

# Healthy Workplaces

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## Electrical Contractors Industry Focus Group Report

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## **A Note About this Report**

The purpose of this report is to document the opinions and ideas of electrical contractors, electricians, apprentices, and training directors as stated in the focus groups. This report does not attempt to interpret whether these opinions meet the regulatory requirements set forth in the Washington State Administrative Code. Mention of any strategies used by companies in this document does not constitute endorsement by Labor and Industries or by the SHARP program.

## **Ordering Information**

To receive copies of the Electrical Contractors Industry Focus Group Report (Technical Report # 67-4-2003), the Food Processing Industry Final Report (Technical Report # 67-2-2001), or the Furniture, Fixtures and Millwork Industry Final Report (Technical Report # 67-3-2003), contact the Safety and Health Assessment and Research for Prevention (SHARP) Program at:

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# EXECUTIVE SUMMARY

## Electrical Contractors Industry Focus Group Report

### Background

The Safety and Health Assessment and Research for Prevention (SHARP) Program is implementing an initiative to determine factors that create workplace health and to disseminate that information throughout industries in Washington State. The overall goal of this initiative is to reduce work-related injuries and illnesses. In 2001 and 2002, the initiative focused on the Food Processing Industry and in the Furniture, Fixtures, and Millwork Industries, respectively. In 2003, SHARP focused on the Electrical Contractor Industry.

Focus groups were held in the Electrical Contractors Industry for the purpose of identifying strategies used to address occupational safety and health. A total of six focus group sessions were held with representatives from three key industry groups: company managers, journeymen and apprentices, and electrical apprenticeship training center representatives.

### Methods

A total of 43 individuals participated in the focus groups. The participants included 21 company managers, 17 journeymen electricians, 2 apprentices, and 3 training center representatives. Some, but not all participants, were members of the International Brotherhood of Electrical Workers (IBEW) union and the National Electrical Contractors Association (NECA). We included urban participants from Seattle and Spokane, as well as rural representatives throughout the state. Some of the focus groups were held in person, while other groups were held over the telephone as a teleconference. All focus group sessions ran about two hours in length.

Each group identified and prioritized their top health and safety concerns and discussed potential solutions. The groups identified the following top hazards and injuries: ladder hazards; lack of fall protection; back injury; energized work and failure to lock-out/tag-out; eye, face and hand injuries; and housekeeping hazards.

### Findings

Ladder hazards and lack of fall protection were discussed extensively in most groups. Some of the issues included: standing too high on a ladder, poor ladder condition, improper use of ladders, and proper use of lifts. Highlights of some of the perceived successful strategies used by companies included:

- Provide ladders with a variety of heights so that the correct size could be used, and dispose of unstable ladders or those in disrepair.
- To avoid having workers stand on the ladder top and top step, place a “dunce cap” over the top, or use rails or wood panels as a barrier for stepping in this area.
- Use aerial lifts when feasible.
- Use a checklist to inspect all ladders or lifts daily.

Back injury and other musculoskeletal injuries were discussed in most of the focus group sessions. Managers recognized that back injury resulted in work time lost and light duty assignments. Strategies used by companies included:

- Educate workers about how to take care of their back and to treat strains before they become a serious injury. Some participants used training programs that included instruction by a chiropractor or physical therapist.
- Use buckets and hand carriers with wheels in place of tool belts to reduce the load on the back.

Energized work and failure to use lock-out/tag-out procedures were serious concerns mentioned by respondents. Strategies to control or reduce electrical events included:

- Do not work on an energized circuit unless necessary. Management commitment and enforcement of a company's hotwork policy is key to working hot only when necessary.
- Educate the customer about issues around energized work. Work with the customer to establish policies that are safe for everyone.
- Have two independent people check to make sure all power sources are shut off.
- Never walk away from a hot panel. Secure the hot panel with setscrews, or restrict the area to qualified persons.
- Stock a variety of locks in the electrician's toolbox for locking out different types of power sources (such as lines and boxes).

Injuries to the eyes, face, and hands were brought up as concerns in the focus groups. Some of the strategies for reducing eye injuries included:

- Label power tools with the words "Eye Protection Required" so that the user would be reminded to wear their safety glasses with each use.
- One company felt it was easier to buy large quantities of inexpensive safety glasses, and replace them as often as needed. Another company felt that buying nice, streamlined stylish glasses that come in a kit with a belt pack was needed to encourage electricians to wear the glasses.

Poor housekeeping was recognized as a safety hazard in several groups. It can be difficult to keep a clean work area on construction sites that have multiple trades using the same space.

- One manager expressed that when you go about keeping a clean worksite, a person may be organizing their mind at the same time, planning, thinking, and doing things efficiently.
- One participant recalled the "Board of Shame," a tactic used by a general contractor to promote housekeeping. Polaroid photos of messes were taken and posted on a board for everyone to see. No one wanted their mess featured on the board; initially there were "tons of pictures on the board", but as people started keeping their areas neat, the photos became more rare.

- Garbage bins, dumpsters, and recycling cans need to be readily available throughout the site and emptied frequently to promote housekeeping.
- One electrician mentioned using a caddy box on their teacart to put scrap into as they completed their work.

In the context of discussing the hazards and injuries listed above, topics such as employee training, incentive programs, hazard analysis, worker involvement, safety rule enforcement, and management commitment were discussed. Highlights of these subjects include:

- Safety meetings are a common venue for safety training. Journeymen mentioned that when safety training incorporates actual safety issues that are current on the job site for that week, it makes everyone more aware and adds to the overall safety of the job.
- At one company, twice a month the foreman picks one other person to walk through a job. They look specifically for things that could be a safety hazard. They write the hazards down, and when they go over safety issues in their regular meetings, they include these site-specific hazards that the foreman and worker found.
- Disciplinary procedures can be used to deal with safety violations and set the tone for safety on a jobsite.
- Without the support of top management, integrating safety into the work is much more difficult.

## **Summary**

In summary, managers, workers and training center representatives shared similar health and safety concerns. The focus groups that were held were an effective way to learn about the safety and health issues, concerns, ideas, and potential solutions in the electrical industry. The information gained could be further developed into an educational tool and shared industry-wide. It is hoped that through discussion of industry safety and health concerns and exploration of solutions, the safety performance of this industry can be raised.

When controlling for occupational hazards, one of the most successful strategies that can be used to prevent injury is hazard elimination. While some of the discussion in a few of the focus groups was on hazard analysis and hazard elimination, many of the strategies being used to reduce injuries are education, training, and use of personal protective equipment. The concepts of hazard analysis and hazard elimination should be promoted throughout this industry. Awareness needs to be raised on how to eliminate hazards rather than coping with the hazards.