

Written by the Technical Committee of the film and video industry's joint sector-based working group and produced by the Commission de la santé et de la sécurité du travail du Québec.



ASSOCIATION DES
PRODUCTEURS DE
FILMS ET DE
TÉLÉVISION DU
QUÉBEC

Electricity

Basic concepts

Any source of voltage represents a risk of electrocution. For example, a source of 120 volts generates sufficient current to seriously injure a person and even cause death. To prevent accidents, always use electrical equipment or accessories in good condition and comply with the codes and standards for electrical installations.

Responsibilities

1. The person in charge of setting up the electrical installation must make sure that it meets the production requirements and that it is safe.
2. Only those personnel authorized by the person in charge of setting up the electrical installation may energize or shut down production's temporary electrical installations.

Precautions to be taken

Distribution panels

3. Ensure that the distribution panels are:
 - protected when energized components are exposed;
 - installed in a location protected from weather and water, where they will not be damaged, and where access is restricted to authorized personnel;
 - easily accessible;
 - installed in a vertical position on insulated structures; and ensure that the rated voltage is indicated.
4. Clearly identify on each switch or circuit breaker the load that it provides so that it can be shut off in an emergency.
5. Make sure that the junction boxes and distribution panels are closed, or install a screen of insulating material (see guideline 10.1, point 15).
6. Make sure that all circuits and electrical equipment connected to the distribution panels are grounded.
7. Maintain the electrical equipment in good condition and regularly check the condition of the flexible cords and their insulating sleeves as well as the equipment connections.

Note. – Electrical rooms must not be used for storage.

Protective devices (circuit breakers, fuses)

8. Make sure that electrical circuits are equipped with protective devices, fuses or circuit breakers, of appropriate capacity.
9. Make sure that fuses are always tightly screwed into their receptacles and check them periodically to ensure that they are not coming loose, which could lead to overheating.
10. Regularly check the condition of reset devices such as circuit breakers.

Electrical outlets

11. Install a sufficient number of electrical outlets near the distribution panels to avoid overloading the circuits.
12. Make sure that the electrical outlets exposed to the weather have waterproof covers.
13. Use plugs and outlets that correspond to the capacity and voltage of the equipment and accessories.

Note. – It is prohibited to use screw plugs that screw into light sockets to supply electricity to equipment.

Extension cords and electrical wires

14. Suspend wires and extension cords at a minimum height of 2.4 m in order to ensure free passage, or protect them with cable mats if they are on floors, in order to avoid damaging them or so that they do not cause tripping.
15. Use grounded extension cords. Choose an extension cord appropriate for the load and the current draw.
16. Inspect all extension cords and wires before use. If they are damaged, they must be removed or repaired.
17. Disconnect and store extension cords that are not in use.

Electrical equipment and tools

18. Make sure that the equipment or tool is grounded or has double insulation.
19. Use tools solely for the purposes for which they are designed.

20. Disconnect tools before changing accessories or making adjustments.
21. Make sure that all electrical tools are properly maintained.
22. Carefully inspect the metal housing of a tool with double insulation to detect any cracks or breaks.

Avoid:

- cutting or bending the grounding plug of an electrical cord or an extension cord;
- pulling on a tool's electrical cord to disconnect it (pull on the plug instead);
- using an electrical tool when leaning against a metal structure (i.e., do not lean against a pipe when using a drill);
- doing make-shift repairs on tools or electrical wiring and on extension cords;
- short-circuiting a tool's defective switch.

Work in humid conditions

Avoid working with electrical tools where water is present. However, if this is unavoidable, use:

- a ground fault circuit interrupter (GFI); or
- low voltage equipment and tools (batteries or very low voltage sources); or
- circuits equipped with an ungrounded isolating transformer.

Note. – The information contained in this guideline is not exhaustive and does not replace current standards, laws and regulations.

Guideline 10 • Appendix

Work near power lines*

1. If a person, part, load or a machine is liable to be brought within 3 m of power lines during production, Hydro-Québec's Customer Service must be contacted in the sector where production is taking place.
2. A Hydro-Québec representative evaluates the situation with the producer (or his representative), proposes a solution, and completes the agreement entitled *Convention – Intervention près des lignes électriques*. The producer or his representative bases his work method on the information written in the agreement.
3. The producer or his representative must inform the members of the production crew of the dangers involved in work near power lines and the procedures to be followed to ensure that everyone is safe.
4. The Hydro-Québec representative and the producer (or his representative) sign the agreement. One copy of it, accompanied by the work procedure, must be forwarded to the CSST.

* **Adaptation of a text taken from *Objectif zéro*, published by Hydro-Québec, dealing with the prevention of electrical accidents.**

Note. – **The producer must anticipate a period of at least five days for the work to be done by Hydro-Québec.**

Reference

Hydro-Québec form: *Convention – Intervention près des lignes électriques*.