Life Cycle Analysis of the Adaptive Solar Facade[☆]

M. Jansen[a,*], P. Jayathissa[a,**], N. Heeren[b], A. Schlueter[a], S. Hellweg[b]

[a] *Architecture and Building Systems, Institute of Technology in Architecture, ETH Zurich, Switzerland*
[b] *Ecological System Design, Institute of Environmental Engineering, ETH Zurich, Switzerland*

Abstract

Text text Text textText textText textText textText textText textText text-Text textText textText textText textText textText textText textText text

Keywords: Adaptive Solar Facade, Life Cycle Analysis

[☆] This document is a collaborative effort.

[*] Corresponding author
[**] Principal corresponding author
Email addresses: m.jansen@student.ethz.ch (M. Jansen), jayathissa@arch.ethz.ch (P. Jayathissa), heeren@ifu.baug.ethz.ch (N. Heeren), schlueter@arch.ethz.ch (A. Schlueter), hellweg@ifu.baug.ethz.ch (S. Hellweg)

1. Introduction

- In the last decades, building integrated photovoltaics (BIPV) have been adopted as part of the energy strategy towards 2050... (advantages of BIPV, potential of BIPV)

- The current developments of light weight efficient thin film technologies have brought new design possibilities for architects in BIPV design... (Adaptive Building Envelopes, Envelope is the barrier between the internal and external environment, Advantages, seamless coupling with solar tracking mechanics)

- The aim of this paper is to analyse the life cycle emissions of an adaptive solar facade and provide comparisons with standard shading systems and static BIPV solutions...

2. Life cycle analysis methodology

bla bla test test merge merge pretty awesome

3. Adaptive solar facade environmental profile

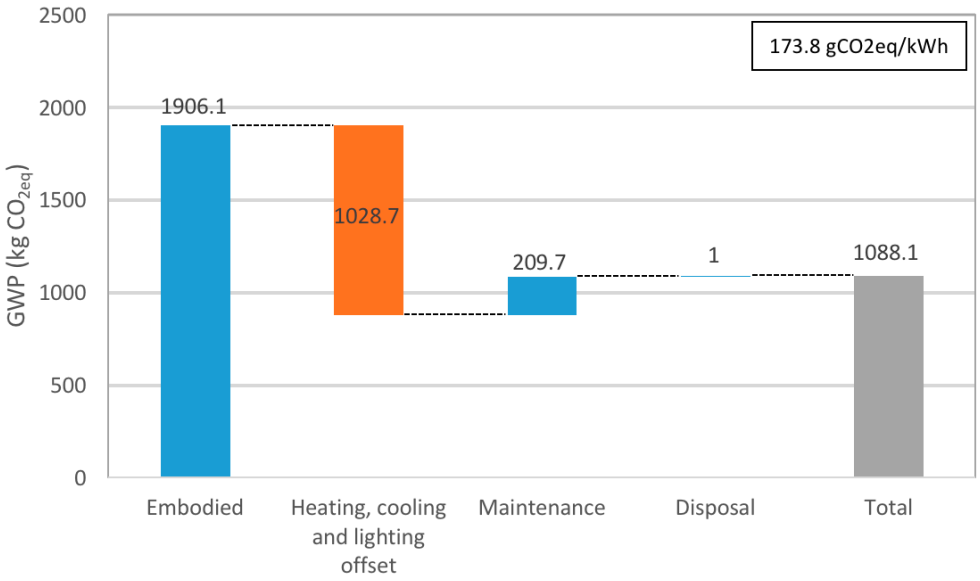

Figure 1: Build-up of total GWP of the ASF

4. Comparison to other technologies

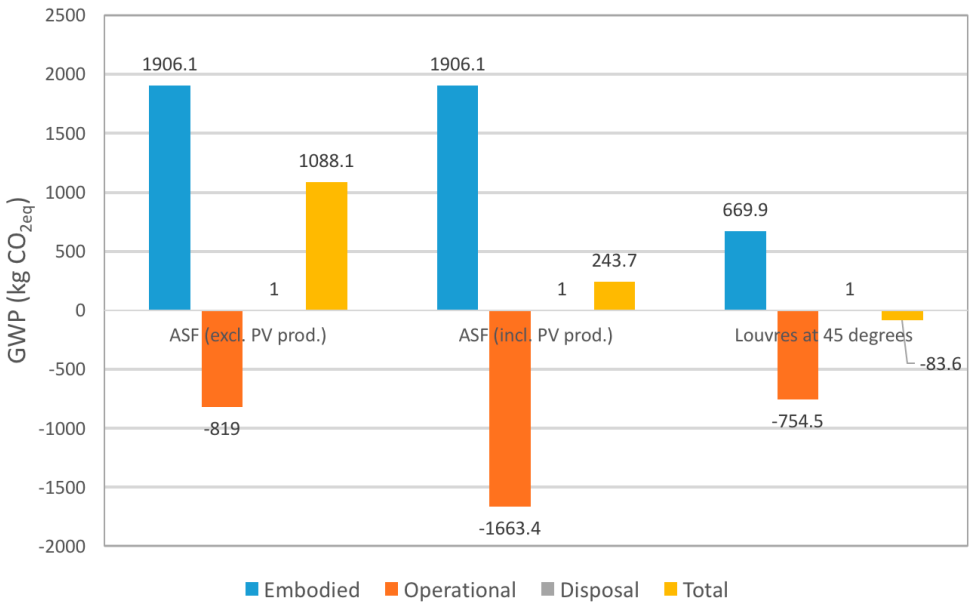

Figure 2: GWP comparison for adaptive solar facade and louvres

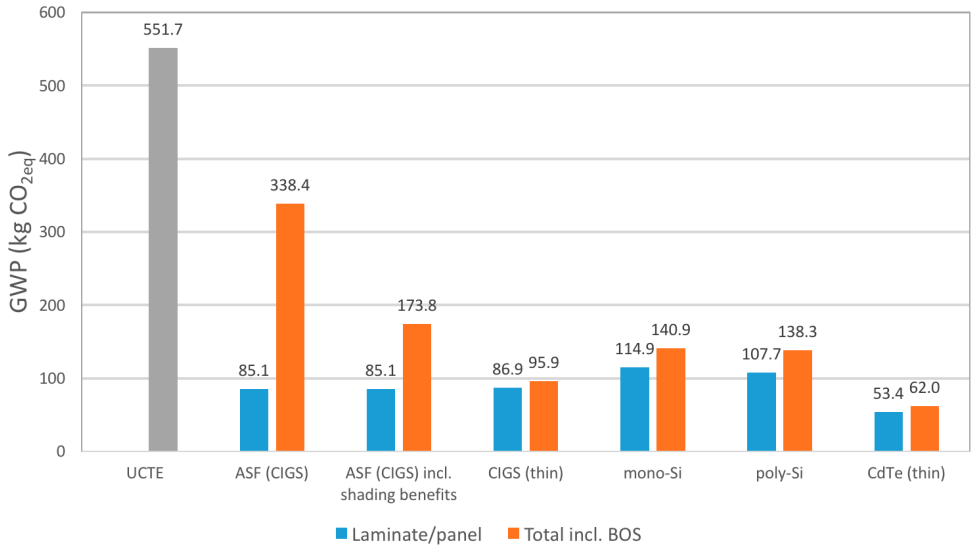

Figure 3: PV comparison for adaptive solar facade and other facade-mounted systems

5. Conclusion

...

6. Acknowledgments

...