Interactive Session with Mr. **Vikram Singh Mehta**, Chairman and Distinguished Fellow, Centre for Social and Economic Progress (CSEP) & Former Chairman, Shell Group of Companies in India, on the occasion of the 28th Lalit Doshi Memorial Lecture held on 15th December 2022

Question:

Vikram (Vikram Singh Mehta) thank you for the precision of your talk. Given our dependency on coal for power generation and our dependence on lithium, cobalt, battery making and chips and solar panels outside the country. Are we fooling ourselves about how green electric energy can be?

Mr. Vikram Singh Mehta:

I think Hemant (Hemant Luthra) it would be wrong to say we are fooling ourselves. We have already increased green electricity to 150 gigawatts against total installed capacity of electricity in the country of around 400 gigawatts. That is, more than one-third. Our national ambition is to provide 50 percent of electricity from green sources by 2030.

We are not fooling ourselves but what I will say is that the share of renewable energy, in our energy basket will be less than the share of fossil fuels for decades to come. We cannot scale up our renewables sector unless we make complementary investments in infrastructure. We need to upgrade the grid to make it flexible to accept or absorb molecules on an intermittent basis. As you know, the sun does not shine at night; nor does the wind blow all the time. The investments required for this upgradation will be enormous. The challenge ahead is to create the financing instruments and the eco system to raise the funds required to create the requisite facilities to scale up renewables.

Question:

Given our import dependence on lithium, solar panels, chips, etc. Are we making a strategic mistake by increasing our dependence directly or indirectly on China?

Mr. Vikram Singh Mehta:

To create a clean energy system, India will need to source minerals, mines, chips from the most competitive supply source. China is currently that source. Were we to impose quotas and duties on the Imports of critical minerals and components from China, we would render the domestic generators of solar energy uncompetitive against coal.

So, this is the strategic dilemma: How do we create indigenous capacity "make in India "; at the same time remain competitive? Clearly in time we have to find alternative sources to China; but for the present that is not easy. As I indicated, 60 percent of lithium is processed in China.

Question:

Thank you, Vikram, for an excellent presentation! You mentioned that the energy transition is going to take a long time and you did mention carbon storage. So, isn't carbon storage a way we can continue to use fossil fuels and be green? Would that play a big role? You had many many suggestions. Could you tell us what are the different cost structures of all these suggestions?

Mr. Vikram Singh Mehta:

Nadir (Nadir Godrej) : Carbon capture and sequestration (CCS) is a proven and accepted technology. The challenge is cost. As matters stand, the economics of CCS work when carbon is captured, sequestered and then used to enhance the recovery rates (productivity) of gas or oil from producing fields. In the absence of such ancillary benefits CCS is a high-cost option. Given the nature of our producing fields - their geology and maturity - CCS is not an effective means yet of enhancing recovery rates in India.

Regards the competitiveness of renewables, the tipping point will be reached when the renewable power is competitive against existing thermal power. Today renewables is competitive against new builds - it is cheaper to build a

new renewable plant than to build a new thermal power plant. But not against existing plants. On a full cost basis coal remains the cheapest fuel.

Regards oil, whilst we have reserves of oil and gas in 26 identified sedimentary basins, these reserves are located in complex geology and terrain like the Himalayan foothills or deep water offshore. It is not easy to locate these reserves and even when located, it is not easy to develop them on a commercially viable basis. The costs are enormous as are the risks. India has scarce public resources. So, it should be cautious in expending public funds in such high-risk, capital-intensive activities especially given that oil and gas are tradable and can be secured on the international market.

Ultimately the challenge ahead is the competitiveness of coal versus renewables. Coal will dominate until such time as the economic and social costs of persisting with coal is eclipsed by the social and economic benefits of clean renewables.

Question:

Vikram, fantastic, very insightful talk! India's investment in the foreign oil and gas reserves has been very limited and even where we have done, we have not been that successful. That I see as a great opportunity. I mean you talked about M & A as an investment. I think securing into the reserves which are available at low cost as a policy would be a quick win for us to pursue that. What is your view on that?

Mr. Vikram Singh Mehta:

Yes, I think there are opportunities. We will not find such opportunities in the Middle East as all petroleum assets are controlled by the national oil companies, but that there will be opportunities in South America, Africa, Central Asia and Russia. The issue is not so much about identifying the opportunities as it is about developing the strategy for acquisition. In the past given the siloed nature of our decision making, our public sector entities have

often competed against themselves when bidding for overseas assets. ONGC and Gas Authority of India (GAIL) was, for instance, bidding for the same exploration acreage in Iran. China, on the other hand, adopts an integrated holistic approach. On one occasion when they were looking to acquire an oil field in Kazakhstan, the President of China put the weight of China Inc behind the bid. He visited Kazakhstan himself and committed to invest in a downstream refinery and a fertiliser plant to strengthen their offer. We must develop a comparable bidding strategy backed by the balance sheets of our Petroleum companies.

Acquisition of overseas assets must be backed by commercial logic. Opportunities exist. India should proactively be looking to identify them.

Question:

Dr. Pawan Goenka - Vikram again thank you very much for a very insightful look on the subject. Listening to your 10 action points, none of them are easy. Each one of them are quite complex, needs a lot of work to do it and while industry will play a good execution role in many of those, but the government has to really be the enabler, be the driver. So, my question is that this will require a very holistic understanding of the whole subject, a long-term view, and a will. Who is your voice going to be, who will be able to kind of implement some of the things that you're talking about? Is someone listening, acting, understanding, and wanting to implement.

Mr. Vikram Singh Mehta:

Who is listening? I do not know. Prima facie, no one is listening to a non-governmental voice like mine. But my hope is of course that someone will indeed pick up some of the thoughts in this talk.

What do I want? I want someone preferably located in the Prime Minister's office to look at energy as one subject.

Currently there is not a single person in the Government who has executive authority over energy. There are individuals with executive authority over petroleum, coal, or renewables. But no one with executive authority over energy.

Energy is integral to economic development. And vice versa. They are symbiotically interdependent. It takes, for instance, four thousand litres of water to make one litre of biodiesel, or Nine thousand litres of water to make one litre of diesel. If this interconnection is not made or understood and policies adopted accordingly, the country may solve its energy requirements but at the risk of confronting a severe water shortage.

We need an omnibus authority that can look at energy through a symbiotic integrated lens. I have already indicated that the establishment of a ministry of energy is infeasible. It would upset too many apple carts and vested interests. So rather than do nothing, I am recommending that the PM appoint someone at the rank of a minister in his office who has the authority to bring everyone around the table and focus on the interlinkages between different aspects of energy and the energy ecosystem and to develop an integrated strategy. His fundamental responsibility should be to realise the objective of Energy Aatmanirbharta, or energy self-reliance.

I also recommend that this initiative be given legislative sanction through an Act of Parliament.

***Question*:**

You spoke about different Ministries being involved in this and no one person taking decisions. Much the same thing was true of the logistics sector. There was the Commerce Ministry, there was the Finance Ministry, there was Civil Aviation, the Railways, Ports and Shipping, but they got their act together now by having one secretary in charge. The results are seen immediately, the cost of logistics has come down.

Can the CSEP take up something similar like this for the energy sector? You be the moving force which will say we need one person that will look at something from all the Ministries, the Ministries won't wither away, I mean we are not the Marxian State, so the Ministries won't wither away. They will continue, but can you do this? Can you be the thrust agency that will do it? When you're doing that can you also look at the question of demand and supply? We are still giving free power instead of giving a subsidy to farmers. Why are we not doing that? When we give free power; power is never turned off, you know this. So, if we can do that and if you can move this also, we may be able to stop giving free power, stop growing rice where we shouldn't be growing it, grow something else and move rice out somewhere else. Can CSEP take that up too?

Mr. Vikram Singh Mehta:

I will think about it Michael. (Mr. Michael Pinto, IAS, [retd.] former Secretary to GOI Ministry of Shipping). Thank you.

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