COP31 AND THE 35x35 INITIATIVE: WILL IT ACCELERATE THE GLOBAL SUSTAINABILITY TRANSITION?

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***Abstract*—This case examines the strategic implications of the COP31 35x35 initiative through the evolving relationship between energy systems, business competitiveness and environmental responsibility. Using an Indian manufacturing company as a teaching context, it explores investment choices, technological uncertainties and stakeholder expectations, encouraging students to evaluate pathways towards responsible and economically viable business transformation.**

***Index Terms*—COP31, 35x35 Initiative, Electrification, Renewable Energy, Sustainable Development, Corporate Sustainability, Energy Transition**

I. The Global Sustainability Initiative

The world is approaching a critical turning point in its efforts to address climate change. Rising global temperatures, extreme weather events, increasing energy demand, resource depletion. The process of environmental degradation have brought sustainability to the centre of international economic and business discussions. Governments, international organisations and businesses are increasingly recognising that economic development cannot continue to depend indefinitely on energy-intensive production systems powered predominantly by fossil fuels. The challenge is no longer simply to generate more energy to support economic growth, but to transform the way energy is produced, distributed and consumed.

Over the past decade, international climate negotiations have played an important role in shaping this transition. The Paris Agreement established a collective commitment to limit global temperature increases to well below 2°C above pre-industrial levels while pursuing efforts to limit the increase to 1.5°C. Subsequent Conferences of the Parties (COP) have attempted to translate these commitments into practical action through renewable energy expansion, energy efficiency, climate finance, carbon reduction and adaptation strategies.

There is a significant gap exist between international climate commitments and their implementation. Many economies remain dependent on coal, petroleum and natural gas for electricity generation, industrial production, transportation and heating. At the same time, developing economies face the challenge of expanding infrastructure, creating employment and improving living standards while reducing their environmental footprint.

Against this background, the 31st Conference of the Parties to the United Nations Framework Convention on Climate Change, commonly known as COP31, assumes particular importance. COP31 is being positioned around the need to move beyond climate commitments towards implementation and measurable outcomes. Among the initiatives is an ambitious global electrification target known as the 35x35 initiative. The initiative proposes increasing electricity's share of global final energy consumption to 35 per cent by 2035, compared with approximately one-fifth of final energy consumption today. Its underlying proposition is that replacing direct fossil fuel consumption in transportation, buildings and industrial processes with

electricity, increasingly generated from renewable sources, can contribute significantly to global decarbonisation. For businesses, this target represents more than an environmental commitment. It signals a possible transformation in the economics of production, infrastructure investment, technological innovation and competitive strategy. The question confronting organisations is whether they are prepared to participate in this transition and how they can do so without compromising financial viability.

The initiative focuses on three major areas: transportation, buildings and industry. In transportation, the transition involves electric vehicles, electric public transport systems and charging infrastructure. In buildings, it includes electric heating and cooling systems, efficient appliances and technologies such as heat pumps. In industrial operations, electrification involves replacing fossil-fuel-based equipment and processes with electrically powered alternatives wherever technically and economically feasible. Consequently, the success of the 35x35 ambition depends on a complementary transformation of electricity generation. Renewable energy sources such as solar, wind and hydropower must expand alongside improvements in electricity transmission, distribution, energy storage and grid reliability.

The pledge also recognises that countries have different economic circumstances, energy requirements, infrastructure capacities and starting points. A uniform approach cannot be applied to every economy. Developing countries may require financial assistance, technology transfer, infrastructure investment and capacity-building to participate meaningfully in the transition.

II. The Business Opportunity

The movement towards electrification is gradually changing the strategic priorities of businesses. Traditionally, energy was treated primarily as an operational expense. Organisations attempted to reduce electricity and fuel costs through energy-saving measures, equipment improvements and production optimisation. Today, energy strategy is increasingly connected with long-term competitiveness, supply-chain resilience, environmental performance and stakeholder expectations. For manufacturing organisations, electrification offers several opportunities. Replacing conventional machinery with electrically operated equipment can improve process efficiency and provide greater control over energy consumption. The integration of rooftop solar installations, battery storage and renewable energy procurement can reduce exposure to conventional energy sources and potentially stabilise long-term energy costs.

Similarly, logistics companies can gradually replace internal combustion engine vehicles with electric fleets, while retailers and commercial establishments can invest in energy-efficient lighting, cooling and building management systems. These changes may also support corporate environmental, social and governance (ESG) commitments and strengthen the sustainability credentials of organisations. Investors, customers and business partners are increasingly interested in the environmental performance of companies. Large corporations are also facing pressure to understand and reduce emissions across their value chains. As a result, suppliers may increasingly be evaluated not only on product quality, delivery and price but also on their energy sources and carbon footprint. The transition involves significant capital expenditure. Electrification may require new machinery, charging facilities, grid connections, storage systems and employee training. Smaller enterprises may find it particularly difficult to mobilise the necessary resources. The benefits of electrification may also differ across industries, depending on the maturity of available technologies and the nature of production processes.

The strategic challenge for businesses is therefore to determine the appropriate pace and scale of transition. Organisations that invest too slowly may face technological obsolescence, regulatory pressures and changing customer expectations. Those that invest too aggressively without assessing financial and infrastructure constraints may face excessive debt, operational disruption and uncertain returns.

III. The Indian Context: Balancing Growth and Sustainability

India represents an important context for understanding the opportunities and challenges associated with the 35x35 ambition. As a rapidly developing economy, India must simultaneously address rising energy demand, industrial expansion, urbanisation, employment generation and environmental sustainability. The country's energy transition involves several interconnected developments, including renewable energy expansion, electric mobility, energy-efficient buildings, modernisation of electricity infrastructure and the development of domestic manufacturing capabilities.

Solar energy, wind power, electric vehicles and battery technologies are creating new opportunities for businesses across multiple industries. Automobile manufacturers are exploring electric mobility, logistics companies are evaluating electric delivery fleets, and industrial organisations are examining renewable energy procurement and energy-efficient production systems. For Indian businesses, the challenge is particularly complex because sustainability investments must coexist with cost competitiveness. A large manufacturing company may have the financial resources to install renewable energy systems and replace conventional equipment, whereas a small or medium enterprise may struggle to finance even an initial electrification project.

There is also an important social dimension. The transition can create employment opportunities in renewable energy, electric mobility, battery manufacturing and smart-grid technologies. At the same time, workers in conventional energy and automotive supply chains may require reskilling and new employment opportunities. Therefore, the 35x35 ambition must be understood not merely as a technological transition but as an economic and social transformation. Its long-term success will depend on whether the benefits of cleaner energy can be distributed across businesses, workers and communities.

Despite its potential, electrification does not automatically guarantee sustainable development. It creates a new set of environmental, economic and social considerations that governments and businesses must address.

The first concern is the carbon intensity of electricity generation. If electricity demand increases faster than renewable energy generation, countries may continue relying on coal and natural gas to meet additional demand. In such circumstances, electrification could increase pressure on conventional power systems without delivering the expected emissions reductions. The second concern relates to critical minerals and resource consumption. Electric vehicles, batteries, renewable energy infrastructure and electricity storage systems require materials such as lithium, nickel, cobalt, copper and other minerals. Their extraction and processing can create environmental damage, water stress and social challenges in mining communities. Sustainable electrification must therefore incorporate responsible sourcing, recycling and circular economy practices.

The third concern is the problem of electronic and battery waste. As electric vehicles, batteries and electrical equipment become more widespread, businesses and governments must develop systems for collection, reuse, recycling and responsible disposal. A transition that replaces fossil-fuel dependence with an unsustainable pattern of material consumption would create a different environmental challenge rather than resolve the existing one.

The fourth concern is affordability and accessibility. Advanced electrification technologies may be financially accessible to large corporations and affluent consumers but remain expensive for smaller businesses and lower-income households. Without suitable financing, infrastructure and public support, the transition could widen existing economic inequalities. The growing demand for electricity from digital infrastructure and artificial intelligence creates another dimension of the challenge. Data centres, cloud computing and AI applications require substantial computing capacity and electricity. While AI can improve

energy forecasting, grid management and industrial efficiency, its own expanding energy requirements must also be considered.

IV. Conclusion

The COP31 35x35 initiative highlights an important shift in the global sustainability discourse: the transition from commitments to measurable changes in how energy is consumed across the economy. Electrification has the potential to transform transportation, buildings and industrial operations, while creating opportunities for technological innovation, investment and sustainable economic development. Eelectrification must not be treated as an independent solution to climate change. Its environmental benefits depend on clean electricity generation, energy efficiency, resilient infrastructure, responsible mineral sourcing, circular economy practices and equitable access to energy.

For businesses, the transition presents both an opportunity and a strategic challenge. Organisations must reconsider their energy strategies, investment priorities, operational processes and relationships with suppliers and customers. The ability to integrate sustainability into core business decisions may increasingly influence long-term competitiveness. For developing economies such as India, the challenge is even more significant. They must pursue economic growth and energy security while ensuring that the transition remains affordable, inclusive and environmentally responsible.

Ultimately, the 35x35 ambition will be judged not by the number of commitments announced at international conferences, but by the extent to which governments, businesses and communities translate those commitments into meaningful action. The future of sustainable development will depend on whether the global economy can power its growth without compromising the environmental and social foundations on which that growth depends.

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