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**CUTS – USISPF Roundtable on “Fostering Indo-U.S. Innovation
Cooperation for Mutual Prosperity”**

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- It is a pleasure to be here with Consumer Unity & Trust Society International (CUTS) and the US India Strategic Partnership Forum (USISPF). CUTS has worked extensively to uplift India’s underprivileged consumers and protecting their consumer sovereignty in the framework of social justice and economic equality. USISPF is also deeply engaged in strengthening India-US economic and trade ties. I am happy that CUTS and USISPF have come together to have this timely conversation to discuss the important role of innovation for mutual prosperity in the India-US strategic partnership.
- We are meeting at a very significant moment. A time where India is one of the fastest growing major economies in the World and is expected to remain among the fastest growing for the next few years. A time when the people of India have given a strong mandate to Prime Minister for his second term. Prime Minister Modi has placed a special emphasis on cultivating an ideal environment for innovation in India. The Government’s policies over the last five years have led to India’s ascendance to 52nd rank in the Global Innovation Index in 2019 from 81st in 2015. Facilitating entrepreneurship through innovation is a critical component under our vision of new India by 2022. The annual index recognizes that India has consistently been ranked among the top countries on innovation parameters such as Information and Communication Technology (ICT) Services Exports, number of graduates in science and engineering, the quality of universities and scientific publications, economy-wide investments, and creative goods exports.
- I would like to talk about three key areas that hold huge potential for greater bilateral exchanges in innovation.

ENERGY:

- India is confident of establishing a win-win situation for both sides in the Energy sector innovation. The 3rd largest consumer of oil in the world, India, is slated to become the largest contributor to demand growth globally. There is an estimated 315 billion barrels of untapped oil and oil equivalent gas in India. To extract the full potential of its resources, the Hydrocarbon Exploration and Licensing Policy (HELP) has been launched which extends single license for all types of hydrocarbons, with fiscal incentives, and freedom for further exploration. In the spirit of our strategic energy partnership, it is in our mutual interest to extract these offshore oil and gas deposits in India.
- India has recoverable shale gas resources of nearly 96 trillion cubic feet (tcf). The Gulf of Cambay, Krishna-Godavari, Cauvery, and the Damodar valley are some of the prominent places where huge reserves have been identified. We invite research expertise from USA to extract Oil and gas from shale reserves in India.
- Technology Innovation in Gas hydrates, Geothermal energy, Battery storage, Carbon Capture and Utilization, offers great potential given the energy demand in India.
- With tremendous growth potential, India is keen to become a refining hub with exporting capabilities. State-run energy firms are to spend \$20 billion on refinery expansions by 2022. India believes this is an opportunity to bring the best practices in refining infrastructure from around the world. Companies investing in innovative technology in the refining sector are encouraged to exchange knowledge in setting up new units across India.
- As India aims to raise its fuel efficiency standards, we encourage global leaders in energy efficiency to invest in ethanol and bio-fuel sector in India.

PLASTICS

- India is a leader in the plastic industry. The Indian plastic industry produces and exports a wide range of raw materials. We believe this sets the stage for larger investments, which can use the robust supply network for the production of chemicals in automobile, textiles, renewable technology, piping

and packaging industry. India is set to have 18 plastic parks. These plastic hubs are aimed at fostering a climate for innovation in bio-based polymers. We believe investments from global players will likely spur the industry to improve processes and achieve sustainable growth. This year Prime Minister Modi has also called upon the people of India to give up on single-use plastics in the interest of sustainable development.

- In July this year, I had an opportunity to visit NREL and see the innovative research in material and process engineering, energy systems integration, molecular and catalyst science, and Nano-science. The research in hydrogen fuel cells, electricity modeling, and in printing of solar panels is indicative of huge potential for future collaboration between NREL and India.

URBAN DEVELOPMENT & HOUSING

- India's urban population is expected to reach 40% by 2030. In order to address the increasing housing requirements of cities in India, the Government has launched the Pradhan Mantri Awas Yojna-Urban (PMAY-U) for providing houses to all eligible urban beneficiaries by the year 2022.
- In order to achieve this, Prime Minister of India has envisaged a paradigm shift in technology using large scale construction under PMAY(U) as an opportunity to get the best available construction technologies across the globe. The shift in technology transition will address the large-scale housing construction in minimum time and minimum cost with efficient usage of resources and environmentally sustainable practices.
- The Ministry of Housing and Urban Affairs (MoHUA) is organizing an international competition titled Global Housing Technology Challenge-India (GHTC-India) in 2019-20, wherein alternative and innovative technologies from across the world will be mainstreamed, through a global challenge process.
- Apart from these key areas, India's focus on sanitation, universal health coverage and cleaning the rivers and reducing air pollution also provides an opportunity for innovation that would have the advantage of scale and massive impact on uplifting the living conditions of a huge population.

- India and the US continue to improve cooperation and exchanges in innovation through a number of platforms. For example, The U.S.-India S&T Endowment Fund (USISTEF) provides grant-in-aid support (up to INR 2.5 Crore) through a highly competitive process, to commercialize S&T driven innovations with significant societal impact. We have Virtual Networked Centers to enable Indian and American scientists to carry out joint research activities by leveraging already existing infrastructure and funding available with the partners on both sides through a linkage established by a virtual mechanism that provides for seamless connectivity and exchange of faculty/scientists and students from both sides. So far 90 virtual centers have been supported. More than 381 Workshops have been supported for exchange of ideas and networking between scientists.
- We have several fellowships and exchange programmes. For faculties–**SPARC** (*Scheme for Promoting Advance and Research Collaboration*), **VAJRA** (*Visiting Advanced Joint Research*), **GIAN** (*Global Initiative for Academic Networks*) . For US students such- **S N Bose program**, **RISE** (*Research Internships in Science and Engineering*) and **GROW** (*The Graduate Research Opportunities Worldwide*). **Re-entry fellowships** for Indian Scientist working abroad such as Ramalinga Swami Fellowship (DBT) and Ramanujan Fellowship (DST).
- Cooperation in Innovation presents the perfect opportunity in the India-US bilateral relationship to pursue win-win outcomes. India, a young country brimming with talent and future entrepreneurs, is the ideal destination for US expertise and capital. Bringing India and the US together in innovation will generate the rising tide lifting both our countries. I look forward to discussing ways to further improve cooperation in innovation between India and the US.
- I would like to convey my best wishes once again to CUTS & USISPF in their endeavor for bringing both countries together in the areas of innovation.
