

# **ENERGY EFFICIENCY POTENTIALS IN CHLOR-ALKALI SECTOR—A CASE STUDY OF SHANDONG PROVINCE IN CHINA**

In this paper, we assess 13 process technologies to improve energy efficiency in the Chlor-Alkali sector of Shandong province in China up to 2025 using a techno-economic approach. The expected results will show the energy efficiency improvement (EEI) potentials in the caustic soda and polyvinyl chloride (PVC) production process compared to a frozen-efficiency respectively. The most influential technologies are analysed in details in two production process. The significance of the energy savings translated into mitigated CO<sub>2</sub> emissions will be discussed. Meanwhile, the cost-effectiveness of energy efficient technologies (EETs) will be investigated. A sensitivity analysis is performed to assess the impacts of uncertainties on the cost-effectiveness of EETs