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INDO-AMERICAN
CHAMBER OF COMMERCE

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IMPROVING MSME COMPETITIVENESS THROUGH LOW CARBON ECONOMY

Knowledge Partner





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Overview

The Roundtable on “**Improving MSMEs Competitiveness Through Low-Carbon Economy**” was organized jointly by the Indo- American Chamber of Commerce and FLAME University, Pune on 22 July 2022. This successful event resulted from a convergence of three key issues. The first key precipitating factor is the existential challenge to the world and to India posed by the threat of catastrophic climate change, to which Prime Minister Modi has responded with a “panchamrit” strategy by promising to achieve net-zero carbon emissions for India by 2070 at the Glasgow Climate Summit in 2021. Modi has also advanced a number of ambitious sub goals under this overarching commitment to accelerate India’s transition to net zero, including:

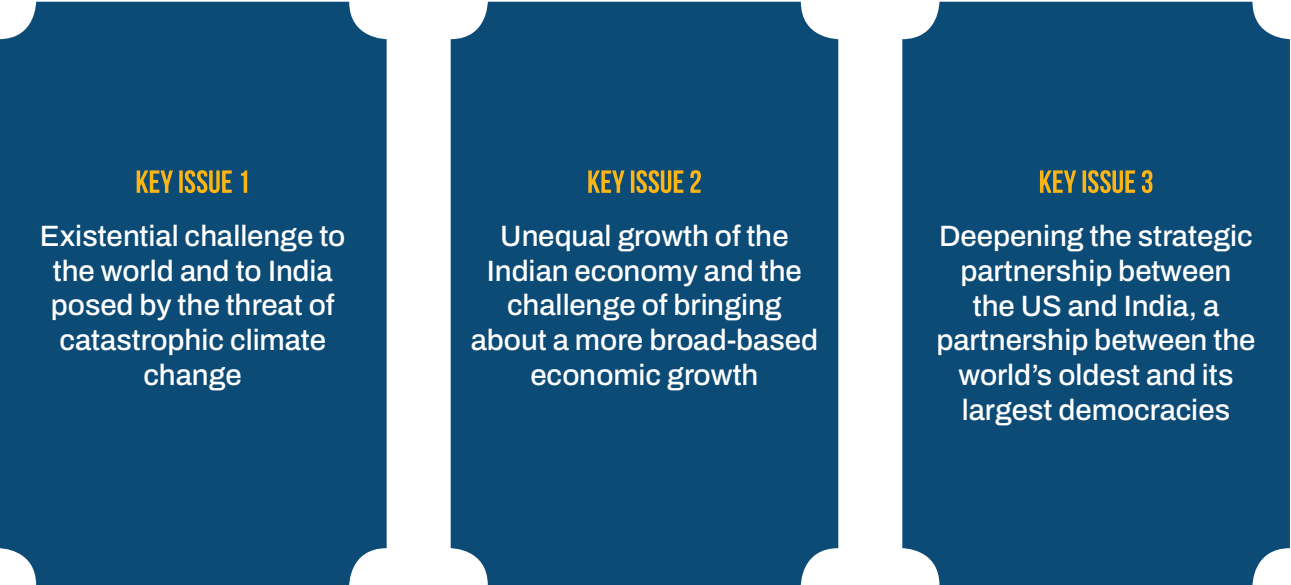
- a) **Increasing non-fossil energy capacity to 500 GW by 2030**
- b) **Sourcing 50% of its energy requirements from renewable energy sources by 2030**
- c) **Reducing total projected carbon emissions by 1 billion tons by 2030**
- d) **Reducing the carbon intensity of the Indian economy by 45% by 2030**

The aforementioned commitments 1 to decarbonize the Indian economy, even as India continues its industrialization and brisk economic growth, will inevitably result in government policies requiring

industry, including MSMEs to reduce their carbon footprint and to become more sustainable in their operations.

The second trigger for the roundtable is the rapid but still unequal growth of the Indian economy and the challenge of bringing about a more broad-based economic growth, increasingly powered by the more than 79 lakh MSMEs in this country as of March 2022 employing 11.1 crore people, and contributing 29% of India’s GDP. The achievement of inclusive economic growth is only possible if government policies encouraging the growth of MSMEs and enhanced job-creation, are aligned with government policies for MSMEs to become more sustainable and eventually carbon-neutral.

The third development, spurring the roundtable is the challenge of deepening the strategic partnership between the US and India, a partnership between the world’s oldest and its largest democracies. Increased economic cooperation between the US and India is a crucial centerpiece of the US-India global partnership and the role of regional-local cooperation, led by MSMEs will be important in deepening the strategic partnership in the coming decades. The success of the economic prong of this partnership is crucial to create the space for collaboration on existential threats such as climate change, pandemics, and rising Chinese assertiveness in Asia, including on India’s borders.



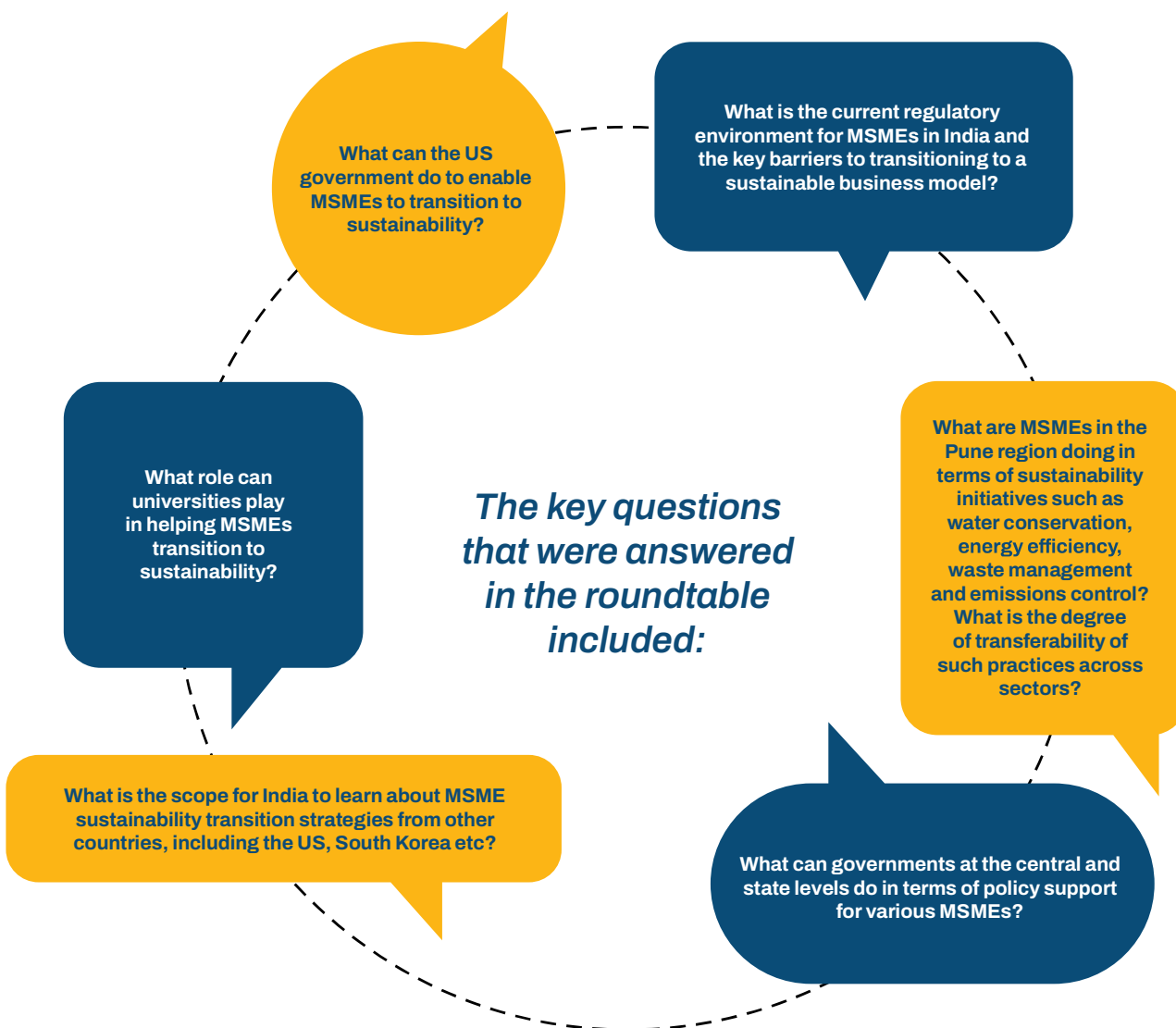
On a broader level, the roundtable is a response to key global developments including a suite of enabling state policies around the world that are creating the incentive structures and price signals towards decarbonization and net-zero emissions. Governments (including the Indian government) are coming up with aggressive renewable energy targets, subsidies for household installation of solar panels, increasingly strict automobile emissions norms, subsidies for buying electric vehicles and

tougher regulations on coal plants. Overarching policies such as the European Union's Emissions Trading Scheme (ETS), cap and trade systems in large US states such as California and China's national carbon trading scheme are indicative of the massive upcoming policy shift towards a low-carbon economy. The aforementioned suite of policies, regulations, incentive structures and price signals are opening up enormous opportunities for MSMEs in many sectors, both globally and in India.



The Indian government has announced several welcome initiatives such as the still-evolving Draft National Policy for MSMEs, Public Procurement Policy, the Prime Minister's Employment Generation Programme, Credit Guarantee Scheme for Micro and Small Enterprises and Procurement and Marketing Support Scheme. However, the 24 major MSME schemes currently deployed by the government do not place sufficient emphasis on promoting MSME competitiveness through low-carbon development.

The roundtable brought together an eminent group of industry leaders and government policymakers to analyze the key opportunities and challenges for MSMEs in India in adopting a sustainable business model, in sharing best practices and in the specific policy support needed from the government to transition at pace and at scale to a low carbon footprint.



Global scenario of MSMEs

This section describes the economic significance of micro, small, and medium enterprises (MSMEs) and their contribution to sustainable development. According to the World Bank, MSMEs are defined as follows; micro-enterprises consisting of 1 to 9 employees; small enterprises with 10 to 49 employees; and medium enterprises with 50 to 249 employees. The 2 definition of MSMEs differs from one country to another, and it is not only based on the number of employees but also depends on other factors such as assets.

In low-income countries, most MSMEs belong to the informal sector and serve as the primary source of net employment generation. According to the estimates provided by the World Bank, 600 million jobs will be required by 2030 to employ the global workforce. This makes developing MSMEs a national priority for many economies. Through job creation for the poor and marginalized populations, MSMEs help eradicate poverty, particularly in developing countries.

In addition, globally, women are observed to lead a large share of MSMEs. **The estimates show that there are nearly 9.34 million women-led MSMEs, out of which Europe and Central Asia have the largest number of MSMEs owned by women, while south Asia records the least number.** Women-led MSMEs cover different sectors of the economy, including wholesale and retail, healthcare, beauty and cosmetics, tourist, hotels and restaurants, and services sectors. Ethiopia, one of the fastest-growing economies in Africa and the developing world, has implemented the Women Entrepreneurship Development Project (WEDP), which provides credit and business training to women entrepreneurs. The aim is to empower women by providing economic opportunities to women in micro, small, and medium enterprises.

Given that the MSMEs have considerable potential for employment generation for a large section of the global population, they can enhance the risk-coping capacities of households through income diversification measures and make vulnerable communities climate resilient.



According to the estimates provided by the World Bank, 600 million jobs will be required by 2030 to employ the global workforce.



It is widely recognized that some sectors, such as agriculture, manufacturing, and tourism, are highly susceptible to weather shocks such as floods and droughts. MSMEs can play an essential role in promoting climate-smart agriculture development and building resilient communities.

Many farmers, particularly in Kenya, Tanzania, Uganda, Ethiopia, Vietnam, Iraq, and Mongolia, are engaged in small-scale farming. In this context, agriculture-focused MSMEs can support small-scale agricultural production and contribute to increasing the productivity of farmers. For instance, in Rwanda, studies have shown that introducing food waste-reducing technology has helped minimize post-harvest losses and thereby increased the income of small-scale farmers. MSMEs have

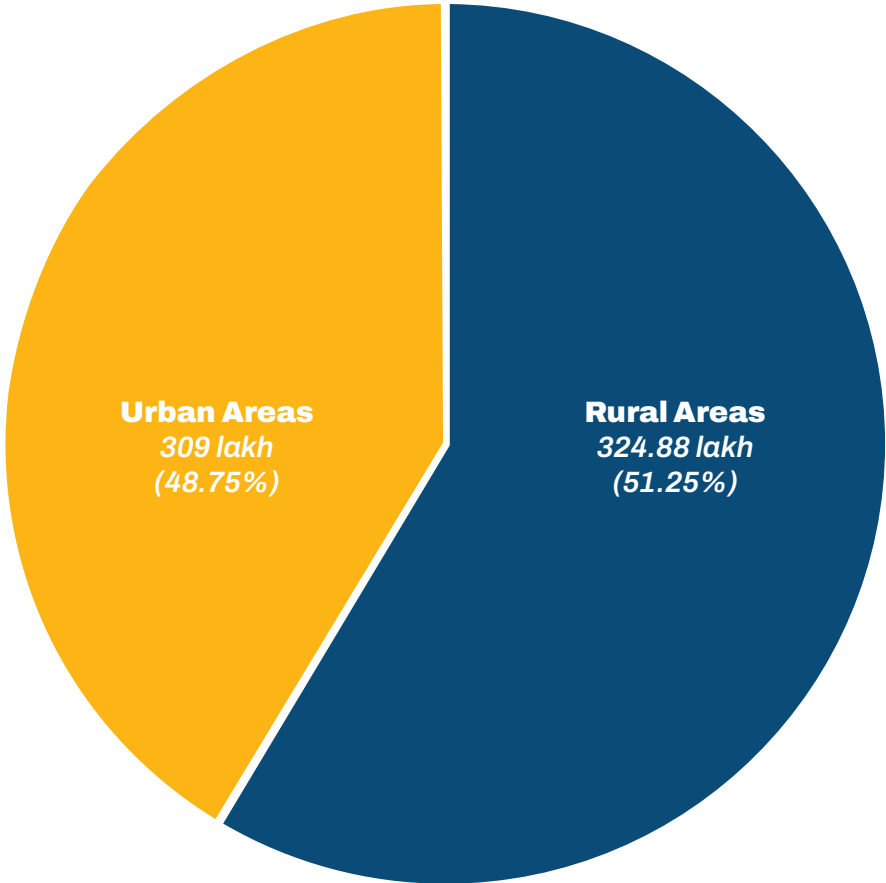
provided innovative services to mitigate climate risk by protecting the crop yields of small-scale farmers in Sub-Saharan Africa. For instance, Ignitia, a high-tech social enterprise connected with the Business Call to Action, sends low-cost weather-related information to small-scale farmers in West Africa. The availability of information enables small farmers in Africa to organize farming activities and become resilient to climate change.

MSME landscape/ milieu in India

According to the United Nations Trade Facilitation and Implementation Guide, there were 162.8 million Micro, Small and Medium-Sized Enterprises (MSMEs) as of 2014, employing over 508 million people. According to the Confederation of Indian Industry (CII), India has 633.88 lakh MSMEs with 324.88 lakh (51.25%) in rural areas and 309 lakh (48.75%) in urban jurisdictions. The Micro sector (630.52) lakh businesses makes up more than 99% of the total 10 number of MSMEs in the country.

MSMEs created 11.10 crore jobs in 2015-16, according to the 73rd National Sample Survey, with 387.18 lakh jobs in Trade, 362.22 lakh jobs in services and 0.07 lakh jobs in the non-captive micro sector in both rural and urban areas. The contribution of MSME-produced products in total exports from India from 2018-19 was 48.10% and their overall contribution to the national GDP is 30%. Given the aforementioned job-creation potential and export contributions of MSMEs, enabling government policies are crucial to promote their growth while also ensuring that their growth aligns with national and sectoral sustainability goals.

MSMEs in India: 633.88 lakh



Challenges/Barriers impeding MSMEs from low-carbon transition

The MSME sector in India faces multiple challenges. Foremost is the crucial bottleneck of unmet financing need, which is a problem for MSMEs worldwide. As a significant share of MSMEs belong to the informal sector, they do not have access to formal credit. These enterprises are less likely to obtain loans from Banks and depend on several informal sources. Per the estimates provided by the International Finance Corporation, 65 million firms or 40% of MSMEs in developing countries, have been experiencing unmet financial assistance of \$5.2 trillion annually or 1.4 times the current global level of MSME lending.



As of March 2021 (2020-21 financial year), MSMEs in India made up only 14% (29.9 crore) of the total number of loan accounts with Indian Scheduled Commercial Banks (SCB's) and just 16% of overall credit flow of Rs 1,09,12,317 crore.

The aforementioned lack of low-cost capitalis compounded by the lack of awareness among 19 MSMEs regarding the massive ongoing emphasis on low-carbon growth, sustainability and net-zero in government policies. This lack of information not only disadvantages MSMEs in their ability to benefit from enabling initiatives such as government schemes and low-interest loans, but also disadvantages them in their ability to demonstrate their sustainability credentials to their key export markets in the US and EU.

Other India-specific challenges include continued bureaucratic inertia and red-tape despite significant reforms in this regard. For example, an average small business entrepreneur in Mumbai still has to clear 12 procedures to start a business as compared to the global average of 5 procedures. Although the average waiting time to start a business has reduced from 127 days to 20 around 30 days, the aforementioned procedural hurdles make small-business entrepreneurship a challenging endeavor.

Infrastructural bottlenecks such as irregular power-supply and lack of skilled labor also pose significant barriers to MSME sustainability transition. A crucial India-specific constraint is the lack of MSME access to low-cost, high-value technology which prevents MSMEs from ascending the value chain.

In the words of MIDC Chairman Dr. P. Anbalagan, "government schemes like Mudra Yojana are useful in helping MSMEs deal with liquidity issues"

Salient points from the deliberations of the roundtable

The roundtable participants began by agreeing that there is immense potential for the MSME sector to get into new businesses or sectors because of the need for employment due to a large number of migrants and a decrease in jobs in several sectors due to automation and mechanization. Given the vast number of manufacturing and service MSMEs, their available labor, skills, and infrastructure can be harnessed for initiating new businesses that can provide growth opportunities and help deal with climate change at the same time.



Renewable energy

The participants also concurred that there is immense scope for Foreign Direct Investment (FDI) in India because of the ongoing government and industry focus on renewable energy like solar farms.

MIDC Chairman, Dr. P. Anbalagan observes that “a major proportion of the overseas capital is coming in the renewable sector, which creates immense potential for this sector”

A number of companies have signed MOUs, taken up land, and started construction activities for their enterprises. Industrial clusters can be set up where companies in the renewable energy space can start their facilities and get government benefits. This

can give a boost to the MSME sector with MSMEs either directly participating in the core business of renewable energy or providing ancillary services. MSMEs should adopt renewable energy resources in big ways to lead the country towards low carbon objectives. They can be more efficient and many MIDC-based MSMEs are doing that.

A lot of policies at the local level exist for adoption of renewable energy. It is, however, the execution of these policies which require more emphasis. **Banks or loan institutes should support renewable energy resources such as solar panels which depreciate in value unlike other investments (real estate) which experience growth in value.**

Renewable energy technologies are yet to become sustainable themselves. For example, when we implement solar panel installation at a large scale, in 20-30 years all of it would become dysfunctional. Discarding or renewing them is still a big challenge. So more research is required in end-to-end analysis of the renewable options. **According to Dr. Anbalagan, “sunrise industries are in a good position to contribute to a low carbon economy by utilising renewable sources of energy like solar power.”**

Electric vehicles

Apart from renewable energy, electric vehicles is another area that MSMEs can support. They can play a big role in providing chargeable battery products, charging infrastructure, and battery waste disposal infrastructure. The demand for these services is predicted to be very high and broad-based across tier-1, tier-2, and tier-3 cities. Further, there can also be a lot of variations in the kind of batteries used and how they are charged, which MSMEs can exploit. Since this is a completely new industry, efforts can also be made by the Government to offer MSMEs renewable energy resources for production purposes.

Transitioning to EVs or asking MSMEs to move to low-carbon technologies is a continuous process. MSMEs need to adapt constantly to changing scenarios and demands in terms of a low carbon economy. The Maharashtra government has already taken bold steps in that direction specifically for EVs. Charging infrastructure for EVs is being built at a rapid rate. PMPML has rolled out a fleet of electric buses and many buses have been converted to green fuels. These kind of initiatives help MSMEs to achieve the goals of a low carbon economy.



Construction industry, transportation

The building or construction industry is one of the biggest contributors to GHGs. It involves the consumption of both, energy and water, at a very high rate. Even though there are proven mechanisms to reduce carbon consumption during the operational stages of any building, the embodied carbon (which is 50% of the whole life cycle) can not be compensated. A life cycle analysis of any building would be useful and should be taken up by the MSMEs while they establish themselves. Water auditing at all stages including when the MSMEs are running their normal functions is essential and reuse and recycling of water should be encouraged.

MSMEs are also well-positioned to provide a number of services for metros which are coming up in many cities as an alternate public transport system, and as a solution for air pollution and traffic congestion. Their participation in the infrastructure development of metros can expedite the expansion of metros and reduce carbon emissions.



E-Commerce

MSMEs can also support a number of sunrise industries that are expanding. For example, the growth of e-commerce companies like Amazon, Myntra, and Flipkart, and their intensive logistic operations can provide impetus to the businesses in the MSME sector. Because of the easy accessibility and choices that e-commerce companies provide to consumers, MSMEs can also contribute to the

apparel industry. Food processing can be another high potential area due to the increasing demand for organic food products and quick food options among the urban population. Other areas are aerospace and defense and security firms. Process and strategy can be put in place at the initial stage itself to ensure minimum carbon emissions in these industries.

MSMEs can support sunrise industries

**E-Commerce
and Apparel
Industries**

**Food
Processing
Industries**

**Aerospace
and Defence
Industries**



Bioresources

MSMEs can use bioresources as a substitute for fossil fuels, to generate energy for their operations. Products made from biomass resources coming from plants, when consumed, would emit carbon dioxide which would be absorbed by plants, resulting in carbon neutrality. Biomass resources like biomass feedstock, sugary feedstock like molasses, and starchy feedstocks like damaged grain can be used to reduce greenhouse emissions. India is a net positive producer of grains. Huge amounts of grains get spoiled in government warehouses due

to a lack of storage space. These grains can be used with minimum incremental costs. Also, cotton straw, wheat straw and rice straw can be harnessed which is currently thrown away or burnt, releasing carbon in the atmosphere. Further, biofuels like bioethanol, biodiesel and biohydrogen can be used in the automotive industry. Compressed biogas instead of compressed natural gas can be used for automobiles. Since there are multiple opportunities in the bio-generation space, MSMEs can also participate in setting up and running biogas plants.

Need for Government Support

Government can support MSMEs through several policy measures. **Dr. D. P. Agarwal, Former Chairman of the Union Public Service Commission (UPSC)** contended that “there is an urgent need for a group that keeps track of the technology development required for a low carbon economy.” He also recommended that the “low carbon economy be driven through different government institutions to clearly lay out the expectations from MSMEs along with defining what it means by low carbon economy. This will also empower MSMEs and allow them to overcome monetary limitations and lack of innovative manpower.”

For example, the food processing sector involves risks of damage to food items and challenges in cleaning, grading and packing. Government can provide financial aid and technological knowhow to help MSMEs deal with aforementioned challenges.

Awareness programs for MSMEs should be taken up by the government to involve them in the low-carbon economy. Awareness can be followed up with sensitization of the tools for doing life cycle analysis of carbon footprint. It has been also observed that most MSMEs are aware of the nature of the pollution they produce. They may also be aware of the necessity to embrace low-carbon technologies. It is unfortunate, however, that the path which would lead to that is unclear. There is a need to institutionalize it. Providing the MSMEs with monetary benefits would greatly encourage them in adopting the green economy. However, motivating MSMEs will continue to be a challenge due to their low per-capita income, lack of adequate collateral for low-interest loans and greater sensitivity to economic perturbations such as recession.



Government can also create a climate management ecosystem using digitization. Many people and organizations are working on climate change, but they are working in silos. Instead, one app or digital platform can be built where all the data can be aggregated. The platform could have information on solar energy, bioenergy and tree plantation etc. The data would give a holistic perspective, and enable effective decision-making regarding the measures that the government, MSMEs, and other stakeholders can take to create a low-carbon economy.



Digitization technology for making it easy for MSMEs to do many things like applying and availing loans, especially from State Commercial Banks (SCB's) could be done.

The government can also focus on creating smart and clean cities by utilizing the services of MSMEs. It can implement solid waste management, water recycling, sewage treatment, garbage disposal, and other cleanliness initiatives through organizing bodies and committees. Also, public and office transport can be replaced by electric and CNG vehicles. MSMEs can participate in all these activities.

Mr. Suhas Pansare, Vice President, RelyOn Solar Pvt Ltd made a strong case for MSME involvement in India's ongoing effort at energy independence by noting that "like our country got freedom in 1947, there is a dire need for energy freedom now. MSMEs can play an active role in the movement of energy freedom by adopting the low carbon economy."



Government can engage educated women, who have been unable to work full-time due to home responsibilities, to find solutions to climate management issues. Many of them are already contributing personally or at the housing-society level in some manner, for example in waste management.

Role of IACC and Academia

Currently, the incentives for MSMEs to move towards the goal could be their objectives of profits, cash flows, and establishing a greater customer base. **A mechanism to incentivize the steps towards a low carbon economy is necessary. IACC can create the necessary framework of academic partners like FLAME University.**

Mr. Saurabh Shah, Regional President of the Western Region of Indo American Chamber of Commerce (IACC) highlighted the significance of strategic communication regarding the low carbon economy by noting that “it is of utmost importance to say clearly why there is a need for a low carbon economy in MSMEs, what is the meaning of that, and the impact of the same. IACC is actively contributing to these necessary steps by conducting round table workshops while inviting the necessary stakeholders. The outcomes of these efforts will lay out a clear plan for achieving the very objective of providing MSMEs with clear directions toward the low carbon economy.” Another conduit of cooperation could be demand-side, buyer-power pressure from large enterprises like smart cities that can compel the MSMEs (suppliers) to be more environmentally friendly. This may bring about a change at a rapid rate.

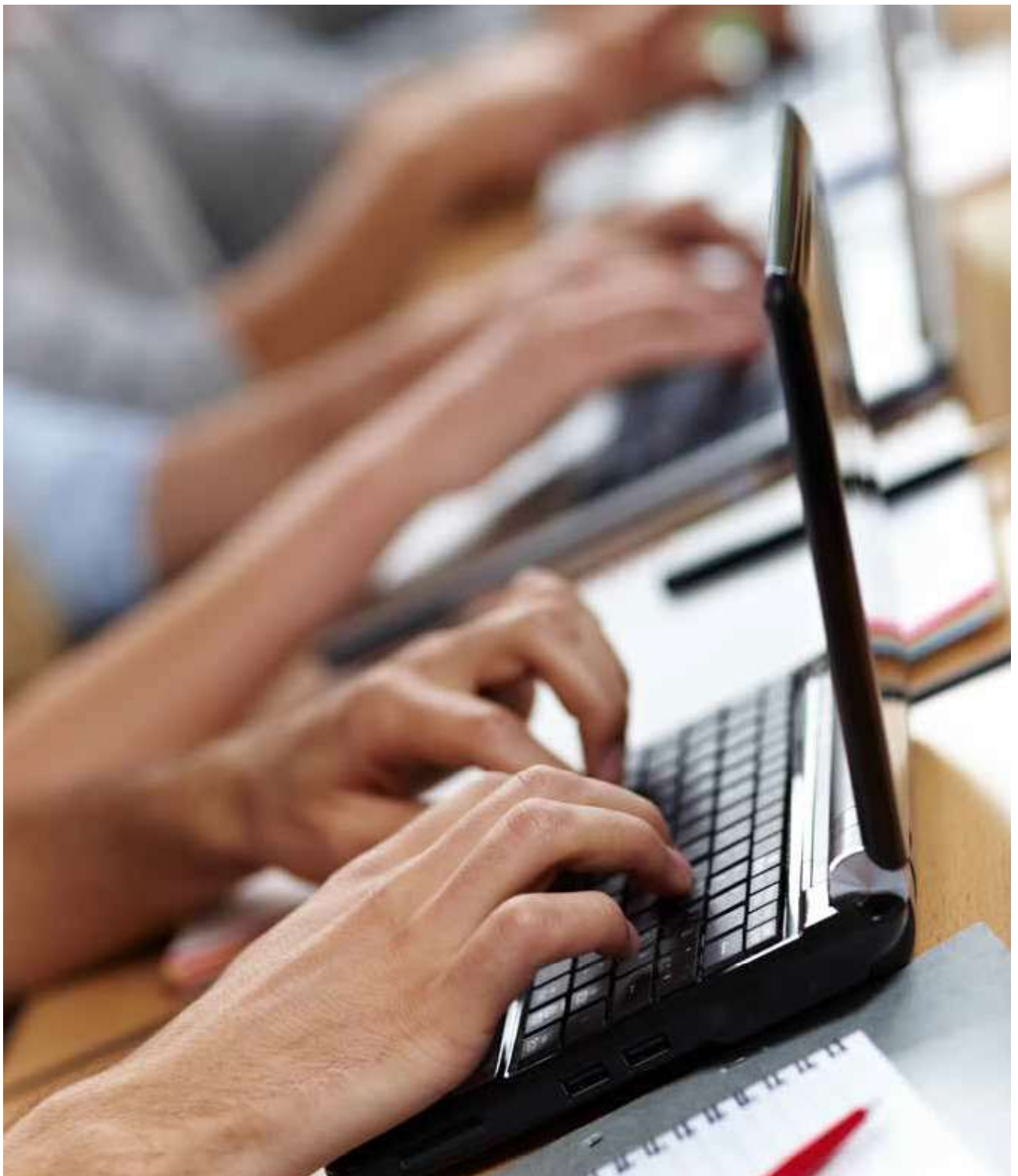


Educational institutions need to simplify the concepts and need of low carbon economy to MSMEs to win their attention and bring awareness without frightening them. It should be a large movement to spread awareness.

A preliminary assessment of types of MSMEs or their thrust areas should be carried out along with a thorough documentation of the technologies being used. Such a systematic investigation may help identify the technology gaps to be filled to move towards low carbon objectives. The problem of employment and employability in MSMEs is also very different from any other big industry.

Therefore, technology changes would definitely impact employment. One needs to think about the potential impacts and how the transition can be achieved. Creating an index to judge the carbon footprints of the MSMEs and ranking them would bring out more details and lacunae in the current system and also provide a pathway for

improvements. Currently, MBA programs don't cater to MSME requirements and employment. Educational institutions can look into this. There is dire need of technology institutes which can take up the challenge of training and supplying the required experts to MSMEs.



Academia-Industry- Policymaker partnerships

Role of IACC and Academia

Strategy and technology road mapping is required. There is an argument that not everything is to be linked with economic aspects but environmental aspects should be given priority. It seems, however, impossible to achieve this unless there is value

creation tightly linked with a low carbon economy. Green value chain can be a solution. For example, instead of generating thermal electricity to be used for EVs, can renewable energy resources be used instead?

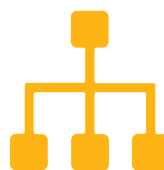
4 Key elements of the green value chain



Creating awareness



Incentives for transition to low-carbon footprint



Institutional framework



Conducive processes

Based on its extensive experience of interacting with academic and industry partners and its in-depth consultations with government policymakers, IACC recommends an ecosystem of support for MSMEs, which can be provided through industry-academia partnership. Industry, academia and policymakers can come together to make things happen similar to the Montreal protocol which saved us from Ozone depletion. This compelled industry to innovate, find alternatives to ozone-depleting CFC's, and become green.



Reconciling the objectives of economic growth and low-carbon growth while also preserving healthy competition and entrepreneurial dynamism is a challenge the proposed institutional consortium of academia, industry and policymakers needs to figure out.



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ABOUT FLAME UNIVERSITY

FLAME University has been created as an academic institution anchored in liberal education.

Being the pioneer of liberal education in India, FLAME University delivers the country's premier interdisciplinary education experience. It exists to build an aspirational destination for students and faculty, to push the design and nature of studies, and to create a societal upgradation phenomenon, particularly in the fields of liberal education and leadership.

FLAME University is driven to being one of India's most respected and reputed centres of learning – the one destination of choice for higher education in the nation for learners and teachers.

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Indo-American Chamber of Commerce aims to serve as a catalyst in promoting growth between the two countries, protect and promote collective bilateral need and interest of the Indo-US business community and effectively lobby with governments on significant bilateral issues and serve the business needs of its members