Record Nr. UNINA9910151780203321 Autore O'Rourke Michael Titolo Snow loads on solar-paneled roofs / / Michael O'Rourke, Nicholas Isyumov Pubbl/distr/stampa Reston, Virginia:,: American Society of Civil Engineers,, 2016 ©2016 **ISBN** 1-5231-1296-4 0-7844-8024-9 Descrizione fisica 1 online resource (61 pages): illustrations Disciplina 697.78 Soggetti Solar houses Dwellings - Energy conservation Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Nota di bibliografia Includes bibliographical references. Nota di contenuto Introduction; Chapter 1; Snow Panel Types; Chapter 2; Balanced Snow Load Considerations; Chapter 3; Sliding Loads; Chapter 4; Drift Loads; Chapter 5; Example Problems; ; Sponsored by the Technical Activities Division of the Structural Sommario/riassunto Engineering Institute of ASCE Snow Loads on Solar-Paneled Roofs offers guidance for structural engineers regarding the snow load conditions that result from the presence of solar panels on a roof. This report focuses on the structural design of roof beams, roof girders, and columns that support solar panels and does not address the design of solar panels or above-the-roof solar panel support components. Drawing from published case studies and their own extensive experience with solar panels, O'Rourke and Isyumov present recommendations which are based on concepts and procedures used in the Minimum Design Loads and Associated Criteria for Buildings and Other Structures, including the ASCE 7 load factors (thermal, slope, and exposure) and ASCE 7 load combinations. The report considers balanced, sliding, and drift snow loads for flush, tilted-closed, tiltedopen, and elevated solar panel installations. Generously illustrated with diagrams, this report includes nine worked example problems

demonstrating the application of the guidelines.