

Editorial to the Proceedings of Solar World Congress 2019 Together with the Solar Heating and Cooling Conference on Buildings and Industry

Dave Renné, Daniel Mugnier, and Jose-Miguel Cardemil

1. Introduction

The International Solar Energy Society (ISES) Solar World Congress (SWC2019), held together with the International Energy Agency (IEA) Solar Heating and Cooling (SHC) Programme's 2019 Conference on Heating and Cooling for Buildings and Energy, was held at Centro Parque in Santiago, Chile on 4-7 November 2019. The Congress was hosted locally by the Solar Energy Research Center, SERC-Chile. The Congress brought together many researchers, renewable energy practitioners, students, government officials, media, and the general public from around the world to learn about the latest development in renewable energy technologies and their deployments. The Congress featured a variety of technical sessions, plenaries and keynote talks, a wide range of networking events and other unique activities 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.

The world has undergone incredible economic growth and prosperity in recent decades, driven largely by low-cost and readily available fossil fuels. But this growth comes at a price; income disparities, energy injustice, and major environmental threats, especially climate change, which are growing along with this wealth and prosperity. In 2019 these disparities came to a head in Chile and elsewhere, where people "took to the streets" to speak out and fight against these social injustices. However, despite the civil unrest in Chile over 400 people from 48 countries participated in the Congress to learn more and exchange knowledge about its important messages.

One solution to the social injustices highlighted in these global protests is a transformation of our energy system into clean, renewable, and distributed energy-producing technologies. This transformation is already underway and is being accelerated as the cost of renewable energy systems continues to drop, especially for solar and wind systems, and as public support for achieving a no-carbon emission energy economy grows. The Latin American continent, and especially countries such as Chile, is emerging as a key marketplace for massive renewable energy growth; significant growth in these technologies has already been realized in many key regions. This growth is resulting in more equitable energy access and choice available to more and more population groups. The challenges and opportunities of this energy transformation was a central theme of the Congress.

These Congress proceedings capture the many outstanding research papers that were presented at the Congress. A total of 561 technical abstracts had been submitted, and thanks to the superb efforts of the Scientific Committee, chaired by Prof. Jose Miquel Cardemil and co-Chaired by Ken Guthrie and Ricardo R  ther, there were a total of 176 oral and 186 poster presentations at the Congress. The papers from these presentations are now published in these Congress 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 Scientific Committee is provided at the beginning of these proceedings.

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