

ICP-AGIR Best Practice for Incheon (Republic of Korea) / Almeria (Spain)

Incheon Hydrogen ecosystem strategy	
	Incheon (Republic of Korea) Almeria (Spain)
Departments/ Institutions involved	Foreign Affairs Department, Incheon Metropolitan City
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Description of the best practice	With global warming emerging as a global issue, transition to renewable energy is a key tool to respond to climate change. In this regard, the two cities have introduced universities and private companies based on each city and jointly made efforts for future collaboration.
Theme and sub-theme if appropriate	Introduction of Incheon City's hydrogen ecosystem building strategy and collaboration between companies in the field of solar power Collaboration and exchange between Almeria University and Inha University in the area of renewable energy

Description of Best Practice	
Challenge Addressed	<p>In an effort to address climate change, the city of Incheon has promoted building the hydrogen production cluster, supplying green hydrogen mobility, and creating dispersed hydrogen fuel cell generation at industrial complexes and power plants.</p> <p>Through this exchange project, Incheon and Almeria have learned each other's renewable energy practices, conducted policy exchange and explored ways for future collaboration through university exchange programs.</p>

<p>Solution Implemented</p>	<p>Incheon is implementing various policies to create a green hydrogen city.</p> <p>First, Incheon SK E&S will start supplying 30,000 tons of byproduct hydrogen annually to the greater capital area from this year and the city will attract hydrogen companies into the industrial complex in order to realize domestic production of integral hydrogen equipment. And to support such activities, the city will run test beds and nurture professionals in the hydrogen industry.</p> <p>Second, the city will supply green hydrogen mobility.</p> <p>To utilize the locally generated hydrogen, all 2,204 city buses will be replaced by hydrogen-powered vehicles by 2030 and over 80% of cars used by public agencies in Incheon will be hydrogen vehicles with the expanded supply of hydrogen trucks and garbage trucks. For the infrastructure, 52 hydrogen fueling stations will be built at existing bus garages, gas stations, and LPG stations by 2030. This will allow hydrogen car drivers to reach a fueling station within 20 minutes from anywhere in the city which will greatly boost convenient accessibility.</p> <p>Third, by building the dispersed hydrogen fuel cell generation emitting no nitrogen oxides, sulfur oxides, and fine dust at industrial complexes and power plants, 606MW electricity will be generated, delivering electricity and heat to the adjacent areas.</p> <p>Incheon retains the technology to store and utilize hydrogen energy and Almeria produces massive amount of green hydrogen through solar power generation. By tapping into the advantages of each city, the two cities would be able to cooperate in supplying eco-friendly energy and creating a carbon-neutral city.</p>
<p>Partnerships</p>	<p>Incheon and Almeria have discussed cooperation through hosting of international event related to renewable energy and Inha University and Almeria University agreed to promote student and faculty exchange programs.</p>

<p>Lessons learned</p>	<ul style="list-style-type: none"> - Incheon needs to share best practices with advanced European cities through ICP-AGIR project, continuously promote the city’s policy efforts, and carry out sustainable exchange to further expand its city diplomacy. - As part of the program, Incheon has built network through the study visit opportunity and explored ways for sustainable project through the visit to best practice sites. - Incheon has also been able to reinforce its city image as one of the key cities in the Asia-Pacific region through international exchange with an advanced city in the areas of renewable energy and transport, which are the strategic industries of the city. - Incheon’s hydrogen production, storage and utilization technology and Almeria’s green hydrogen production technology harnessing solar energy sources could provide an opportunity for cooperation such as technology exchange, hydrogen production and hydrogen energy import, and so on.
<p>Main Milestones</p>	<ul style="list-style-type: none"> - Incheon will produce 30,000 tons of liquid hydrogen each year starting from 2023 and will sign an MoU with enterprises such as SK and Hyundai Motor Company to facilitate the production and supply of liquid hydrogen while accelerating its effort to build the charging infrastructure and replace CNG buses with hydrogen-fueled vehicles. - Also, the city plans to shut down coal-fired power plant early by building the blue hydrogen fuel cell power plant in a bid to reduce greenhouse gas emissions. In 2021, the construction of Incheon Fuel Cell Power Plant was completed following the city government’s proactive intervention through hosting consultation sessions between the municipality and local residents as a way to resume the plant construction that had been suspended for 11 months due to the residents’ opposition. - In addition, the city held a number of briefing sessions, forums, and seminars to address the residents’ misconceptions and misunderstanding on the hydrogen energy projects through dialogue, thereby successfully garnering their consensus. - As the optimal place to drive the growth of hydrogen energy of the Republic of Korea based on the liquid hydrogen production infrastructure, Incheon will continue to provide its full support and make bold investment in order to lead the hydrogen economy. - Continuous interactions to explore ways for sustainable exchanges focused on the cooperation area. (virtual meetings, mutual visits, etc.)

Materials for promotion	
Quote from city representative	To achieve a goal of creating a hydrogen city with happy citizens , clean environment and new growth industry in harmony, Incheon City is implementing various policies to lead carbon neutrality. The city hopes this Incheon-Almeria exchange would be a chance to expand know-hows and policy sharing, create sustainable environment and boost the city's competitiveness.
Graphic Material	Videos, Images, documents
Online links	Links to websites, social media, etc.