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# Evaluation of Potential Locations for Siting Small Modular Reactors in Iraq to Support Clean Energy Goals

the study contains the feasibility of small modular reactors and an assessment of the site selection process for small modular reactors in Iraq to produce electrical energy to contribute to solving the problem of shortage of electrical energy in Iraq, where Iraq needs (35000) MW to meet the actual need for energy while the total production (24000) MW and Iraq seeks to diversify the sources of power generation and reduce the bill Fossil fuels and reducing greenhouse gas emissions resulting from power generation, where the need arose in remote areas for small power plants.Where work was done within the work methodology to choose sites for establishing a standard reactor station, which is based on scientific literature published in the field of earth sciences, water resources, environment, climate, satellite images, geological,
topographical and hydrological maps, etc. And adopting projective standards according to the literature of the International Atomic Energy Agency. And working on advanced scientific programs such as (GIS). These programs were used to analyze satellite and digital images to choose the best sites. The first revealed multiple sites in different governorates of Iraq, including (7) sites in Babil Governorate. (5) sites in Diwaniyah Governorate, (3) sites in Muthanna Governorate, and (3) sites in Najaf Governorate, where a comparison was made between them in terms of describing their geographical locations and their distance from the center of the governorate, as well as the area available for each site, the type of available water source, and proximity to transmission lines. Energy and population density of the areas and their surroundings, as well as the topography of the nominated areas, and the best reality was in Babil Governorate.

## Country OR International Organization

Iraqi Atomic Energy Commission

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## Confirm that the work is original and has not been published anywhere else

YES

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