



TORQ Analysis of Electricians to Helpers--Electricians

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Electricians	47-2111.00	Abilities:	Importance Level: 50	Weight: 1
To Title:	Helpers--Electricians	47-3013.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS											
Grand TORQ:					92						
Ability TORQ		Skills TORQ		Knowledge TORQ							
Level	93	Level	88	Level	94						
Gaps To Narrow if Possible			Upgrade These Skills		Knowledge to Add						
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt	Knowledge	Level	Gap	Impt
No Critical Gaps Recorded!				Troubleshooting	65	8	76	No Knowledge Upgrades Required!			
				Installation	69	8	75				
<p>LEVEL and IMPT (IMPORTANCE) refer to the Target Helpers--Electricians. GAP refers to level difference between Electricians and Helpers--Electricians.</p>											

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Electricians	Helpers--Electricians	Importance
Manual Dexterity	55	53	75
Near Vision	64	55	72
Problem Sensitivity	69	42	62
Information Ordering	64	50	62
Extent Flexibility	76	59	62
Arm-Hand Steadiness	60	48	59
Finger Dexterity	62	46	59
Trunk Strength	55	46	59
Oral Comprehension	57	51	56
Control Precision	55	48	56
Multilimb Coordination	48	42	56
Static Strength	62	44	56
Visualization	62	50	53
Gross Body Equilibrium	59	46	53
Visual Color Discrimination	55	51	53
Deductive Reasoning	59	39	50
Gross Body Coordination	41	39	50

Skill Level Comparison - Abilities with importance scores over 69

Description	Electricians	Helpers--Electricians	Importance
Troubleshooting	57 	65 	76 
Installation	61 	69 	75 

Knowledge Level Comparison - Knowledge with importance scores over 69

Description	Electricians	Helpers--Electricians	Importance
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Experience & Education Comparison

Related Work Experience Comparison			Required Education Level Comparison		
Description	Electricians	Helpers--Electricians	Description	Electricians	Helpers--Electricians
10+ years	15% 	0%	Doctoral	0%	0%
8-10 years	0%	2% 	Professional Degree	0%	0%
6-8 years	0%	0%	Post-Masters Cert	0%	0%
4-6 years	7% 	2% 	Master's Degree	0%	0%
2-4 years	13% 	10% 	Post-Bachelor Cert	0%	0%
1-2 years	30% 	14% 	Bachelors	0%	0%
6-12 months	13% 	18% 	AA or Equiv	1% 	0%
3-6 months	0%	19% 	Some College	3% 	2% 
1-3 months	0%	0%	Post-Secondary Certificate	40% 	20% 
0-1 month	3% 	0%	High School Diploma or GED	30% 	50% 
None	14% 	32% 	No HSD or GED	23% 	27% 

Electricians

Helpers--Electricians

Most Common Educational/Training Requirement:

Long-term on-the-job training

Short-term on-the-job training

Job Zone Comparison

3 - Job Zone Three: Medium Preparation Needed
 Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.

Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.

Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

2 - Job Zone Two: Some Preparation Needed
 Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.

These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.

Employees in these occupations need anywhere from a few months to one year of working with experienced employees.

Tasks

Electricians	Helpers--Electricians
Core Tasks	Core Tasks



Generalized Work Activities:

- Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
- Organizing, Planning, and Prioritizing Work - Developing specific goals and plans to prioritize, organize, and accomplish your work.
- Updating and Using Relevant Knowledge - Keeping up-to-date technically and applying new knowledge to your job.

Specific Tasks

Occupation Specific Tasks:

- Advise management on whether continued operation of equipment could be hazardous.
- Assemble, install, test, and maintain electrical or electronic wiring, equipment, appliances, apparatus, and fixtures, using hand tools and power tools.
- Connect wires to circuit breakers, transformers, or other components.
- Construct and fabricate parts, using hand tools and specifications.
- Diagnose malfunctioning systems, apparatus, and components, using test equipment and hand tools, to locate the cause of a breakdown and correct the problem.
- Direct and train workers to install, maintain, or repair electrical wiring, equipment, and fixtures.
- Fasten small metal or plastic boxes to walls to house electrical switches or outlets.
- Inspect electrical systems, equipment, and components to identify hazards, defects, and the need for adjustment or repair, and to ensure compliance with codes.
- Install ground leads and connect power cables to equipment, such as motors.
- Maintain current electrician's license or identification card to meet governmental regulations.
- Perform business management duties such as maintaining records and files, preparing reports and ordering supplies and equipment.
- Perform physically demanding tasks, such as digging trenches to lay conduit and moving and lifting heavy objects.
- Place conduit, pipes or tubing, inside designated partitions, walls, or other concealed areas, and pull insulated wires or

Generalized Work Activities:

- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
- Organizing, Planning, and Prioritizing Work - Developing specific goals and plans to prioritize, organize, and accomplish your work.

Specific Tasks

Occupation Specific Tasks:

- Bolt component parts together to form tower assemblies, using hand tools.
- Break up concrete, using airhammer, to facilitate installation, construction, or repair of equipment.
- Clean work area and wash parts.
- Construct controllers and panels, using power drills, drill presses, taps, saws and punches.
- Dig trenches or holes for installation of conduit or supports.
- Disassemble defective electrical equipment, replace defective or worn parts, and reassemble equipment, using hand tools.
- Drill holes and pull or push wiring through openings, using hand and power tools.
- Erect electrical system components and barricades, and rig scaffolds, hoists, and shoring.
- Examine electrical units for loose connections and broken insulation and tighten connections, using hand tools.
- Install copper-clad ground rods, using a manual post driver.
- Maintain tools, vehicles, and equipment and keep parts and supplies in order.
- Measure, cut, and bend wire and conduit, using measuring instruments and hand tools.
- Operate cutting torches and welding equipment, while working with conduit and metal components to construct devices associated with electrical functions.
- Paint a variety of objects related to electrical functions.
- Perform semi-skilled and unskilled laboring duties related to the installation,



cables through the conduit to complete circuits between boxes.

- Plan layout and installation of electrical wiring, equipment and fixtures, based on job specifications and local codes.
- Prepare sketches or follow blueprints to determine the location of wiring and equipment and to ensure conformance to building and safety codes.
- Provide assistance during emergencies by operating floodlights and generators, placing flares, and driving needed vehicles.
- Provide preliminary sketches and cost estimates for materials and services.
- Repair or replace wiring, equipment, and fixtures, using hand tools and power tools.
- Test electrical systems and continuity of circuits in electrical wiring, equipment, and fixtures, using testing devices such as ohmmeters, voltmeters, and oscilloscopes, to ensure compatibility and safety of system.
- Use a variety of tools and equipment such as power construction equipment, measuring devices, power tools, and testing equipment including oscilloscopes, ammeters, and test lamps.
- Work from ladders, scaffolds, and roofs to install, maintain or repair electrical wiring, equipment, and fixtures.

Detailed Tasks

Detailed Work Activities:

- adhere to safety procedures
- analyze operation of malfunctioning electrical or electronic equipment
- bend tubing or conduit
- climb ladders, scaffolding, or utility or telephone poles
- conduct training for personnel
- confer with management or users
- construct or fabricate electrical parts or fixtures
- direct and coordinate activities of workers or staff
- distinguish colors
- drive automobile, van, or light truck
- estimate cost for repair services
- fabricate, assemble, or disassemble manufactured products by hand
- inspect electrical installation for code conformance
- install electrical conduit or tubing
- install electrical fixtures or components
- install electronic power, communication, control, or security equipment or systems
- install lead-in wires to control boxes and other components
- install or replace meters, regulators, or related measuring or control devices
- install/connect electrical equipment to power

maintenance and repair of a wide variety of electrical systems and equipment.

- Raise, lower, or position equipment, tools, and materials, using hoist, hand line, or block and tackle.
- Requisition materials, using warehouse requisition or release forms.
- Solder electrical connections, using soldering iron.
- String transmission lines or cables through ducts or conduits, under the ground, through equipment, or to towers.
- Strip insulation from wire ends, using wire stripping pliers, and attach wires to terminals for subsequent soldering.
- Thread conduit ends, connect couplings, and fabricate and secure conduit support brackets, using hand tools.
- Trace out short circuits in wiring, using test meter.
- Transport tools, materials, equipment, and supplies to work site by hand, handtruck, or heavy, motorized truck.
- Trim trees and clear undergrowth along right-of-way.

Detailed Tasks

Detailed Work Activities:

- apply cleaning solvents
- assist mechanic, or extractive or construction trades craft worker
- bend tubing or conduit
- clean equipment or machinery
- clean rooms or work areas
- climb ladders, scaffolding, or utility or telephone poles
- construct or fabricate electrical parts or fixtures
- dig holes or trenches for foundations, posts, poles, or related items
- dismantle or reassemble rigging
- distinguish colors
- drive automobile, van, or light truck
- erect scaffold
- fabricate, assemble, or disassemble manufactured products by hand
- install electrical conduit or tubing
- install/string electrical or electronic cable or wiring
- maintain electrician's tools or equipment
- maintain inventory of supplies
- maintain or repair cargo or passenger vehicle
- measure, weigh, or count products or materials
- move or fit heavy objects
- operate hoist, winch, or hydraulic boom
- paint walls or other structural surfaces
- read blueprints



circuit

- install/string electrical or electronic cable or wiring
- lay out electrical wiring for buildings, etc.
- maintain electrician's tools or equipment
- maintain records, reports, or files
- move or fit heavy objects
- order or purchase supplies, materials, or equipment
- perform safety inspections in construction or resource extraction setting
- perform safety inspections in industrial, manufacturing or repair setting
- plan layout of electrical/electronic equipment installation
- plan or organize work
- prepare reports
- read blueprints
- read tape measure
- read technical drawings
- repair electronic components, equipment, or systems
- repair or adjust measuring or control devices
- repair or replace electrical wiring, circuits, fixtures, or equipment
- replace electronic components
- solder electrical or electronic connections or components
- splice electric cable
- splice electric or communications trunk lines
- test electrical/electronic wiring, equipment, systems or fixtures
- test electronic or electrical circuit connections
- understand service or repair manuals
- use electrical or electronic test devices or equipment
- use hand or power tools
- use high voltage apparatus
- use interpersonal communication techniques
- use measuring devices in construction or extraction work
- use oscilloscopes in electronics repair
- use soldering equipment
- use voltmeter, ammeter, or ohmmeter

Technology - Examples

Accounting software

- Turtle Creek Software Goldenseal

Analytical or scientific software

- Electrosoft FlashWorks
- Elite ECOORD
- Elite Software Inpoint

- read tape measure
- read technical drawings
- repair or replace electrical wiring, circuits, fixtures, or equipment
- replace electronic components
- set up specialized rigging
- solder electrical or electronic connections or components
- test electrical/electronic wiring, equipment, systems or fixtures
- test electronic or electrical circuit connections
- use acetylene welding/cutting torch
- use basic carpentry techniques
- use chain saws
- use electrical or electronic test devices or equipment
- use hand or power tools
- use measuring devices in construction or extraction work
- use soldering equipment
- use voltmeter, ammeter, or ohmmeter

Technology - Examples

Spreadsheet software

- Recordkeeping software

Word processing software

- Report generation software

Tools - Examples

- Pliers
- Crescent wrenches
- Air compressors
- Ammeters
- Awls
- Backhoes
- Cable tie guns
- Block and tackle equipment
- Cutting torches
- Insulated bolt cutters
- Horizontal boring tools
- Bear claw wire threaders
- Cable reels
- Cable splicing knives
- Inductance testers

- Elite Software Outpoint

- Elite Software Short

- Elite Software VDROP

- Lighting calculation software

- SoftEmpire Electrical Calculations

Computer aided design CAD software

- Computer aided design CAD software

- One Mile Up Panel Planner

- SmartDraw software

Data base user interface and query software

- Database software

- Insight Direct ServiceCEO

- Resolve service management software

- Shafer Service Systems software

- Timberline Office

Project management software

- Construction Master Pro software

- Craftsman CD Estimator

Spreadsheet software

- Spreadsheet software

Word processing software

- Socrates Contractor's Library

- Word processing software

Tools - Examples

- Pump pliers

- Adjustable wrenches

- Air compressors

- Ammeters

- Awns

- Backhoes

- Cable tie guns

- Bandsaws

- Cutting torches

- Insulated bolt cutters

- Bear claw wire threaders

- Resistance bridges

- Capacitance testers

- Bucket trucks

- Continuity testers

- Circuit test meters

- Current clamps

- Pneumatic compacting equipment

- Hydraulic conduit benders

- Conduit deburring tools

- Desktop computers

- Diagonal cut pliers

- Dump trucks

- Side cutting pliers

- Fish tape pullers

- Fuse pullers

- Gas leak detection devices

- Generators

- Ground fault circuit interrupter GFCI testers

- Hammers

- Handtrucks

- Heat guns

- Hex key sets

- Hoist trucks

- Circle cutters

- Electric impact drivers

- Transfer impedance meters

- Cable labeling machines

- Ladders

- Levels

- Extension lamp extractors

- Insulated pliers

- Conduit locknut and reaming pliers

- Lona nose pliers



- Single reel cable trailers
- Cable splicing knives
- Inductance testers
- Resistance bridges
- Capacitance testers
- Bucket trucks
- Circuit testers
- Circuit tracers
- Current clamps
- Cable benders
- Truck cranes
- Conduit deburring tools
- Desktop computers
- Diagonal cut pliers
- Drill bits
- Frequency meters
- End cutting pliers
- Feeler gauges
- Fish tape pullers
- Fuse pulling equipment
- Gas leak detection devices
- Generators
- Ground fault circuit interrupter GFCI testers
- Claw hammers
- Hard hats
- Heat guns
- Allen wrenches
- Hole saws
- Hydraulic presses
- Transfer impedance meters
- Cable labeling machines
- Ladders

- Lighted magnet pickups
- Electric manlifts
- Meggers
- Magnetic locators
- Digital multimeters
- Nibbler cutting tools
- Notebook computers
- Insulated nutdrivers
- Double-end can socket wrenches
- Ohmmeters
- Personal computers
- Phase rotation meters
- Picks
- Polyvinyl chloride PVC cutters
- Plumb bobs
- Airhammers
- Post drivers
- Cordless drills
- Cable gripping gloves
- Punchdown tools
- Tapered reamers
- Respirators
- External snap ring pliers
- Hacksaws
- Scaffolding
- Cabinet tip screwdrivers
- Shears
- Insulated socket sets
- Soldering irons
- Insulated wrenches
- Wire wrap guns
- Punches



- Laser printers
- Conduit levels
- Insulated pliers
- Channel lock pliers
- Heavy duty longnose pliers
- Lighted magnet pickups
- Inspection mirrors
- Manlifts
- Meggers
- Magnetic locators
- Depth gauges
- Multimeters
- Needlenose pliers
- Nibbler cutting tools
- Notebook computers
- Insulated nutdrivers
- Double-end can socket wrenches
- Ohmmeters
- Oscilloscopes
- Personal computers
- Personal digital assistants PDA
- Phase rotation meters
- Polyvinyl chloride PVC cutters
- Ratcheting pipe wrenches
- Laser plumb bobs
- Cordless drills
- Circular saws
- Cable gripping gloves
- Punchdown tools
- Razor knives
- Tapered reamers
- Respirators
- External snap ring pliers

- Strap wrenches
- Automatic wire strippers
- Compaction tampers
- Tape measures
- Infrared scanners
- Dies
- Taps
- Tongue and groove pliers
- Excavators
- Air spades
- Two way radios
- Electricians' knives
- Non-contact voltage sensors
- Welders
- Welding hoods
- Bulldozers
- Electricians' snips
- Crimping tools
- Cable cutters
- Drill presses

- Protective safety glasses
- Hacksaws
- Scaffolding
- Cabinet tip screwdrivers
- Shears
- Insulated socket sets
- Butane soldering irons/torches
- Insulated wrenches
- Wire wrap guns
- Hydraulic punching tools
- Staple guns
- Strap wrenches
- Automatic insulation strippers
- Tablet computers
- Conduit measuring tapes
- Tap and die sets
- Tension gauges
- Infrared scanners
- Threading dies
- Tin snips
- Tongue and groove pliers
- Diggers
- Two way radios
- Utility knives
- Milliameters
- Wattmeters
- Welders
- Welding hoods
- Soldering tools
- Winches
- Electricians' scissors
- Crimping pliers

- Cable butt trimmers

Labor Market Comparison

Maine Department of Labor.

Description	Electricians	Helpers--Electricians	Difference
Median Wage	\$ 43,650	\$ 31,250	\$ (12,400)
10th Percentile Wage	\$ 32,680	\$ 24,000	\$ (8,680)
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 49,050	\$ 35,550	\$ (13,500)
90th Percentile Wage	\$ 52,890	\$ 38,740	\$ (14,150)
Mean Wage	\$ 43,700	\$ 31,020	\$ (12,680)
Total Employment - 2461	2,910	560	-2,350
Employment Base - 2006	3,304	564	-2,740
Projected Employment - 2470	3,340	592	-2,748
Projected Job Growth - 2006-2470	1.1 %	5.0 %	3.9 %
Projected Annual Openings - 2006-2470	89	17	-72
Special	★		

Special Occupations: ★ Maine High Wage - In Demand

National Job Posting Trends

Trend for Electricians and Helpers--Electricians



Data from [Indeed](http://Indeed.com)

Programs

Related Programs

Electrician

Electrician. A program that prepares individuals to apply technical knowledge and skills to install, operate, maintain, and repair electric apparatus and systems such as residential, commercial, and industrial electric-power wiring; and DC and AC motors, controls, and electrical distribution panels. Includes instruction in the principles of electronics and electrical systems, wiring, power transmission, safety, industrial and household appliances, job estimation, electrical testing and inspection, and applicable codes and standards.

Institution	Address	City	URL
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu
Washington County Community College	One College Drive	Calais	www.wccc.me.edu
Kennebec Valley Community College	92 Western Ave	Fairfield	www.kvcc.me.edu
Kennebec Valley Community College	92 Western Ave	Fairfield	www.kvcc.me.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Southern Maine Community College	2 Fort Road	South Portland	www.smccME.edu

Maine Statewide Promotion Opportunities for Electricians

O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
47-2111.00	Electricians	100	3	2,910	\$43,650.00	\$0.00	1%	89	★
49-9012.00	Control and Valve Installers and Repairers, Except Mechanical Door	85	3	170	\$47,860.00	\$4,210.00	-9%	3	
49-9051.00	Electrical Power-Line Installers and Repairers	85	3	280	\$47,750.00	\$4,100.00	9%	12	★
51-4192.00	Lay-Out Workers, Metal and Plastic	85	2	180	\$43,870.00	\$220.00	-24%	3	
49-9052.00	Telecommunications Line Installers and Repairers	84	3	720	\$56,120.00	\$12,470.00	0%	19	
51-4111.00	Tool and Die Makers	83	3	160	\$51,670.00	\$8,020.00	-11%	2	
49-2094.00	Electrical and Electronics Repairers, Commercial and Industrial Equipment	82	3	440	\$49,450.00	\$5,800.00	-19%	15	

49-2095.00	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	81	5	20	\$60,790.00	\$17,140.00	5%	1	
49-3011.00	Aircraft Mechanics and Service Technicians	79	3	210	\$44,280.00	\$630.00	-2%	2	
47-1011.00	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	79	3	3,190	\$46,630.00	\$2,980.00	3%	77	★
17-3023.03	Electrical Engineering Technicians	77	3	430	\$45,180.00	\$1,530.00	-20%	9	
11-9021.00	Construction Managers	76	3	970	\$72,320.00	\$28,670.00	4%	35	★
17-3027.00	Mechanical Engineering Technicians	76	3	130	\$44,890.00	\$1,240.00	2%	3	
49-1011.00	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	76	4	2,490	\$46,810.00	\$3,160.00	0%	60	★
17-3023.01	Electronics Engineering Technicians	75	3	430	\$45,180.00	\$1,530.00	-20%	9	

Special Occupations: ★ Maine High Wage - In Demand

Top Industries for Helpers--Electricians

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Electrical contractors	238210	87.60%	92,278	97,774	5.96%
Self-employed workers, primary job	000601	2.83%	2,981	3,209	7.65%
Employment services	561300	1.71%	1,804	2,307	27.89%
Nonresidential building construction	236200	1.50%	1,581	1,790	13.22%
Plumbing, heating, and air-conditioning contractors	238220	1.44%	1,515	1,729	14.11%
Local government, excluding education and hospitals	939300	0.54%	570	647	13.52%
Electric power generation, transmission and distribution	221100	0.38%	401	373	-7.06%
Residential building construction	236100	0.36%	383	436	13.79%
Power and communication line and related structures construction	237130	0.29%	304	324	6.30%
Unpaid family workers, primary job	000701	0.24%	254	203	-20.06%
Offices of real estate agents and brokers	531200	0.20%	215	265	23.08%



Colleges, universities, and professional schools, public and private	611300	0.17%	177	200	13.05%
Other building equipment contractors	238290	0.13%	139	152	9.52%
Management of companies and enterprises	551100	0.12%	124	145	16.49%
General medical and surgical hospitals, public and private	622100	0.10%	108	121	11.87%

Top Industries for Electricians

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Electrical contractors	238210	62.85%	443,111	481,763	8.72%
Self-employed workers, primary job	000601	9.20%	64,835	71,620	10.46%
Local government, excluding education and hospitals	939300	2.23%	15,740	18,334	16.48%
Self-employed workers, secondary job	000602	1.55%	10,924	11,833	8.32%
Nonresidential building construction	236200	1.39%	9,799	11,384	16.18%
Employment services	561300	1.38%	9,746	8,313	-14.70%
Plumbing, heating, and air-conditioning contractors	238220	1.25%	8,792	10,294	17.09%
Motor vehicle parts manufacturing	336300	1.16%	8,149	6,727	-17.45%
Electric power generation, transmission and distribution	221100	1.01%	7,125	6,795	-4.64%
Colleges, universities, and professional schools, public and private	611300	0.89%	6,241	7,239	16.00%
Residential building construction	236100	0.77%	5,415	6,322	16.76%
Federal government, excluding postal service	919999	0.67%	4,750	4,656	-1.98%
Ship and boat building	336600	0.53%	3,766	4,370	16.06%
Coal mining	212100	0.48%	3,382	3,542	4.71%
State government, excluding education and hospitals	929200	0.47%	3,329	3,387	1.75%



TORQ Analysis of Electricians to Welders, Cutters, and Welder Fitters

ANALYSIS INPUT					
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From Title:	Electricians	47-2111.00	Abilities:	Importance Level: 50	Weight: 1
To Title:	Welders, Cutters, and Welder Fitters	51-4121.06	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

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Grand TORQ:					88						
Ability TORQ		Skills TORQ		Knowledge TORQ							
Level	87	Level	90	Level	87						
Gaps To Narrow if Possible		Upgrade These Skills		Knowledge to Add							
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt	Knowledge	Level	Gap	Impt
No Critical Gaps Recorded!				No Skills Upgrade Required!				No Knowledge Upgrades Required!			
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Ability Level Comparison - Abilities with importance scores over 50			
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Near Vision	64	50	65
Manual Dexterity	55	46	62
Control Precision	55	44	62
Oral Expression	66	50	56
Problem Sensitivity	69	39	56
Finger Dexterity	62	42	56
Multilimb Coordination	48	44	56
Oral Comprehension	57	46	53
Visualization	62	51	50
Selective Attention	46	44	50
Skill Level Comparison - Abilities with importance scores over 69			
Description	Electricians	Welders, Cutters, and Welder Fitters	Importance
Knowledge Level Comparison - Knowledge with importance scores over 69			

Description	Electricians	Welders, Cutters, and Welder Fitters	Importance
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Experience & Education Comparison

Related Work Experience Comparison			Required Education Level Comparison		
Description	Electricians	Welders, Cutters, and Welder Fitters	Description	Electricians	Welders, Cutters, and Welder Fitters
10+ years	15%	1%	Doctoral	0%	0%
8-10 years	0%	1%	Professional Degree	0%	0%
6-8 years	0%	0%	Post-Masters Cert	0%	0%
4-6 years	7%	0%	Master's Degree	0%	0%
2-4 years	13%	17%	Post-Bachelor Cert	0%	0%
1-2 years	30%	23%	Bachelors	0%	0%
6-12 months	13%	28%	AA or Equiv	1%	0%
3-6 months	0%	6%	Some College	3%	8%
1-3 months	0%	1%	Post-Secondary Certificate	40%	26%
0-1 month	3%	6%	High School Diploma or GED	30%	26%
None	14%	11%	No HSD or GED	23%	38%

Electricians	Welders, Cutters, and Welder Fitters
Most Common Educational/Training Requirement:	
Long-term on-the-job training	Long-term on-the-job training
Job Zone Comparison	
3 - Job Zone Three: Medium Preparation Needed	2 - Job Zone Two: Some Preparation Needed
Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.	Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.
Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.	These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.
Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.	Employees in these occupations need anywhere from a few months to one year of working with experienced employees.

Tasks

Electricians	Welders, Cutters, and Welder Fitters
Core Tasks	Core Tasks
Generalized Work Activities:	Generalized Work Activities:
<ul style="list-style-type: none"> • Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems. • Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person. • Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, 	<ul style="list-style-type: none"> • Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects. • Identifying Objects, Actions, and Events - Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events. • Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.



lifting, balancing, walking, stooping, and handling of materials.

- Organizing, Planning, and Prioritizing Work - Developing specific goals and plans to prioritize, organize, and accomplish your work.
- Updating and Using Relevant Knowledge - Keeping up-to-date technically and applying new knowledge to your job.

Specific Tasks

Occupation Specific Tasks:

- Advise management on whether continued operation of equipment could be hazardous.
- Assemble, install, test, and maintain electrical or electronic wiring, equipment, appliances, apparatus, and fixtures, using hand tools and power tools.
- Connect wires to circuit breakers, transformers, or other components.
- Construct and fabricate parts, using hand tools and specifications.
- Diagnose malfunctioning systems, apparatus, and components, using test equipment and hand tools, to locate the cause of a breakdown and correct the problem.
- Direct and train workers to install, maintain, or repair electrical wiring, equipment, and fixtures.
- Fasten small metal or plastic boxes to walls to house electrical switches or outlets.
- Inspect electrical systems, equipment, and components to identify hazards, defects, and the need for adjustment or repair, and to ensure compliance with codes.
- Install ground leads and connect power cables to equipment, such as motors.
- Maintain current electrician's license or identification card to meet governmental regulations.
- Perform business management duties such as maintaining records and files, preparing reports and ordering supplies and equipment.
- Perform physically demanding tasks, such as digging trenches to lay conduit and moving and lifting heavy objects.
- Place conduit, pipes or tubing, inside designated partitions, walls, or other concealed areas, and pull insulated wires or cables through the conduit to complete circuits between boxes.
- Plan layout and installation of electrical wiring, equipment and fixtures, based on job specifications and local codes.
- Prepare sketches or follow blueprints to determine the location of wiring and equipment and to ensure conformance to building and safety codes.
- Provide assistance during emergencies by operating floodlights and generators, placing flares, and driving needed vehicles.
- Provide preliminary sketches and cost estimates for materials and services.
- Repair or replace wiring, equipment, and

communicating with supervisors, peers, or subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.

- Evaluating Information to Determine Compliance with Standards - Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.

Specific Tasks

Occupation Specific Tasks:

- Adjust electric current and timing cycles of resistance welding machines to heat metals to bonding temperature.
- Align and clamp workpieces together, using rules, squares, or hand tools, or position items in fixtures, jigs, or vises.
- Brush flux onto joints of workpieces or dip braze rods into flux, to prevent oxidation of metal.
- Clean equipment parts, such as tips of soldering irons, using chemical solutions or cleaning compounds.
- Clean joints of workpieces with wire brushes or by dipping them into cleaning solutions.
- Clean workpieces to remove dirt and excess acid, using chemical solutions, files, wire brushes, or grinders.
- Connect hoses from torches to regulator valves and cylinders of oxygen and specified gas fuels.
- Cut carbon electrodes to specified sizes and shapes, using cutoff saws.
- Dip workpieces into molten solder, or place solder strips between seams and heat seams with irons, to bond items together.
- Examine seams for defects, and rework defective joints or broken parts.
- Grind, cut, buff, or bend edges of workpieces to be joined to ensure snug fit, using power grinders and hand tools.
- Guide torches and rods along joints of workpieces to heat them to brazing temperature, melt braze alloys, and bond workpieces together.
- Heat soldering irons or workpieces to specified temperatures for soldering, using gas flames or electric current.
- Melt and apply solder along adjoining edges of workpieces to solder joints, using soldering irons, gas torches, or electric-ultrasonic equipment.
- Melt and apply solder to fill holes, indentations, and seams of fabricated metal products, using soldering equipment.
- Melt and separate brazed or soldered joints to remove and straighten damaged or misaligned components, using hand torches, irons or furnaces.
- Place solder bars into containers, and turn knobs to specified positions to melt solder and regulate its temperature.



repair or replace wiring, equipment, and fixtures, using hand tools and power tools.

- Test electrical systems and continuity of circuits in electrical wiring, equipment, and fixtures, using testing devices such as ohmmeters, voltmeters, and oscilloscopes, to ensure compatibility and safety of system.
- Use a variety of tools and equipment such as power construction equipment, measuring devices, power tools, and testing equipment including oscilloscopes, ammeters, and test lamps.
- Work from ladders, scaffolds, and roofs to install, maintain or repair electrical wiring, equipment, and fixtures.

Detailed Tasks

Detailed Work Activities:

- adhere to safety procedures
- analyze operation of malfunctioning electrical or electronic equipment
- bend tubing or conduit
- climb ladders, scaffolding, or utility or telephone poles
- conduct training for personnel
- confer with management or users
- construct or fabricate electrical parts or fixtures
- direct and coordinate activities of workers or staff
- distinguish colors
- drive automobile, van, or light truck
- estimate cost for repair services
- fabricate, assemble, or disassemble manufactured products by hand
- inspect electrical installation for code conformance
- install electrical conduit or tubing
- install electrical fixtures or components
- install electronic power, communication, control, or security equipment or systems
- install lead-in wires to control boxes and other components
- install or replace meters, regulators, or related measuring or control devices
- install/connect electrical equipment to power circuit
- install/string electrical or electronic cable or wiring
- lay out electrical wiring for buildings, etc.
- maintain electrician's tools or equipment
- maintain records, reports, or files
- move or fit heavy objects
- order or purchase supplies, materials, or equipment
- perform safety inspections in construction or resource extraction setting
- perform safety inspections in industrial, manufacturing or repair setting

- Remove workpieces from fixtures, using tongs, and cool workpieces, using air or water.
- Remove workpieces from molten solder and hold parts together until color indicates that solder has set.
- Select torch tips, flux, and brazing alloys from data charts or work orders.
- Smooth soldered areas with alternate strokes of paddles and torches, leaving soldered sections slightly higher than surrounding areas for later filing.
- Sweat together workpieces coated with solder.
- Turn dials to set intensity and duration of ultrasonic impulses, according to work order specifications.
- Turn valves to start flow of gases, and light flames and adjust valves to obtain desired colors and sizes of flames.

Detailed Tasks

Detailed Work Activities:

- adjust welding equipment
- apply cleaning solvents
- apply flux to workpiece before soldering or brazing
- braze metal parts or components together
- clean or degrease weld, or parts to be welded or soldered
- examine products or work to verify conformance to specifications
- fabricate, assemble, or disassemble manufactured products by hand
- file, sand, grind, or polish metal or plastic objects
- identify properties of metals for repair or fabrication activities
- load or unload material or workpiece into machinery
- monitor the quantity of assembly output
- move or fit heavy objects
- perform safety inspections in industrial, manufacturing or repair setting
- position, clamp or assemble workpiece prior to welding
- preheat metal before welding, brazing, or soldering
- read blueprints
- read production layouts
- read technical drawings
- read work order, instructions, formulas, or processing charts
- sharpen metal objects
- solder metal parts or components together
- understand technical operating, service or repair manuals
- use acetylene welding/cutting torch

- plan layout of electrical/electronic equipment installation
- plan or organize work
- prepare reports
- read blueprints
- read tape measure
- read technical drawings
- repair electronic components, equipment, or systems
- repair or adjust measuring or control devices
- repair or replace electrical wiring, circuits, fixtures, or equipment
- replace electronic components
- solder electrical or electronic connections or components
- splice electric cable
- splice electric or communications trunk lines
- test electrical/electronic wiring, equipment, systems or fixtures
- test electronic or electrical circuit connections
- understand service or repair manuals
- use electrical or electronic test devices or equipment
- use hand or power tools
- use high voltage apparatus
- use interpersonal communication techniques
- use measuring devices in construction or extraction work
- use oscilloscopes in electronics repair
- use soldering equipment
- use voltmeter, ammeter, or ohmmeter

Technology - Examples

Accounting software

- Turtle Creek Software Goldenseal

Analytical or scientific software

- Electrosoft FlashWorks

- Elite ECOORD

- Elite Software Inpoint

- Elite Software Outpoint

- Elite Software Short

- Elite Software VDROP

- Lighting calculation software

- SoftEmpire Electrical Calculations

Computer aided design CAD software

- Computer aided design CAD software

- One Mile Up Panel Planner

- use braze-welding equipment
- use hand or power tools
- use soldering equipment

Technology - Examples

Analytical or scientific software

- Scientific Software Group Filter Drain FD

Calendar and scheduling software

- OmniFleet Equipment Maintenance Management

Computer aided design CAD software

- EZ Pipe software

Project management software

- Recordkeeping software

Tools - Examples

- Wrenches

- Anvils

- Bandsaws

- Slitters

- Motorized cutting torches

- Calipers

- Desktop computers

- Underwater electrode holders

- Files

- Gas flow measurement instruments

- Forklifts

- Current converters

- Brazing equipment

- Goggles

- Grinding machinery

- Hand chipping hammers

- Clamps

- Temperature measurement instruments

- Electric overhead hoists

- Hydraulic presses

- Impact wrenches

- Hydraulic jacks

- SmartDraw software

Data base user interface and query software

- Database software
- Insight Direct ServiceCEO
- Resolve service management software
- Shafer Service Systems software

- Timberline Office

Project management software

- Construction Master Pro software
- Craftsman CD Estimator

Spreadsheet software

- Spreadsheet software

Word processing software

- Socrates Contractor's Library
- Word processing software

Tools - Examples

- Pump pliers
- Adjustable wrenches
- Air compressors
- Ammeters
- Awns
- Backhoes
- Cable tie guns
- Bandsaws
- Cutting torches
- Insulated bolt cutters
- Bear claw wire threaders
- Single reel cable trailers
- Cable splicing knives
- Inductance testers
- Resistance bridges
- Capacitance testers
- Bucket trucks
- Circuit testers

- Ladders

- Laser printers

- Laser welders

- Lathes

- Levels

- Light trucks

- Hydraulic truck lifts

- Metal inert gas MIG welders

- Metal markers

- Punches

- Computerized numerical control CNC programmable welding robot controllers

- Micrometers

- Milling machines

- Nibblers

- Personal computers

- Pipe cutters

- Plasma welders

- Air drills

- Air chisels

- Air scalers

- Buffers

- Power chippers

- Power drills

- Power grinders

- Cutoff saws

- Steamers

- Waterproof gloves

- Angle finders

- Pinchbars

- Comealongs

- Ratchets

- Self-contained breathing equipment



- Circuit tracers
- Current clamps
- Cable benders
- Truck cranes
- Conduit deburring tools
- Desktop computers
- Diagonal cut pliers
- Drill bits
- Frequency meters
- End cutting pliers
- Feeler gauges
- Fish tape pullers
- Fuse pulling equipment
- Gas leak detection devices
- Generators
- Ground fault circuit interrupter GFCI testers
- Claw hammers
- Hard hats
- Heat guns
- Allen wrenches
- Hole saws
- Hydraulic presses
- Transfer impedance meters
- Cable labeling machines
- Ladders
- Laser printers
- Conduit levels
- Insulated pliers
- Channel lock pliers
- Heavy duty longnose pliers
- Lighted magnet pickups
- Inspection mirrors
- Respirator hose masks
- Welding lenses
- Scaffolding
- Scribes
- Shears
- Socket sets
- Soldering irons
- Wire feed rate measurement instruments
- Squares
- Straightedges
- Metal benders
- Dies
- Fillet weld gauges
- Electric pipe threaders
- Hand pipe threaders
- Tungsten inert gas TIG welding equipment
- Two way radios
- Ultrasonic welding equipment
- Arc voltage measurement instruments
- Arc welders
- Underwater electrodes
- Direct current DC sources
- Face shields
- Welding tips
- Welding robots
- Rod ovens
- Electrode wires
- Dive suits
- Winches
- Power wire brushes
- Wire cutters
- Overhead cranes



- Manlifts
- Meggers
- Magnetic locators
- Depth gauges
- Multimeters
- Needlenose pliers
- Nibbler cutting tools
- Notebook computers
- Insulated nutdrivers
- Double-end can socket wrenches
- Ohmmeters
- Oscilloscopes
- Personal computers
- Personal digital assistants PDA
- Phase rotation meters
- Polyvinyl chloride PVC cutters
- Ratcheting pipe wrenches
- Laser plumb bobs
- Cordless drills
- Circular saws
- Cable gripping gloves
- Punchdown tools
- Razor knives
- Tapered reamers
- Respirators
- External snap ring pliers
- Protective safety glasses
- Hacksaws
- Scaffolding
- Cabinet tip screwdrivers
- Shears
- Insulated socket sets

- Brakes



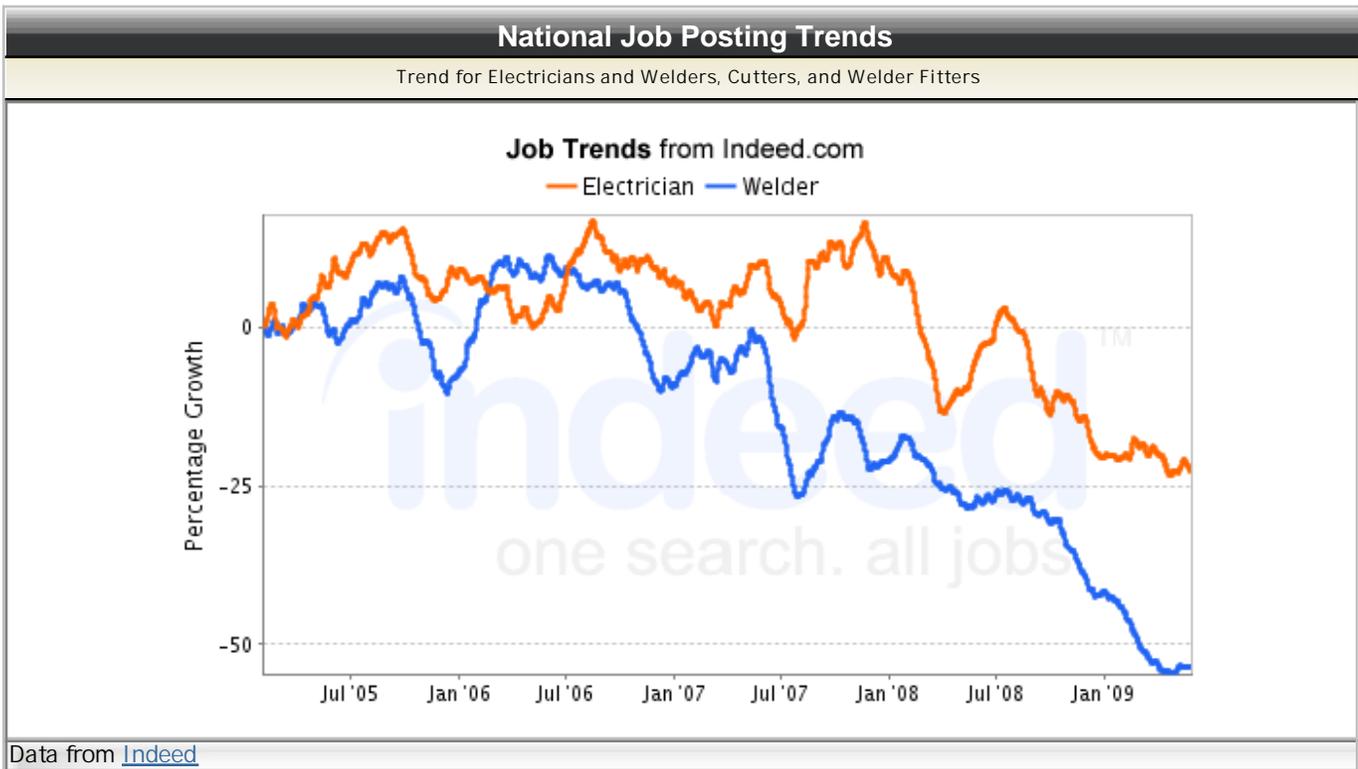
- Butane soldering irons/torches
- Insulated wrenches
- Wire wrap guns
- Hydraulic punching tools
- Staple guns
- Strap wrenches
- Automatic insulation strippers
- Tablet computers
- Conduit measuring tapes
- Tap and die sets
- Tension gauges
- Infrared scanners
- Threading dies
- Tin snips
- Tongue and groove pliers
- Diggers
- Two way radios
- Utility knives
- Millimeters
- Wattmeters
- Welders
- Welding hoods
- Soldering tools
- Winches
- Electricians' scissors
- Crimping pliers
- Cable butt trimmers

Labor Market Comparison

Maine Department of Labor.

Description	Electricians	Welders, Cutters, and Welder Fitters	Difference
Median Wage	\$ 43,650	\$ 38,030	\$ (5,620)

10th Percentile Wage	\$ 32,680	\$ 22,680	\$(10,000)
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 49,050	\$ 46,190	\$(2,860)
90th Percentile Wage	\$ 52,890	\$ 50,780	\$(2,110)
Mean Wage	\$ 43,700	\$ 38,260	\$(5,440)
Total Employment - 2461	2,910	1,610	-1,300
Employment Base - 2006	3,304	1,691	-1,613
Projected Employment - 2470	3,340	1,816	-1,524
Projected Job Growth - 2006-2470	1.1 %	7.4 %	6.3 %
Projected Annual Openings - 2006-2470	89	49	-40
Special	★	★	
Special Occupations:	★ Maine High Wage - In Demand		



Programs
Related Programs
Welder/Welding Technologist

Welding Technology/Welder. A program that prepares individuals to apply technical knowledge and skills to join or cut metal surfaces. Includes instruction in arc welding, resistance welding, brazing and soldering, cutting, high-energy beam welding and cutting, solid state welding, ferrous and non-ferrous materials, oxidation-reduction reactions, welding metallurgy, welding processes and heat treating, structural design, safety, and applicable codes and standards.

Institution	Address	City	URL
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu
Washington County Community College	One College Drive	Calais	www.wccc.me.edu

Maine Statewide Promotion Opportunities for Electricians									
O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
47-2111.00	Electricians	100	3	2,910	\$43,650.00	\$0.00	1%	89	★
49-9012.00	Control and Valve Installers and Repairers, Except Mechanical Door	85	3	170	\$47,860.00	\$4,210.00	-9%	3	
49-9051.00	Electrical Power-Line Installers and Repairers	85	3	280	\$47,750.00	\$4,100.00	9%	12	★
51-4192.00	Lay-Out Workers, Metal and Plastic	85	2	180	\$43,870.00	\$220.00	-24%	3	
49-9052.00	Telecommunications Line Installers and Repairers	84	3	720	\$56,120.00	\$12,470.00	0%	19	
51-4111.00	Tool and Die Makers	83	3	160	\$51,670.00	\$8,020.00	-11%	2	
49-2094.00	Electrical and Electronics Repairers, Commercial and Industrial Equipment	82	3	440	\$49,450.00	\$5,800.00	-19%	15	
49-2095.00	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	81	5	20	\$60,790.00	\$17,140.00	5%	1	
49-3011.00	Aircraft Mechanics and Service Technicians	79	3	210	\$44,280.00	\$630.00	-2%	2	
47-1011.00	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	79	3	3,190	\$46,630.00	\$2,980.00	3%	77	★
17-3023.03	Electrical Engineering Technicians	77	3	430	\$45,180.00	\$1,530.00	-20%	9	
11-9021.00	Construction Managers	76	3	970	\$72,320.00	\$28,670.00	4%	35	★



17-3027.00	Mechanical Engineering Technicians	76	3	130	\$44,890.00	\$1,240.00	2%	3	
49-1011.00	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	76	4	2,490	\$46,810.00	\$3,160.00	0%	60	★
17-3023.01	Electronics Engineering Technicians	75	3	430	\$45,180.00	\$1,530.00	-20%	9	

Special Occupations: ★ Maine High Wage - In Demand

Top Industries for Welders, Cutters, and Welder Fitters

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Architectural and structural metals manufacturing	332300	11.33%	46,347	52,658	13.62%
Agriculture, construction, and mining machinery manufacturing	333100	6.36%	26,009	25,834	-0.67%
Self-employed workers, primary job	000601	5.26%	21,505	24,372	13.33%
Motor vehicle body and trailer manufacturing	336200	5.12%	20,924	21,779	4.09%
Commercial and industrial machinery and equipment (except automotive and electronic) repair and maintenance	811300	4.38%	17,916	20,168	12.57%
Other general purpose machinery manufacturing	333900	3.83%	15,672	15,050	-3.97%
Boiler, tank, and shipping container manufacturing	332400	3.10%	12,686	12,161	-4.14%
Motor vehicle parts manufacturing	336300	3.03%	12,410	10,511	-15.31%
Machine shops	332710	3.03%	12,381	10,895	-12.00%
Other fabricated metal product manufacturing	332900	2.73%	11,163	10,522	-5.74%
Employment services	561300	2.58%	10,544	14,196	34.64%
Ship and boat building	336600	2.51%	10,285	12,246	19.07%
Ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing	333400	2.39%	9,762	9,553	-2.14%
Nonresidential building construction	236200	2.03%	8,323	9,921	19.20%
Industrial machinery manufacturing	333200	1.31%	5,341	4,655	-12.85%

Top Industries for Electricians

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Electrical contractors	238210	62.85%	443,111	481,763	8.72%
Self-employed workers, primary job	000601	9.20%	64,835	71,620	10.46%
Local government, excluding education and hospitals	939300	2.23%	15,740	18,334	16.48%

Self-employed workers, secondary job	000602	1.55%	10,924	11,833	8.32%
Nonresidential building construction	236200	1.39%	9,799	11,384	16.18%
Employment services	561300	1.38%	9,746	8,313	-14.70%
Plumbing, heating, and air-conditioning contractors	238220	1.25%	8,792	10,294	17.09%
Motor vehicle parts manufacturing	336300	1.16%	8,149	6,727	-17.45%
Electric power generation, transmission and distribution	221100	1.01%	7,125	6,795	-4.64%
Colleges, universities, and professional schools, public and private	611300	0.89%	6,241	7,239	16.00%
Residential building construction	236100	0.77%	5,415	6,322	16.76%
Federal government, excluding postal service	919999	0.67%	4,750	4,656	-1.98%
Ship and boat building	336600	0.53%	3,766	4,370	16.06%
Coal mining	212100	0.48%	3,382	3,542	4.71%
State government, excluding education and hospitals	929200	0.47%	3,329	3,387	1.75%



TORQ Analysis of Electricians to Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Electricians	47-2111.00	Abilities:	Importance Level: 50	Weight: 1
To Title:	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	47-3015.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS																	
Grand TORQ:												89					
Ability TORQ				Skills TORQ				Knowledge TORQ									
Level				89		Level				84		Level				92	
Gaps To Narrow if Possible				Upgrade These Skills				Knowledge to Add									
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt	Knowledge	Level	Gap	Impt						
No Critical Gaps Recorded!				Active Listening	82	18	69	Chemistry	31	12	70						
				Operation Monitoring	55	11	76	Public Safety and Security	48	7	69						
				Equipment Selection	62	7	77										
<p>LEVEL and IMPT (IMPORTANCE) refer to the Target Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters. GAP refers to level difference between Electricians and Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters.</p>																	

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Electricians	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	Importance
Manual Dexterity	55	41	62
Near Vision	64	50	59
Oral Comprehension	57	50	56
Information Ordering	64	44	56
Extent Flexibility	76	57	56
Arm-Hand Steadiness	60	41	53
Trunk Strength	55	44	53
Problem Sensitivity	69	37	50
Multilimb Coordination	48	35	50
Static Strength	62	44	50
Skill Level Comparison - Abilities with importance scores over 69			

Description	Electricians	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	Importance
Equipment Selection	55 	62 	77 
Operation Monitoring	44 	55 	76 
Active Listening	64 	82 	69 
Knowledge Level Comparison - Knowledge with importance scores over 69			
Description	Electricians	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	Importance
Chemistry	19 	31 	70 
Public Safety and Security	41 	48 	69 

Experience & Education Comparison					
Related Work Experience Comparison			Required Education Level Comparison		
Description	Electricians	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	Description	Electricians	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters
10+ years	15% 	0% 	Doctoral	0% 	0% 
8-10 years	0% 	0% 	Professional Degree	0% 	0% 
6-8 years	0% 	11% 	Post-Masters Cert	0% 	0% 
4-6 years	7% 	13% 	Master's Degree	0% 	0% 
2-4 years	13% 	12% 	Post-Bachelor Cert	0% 	0% 
1-2 years	30% 	3% 	Bachelors	0% 	0% 
6-12 months	13% 	14% 	AA or Equiv	1% 	0% 
3-6 months	0% 	24% 	Some College	3% 	0% 
1-3 months	0% 	4% 	Post-Secondary Certificate	40% 	46% 
0-1 month	3% 	0% 	High School Diploma or GED	30% 	33% 
None	14% 	14% 	No HSD or GED	23% 	19% 
Electricians			Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters		
Most Common Educational/Training Requirement:					
Long-term on-the-job training			Short-term on-the-job training		
Job Zone Comparison					
3 - Job Zone Three: Medium Preparation Needed			2 - Job Zone Two: Some Preparation Needed		
<p>Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.</p> <p>Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.</p> <p>Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.</p>			<p>Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.</p> <p>These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.</p> <p>Employees in these occupations need anywhere from a few months to one year of working with experienced employees.</p>		

Tasks	
Electricians	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters
Core Tasks	Core Tasks



Generalized Work Activities:

- Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
- Organizing, Planning, and Prioritizing Work - Developing specific goals and plans to prioritize, organize, and accomplish your work.
- Updating and Using Relevant Knowledge - Keeping up-to-date technically and applying new knowledge to your job.

Specific Tasks

Occupation Specific Tasks:

- Advise management on whether continued operation of equipment could be hazardous.
- Assemble, install, test, and maintain electrical or electronic wiring, equipment, appliances, apparatus, and fixtures, using hand tools and power tools.
- Connect wires to circuit breakers, transformers, or other components.
- Construct and fabricate parts, using hand tools and specifications.
- Diagnose malfunctioning systems, apparatus, and components, using test equipment and hand tools, to locate the cause of a breakdown and correct the problem.
- Direct and train workers to install, maintain, or repair electrical wiring, equipment, and fixtures.
- Fasten small metal or plastic boxes to walls to house electrical switches or outlets.
- Inspect electrical systems, equipment, and components to identify hazards, defects, and the need for adjustment or repair, and to ensure compliance with codes.
- Install ground leads and connect power cables to equipment, such as motors.
- Maintain current electrician's license or identification card to meet governmental regulations.
- Perform business management duties such as maintaining records and files, preparing reports and ordering supplies and equipment.
- Perform physically demanding tasks, such as digging trenches to lay conduit and moving and lifting heavy objects.
- Place conduit, pipes or tubing, inside designated partitions, walls, or other concealed areas, and pull insulated wires or cables through the conduit to complete

Generalized Work Activities:

- Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
- Inspecting Equipment, Structures, or Material - Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.
- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Operating Vehicles, Mechanized Devices, or Equipment - Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.

Specific Tasks

Occupation Specific Tasks:

- Assist pipe fitters in the layout, assembly, and installation of piping for air, ammonia, gas, and water systems.
- Assist plumbers by performing rough-ins, repairing and replacing fixtures, and locating and repairing leaking or broken pipes.
- Clean and renew steam traps.
- Clean shop, work area, and machines, using solvent and rags.
- Cut or drill holes in walls or floors to accommodate the passage of pipes.
- Cut pipe and lift up to fitters.
- Disassemble and remove damaged or worn pipe.
- Excavate and grade ditches, and lay and join pipe for water and sewer service.
- Fill pipes with sand or resin to prevent distortion, and hold pipes during bending and installation.
- Fit or assist in fitting valves, couplings, or assemblies to tanks, pumps, or systems, using hand tools.
- Immerse pipe in chemical solution to remove dirt, oil, and scale.
- Install gas burners to convert furnaces from wood, coal, or oil.
- Measure, cut, thread and assemble new pipe, placing the assembled pipe in hangers or other supports.
- Mount brackets and hangers on walls and ceilings to hold pipes, and set sleeves or inserts to provide support for pipes.
- Requisition tools and equipment, select type and size of pipe, and collect and transport materials and equipment to work site.



cabres through the conduit to complete circuits between boxes.

- Plan layout and installation of electrical wiring, equipment and fixtures, based on job specifications and local codes.
- Prepare sketches or follow blueprints to determine the location of wiring and equipment and to ensure conformance to building and safety codes.
- Provide assistance during emergencies by operating floodlights and generators, placing flares, and driving needed vehicles.
- Provide preliminary sketches and cost estimates for materials and services.
- Repair or replace wiring, equipment, and fixtures, using hand tools and power tools.
- Test electrical systems and continuity of circuits in electrical wiring, equipment, and fixtures, using testing devices such as ohmmeters, voltmeters, and oscilloscopes, to ensure compatibility and safety of system.
- Use a variety of tools and equipment such as power construction equipment, measuring devices, power tools, and testing equipment including oscilloscopes, ammeters, and test lamps.
- Work from ladders, scaffolds, and roofs to install, maintain or repair electrical wiring, equipment, and fixtures.

Detailed Tasks

Detailed Work Activities:

- adhere to safety procedures
- analyze operation of malfunctioning electrical or electronic equipment
- bend tubing or conduit
- climb ladders, scaffolding, or utility or telephone poles
- conduct training for personnel
- confer with management or users
- construct or fabricate electrical parts or fixtures
- direct and coordinate activities of workers or staff
- distinguish colors
- drive automobile, van, or light truck
- estimate cost for repair services
- fabricate, assemble, or disassemble manufactured products by hand
- inspect electrical installation for code conformance
- install electrical conduit or tubing
- install electrical fixtures or components
- install electronic power, communication, control, or security equipment or systems
- install lead-in wires to control boxes and other components
- install or replace meters, regulators, or related measuring or control devices

Detailed Tasks

Detailed Work Activities:

- adhere to safety procedures
- apply adhesives, caulking, sealants, or coatings
- apply cleaning solvents
- assemble and install pipe sections, fittings, or plumbing fixtures
- assist mechanic, or extractive or construction trades craft worker
- bend tubing or conduit
- build or repair structures in construction, repair, or manufacturing setting
- clean equipment or machinery
- clean rooms or work areas
- cut, bend, or thread pipe for gas, air, hydraulic, or water lines
- cut, shape, fit, or join wood or other construction materials
- fabricate, assemble, or disassemble manufactured products by hand
- measure and mark reference points or cutting lines on workpieces
- move materials or goods between work areas
- move or fit heavy objects
- repair or replace gas, steam, sewer, or water piping or fixtures
- requisition stock, materials, supplies or equipment
- use acetylene welding/cutting torch
- use basic plumbing techniques
- use hand or power tools
- use measuring devices in construction or extraction work
- use pipe fitting equipment
- use two-way radio or mobile phone

Technology - Examples

Tools - Examples

- Expanding-jaw pliers
- Adjustable wrenches
- Air compressors
- Augers
- Backhoes
- Bandsaws
- Bench chain vises
- Block and tackle equipment
- Butane torches



- install/connect electrical equipment to power circuit
- install/string electrical or electronic cable or wiring
- lay out electrical wiring for buildings, etc.
- maintain electrician's tools or equipment
- maintain records, reports, or files
- move or fit heavy objects
- order or purchase supplies, materials, or equipment
- perform safety inspections in construction or resource extraction setting
- perform safety inspections in industrial, manufacturing or repair setting
- plan layout of electrical/electronic equipment installation
- plan or organize work
- prepare reports
- read blueprints
- read tape measure
- read technical drawings
- repair electronic components, equipment, or systems
- repair or adjust measuring or control devices
- repair or replace electrical wiring, circuits, fixtures, or equipment
- replace electronic components
- solder electrical or electronic connections or components
- splice electric cable
- splice electric or communications trunk lines
- test electrical/electronic wiring, equipment, systems or fixtures
- test electronic or electrical circuit connections
- understand service or repair manuals
- use electrical or electronic test devices or equipment
- use hand or power tools
- use high voltage apparatus
- use interpersonal communication techniques
- use measuring devices in construction or extraction work
- use oscilloscopes in electronics repair
- use soldering equipment
- use voltmeter, ammeter, or ohmmeter

Technology - Examples

Accounting software

- Turtle Creek Software Goldenseal

Analytical or scientific software

- Electrosoft FlashWorks
- Elite ECOORD
- Elite Software Inpoint

- Bolt cutters
- Boring machines
- Box end wrenches
- Calipers
- Caulking guns
- Wire tracers
- Compactors
- Deburring tools
- Line locators
- Utility pumps
- Diagonal cut pliers
- Test pumps
- Video diagnostic tools
- Drain cleaning cables
- Plungers
- Dredges
- Drilling machines
- Dump trucks
- Explosimeters
- Flat files
- Flow gauges
- Pipe freezing kits
- Forklifts
- Gas leak detection devices
- Generators
- Brazing equipment
- Telescopic inspection mirrors
- Graders
- Rotary hammers
- Ball peen hammers
- Allen wrenches
- Chain falls
- Hole cutting tools



- Elite Software Outpoint

- Elite Software Short

- Elite Software VDROP

- Lighting calculation software

- SoftEmpire Electrical Calculations

Computer aided design CAD software

- Computer aided design CAD software

- One Mile Up Panel Planner

- SmartDraw software

Data base user interface and query software

- Database software

- Insight Direct ServiceCEO

- Resolve service management software

- Shafer Service Systems software

- Timberline Office

Project management software

- Construction Master Pro software

- Craftsman CD Estimator

Spreadsheet software

- Spreadsheet software

Word processing software

- Socrates Contractor's Library

- Word processing software

Tools - Examples

- Pump pliers

- Adjustable wrenches

- Air compressors

- Ammeters

- Awns

- Backhoes

- Cable tie guns

- Bandsaws

- Cutting torches

- Insulated bolt cutters

Deep cleaning threads

More cutting tools

- Gasket cutters

- Cranes

- Hydraulic valve turners

- Tractor pipe carrier attachments

- Manual screw jacks

- Ladders

- Pipe lasers

- Lathes

- Trutest smoke detectors

- Transits

- Automatic levels

- Light pickup trucks

- Ultrasonic leak detectors

- Channel lock pliers

- Manlifts

- Magnetic locators

- Metal inert gas MIG welders

- Centering head tools

- Moisture meters

- Mud pumps

- Universal nut wrenches

- Hollow core socket wrenches

- Ohmmeters

- Oilers

- Mandrels

- Manual benders

- Pipe extractors

- Pipelayers

- Mini tubing cutters

- Aligning clamps

- End pipe wrenches

- Pneumatic drills



- Bear claw wire cutters
- Single reel cable trailers
- Cable splicing knives
- Inductance testers
- Resistance bridges
- Capacitance testers
- Bucket trucks
- Circuit testers
- Circuit tracers
- Current clamps
- Cable benders
- Truck cranes
- Conduit deburring tools
- Desktop computers
- Diagonal cut pliers
- Drill bits
- Frequency meters
- End cutting pliers
- Feeler gauges
- Fish tape pullers
- Fuse pulling equipment
- Gas leak detection devices
- Generators
- Ground fault circuit interrupter GFCI testers
- Claw hammers
- Hard hats
- Heat guns
- Allen wrenches
- Hole saws
- Hydraulic presses
- Transfer impedance meters
- Cable labeling machines
- Ladders
- Air operated grinders
- Air hammers
- Sandblasters
- Cordless drills
- Bevel grinding machines
- Circular saws
- Cordless screwdrivers
- Air pressure gauges
- Rodders
- Crowbars
- Compression sleeve pullers
- Ratchet wrenches
- Reamers
- Safety harnesses
- Hacksaws
- Scaffolding
- Impact screwdrivers
- Sewage pumps
- Narrow mouth shovels
- Belting slings
- Slip pliers
- Soldering equipment
- Basin wrenches
- Die heads for threading machines
- Staple guns
- Rubber strap wrenches
- Sump pumps
- Swaging tools
- Hand tachometers
- Powered tampers
- Measuring tapes
- Non-contact infrared thermometers
- Die heads for plastic pipe/conduit



- Laser printers
- Conduit levels
- Insulated pliers
- Channel lock pliers
- Heavy duty longnose pliers
- Lighted magnet pickups
- Inspection mirrors
- Manlifts
- Meggers
- Magnetic locators
- Depth gauges
- Multimeters
- Needlenose pliers
- Nibbler cutting tools
- Notebook computers
- Insulated nutdrivers
- Double-end can socket wrenches
- Ohmmeters
- Oscilloscopes
- Personal computers
- Personal digital assistants PDA
- Phase rotation meters
- Polyvinyl chloride PVC cutters
- Ratcheting pipe wrenches
- Laser plumb bobs
- Cordless drills
- Circular saws
- Cable gripping gloves
- Punchdown tools
- Razor knives
- Tapered reamers
- Respirators

• Die heads for plastic pipe/conduit

- Pipe threaders
- Tin snips
- Chain tongs
- Four-in-one keys
- Excavators
- Track loaders
- Cable plows
- Crimping tools
- Tungsten inert gas TIG welding equipment
- Two way radios
- Vacuum gauges
- Vibration analyzers
- Amp meters
- Ditch pumps
- Water sampling devices
- Alternating current/direct current AC/DC welders
- Welding hoods
- Bulldozers
- Wheel loaders
- Winches
- Air wire brushes
- Cable saws
- Drill presses



- External snap ring pliers
- Protective safety glasses
- Hacksaws
- Scaffolding
- Cabinet tip screwdrivers
- Shears
- Insulated socket sets
- Butane soldering irons/torches
- Insulated wrenches
- Wire wrap guns
- Hydraulic punching tools
- Staple guns
- Strap wrenches
- Automatic insulation strippers
- Tablet computers
- Conduit measuring tapes
- Tap and die sets
- Tension gauges
- Infrared scanners
- Threading dies
- Tin snips
- Tongue and groove pliers
- Diggers
- Two way radios
- Utility knives
- Millimeters
- Wattmeters
- Welders
- Welding hoods
- Soldering tools
- Winches
- Electricians' scissors



- Crimping pliers
- Cable butt trimmers

Labor Market Comparison

Maine Department of Labor.

Description	Electricians	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	Difference
Median Wage	\$ 43,650	\$ 25,760	\$(17,890)
10th Percentile Wage	\$ 32,680	\$ 18,110	\$(14,570)
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 49,050	\$ 31,390	\$(17,660)
90th Percentile Wage	\$ 52,890	\$ 42,050	\$(10,840)
Mean Wage	\$ 43,700	\$ 27,550	\$(16,150)
Total Employment - 2461	2,910	320	-2,590
Employment Base - 2006	3,304	333	-2,971
Projected Employment - 2470	3,340	362	-2,978
Projected Job Growth - 2006-2470	1.1 %	8.7 %	7.6 %
Projected Annual Openings - 2006-2470	89	11	-78
Special	★		
Special Occupations:	★ Maine High Wage - In Demand		

National Job Posting Trends

Trend for Electricians and Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters



Programs

Related Programs

Plumbing Technology/Plumber

Plumbing Technology/Plumber. A program that prepares individuals to practice as licensed plumbers by applying technical knowledge and skills to lay out, assemble, install, and maintain piping fixtures and systems for steam, natural gas, oil, hot water, heating, cooling, drainage, lubricating, sprinkling, and industrial processing systems in home and business environments. Includes instruction in source determination, water distribution, waster removal, pressure adjustment, basic physics, technical mathematics, blueprint reading, pipe installation, pumps, welding and soldering, plumbing inspection, and applicable codes and standards.

Institution	Address	City	URL
Wasington County Community College	One College Drive	Calais	www.wccc.me.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Southern Maine Community College	2 Fort Road	South Portland	www.smccME.edu
Southern Maine Community College	2 Fort Road	South Portland	www.smccME.edu

Maine Statewide Promotion Opportunities for Electricians

O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
47-2111.00	Electricians	100	3	2,910	\$43,650.00	\$0.00	1%	89	★



49-9012.00	Control and Valve Installers and Repairers, Except Mechanical Door	85	3	170	\$47,860.00	\$4,210.00	-9%	3	
49-9051.00	Electrical Power-Line Installers and Repairers	85	3	280	\$47,750.00	\$4,100.00	9%	12	★
51-4192.00	Lay-Out Workers, Metal and Plastic	85	2	180	\$43,870.00	\$220.00	-24%	3	
49-9052.00	Telecommunications Line Installers and Repairers	84	3	720	\$56,120.00	\$12,470.00	0%	19	
51-4111.00	Tool and Die Makers	83	3	160	\$51,670.00	\$8,020.00	-11%	2	
49-2094.00	Electrical and Electronics Repairers, Commercial and Industrial Equipment	82	3	440	\$49,450.00	\$5,800.00	-19%	15	
49-2095.00	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	81	5	20	\$60,790.00	\$17,140.00	5%	1	
49-3011.00	Aircraft Mechanics and Service Technicians	79	3	210	\$44,280.00	\$630.00	-2%	2	
47-1011.00	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	79	3	3,190	\$46,630.00	\$2,980.00	3%	77	★
17-3023.03	Electrical Engineering Technicians	77	3	430	\$45,180.00	\$1,530.00	-20%	9	
11-9021.00	Construction Managers	76	3	970	\$72,320.00	\$28,670.00	4%	35	★
17-3027.00	Mechanical Engineering Technicians	76	3	130	\$44,890.00	\$1,240.00	2%	3	
49-1011.00	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	76	4	2,490	\$46,810.00	\$3,160.00	0%	60	★
17-3023.01	Electronics Engineering Technicians	75	3	430	\$45,180.00	\$1,530.00	-20%	9	

Special Occupations: ★ Maine High Wage - In Demand

Top Industries for Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Plumbing, heating, and air-conditioning contractors	238220	75.60%	63,986	72,257	12.93%
Nonresidential building construction	236200	3.50%	2,962	3,318	12.05%



Self-employed workers, primary job	000601	2.83%	2,391	2,548	6.54%
Other specialty trade contractors	238900	1.56%	1,323	1,463	10.52%
Electrical contractors	238210	1.55%	1,312	1,376	4.86%
Local government, excluding education and hospitals	939300	1.06%	895	1,006	12.34%
Residential building construction	236100	0.75%	638	718	12.61%
Employment services	561300	0.67%	568	719	26.56%
Highway, street, and bridge construction	237300	0.59%	495	533	7.66%
Remediation and other waste management services	562900	0.39%	330	436	32.25%
Power and communication line and related structures construction	237130	0.38%	325	342	5.19%
Other heavy and civil engineering construction	237900	0.36%	301	323	7.41%
Land subdivision	237200	0.30%	257	256	-0.15%
Unpaid family workers, primary job	000701	0.24%	204	161	-20.89%
Natural gas distribution	221200	0.21%	177	145	-18.16%

Top Industries for Electricians

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Electrical contractors	238210	62.85%	443,111	481,763	8.72%
Self-employed workers, primary job	000601	9.20%	64,835	71,620	10.46%
Local government, excluding education and hospitals	939300	2.23%	15,740	18,334	16.48%
Self-employed workers, secondary job	000602	1.55%	10,924	11,833	8.32%
Nonresidential building construction	236200	1.39%	9,799	11,384	16.18%
Employment services	561300	1.38%	9,746	8,313	-14.70%
Plumbing, heating, and air-conditioning contractors	238220	1.25%	8,792	10,294	17.09%
Motor vehicle parts manufacturing	336300	1.16%	8,149	6,727	-17.45%
Electric power generation, transmission and distribution	221100	1.01%	7,125	6,795	-4.64%
Colleges, universities, and professional schools, public and private	611300	0.89%	6,241	7,239	16.00%
Residential building construction	236100	0.77%	5,415	6,322	16.76%
Federal government, excluding postal service	919999	0.67%	4,750	4,656	-1.98%
Ship and boat building	336600	0.53%	3,766	4,370	16.06%
Coal mining	212100	0.48%	3,382	3,542	4.71%
State government, excluding education and hospitals	929200	0.47%	3,329	3,387	1.75%



TORQ Analysis of Electricians to Recreational Vehicle Service Technicians

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Electricians	47-2111.00	Abilities:	Importance Level: 50	Weight: 1
To Title:	Recreational Vehicle Service Technicians	49-3092.00	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS											
Grand TORQ:					89						
Ability TORQ		Skills TORQ		Knowledge TORQ							
Level	91	Level	90	Level	84						
Gaps To Narrow if Possible			Upgrade These Skills			Knowledge to Add					
Ability	Level	Gap	Imp	Skill	Level	Gap	Imp	Knowledge	Level	Gap	Imp
Hearing Sensitivity	46	5	50	Repairing	72	21	89	Physics	40	2	73
				Troubleshooting	68	11	91				
				Writing	52	8	69				
				Installation	64	3	74				
<p>LEVEL and IMPT (IMPORTANCE) refer to the Target Recreational Vehicle Service Technicians. GAP refers to level difference between Electricians and Recreational Vehicle Service Technicians.</p>											

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Electricians	Recreational Vehicle Service Technicians	Importance
Oral Comprehension	57	55	72
Oral Expression	66	53	68
Manual Dexterity	55	53	68
Near Vision	64	53	68
Problem Sensitivity	69	50	65
Finger Dexterity	62	50	65
Control Precision	55	53	65
Extent Flexibility	76	59	62
Deductive Reasoning	59	50	59
Inductive Reasoning	62	50	59
Arm-Hand Steadiness	60	44	59
Multilimb Coordination	48	46	59
Speech Recognition	50	44	59

Written Comprehension	59	46	56
Information Ordering	64	51	56
Speech Clarity	41	41	56
Visualization	62	48	50
Static Strength	62	42	50
Visual Color Discrimination	55	48	50
Depth Perception	46	37	50
Hearing Sensitivity	41	46	50

Skill Level Comparison - Abilities with importance scores over 69

Description	Electricians	Recreational Vehicle Service Technicians	Importance
Troubleshooting	57	68	91
Repairing	51	72	89
Installation	61	64	74
Writing	44	52	69

Knowledge Level Comparison - Knowledge with importance scores over 69

Description	Electricians	Recreational Vehicle Service Technicians	Importance
Physics	38	40	73

Experience & Education Comparison

Related Work Experience Comparison			Required Education Level Comparison		
Description	Electricians	Recreational Vehicle Service Technicians	Description	Electricians	Recreational Vehicle Service Technicians
10+ years	15%	0%	Doctoral	0%	0%
8-10 years	0%	0%	Professional Degree	0%	0%
6-8 years	0%	0%	Post-Masters Cert	0%	0%
4-6 years	7%	0%	Master's Degree	0%	0%
2-4 years	13%	34%	Post-Bachelor Cert	0%	0%
1-2 years	30%	34%	Bachelors	0%	0%
6-12 months	13%	17%	AA or Equiv	1%	4%
3-6 months	0%	4%	Some College	3%	0%
1-3 months	0%	0%	Post-Secondary Certificate	40%	39%
0-1 month	3%	0%	High School Diploma or GED	30%	52%
None	14%	8%	No HSD or GED	23%	4%

Electricians

Recreational Vehicle Service Technicians

Most Common Educational/Training Requirement:

Long-term on-the-job training

Long-term on-the-job training

Job Zone Comparison

3 - Job Zone Three: Medium Preparation Needed

2 - Job Zone Two: Some Preparation Needed

Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.

Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.



Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.

Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.

Employees in these occupations need anywhere from a few months to one year of working with experienced employees.

Tasks

Electricians

Core Tasks

Generalized Work Activities:

- Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
- Organizing, Planning, and Prioritizing Work - Developing specific goals and plans to prioritize, organize, and accomplish your work.
- Updating and Using Relevant Knowledge - Keeping up-to-date technically and applying new knowledge to your job.

Specific Tasks

Occupation Specific Tasks:

- Advise management on whether continued operation of equipment could be hazardous.
- Assemble, install, test, and maintain electrical or electronic wiring, equipment, appliances, apparatus, and fixtures, using hand tools and power tools.
- Connect wires to circuit breakers, transformers, or other components.
- Construct and fabricate parts, using hand tools and specifications.
- Diagnose malfunctioning systems, apparatus, and components, using test equipment and hand tools, to locate the cause of a breakdown and correct the problem.
- Direct and train workers to install, maintain, or repair electrical wiring, equipment, and fixtures.
- Fasten small metal or plastic boxes to walls to house electrical switches or outlets.
- Inspect electrical systems, equipment, and components to identify hazards, defects, and the need for adjustment or repair, and to ensure compliance with codes.
- Install ground leads and connect power

Recreational Vehicle Service Technicians

Core Tasks

Generalized Work Activities:

- Updating and Using Relevant Knowledge - Keeping up-to-date technically and applying new knowledge to your job.
- Getting Information - Observing, receiving, and otherwise obtaining information from all relevant sources.
- Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
- Handling and Moving Objects - Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.
- Operating Vehicles, Mechanized Devices, or Equipment - Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.

Specific Tasks

Occupation Specific Tasks:

- Confer with customers, read work orders, and examine vehicles needing repair in order to determine the nature and extent of damage.
- Connect electrical systems to outside power sources, and activate switches to test the operation of appliances and light fixtures.
- Connect water hoses to inlet pipes of plumbing systems, and test operation of toilets and sinks.
- Examine or test operation of parts or systems that have been repaired to ensure completeness of repairs.
- Inspect recreational vehicles to diagnose problems, then perform necessary adjustment, repair, or overhaul.
- List parts needed, estimate costs, and plan work procedures, using parts lists, technical manuals, and diagrams.
- Locate and repair frayed wiring, broken connections, or incorrect wiring, using ohmmeters, soldering irons, tape, and hand tools.
- Open and close doors, windows, and drawers to test their operation, trimming



cables to equipment, such as motors.

- Maintain current electrician's license or identification card to meet governmental regulations.
- Perform business management duties such as maintaining records and files, preparing reports and ordering supplies and equipment.
- Perform physically demanding tasks, such as digging trenches to lay conduit and moving and lifting heavy objects.
- Place conduit, pipes or tubing, inside designated partitions, walls, or other concealed areas, and pull insulated wires or cables through the conduit to complete circuits between boxes.
- Plan layout and installation of electrical wiring, equipment and fixtures, based on job specifications and local codes.
- Prepare sketches or follow blueprints to determine the location of wiring and equipment and to ensure conformance to building and safety codes.
- Provide assistance during emergencies by operating floodlights and generators, placing flares, and driving needed vehicles.
- Provide preliminary sketches and cost estimates for materials and services.
- Repair or replace wiring, equipment, and fixtures, using hand tools and power tools.
- Test electrical systems and continuity of circuits in electrical wiring, equipment, and fixtures, using testing devices such as ohmmeters, voltmeters, and oscilloscopes, to ensure compatibility and safety of system.
- Use a variety of tools and equipment such as power construction equipment, measuring devices, power tools, and testing equipment including oscilloscopes, ammeters, and test lamps.
- Work from ladders, scaffolds, and roofs to install, maintain or repair electrical wiring, equipment, and fixtures.

Detailed Tasks

Detailed Work Activities:

- adhere to safety procedures
- analyze operation of malfunctioning electrical or electronic equipment
- bend tubing or conduit
- climb ladders, scaffolding, or utility or telephone poles
- conduct training for personnel
- confer with management or users
- construct or fabricate electrical parts or fixtures
- direct and coordinate activities of workers or staff
- distinguish colors
- drive automobile, van, or light truck
- estimate cost for repair services
- fabricate, assemble, or disassemble

drawers to test their operation, trimming edges to fit as necessary.

- Refinish wood surfaces on cabinets, doors, moldings, and floors, using power sanders, putty, spray equipment, brushes, paints, or varnishes.
- Remove damaged exterior panels, and repair and replace structural frame members.
- Repair leaks with caulking compound, or replace pipes, using pipe wrenches.
- Repair plumbing and propane gas lines, using caulking compounds and plastic or copper pipe.
- Reset hardware, using chisels, mallets, and screwdrivers.
- Seal open sides of modular units to prepare them for shipment, using polyethylene sheets, nails, and hammers.

Detailed Tasks

Detailed Work Activities:

- adhere to safety procedures
- adjust or set mechanical controls or components
- align or adjust clearances of vehicle body parts or components
- apply adhesives, caulking, sealants, or coatings
- assemble and install pipe sections, fittings, or plumbing fixtures
- assemble, dismantle, or reassemble equipment or machinery
- build or repair structures in construction, repair, or manufacturing setting
- conduct tests to locate mechanical system malfunction
- construct, erect, or repair wooden frameworks or structures
- cut, shape, fit, or join wood or other construction materials
- determine installation, service, or repair needed
- diagnose malfunctioning vehicle systems
- diagnose mechanical problems in machinery or equipment
- estimate time or cost for installation, repair, or construction projects
- fabricate, assemble, or disassemble manufactured products by hand
- finish or refinish floor, furniture, or related wood surfaces
- identify properties of metals for repair or fabrication activities
- inspect machinery or equipment to determine adjustments or repairs needed
- install carpet, linoleum, tile, or related material onto floors or walls
- install household appliances
- install prefabricated building components
- install siding or sheeting



manufactured products by hand

- inspect electrical installation for code conformance
- install electrical conduit or tubing
- install electrical fixtures or components
- install electronic power, communication, control, or security equipment or systems
- install lead-in wires to control boxes and other components
- install or replace meters, regulators, or related measuring or control devices
- install/connect electrical equipment to power circuit
- install/string electrical or electronic cable or wiring
- lay out electrical wiring for buildings, etc.
- maintain electrician's tools or equipment
- maintain records, reports, or files
- move or fit heavy objects
- order or purchase supplies, materials, or equipment
- perform safety inspections in construction or resource extraction setting
- perform safety inspections in industrial, manufacturing or repair setting
- plan layout of electrical/electronic equipment installation
- plan or organize work
- prepare reports
- read blueprints
- read tape measure
- read technical drawings
- repair electronic components, equipment, or systems
- repair or adjust measuring or control devices
- repair or replace electrical wiring, circuits, fixtures, or equipment
- replace electronic components
- solder electrical or electronic connections or components
- splice electric cable
- splice electric or communications trunk lines
- test electrical/electronic wiring, equipment, systems or fixtures
- test electronic or electrical circuit connections
- understand service or repair manuals
- use electrical or electronic test devices or equipment
- use hand or power tools
- use high voltage apparatus
- use interpersonal communication techniques
- use measuring devices in construction or extraction work
- use oscilloscopes in electronics repair
- use soldering equipment
- use voltmeter, ammeter, or ohmmeter

- maintain repair records
- move or fit heavy objects
- obtain information from clients, customers, or patients
- paint walls or other structural surfaces
- perform safety inspections in construction or resource extraction setting
- plan or organize work
- prepare building surfaces for paint, finishes, wallpaper, or adhesives
- prime or paint vehicle or transportation equipment surfaces
- read blueprints
- read schematics
- read specifications
- read tape measure
- read technical drawings
- read vehicle manufacturer's specifications
- read work order, instructions, formulas, or processing charts
- repair or replace electrical wiring, circuits, fixtures, or equipment
- repair or replace gas, steam, sewer, or water piping or fixtures
- repair or replace malfunctioning or worn mechanical components
- repair prefabricated wooden building components
- solder electrical or electronic connections or components
- test electrical/electronic wiring, equipment, systems or fixtures
- test mechanical products or equipment
- understand service or repair manuals
- use acetylene welding/cutting torch
- use arc welding equipment
- use basic carpentry techniques
- use basic plumbing techniques
- use hand or power tools
- use hand or power woodworking tools
- use knowledge of metric system
- use knowledge of welding filler rod types
- use measuring devices in construction or extraction work
- use oral or written communication techniques
- use soldering equipment
- use spray paint equipment
- use voltmeter, ammeter, or ohmmeter
- weld together metal parts, components, or structures

Technology - Examples



Technology - Examples

Accounting software

- Turtle Creek Software Goldenseal

Analytical or scientific software

- Electrosoft FlashWorks
- Elite ECOORD
- Elite Software Inpoint
- Elite Software Outpoint
- Elite Software Short
- Elite Software VDROP

- Lighting calculation software

- SoftEmpire Electrical Calculations

Computer aided design CAD software

- Computer aided design CAD software
- One Mile Up Panel Planner
- SmartDraw software

Data base user interface and query software

- Database software
- Insight Direct ServiceCEO
- Resolve service management software
- Shafer Service Systems software
- Timberline Office

Project management software

- Construction Master Pro software
- Craftsman CD Estimator

Spreadsheet software

- Spreadsheet software

Word processing software

- Socrates Contractor's Library
- Word processing software

Tools - Examples

- Pump pliers
- Adjustable wrenches
- Air compressors
- Ammeters



- AWMs
- Backhoes
- Cable tie guns
- Bandsaws
- Cutting torches
- Insulated bolt cutters
- Bear claw wire threaders
- Single reel cable trailers
- Cable splicing knives
- Inductance testers
- Resistance bridges
- Capacitance testers
- Bucket trucks
- Circuit testers
- Circuit tracers
- Current clamps
- Cable benders
- Truck cranes
- Conduit deburring tools
- Desktop computers
- Diagonal cut pliers
- Drill bits
- Frequency meters
- End cutting pliers
- Feeler gauges
- Fish tape pullers
- Fuse pulling equipment
- Gas leak detection devices
- Generators
- Ground fault circuit interrupter GFCI testers
- Claw hammers
- Hard hats



- Heat guns
- Allen wrenches
- Hole saws
- Hydraulic presses
- Transfer impedance meters
- Cable labeling machines
- Ladders
- Laser printers
- Conduit levels
- Insulated pliers
- Channel lock pliers
- Heavy duty longnose pliers
- Lighted magnet pickups
- Inspection mirrors
- Manlifts
- Meggers
- Magnetic locators
- Depth gauges
- Multimeters
- Needlenose pliers
- Nibbler cutting tools
- Notebook computers
- Insulated nutdrivers
- Double-end can socket wrenches
- Ohmmeters
- Oscilloscopes
- Personal computers
- Personal digital assistants PDA
- Phase rotation meters
- Polyvinyl chloride PVC cutters
- Ratcheting pipe wrenches
- Laser plumb bobs



- Cordless drills
- Circular saws
- Cable gripping gloves
- Punchdown tools
- Razor knives
- Tapered reamers
- Respirators
- External snap ring pliers
- Protective safety glasses
- Hacksaws
- Scaffolding
- Cabinet tip screwdrivers
- Shears
- Insulated socket sets
- Butane soldering irons/torches
- Insulated wrenches
- Wire wrap guns
- Hydraulic punching tools
- Staple guns
- Strap wrenches
- Automatic insulation strippers
- Tablet computers
- Conduit measuring tapes
- Tap and die sets
- Tension gauges
- Infrared scanners
- Threading dies
- Tin snips
- Tongue and groove pliers
- Diggers
- Two way radios
- Utility knives



- Milliameters
- Wattmeters
- Welders
- Welding hoods
- Soldering tools
- Winches
- Electricians' scissors
- Crimping pliers
- Cable butt trimmers

Labor Market Comparison

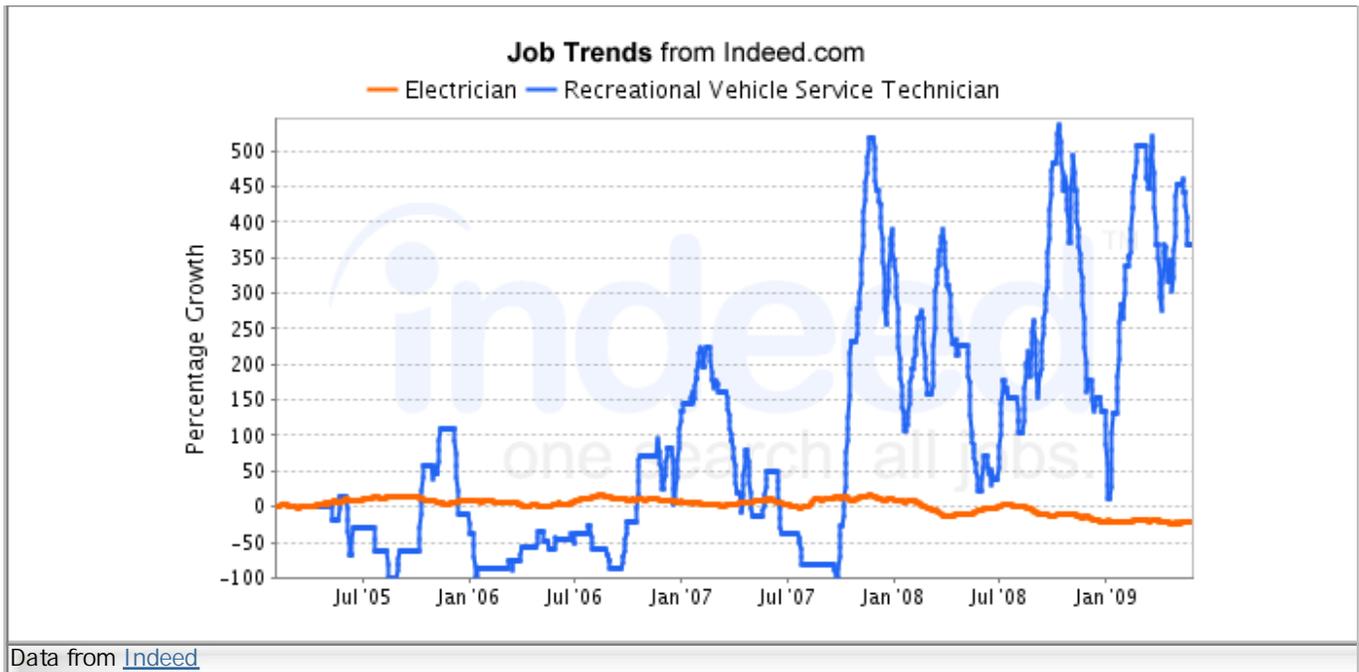
Maine Department of Labor.

Description	Electricians	Recreational Vehicle Service Technicians	Difference
Median Wage	\$ 43,650	\$ 29,640	\$(14,010)
10th Percentile Wage	\$ 32,680	\$ 22,130	\$(10,550)
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 49,050	\$ 34,510	\$(14,540)
90th Percentile Wage	\$ 52,890	\$ 38,290	\$(14,600)
Mean Wage	\$ 43,700	\$ 29,710	\$(13,990)
Total Employment - 2461	2,910	70	-2,840
Employment Base - 2006	3,304	67	-3,237
Projected Employment - 2470	3,340	71	-3,269
Projected Job Growth - 2006-2470	1.1 %	6.0 %	4.9 %
Projected Annual Openings - 2006-2470	89	1	-88
Special	★		

Special Occupations: ★ Maine High Wage - In Demand

National Job Posting Trends

Trend for Electricians and Recreational Vehicle Service Technicians



Programs

Related Programs

Building/Property Main. and Manager

Heavy Equipment Maintenance Technology/Technician. A program that prepares individuals to apply technical knowledge and skills in the field maintenance and repair of heavy equipment, and in the general maintenance and overhaul of such equipment. Includes instruction in inspection, maintenance, and repair of tracks, wheels, brakes, operating controls, pneumatic and hydraulic systems, electrical circuitry, engines and in techniques of welding and brazing.

Institution	Address	City	URL
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu
Wasington County Community College	One College Drive	Calais	www.wccc.me.edu

Vehicle Maintenance and Repair Technologies, Other.

Vehicle Maintenance and Repair Technologies, Other. Any instructional program in vehicle and mobile equipment mechanics and repairers not listed above.

Institution	Address	City	URL
Landing School of Boat Building and Design	286 River Rd	Arundel	www.landingschool.edu
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu
Eastern Maine Community College	354 Hogan Rd	Bangor	www.emcc.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu

Maine Statewide Promotion Opportunities for Electricians

O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
47-2111.00	Electricians	100	3	2,910	\$43,650.00	\$0.00	1%	89	★
49-9012.00	Control and Valve Installers and Repairers, Except Mechanical Door	85	3	170	\$47,860.00	\$4,210.00	-9%	3	
49-9051.00	Electrical Power-Line Installers and Repairers	85	3	280	\$47,750.00	\$4,100.00	9%	12	★
51-4192.00	Lay-Out Workers, Metal and Plastic	85	2	180	\$43,870.00	\$220.00	-24%	3	
49-9052.00	Telecommunications Line Installers and Repairers	84	3	720	\$56,120.00	\$12,470.00	0%	19	
51-4111.00	Tool and Die Makers	83	3	160	\$51,670.00	\$8,020.00	-11%	2	
49-2094.00	Electrical and Electronics Repairers, Commercial and Industrial Equipment	82	3	440	\$49,450.00	\$5,800.00	-19%	15	
49-2095.00	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	81	5	20	\$60,790.00	\$17,140.00	5%	1	
47-1011.00	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	79	3	3,190	\$46,630.00	\$2,980.00	3%	77	★
49-3011.00	Aircraft Mechanics and Service Technicians	79	3	210	\$44,280.00	\$630.00	-2%	2	
17-3023.03	Electrical Engineering Technicians	77	3	430	\$45,180.00	\$1,530.00	-20%	9	
17-3027.00	Mechanical Engineering Technicians	76	3	130	\$44,890.00	\$1,240.00	2%	3	
49-1011.00	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	76	4	2,490	\$46,810.00	\$3,160.00	0%	60	★
11-9021.00	Construction Managers	76	3	970	\$72,320.00	\$28,670.00	4%	35	★
49-9062.00	Medical Equipment Repairers	75	3	80	\$46,700.00	\$3,050.00	30%	6	★

Special Occupations: ★ Maine High Wage - In Demand



Top Industries for Recreational Vehicle Service Technicians

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Other motor vehicle dealers	441200	69.59%	9,741	11,854	21.69%
Automotive mechanical and electrical repair and maintenance	811110	4.13%	578	686	18.73%
Automobile dealers	441100	3.93%	550	623	13.44%
Self-employed workers, primary job	000601	3.55%	497	529	6.54%
Automotive body, paint, interior, and glass repair	811120	3.37%	471	550	16.76%
Motor vehicle body and trailer manufacturing	336200	2.82%	395	387	-2.15%
Other miscellaneous store retailers	453900	1.85%	259	278	7.20%
Automotive parts, accessories, and tire stores	441300	1.81%	253	247	-2.44%
Motor vehicle and motor vehicle parts and supplies merchant wholesalers	423100	1.78%	249	284	14.14%
Automotive equipment rental and leasing	532100	1.20%	168	191	13.46%
Commercial and industrial machinery and equipment (except automotive and electronic) repair and maintenance	811300	0.92%	129	137	5.82%

Top Industries for Electricians

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Electrical contractors	238210	62.85%	443,111	481,763	8.72%
Self-employed workers, primary job	000601	9.20%	64,835	71,620	10.46%
Local government, excluding education and hospitals	939300	2.23%	15,740	18,334	16.48%
Self-employed workers, secondary job	000602	1.55%	10,924	11,833	8.32%
Nonresidential building construction	236200	1.39%	9,799	11,384	16.18%
Employment services	561300	1.38%	9,746	8,313	-14.70%
Plumbing, heating, and air-conditioning contractors	238220	1.25%	8,792	10,294	17.09%
Motor vehicle parts manufacturing	336300	1.16%	8,149	6,727	-17.45%
Electric power generation, transmission and distribution	221100	1.01%	7,125	6,795	-4.64%
Colleges, universities, and professional schools, public and private	611300	0.89%	6,241	7,239	16.00%
Residential building construction	236100	0.77%	5,415	6,322	16.76%
Federal government, excluding postal service	919999	0.67%	4,750	4,656	-1.98%
Ship and boat building	336600	0.53%	3,766	4,370	16.06%
Coal mining	212100	0.48%	3,382	3,542	4.71%

State government, excluding education and hospitals	929200	0.47%	3,329	3,387	1.75%
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TORQ Analysis of Electricians to Rough Carpenters

ANALYSIS INPUT					
Transfer	Title	O*NET	Filters		
From Title:	Electricians	47-2111.00	Abilities:	Importance Level: 50	Weight: 1
To Title:	Rough Carpenters	47-2031.02	Skills:	Importance Level: 69	Weight: 1
Labor Market Area:	Maine Statewide		Knowledge:	Importance Level: 69	Weight: 1

TORQ RESULTS											
Grand TORQ:					88						
Ability TORQ		Skills TORQ		Knowledge TORQ							
Level	93	Level	85	Level	85						
Gaps To Narrow if Possible			Upgrade These Skills		Knowledge to Add						
Ability	Level	Gap	Impt	Skill	Level	Gap	Impt				
No Critical Gaps Recorded!				Writing	46	4	73	Chemistry	28	9	73
<p>LEVEL and IMPT (IMPORTANCE) refer to the Target Rough Carpenters. GAP refers to level difference between Electricians and Rough Carpenters.</p>											

ASK ANALYSIS			
Ability Level Comparison - Abilities with importance scores over 50			
Description	Electricians	Rough Carpenters	Importance
Problem Sensitivity	69	42	68
Oral Comprehension	57	48	62
Deductive Reasoning	59	42	62
Information Ordering	64	46	62
Arm-Hand Steadiness	60	46	62
Manual Dexterity	55	42	62
Trunk Strength	55	53	62
Near Vision	64	51	62
Inductive Reasoning	62	39	59
Visualization	62	51	56
Static Strength	62	51	56
Far Vision	46	44	56
Depth Perception	46	42	56
Written Comprehension	59	39	53
Oral Expression	66	44	53
Category Flexibility	51	39	53
Selective Attention	46	39	53
Control Precision	55	44	53

Description	Electricians	Rough Carpenters	Importance
Multilimb Coordination	48	44	53
Extent Flexibility	76	51	53
Speech Recognition	50	34	53
Speech Clarity	41	37	53
Finger Dexterity	62	39	50
Hearing Sensitivity	41	37	50

Skill Level Comparison - Abilities with importance scores over 69

Description	Electricians	Rough Carpenters	Importance
Writing	42	46	73

Knowledge Level Comparison - Knowledge with importance scores over 69

Description	Electricians	Rough Carpenters	Importance
Chemistry	19	28	73

Experience & Education Comparison

Related Work Experience Comparison			Required Education Level Comparison		
Description	Electricians	Rough Carpenters	Description	Electricians	Rough Carpenters
10+ years	15%	0%	Doctoral	0%	0%
8-10 years	0%	3%	Professional Degree	0%	0%
6-8 years	0%	10%	Post-Masters Cert	0%	0%
4-6 years	7%	29%	Master's Degree	0%	0%
2-4 years	13%	19%	Post-Bachelor Cert	0%	0%
1-2 years	30%	27%	Bachelors	0%	0%
6-12 months	13%	1%	AA or Equiv	1%	16%
3-6 months	0%	0%	Some College	3%	1%
1-3 months	0%	0%	Post-Secondary Certificate	40%	21%
0-1 month	3%	0%	High School Diploma or GED	30%	36%
None	14%	8%	No HSD or GED	23%	24%

Electricians

Rough Carpenters

Most Common Educational/Training Requirement:

Long-term on-the-job training

Long-term on-the-job training

Job Zone Comparison

3 - Job Zone Three: Medium Preparation Needed

Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.

Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree. Some may require a bachelor's degree.

Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers.

2 - Job Zone Two: Some Preparation Needed

Some previous work-related skill, knowledge, or experience may be helpful in these occupations, but usually is not needed. For example, a teller might benefit from experience working directly with the public, but an inexperienced person could still learn to be a teller with little difficulty.

These occupations usually require a high school diploma and may require some vocational training or job-related course work. In some cases, an associate's or bachelor's degree could be needed.

Employees in these occupations need anywhere from a few months to one year of working with experienced employees.

Tasks



Electricians

Core Tasks

Generalized Work Activities:

- Making Decisions and Solving Problems - Analyzing information and evaluating results to choose the best solution and solve problems.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Performing General Physical Activities - Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.
- Organizing, Planning, and Prioritizing Work - Developing specific goals and plans to prioritize, organize, and accomplish your work.
- Updating and Using Relevant Knowledge - Keeping up-to-date technically and applying new knowledge to your job.

Specific Tasks

Occupation Specific Tasks:

- Advise management on whether continued operation of equipment could be hazardous.
- Assemble, install, test, and maintain electrical or electronic wiring, equipment, appliances, apparatus, and fixtures, using hand tools and power tools.
- Connect wires to circuit breakers, transformers, or other components.
- Construct and fabricate parts, using hand tools and specifications.
- Diagnose malfunctioning systems, apparatus, and components, using test equipment and hand tools, to locate the cause of a breakdown and correct the problem.
- Direct and train workers to install, maintain, or repair electrical wiring, equipment, and fixtures.
- Fasten small metal or plastic boxes to walls to house electrical switches or outlets.
- Inspect electrical systems, equipment, and components to identify hazards, defects, and the need for adjustment or repair, and to ensure compliance with codes.
- Install ground leads and connect power cables to equipment, such as motors.
- Maintain current electrician's license or identification card to meet governmental regulations.
- Perform business management duties such as maintaining records and files, preparing reports and ordering supplies and equipment.
- Perform physically demanding tasks, such as digging trenches to lay conduit and moving

Rough Carpenters

Core Tasks

Generalized Work Activities:

- Controlling Machines and Processes - Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).
- Judging the Qualities of Things, Services, or People - Assessing the value, importance, or quality of things or people.
- Monitor Processes, Materials, or Surroundings - Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.
- Communicating with Supervisors, Peers, or Subordinates - Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.
- Coordinating the Work and Activities of Others- Getting members of a group to work together to accomplish tasks.

Specific Tasks

Occupation Specific Tasks:

- Apply shock-absorbing, sound-deadening, and decorative paneling to ceilings and walls.
- Arrange for subcontractors to deal with special areas such as heating and electrical wiring work.
- Assemble and fasten materials to make framework or props, using hand tools and wood screws, nails, dowel pins, or glue.
- Build or repair cabinets, doors, frameworks, floors, and other wooden fixtures used in buildings, using woodworking machines, carpenter's hand tools, and power tools.
- Construct forms and chutes for pouring concrete.
- Cover subfloors with building paper to keep out moisture and lay hardwood, parquet, and wood-strip-block floors by nailing floors to subfloor or cementing them to mastic or asphalt base.
- Erect scaffolding and ladders for assembling structures above ground level.
- Fill cracks and other defects in plaster or plasterboard and sand patch, using patching plaster, trowel, and sanding tool.
- Finish surfaces of woodwork or wallboard in houses and buildings, using paint, hand tools, and paneling.
- Follow established safety rules and regulations and maintain a safe and clean environment.
- Inspect ceiling or floor tile, wall coverings, siding, glass, or woodwork to detect broken or damaged structures.
- Install structures and fixtures, such as windows, frames, floorings, and trim, or



and lifting heavy objects.

- Place conduit, pipes or tubing, inside designated partitions, walls, or other concealed areas, and pull insulated wires or cables through the conduit to complete circuits between boxes.
- Plan layout and installation of electrical wiring, equipment and fixtures, based on job specifications and local codes.
- Prepare sketches or follow blueprints to determine the location of wiring and equipment and to ensure conformance to building and safety codes.
- Provide assistance during emergencies by operating floodlights and generators, placing flares, and driving needed vehicles.
- Provide preliminary sketches and cost estimates for materials and services.
- Repair or replace wiring, equipment, and fixtures, using hand tools and power tools.
- Test electrical systems and continuity of circuits in electrical wiring, equipment, and fixtures, using testing devices such as ohmmeters, voltmeters, and oscilloscopes, to ensure compatibility and safety of system.
- Use a variety of tools and equipment such as power construction equipment, measuring devices, power tools, and testing equipment including oscilloscopes, ammeters, and test lamps.
- Work from ladders, scaffolds, and roofs to install, maintain or repair electrical wiring, equipment, and fixtures.

Detailed Tasks

Detailed Work Activities:

- adhere to safety procedures
- analyze operation of malfunctioning electrical or electronic equipment
- bend tubing or conduit
- climb ladders, scaffolding, or utility or telephone poles
- conduct training for personnel
- confer with management or users
- construct or fabricate electrical parts or fixtures
- direct and coordinate activities of workers or staff
- distinguish colors
- drive automobile, van, or light truck
- estimate cost for repair services
- fabricate, assemble, or disassemble manufactured products by hand
- inspect electrical installation for code conformance
- install electrical conduit or tubing
- install electrical fixtures or components
- install electronic power, communication, control, or security equipment or systems
- install lead-in wires to control boxes and

hardware, using carpenter's hand and power tools.

- Maintain records, document actions and present written progress reports.
- Measure and mark cutting lines on materials, using ruler, pencil, chalk, and marking gauge.
- Perform minor plumbing, welding or concrete mixing work.
- Prepare cost estimates for clients or employers.
- Remove damaged or defective parts or sections of structures and repair or replace, using hand tools.
- Select and order lumber and other required materials.
- Shape or cut materials to specified measurements, using hand tools, machines, or power saw.
- Study specifications in blueprints, sketches or building plans to prepare project layout and determine dimensions and materials required.
- Verify trueness of structure, using plumb bob and level.
- Work with or remove hazardous material.

Detailed Tasks

Detailed Work Activities:

- adhere to safety procedures
- anchor or brace wooden structures, frameworks, or forms
- apply adhesives, caulking, sealants, or coatings
- attach moisture barrier sheeting over construction surfaces
- build or install cabinets or related interior wood fixtures
- build or repair structures in construction, repair, or manufacturing setting
- climb ladders, scaffolding, or utility or telephone poles
- construct, erect, or repair wooden frameworks or structures
- cut, shape, fit, or join wood or other construction materials
- determine dimensions of wooden furnishings or structures to be built
- determine installation, service, or repair needed
- determine material or tool requirements
- determine project methods and procedures
- direct and coordinate activities of workers or staff
- erect scaffold
- estimate time or cost for installation, repair, or construction projects
- examine products or work to verify conformance to specifications
- fabricate, assemble, or disassemble manufactured products by hand



other components

- install or replace meters, regulators, or related measuring or control devices
- install/connect electrical equipment to power circuit
- install/string electrical or electronic cable or wiring
- lay out electrical wiring for buildings, etc.
- maintain electrician's tools or equipment
- maintain records, reports, or files
- move or fit heavy objects
- order or purchase supplies, materials, or equipment
- perform safety inspections in construction or resource extraction setting
- perform safety inspections in industrial, manufacturing or repair setting
- plan layout of electrical/electronic equipment installation
- plan or organize work
- prepare reports
- read blueprints
- read tape measure
- read technical drawings
- repair electronic components, equipment, or systems
- repair or adjust measuring or control devices
- repair or replace electrical wiring, circuits, fixtures, or equipment
- replace electronic components
- solder electrical or electronic connections or components
- splice electric cable
- splice electric or communications trunk lines
- test electrical/electronic wiring, equipment, systems or fixtures
- test electronic or electrical circuit connections
- understand service or repair manuals
- use electrical or electronic test devices or equipment
- use hand or power tools
- use high voltage apparatus
- use interpersonal communication techniques
- use measuring devices in construction or extraction work
- use oscilloscopes in electronics repair
- use soldering equipment
- use voltmeter, ammeter, or ohmmeter

Technology - Examples

Accounting software

- Turtle Creek Software Goldenseal

Analytical or scientific software

- Electrosoft FlashWorks

- finish or refinish floor, furniture, or related wood surfaces
- inspect premises or structure for evidence of deterioration or damage
- install doors, wood floors, window frames, trim, or stairs
- install drywall, plasterboard, or wallboard
- install insulating materials
- install lathing to support plaster, stucco, or related construction material
- install locks, hinges, or related finish hardware
- install or replace glass in windows, skylights, or other structural surfaces
- install prefabricated building components
- install siding or sheeting
- install sub flooring, rough framing, or partitions
- install wall or ceiling shock-absorbing paneling or acoustical tiles
- laminate objects
- lay out woodworking projects
- lubricate machinery, equipment, or parts
- maintain records, reports, or files
- measure and mark reference points or cutting lines on workpieces
- measure, weigh, or count products or materials
- move materials or goods between work areas
- move or fit heavy objects
- obtain information from clients, customers, or patients
- operate hoist, winch, or hydraulic boom
- operate woodworking equipment/machinery
- order or purchase supplies, materials, or equipment
- paint walls or other structural surfaces
- perform safety inspections in construction or resource extraction setting
- position, align, or level machines, equipment, or structures
- prepare building surfaces for paint, finishes, wallpaper, or adhesives
- prepare reports
- read blueprints
- read specifications
- read tape measure
- read technical drawings
- recognize wood characteristics
- recognize wood species characteristics
- repair cracks, defects, or damage in installed building materials
- repair or replace locks, hinges, or related finish hardware
- repair prefabricated wooden building components



- Elite ECOORD
- Elite Software Inpoint
- Elite Software Outpoint
- Elite Software Short
- Elite Software VDROP
- Lighting calculation software
- SoftEmpire Electrical Calculations

Computer aided design CAD software

- Computer aided design CAD software
- One Mile Up Panel Planner
- SmartDraw software

Data base user interface and query software

- Database software
- Insight Direct ServiceCEO
- Resolve service management software
- Shafer Service Systems software
- Timberline Office

Project management software

- Construction Master Pro software
- Craftsman CD Estimator

Spreadsheet software

- Spreadsheet software

Word processing software

- Socrates Contractor's Library
- Word processing software

Tools - Examples

- Pump pliers
- Adjustable wrenches
- Air compressors
- Ammeters
- Awls
- Backhoes
- Cable tie guns
- Bandsaws
- Cutting torches

- signal directions or warnings to coworkers
- understand construction specifications
- use basic carpentry techniques
- use basic plumbing techniques
- use building materials for routine building maintenance
- use building or land use regulations
- use concrete fabrication techniques
- use hand or power tools
- use hand or power woodworking tools
- use hazardous materials information
- use measuring devices in construction or extraction work
- use oral or written communication techniques
- verify trueness of structure using plumb bob or level
- weld together metal parts, components, or structures

Technology - Examples

Computer aided design CAD software

- Drawing and drafting software

Mobile operator specific application software

- Bosch Punch List

Office suite software

- Microsoft Office

Spreadsheet software

- Microsoft Excel

Word processing software

- Microsoft Word

Tools - Examples

- Compressors
- Level jigs
- Bandsaws
- Sliding t-bevels
- Calipers
- Caulking guns
- Cranes
- Push sticks
- Pettibones
- Power generators
- Chainsaw jigs
- Rotary hammers



- Insulated bolt cutters
- Bear claw wire threaders
- Single reel cable trailers
- Cable splicing knives
- Inductance testers
- Resistance bridges
- Capacitance testers
- Bucket trucks
- Circuit testers
- Circuit tracers
- Current clamps
- Cable benders
- Truck cranes
- Conduit deburring tools
- Desktop computers
- Diagonal cut pliers
- Drill bits
- Frequency meters
- End cutting pliers
- Feeler gauges
- Fish tape pullers
- Fuse pulling equipment
- Gas leak detection devices
- Generators
- Ground fault circuit interrupter GFCI testers
- Claw hammers
- Hard hats
- Heat guns
- Allen wrenches
- Hole saws
- Hydraulic presses
- Transfer impedance meters

- Framing hammers
- Hard hats
- Electric impact wrenches
- Beam-lifting jacks
- Extension ladders
- Laser measuring tools
- Carpentry transits
- A-frame levels
- Marking gauges
- Moisture meters
- Needlenose pliers
- Notebook computers
- Personal computers
- Personal digital assistants PDA
- Plumb bobs
- Pneumatic nail guns
- Power drills
- Nail guns
- Routers
- Belt sanders
- Beam saws
- Staple guns
- Protractors
- Mini pry bars
- Cat's paws
- Respirators
- Rulers
- Work boots
- Fall arrest systems
- Dado blades
- Saw guides
- Hand saws



- Cable labeling machines
- Ladders
- Laser printers
- Conduit levels
- Insulated pliers
- Channel lock pliers
- Heavy duty longnose pliers
- Lighted magnet pickups
- Inspection mirrors
- Manlifts
- Meggers
- Magnetic locators
- Depth gauges
- Multimeters
- Needlenose pliers
- Nibbler cutting tools
- Notebook computers
- Insulated nutdrivers
- Double-end can socket wrenches
- Ohmmeters
- Oscilloscopes
- Personal computers
- Personal digital assistants PDA
- Phase rotation meters
- Polyvinyl chloride PVC cutters
- Ratcheting pipe wrenches
- Laser plumb bobs
- Cordless drills
- Circular saws
- Cable gripping gloves
- Punchdown tools
- Razor knives

- Ladder jacks
- Ladder levelers
- Multi-tip screwdrivers
- Combination squares
- Hammer staplers
- Cross-curve tape measures
- Templates
- Theodolites
- Snips
- Right triangles
- Utility knives
- Drill presses

- Tapered reamers
- Respirators
- External snap ring pliers
- Protective safety glasses
- Hacksaws
- Scaffolding
- Cabinet tip screwdrivers
- Shears
- Insulated socket sets
- Butane soldering irons/torches
- Insulated wrenches
- Wire wrap guns
- Hydraulic punching tools
- Staple guns
- Strap wrenches
- Automatic insulation strippers
- Tablet computers
- Conduit measuring tapes
- Tap and die sets
- Tension gauges
- Infrared scanners
- Threading dies
- Tin snips
- Tongue and groove pliers
- Diggers
- Two way radios
- Utility knives
- Millimeters
- Wattmeters
- Welders
- Welding hoods
- Soldering tools

- Winches
- Electricians' scissors
- Crimping pliers
- Cable butt trimmers

Labor Market Comparison

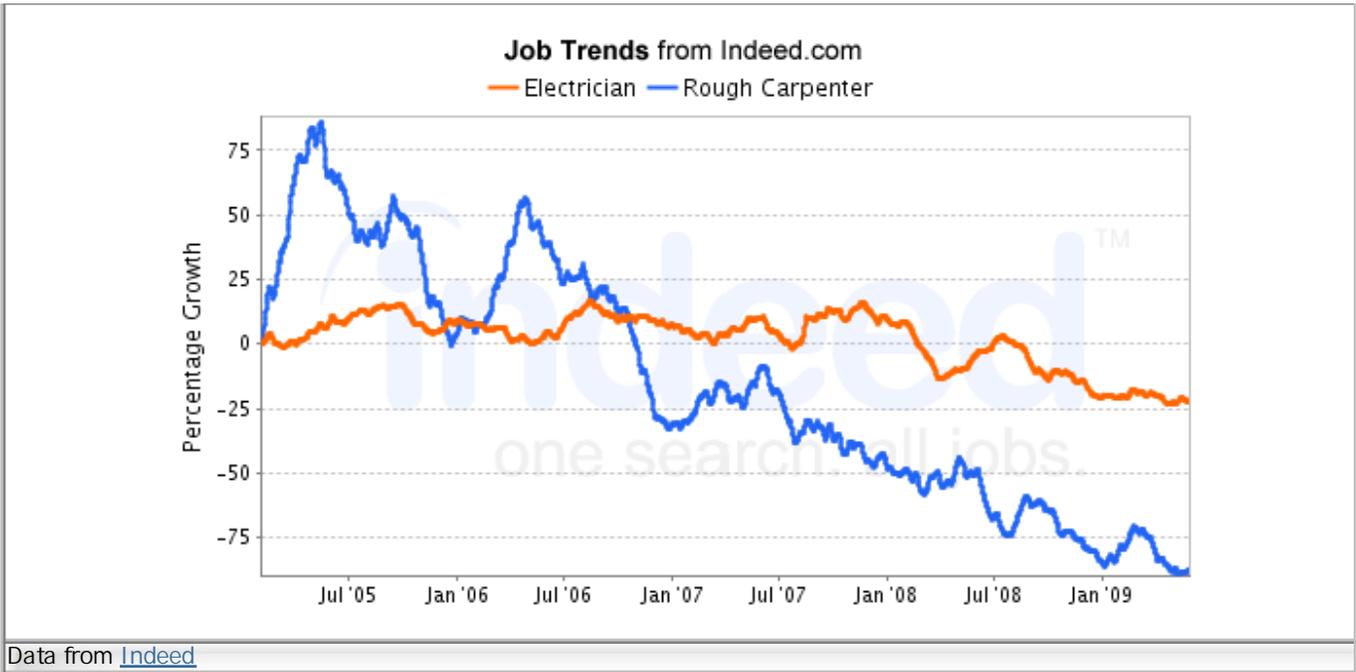
Maine Department of Labor.

Description	Electricians	Rough Carpenters	Difference
Median Wage	\$ 43,650	\$ 32,710	\$(10,940)
10th Percentile Wage	\$ 32,680	\$ 25,700	\$(6,980)
25th Percentile Wage	N/A	N/A	N/A
75th Percentile Wage	\$ 49,050	\$ 38,540	\$(10,510)
90th Percentile Wage	\$ 52,890	\$ 46,230	\$(6,660)
Mean Wage	\$ 43,700	\$ 34,030	\$(9,670)
Total Employment - 2461	2,910	6,150	3,240
Employment Base - 2006	3,304	11,492	8,188
Projected Employment - 2470	3,340	11,306	7,966
Projected Job Growth - 2006-2470	1.1 %	-1.6 %	-2.7 %
Projected Annual Openings - 2006-2470	89	156	67
Special	★		

Special Occupations: ★ Maine High Wage - In Demand

National Job Posting Trends

Trend for Electricians and Rough Carpenters



Programs			
Related Programs			
Carpenter			
<p>Carpentry/Carpenter. A program that prepares individuals to apply technical knowledge and skills to lay out, cut, fabricate, erect, install, and repair wooden structures and fixtures, using hand and power tools. Includes instruction in technical mathematics, framing, construction materials and selection, job estimating, blueprint reading, foundations and roughing-in, finish carpentry techniques, and applicable codes and standards.</p>			
Institution	Address	City	URL
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Northern Maine Community College	33 Edgemont Dr	Presque Isle	www.nmcc.edu
Southern Maine Community College	2 Fort Road	South Portland	www.smccME.edu

Maine Statewide Promotion Opportunities for Electricians									
O*NET Code	Title	Grand TORQ	Job Zone	Employment	Median Wage	Difference	Growth	Annual Job Openings	Special
47-2111.00	Electricians	100	3	2,910	\$43,650.00	\$0.00	1%	89	★
49-9012.00	Control and Valve Installers and Repairers, Except Mechanical Door	85	3	170	\$47,860.00	\$4,210.00	-9%	3	
49-9051.00	Electrical Power-Line Installers and Repairers	85	3	280	\$47,750.00	\$4,100.00	9%	12	★



51-4192.00	Lay-Out Workers, Metal and Plastic	85	2	180	\$43,870.00	\$220.00	-24%	3	
49-9052.00	Telecommunications Line Installers and Repairers	84	3	720	\$56,120.00	\$12,470.00	0%	19	
51-4111.00	Tool and Die Makers	83	3	160	\$51,670.00	\$8,020.00	-11%	2	
49-2094.00	Electrical and Electronics Repairers, Commercial and Industrial Equipment	82	3	440	\$49,450.00	\$5,800.00	-19%	15	
49-2095.00	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	81	5	20	\$60,790.00	\$17,140.00	5%	1	
49-3011.00	Aircraft Mechanics and Service Technicians	79	3	210	\$44,280.00	\$630.00	-2%	2	
47-1011.00	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	79	3	3,190	\$46,630.00	\$2,980.00	3%	77	★
17-3023.03	Electrical Engineering Technicians	77	3	430	\$45,180.00	\$1,530.00	-20%	9	
11-9021.00	Construction Managers	76	3	970	\$72,320.00	\$28,670.00	4%	35	★
17-3027.00	Mechanical Engineering Technicians	76	3	130	\$44,890.00	\$1,240.00	2%	3	
49-1011.00	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	76	4	2,490	\$46,810.00	\$3,160.00	0%	60	★
17-3023.01	Electronics Engineering Technicians	75	3	430	\$45,180.00	\$1,530.00	-20%	9	

Special Occupations: ★ Maine High Wage - In Demand

Top Industries for Rough Carpenters

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Self-employed workers, primary job	000601	30.54%	446,483	475,671	6.54%
Residential building construction	236100	21.02%	307,298	346,046	12.61%
Nonresidential building construction	236200	10.73%	156,942	175,852	12.05%
Drywall and insulation contractors	238310	2.97%	43,454	46,350	6.66%
Employment services	561300	1.98%	28,968	36,663	26.56%
Other wood product manufacturing	321900	1.33%	19,516	18,391	-5.77%

Poured concrete foundation and structure contractors	238110	1.30%	18,976	21,392	12.73%
Self-employed workers, secondary job	000602	1.24%	18,094	18,903	4.47%
Highway, street, and bridge construction	237300	0.99%	14,411	15,516	7.66%
Other specialty trade contractors	238900	0.97%	14,210	15,706	10.52%
Wood kitchen cabinet and countertop manufacturing	337110	0.78%	11,337	12,552	10.72%
Building material and supplies dealers	444100	0.71%	10,317	13,185	27.79%
Local government, excluding education and hospitals	939300	0.61%	8,942	10,045	12.34%
Other heavy and civil engineering construction	237900	0.45%	6,529	7,013	7.41%
Ship and boat building	336600	0.43%	6,281	7,030	11.93%

Top Industries for Electricians

Industry	NAICS	% of Industry	Employment	Projected Employment	% Change
Electrical contractors	238210	62.85%	443,111	481,763	8.72%
Self-employed workers, primary job	000601	9.20%	64,835	71,620	10.46%
Local government, excluding education and hospitals	939300	2.23%	15,740	18,334	16.48%
Self-employed workers, secondary job	000602	1.55%	10,924	11,833	8.32%
Nonresidential building construction	236200	1.39%	9,799	11,384	16.18%
Employment services	561300	1.38%	9,746	8,313	-14.70%
Plumbing, heating, and air-conditioning contractors	238220	1.25%	8,792	10,294	17.09%
Motor vehicle parts manufacturing	336300	1.16%	8,149	6,727	-17.45%
Electric power generation, transmission and distribution	221100	1.01%	7,125	6,795	-4.64%
Colleges, universities, and professional schools, public and private	611300	0.89%	6,241	7,239	16.00%
Residential building construction	236100	0.77%	5,415	6,322	16.76%
Federal government, excluding postal service	919999	0.67%	4,750	4,656	-1.98%
Ship and boat building	336600	0.53%	3,766	4,370	16.06%
Coal mining	212100	0.48%	3,382	3,542	4.71%
State government, excluding education and hospitals	929200	0.47%	3,329	3,387	1.75%

Industry & Occupational Data Sources

TORQ Results: The TORQ Scores is based upon an proprietary algorithm applied against Knowledge, Skills and Ability levels and importance derived from O*NET 12.

ASK Analysis, Experience & Education Levels and Tasks: O*Net 12

Labor Market Comparisons Occupational Projections data from Maine Department of Labor

National Posting Trends Indeed.com

Labor Pool & Promotions Opportunities: Occupational Projections data from Maine Department of Labor

Top Industries: Occupational Employment Statistics program (U.S. Bureau of Labor Statistics)