

Editorial to the Proceedings of the 13th International Conference on Solar Energy for Buildings and Industry (EuroSun 2020)

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1. Introduction

The 13th International Conference on Solar Energy for Buildings and Industry (EUROSUN 2020) of the International Solar Energy Society (ISES) was held virtually on 1-3 September 2020, in collaboration with the International Energy Agency (IEA) Solar Heating and Cooling (SHC). The Conference was organised in cooperation with the Cyprus University of Technology (CUT) and the University of West Attica. The Conference e-connected many researchers, renewable energy practitioners, students, government officials, media, and the general public, not only from Europe, but from around the world to learn about the latest development in renewable energy technologies and their deployments. The Conference featured a variety of technical sessions, plenaries and keynote talks to stimulate discussions on how the world can achieve 100% renewable energy to meet all end use energy requirements; not just electricity, but also heating, cooling and transport applications.

Our planet is facing unprecedented changes as a result of climate change due to the use of fossil fuels and other sources of greenhouse gases. As such, countries around the world must focus on how to achieve a decarbonized world. Emphasis should be given to all aspects of our lives (from sustainable cities to the maritime sector) and solar energy is the key player in our efforts. Within Europe, the European Commission, as a response to these challenges, has set the European Green Deal. It is a new growth strategy that aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient and competitive economy where there are no net emissions of greenhouse gases in 2050 and where economic growth is decoupled from resource use. Furthermore, in 2019, all Member States submitted their National Energy and Climate Plans (NECPs), that include new research, innovation and development opportunities over the next few years for all technologies, including of course solar energy. Ambitious targets have been set, that may not be ambitious enough however, given the urgency of the challenges the planet is dealing with and facing more of.

The worldwide success of renewable energy technologies, and solar energy in particular is remarkable, and it is what we are working for. In many cases solar technologies are already the most economical way to produce heat and electricity. But there is still way to go in order to rapidly achieve the goal of 100% renewable energy in all end-use sectors. Efficiencies must be increased, the costs of systems and services should be reduced further, and large energy storage systems have to be developed. We need a shift to thinking in terms of systems and a better understanding of the interaction of the heat, electricity and mobility sectors.

The challenges and opportunities of this energy transformation was the central theme of this Conference and these proceedings capture the many outstanding research papers that were presented at the Conference. A total of 214 technical abstracts had been submitted, and thanks to the superb efforts of the Theme Chairs, there were a total of 86 oral and 67 poster presentations at the Conference. 101 papers from these presentations are now published in these Proceedings. The papers cover a wide range of themes and topics, listed in the first pages of the proceedings. A full listing of the International and Local Organizing Committees as well as the Theme Chairs, is provided at the beginning of these proceedings.

The authors of this Editorial greatly appreciate your interest in these Conference Proceedings and look forward to your participation in future events of ISES and the IEA SHC Program.