



National Electrical Manufacturers Association

The association of electrical equipment
and medical imaging manufacturers
www.nema.org

July 30, 2021

NEMA comments on Colombian Ministry of Health and Social Protection resolution on general criteria for design and construction of buildings intended for provision of health services in Colombia

Dear Representative of Colombian Ministry of Health and Social Protection,

The National Electrical Manufacturers Association (NEMA) is the leading trade group representing electrical equipment and medical imaging manufacturers at the forefront of electrical safety, reliability, and efficiency. Our nearly 325 Member companies provide a range of products including both the transportation and utilities sectors. Collectively our NEMA Members account for worldwide industry sales exceeding \$140 billion.

On behalf of the NEMA Fire, Life Safety, Security, and Emergency Communication Section, we submit the following comments on Colombian Ministry of Health and Social Protection resolution establishing the general criteria for design and construction of buildings for the provision of health services.

These comments are intended to strengthen the resolution by:

- Referencing widely adopted fire, life safety, and security Standards
- Requiring certified products and proper installation of fire detection systems in healthcare facilities
- Requiring access control and video surveillance systems in sensitive healthcare facility locations

Should you have any comments about the attached comments, please contact Fernanda Heredia at feernanda.heredia@gmail.com.

Sincerely,

A handwritten signature in dark ink that reads "Philip A. Squair". The signature is written in a cursive, flowing style.

Philip A. Squair
Vice President, Government Relations
National Electrical Manufacturers Association

**Comments of
National Electrical Manufacturers Association (NEMA)
to
Colombian Ministry of Health and Social Protection**

**RE: Resolution published on general criteria for design and construction of
buildings intended for provision of health services in Colombia**

https://prestadores.minsalud.gov.co/habilitacion/norma_infraestructura/td/solicitudes.aspx

July 30, 2021

The National Electrical Manufacturers Association (NEMA) represents nearly 325 electrical equipment and medical imaging manufacturers that make safe, reliable, and efficient products and systems in seven industrial sectors. NEMA Member companies represent over 370,000 American manufacturing jobs in more than 6,100 facilities. Worldwide annual sales of products in the NEMA scope exceed \$140 billion.¹

Summary of NEMA Comments:

1. Introduction
2. Energy Efficiency (Section 4.3)
3. Fire Protection System (Section 4.7)
4. Security Systems (Section 4.8)
5. Ventilation and Air Conditioning System (Section 4.11) and Technical Annex
6. Conclusion

Introduction

The Colombian Ministry of Health and Social Protection has invited the filing of comments in response to its resolution published on general criteria for the design and construction of buildings intended for the provision of health services in Colombia. Please find our comments below.

Energy Efficiency (Section 4.3)

NEMA proposes including the following text into the regulation:

4.3 Environmental Sustainability and energy efficiency

"Regarding energy efficiency, buildings intended for the provision of health

¹ For more information, please visit: <https://www.nema.org/>.

services, **must comply at least with the ANSI / ASHRAE / IES 90.1-2019 standard - Energy Requirements for Buildings except Low-Rise Residential.** Additionally, the provisions and guidelines of the Ministry of Environment and Sustainable Development, in relation to water and energy efficiency, will be taken into account. Depending on the weather and conditions of the place, all designs must involve passive and active measures such as:

* Orientation of the building.

* Accessories for saving water.

* Collection and use of rainwater for irrigation of green areas”.

According to UPME (National Energy Planning Agency), hospitals are the buildings that consume the most energy (KW / h / m2), even ahead of shopping centers.

Consequently, and given the needs of occupants of hospitals, energy efficiency measures must be more specific. For this purpose, NEMA proposes the adoption of the ASHRAE 90.1 Standard as mandatory in its 2019 version

(http://www.caatvalencia.es/pdf/10003864_previews_2015092_pre.pdf). This Standard has become a global benchmark in energy efficiency for buildings and establishes minimum requirements for hospitals to obtain certifications such as LEED. This Standard provides:

a. The minimum energy efficiency requirements for the design, construction and operation and maintenance of:

1. new buildings and their systems,
2. new areas of buildings and their systems,
3. new systems and equipment in existing buildings, and
4. new building equipment or systems specially identified in the Standard as part of manufacturing or industrial processes; and

b. The criteria for determining compliance with these requirements.

It is important to mention that in several public tenders in Colombia the ASHRAE 90.1 Standard, for example for low-income housing (less complex than a hospital), is mandatory (see for example http://www.sdp.gov.co/sites/default/files/2019-07-23_pdl_-_final1_v7_sdp_anex_1.pdf)

Fire Protection System (Section 4.7)

“It must comply with the minimum requirements for fire protection, and they will have a system for timely detection, control and extinction of fire, in accordance with current regulation – Colombian Regulation on Seismic Resistant Construction NSR 10 and Law 1575 of the 2012, or the rules that modify or replace them”.

NEMA proposes to add the following underlined text:

Regarding fire protection systems, buildings for the provision of health services must comply with the minimum requirements for fire protection, and they will have a system for timely detection, control, and extinction of fire, in accordance with current regulation – Colombian Regulation on Seismic Resistant Construction NSR 10 and Law 1575 of the 2012, or the rules that modify or replace them.

Additionally, buildings for the provision of health services must comply with the provisions of the following international standards:

- *International Building Code 2018, regarding infrastructure classified as I-2, or Institutional Group, referring to buildings and structures for the provision of health services with more than five people without self-preservation capacity, such as hospitals, geriatric homes and hospitals psychiatric.*
- *NFPA 72, National Fire Alarm and Signaling Code, 2016*
- *NFPA 101, Life Safety Code, 2018 specifically what is described in Chapter 9, Section 9.6 "Fire Detection, Alarm and Communications Systems", supplemented with the recommendations indicated in Chapters 18 and 19 focused on buildings with occupation for health care, both new as existing.*
- *NFPA 99, Health Care Facilities Code, specification as indicated in Chapter 16, Section 16.7 "Fire Detection, Alarm and Communications Systems".*

Rationale:

The National Electrical Manufacturers Association (NEMA) Fire, Life Safety, Security, and Emergency Communication Section submits the attached comments to strengthen the NSR 10 code to guarantee adequate fire protection to building occupants.

Hospitals and other health infrastructure, due to the critical function they fulfill and the additional logistical challenges, for instance for evacuation or shelter in place, require quality fire detection requirements, based on established Standards. This has been recognized by reference countries in regulatory matters such as Canada, the United States, and the United Kingdom, that have issued specific regulation and Standards for health care facilities. It would be worrying that, as is in the draft of the proposed Standard, Colombia does not require certified products and installations of fire detection.

NEMA proposes including references to the most recognized international Standards on

fire detection for the health sector as follows:

- International Building Code 2018 (Chapter 9 relating to I-2 occupancies)
- NFPA 72 Standard: basic standard for installation of fire and detection systems
- NFPA 101 more specific for health care
- NFPA 99, Health Care Facilities Code

Also, to guarantee functioning systems, NEMA proposes that the system technologies must be certified to the most widely accepted international Standard.

Security Systems (New Section 4.8)

NEMA proposes including the following requirements in a new annex as follows in order to address the need for security in hospitals and other healthcare facilities:

4.8. Security Systems (new)

The following areas must have an access control system and a video surveillance system, installed in accordance with the NFPA 731 Standard for the Installation of Premises Security Systems:

- 7.6. Pharmaceutical Service (areas of reception of medicines and medical devices, storage area, storage of rejected, returned and withdrawn products, storage of products destroyed or denatured by expiration or deterioration)
- 7.24. Neonatal Basic Care, Neonatal Intermediate Care and Neonatal Intensive Care Service
- 7.25. Pediatric intermediate care and pediatric intensive care service
- 7.32. Delivery Care Service

In compliance with data privacy requirements, cameras used for patient monitoring or with access to protected medical information must be only accessible to authorized personnel. Access to video surveillance systems and Access to restricted areas must be traceable and based on roles and different levels of permits.

Rationale:

Video Surveillance and access control systems are increasingly recognized as an inherent part of the infrastructure of any hospital and patient-oriented healthcare facility. Security systems must guarantee control of authorized personnel who access certain restricted areas in order to avoid loss, theft, or misuse of confidential medical information of patients, hospital equipment, medical supplies, or pharmaceuticals.

Additionally, sensitive areas such as maternity must have robust security systems that minimize events threatening newborns or their mothers. These systems must also store and allow information to be obtained for forensic analysis, audits, and investigations.

Systems must be installed in accordance with international Standards, such as NFPA 731 Standard for the Installation of Premises Security Systems, to guarantee compatibility and compliance with privacy Standards and to safeguard patient information.

Ventilation and Air Conditioning System (Section 4.11) and Technical Annex

NEMA proposes the following:

Filtration systems. Article 4.11 of the regulation will be as follows:

4.11 Ventilation and air conditioning system

Regarding ventilation and air conditioning, the design and construction of buildings for the provision of health services will follow the provisions of the ANSI / ASHRAE / ASHE 170-2017 Standard.

Rationale:

COVID-19 demonstrated the importance of having efficient filtration systems and, in general, adequate ventilation for public health infrastructure. The most recognized international Standard on the matter is ANSI / ASHRAE / ASHE 170-2017, Ventilation of Health Care Facilities.

This Standard gives clear and internationally recognized protocols to guarantee adequate air quality in public health institutions. This avoids possible confusion arising from the simple general description contained in the draft regulation proposed by the Ministry of Health, and recognizes the requirement for more technical details to be effectively implemented, certified and audited.

Conclusion

We look forward to working with the Ministry in the future. Should you have any questions, please contact Heredia at feernanda.heredia@gmail.com.

Philip A. Squair
Vice President, Government Relations
National Electrical Manufacturers Association