



Project ID 5578665	Smart Urban Isle - Smart bioclimatic low-carbon urban areas as innovative energy isles in the sustainable city	
Date: 15/04/2017	Deliverable D2.1 – Energy Profile of the SUI	



## *D2.1*

# Energy Profile of the SUI (M6)

Document Owner: CARSA
Contributors: METU
Dissemination: Confidential
Contributing to: WP2
Date: 15/06/2017
Revision:

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## Executive Summary

This study provides a research and evaluation of Sulzer Areal (Werk1) – Winterthur, Switzerland which is subject to transition process with new projects. So, this site has opportunity to compare existing and proposal situations. The method of this study includes site survey, analysis on externally provided data, and computer-based energy & comfort performance simulations. Urban level and Building level are two main title of simulations. Urban level has 8 simulation series which are used to compare current and proposal situations at summer day, summer night, winter day and winter night. On the other hand; Building level results include energy performance, comfort, co2 emissions and daylighting analysis. Building level focused on both proposal and existing building types by determining current/design case. Rehabilitation/improvement possibilities proposed and tested for All results can be found in special reports for both urban level and building level. Results generally shows that proposal situation has more positive values than current in general as expected.

The report not only finds comparative impact of new proposal, but also point outs the energy and comfort levels for both cases. Recommendations discussed include; 1) some improvements can be applied on even proposal case. 2) Energy production systems will help to move results to better steps.

The report also investigates that the analysis conducted has limitations. Some of the limitations include: HVAC system information for all buildings was not provided and taken as default. Also, HVAC part is beyond the architectural point of view. So, energy performance and co2 emission result can be used to compare them with each other. Exact/precise energy loads and co2 emissions are not present.