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# A THERMO-ECONOMIC APPROACH FOR TRANSFERRING THE SEA WATER FROM GABES GULF TO THE PHOSPHATE BASIN (SOUTHERN TUNISIA)

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**T**he Gafsa phosphate mining area is among the big basins that exploits huge amounts of water in phosphate washing. The orientation towards green chemistry and renewable energies is becoming a primordial necessity in the mainly industrial world especially in these climate change situations. The goal of our project is to transfer seawater from the Gulf of Gabes to this mining basin (250 km) based on the use of solar energy (thermo-economic energy) instead of electric energy. This project will be a pilot project in Southern Tunisia in the future factory. Solar energy in the study area varies between 20°C/8H/Day in the winter period and 45°C/12H/Day in the summer period. As a result, the direction towards the valorization of this renewable energy will cause a significant economic boom. The high consumption of groundwater that is not very renewable in an arid climate will stop, the phosphate wastewater will be valorised and no contamination, air, soil or hydrographic network (ecological system).

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