



Ergonomic Technologies Corp.

Ergonomic Risk Assessment & Workplace Injury Prevention Solutions

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Public Utility, Construction & Telecommunications

Profiting Through Ergonomics

Public utilities, construction, and telecommunications workers operate in some of the most physically demanding and unpredictable environments of any industry. ETC helps these organizations identify ergonomic hazards, implement targeted solutions, and build programs that protect workers in the field.

OVERVIEW

Public utilities, transportation, and telecommunications share a common operational profile: technically skilled workforce performing complex, variable tasks, often alone or in small teams, across outdoor environments that change with the weather, the season, and the job site. These industries consistently rank among the highest for overexertion injuries, manual handling incidents, and musculoskeletal disorders.



The nature of the work creates both risk and opportunity. Tasks are largely self-paced with significant variation, and travel time between sites provides natural recovery intervals, reducing cumulative repetition risk. However, sustained exposure to environmental elements, unpredictable work surfaces, and physically demanding tasks involving heavy equipment, climbing, and lifting creates significant ergonomic hazard that requires structured intervention.

RISK FACTORS

Environmental Hazards

- Temperature extremes: heat stress in summer, cold-related injury risk in winter
- Weather exposure: rain, snow, ice, wind, humidity, dust, and pollen
- Severe weather events: thunderstorms, blizzards, tornadoes, and floods

- Biological hazards: allergic dermatitis from contact with plants such as poison ivy and poison oak

Physical & Safety Hazards

- Traffic hazards: working in or adjacent to active roadways and construction zones
- Electrical hazards: maintenance performed near energized systems, risk of electrocution and electrical shock at high voltages
- Fall risk: ascending and descending poles, radio masts, ladders, and elevated structures
- Heavy equipment operation: use of lifting gear, cranes, and mobile machinery
- Manual materials handling: heavy materials and equipment handling is a primary cause of back and lower extremity injuries

PPE & Workwear Constraints

- Personal protective equipment can significantly restrict range of motion, reduce dexterity, and diminish comfort during extended wear
- Layered clothing for cold conditions compounds movement restriction
- Increased likelihood of slips, trips, and falls due to encumbered movement and variable terrain
- Reduced grip and fine motor control when wearing insulating or heavy-duty gloves

BENEFITS OF ERGONOMICS

- Measurable reduction in injuries and associated direct and indirect costs
- Improved productivity, job satisfaction, and workforce morale
- Protection of workers' health, safety, and long-term well-being
- Evidence-based specifications of appropriate PPE: helmets, eye shields, gloves, and dust masks, that balances protection with usability
- Provision and proper deployment of mechanical aids: cranes, hydraulic manhole cover lifters, mounted cable reels, and manual materials handling (MMH) equipment
- Training and awareness programs for the correct use of mechanical aids and job-specific safe work methods
- Ergonomic criteria-based hand tool selection and specification
- Safe approach procedures for energized overhead power lines, including properly insulated glove protocols
- Systematic maintenance and periodic inspection schedules for tools, equipment, and PPE
- Rubber insulating glove protection protocols, outer canvas or leather glove pairing, and periodic re-testing of gloves and blankets
- Specification of appropriate personal climbing equipment: body belts, safety straps, and lanyards with cushioned, rivet-free interior design
- Equipment and vehicle redesign: improved truck layouts, tool storage, and field access
- Flexible staffing protocols for adverse and extreme weather conditions

ETC'S IMPLEMENTATION APPROACH

ETC follows a structured, five-step process to deliver ergonomic improvements in field operations:

- Conduct risk assessments to identify hazards and establish intervention priorities
- Develop tailored solutions in collaboration with vendors, engineers, and operations teams
- Test and implement solutions in live work environments
- Develop job demand descriptions to support hiring, placement, and return-to-work programs
- Design and deliver training programs customized for the workforce and work conditions

Pre-employment screening and health surveillance programs are also available to support workforce management and long-term injury prevention.

TRUSTED BY LEADING UTILITIES & ENERGY COMPANIES

ETC has partnered with major utilities, energy providers, and infrastructure organizations to deliver ergonomic programs that protect field workers and improve operational performance:

Brooklyn Union Gas
Con Edison
Eagle Electric Corporation
Edison Electric Group
Florida Power & Light
Violia

Gas Research Institute
Keyspan
Louisville Gas & Electric Company
Rochester Gas & Electric
Salt River Project
Suez

Contact ETC to Discuss How Your Business Can Profit Through Ergonomics

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