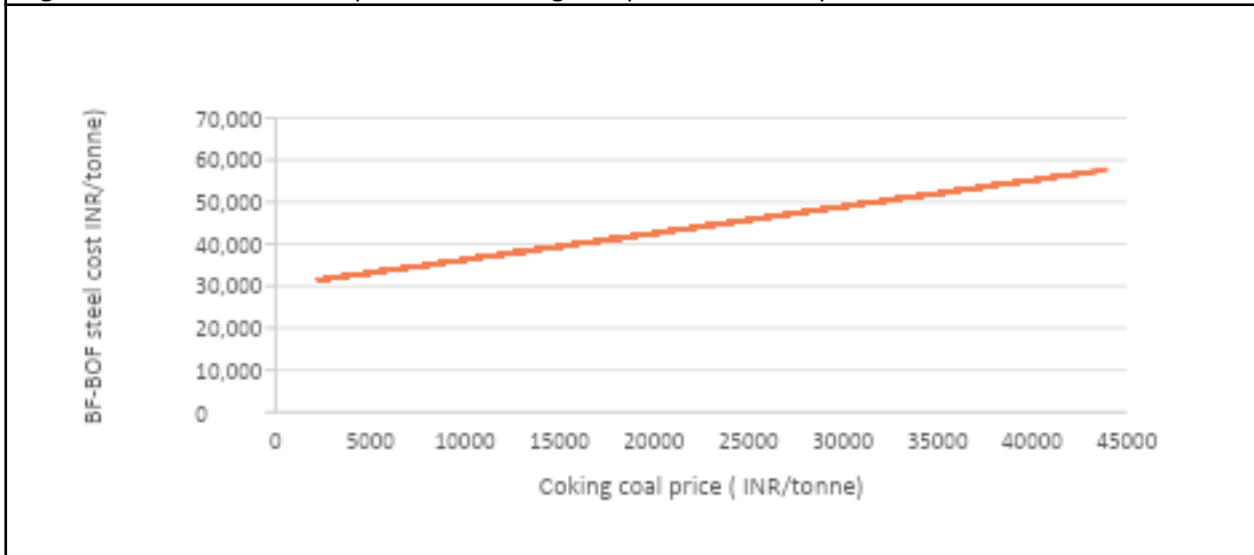
Figure A7: The United States accounts for nearly half of global LNG export capacity under development



Source: Authors' illustration based on Global Energy Monitor. n.d. Global Gas Infrastructure Tracker

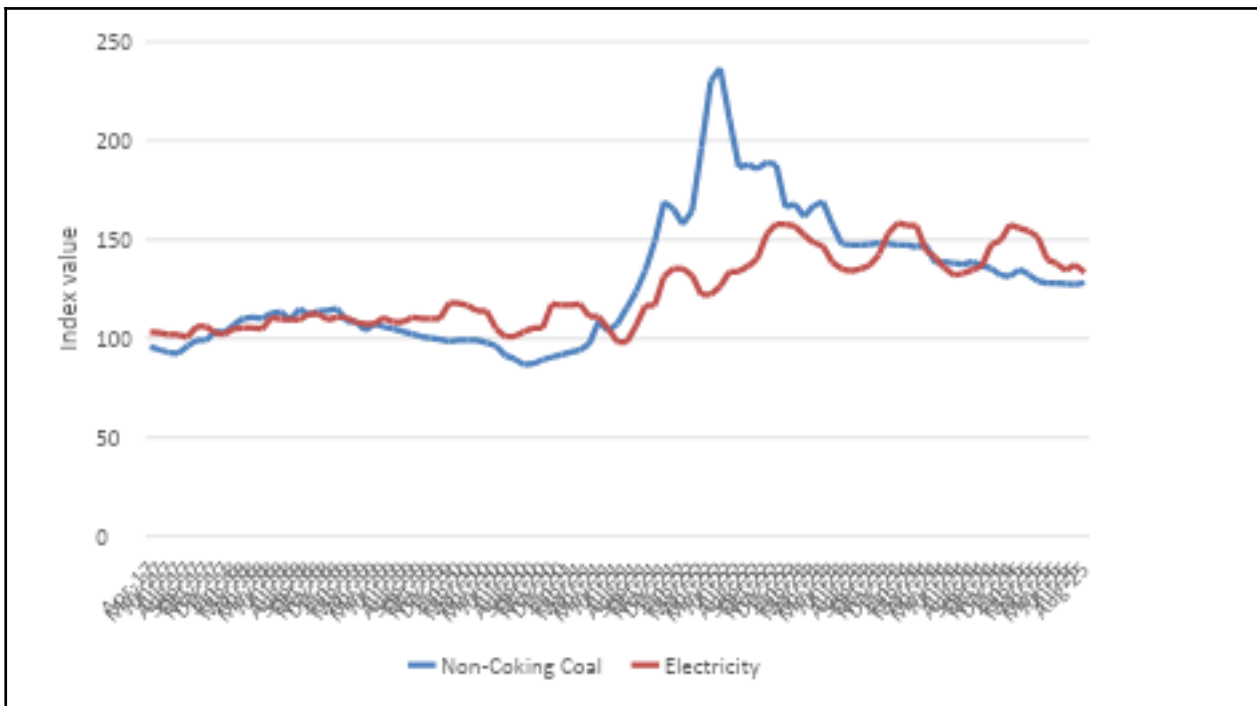
Note: Data is as of September 2024

Figure A8: Linear relationship between coking coal prices and steel prices



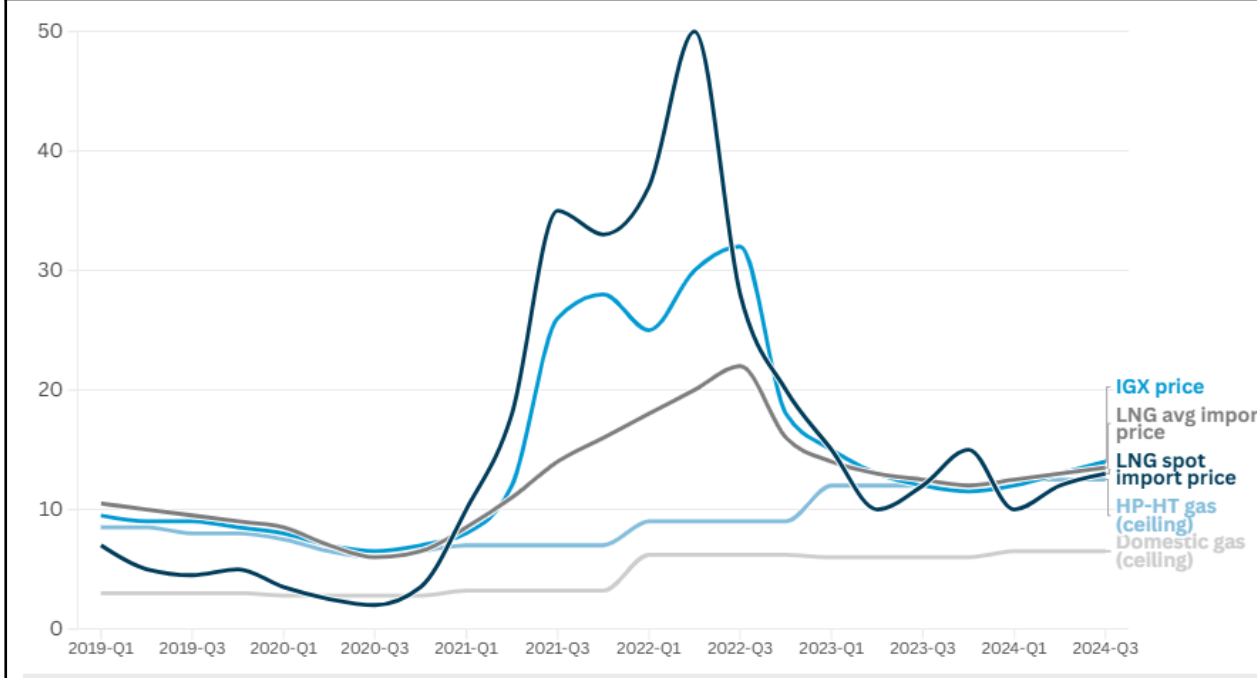
Source: Authors' analysis

Figure A9: National coal index for non-coking coal and electricity prices are strongly correlated, although the dependencies reduce as the share of electricity from coal reduces over time



Source: Authors' adaptation from DPIIT. 2025. Wholesale Price Index (WPI) Data (2011–12 Series) and MoC. 2025a. National Coal Index (NCI) — Monthly Price Index of Coal.

Figure A10: Price controls and contracts buffer domestic gas users from LNG price spikes



Source: Authors' adaptation from IEA (International Energy Agency). 2025b. India Gas Market Report: Outlook to 2030. International Energy Agency

Note: Data digitised from published figure; values are approximate