KOREA - INDIA
50 YEARS OF DIPLOMATIC RELATIONS

2023 KOREA-INDIA FORUM

KOREA – INDIA INFRASTRUCTURE & URBAN DEVELOPMENT FORUM

"HYDROGEN SMART CITY" NETWORK

11th September, 2023 10:00 a.m.
(Registration starts from 9:30 a.m.)
India Habitat Centre
The Stein Auditorium

Host.

KRIHS
Korea Research Institute for Human Settlements

Organizer.

CIDC
Construction Industry Development Council

KIEP
Korea Institute for International Economic Policy

PREAMBLE

India's energy sector is undergoing a significant transformation as the country strives to balance economic growth with environmental sustainability. With a population of over 1.3 billion people and a rapidly growing economy, India's energy demand is expected to double by 2040.

In order for India to move towards establishing itself as a global superpower, attaining energy self-reliance is of utmost importance. At the same time, the country should be committed to reducing its carbon emissions and achieving its climate change goals. Given this background, green hydrogen has emerged as a promising solution for India's energy security and sustainability.

Korea's experience in hydrogen utilization gives us some insights to develop a green hydrogen economy. Korea focuses on the utilization of hydrogen among the hydrogen value chain composed of production, storage, distribution, and utilization. They developed to start reversely producing personal hydrogen cars before production and storage distribution. Firstly, they produce cars to run 600km at one hydrogen charging of 6Kg that hydrogen pressure had changed from conventional 200~300 bar to 700 bar. Thus, the hydrogen charging station in Korea uses the standard of 700 bar. Currently, there are over 32,000 hydrogen personal cars and over 140 charging stations with over 200 charging machines in June 2023.

The Korean central government also encourages local governments to create industrial clustering and Hydrogen Pilot Cities in order to nurture the hydrogen industry and increase the utilization of hydrogen in the daily life of people. Currently, the Central government designated Ulsan, Ansan, and Jeonju-Wanju as hydrogen pilot cities. And Changwon City has been developing its area as a hydrogen industrial complex. Such a focus on hydrogen utilization led to increasing hydrogen demand and maximum utilization of hydrogen production which is mostly by-product hydrogen from steel and chemical factories. Now, by-product hydrogen occupies 95% of Korean hydrogen utilization. Korean buildings of cities also use hydrogen through reforming hydrogen, since all the natural gas systems in urban areas can be changed to hydrogen fuel. Although its urban utilization is few, direct utilization of hydrogen by individuals will lead to later huge utilization of hydrogen. In spite of the achievements. Korea is also faced with the task to adopt green hydrogen because the grey hydrogen of by-products and reforming hydrogen produces CO2. Therefore, it is expected to form a hydrogen value chain between Korea and India.

The Planning and Construction field has an importance of building hydrogen industrial clusters and cities in this respect. The world faces with a transitional period of energy economy from conventional fossil fuel to renewable green hydrogen. Agglomeration of industry and cities has been significant planning in each nation to facilitate a new kind of energy economy. While the smart city is symbolic planning of the information age, the new era of green hydrogen economy adopting climate change needs a rather updated industrial complex and city that encourages the production of green renewable hydrogen equipment and massive consumption of green hydrogen.

People believe that India would be a promising nation to lead a new green hydrogen economy. Qualification as a leader relies not only on the affluent sunshine but also on the potential domestic economy without swaying from outside impacts In addition, creating agglomerate spaces such as industrial complexes and cities will be effective to gather people, exchange knowledge, produce green hydrogen products, and consume green hydrogen.

Our forthcoming flagship event – the International Conference on 11th September 2023 "Korea-India Infrastructure and Urban Development Forum: Hydrogen Smart City" CIDC, jointly with KRIHS to share the knowledge of both countries' experience of hydrogen production, storage and distribution, and utilization of hydrogen. Through this forum, the updated vision of adopting climate change in smart cities would be discussed based on the vision of Hydrogen Smart Cities. The forum also promotes collaboration between Korea and India Network, with support from associate organizations & Governments from India and abroad.

◆ Forum Schedule on 11th September, 2023

Time	Event Contents		Speakers
09:30 ~	Registration		
10:00 ~	Opening Remark Welcoming Remark		KRIHS President CIDC Director General
10:10 ~	Congratulatory Speech		India: Advisor of NITI Aayog, Secretary of Rajasthan State, Secretary of Sikkim State, Korea: Ambassador of the Republic of Korea in India H.E. Chang Jae-bok, President of KIEP Lee Siwook
10:40 ~	1. Candle Ceremony 2. MOU Ceremony (G2G Assistance Collaboration in HSC) 3. Photo time		KRIHS-Rajasthan-CIDC KRIHS-Sikkim-CIDC
11:00 ~	Tea Break		
11:30 ~	Keynote Speech: Vision and Direction of Korea-India Infrastructure and Urban Development Forum		Dr. Jo, Jin Cheol, KRIHS
11:45 ~	Cooperation of HSC against future		Dr. Cho, Choongjae, Delhi Office, KIEP
12:00 ~	Construction Industry Development in Indian HSC		Mr. Deepak Mazumdar, CIDC
12:15 ~	H2Powered Green Growth for Self-Reliance and Sustainability of Cities		Mr. Sunil Kumar Mishra, Director TERI School of Advanced Studies
12:30 ~	Discussion		Floor Q&A and Discussion
13:00 ~	Lunch		
14:00 ~	Hydrogen Pilot City in Korea		Dr. Lee, Jungchan, Research Fellow, KRIHS
14:15 ~	India's Hydrogen Value Chain Status and Challenges		Ms. Surbhi Goyal, Senior Energy Specialist, World Bank
14:30 ~	Potential HSC among Smart Cities in Sikkim		Mr. Karma R. Bonpo (IAS) Sikkim Secretary, Commerce & Industry, Government of Sikkim
14:45 ~	De-carbonizing Traction on Indian Railways		Dr. Anirudh Gautam, Principal Executive Director, Resource & Testing, RDSO
15:00 ~	Green Steel – A net zero pathway for secondary steel sector		Mr. Nishant Aggarwal, Technical Advisor, AIIFA
15:15 ~	Introduction Cases of LH projects related to industrial complexes		Mr. Jung Changhwa, Chief Representative LH (Korea Land & Housing Corporation) India Office
15:30 ~	National database of verified vendors, contractors, consultants and suppliers		Mr. Ashutosh Bhardwaj, Sr. Director, CIDC
15:45 ~	Discussion		Floor Q&A and Discussion
15:15 ~	Tea Break		
15:45 ~	Business Session	JNK Heater (JNK India)	Mr. Park, Jong Han, Director
16:00 ~		Vinatech	Dr. Kim, Gyeong Chul, COO
16:15 ~		Kwangshin Machinery	Speaker in Kwangshin Machinery India
16:30 ~		H2 Korea	Mr. Byoen, Seongmin, Senior Research
16:45 ~		S-Fuelcell	Promotional Video Presentation
16:50 ~		Hylium Industries	Promotional Video Presentation
16:55 ~		Hydrogen Plan in ONGC	Mr. Ravi, Director General ONGC Energy Centre
17:10 ~		Hydrogen Plan in NHPC	Mr. Krishan Kumar, GM (Mechanical)
17:25 ~		Hydrogen Plan in NTPC	Mr. Rahul Pataballa, Sr. Manager, NTPC
17:40 ~	Discussion		Floor Q&A and Discussion
18:10 ~	Closing Ceremony		KRIHS and CIDC

◆ Supporting State Governments:

RVPN, Rajasthan

MSME, Commerce & Industries
Government of Sikkim

◆ Supporting Korea Institutes and Hydrogen Enterprises

◆ About Host:

KRIHS: Korea Research Institute for Human Settlements founded in 1978, has played a pivotal role in national territorial policy development with research in balanced national development, housing stability, infrastructure development, and geospatial information system. The policies KRIHS developed and suggested have contributed to enhancing the quality of life of the people. Please refer to (www.krihs.re.kr/eng/)

◆ About Organizer:

CIDC: Construction Industry Development Council, as the apex body of construction in India was formed by Govt. of India together with Industry (reporting to NITI Aayog), to introduce structural reforms and to take up necessary initiatives needed for the development of the Industry. Please see (www.cidc.in)

KIEP: The Korea Institute for International Economic Policy is a national policy research institute established to conduct studies, research, and analyses of global economic issues, guiding the nation toward effective international economic policies. The KIEP recently opened its 3rd abroad office in Delhi. It is expected to contribute to expanding India-Korea economic relations. Please refer to (www.kiep.go.kr/eng)