

HARMONIC DISTORTION IN RESIDENTIAL AREAS DUE TO LARGE SCALE PV IMPLEMENTATION IS PREDICTABLE

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ABSTRACT

Currently the total power of PV-generators in the built environment is small compared to the power of the distribution transformer. With the steady growth of PV installations, the penetration of PV-generators in the built environment will grow as well. This can lead to harmonic distortion [1,2]. In order to be able to predict whether this will occur, a simple though accurate harmonics model for the grid, the cables, the loads and the inverters is presented, as well as a measuring method to determine the necessary frequency dependent parameters of inverters and loads in general.