Large-Scale PV Systems: Based on the $IBC^{\circledast},\,IFC^{\circledast}$ and NEC^{\circledast}

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his publication, *Large-Scale PV Systems: Based on the IBC, IFC and NEC*, provides a brief overview of what are more commonly known as "solar farms." Solar panels and solar PV systems have been around for many years and are a common feature of residential and commercial buildings in many countries, resulting in a relatively knowledgeable workforce on this renewable energy system. Large-scale PV systems or solar farms; however, are different in that they are massive solar PV projects that are often outside of the municipalities, are structurally self-supported, connect directly to the utility grid and are, therefore, much less understood by most.

The momentum for using more renewable energy sources and fast-paced growth in many communities have resulted in such large-scale PV systems becoming part of communities, necessitating compliance with local or building codes, zoning regulations and other laws and ordinances.

Large-Scale PV Systems: Based on the IBC, IFC and NEC attempts to address some of the code and standard-related matters that building safety departments will face in addressing the needs of their communities. Technicians, designers and code officials, regardless of their level of experience, will benefit from this easy-to-read illustrated resource. The 2020 edition of NFPA 70: National Electrical Code[®] (NEC[®]) and the 2021 as well as the 2018 editions of the International Building Code[®] (IBC[®]) and International Fire Code[®] (IFC[®]) were used in developing this unique publication.

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About the International Building Code[®] (IBC[®])

Building officials, design professionals and others involved in the building construction industry recognize the need for a modern, up-to-date building code addressing the design and installation of building systems through requirements emphasizing performance. The *International Building Code*[®] (IBC[®]), in the 2021 edition, is intended to meet these needs through model code regulations that safeguard public health and safety in all communities, large and small. The IBC is kept up to date through the open code development process of the International Code Council[®] (ICC[®]). The provisions of the 2018 edition, along with those code changes approved in the most recent code development cycle, make up the 2021 edition.

The International Code Council (ICC), publisher of the IBC, was established in 1994 and is a nonprofit association that provides a wide range of building safety solutions including product evaluation, accreditation, certification, codification and training. The ICC develops model codes and standards used worldwide to construct safe, sustainable, affordable and resilient structures. The ICC's mission is to provide the highest-quality codes, standards, products and services for all concerned with the safety and performance of the built environment.

The IBC is one of 15 International Codes[®] (I-Codes[®]) published by the ICC. This comprehensive building code establishes minimum regulations for building systems through prescriptive and performance-related provisions. It is founded on broad-based principles that make possible the use of new materials and new building designs. The IBC is available for adoption and use by jurisdictions internationally. Its use within a governmental jurisdiction is intended to be accomplished through adoption by reference, in accordance with proceedings established by the jurisdiction's laws.

About the International Fire Code[®] (IFC[®])

ire code officials, fire inspectors, building officials, design professionals, contractors and others involved in the field of fire safety recognize the need for a modern, upto-date fire code. The *International Fire Code* (IFC), 2021 edition, is intended to meet these needs through model code regulations that safeguard the public health and safety in all communities, large and small. The IFC is kept up to date through ICC's open code development process. The provisions of the 2018 edition, along with those changes approved in the most recent code development cycle, make up the 2021 edition.

One in a family of International Codes[®] published by ICC, the IFC is a model code that establishes minimum fire safety requirements for new and existing buildings, facilities, storage and processes. It addresses fire prevention, fire protection, life safety and safe storage and use of hazardous materials. The IFC provides a total approach of controlling hazards in all buildings and sites, regardless of the hazard being indoors or outdoors.

The IFC is a design document. For example, before a building is constructed, the site must be provided with an adequate water supply for fire-fighting operations and a means of building access for emergency responders in the event of a medical emergency, fire or natural or technological disaster. Depending on the building's occupancy and uses, the IFC regulates the various hazards that may be housed within the building, including refrigeration systems, application of flammable finishes, fueling of motor vehicles, high-piled combustible storage and the storage and use of hazardous materials. The IFC sets forth minimum requirements for these and other hazards and contains requirements for maintaining the life safety of building occupants, the protection of emergency responders, and to limit the damage to a building and its contents as the result of a fire, explosion or unauthorized hazardous material discharge and electrical systems. The IFC is available for adoption and use by jurisdictions internationally. Its use within a governmental jurisdiction is intended to be accomplished through adoption by reference, in accordance with proceedings establishing the jurisdiction's laws.



• About the NFPA 70[®], National Electrical Code[®] (NEC[®])

FPA 70, NEC, was first published in 1897 and is continually put through a rigorous review process to keep it up to date with the most current industry practices, emerging trends, and the development and introduction of new technologies. The latest requirements for safe and more effective electrical design, installation, and inspection, including provisions for wiring, overcurrent protection, grounding, and equipment, are covered. NFPA 70[®], *National Electrical Code*[®] (NEC[®]), is the benchmark standard for electrical safety in residential, commercial, and industrial settings.



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