



BEYOND TOMORROW



HEG LIMITED
51st ANNUAL REPORT 2022-23

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**BUSINESSES THRIVE ON
TAKING CALLS ON, BUILDING
SCENARIOS AND COMMITTING
INVESTMENTS FOR A
BRIGHTER TOMORROW.**

**LIKE ALL OTHERS, OUR BUSINESS
APPROACH IS RELATIVELY
SIMILAR. OUR DEFINING
DIFFERENCE IS THAT OUR
TOMORROW IN QUESTION IS A
PERIOD THAT IS WAY
BEYOND
TOMORROW.**

**We think ahead. We plan better.
We execute efficiently.**

**We stand to emerge as a first-mover to carve away a
significant share of emerging opportunities.**

SUPPORTING THE GREEN STEEL REVOLUTION.

Our crucial business decision in the recent past was to expand our graphite electrode manufacturing capacity at a time when the prospects of our business space and that of our user sector appeared dismal.

Even as our well-wishers warned us of the ills of our decision, we moved ahead nevertheless.

We were the only ones in the western world to embark upon our capacity augmentation strategy, at a time when some others were shutting their plant operations.

Our vision, assumptions and analysis were spot on.

Recently, our global peers have articulated that as the steel world transitions towards the Electric Arc Furnace route for steel making there will be an annual incremental demand for Graphite Electrode estimated at

200,000_{mt}

Outside of China by 2030.

Interestingly, our additional capacity of

20,000_{mt}

is about to take off. Positioning us perfectly to fully-support the steel world's revolution – from steel to green steel.

POWERING THE E-MOBILITY DRIVE.

The storage energy landscape platformed on lithium chemistries has progressed from a mere concept to a tangible reality.

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While this seismic technology shift has disrupted the business environment world over, it has created exciting opportunities for the proactive few who have the stomach to embrace change to elevate their position.

Leveraging our expertise in graphite technology, we have broken ground on setting up India's first large scale green energy project that will power India's e-mobility drive and

emerge as an important catalyst towards India's net zero ambition.

In the first phase of our new facility, we will produce

10,000_{mt}

of anode per year to commence operations in 2025, by which time e-mobility and new energy solutions in India would have gained appreciable momentum.

In the second phase, we will double our capacity.

Experts put the global demand of lithium ion batteries at

6,000_{GWh}

by 2030.

India's demand for this niche product is estimated at

260_{GWh}

over the same period.

About HEG Limited.

PART OF THE LNJ BHILWARA GROUP, WE ARE THE MOST MODERN PLAYER IN THE GLOBAL GRAPHITE ELECTRODE INDUSTRY WITH LARGEST GRAPHITE ELECTRODE PLANT.

We are among the most respected players in our business space, not because we have the largest single location manufacturing facility in the world, it is because...

...we have the depth of knowledge in graphite electrodes which reflects in our product quality.

...we have the capability to manage expansive operations which manifests in our ability to service the Top 25 global steel giants

...we have the foresight to analyse and envision sectoral trends effectively.

Headquartered in Noida (NCR Delhi), India we have our integrated manufacturing facility proximate to Bhopal, Madhya Pradesh which manufactures HP (High Power) and UHP (Ultra High Power) electrodes. Our products are marketed to 35+ countries around the globe.

We have power generation assets cumulating 76.5 mw (thermal and hydel) equipped to supply quality power to our manufacturing facility which is managed by a team of 900+ enthusiastic professionals.

Vision

A vibrant globally acknowledged top league player in Graphite Electrode & allied business with a commitment to growth, innovation, quality & customer focus.

Mission

To become a leading international player in Graphite Electrodes & related businesses by leveraging our core competence and thereby enhancing value to our customers, shareholders, employees & society.

BUSINESS IN FY23

80,000 tpa

Manufacturing capacity as of FY23 (GOING TO 100,000 tpa SOON)

76.5 mw

Captive power generation capacity

903

Team size

73 %

Export percentage of the total Sale

89

Capacity utilisation (%)

2,576

Revenue (₹ crore)

729

EBITDA (₹ crore)

456

Net Profit (₹ crore)

114

Net Cash flow from Operations (₹ crore)

From the Chairman's desk

"I AM EXCITED ABOUT THE FUTURE OF HEG AS WE HAVE TAKEN DEFINITIVE STEPS TO BETTER OUR PROSPECTS BEYOND TOMORROW. I AM CONFIDENT THAT WE WILL ACHIEVE REMARKABLE SUCCESS IN OUR FUTURE ENDEAVOURS."

Dear Shareholders,

It is a pleasure to connect with you through this statement, for, it provides an opportunity to ink my thoughts.

I am delighted to mention that your Company registered a good performance in the face of strong headwinds which restrained global progress in the past year, evidenced in the de-growth of the steel sector, a critical proxy to economic growth.

Allow me to throw in a few numbers to put our performance into perspective.

The world produced less steel - 1885 mmt in CY 2022 against 1962 mmt in 2021 - a drop of 4%. More pertinently, the steel world, excluding China and Iran, our market place, registered a drop in steel production by 7.5%, resulting in drop in demand for graphite electrodes.





In the face of this dismal global steel landscape, our sales volumes decreased by 13% although revenue from operations grew by 12%. Our capacity utilisation was amongst the highest in the industry at close to 90%.

Furthermore, despite persistent and elevated inflation that prevailed across the globe, our EBITDA went up by 20%, and we reported a Net Profit of ₹456 crore – a jump of 17% over the previous year. We successfully navigated the challenges driven by our commitment to innovation, customer satisfaction and operational efficiency.

Fiscal 2023 holds special significance, as we are on threshold of emerging as the largest graphite electrode facility with a capacity of 100,000 tons under one roof in the Western world. By the end of the fiscal, we were very close to the completion of the project, with four of the five electrode-making processes up and running and the fifth at the final stage of completion. We expect to fully commence operations of our expanded capacity soon. This is a happy milestone for me and the entire HEG team, who have worked tirelessly and with an unwavering dedication to elevating the Company into a new growth orbit despite the gloom and doom period of pandemic all around the Globe

The expansion showcases our passion for technological innovation, placing us at the forefront of the industry with some of the best and latest equipments and technologies we have put under one roof. It positions HEG in the right place at the right time.

Our tomorrow

Our drive to move against the tide continues in the current year as the prevailing geopolitical current casts a bearish shadow on the global steel industry's prospects. Experts of the steel sector feel that the steel demand will remain impacted by the fear of a global recession. Our industry cannot remain untouched but, rest assured, we will continue to strive hard to sustain profitable business growth in the current year too.

Beyond tomorrow

The medium- to long-term growth in our consumer segment - Electric Arc Furnace Steel production, is clearly very promising. My optimism stems from the de-carbonisation narrative that will continue to play out over the foreseeable future.

Climate change and sustainability have become the pivotal factors in long-term business. Embedding sustainability into business

strategies and investment blueprints has become a necessary mandate in each and every country around the Globe - rich or poor.

This is particularly relevant for the global steel sector. World Steel Association studies reveal that the global steel sector alone accounts for between 7% to 9% of global carbon emissions.

But this is changing and changing fast. The Blast furnace (BOF) route for steel making is fast giving way to the Electric Arc furnace (EAF) route in a very rapid way, which the world has not seen in decades owing to significantly less emissions by the latter. As per the World Steel Association, Electric Arc Furnace share of steel production (ex-China) has increased from 44% in 2015 to 49% in 2022, and is likely to reach around 55% in a few years.

Global steelmaking is undergoing a structural shift - with 50 to 60 mmt of Greenfield steelmaking capacity being established using the Electric Arc Furnace at an estimated investment of about US\$ 50 to 60 billion all over the world . Of this, about 25 mmt is expected to come up in the U.S. alone, which already produces 70% of its steel through EAF. Similar new announcements keep coming from European and

other countries large Steel companies all over the world. We have been consistently exporting between 65% to 75% of our production for more than last 10 years. All these will require graphite electrodes for which we are ready with our additional capacity.

From a long-term perspective, we believe that the Electric Arc Furnace route for steelmaking will grow at a 3% CAGR in the next decade - much more than the overall Steel production growth translating into a substantial increase in electrode demand.

While the demand prospects appear promising, barring unforeseen adversities, the supply position appears largely stable. No other Graphite Electrode company has announced any new capacity. Moreover, between 2018 and 2022, due to Covid related slump in demand, about 60,000 tons of graphite electrode capacity around the world has shut down their operations.

Our longstanding presence in international markets coupled with timely expansion of our plant from 80,000 to 100,000 mt per annum strengthens our confidence in HEG's ability to envision opportunities in the electrode industry and to meet future demand all over the world.

We will leverage our extensive global market reach across 35+ countries globally, which we have diligently cultivated over the past 25 years, to capitalise on emerging profitable growth opportunities to create value for our stakeholders.

Building a new opportunity

India is passionate about its e-mobility ambitions as a critical tool in its Net Zero commitment. The Government's encouraging policies have enhanced the positivity around the e-mobility space. This has increased the spotlight on lithium-ion-based energy storage solutions. Currently, cells and battery packs are largely imported into India.

Witnessing the fast-altering mobility ecosystem, we anticipate a huge domestic demand for graphite anode as cell manufacturing shifts to India. We are diversifying into graphite anode for lithium-ion cells, which forms the battery for electric vehicles and energy storage systems.

Given that it's the first such plant coming into our country, we see a huge opportunity here in the long term.

We have incorporated a wholly-owned subsidiary of HEG in the name of TACC Limited for this

new business. Our Board has approved a budget of ₹1,000 crore for setting up a manufacturing facility of 10,000 tons of anodes per annum in Phase 1.

Our new project is progressing well. We are about to start our pilot plant, which will facilitate trials and tweaks as necessary. The location has been decided. The land acquisition is under process, and we expect to complete the project's first phase by mid-2025.

I am excited about the future of HEG as we have taken definitive steps to better our prospects beyond tomorrow. I am confident that we will achieve good success in our future endeavours. With the support of our experienced leadership team, I am certain that we will maintain our longstanding track record of superior performance, ultimately creating value for all our stakeholders.

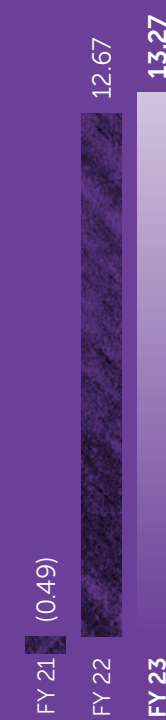
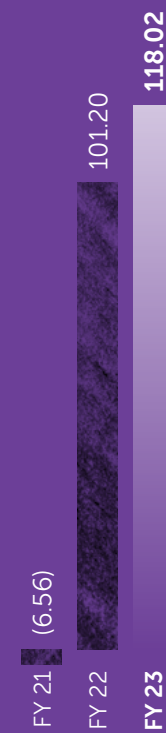
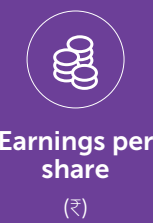
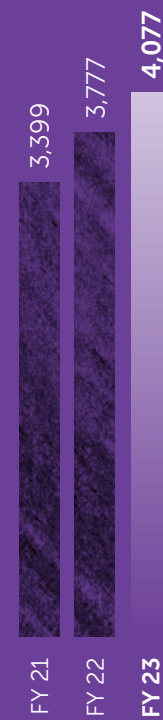
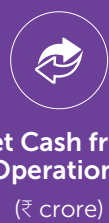
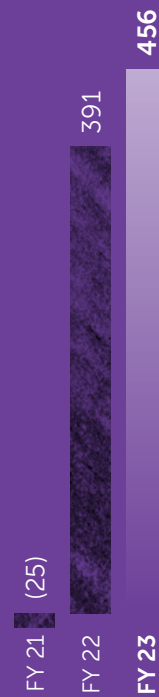
In conclusion, I express my sincerest gratitude to every stakeholder for their contribution to our journey so far. Without them, we would not have reached where we are today.

Warm regards,

Ravi Jhunjunwala

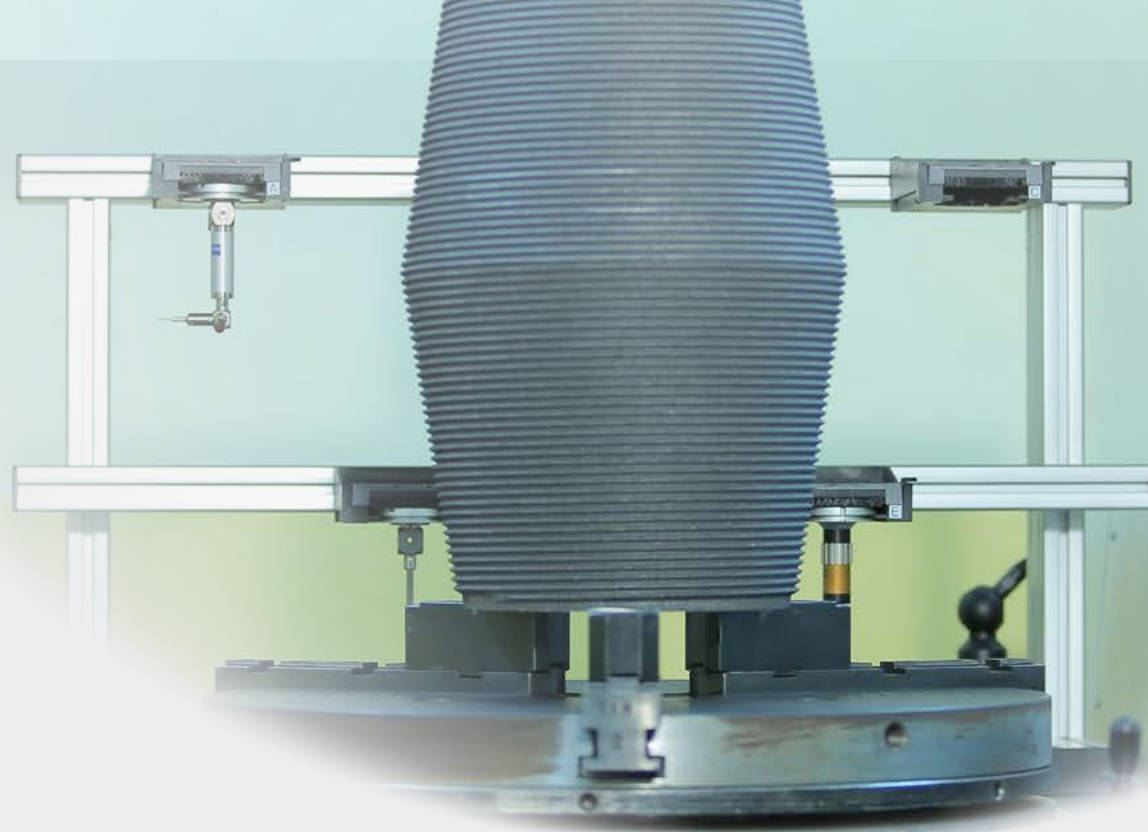
Chairman, Managing Director & CEO

KEY PERFORMANCE INDICATORS

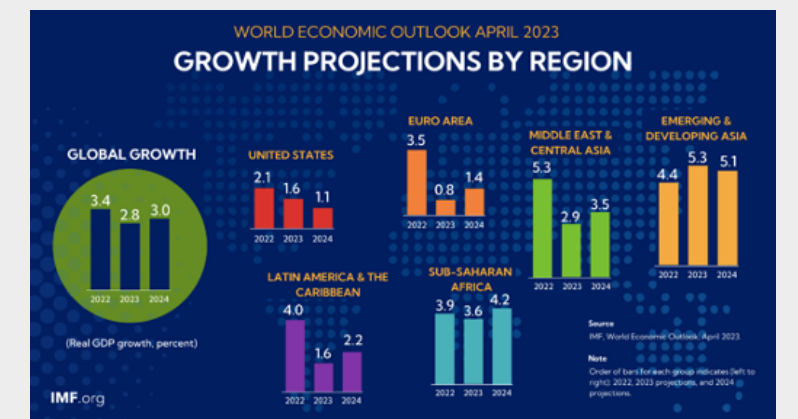


MANAGEMENT DISCUSSION AND ANALYSIS





2022 saw the global economy surpass US\$100 trillion for the first time, reaching US\$101.6 trillion. According to the source, the top five countries account for 51% of global GDP. In the same year, India overtook the United Kingdom to become the world's fifth-largest economy.



THE ECONOMIC OVERVIEW



World Economy: The global economy demonstrated exemplary resilience reporting a GDP growth of 3.4% (reported by IMF) despite extreme volatility and uncertainty across the World.

The global fight against inflation, Russia/Ukraine war, a resurgence of COVID-19 in China, and recessionary headwinds prevailing in the US and Europe in the first half of 2022 altogether affected global economic activity detrimentally.

The surprisingly strong trend reversal in the global economy in the third quarter of 2022 played a decisive role in rebounding the global economy. The sources of these surprises were, in many cases, domestic: stronger-than-expected private consumption and investment, and greater-than-anticipated fiscal support. Households spent more. Business investments increased.

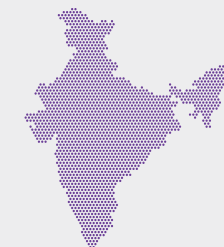
On the supply side, easing bottlenecks and declining transportation costs reduced pressures on input prices and enabled a rebound in previously constrained sectors; energy markets adjusted faster than expected to the shock from Russia's invasion of Ukraine.

Commodity prices remained volatile throughout the year. Despite the instability, global trade in goods remained high owing to a strong rebound in household consumption.

Outlook: Russia/Ukraine war overshadows the world economy. Despite recent signs of improvement, recovery over the next two years is expected only to be moderate. The outlook remains fragile, and downside risks predominate. Trade tensions are high and

could further worsen. Concerns about financial vulnerabilities have risen, including in financial institutions, housing markets, and low-income countries. While headline inflation has started declining, it remains elevated and could persist longer.

Emerging economies are likely to perform better in CY23 compared to their advanced counterparts. New trade agreements are anticipated to fuel global trade in 2023. And the overall shift manufacturing trends would be shifting towards green energy, investment in digital tools, and better integration with suppliers.



Indian Economy: In the financial year 2022-23, in the aftermath of Covid, India stood out as one of the finest examples of hope and optimism while the world was tipping toward recession. After a spectacular rebound in FY22 from a lower base, the Indian economy again registered a healthy 7.2% growth in the GDP. Growth was underpinned by investment activity led by the Government's strong capital expenditure thrust, subsequent capital formation, and return on private consumption. However, inflation remained high all year-round year round.

Inflation: CPI (Consumer Price Index), which measures the retail inflation of goods and services across 260 commodities, hit the highest 7.79% in April 2022. Subsequent

monetary policy tightening by the RBI throughout the financial year comforted/assured consumers. By the end of March 2023, the headline inflation declined to 5.66%, within RBI's upper ceiling.

Exports & the rupee: Overall exports (merchandise and service) were US\$ 770.18 billion worth during FY23 growing at 13.84% over the previous financial year. Supported by the gains from high services exports, the moderation in oil prices, and the recent fall in import-intensive consumption demand, India's current account deficit is estimated to fall in FY23 and FY24, providing a buffer to the rupee in uncertain times. This will provide a much-needed cushion to India's external sector at a time when the Fed is likely to raise rates further.

Manufacturing: IIP data shows manufacturing and electricity witnessed strong traction in the first 11 months of FY23, registering an overall growth of 5.5%. In that same period, mining, manufacturing, and electricity, three principal components of the IIP, grew by 5.7%, 4.9%, and 10.0%, respectively. Despite elevated input prices, new investments announced in the manufacturing sector during April-December 2022 were five times that of FY20.

Outlook: India will remain one of the fastest-growing major economies, notwithstanding the growth slowdown in advanced economies. Despite sluggish exports, industrial output should remain healthy due to robust domestic demand. GDP estimates for FY24 by international and Government agencies are between 6-6.5%.