Decarbonizing E-Commerce: Paving the Way to a Low Carbon Economy

THEMATIC TRACK SUMMARY

Venue: Marigold Hall

Date: 24 February 2023

Time: 2:00 PM - 3:30 PM (IST)

Suggested Citation

World Sustainable Development Summit (2023), Decarbonizing E-Commerce: Paving the Way to a Low Carbon Economy; Thematic Track Summary (Rapporteurs: Gaurav Yadav and Kanchan Tomar), New Delhi: The Energy and Resources Institute.

Actionable Messages

Message 1: E-commerce companies should take responsibility to decarbonize and comply with business responsibility and reporting guidelines by adopting electric mobility and alternative fuels as possible solutions.

Message 2: The government should introduce enabling factors beforehand to ensure a successful implementation of clean fleet mandates in certain states.

Message 3: Private players should take up the responsibility to create charging infrastructure, and the government should incentivize infra players to apply directly.

Message 4: The industry should focus on creating affordable and specific EV products for delivery and finding energy-efficient vehicles that are designed for EV.

Message 5: Stakeholders like Amazon should be involved in developing packaging guidelines for the entire country, and the discussion should also include warehousing as it is essential for the delivery process.

Message 6: Innovations like developing paper from bamboo, banana fiber, and waste materials can replace MLP (multi-layered packaging), and companies should invest in research-based projects to find sustainable packaging solutions.

Message 7: The packaging industry should explore local areas and properties to find suitable materials for packaging, such as non-woody fibrous material like agro waste, jute, and rice straw.

Narrative

The thematic track titled, "Decarbonizing E-Commerce: Paving the Way to a Low Carbon Economy" was conducted as part of the World Sustainable Development Summit (WSDS) annual flagship initiative of The Energy and Resources Institute (TERI). The first session within this track was titled, "Freight Decarbonization - Last Mile and Middle Mile Transportation," and the second session had the panelists deliberate on the topic, "Creating a Vibrant Ecosystem for Sustainable Packaging Alternatives and Local Packaging Manufacturing." The sessions aimed to discuss the issue of decarbonization of e-commerce so far, and the ways forward.

Mr. RR Rashmi, Distinguished Fellow, The Energy and Resources Institute (TERI), welcomed all the delegates and participants. He initiated the session by highlighting the need to consider the GHG emission contribution of the services sector. He emphasized the responsibility of e-commerce companies to decarbonize and comply with business responsibility and reporting guidelines. As the transport sector is a significant source of emissions, he suggested that electric mobility and alternative fuels could be the possible solutions. He also stressed on the need for both short-term and long-term intervention towards decarbonization to be in line with India's Nationally Determined Contributions (NDCs) and long-term low emission development strategy.

Mr. Sudhendu Sinha, Adviser (Infrastructure Connectivity – Transport and Electric Mobility), NITI Aayog, discussed the National Mission on Transformative Mobility and Battery Storage. He pointed out that the decarbonization of the GHG economy was relatively late but the Suni campaign has achieved great results, with almost all industry players living up to their commitments. There are specific problems that certain industries face, such as the packaging issue for IKEA. Some states are mandating a certain percentage of clean fleet, but enabling factors must be set up beforehand to ensure successful implementation. The Suni campaign video received 28 million hits, and National Geographic is exploring the creation of similar clips for e-commerce.

The moderator for the first session on "*Freight Decarbonization - Last Mile and Middle Mile Transportation*", **Mr. I.V. Rao, Distinguished Fellow, Transport & Urban Governance, The Energy and Resources Institute (TERI)** unfolded the discussions on various topics including contributing factors to reduce scope 3 emissions in transport, increasing the usage of electric mobility in e-commerce and introduction of environmental consciousness in the supply chain.

Ms. Shubhra Jain, Public Policy Manager, Amazon India, highlighted that Amazon recognizes the concerns of their consumers around packaging and are taking steps to constantly reduce and move towards alternative solutions. In terms of sustainable transportation solutions, Amazon relies on fleet services and logistics to move goods across the country. They aim to have 10,000 electric vehicles as part of their fleet by 2025 and are on track to achieve this goal. However, they still face challenges in the last mile and middle mile transportation, particularly with the maturity of the ecosystem, availability of viable and scalable solutions, and the needs of

the ecosystem such as infrastructure and charging stations. While they have solved the issue for the last mile delivery using smaller electric vehicles, they seek support for the medium and heavy-duty tracking space to create scalable solutions. They also require a relook at charging infrastructure for medium and heavy-duty transportation.

Ms. Chetna Nagpal, Senior Associate, RMI emphasized the importance of incentives for freight transportation vehicles and suggested to learn from other countries' supply-side policies and fuel economy norms. She also highlighted the success of demand-side strategies in India for light vehicles but pointed out about the need for a supply-side push for medium and heavy-duty vehicles. She further added, there is a need for adoption of electric trucks by service providers such as Amazon and IKEA in different regions and also finding the best solution for low-carbon initiatives while being technology agnostic.

Mr. P Sanjeev, Head / VP EV Micromobility, TVS Motors, emphasized the significance of solving the last-mile mobility problem, with 60% of petrol consumption occurring in urban areas. He discussed TVS Motors' efforts to create affordable and specific EV products for delivery, as well as the need for energy-efficient vehicles that are designed for EV. Retrofitting is one solution, but it must be done properly, and financing solutions are needed for the adoption of EVs.

Mr. Akshay Shekhar, CEO, Kazam shared insights on the charging infrastructure and how they are catering to the requirement. He emphasized the need for digitization in the utility segment and discussed the bureaucratic challenges in getting new connections. He highlighted the importance of private players in the charging infra play and called for incentives for infra players to apply directly. He also discussed the importance of smart infrastructure players in bringing software technology to the table and avoiding the recapitalization of charging infrastructure by adopting a smart charging ecosystem.

Mr. Jasmeet Khurana, Lead, Moving Emerging Markets, World Economic Forum, talked about his experience with emerging markets outside of China and India's leadership role in policy. He noted that India is ahead of other countries in this regard and highlighted opportunities for Indian OEMs in EV fleets. Mr. Khurana also discussed two divergences in the market, one related to vehicle ownership and the other related to the product. He emphasized the importance of policy orientation towards these changes and how India can set the direction for emerging markets. Finally, he touched upon the various perspectives of global markets, such as Indonesia's focus on fleet conversion and Africa's unique market dynamics.

Mr. Er S Bhardwaj, Deputy Director General, Department for Promotion of Industry, and Internal Trade (DPIIT) began with his introductory remarks for the second session on *"Creating a Vibrant Ecosystem for Sustainable Packaging Alternatives and Local Packaging Manufacturing"*. He spoke about the need to develop packaging guidelines for the entire country and suggested involving stakeholders like Amazon. He also recommended including warehousing as a part of the discussion, as it is essential for the delivery process. He informed the participants about the specialized Indian shooter packaging under the ministry and offered to connect them

with the organization. Finally, he requested the stakeholders' coordination in formulating strong guidelines.

The moderator for the second session, **Dr. Suneel Pandey, Senior Fellow & Director, Environment & Waste Management, The Energy and Resources Institute (TERI)**, started the discussion by highlighting the challenges in phasing out single-use plastics in India and the need for eco-friendly and easy-to-recycle packaging alternatives. Stakeholders, including brand owners and packaging manufacturers, emphasized the importance of a policy framework that considers the transition of MSMEs and promotes the use of alternate packaging.

Mr. Ankit Gupta, General Manager, Corporate Sustainability, ITC Limited, explained the company's approach to plastic usage. The company recognizes that plastic is necessary for certain products such as food, but also looks at alternatives to reduce plastic usage. ITC Limited has a variety of businesses such as paper and packaging and uses synergies within the company to develop sustainable solutions. The company also offers solutions to other brands in the B2B space and has seen a growing demand for sustainable solutions. The Indian government's regulations have created a market for recycled content in packaging, but there are challenges to creating a local supply chain.

Dr. B K Karna, Director, Packaging Clinic & Research Institute (PCRI), highlighted the gap between expectations and reality when it comes to e-commerce packaging. He mentioned that India produces the highest packaging professionals and institutions globally but has only 40-50 packaging varieties, which is a challenge in the e-commerce industry that has seven to eight million products. Mr. Karna also addressed the issue of over-packaging and emphasized the importance of sustainable packaging while keeping the cost economy in mind. Furthermore, he discussed the confusion surrounding biodegradable plastics, such as PLA, and its usage in the packaging industry.

Mr. Vibhore Rastogi, Professor, Indian Institute of Technology, Roorkee, Saharanpur Campus, discussed the need for alternate materials for packaging, but acknowledged that it is the last priority on the list. He noted the four strategies for packaging: eliminate, reduce, recycle or reuse, and alternative materials. He talked about the huge demand for paper and the need to innovate new products that can replace this material. He suggested using non-woody fibrous materials like agro waste, jute, and rice straw, but lamented the poor collaboration between industries and research institutes in India. He emphasized on the need to explore local areas and properties to find suitable materials for packaging. He concluded by lauding the Indian government's CSR initiative for the private industry, and urged that the funds available under CSR be invested in research-based projects.

Mr. Vaibhav Anant, Founder, Bambrew, spoke about the difference between biodegradability and compostability of packaging materials. He highlighted that composting facilities are not yet available in India to decompose the compostable products. Therefore, he urged the government to ban the use of compostable products until the country has a proper supply chain for recovering them. Mr. Anant also emphasized the innovations that Bambrew has

made in developing paper from bamboo, banana fiber, and waste materials, which can replace MLP (multi-layered packaging). Additionally, Bambrew has developed solutions to replace single-use plastics in food packaging materials. However, the company has faced challenges in partnering with large organizations due to bureaucratic hurdles.

Making Words Count @WSDS 2023

Session 1 *Freight Decarbonization – Last Mile and Middle Mile Transportation*	
“	The services sector, especially e-commerce, has a significant role to play in India’s decarbonization efforts. We cannot overlook the high emissions from the middle and last mile transportation and packaging in this sector. It is crucial to address these emissions and work towards more sustainable practices to achieve a greener future. Urgent action is needed to decarbonize small and hard-to-abate sectors like e-commerce, aviation, shipping, and heavy industry for a sustainable future. Innovative solutions such as energy efficiency, electrification, and circular economy can reduce emissions without compromising economic growth. Let’s act now to secure a greener and prosperous tomorrow. ***Mr. R R Rashmi*** ***Distinguished Fellow & Programme Director, TERI***
“	Every delivery is an opportunity to promote clean mobility. E-commerce companies can be ambassadors of sustainability by adopting eco-friendly delivery systems that inspire people to make the switch. Sustainability is a two-way street. The push for clean mobility must come from both buyers and sellers, inspiring each other to move towards a greener future. ***Mr. Sudhendu Sinha*** ***Adviser (Infrastructure Connectivity – Transport and Electric Mobility), NITI Aayog***
“	India is setting the standard for impactful policymaking. With bold and effective initiatives, India is leading the way towards a sustainable and prosperous future. Opportunities abound for Indian OEMs. With innovation and a focus on sustainability, Indian manufacturers can lead the change towards a brighter and greener future. ***Mr. Jasmeet Khurana*** ***Lead, Moving Emerging Markets, WEF***
“	Financing delivery partners is the key to unlocking a sustainable future. Without it, we can’t buy products or achieve our goals of a greener, more prosperous world. Energy efficiency is the future, and retrofitting alone won’t get us there. To build a sustainable tomorrow, we must focus on designing and manufacturing purpose-built EVs that prioritize efficiency and environmental impact. ***Mr. P Sanjeev*** ***Head / VP, EV Micromobility, TVS Motors***
“	To achieve sustainability in transportation, we must focus on the last mile, middle mile, and long haul. While the latter two are key, breaking them down into manageable parts is crucial given the maturity of the ecosystem in these segments. To make a real impact, medium and heavy-duty trucking solutions must be scalable and part of larger fleets. By focusing on scalability, we can accelerate the adoption of sustainable transportation and pave the way for a greener future. ***Ms. Shubhra Jain*** ***Public Policy Manager, Amazon India***
“	Digitization is key to sustainable transportation. Without the necessary infrastructure, battery swapping may be the fallback solution. Let’s prioritize digitization to create a greener, more efficient future. Transparency is the key to unlocking efficient processes. By creating a mechanism for tracking the progress and identifying roadblocks, we can streamline applications and create a more productive future. ***Mr. Akshay Shekhar*** ***CEO, Kazam***
“	The future of sustainable transportation lies in medium and heavy-duty vehicles. By tightening norms and introducing safe standards, we can accelerate the adoption of green technologies and pave the way for a cleaner, more prosperous tomorrow. Green policies and innovative solutions can drive sustainable

	transportation forward. By encouraging the adoption of battery-swappable trucks and advanced green truck rules, we can create a brighter, more sustainable future. ***Ms. Chetna Nagpal*** ***Senior Associate, RMI***
Session 2 ***Creating a Vibrant Ecosystem for Sustainable Packaging Alternatives and Local Packaging Manufacturing***	
“	When e-commerce packages pile up, emissions rise high, for what must be packaged cannot be instantly delivered and must first find a place to lie. Packaging waste from e-commerce may seem small on its own, but with the sheer volume of shipped goods and the need to warehouse them, the environmental impact adds up quickly. It’s important for us to consider the emissions from this sector and find ways to reduce our impact on the planet. ***Mr. Er S Bhardwaj*** ***Deputy Director General, DPIIT***
“	Passing a ban is the first step towards creating a better future. Ensuring that the banned items are no longer used or manufactured within a specified timeline is the real challenge that requires continued effort and vigilance. The shift towards alternate packaging is not just an option but a necessity to address the alarming issue of plastic pollution in our oceans. Sustainable packaging is a conscious decision towards a healthier planet and a brighter future. ***Dr. Suneel Pandey*** ***Senior Fellow & Director, Environment & Waste Management, TERI***
“	Choosing reusable packaging isn’t just a smart business move; it’s also a step towards a cleaner, greener future. Let’s work towards decarbonization in the e-commerce sector by embracing sustainable solutions, one reusable package at a time. Turning waste into wealth through ITC’s recycling efforts is the ultimate win-win for both the planet and the economy. By closing the loop and embracing circularity, we can achieve decarbonization and create a brighter future. ***Mr. Ankit Gupta*** ***General Manager, Corporate Sustainability, ITC Limited***
“	Packaging and shipping can be transformed by sustainable alternatives and circular economy principles. By embracing these changes, the e-commerce sector can create a responsible and resilient supply chain that benefits our planet and our business. Let’s reimagine packaging and delivery for a sustainable future. Cost-effective sustainability is key to transforming e-commerce packaging. By investing in research, collaborating with partners, and leveraging innovation, we can create sustainable solutions that benefit the environment and businesses alike. ***Ms. Shweta Ramdas*** ***Sustainability Leader, Amazon India Operations***
“	Packaging up sustainability through RIP – Reduction, Innovation, and Packaging audit – is the key to delivering a greener future for the e-commerce industry. Let’s wrap up our carbon footprint and deliver a better world for all. Green packaging is more than just a trend, it’s a responsibility towards our planet. ***Dr. B K Karna, Director*** ***Director, PCRI***
“	Redirecting Corporate Social Responsibility (CSR) funds towards research and development is not just an investment in innovation, but an investment in our planet’s future. By focusing on developing new technologies and products that help achieve decarbonization and reduce emissions, we can create a sustainable and prosperous future for generations to come. To create a sustainable future, we must look beyond the baseline scenario and explore new local areas that can transform waste into valuable resources. By embracing innovative solutions to reduce

	emissions from all sectors, including e-commerce, we can create a circular economy that benefits our planet and our communities. ***Mr. Vibhore Rastogi*** ***Professor, IIT-Roorkee, Saharanpur Campus***
“	By shifting away from traditional pulp-based paper manufacturing and embracing sustainable alternatives like bamboo, we can create a more environmentally responsible and economically viable future. By reducing the cradle-to-gate emissions associated with pulp production, we can create a cleaner, greener paper industry that meets the needs of today without compromising the needs of future generations. We need to change how we think about packaging materials and move away from single-use plastics. Although it may have been common practice in the past to use raw food products packed in paper, we now have the technology and knowledge to develop sustainable packaging solutions that are both eco-friendly and effective. Educating and empowering consumers to make better choices can create a more sustainable future for all. ***Mr. Vaibhav Anant*** ***Founder, Bambrew***