



Institute for Energy Economics
and Financial Analysis

Sustainable power and energy

Driving investment in Bangladesh

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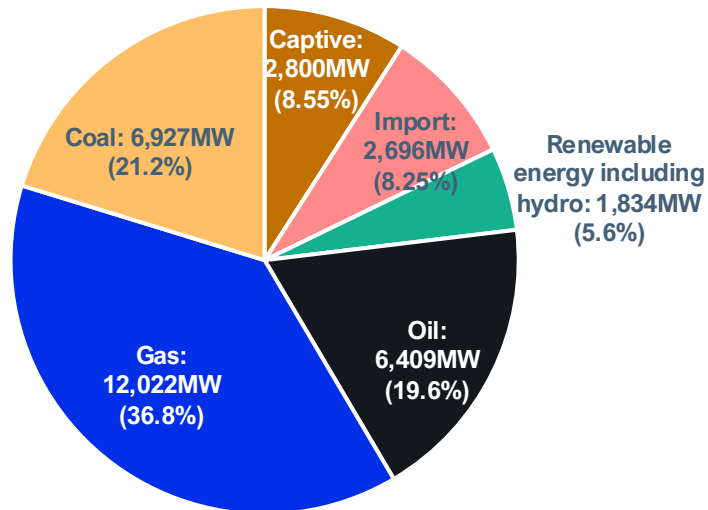
19 October 2026



Imported dollar-denominated fossil fuel-based energy and power systems expose Bangladesh's high vulnerability

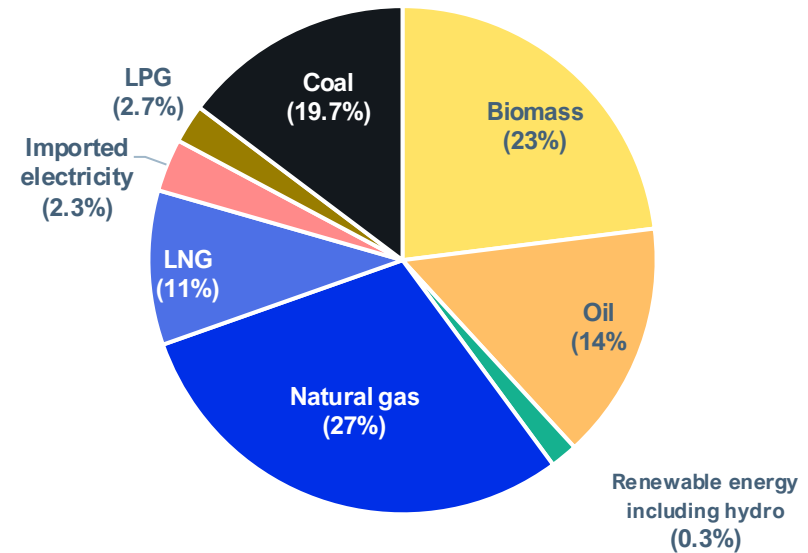
Bangladesh's energy and power sectors at a glance

Energy mix in power generation, August 2026
(Installed capacity including off-grid systems: 32,688MW)



Source: BPDB; IEEFA analysis

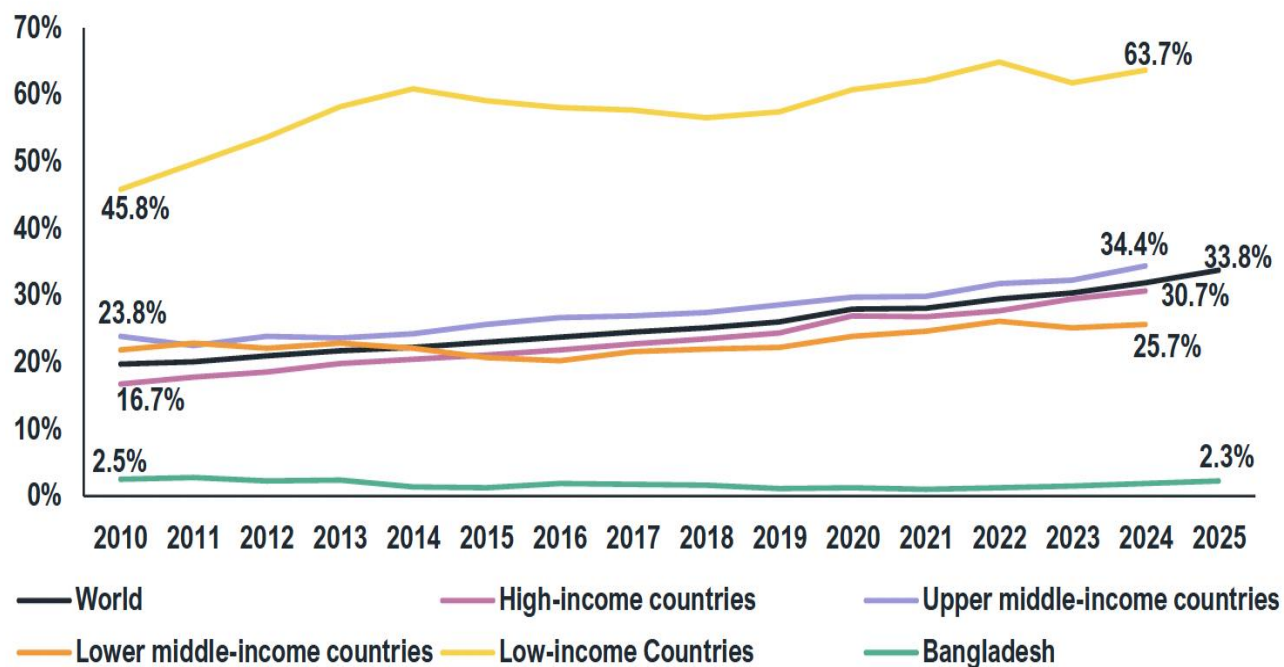
Primary energy sources, Fiscal Year (FY) 2024–25
(Total supply: approx. 59.8Mtoe)



Source: HCU; IEEFA analysis

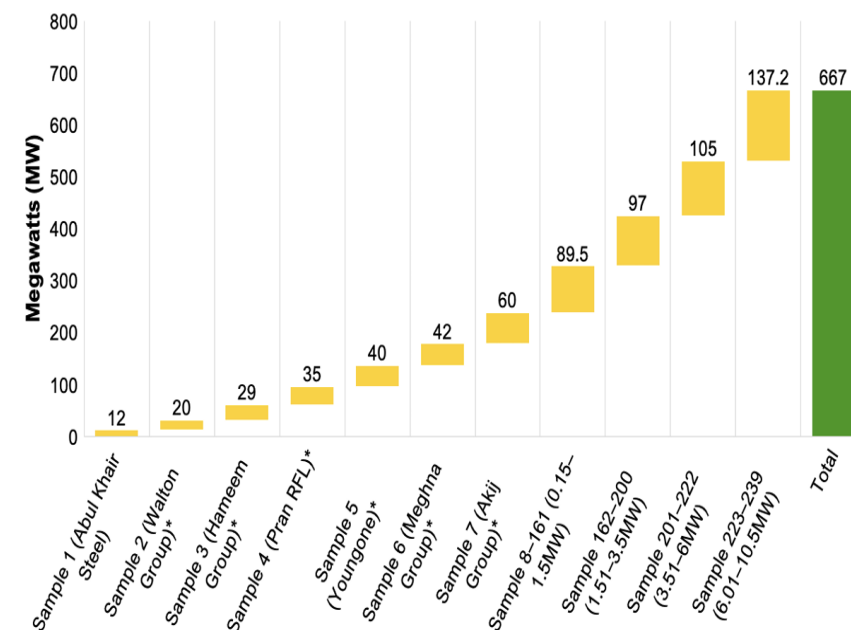
Low share of renewable energy

Share of renewable energy in Bangladesh's power generation compared with different country groups



Source: IEEFA. *Fostering Bangladesh's Energy Transition*. May 2026

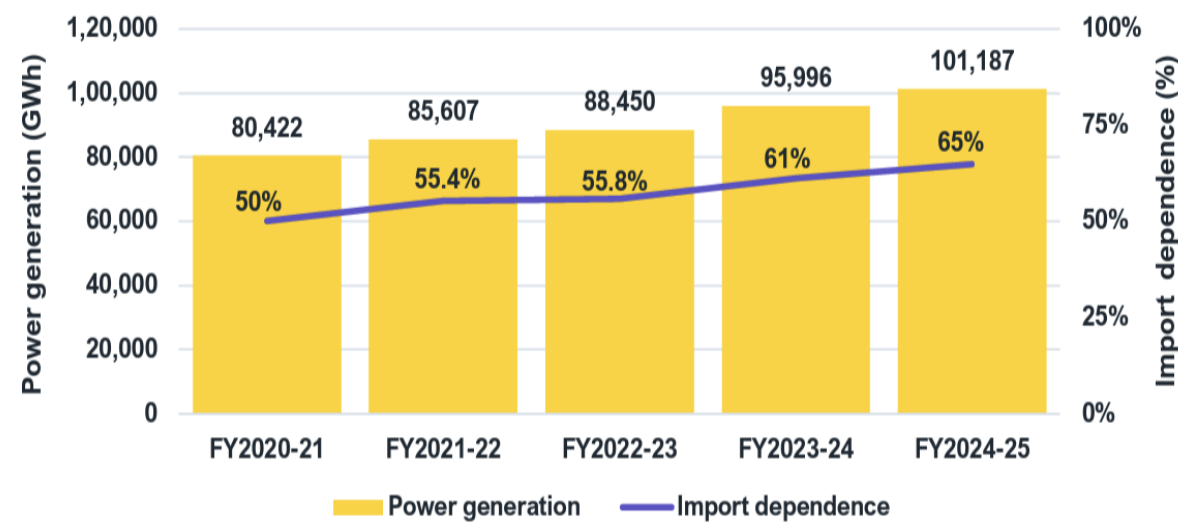
Distributed renewable energy shows an encouraging sign



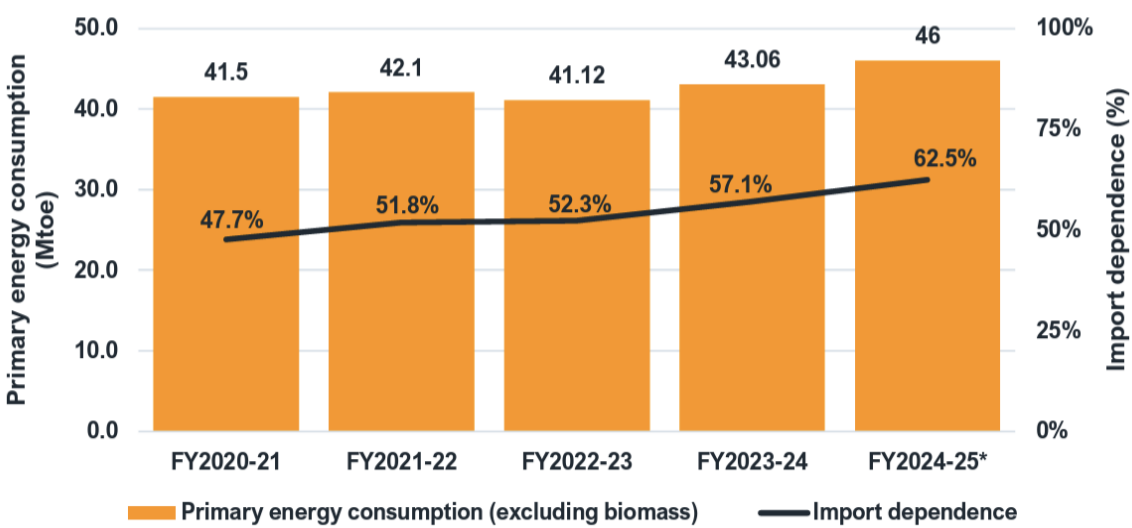
Source: IEEFA. *Role of Distributed Resources in Energy Transition*. August 2026

Growing import dependence

Power sector – FY basis



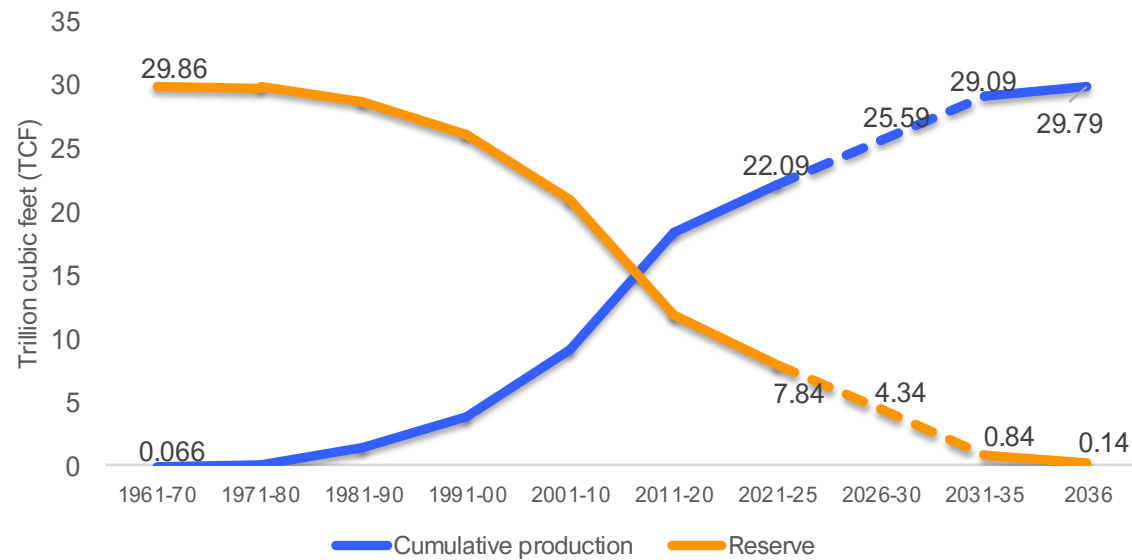
Energy sector – FY basis



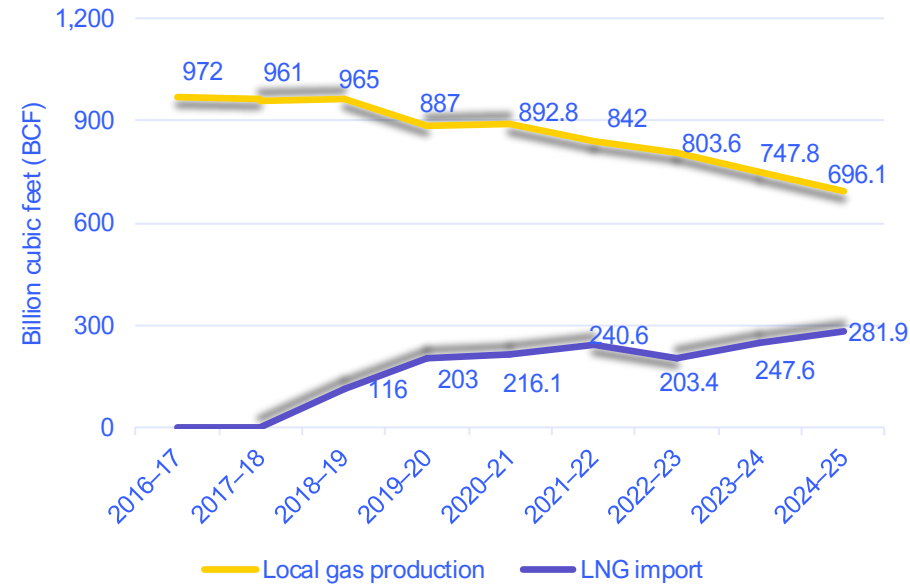
Source: BPDB; HCU; IEEFA. *Fostering Bangladesh's Energy Transition*. May 2026

Dwindling domestic gas supply increases LNG imports

Falling local gas reserves



Rising LNG imports with declining domestic supply



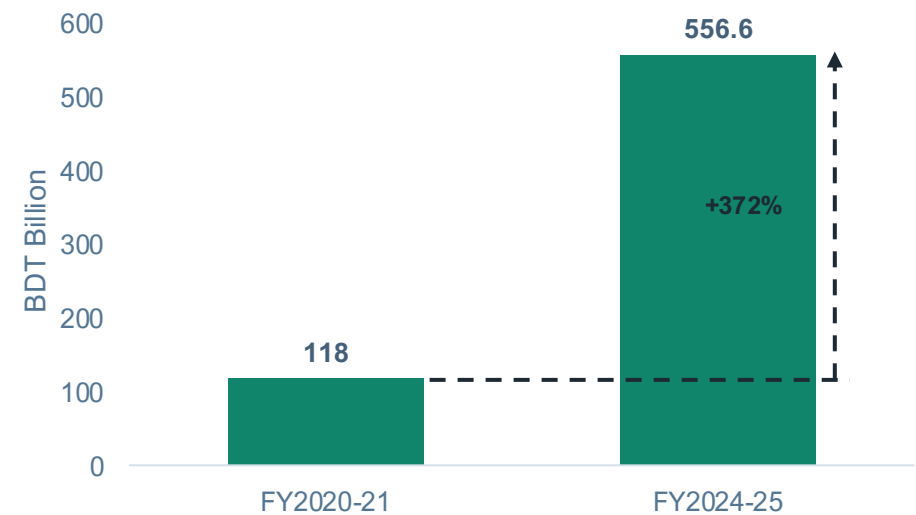
- Without new discoveries, Bangladesh's domestic gas reserves may be depleted by 2036
- The high cost of LNG is taking a toll on the economy

Source: IEEFA. *Fostering Bangladesh's Energy Transition*. May 2026.

Impacts of imported fossil-fuel dependence

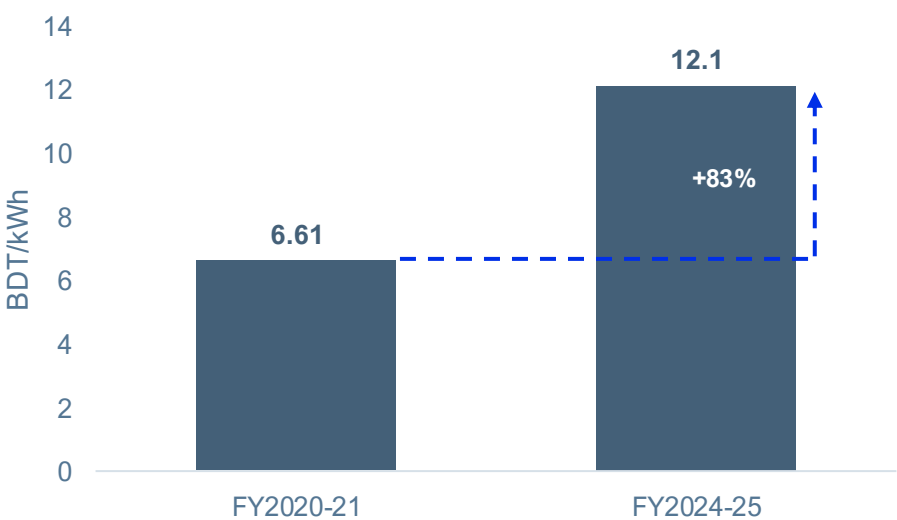
Supply-side impacts: Rising cost and revenue gap

BPDB's surging revenue shortfall



Source: BPDB; IEEFA analysis

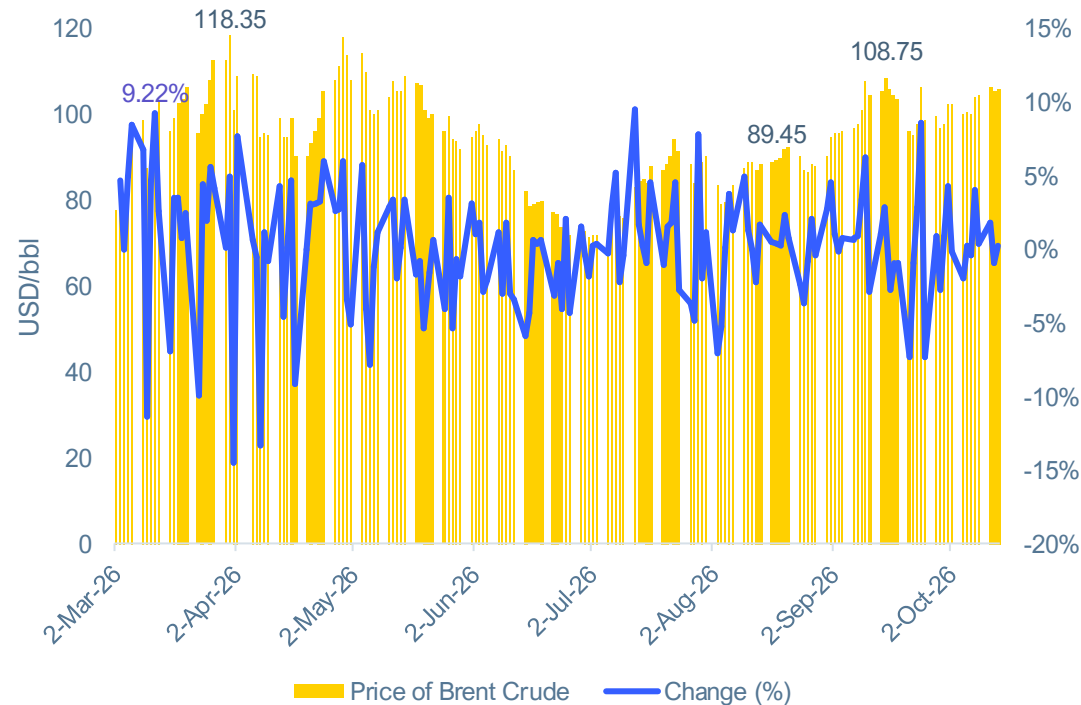
Soaring average power generation cost (excl. transmission cost)



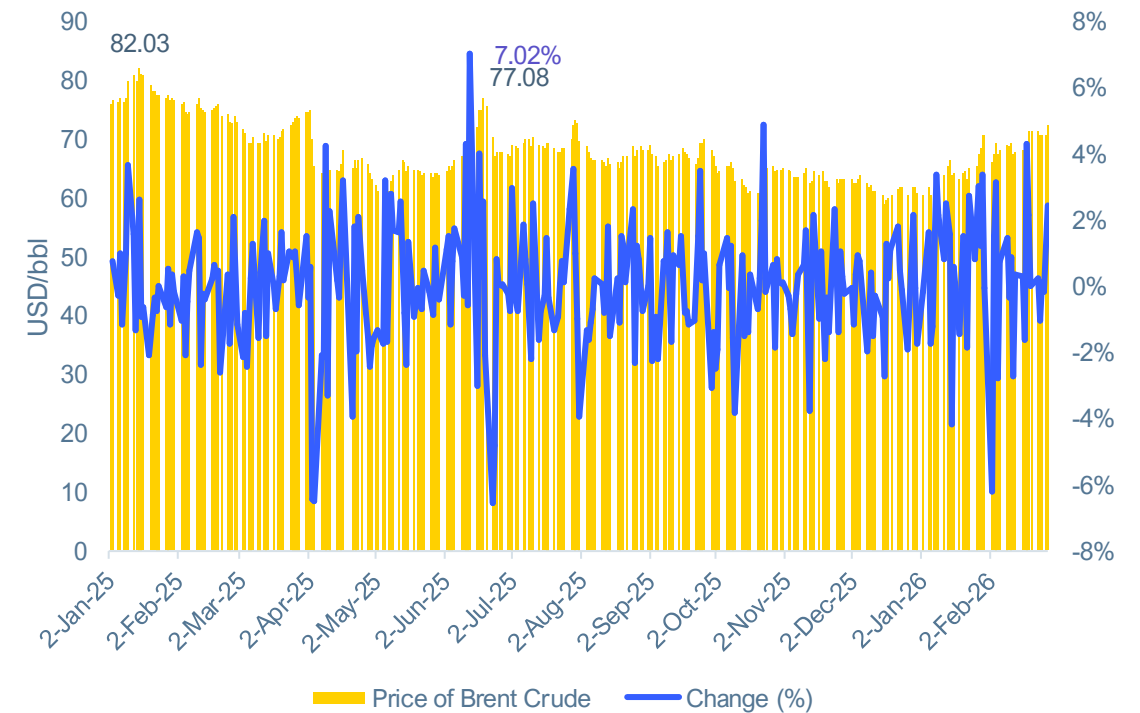
Average generation cost surged to around BDT12.9/kWh in FY2025–26

Supply-side impacts: Price shocks

Brent crude price trend, 1 March–14 October 2026



Brent crude price trend, 1 January 2025–27 February 2026

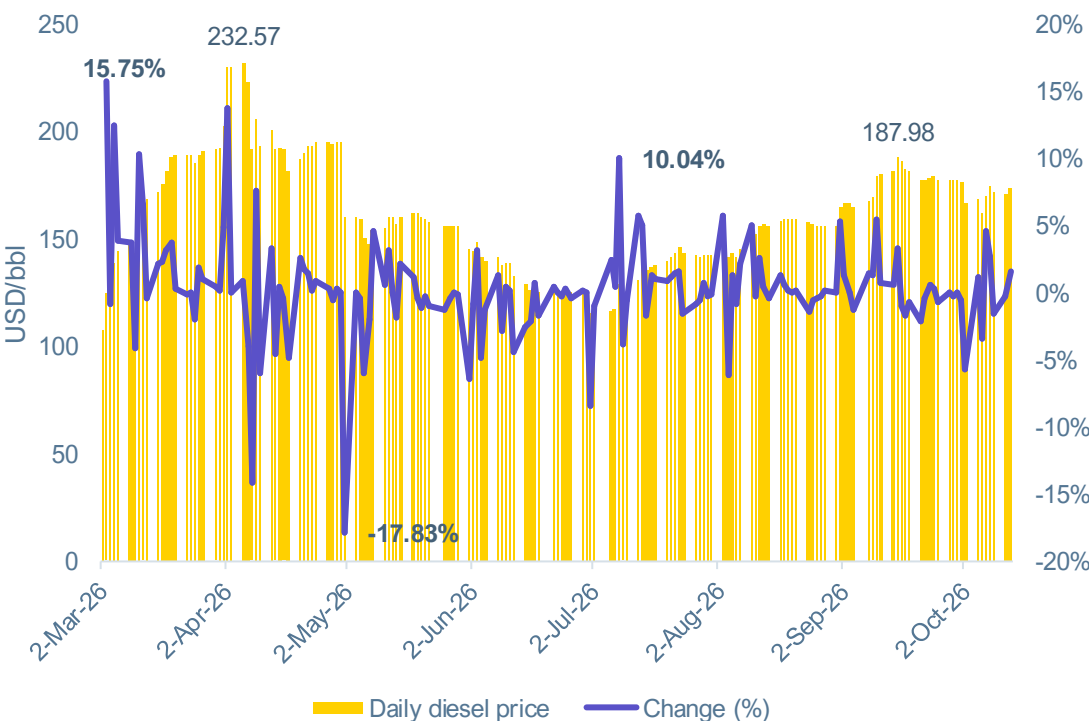


Source: Investing.com; IEEFA analysis

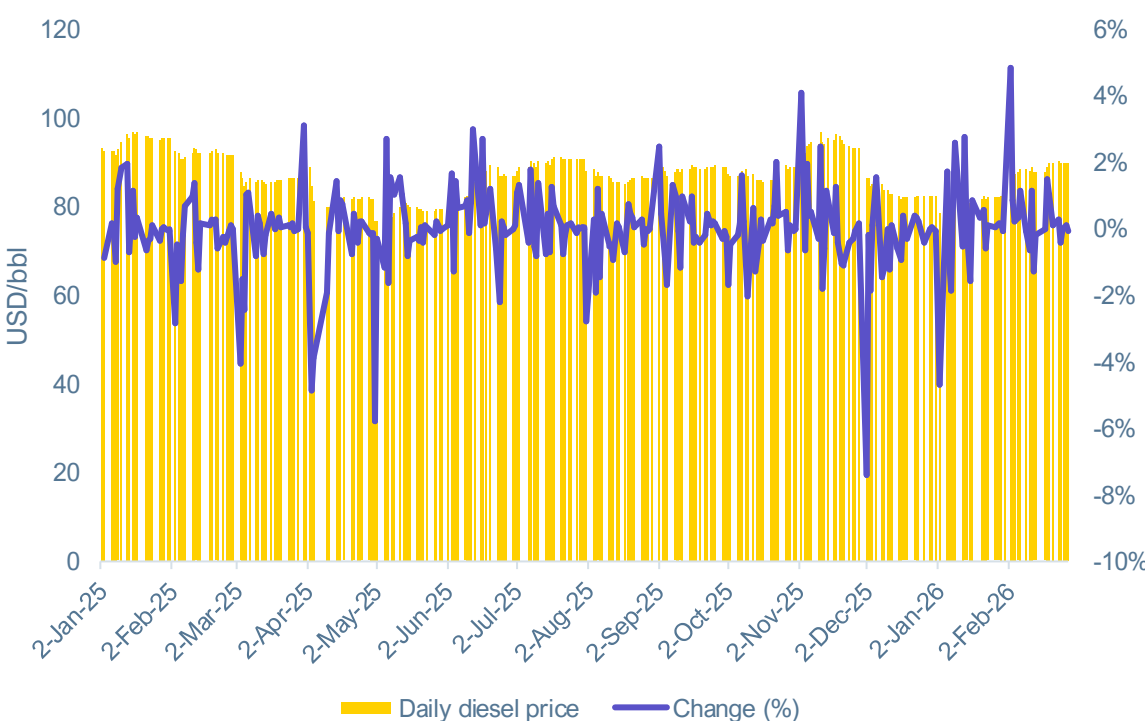
The current Brent crude price is around 45% higher than the pre-crisis level

Supply-side impacts: Price shocks

Diesel price trend, 1 March–14 October 2026



Diesel price trend, 1 January 2025–27 February 2026

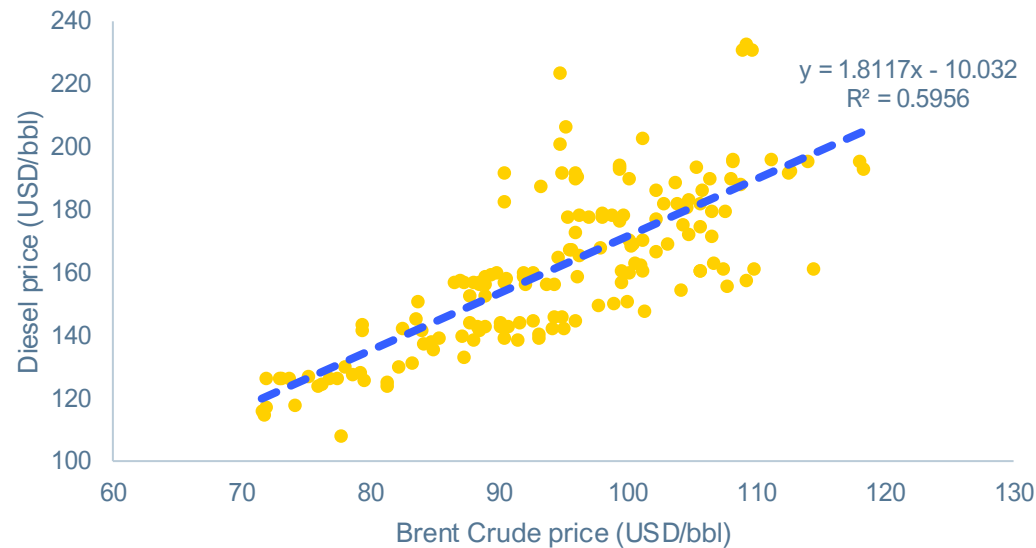


Source: Investing.com; IEEFA analysis

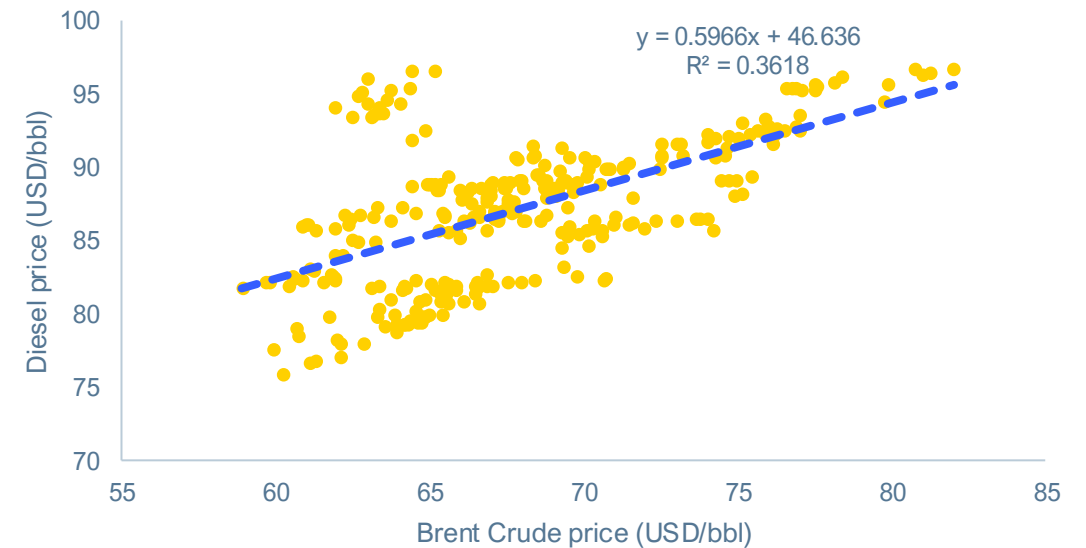
The current diesel price is around 97% higher than the pre-crisis level

Supply-side impacts: Price shocks

Correlation (Brent and diesel), 1 March–14 October 2026



Correlation (Brent and diesel), 1 January 2025–27 February 2026

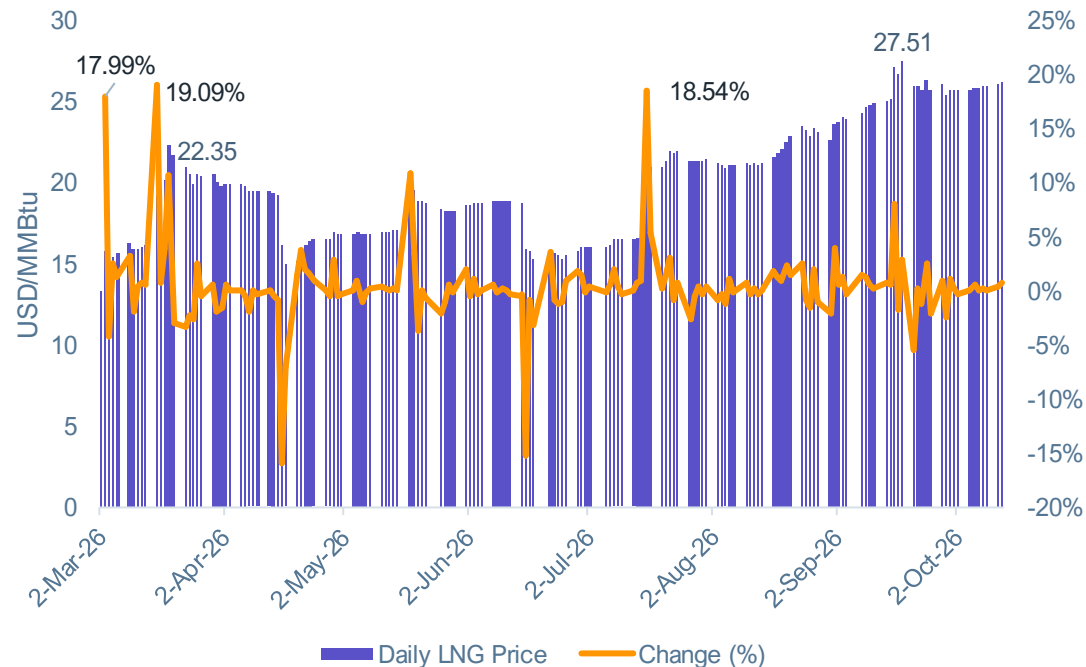


Source: Investing.com; IEEFA analysis

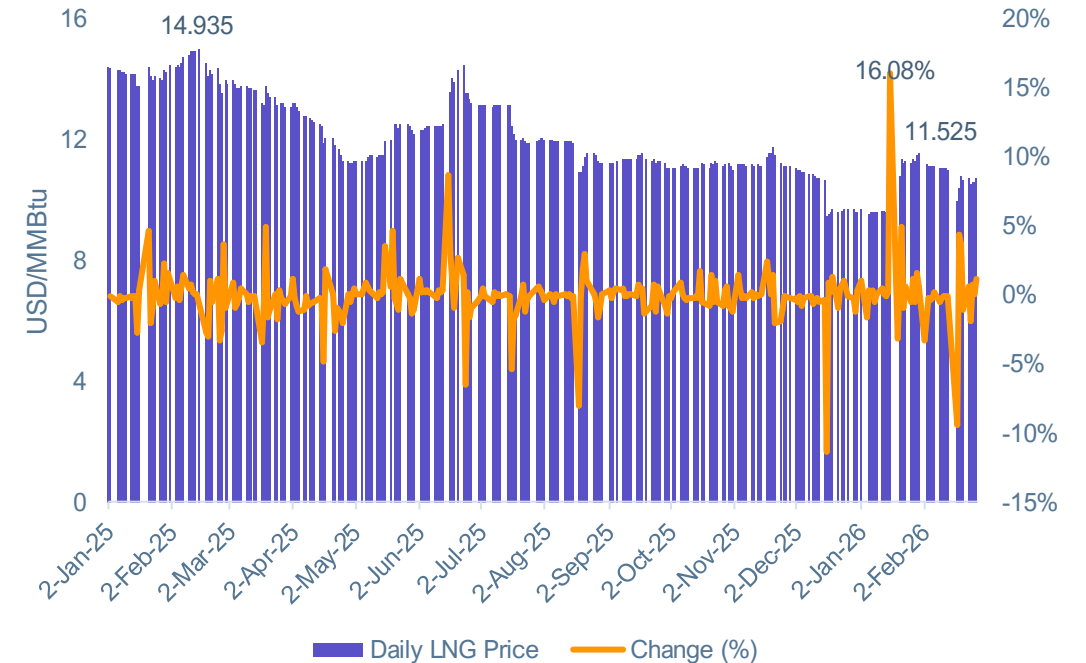
Diesel price has increased at a higher rate than the Brent crude price

Supply-side impacts: Price shocks

LNG price trend, 1 March–14 October 2026 (JKM)



LNG price trend, 1 January 2025–27 February 2026 (JKM)

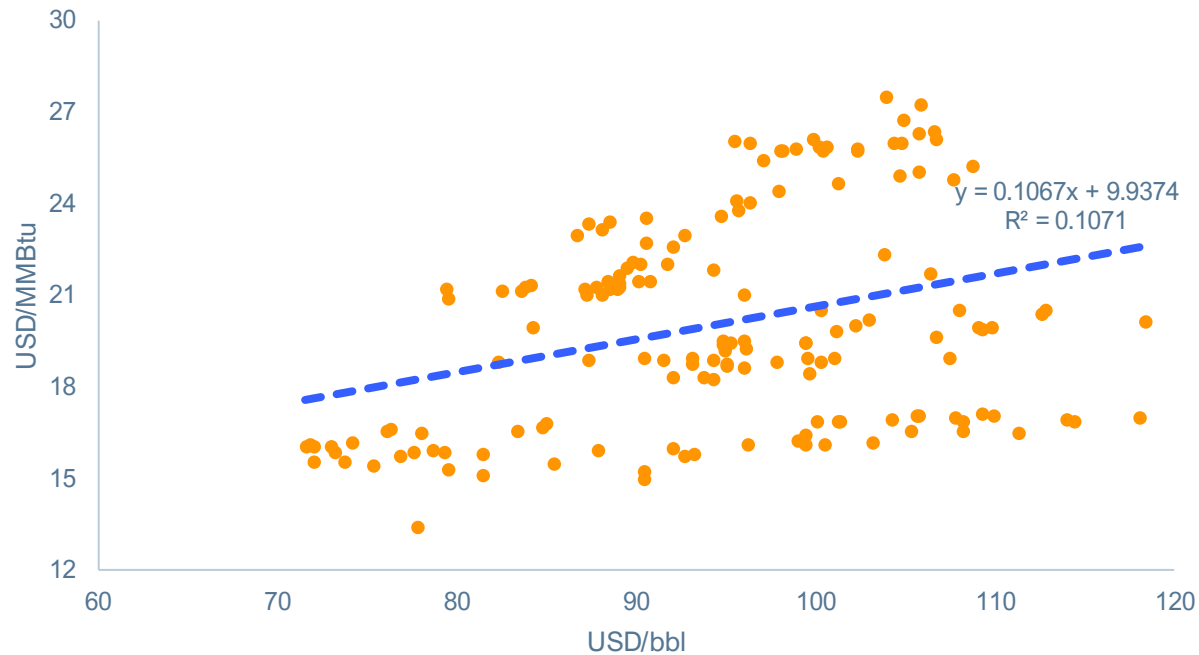


LNG price has surged by more than **150%** compared to the pre-crisis level. At USD25/MMBtu, the government pays a subsidy of over **BDT80/m³** of gas.

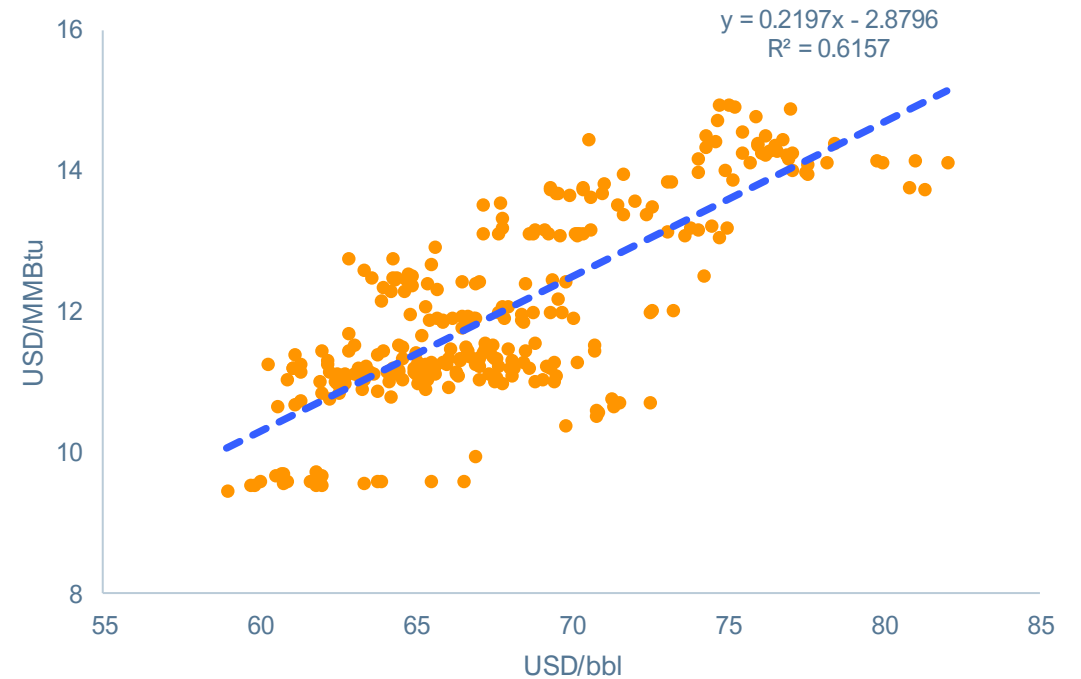
Source: Investing.com; IEEFA analysis

Supply-side impacts: Price shocks

Correlation (Brent and LNG), 1 March–14 October 2026



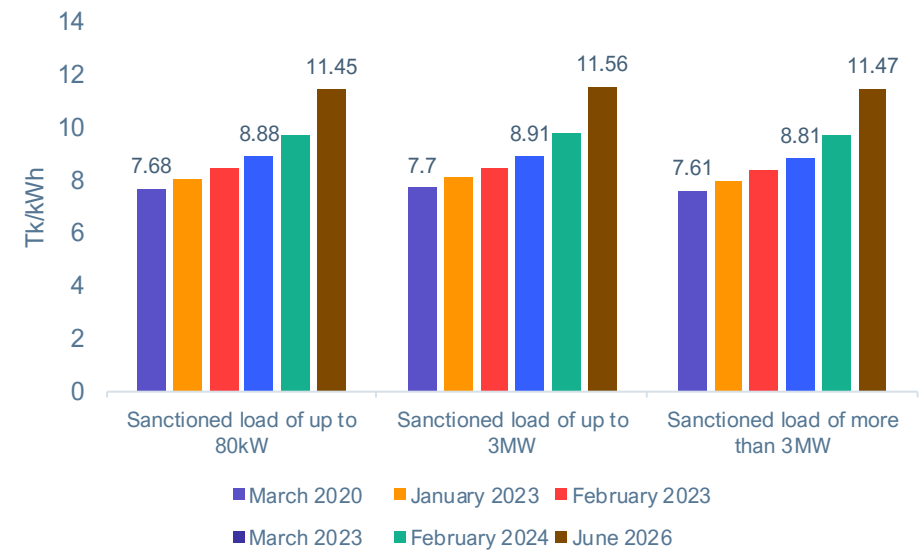
Correlation (Brent and LNG), 1 January 2025–27 February 2026



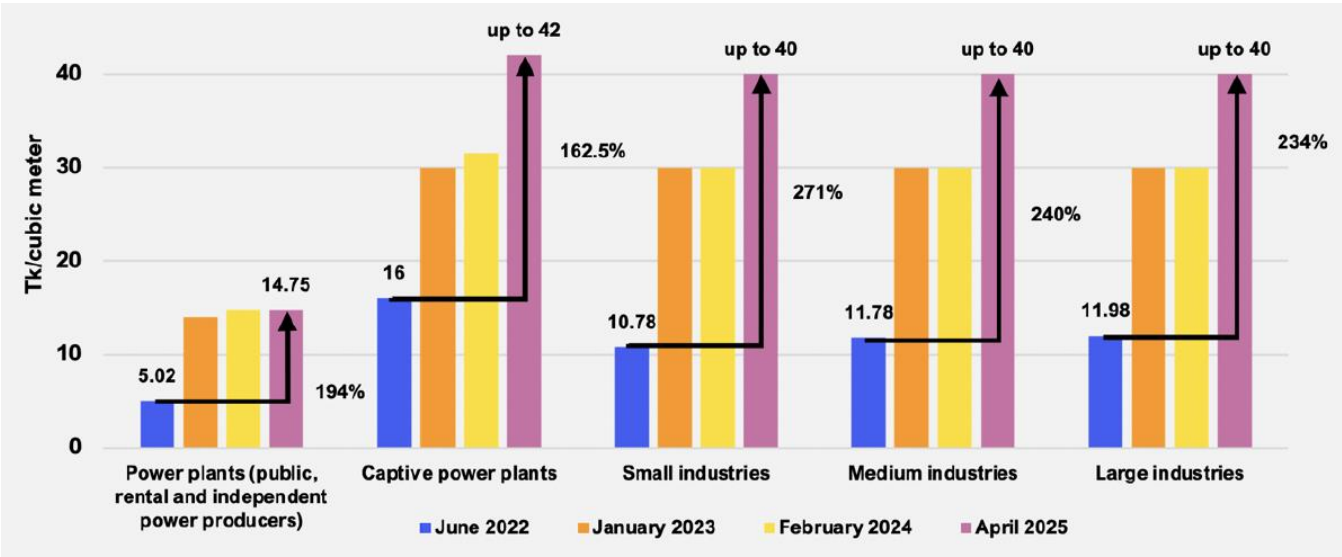
Source: Investing.com; IEEFA analysis

Supply-side impacts: Rising costs

Rising power tariffs (Off-peak rates for industries)



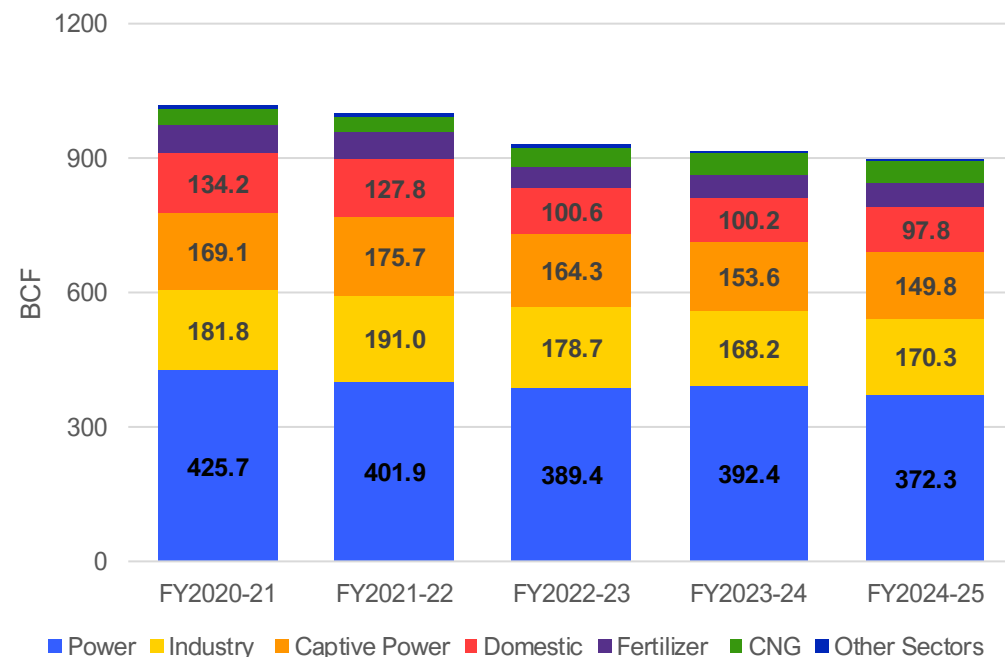
Rising gas tariffs



Source: BPDB; Petrobangla; IEEFA analysis

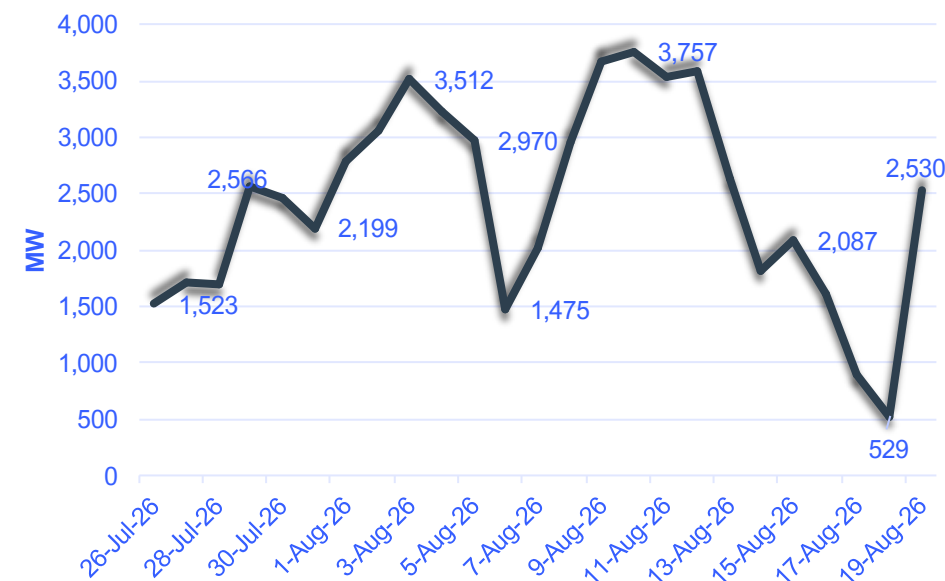
Demand-side impact: Insufficient energy supply

Gas supply to different sectors



Source: HCU; IEEFA analysis

Maximum load shedding, 26 July–19 August 2026



Source: Power Grid PLC; IEEFA analysis

Impact on the economy

Growth rate (Real, %)

	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26e
GDP Growth	7.9	3.4	6.9	7.1	5.8	4.2	3.5	3.9
<i>Growth (%)</i>								
Industry	11.6	3.6	10.3	9.9	8.4	3.5	3.7	3.8
Services	6.9	3.9	5.7	6.3	5.4	5.1	4.3	4.1
Agriculture	3.3	3.4	3.2	3.1	3.4	3.3	2.4	3.0
<i>Growth (%)</i>								
Consumption	5.5	2.9	7.9	7.4	2.5	6.3	6.2	6.3
Private consumption	4.9	3.0	8.0	7.5	2.0	6.0	6.6	6.0
Government consumption	13.4	2.0	6.9	6.2	8.5	9.8	2.3	9.2
Investment	6.9	3.9	8.1	11.7	2.2	3.3	-2.5	0.6
Private Investment	8.6	0.2	7.8	11.8	2.9	4.3	-3.6	1.6
Government Investment	0.7	18.2	9.1	11.1	-0.0	-0.2	1.5	-2.7
Exports, goods & services	11.5	-17.5	9.2	29.4	8.0	-17.1	10.0	2.3
Imports, goods & services	0.5	-11.4	15.3	31.2	-9.8	-4.6	6.8	7.7

- Industries show a tepid growth trend

- Both private and government investment show a lacklustre trend

Source: The World Bank's Bangladesh Development Update, April 2026; * e: estimate

**Bangladesh needs to offer uninterrupted and affordable energy supply to catalyse investment.
Solutions to its persistent energy problems, however, lie closer to home.**

Domestic gas

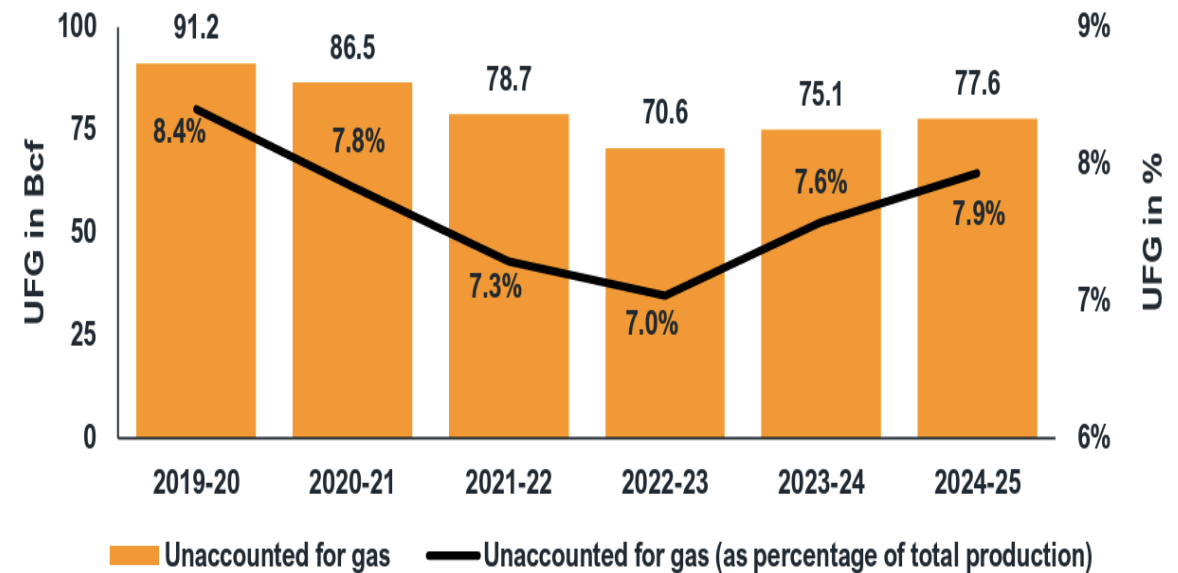
Exploration

- Between 2018 and 2025, Bangladesh spent a lot of money on imported LNG, but it did not focus on exploring domestic gas
- In addition to exploring domestic gas, it should step up efforts to ensure the availability of infrastructure to utilise the same (for example, proven gas reserves of over 1TCF in Bhola)

Minimising loss, known as unaccounted-for gas (UFG)

- By limiting the UFG to 2%, Bangladesh can save more than USD0.6 billion a year, at an LNG price of USD12/MMBtu. It can save more than USD1 billion at an LNG price of USD20/MMBtu.

UFG in Bangladesh



Source: IEEFA's study "Fostering Bangladesh's Energy Transition" 2026

Renewable energy

Distributed systems: Rooftop solar

- It is a low-hanging fruit
- Some large industries are aggressively pursuing rooftop solar, while others are gradually implementing the system
- Rising power tariffs make rooftop solar a compelling investment case; Battery Energy Storage System with rooftop solar is feasible now for industries.

Distributed systems: Irrigation

- Replacing even one-third of the currently operational diesel-run irrigation pumps with solar-powered systems will save more than USD0.2 billion per annum

Distributed systems: Charging facilities

- This will help catalyse a transition to electric vehicles (EVs)

Utility-scale renewable energy

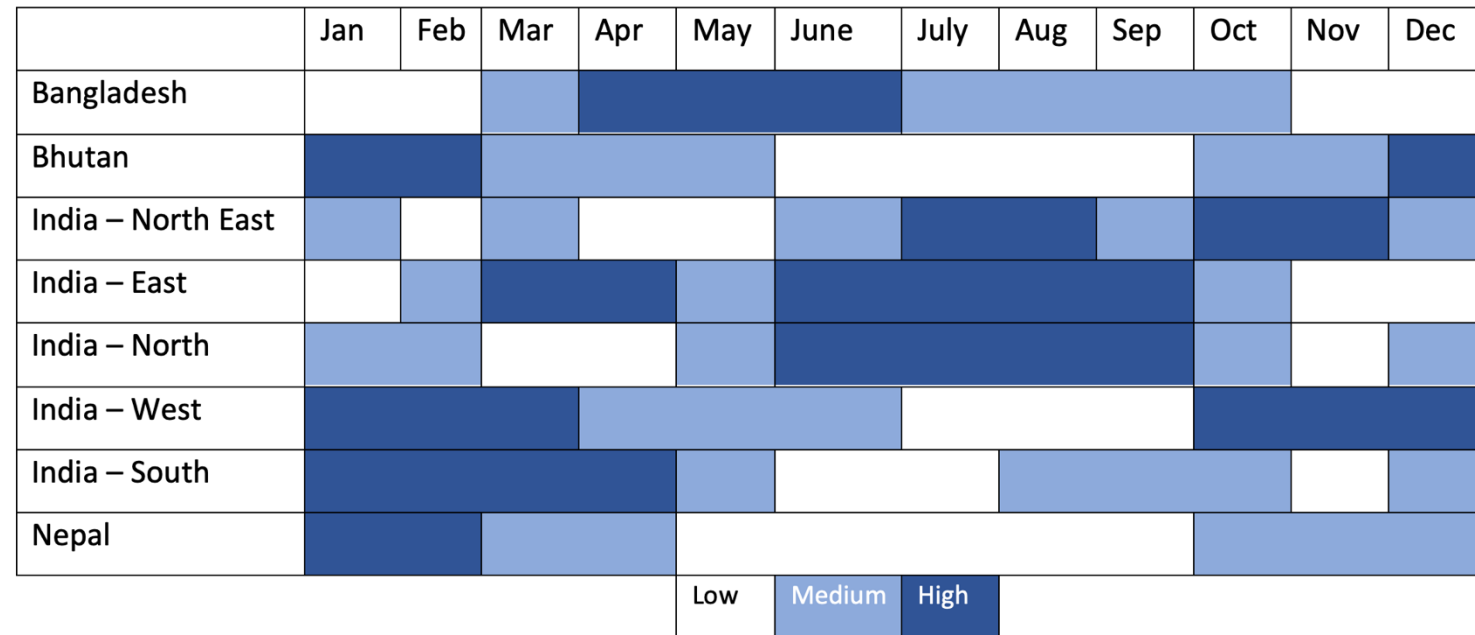
- This requires a significant volume of investment each year
- Public-private-partnership (PPP) guidelines will likely address the land acquisition challenges
- Industries with greenhouse gas mitigation targets will likely need to procure renewable energy from projects under Corporate power purchase agreements (CPPAs)

Regional cooperation

Regional hydropower

- This could help limit Bangladesh's growing reliance on imported LNG
- By tapping into the cross-border hydro potential and enhancing domestic gas supply, Bangladesh can meet its demand for gas beyond 2030

Monthly demand pattern for electricity in Bangladesh, Bhutan, India and Nepal (BBIN)



Source: UN ESCAP; IEEFA. Cross-border trade among BBIN countries offers mutual benefits. 2023

Energy efficiency

Motors and motor-driven systems (pumps, compressors)

- By installing efficient motors (IE3, IE4) and using variable frequency drives (VFDs), significant electrical energy can be saved (Note: Industries are replacing old and inefficient motors and installing VFDs, but there is still untapped potential.)

Boilers

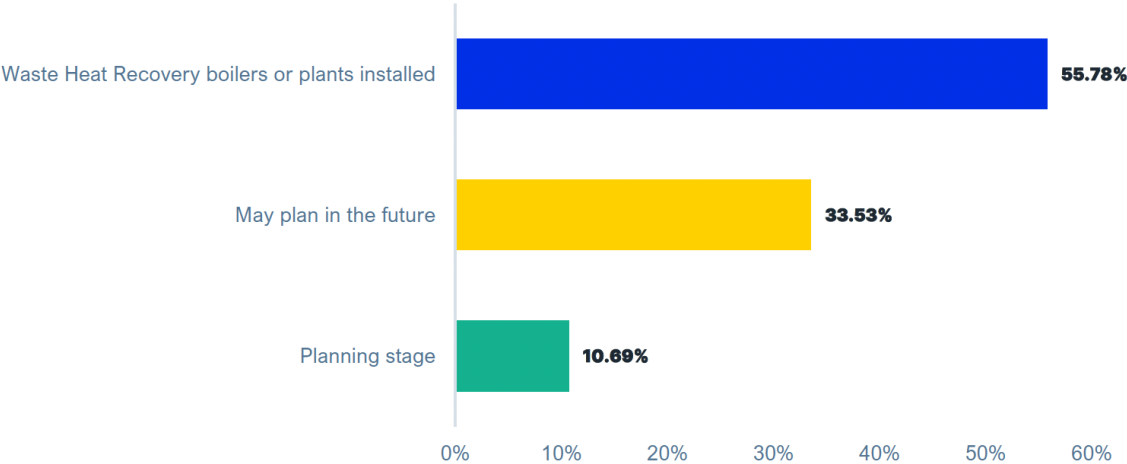
- Average efficiency of boilers hovers around 70%

- Motors and motor-driven systems are responsible for **two-thirds** of industrial electricity consumption

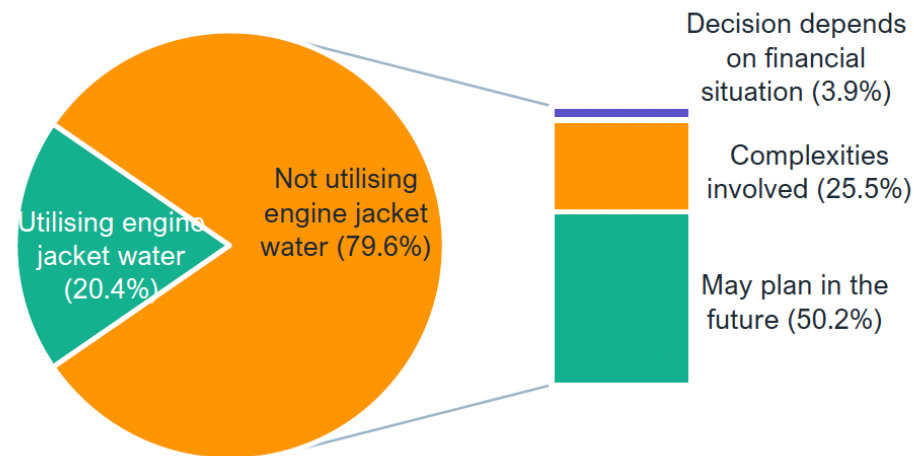
- Excluding captive power generators, boilers consume **most of the gas** in industrial processes

Energy efficiency (Continued)

Status of waste heat recovery in captive power generation



Status of using jacket cooling water



Payback period is around one year for both interventions

Source: IEEFA's study 'Industrial Energy Efficiency to Curb Bangladesh's Short-term LNG Demand Growth', 2024;

Energy efficiency (Continued)

Households

- This sector consumes more than 50% of the grid-based power and offers significant energy efficiency potential
- Cooling load will likely surge amid global warming and provides an immediate opportunity to limit an increase in power demand
- Cooking will drastically increase power demand in the foreseeable future. This also offers energy efficiency and other opportunities

Technological shifts on the demand side

- With the rising share of renewable energy on the grid, the demand side (such as industries) will likely need to evolve and embrace electrification
- The urgency for demand-side electrification will further rise if the country enhances regional cooperation
- Electrification will not only reduce the gas dependency of industries but also improve energy efficiency

Way forward

Policy

- Ensure policy certainty to attract foreign investment in large-scale renewable energy projects
- Offer duty benefits for a longer period
- Revisit the timeline for surplus generation from rooftop solar
- Reassess the open-access tariff of renewable energy projects under the CPPA
- Fix a timeline for project implementation under the PPP framework
- Maintain sustained focus on domestic gas discovery
- Prioritise energy efficiency, conservation, and loss minimisation efforts
- Develop a framework for enhanced cross-border collaboration beyond 2030

Capacity development and awareness raising

- The SREDA should work on developing the capacity of key stakeholders such as EPCs and financial institutions
- The SREDA should implement targeted awareness-raising programmes on using technologies such as electric boilers or heat pumps

Way forward

Finance

Clean energy

- Allocate sufficient funding for the grid modernisation to make it more flexible and resilient for demand-side response amid the growing share of renewable energy
- Develop investment-ready utility-scale renewable energy projects to attract foreign investors
- Follow a one-step approval process for the green finance scheme
- Design a credit risk guarantee scheme to reduce financiers' risks that deter financing flow into rooftop solar projects. This will likely help reduce the requirement for collaterals
- Allow microfinance institutions to access low-cost green finance to support solar irrigation projects
- Financial institutions should offer low-cost loans for new technologies, such as electric boilers, supported by the Bangladesh Bank's green finance

Domestic gas

- Allocate sufficient funding for domestic gas exploration to limit dependence on LNG
- Monitor the progress and frontload necessary corrective measures

Regional cooperation

- Catalyse investment in infrastructure for broader regional collaboration post-2030

As the saying goes, the Stone Age did not end because we ran out of stones; we transitioned to better solutions. The same opportunity lies before us with energy efficiency and clean energy.

- Nobel laureate Steven Chu



Thank you

Contact

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