

OPTIMIZACIJA HIBRIDNOG SISTEMA ZA SNABDIJEVANJE POTROŠAČA ENERGIJOM BAZIRANOG NA OBNOVLJIVIM IZVORIMA ENERGIJE

Sažetak:

Svjesni činjenice da u skorijoj budućnosti klimatska neutralnost postaje obaveza svih nas te da svaki pojedinačni sektor mora doprinijeti energetskej tranziciji Bosne i Hercegovine, upotreba hibridnih sistema baziranih na OIE postaje sve veća potreba. Cilj ove disertacije je izrada modela optimizacije za hibridne sisteme za snabdijevanje energijom potrošača kao što su obrazovne institucije. Optimizacija je provedena s tri aspekta: energijskog, okolinskog i ekonomskog s ciljem uvida u konkurentnost ovih sistema u odnosu na konvencionalne, kao i mogućnost prelaska klasičnog potrošača u prosumera. U svrhu provedbe optimizacije, definisani su utjecajni kriteriji te su izvršena eksperimentalna mjerenja utjecajnih parametara.

Ključne riječi: hibridni sistemi, optimizacija, OIE, javne zgrade, klimatska neutralnost

OPTIMIZATION OF THE HYBRID SYSTEM FOR SUPPLYING CONSUMERS WITH ENERGY BASED ON RENEWABLE ENERGY SOURCES

Abstract:

Aware of the fact that in the near future climate neutrality will become an obligation for all of us and that each individual sector must contribute to the energy transition of Bosnia and Herzegovina, the use of hybrid systems based on RES is becoming a growing need. The goal of this dissertation is to develop an optimization model for hybrid energy supply systems for consumers such as educational institutions. The optimization was carried out from three aspects: energy, environmental and economic in order to gain insight into the competitiveness of these systems compared to conventional ones, as well as the possibility of transitioning from a classic consumer to a prosumer. For the purpose of optimization, influential criteria were defined and experimental measurements of influential parameters were carried out.

Keywords: hybrid systems, optimization, RES, public buildings, climate neutrality