

Smart living for a sustainable nation

As electricity costs rise and environmental concerns take centre stage globally, the demand for smarter, power-saving home appliances has never been higher. For LG, meeting this demand is the core of their global design philosophy.

Science of Savings

LG's approach to energy efficiency relies heavily on hardware innovation. The strategy focuses on eliminating energy waste through intelligent automation. They achieve this through advanced inverter platforms and intelligent sensors that adjust power consumption automatically based on usage patterns.

This technology manifests differently across

manufacturing facilities but has also strategic alliances for local assembly. In Bangladesh, they work closely with Butterfly Group and Rancon Electronics (Rangs Group) for the local assembly of selected LG products. All LG appliances—whether imported or assembled locally—are designed and tested against rigorous global performance and safety standards. They undergo certified evaluations for efficiency and durability before hitting the market, ensuring full compliance with Bangladesh's regulatory requirements.



GERALD CHUN

Managing Director
 LG Electronics, Bangladesh

- LG is investing heavily in next-generation technologies such as AI-based power optimisation, advanced Smart Inverter Compressors, Eco-Hybrid Heat Pump Systems, Door Cooling+ improvements, etc. Integration with the LG ThinQ platform will also allow users to monitor and manage energy usage more intelligently. Our commitment is to help build a more energy-conscious and environmentally responsible Bangladesh.

product lines. LG's refrigerators utilise Inverter Linear Compressors and Multi-Air Flow systems to maintain stable temperatures with minimal energy loss. Meanwhile, their washing machines are equipped with AI Direct Drive (AIDD) motors that detect fabric types and optimise wash motions accordingly.

However, the standout performer in the Bangladeshi market is LG's cooling technology. Their LG Dual Inverter Air Conditioners lead the way, offering up to 70% reduced energy consumption compared to non-inverter models, highlighting that smart inverter refrigerators are also major contributors to household electricity savings.

Global Standards, Local Assembly

The company operates globally certified

Next Generation of Home Tech

LG is doubling down on R&D to push the boundaries of efficiency even further. The company is investing heavily in next-generation technologies, including AI-based power optimisation, Eco-Hybrid Heat Pump systems, and improvements to their Door Cooling+ technology.

A key part of this future is the LG ThinQ platform, which connects appliances to a central digital ecosystem, allowing users to monitor and manage energy usage intelligently. LG WashTower—a unit featuring AI washing and heat pump drying—is a prime example of this new direction, delivering premium performance with significantly reduced energy use.

Sustainable Appliance Manufacturing in Bangladesh

Electro Mart Group shares insights into the company's strategy for promoting energy efficiency and sustainable living. Md. Nurul Afser, Deputy Managing Director, explores the challenges and opportunities of manufacturing smart, eco-friendly appliances in Bangladesh.

The Daily Star(TDS): Do you have any initiatives that promote energy efficiency or sustainable living in Bangladesh?

Md. Nurul Afser (MNA): We drive energy efficiency through both consumer education and technological innovation. On the consumer side, we use transparent labelling, cost comparison campaigns, and energy audits to demonstrate potential savings of 30–60%. Technologically, we feature Gree's G-Boost inverter (60% savings)

South Asian Business Excellence Awards. We are currently designing platforms to meet rigorous global standards, including IEC/ISO, Energy Star equivalents, and regional regulations like SASO, ESMA, and BSTI.

TDS: Do you have any targets for reducing the average power consumption of your appliance portfolio over the next 5 years?

MNA: We have observed a 35% market surge in energy-efficient appliances over the last two years. Driven by rising electricity tariffs, consumers are increasingly choosing inverter technology (ACs,



MD. NURUL AFSER

Deputy Managing Director
 Electro Mart Group
 Konka, Gree & Haiko
 Electronics & Home Appliances

- The future role of smart appliances and IoT in reducing household energy consumption in Bangladesh is set to be transformational and is actively supported by the government's Smart Bangladesh Vision and the National IoT Strategy.

and Solar Hybrid ACs with PV Direct Drive, which eliminates conversion losses. Additionally, Konka and Gree washing machines utilise AI load detection and Eco-Wash systems to optimise water and electricity usage automatically.

TDS: Which national or international energy/performance certifications or test standards do your power-saving products hold?

MNA: Our products are backed by comprehensive national and international certifications, including BSTI, BUET, ISO 9001:2015, and UKAS. Our manufacturing excellence has been recognised globally, with Gree winning multiple Superbrand Awards and our facility being named the 2025 Best Manufacturer of the Year (Electronics) at the

fridges, washing machines) to lower the Total Cost of Ownership (TCO). These appliances offer 30–60% energy savings, justifying the higher initial investment through long-term bill reduction and lower emissions.

TDS: What role does government policy or incentives play in encouraging manufacturers like you to innovate in energy saving?

MNA: Regulations, such as minimum energy performance standards (MEPS) and mandatory energy audits, create market demand for efficient products and processes, forcing manufacturers to innovate to remain competitive. These government actions stimulate the industry's transition towards green manufacturing, fostering a cleaner, more secure, and affordable energy future.

Cutting bills without cutting comfort

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Solar water-heating options, with household prices starting from Tk 12,000. A new trend is Wi-Fi-enabled geysers. These units let users schedule heating or remotely turn off the heater via a smartphone app. By avoiding unnecessary heating cycles (for example, ensuring no water is warmed when nobody's home), these devices can knock 10–30% off a household's water-heating energy.

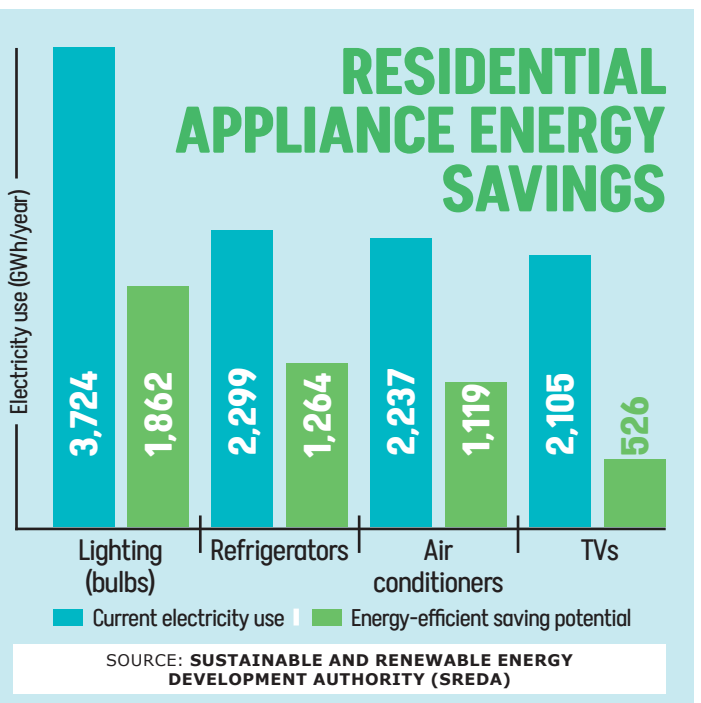
Bulbs and lighting are dominated by LEDs and smart bulbs with dimming, motion sensors and timers; a household LED bulb price band is approximately

and energy-monitoring tools globally. Electro Mart retails, imports and manufactures a wide smart-appliance selection. Local firms adapt features to Bangladesh's intermittent grid and routines. Examples include scheduled water heating, motion-sensing lights and timers too. Adaptive compressor speeds and better insulation cut cycling energy significantly. Smart diagnosis provides push alerts, simplifying repairs and warranty claims. Retailers bundle IoT ecosystems, making multi-device control easier for consumers. Price tiers range from budget models to premium connected refrigerators. These offerings shrink energy bills when families adopt efficient habits. Government labelling and checks help buyers choose verified efficient products. IoT features also enable energy monitoring that shows kilowatt-hour reductions. Manufacturers tailor firmware and hardware for humid, tropical, voltage-unstable conditions. Consumers gain application control, scheduled automation, diagnostics and improved efficiency. Together Walton, Jamuna, LG, Electro Mart and many others are reinventing Bangladesh's appliance market.

Every modest swap is simple, affordable and replicable: lower monthly bills, fewer wasteful cycles and reduced strain on the electricity system. Power-saving appliances combine improved hardware – inverter compressors, better insulation and long-life LEDs – with smarter controls such as timers, motion sensors and scheduling. With accessible price bands for fridges, TVs, geysers and bulbs in Bangladesh, families can pick solutions that fit budgets and reduce household electricity consumption immediately. These pragmatic steps deliver personal savings and contribute to national energy resilience when multiplied across communities. Start with LEDs and an inverter fridge for the quickest, most affordable gains, then layer in smart plugs, timers, occupancy sensors and an on-demand heater where they match routines; each small change reduces kWh use, lowers bills and makes homes more comfortable and resilient while helping Bangladesh reduce peak load, lower generation costs and use energy more sustainably for the long term.

Tk 100–Tk 800 per unit. These categories replace standby waste and old inefficient loads with controlled, lower-power devices that deliver similar comfort at far lower energy use.

BANGLADESH'S SMART UPGRADE Bangladeshi brands are rapidly integrating IoT into everyday appliances now. Walton produces AI-enabled refrigerators with inverter compressors and diagnostic features. Their AI Doctor monitors faults and reduces energy use and maintenance. Jamuna sells affordable smart TVs, compact fridges and app-controlled devices. LG brings ThinQ connectivity, remote control



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