FEBRUARY 2022 | VOL. 21

POLICY PULSE

A MONTHLY NEWSLETTER

In This Volume:

FIRST TAKE

Overview

The Union Budget announced by Finance Minister Nirmala Sitharaman has focused on a blueprint for India@100. While there has been a fair share of criticism of the Budget stating that it does not provide the stimulus required to overcome the COVID crisis, most of the experts and businesses have welcomed the Budget. There seem to be more aye's than no's for this Budget. The focus on boosting economic growth through infrastructure spending has been particularly singled out as an important announcement.

The Omicron variant of COVID has continued to trouble countries across the globe but given the need to sustain the economy countries have continued to keep their economy open and lockdowns have been very few and far in-between in most countries.

At the WTO, while the Ministerial Conference that was to be held in Geneva has been postponed countries are continuing to engage with each other and are trying to give final touches to some of the new issues on the table. At a recent conference DDG of WTO, Angela Ellard noted that, "despite the postponement of the 12th WTO Ministerial Conference, members are determined to keep the momentum going and that useful discussions on the full range of topics are taking place regularly." She further noted that members have already harvested some results, such as the conclusion of plurilateral negotiations on Services Domestic Regulation and the launch of the three environmental initiatives.

Global trade and economic prospects are not particular rosy now, but the next few months will give a better picture of where the world is headed in 2022.

We hope you enjoy this issue of Policy Pulse.

IN THIS ISSUE

ECONOMIC SNAPSHOT

GLOBAL ECONOMY

According to the World Bank's latest Global Economic Prospects report, following a strong rebound in second half of 2021, the global economy is entering a pronounced slowdown amid new variant followed with a rise in inflation, debt, and income inequality. These could endanger the recovery in emerging and developing economies. After rebounding to an estimated 5.5% in 2021, global growth is expected to slow down in 2022 to 4.1%.

Growth in advanced economies is expected to decline from 5% in 2021 to 3.8% in 2022 and 2.3% in 2023. In emerging and developing economies, however, growth is expected to drop from 6.3% in 2021 to 4.6% in 2022 and 4.4% in 2023. Although output and investment in advanced economies are projected to return to pre-pandemic trends in 2023, they will remain below in emerging market and developing economies (EMDEs).

As per World Bank, major economies including the **United States, China** and countries in the **Euro Zone** are expected to slow down in 2022. A resurgence in new variant infections is likely to disrupt economic activity in the near term and could worsen growth projections if it persists.

United States

In the **US**, after a blistering pace of growth in 2021, economists expect a downshift in 2022 as it grapples with labour and supply shortages and rampant inflation. Goldman Sachs cut the US GDP forecast in 2022 to 3.2% from earlier 3.8%. Due to the labour and supply shortages in the US, GDP may take longer to return to pre-pandemic levels.

Euro Zone

As per Goldman Sachs, the **Euro Zone** will grow faster than the US in the next two years primarily due to a difference in government policy. It also expects that European Union countries are expected to invest large sums of money in the coming years.

China

As per World Bank, growth in **China** is set to ease from an estimated 8% in 2021 to 5.1% in 2022, partly due to the lasting effects of the pandemic. Goldman Sachs cut its 2022 forecast for China economic growth to 4.3%, down from 4.8% previously. Consumption is likely be affected the most in China but exports are less effected due to limited disruptions to supply chains.

GDP Growth Projections (%)				
	2020	2021	2022-P	2023-P
World Output	**–3.1**	**5.9**	**4.4**	**3.8**
Advanced Economies	**–4.5**	**5.0**	**3.9**	**2.6**
United States	–3.4	5.6	4.0	2.6
Euro Area	–6.4	5.2	3.9	2.5
Japan	–4.5	1.6	3.3	1.8
United Kingdom	–9.4	7.2	4.7	2.3
Emerging Market and Developing Economies	**–2.0**	**6.5**	**4.8**	**4.7**
China	2.3	8.1	4.8	5.2
India	–7.3	9.0	9.0	7.1
ASEAN-5 *(Indonesia, Malaysia, Philippines, Thailand, Vietnam)*	–3.4	3.1	5.6	6.0
Latin America and the Caribbean	–6.9	6.8	2.4	2.6
Middle East and Central Asia	–2.8	4.2	4.3	3.6
World Trade Volume (Goods and Services)	**–8.2**	**9.3**	**6.0**	**4.9**
Advanced Economies	–9.0	8.3	6.2	4.6
Emerging Markets	–6.7	11.1	5.7	5.4

Source: IMF World Economic Outlook January 2022, P=Projection

ASEAN

ASEAN is on-track to become the fourth-largest economy in the world. An established and coordinated pandemic response efforts, along with the implementation of the Regional Comprehensive Economic Partnership (RCEP) and digital transformation is expected to drive inclusive growth and development in the region. Public-private cooperation is also key to ASEAN's sustainable, resilient and green future. Despite the decline in foreign direct investment (FDI), ASEAN remained an attractive investment destination. To support recovery and resilience building, ASEAN launched the COVID-19 ASEAN Response Fund and cooperated with external partners to enhance regional health security. With the RCEP agreement came into force on 1 January 2022 for a majority of countries, ASEAN resolves to keep markets open while strengthening regional economic integration towards post-pandemic inclusive recovery.

As per IMF, inflation is expected to remain elevated in the near term, averaging 3.9% in advanced economies and 5.9% in emerging market and developing economies in 2022. The rapid increase in fuel prices is also expected to moderate during 2022–23, which will help contain headline inflation.

Global trade is expected to moderate in 2022 and 2023. Assuming that the pandemic eases over 2022, supply chain problems are expected to decline later in 2022. Moderate global goods demand will also help reduce imbalances. Cross-border services trade particularly tourism is expected to remain subdued.

Regional Outlook

East Asia and Pacific: Growth is projected to decelerate to 5.1% in 2022 before increasing slightly to 5.2% in 2023.

East Asia and Pacific (EAP) Forecast Summary					
	2019	**2020**	**2021**	**2022F**	**2023F**
GDP	**5.8**	**1.2**	**7.1**	**5.1**	**5.2**
Exports	1.8	-1.5	14.4	4.9	4.7
Imports	-1.3	-4.5	10.4	6.0	5.9

Source: World Bank

Europe and Central Asia: Growth is forecast to slow to 3.0% in 2022 year and 2.9% in 2023.

Europe and Central Asia Forecast Summary					
	2019	**2020**	**2021**	**2022F**	**2023F**
GDP	**2.7**	**-2.0**	**5.8**	**3.0**	**2.9**
Exports	3.6	-6.7	10.5	5.7	4.9
Imports	2.9	-4.6	10.0	5.5	6.1

Source: World Bank

Latin America and the Caribbean: Growth is projected to slow to 2.6% in 2022 before increasing slightly to 2.7% in 2023.

Latin America and the Caribbean Forecast Summary					
	2019	**2020**	**2021**	**2022F**	**2023F**
GDP	**0.8**	**-6.4**	**6.7**	**2.6**	**2.7**
Exports	0.8	-8.5	8.3	5.3	4.6
Imports	-0.8	-14.0	16.1	4.1	4.9

Source: World Bank

Middle East and North Africa: Growth is forecast to accelerate to 4.4% in 2022 before slowing to 3.4% in 2023.

Middle East and North Africa Forecast Summary					
	2019	**2020**	**2021**	**2022F**	**2023F**
GDP	**0.9**	**-4.0**	**3.1**	**4.4**	**3.4**
Exports	-5.7	-9.7	5.6	7.5	5.0
Imports	-7.7	-12.2	6.4	4.7	4.3

Source: World Bank

South Asia: Growth is projected to accelerate to 7.6% in 2022 before slowing to 6.0% in 2023.

South Asia Forecast Summary					
	2019	**2020**	**2021**	**2022F**	**2023F**
GDP	**4.4**	**-5.2**	**7.0**	**7.6**	**6.0**
Exports	1.7	-7.6	18.4	7.6	8.6
Imports	-1.6	-11.6	24.5	8.4	9.2

Source: World Bank

Sub-Saharan Africa: Growth is forecast to accelerate slightly to 3.6% in 2022 and rise further to 3.8% in 2023.

Sub-Saharan Africa Forecast Summary					
	2019	**2020**	**2021**	**2022F**	**2023F**
GDP	**2.5**	**-2.2**	**3.5**	**3.6**	**3.8**
Exports	3.0	-12.1	8.8	5.5	5.5
Imports	5.0	-10.7	9.3	6.3	5.7

Source: World Bank

INDIAN ECONOMY

As per the Reserve Bank of India (RBI), India will grow at 9.2% in 2021-22 compared to a contraction of 7.3% in the previous year. S&P expected India to grow at 9.5%. Moody's projection put India's growth forecast at 9.3%, and Fitch Ratings projected an 8.7% expansion. The United Nations World Economic Situation and Prospects (WESP) 2022 report said that India's GDP is forecast to grow at 6.7% in 2022, a contraction from 9% in 2021. Growth is projected to further slow down to 6.1% in fiscal year 2023. It also says that robust export growth and public investments will reinforce economic activity, but high oil prices and coal shortages could put the brakes on economic activity. Oxford Economics revised India's GDP growth forecast to 7.9% from earlier 7.8% for the current financial year 2021-22 (FY22), citing more durable recovery and higher Covid-19 vaccination rates. The IMF has also cut India's economic growth forecast to 9%, joining the other agencies which have downgraded their projections.

Economists believe that the Indian economy is sailing through rising coronavirus cases, spiralling commodity prices and spiking inflation. Continuing massive vaccination drives and 'precaution' doses for select categories of people will provide a firewall against any steep spike in COVID cases. Experts opined that the economy is expected to see a strong recovery in the coming months and even going past the pre-COVID levels unless the pandemic plays spoilsport. Sustained growth is needed for accelerating job creation, removing poverty and bringing in prosperity in the rural and semi-urban areas. They also expect the services sector to show a strong reading amid the lifting of most restrictions. India's exports continued to register an impressive recovery, emerging as a key driver of the higher growth trajectory.

As per the Economic Survey 2021-22 released by the Ministry of Finance, India will remain fastest-growing major economy in the world during 2021-24. As per the Survey, the projection for 2022-23 assumes that there will be no further pandemic related economic disruption, monsoon will be normal, oil prices will be in the range of USD70- USD75/bbl, and global supply chain disruptions will steadily ease over the course of the year.

The Survey states that agriculture and allied sectors have been the least impacted by the pandemic and the sector is expected to grow by 3.9% in 2021-22 after growing by 3.6% in the previous year. The industrial sector went through a sharp rebound from a contraction of 7% in 2020-21 to an expansion of 11.8% in this financial year. The manufacturing, construction and mining sub-sectors went through the same swing. The services sector has been the hardest hit by the pandemic, especially segments that involve human contact. This sector is estimated to grow by 8.2% following last year's 8.4%. Both the finance/ real estate and the public administration segments are now well above pre-COVID levels. However, segments like travel, trade and hotels are yet to fully recover. There has been a boom in software and IT-enabled services exports even as earnings from tourism have declined sharply.

On the exports and imports front, merchandise exports have been above US$ 30 billion for eight consecutive months in 2021-22. From a demand perspective, India's total exports are expected to grow by 16.5% in 2021-22 surpassing pre-pandemic levels. Imports are expected to grow by 29.4% in 2021-22 surpassing corresponding pre-pandemic levels.

Performance of Key Indicators

As per the latest data released by the Government of India, India's eight core sectors grew by 3.8% in December 2021 compared to 3.4% in November 2021. Coal output increased by 5.2%, while that of refinery products increased by 5.9%. The increase in output in December 2021 was largest for natural gas, which posted an increase of 19.5%. Cement followed closely, with its output rising 12.9%. Production of fertilizers and electricity increased by 3.5% and 2.5%, respectively. Two sectors which saw a contraction in their output were crude oil and steel. While crude oil output fell 1.8%, steel production declined 1.0%.

Industrial production index data for December 2021 is scheduled to be released in second week of February 2022. The most recent data showed industrial growth slumped to a nine-month low of 1.4% in November 2021.

However, the Goods and service tax (GST) collections in January 2022 hit a staggering INR 1.4 lakh crore, the highest since the rollout of the indirect tax regime is a key indicator of economic growth.

FREE TRADE AGREEMENTS/ BILATERAL DISCUSSIONS

INDIA

India-Sri Lanka

Trinco Oil Tank Farm: Both countries jointly signed an agreement to redevelop the strategic World War II-era oil tank farm in the island nation's eastern port district of Trincomalee. This is a new milestone towards economic and energy partnership. According to the statement, the Union Cabinet approved the proposal by the Ministry of Power to allocate 24 oil tanks for Ceylon Petroleum Corporation and 14 tanks of the Lower Oil Tank Complex already in use by Lanka IOC for the company's business activities. Further, to implement a development project by a company named Trinco Petroleum Terminal Pvt. Ltd. of the remaining 61 tanks, 51% to be owned by Ceylon Petroleum Corporation and 49% by Lanka IOC.

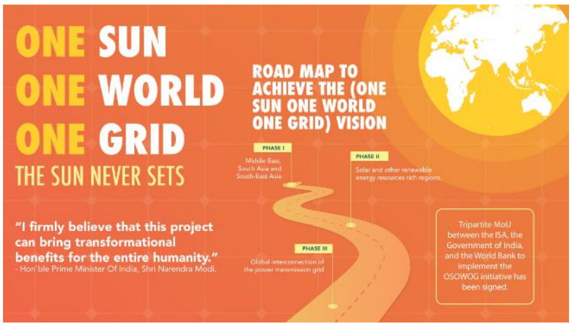
Science and Technology cooperation extended for 3 years: At the India – Sri Lanka 5th Joint Committee on S&T Cooperation extends the collaboration with a focus on new areas such as waste-water technologies, biotech, sustainable agriculture, aerospace engineering, robotics, big data analytics, artificial intelligence, as well as industrial collaborations.

Indian aid for Sri Lanka: India will extend facilities of about US$900 million which includes $400 million currency swap and US$500 million as deferred payment for settlement to the Asian Clearing Union (ACU).

India – UK

India-UK 2030 Roadmap: Shri Bhupender Yadav, Union Minister of Environment, Forest and Climate Change had an in-person meeting with the UK Secretary of State for International Trade & COP26 Presidency Champion on Adaptation and Resilience, the RT Hon Anne-Marie Belinda Trevelyan. During the meeting, both discussed issues relating to India's new commitments at COP 26, India-UK collaboration on climate change and the India-UK 2030 Roadmap.

India and UK launched two joint initiatives One Sun One World One Grid (OSOWOG) and Infrastructure for Resilient Island States (IRIS). Both sides addressed how to strengthen their relationship in cutting-edge technology research and development as well as the transfer of proven technologies to help advance low-carbon pathways. Further, both sides will also explore continuing to contribute to the success of COP26 by taking tangible steps to meet our pledges through bilateral collaboration.



India-UK FTA: The UK Minister and Indian Commerce minister formally launched a bilateral comprehensive FTA in January 2022 and excepted to double the trade to over US$ 100 billion by 2030. The FTA aimed at boosting economic ties, which will mutually benefit both countries. The FTA will be concluded the negotiation by the end of the year or early 2023. This will help in boosting Indian exports from several sectors such as leather, textile, jewelry, and processed Agri- products. The Trade Deal highlighted Scotch whisky, financial services, and cutting-edge renewable technology among some other of the key sectors set to benefit.

India – France

The Union Minister Bhupendra Yadav and French Ambassador Emmanuel Lenain discussed issues relating to One Ocean Summit; Cooperation on Plastic Pollution, Global Treaty on Plastics; High Ambition Coalition on Biodiversity Beyond National Jurisdiction (BBNJ); and COP15.

'The One Ocean Summit will be an opportunity to gather political leaders and all stakeholders ready to make a decisive contribution with bold, tangible, and actionable initiatives and commitments, however, India is fully determined to protect its maritime interests, while it supports the maintenance of rule-based maritime systems, as mandated under UN Convention on the Law of Seas (UNCLOS), 1982'- the Environment Minister.

Further, both sides further discussed how COP 15 will help in developing a holistic Post-2020 Global Biodiversity Framework (GBF) taking into account poverty eradication, means of implementation and resource mobilization, etc. And also to strengthen activities in 2022 under the Indo-French Year of Environment.

India – USA

In pursuant of 12th India – USA Trade Policy Forum, Department of Agriculture and farmer's welfare (DAC&FW), Government of India and US Department of Agriculture (USDA) have signed a framework agreement for implementing the '2 Vs 2 Agri market access issues'. This included inspection/oversight transfer for Indian mangoes & pomegranate and market access for pomegranate arils from India and market access for US cherries and U.S Alfalfa hay. Mango and pomegranate exports will start from Jan – Feb 2022 and pomegranate aril exports from April 2022. Exports of Alfalfa hay and cherries from the USA will begin in April 2022.

Furthermore, the Department of Animal Husbandry and Dairying (DAHD) indicated its readiness to provide market access for US pork and requested a signed copy of a final sanitary certificate from the US to complete the process.

India- South Korea

During the bilateral meeting between Union Minister Piyush Goyal and South Korean Trade Minister Yeo Han Koo, held discussions covering the various topics of Bilateral Trade and Investment related aspects. The Ministers agreed to impart fresh momentum to the discussions on CEPA up-gradation negotiations and also promote extensive B2B interactions on trade and investment between the Industry leaders of the two countries.

Highlights:

- Indian side flagged market access issues faced by industry players such as steel, engineering, and Agri-products and also regulatory issues in Korea. Other products that are facing market access issues in Korea are bovine meat, grapes, pomegranate, okra and eggplants.

- The Indian side also raised its concerns over the widening trade deficit with Korea.

- During the meeting, India sought investments from Korean companies in sectors like semiconductors, chemical batteries for e-vehicles, and technical textiles.

Both ministers agreed to address issues raised by industry on both sides and directed their respective negotiating teams to meet on a regular basis in order to conclude the CEPA up-gradation negotiations as soon as possible and in a timely way.

This regular negotiation will serve as a forum to examine the challenges faced by the business communities in both nations, as well as new trade-related topics such as supply chain resilience.

OTHERS

POWERGRID and Africa50

Africa50- the PAN-African infrastructure investment platform and Power Grid Corporation of India Limited (POWERGRID) signed a Joint Development Agreement to develop the Kenya Transmission Project on a public-private partnership basis.

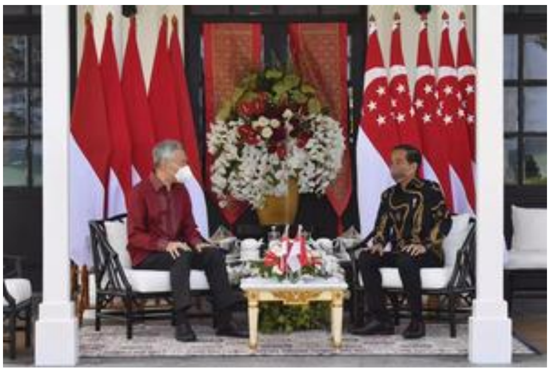
The project entails the development, financing, construction, and operation of the 400kV Lessos – Loosuk and 220kV Kisumu – Musaga transmission lines under a public-private partnership (PPP) framework. PowerGrid will contribute technical and operational experience to the project, while Africa50 will bring project development and financing skills, as well as function as a bridge between the Kenyan government and private investors, as part of this development partnership.

The signing of this agreement demonstrates PowerGrid and Africa50's resolve to continue dedicating resources to accelerate project development activities until financial close. Once the project is completed, it will be the first independent power transmission (IPT) in Kenya and will set a reference point in Africa as the first financing of transmission lines on a PPP basis.

This project will also improve power transmission supply and reliability in western Kenya, as well as provide a demonstration effect to encourage private sector investment in the extension of Africa's power transmission networks, which is vital to bridging the continent's electricity access gap.

Singapore – Indonesia

Both the country leaders have in a bilateral meeting addressed long-standing issues - Extradition, Airspace and Defense Agreement, and endorsement pacts on financial regulation, innovation and energy cooperation.



<u>Flight Information Region (FIR):</u> Both the countries signed FIR to ensure air traffic control services are provided safely while allowing Singapore’s Changi Airport to grow in long term as an International air hub. Both have agreed to realign the boundary between the Jakarta FIR and the Singapore FIR as part of the FIR Agreement. The provision of air navigation services in portions of the airspace within the realigned Jakarta FIR will be delegated to

Singapore. This agreement will be in effect for 25 years and may be extended by mutual consent if both parties agree that it is in their best interests.

Defense cooperation: Through increased collaboration and tighter interaction between both military, the defense pact will deepen the strategic connection between both countries' defense establishments. The Singapore Armed Forces (SAF) will continue to conduct military training and exercises in Indonesian training areas "with full respect" for Indonesia's territorial sovereignty, including its archipelagic and territorial waters and airspace, and in accordance with the United Nations Convention on the Law of the Sea (UNCLOS), according to the Ministry of Foreign Affairs.

Extradition: Both nations will be able to authorize extradition for a wide range of crimes. This is provided that the extradition is carried out in line with both nations' laws and is subject to the treaty's safeguards and provisions. There is no time limit on the extradition pact.

Other MoU Include:

- MOU on Financial and Economic Cooperation, which covers emerging areas of collaboration in financial services, climate finance and the digital economy.

- MOU on Bilateral Partnership on Green and Circular Economy Development, potentially paving the way for collaborations on recycling and waste management.

- MOU on Energy Cooperation, allowing officials from Singapore and Indonesia to work together on cross-border electricity trading, hydrogen and carbon capture and other energy-related initiatives.

- MOU on Central Banking, Financial Regulation, and Innovation, to promote collaboration on projects involving payment innovation and to formalize cooperation across the central bank and regulatory functions.

- The education ministries of both countries had also signed a Human Capital Partnership Arrangement at the end of January to open up new areas of educational cooperation.

Singapore – Pacific Alliance

At the Pacific Alliance Summit in Colombia, Singapore signed a deal known as – Pacific Alliance – Singapore Free Trade Agreement (PASFTA). The Pacific Alliance is a Latin American trade bloc formed by Chile, Colombia, Mexico and Peru, which all border the Pacific Ocean.

With the signing of the PASFTA and the Pacific Alliance-Singapore joint declaration, Singapore will become the first Associate State of the Pacific Alliance (PASFTA) demonstrates our shared commitment to improve the lives of people in both our regions. It generates new opportunities for growth, jobs and prosperity in the post-pandemic global economy.

"It assures businesses that their forays into our respective markets will be underpinned by a conducive trade architecture. It fosters further cooperation in areas such as e-commerce, customs and trade facilitation, and maritime services."

USA-Japan

USA – Japan seeking to deepen their defense cooperation, will sign a five-year agreement on sharing the cost of the American military presence in Japan. Washington and Tokyo will also be signing an agreement to collaborate on advanced space systems and counter-hypersonic missile technology research and development. This US-Japan Alliance is important because both want to counter China increased defense activities in the South China Sea and challenge free & secure Indo-Pacific region threat from North Korea activities – of testing missiles.

Japan-Australia

Japan – Australia signed a defense treaty – the Reciprocal Access Agreement (RAA), apart from its strategic significance in Asia and Indo-Pacific. This is aimed towards an empowered and committed regional strategic network, both countries want to counter China's influence in the region.

KEY POLICY DISCUSSION AREAS

Formalization of Cryptocurrency Space

One of the crucial highlights of the budget has been the announcement of the launch of Central Bank Digital Currency (CBDC) using blockchain and other technologies starting 2022-23. However, it is important to note that CBDC and cryptocurrencies are fundamentally different in how their circulation happens in the economy. While the central bank will issue CBDCs, cryptos come into circulation through a process called mining that takes place in a decentralised manner. Though nothing specific regarding cryptocurrencies were announced in the budget, experts are of the view that the announcement in the budget that transfer of digital assets will be taxed at a rate of 30 per cent is an indication of the Government legalizing cryptocurrencies. The recipient of the virtual digital asset gift is also proposed to be taxed. The government is expected to bring about regulations for cryptocurrencies soon.

Monetary Policy Environment

U.S Federal Bank has indicated that it will likely soon hike the repo rate/ interest rate and taper down its balance sheet to lower inflation. Inflation in the U.S is at a four-decade high. The labour wage inflation is making it hard for employers to find workers to run the manufacturing operation smoothly leading further to supply constraints. The RBI has, however, indicated that it will likely maintain its accommodative stance on interest rates. The decision seems to be based on the calculation that our exports, risk capital mobilisation by the robust capital market and our Forex which currently stands at nearly $635 billion could provide a buffer. But the low-interest rate in India is also responsible for high inflation which is majorly hurting the rural consumption and demand as well as manufacturing input procurement. The RBI may increase the interest rate to lower the inflationary pressure or the government may step in and provide further CAPEX for derisking of supply chain based disruptions and growing consumption levels. With the government indicating that it has adequate room for taking fiscal measures, there are expectations for acceleration of projects under the PM Gati Shakti Mission and National Infrastructure Pipeline.

New Labour Codes

Four new labour codes are likely to be introduced in FY22-23 in India. These new labour codes are - the Code on Wages, Industrial Relations Code, Social Security Code and the Occupational Safety, Health and Working Conditions Code.

The new labour codes are expected to simplify and streamline the labour laws as the 40 central laws have been subsumed into these four codes. The codes aim to reduce employers' compliance burden to provide ease of doing business, increase the employment rate, and extend the protection mechanism to the unorganized sector and gig economy workers. These codes will impact the complete employee life-cycle; a four-day work week with 12 hours of mandatory work per day may soon become a reality. Employees' take-home salary is expected to reduce as the codes intend to increase the benefit under the social security schemes like the EPF, EPS, and ESI. Interestingly, the new industrial relation code will raise the limit for requiring government permission for the closure of industrial operations from 100 to 300 workers.

India's Vision 2047 (Chemical)

India is on the path of setting a clear vision that the chemicals and petrochemicals sector shall achieve by the year 2047. The development of this sector is fundamental for fueling many of India's growth aspirations, including doubling of farm income, developing the pharma manufacturing hub and meeting climate action goals. The three main areas that the sector believes will foster growth are the development of innovation through R&D capabilities, simplifying regulations, and technological upgradation.

The R&D capability is necessary to reduce India's import dependence on feedstocks like API, crude oil, etc. and also to sharpen the competitive edge. Secondly, while PLI schemes can be a vital enabler of sector growth, a strong regulatory environment is required to support and sustain this growth. Sector-specific industry clusters like 'Petroleum, Chemicals and Petrochemicals Investment Regions' (PCPIRs) shall be developed with a complete ecosystem for effective and targeted growth, the circular economy shall be an integrated component, anomalies in duty structure be removed and other such regulatory measures that make the compliances easier be initiated. The incentive for the adoption of green technology shall be provided and active collaboration for access to such technology be encouraged for long-term sustainability and growth.

Regulation on Neo-Banks

The fintech industry is revolutionizing the system of lending in India. Digital economy and Fintech were highlighted as enablers of inclusive development in the budget.

Access to credit has become easier for the rural population, the unbanked and underbanked population of the economy. Due to its pivotal role in driving the growth of India's financial inclusion, it has come to be identified as the Neo bank of the economy. There is a high aspiration from this sector to create a significant financial arrangement for the Small Manufacturing Enterprises (SMEs). But as the sector is growing, so is the need for regulations. Unbridled lending can result in the creation of more Non Performing Assets (NPAs) into the financial system, creating troubles for the central bank. But with the central bank's regulation, it can be ensured that prudence is employed in the lending operations of the fintech companies. The central bank, RBI has launched the department of fintech on January 4, 2022. The department will play a crucial role in research-based policy intervention into this space as well as in the promotion of innovation and other opportunities.

POLICY – REGULATORY BRIEF

INDIA

Odisha and GAIL sign an MoU

The agreement was signed by the public sector unit and the Industrial Promotion and Investment Corporation Odisha (IPICOL) in Bhubaneswar. The MoU seeks to prepare a feasibility study for setting up plants in areas of green hydrogen, green ammonia, and renewable energy like solar & wind and for cooperation in the production of eco-friendly fuels in the state.

UP: New Excise Policy

The UP government has issued a new excise policy for the fiscal year 2022-23 to assist farmers in earning more money from their crops. Under the new policy, the price of liquor will not be increased, but the license fee will be increased by 7.5%. This will provide quality liquor to customers at reasonable rates. The move is aimed at generating employment and providing a market for farm produce, besides attracting large-scale investors. Liquor made will be supplied in Glass bottles rather than tetra pack but will be allowed in case of difficulty of procuring glass bottles.

Aggregators Policy on Electric Vehicles

The Delhi government announced an "Aggregators' Policy" to mandate ride aggregators and delivery services to use electric vehicle (EV) fleets. The proposal aims to encourage the use of electric vehicles (EVs) in order to reduce air pollution in Delhi.

In their newly on-boarded fleets, ride aggregators and delivery firms will be required to use EVs. In the next three months, at least 10% of their new two-wheelers and 5% of their new four-wheelers must be electric. According to the government, this will be increased to 50% of all new two-wheelers and 25% of new four-wheelers by March 2023.

Vision Document-Volume 2 "$300 billion Sustainable Electronics Manufacturing & Export by 2026"

In collaboration with ICEA, the Ministry of Electronics and Information Technology (MEITY) released a 5-year roadmap and Vision Document for the electronics sector. This plan is the second volume of a two-part Vision Document, the first of which was announced in November 2021 and was titled "Increasing India's Electronics Exports and Share in GVCs." This report provides a year-by-year breakdown and output predictions for the numerous items that would lead India's transformation US$300 billion electronics manufacturing powerhouse.

Mobile phones, IT hardware, consumer electronics, industrial electronics, auto electronics, electronic components, LED lighting, strategic electronics, PCBA, wearables and hearables, and telecom equipment are among the key products expected to drive India's growth in electronics manufacturing.

India-UAE set up Venture Capital (VC) Fund

The VC fund is about $150 million launched from Indian Pavilion at Expo 2020. The VC fund is the first of its kind to be launched in the UAE, with the goal of sourcing, investing in, and nurturing potential startups through an accelerator to fuel the growth of India-UAE start-ups. It will be funded by investors from the UAE, India, and the wider GCC region. This was announced by Ajai Chowdhry, founder of HCL and Chairman of the FICCI Startup Committee.

'Grama One' program in 12 districts of Karnataka

Grama One is envisaged to be a single point assistance center for all citizen-centric activities at the village level which include G2C services, banking services, RTI queries, etc. It is provided that the government services will be at the doorstep without making them spend money. The initiative aims to deliver Aadhar Cards, Ration Cards, and other services connected to agriculture, horticulture, revenue, women's welfare, and child welfare ministries. It would also help to decentralize power by reducing the rush at Taluk offices.

Banking on Electric Vehicles in India

A report on the importance of priority-sector recognition for retail lending in the electric mobility ecosystem was released by NITI Aayog, Rocky Mountain Institute (RMI), and RMI India. The report includes considerations and recommendations to help the Reserve Bank of India (RBI) decide whether or not to include electric vehicles (EVs) in its priority-sector lending (PSL) guidelines.

By 2025, banks and non-banking financial firms (NBFCs) in India might have a market size of Rs 40,000 crore (USD 5 billion) and Rs 3.7 lakh crore (USD 50 billion) for electric vehicle (EV) financing. However, EV retail financing has been difficult to take off.

Electric two-wheelers, three-wheelers, and commercial four-wheelers are among the first segments to be prioritized under PSL, as per the report. Other ministries and industry stakeholders would need to be involved in the future to ensure that the rules created will effectively boost EV investment in India.

The report also recommends a clear sub-target and penalty mechanism for priority sector lending to renewable energy and EVs to maximize the impact of their inclusion. It also advises that the Ministry of Finance recognize EVs as an infrastructure sub-sector, as well as the inclusion of EVs as a separate reporting category under the RBI. These multifaceted solutions are required not only for EV adoption and businesses but also for the financial sector and India's net-zero aim of 2070.

Draft Policy on Energy Storage Systems (ESS)

This is to promote the creation of storage systems on a large scale across the country. The policy aims at the creation of a technology-agnostic storage system across the value chain of the electricity sector viz. at generation, transmission, and distribution levels. The Union Minister of Power and New and Renewable Energy Mr. R.K. Singh met with various developers & industry stakeholders.

He emphasized the importance of establishing large-scale storage systems in the country. Under the Electricity Act, Energy Storage Systems (ESS) is required to be an essential element of the power system, and the establishment of standalone ESS is a delicensed activity.

ESS will benefit generating companies, state distribution companies, grid operators, and other energy value chain actors. They will improve transmission system usage by facilitating peak shifting, peak shaving, ramp up/ramp down, and frequency control. ESS is regarded as critical for a smooth transition from coal-based to renewable energy sources and a cleaner environment. He highlighted the aspects of the proposed policy, stating that storage will now be included in the Renewable Purchase Obligation.

According to the planned policy, ESS developers will be granted Inter-State Transmission System (ISTS) connectivity through General Network Access (GNA), allowing them to sell/purchase power from anywhere in the country. The amount of ESS included in Round-The-Clock (RTC) Renewable Energy will be counted as a Renewable Purchase Obligation (RPO) for storage. ESS may be given Renewable Energy Certificates (RECs). Discoms and obligated entities can set up their own storage, or they can purchase storage capacity or lease storage space from public or private ESS providers. Any sale of electricity from storage or sale/lease of storage space may be made by open competitive bidding, power exchange, or tariff determined under Section 62 of the Electricity Act. The policy recommends that the transmission cost for RE be waived both when charging the storage and when selling the stored RE.

WORLD

China: Draft guidelines for Genetically Modified (GM) Crops

China has published trial rules to allow genetically modified crops to be grown on its soil as part of Beijing's goal for more modern agriculture and self-sufficiency in food supply. This move is to boost food security in the country simultaneously to decrease foreign dependence. The Ministry of Agriculture and Rural Affairs issued guidelines on January 24 that "stipulate that once gene-edited plants have completed pilot trials, a production certificate can be applied for, avoiding the long field trials required for the approval of a GM plant. To start as a pilot crop, China could plant 33 million hectares of GM Corn.

OPINION COLUMN

Geopolitics
Behind the Clutter
Anjali Mahto

India-China Decoupling endeavor

Despite efforts for an economic decoupling, India's bilateral trade with China has increased by 44 per cent in the year 2021. Our total import from China is at $97.5 billion, a 46.1 per cent jump from $66.7 billion in 2020. At the same time, our trade deficit has increased from $45.9 billion in 2020 to $69.4 billion in 2021.

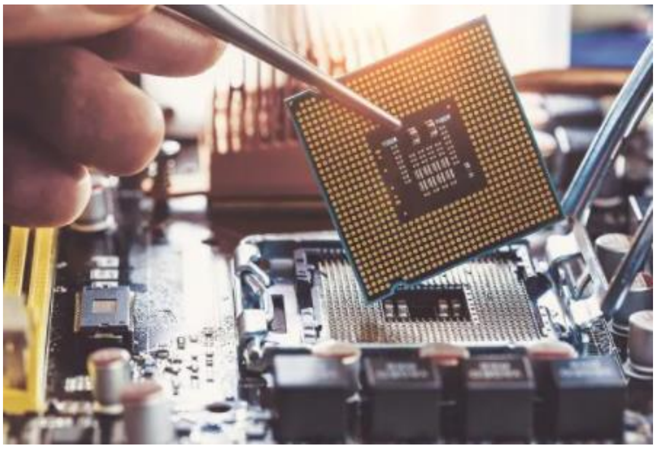
Predominantly, India has huge import dependence on China for electrical and electronic goods. The government has identified this sector as crucial for realising India's aspirations for achieving a US$5 trillion economy by 2025, developing global manufacturing hubs, increasing financial inclusion and meeting the climate action goals such as Electronic Vehicle (EV) push. Having large dependence on supply chains from China which is not a trusted partner, can jeopardise all these growth aspirations.

Therefore, India needs to diversify its supply chains away from China to reduce this dependency and become more resilient. Secondly, it needs to develop a complete industrial manufacturing ecosystem of electronic goods. If manufactured on a large scale within India, the locally sourced manufacturing components will bring down the manufacturing cost of the finished goods and make them competitive in pricing. But the promotion of local manufacturing shall not be hostile to imports of manufacturing components for electronic devices. Instead, cheaper but standard imports should be encouraged by reducing tariffs to facilitate assembly operations to reach a large scale of manufacturing. For the next financial year, the Union Budget announced on February 1 has announced calibration of custom duty rates in wearable, hearable and electronic smart meter devices segments. Duty concession will be provided for the parts of the transformer of mobile phone chargers, camera lens, and certain other items.

Though initially, huge imports might result in a low share in the domestic value addition ratio, expanding the production volume over time will bring down the price and make them globally competitive. The local manufacturing of raw materials shall be explicitly promoted for those product segments that can succeed in large-scale production. The government has announced incentive for 100 local firms to develop integrated circuits, Chipsets, System on Chips (SoCs), Systems & IP Cores and semiconductors linked to design. Technology Minister Ashwini Vaishnav has commented that the encouragement will lead to the development of "the complete semiconductor ecosystem - from the design of semiconductor chips to their fabrication, packing and testing in the country". Further, India has a geopolitical advantage as businesses plan to shift their manufacturing bases away from China to other Asian regions after facing supply disruptions during the pandemic.

To lure global businesses to manufacture in India, an outlay of $10 billion for developing semiconductors and display manufacturing ecosystems has been approved. The amount of Capex is expected to bring an investment of 1.67 trillion rupees ($8.8 billion) and create about 35,000 high-quality and nearly 100,000 indirect jobs.

According to a statement, "India's government will extend fiscal support of up to 50% of a project's cost to eligible display and semiconductor fabricators." This has resulted in investment commitments from tech giants like Foxconn of Taiwan. The huge employment generation target of the semiconductor manufacturing clusters will boost the consumption at the lower end of the pyramid and further the economic demand and growth.



While the PLI schemes will enable the manufacturing sector, the government shall provide the requisite policy support to reduce existing cost disabilities and provide a competitive edge in the global market. For instance, an effective policy framework is needed for the issue of labour that arises from the huge demand of workers projected to be required by the sector to meet the manufacturing targets. Such a huge workforce will have a pool of workers from different geographical areas, many of them having commuting issues. Developing a huge workforce will need policy aid such as housing facilities near the manufacturing units.

Similarly, there is a need for promoting R&D capabilities that foster innovation, tax deduction, GST rationalisation, export incentives, technological upgradation, reduced litigation, skilled manpower and friendly regulatory policies.

The budget for FY 2022-23 has announced an allocation of five per cent from the annual collections under the Universal Service Obligation Fund to promote R&D and commercialisation of technologies and solutions for increasing penetration of affordable internet and mobile services in rural areas. For India to become a global leader in the electrical and electronic goods space and reduce its dependence on China, the government shall continue to provide policy support to the sector in the next 4 to 5 years and that is a welcome step.

(The writer is an Account Executive at VeKommunicate)

Agri - Economy
Shreesh Kaushik

Drone Technology in Indian Agriculture

India's agricultural sector contributes around 18% to India's GDP (Gross Domestic Product). It is considered to be the main source of livelihood for about 58% of the country's population, especially in rural areas. No matter how much Indian agriculture contributes to GDP, our country will continue to improve productivity and efficiency in this sector to the highest level. Several magnitude and concerns need to be identified, supported, and equipped with decisions. Improper crop monitoring methods, watering, use of pesticides, and many other necessary agricultural activities are currently in use. Resources are inadequate, not distributed by weather conditions, or have never been used in the most efficient way — the reason for which is often the decline in Return on Investment (ROI).

These barriers have provided many opportunities for growth and development in the technological world. The impact of technology on the agricultural sector has always been positive since its inception. As governments and businesses around the world realized the importance of food security and the consequences of environmental degradation, pollution, and water scarcity, the urgency to overcome certain obstacles arose.

Benefits of Drones to Indian Farmers

Drones will not only improve overall performance but also encourage farmers to solve various other obstacles and reap many benefits from agricultural precision. With the market for agricultural drones reaching $ 1.3 billion, UAVs (unmanned aerial vehicles) close the gap between human error and inefficient farming practices. The purpose of adopting drone technology is to eliminate any speculation or ambiguity and instead focus on accurate and reliable information.

External factors such as climate, soil conditions, and temperature play an important role in agriculture. The agricultural drone gives the farmer the ability to adapt to a particular environment and make informed decisions accordingly. The data obtained helps control plant health, plant treatment, crop testing, irrigation, and field soil testing and crop damage monitoring. Drone survey helps to increase crop yields and reduce time and cost. Drone technology, incorporated with artificial intelligence (AI), machine learning (ML), and remote hearing features, are increasingly in demand due to its benefits.

Working of Drone Technology

Typically, drones include a navigation system, GPS, multiple sensors, high-quality cameras, adjustable controls, and independent drones tools. Firstly, drones set the boundary, analyzing the location, and finally, loading the technical GPS information into the drone navigation system. Then, they collect the required data from the set boundary. The data collected is processed through several software for further analysis and then the final output is obtained for the farmers.

In order to promote the use of drone's technology central government has recently announced a 100% subsidy of up to Rs. 10 lakhs to agriculture institutions for the purchase of drones for farming and allied activities.

(The writer is an Account Manager at VeKommunicate)

Finance Column
Omar Pervez

Cryptocurrency – poison or panacea for the financial world

Bitcoin is recognized as a legal tender in El Salvador while it is banned in China and Turkey. After the Supreme Court lifted the ban imposed by the RBI, India's position remains neutral - it neither prohibits nor allows investment in the cryptocurrency market. In the rest of the world, cryptocurrency regulation varies by jurisdiction

Cryptocurrency evokes very strong reactions – from some claiming it to be a fraud, to others terming it as the future of money.

So what is cryptocurrency?

A cryptocurrency is a form of virtual or digital currency that is designed to work as a medium of exchange – '*nothing more, nothing less*. It is not backed or convertible into commodities, and at the core is a collection of binary data - so technically its value can drop (even if temporarily) to zero. The ownership records of individual coins are stored in a distributed digital ledger, in a computerized database, using strong cryptography that provides a secure environment to record transactions, define rules for the creation of additional coins and thereby control the volume in circulation, and verify/validate transfer of coin ownership.

Cryptocurrencies are not issued by any central authority thus making them theoretically immune to government interference or manipulation. It is touted to be an engine for disrupting the established monopoly of financial institutions and giving power to consumers - providing a platform where lenders and borrowers can interact freely and where applicable transaction cost is minimal. It seeks to remove the role of intermediaries in the transaction thereby making it an efficient and cost-effective platform. Cryptocurrencies function outside existing banking and governmental institutions, using the internet as a medium for exchange. They thus eliminate the possibility of a single point of failure (such as a large bank), that can cause a ripple effect in the conventional system e.g. the housing bubble of 2008 triggered by the failure of institutions in the United States.

Bitcoin was the first cryptocurrency, introduced in 2019 by pseudonymous developer Satoshi Nakamoto, and continues to be the most popular with the highest market capitalization. Cryptocurrencies abound in thousands - notable among them being Ethereum, Litecoin, Dogecoin, Tezos, EOS, and ZCash. Each cryptocurrency claims to have a different function and specification. Tokens, cryptocurrencies, and other types of digital assets that are not bitcoin are collectively known as 'alternative cryptocurrencies' or 'altcoins'.

The distinguishing feature of cryptocurrency is its architecture. The entire cryptocurrency system is collectively and actively involved in the creation of decentralized cryptocurrency, at a pre-specified rate defined at the point of creating the system. This rate is publically known and cannot be altered at any time in future. A cap is also placed on the total amount of cryptocurrency that will ever be in circulation, by instituting a mechanism that gradually decreases the production of that currency over time.

The safety, integrity and balance of ledgers is maintained by a huge number of individuals (referred to as miners), who help validate and timestamp transactions through their systems, and add them to the ledger in accordance with a particular timestamping scheme defined in the proof-of-work cryptocurrency system such as Bitcoin. In a proof-of-stake (PoS) Blockchain, transactions are validated by holders of the associated cryptocurrency, sometimes grouped together in stake pools.

Blockchain is the mechanism that is at core of cryptocurrency – providing validity to each cryptocurrency coin produced/mined or in circulation. A Blockchain is an organically growing list of records (referred to as blocks), that are linked and secured using cryptography. Each block has a time stamp, a transaction date and a hash pointer linking it to the previous block – thus rendering it uniquely distinguishable from other blocks. Thus the data in any given block, once recorded, cannot be altered retroactively, since it would require simultaneously altering all subsequent blocks that in turn requires collusion of the network majority to act in unison. A Blockchain is organized as an open, distributed ledger, managed by a peer-to-peer network that collectively adhere to an agreed protocol for validating new blocks – such that the transaction between two parties can be recorded in a verifiable and permanent way – and where data cannot be modified in future under any circumstances.

A computer that connects to the cryptocurrency network to support the varied functions like hosting or validating a transaction or simply relaying transactions is called a 'node'. Each node stores a copy of the Blockchain it supports, whenever a transaction is made, and broadcasts the details of the transaction using encryption to other nodes throughout the node network, thereby creating copies of that and every other transaction. Node owners vary from volunteers, organisation or body responsible for developing the cryptocurrency Blockchain network technology, to those who host a node for the selfish reason of receiving rewards from hosting the node network

Mining is the validation of transactions, and timestamping is the proof-of-work schemes for establishing the validity of transactions added to the Blockchain ledger without the need for a trusted third party. The most widely used proof-of-work schemes are based on SHA-256 and Scrypt. Others include CryptoNight, Blake, SHA-3, and X11 to name a few.

The proof-of-stake on the other hand, is a method used to determine ownership of underlying currency coin thereby providing security to the cryptocurrency network. This method involves achieving distributed consensus through requesting users to show ownership of a certain amount of currency.

A cryptocurrency is tied to one or more specific keys (private keys) and not to any particular individual. Thus anyone who possesses this private key (a 256-bit number expressed as a hexadecimal) is the owner of that cryptocurrency coin(s). This key may be stored in digital wallet or even in physical printed form. Thus it is pseudonymous rather than anonymous, where owners are unknown while details of all transactions are publicly available in the Blockchain.

Cryptocurrency exchanges play an important role of allowing customers to trade cryptocurrencies for other assets, such as conventional fiat money, or to trade between different digital currencies

Cryptocurrencies have unfortunately become a popular tool for nefarious activities such as money laundering and illicit purchases. Hackers use them for ransomware activities. A recent case to grab headlines was Dread Pirate Roberts, who ran a marketplace to sell drugs on the dark web using cryptocurrencies. Thus the concern of government authorities around the world is not unsubstantiated.

MIT study on Bitcoin has revealed a few surprises:

- 11,000 investors held roughly 45% of Bitcoin's surging value
- 10% of miners account for 90% of its mining capacity

Though cryptocurrency Blockchain are highly secure, the crypto repositories such as exchanges and wallets, prove to be the weak link, often exploited by the hackers or people in authority, leading to customers losing their digital wealth. Additionally, Cryptocurrencies suffer from price volatilities making them risky investments for the uninformed.

If you're trying to pay a person or retailer who accepts cryptocurrency, a cryptocurrency wallet is required. One needs to scan the QR code of the recipient or enter their wallet address manually. A cryptocurrency debit card may be an alternative if allowed in the country of use. The use of cryptocurrency as a medium of exchange remains limited due to its low acceptability.

Blockchain has definitely caught the attention of the financial world with a number of leading countries working on *'central bank digital currency - CBDC'*

It will be interesting to see how distributed ledger and CBDC evolve overtime, and if they will interact/merge in future – the possibilities are unlimited.

(The writer is Advisor at VeKommunicate)

Environment Equity
Saloni Goyal

Electric vehicles and the Environment

Rising fuel prices and a focus on greener initiatives have prompted countries to invest in electric vehicles (EVs) for their fleets. EVs can be one serve as one component of a multi-pronged approach to decarbonizing our economy and lowering GHG emissions. This also helps in achieving sustainable goals and aligning with government guidelines.

Internal combustion engines (ICEs) in conventional vehicles are powered by fossil fuels such as gasoline or diesel. EVs is a vehicle that is operated by one or more electric motors that are driven by rechargeable lithium-ion batteries. EVs, like other modern devices, require external power sources to charge. Other types of batteries rely on regenerative braking to charge, or on generating electricity from the frictional energy of the vehicle. Lithium-ion batteries are often more efficient than fuel engines, in addition to being less polluting.

It can be powered by a collector system that uses electricity from outside the vehicle, or it can be self-powered by a battery (sometimes charged by solar panels, or by converting fuel to electricity using fuel cells or a generator). Many are guaranteed to last 8-10 years.

EV came in the 1900s in America when the Studebaker Automobile Company entered the automotive business with electric vehicles. EVs have witnessed a resurgence in the 21st century as a result of technological advancements, a greater focus on renewable energy, and the possibility to reduce transportation's impact on climate change and other environmental challenges.

Impact on Environment:

The manufacturing of EV batteries creates upstream (tailpipes) emissions. In reality, the production of EVs can be more environmentally damaging than that of ICEs. EVs are still the most environmentally friendly mode of transportation because their entire life cycle is significantly more sustainable. Driving compensates for their greater manufacturing emissions because they use electricity as fuel. Over its lifespan, an EV emits half the carbon emissions of a conventional vehicle, outperforming it fully in terms of sustainability.

❖ <u>EV battery production can be clean</u>

Although EVs do not contribute much to roadside air pollution, the production of EV batteries can be hazardous if done carelessly. Almost all EV emissions are well-to-wheel emissions produced during the battery manufacturing process. As, EVs are still newer technology, industry standards for the energy sources used to make batteries are varied, resulting in higher carbon footprints.

EV manufacturers are setting rules for their suppliers to use only renewable energy. For Example, Tesla- EV automaker intends to produce its batteries only by using renewable energy.

❖ <u>EV manufacturers use eco-friendly materials</u>

One of the most difficult challenges for EV producers is creating a functional, lightweight vehicle. Lighter EVs have a longer range and a lower carbon footprint, but standard materials make this challenging. Eco-friendly materials are being used and improved by EV producers in order to build lighter, more efficient vehicles.

Using recycled and organic materials not only saves weight, but they are also better for the environment. Using new materials such as metals and plastics is unsustainable and pollutes the environment. Natural or recycled materials reduce environmental impact both during and after the EV manufacturing process.

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