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The Development status of Innovative SMR and Future Plan

The innovative SMR Development agency and related companies such KHNP, KAERI, KEPCO ENC, KNF are developing innovative-SMR (iSMR) since 2019. iSMR is integrated module type PWR. All the RCS components are encapsulated into small steel containment. One reactor module produces 170MWe, and one standard plant is composed of 4 reactor modules, so one standard plant produces 680MWe. There are no active component nor electricity for safety function. All engineered safety features perform their function with fully passive manner. With these feature, iSMR has very low CDF (less than $10E-9$). It means that severe accident is practically, technically eliminated. Modularization of RCS reduce overall construction period. Therefore, Nth plant of iSMR can be built with 24 months from first concrete to operating license.

iSMR has the capability to produce hydrogen and/or heat beside producing electricity.

The standard design of iSMR will be completed by 2025 and the standard design approval by Korean regulatory body will be done at 2028. The first iSMR plant will be constructed early 2030s.

Country OR International Organization

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