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Ministry of Environment Begins Nation's First Full-Scale Production and Supply of Green Hydrogen for Vehicles Using Hydropower

- Full-scale production of green hydrogen for vehicles begins at Seongnam Water Purification Plant's water electrolysis hydrogen production facility
- Supplying up to 188kg per day of green hydrogen to hydrogen refueling stations, enough to fuel 38 hydrogen passenger vehicles

The Ministry of Environment (Minister Kim Sungwhan) and the K-Water (CEO Yun Seog-dae) announced that they will hold a commemorative event for the shipment of green hydrogen at the Seongnam Water Purification Plant (Seongnam-si, Gyeonggi-do) on the morning of July 23, together with organizations including the Korea Automobile Environment Association and the Korea Hydrogen Environment Association, and will begin full-scale supply to hydrogen refueling stations.

Supplying green hydrogen to hydrogen refueling stations represents the nation's first case of providing carbon-free clean energy produced by electrolyzing water with electricity generated from eco-friendly renewable hydropower.

The green hydrogen production facility at the Seongnam Water Purification Plant was constructed as part of a project initiated in 2022 to establish a foundation for expanding hydrogen vehicle adoption toward achieving "2050 Carbon Neutrality," with a total investment of KRW 4.4 billion (KRW 3.1

billion from government funding and KRW 1.3 billion from K-Water).

The facility can produce up to 188kg of green hydrogen per day (enough to fuel about 38 hydrogen passenger vehicles), or up to 62 tons annually. Until September of this year, hydrogen will be transported by vehicle to the Seongnam Hydrogen Refueling Station (546-7 Galhyeon-dong, Jungwon-gu, Seongnam-si). From October onward, it will be directly supplied via pipeline to a hydrogen refueling station installed near the Seongnam Water Purification Plant.

Meanwhile, the Ministry of Environment, in collaboration with Miryang City and Chungju City, is constructing green hydrogen production facilities at Miryang Dam and Chungju Dam* using hydropower energy. Upon completion in 2028, these facilities will additionally produce 1,069 kg of green hydrogen daily, enough to refuel approximately 214 hydrogen passenger vehicles.

* Miryang Dam (2023–2026): Daily maximum production of 429 kg; Chungju Dam (2023–2027): Daily maximum production of 640 kg

Moving forward, close cooperation with local governments will continue to expand projects for green hydrogen production facilities using renewable energy. This aims to establish a regionally self-sufficient hydrogen production system, producing hydrogen locally for local use, thereby ensuring a stable hydrogen supply, improving economic efficiency of supply pricing, and enhancing convenience for vehicle refueling.

Ryu Pil-mu, Director of the Air Quality Future Strategy Division at the Ministry of Environment, stated, “The supply of green hydrogen to hydrogen refueling stations signifies the transition of green hydrogen, a clean energy source in the era of climate crisis, from the demonstration stage to full-scale utilization.” He added, “We will continue establishing a stable supply chain for green hydrogen for vehicle use, contributing not only to expanding the

distribution of hydrogen vehicles but also to revitalizing the domestic hydrogen economy.”