

Green Sectors and Related Industries and Occupations

Agriculture and Natural Resources

- Biomass Production for Biofuels and Industrial Materials. Expanding the production of biomass (agricultural and agricultural waste products) for biofuel and biomass pellet production, and the development of renewable industrial materials for green manufactured products.
- Sustainable Agriculture. Developing and expanding sustainable agriculture approaches to large-scale, commodity agricultural production that improves productivity with lesser environmental impacts.
- Local and Regional Food Systems. Expanding local and regional food systems to provide fresh, high-quality foods and lower energy use in the transportation and distribution of foods.
- Landscaping and Horticulture. Expanding the use of landscaping to improve overall environmental quality including the use of landscaping to promote green buildings.
- Natural Resource Management. Expanding and improving forest management and natural water resource management including parks, lakes, waterways and wetland areas.
- Environmental Services. Expanding environmental services including prevention and control of pollution, emissions and other toxicity at their source as well as environmental remediation services including brownfield redevelopment, hazardous waste site remediation, and river and wetlands restoration.

Related Industries (NAICS code and title):

111 – Crop Production (oilseed, grain, vegetable, melon, fruit, greenhouse, etc.)

112 – Animal Production (cattle, hog, poultry, egg, etc.)

113 – Forestry and Logging

54162 – Environmental Consulting Services

54169 – Other Scientific and Technical Consulting Services (includes horticulture consulting services)

56173 – Landscaping Services

92412 – Administration of Conservation Programs

Example Occupations

SOC Code	Occupational Title	SOC Code	Occupational Title
119012	Farmers	172111	Health & Safety Engineers
452092	Farmworkers/Laborers, Crop/Nursery/Greenhouse	191031	Conservation Scientists *
373011	Landscaping/Groundskeeping Workers	191012	Food Scientists & Technologists *
119011	Farm, Ranch & Other Agric. Managers	191013	Soil and Plant Scientists *
194091	Environmental Science & Protection Technicians	119121	Natural Sciences Managers *
452093	Farmworkers, Crop and Animal	192042	Geoscientists *
519061	Inspectors/Testers/Sorters/Weighers	192043	Hydrologists *
452091	Agricultural Equipment Operators		
192041	Environmental Scientists/Specialists		
493041	Farm Equipment Mechanics		
194011	Agricultural and Food Science Technicians		
194093	Forest and Conservation Technicians		
413031	Securities & Commodities, Agents		
172021	Agricultural Engineers		
171012	Landscape Architects		
451011	1st-Line Supervisors/Managers, Farm Workers		
151021	Computer Programmers		
132011	Accountants and Auditors		
151041	Computer Support Specialists		
132051	Financial Analysts		

* denotes occupations with small employment size currently in Illinois.

Architecture and Construction

- **Building Retrofitting.** Retrofitting and weatherization of existing industrial, commercial, and residential buildings to reduce energy use and improve overall environmental performance.
- **Green Development and Building Design and Construction.** Expanding green commercial, industrial and residential development including the use of green building design and construction to meet leading industry standards (e.g., LEED standards).
- **Energy and Telecommunications Infrastructure Construction.** Improving and expanding electrical grid and broadband infrastructure including the use of smart grid technologies.
- **Public Transportation Infrastructure Construction.** Expanding and improving public transportation infrastructure including highways, mass-transit and high-speed rail.

Related Industries (NAICS code and title):

236 – Construction of Buildings (residential, industrial, and commercial)

237 – Heavy and Civil Engineering Construction (utility, road, bridge, etc.)

238 – Specialty Trade Contractors (foundation, structure, building exterior, building equipment, building finishing, etc.)

5413 – Architectural, Engineering, and Related Services

5414 – Specialized Design Services (interior design, industrial design)

92612 – Regulation and Administration of Transportation Programs

Example Occupations:

SOC Code	Occupational Title	SOC Code	Occupational Title
472031	Carpenters	171012	Landscape Architects
472111	Electricians	172071	Electrical Engineers
472152	Plumbers, Pipefitters & Steamfitters	172081	Environmental Engineers
471011	1st-Line Supervisors, Construction Trades	172199	Engineers, All Other
472051	Cement Masons & Concrete Finishers	499052	Telecommunication Line Installers/Repairers
472073	Operating Engineers/Construction Equipment Operators	173013	Mechanical Drafters
472021	Brickmasons and Blockmasons	173025	Environmental Engineering Technicians
499021	Heating, A/C & Refrig Mechanics/Installers	499098	Helpers, Installation & Repair Workers
172051	Civil Engineers	172061	Computer Hardware Engineers
131051	Cost Estimators	472161	Plasterers and Stucco Masons
472181	Roofers	151071	Network & Computer Systems Administrators
472211	Sheet Metal Workers	474011	Construction & Building Inspectors
171011	Architects, except Landscape	113031	Financial Managers
119021	Construction Managers	537021	Crane and Tower Operators
472221	Structural Iron and Steel Workers	271025	Interior Designers
499042	General Maintenance & Repair Workers		
173011	Architectural and Civil Drafters		
173022	Civil Engineering Technicians		
492022	Telecommunication Eqpmt Installers/Repairers		
472041	Carpet Installers		
119041	Engineering Managers		
472121	Glaziers		
499051	Electric Power-Line Installers/Repairers		
472131	Insulation Workers, Floor/Ceiling/Wall		
499099	Installation/Maintenance/Repair Workers, Miscellaneous		

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Energy, Utilities, and Waste Management

- Alternative Energy Production. Producing more alternative energy that reduces environmental impacts including renewable energy such as solar, wind, hydro, geothermal and biomass as well as more traditional energy sources produced through nuclear and clean coal technology.
- Energy Distribution and Utilization. Improving the efficiency of energy distribution and utilization including the expansion and improvement of the national electric grid through application of smart grid technologies.
- Water Management. Improving the treatment, distribution, and overall management of water for industrial, commercial and residential uses.
- Waste Recycling. Improving the deconstruction, recycling and reuse of materials in both private and public waste management streams.
- Environmental Services. Expanding environmental services including prevention and control of pollution, emissions and other toxicity at their source as well as environmental remediation services including brownfield redevelopment, hazardous waste site remediation, and river and wetlands restoration.

Related Industries (NAICS code and title):

221 – Utilities (electric power generation, transmission, and distribution; water, sewage and other systems; etc.)

56179 – Other Services to Buildings and Dwellings (includes lighting maintenance services)

562 – Waste Management and Remediation Services (waste collection, waste treatment and disposal, remediation, etc.)

924 – Administration of Environmental Quality Programs (includes air and water resource and solid waste management)

Example Occupations:

SOC Code	Occupational Title	SOC Code	Occupational Title
537081	Refuse & Recyclable Material Collectors	131023	Purchasing Agents, except Retail/Farm Water & Liquid Waste Treatment Plant & System Operators
499051	Electric Power-Line Installers/Repairers	518031	Accountants and Auditors
499042	General Maintenance & Repair Workers	132011	Engineers, All Other
474041	Hazardous Materials Removal Workers	172199	Financial Specialists, All Other
472073	Operating Engineers/Construction Equipment Operators	132099	Power Distributors & Dispatchers
518013	Power Plant Operators	518012	Computer Programmers
499012	Control & Valve Installers/Repairers	151021	Mining, Safety & Geological Engineers *
499043	Maintenance Workers, Machinery	172151	Nuclear Engineers *
511011	1st-Line Supervisors, Production/Operating Workers	172161	Petroleum Engineers *
492095	Electrical/Electronics Repairers, Powerhouse/Substation/Relay	172171	
151051	Computer Systems Analysts		
471011	1st-Line Supervisors, Construction Trades		
518092	Gas Plant Operators		
491011	1st-Line Supervisors, Mechanics/Installers		
172071	Electrical Engineers		
472152	Pipelayers, Plumbers, Pipefitters & Steamfitters		
119041	Engineering Managers		
472111	Electricians		
499041	Industrial Machinery Mechanics		
518021	Stationary Engineers & Boiler Operators		

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Manufacturing

- Biofuel and Renewable Materials Production. Development and production of biofuels, biomass pellets, and renewable materials from biomass.
- Agricultural Machinery, Equipment and Materials. Development and production of agriculture machinery, equipment, and related technologies used for sustainable agriculture, horticulture and local and regional food production as well as materials and inputs such as new fertilizers.
- Alternative Energy Machinery, Equipment and Components. Developing and producing machinery, equipment and related components for alternative energy including solar panels and wind turbines and their major components.
- Green Building Products, Materials, and Systems. Expanding the design, development and production of building products and materials and building systems (e.g., heating and cooling and air quality systems, water management systems) for improving environmental performance of buildings.
- Energy-Efficient Appliances and Commercial and Office Equipment. Developing and producing energy efficient products used in commercial (e.g., offices, restaurants), residential (e.g., home appliances) and industrial buildings including information technology.
- Fuel Efficient and Alternative Transportation Equipment. Design, development, and production of more fuel efficient transportation technology (e.g., diesel engines) and alternative transportation technology.
- Green Products and Processes and Environmental Management Systems. Expanded design, development, and production of green products using green processes, materials and energy-efficient production systems managed through comprehensive environmental management systems (across all manufacturing industries).

Related Industries (NAICS code and title):

321 – Wood Product Manufacturing

322 – Paper Manufacturing

324 – Petroleum and Coal Products Manufacturing

325 – Chemical Manufacturing

326 – Plastics and Rubber Products Manufacturing

327 – Nonmetallic Mineral Product Manufacturing

331 – Primary Metal Manufacturing

332 – Fabricated Metal Product Manufacturing

333 – Machinery Manufacturing

334 – Computer and Electronic Product Manufacturing

335 – Electrical Equipment, Appliance, and Component Manufacturing

337 – Furniture and Related Product Manufacturing

Example Occupations:

SOC Code	Occupational Title
511011	1st-Line Supervisors/Managers of Production & Operating Workers
512022	Electrical & Electronics Equipment Assemblers
512023	Electromechanical Equipment Assemblers
512041	Structural Metal Fabricators/Fitters
512031	Engine and Other Machine Assemblers
512099	Assemblers & Fabricators, All Other

SOC Code	Occupational Title
514041	Machinists
514011	Computer-Controlled Machine Tool Operators
514111	Tool and Die Makers
499044	Millwrights
514012	Numerical Tool/Processing Control Programmers
514034	Lathe/Turning Machine Tool Setters/Operators
514033	Grinding/Polishing Machine Tool Setters/Operators
514031	Cutting, Punching, & Press Machine Setters, Operators, & Tenders
514081	Multiple Machine Tool Setters, Operators, & Tenders
514032	Drilling/Boring Machine Tool Setters/Operators
514035	Milling/Planing Mach Setters/Operators
519021	Crushing/Grinding/Polishing Machine Setters/Operators
514121	Welders Cutters Solderers & Brazers
514122	Welding/Soldering/Brazing Machine Setters/Operators
514021	Extruding & Drawing Machine Setters, Operators, & Tenders
514022	Forging Machine Setters, Operators, & Tenders
514193	Plating/Coating Machine Setters/Operators
514023	Rolling Mach Setters/Operators/Tenders
519041	Extruding/Forming/Pressing/Compacting Machine Setters & Operators
514072	Molding/Coremaking/Casting Mach Operators
514051	Metal-Refining Furnace Operators & Tenders
514191	Heat Treating Equipment Setters/Operators
172041	Chemical Engineers
192031	Chemists
194031	Chemical Technicians
518093	Petroleum Pump System/Refinery Operators
519011	Chemical Equipment Operators & Tenders
518091	Chemical Plant and System Operators
537072	Pump Operators, except Wellhead Pumper
519023	Mixing and Blending Machine Setters, Operators, & Tenders
519012	Separating/Precipitating/Still Machine Operators
519111	Packaging and Filling Machine Operators and Tenders
491011	1st-Line Supervisors/Managers, Mechanics/Installers
499042	General Maintenance & Repair Workers
499041	Industrial Machinery Mechanics
472111	Electricians
499043	Maintenance Workers, Machinery
514194	Tool Grinders, Filers & Sharpeners
519061	Inspectors, Testers, Sorters, Samplers, and Weighers
151021	Computer Programmers
151031	Computer Software Engineers, Applications
151051	Computer Systems Analysts
151099	Computer Specialists, All Other

SOC Code	Occupational Title
131023	Purchasing Agents, except Retail/Farm
131199	Business Operations Specialists, All Other
435061	Production/Planning/Expediting Clerks
537051	Industrial Truck and Tractor Operators
537021	Crane and Tower Operators
111021	General and Operations Managers
131051	Cost Estimators
113051	Industrial Production Managers
119041	Engineering Managers
172112	Industrial Engineers
172141	Mechanical Engineers
172071	Electrical Engineers
173013	Mechanical Drafters
173023	Electrical & Electronics Engineering Technicians
194021	Biological Technicians
173026	Industrial Engineering Technicians
172072	Electronics Engineers, except Computer
191022	Microbiologists
173027	Mechanical Engineering Technicians
151032	Computer Software Engineers, Systems
173012	Electrical and Electronics Drafters
132099	Financial Specialists, All Other
173024	Electro-Mechanical Technicians
151011	Computer Scientists, Research
271021	Commercial & Industrial Designers
172131	Materials Engineers
192099	Physical Scientists, All Other
173029	Engineering Technicians, All Other
172199	Engineers, All Other
192032	Materials Scientists *

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Transportation, Distribution and Logistics

- Fuel Efficient and Alternative Transportation Technology. Expanded development and use of more fuel efficient and alternative fueled (e.g., electric, hydrogen, hybrid) transportation technology including improved energy storage technology such as battery and fuel cell technology and support systems such as fueling stations and equipment.
- Public Transportation Planning and Management. Improved public transportation planning and management and expanded use of mass transit and high speed rail.
- Logistics Planning and Management. Improved logistics planning and management that will improve the efficiency in the movement of goods and people and expand the use of more fuel efficient and alternative transportation technology.

Related Industries (NAICS code and title):

481 – Air Transportation
 482 – Rail Transportation
 483 – Water Transportation
 484 – Truck Transportation
 485 – Transit and Ground Passenger Transportation
 491 – Postal Services (mail delivery services)
 492 – Couriers and Messengers (parcel and document delivery services)
 49312 – Refrigerated Warehousing and Storage
 541614 – Process, Physical Distribution, and Logistics Consulting Services
 92612 – Regulation and Administration of Transportation Programs

Example Occupations

SOC Code	Occupational Title
113071	Transportation, Storage & Distribution Managers
534031	Railroad Conductors and Yardmasters
531031	1st-Line Supervisors/Managers of Transportation Workers
131081	Logisticians
534011	Locomotive Engineers
537051	Industrial Truck and Tractor Operators
474061	Rail-Track Laying & Maintenance Equipment Operators
493031	Bus and Truck Mechanics and Diesel Engine Specialists
435011	Cargo and Freight Agents
492093	Electrical & Electronics Installers & Repairers, Transportation Equipment
533021	Bus Drivers, Transit and Intercity
493042	Mobile Heavy Equipment Mechanics
514041	Machinists
532021	Air Traffic Controllers
491011	1st-Line Supervisors/Managers of Mechanics, Installers, & Repairers
514121	Welders, Cutters, Solderers, and Brazers
499042	General Maintenance and Repair Workers
493023	Automotive Service Technicians and Mechanics
152031	Operations Research Analysts
493043	Rail Car Repairers
151041	Computer Support Specialists
536051	Transportation Inspectors
151081	Network Systems and Data Communications Analysts
534021	Railroad Brake/Signal/Switch Operators
151061	Database Administrators
113021	Computer and Information Systems Managers
536041	Traffic Technicians *

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