**ACTION PLAN FOR THE MITIGATION OF GREENHOUSE GAS EMISSIONS IN THE HOSPITAL-BASED HEALTHCARE OF THE HELLENIC ARMY**

**I.Sebos1, A.Tsakanikas2 , V.Bozoudis3**

1 Teaching and Research Associate, School of Chemical Engineering, National Technical University of Athens (NTUA), Zografou Campus, 9 Heroon Polytechniou Street, 15780, Zografou, Greece.

2 Assistant Professor, School of Chemical Engineering, (NTUA).

3 PhD candidate, School of Chemical Engineering, (NTUA), Email: [v.n.bozoudis@army.gr](mailto:v.n.bozoudis@army.gr)

**ABSTRACT**

Climate change is a growing threat for human health and well-being, one that will seriously impact and potentially disrupt all economic sectors and supply chains, such as trade, tourism, agriculture, forestry, fisheries etc. The environmental impact of the delivery of medical and hospital care generates its own greenhouse gas emissions, and needs to be examined and analyzed in detail in order to design and implement effective mitigation actions and measures. Hospital internal energy use processes include the energy consumed for hospital operation, including lighting, heating, cooking, waste treatment, and other functions associated with the logistical and operational support of hospitals.

This study focuses on the carbon footprint of the stationary emission sourcesof the 401 Military General Hospital of Athens (401 MGHA), in order to serve as a second step (following the assessment of the transport activities of the hospital undertaken in a previous study) for the development of an action plan for the mitigation of greenhouse gas (GHG) emissions in the hospital-based healthcare of the Greek Army.

The total carbon footprint of the 401 MGHA in year 2018 was 9,791.2 tCO2eq. GHG emissions of 401 MGHA in 2030 should be reduced by 35% (similar to the national target), by about 3,400 tCO2eq compared to 2018 levels. The electricity consumption in the 401 MGHA in 2018 was 8,472,700 kWh constitutes the category with the highest contribution (62.9%) to the hospital’s carbon footprint of stationary emission sources, and was responsible for 5,275.3 tCO2eq (53.9% of the hospital’s total GHG emissions). These GHG emissions will be significantly reduced by 2030, because the GHG conversion factor for 2030 will be reduced to 0.3566 kgCO2eq/KWh compared to 0.6227 kgCO2eq/KWh in year 2018.

The estimation of the CF of the stationary emission sources in this study, in combination with the estimation of the CF of transport activities of the 401 MGHA (Bozoudis and Sebos, 2021), constitutes the baseline for the development of an action plan for the mitigation of GHG emissions, the reduction of energy use and operating annual budget in the hospital-based healthcare of the Greek Army.

**KEYWORDS:** Carbon Footprint; Greenhouse Gas Emissions; Hospital-based Healthcare; Stationary Emission Sources; Key Performance Indicators.

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