

ENHANCED SKILLS OCCUPATIONS

Occupational Title	Employment ^[1]			\$ ^[2]		Career Preparation ^[3]			Top Skills ^[4]											
	2012 Est	2022 Proj	Annual Growth Rate (%)	2015 Mean Wage	2015 Mean Salary	Educ	Work Exp	Job Training	(L-R in order of significance)											
Personal Financial Advisors	1,605	2,130	3.3	39.34	81,835	BA	N	N	B3	B9	B7	SY1	B10							
Construction Laborers	10,365	13,025	2.6	15.75	32,768	< HS	N	S	B9	SO1	B2	B3	T4	T5	SO6					
Heating/AC/Refrigeration Mechanics/Installers	3,235	4,015	2.4	23.32	48,511	PS	N	L	T3	T11	T9	T1	T5							
Environmental Science & Protection Techs, Incl Health	440	550	2.4	20.33	42,290	AS	N	N	B7	B2	C1	B9	B10							
Plumbers, Pipefitters, & Steamfitters	6,290	7,745	2.3	22.62	47,050	HS	N	A	SO1	R4	B3	T5	B2	SY1	B6	B9				
Construction Mgrs	3,300	4,010	2.2	35.83	74,523	BA	N	M	R4	B2	B3	R3	B9							
Architects, Ex Landscape & Naval	935	1,140	2.1	33.23	69,117	BA	N	I	B2	B3	C1	B9	SY1	B7						
Sheet Metal Wkrs	2,020	2,415	2.0	24.20	50,333	HS	N	A	B3	SY1	R4	B5	B2	SO1	B6	B7	B9			
Civil Engineers	1,690	2,025	2.0	37.20	77,369	BA	N	N	C1	B3	SY1	B5	T6	B7						
Heavy & Tractor-Trailer Truck Drivers	42,685	50,715	1.9	19.93	41,451	PS	N	S	T4	T5	B6	B2	B3	T8						
Financial Analysts	1,935	2,275	1.8	36.85	76,648	BA	N	N	B3	B7	B10	B2	C1							
Soil & Plant Scientists	1,495	1,745	1.7	33.86	70,437	BA	N	N	B8	B2	B3	B9	SY1	B7						
Marketing Mgrs	1,645	1,900	1.6	52.22	108,610	BA	> 5	N	B2	B3	SO4	SO6	B9							
Training & Development Specialists	2,500	2,895	1.6	25.61	53,269	BA	< 5	N	B9	SO2	B4	B7	B2							
Refuse & Recyclable Material Collectors	1,615	1,860	1.5	14.90	30,994	< HS	N	S	T4	T5	SO1	B3	B2	SY1	B6	SO6	B9			
Public Relations Specialists	2,230	2,565	1.5	26.38	54,866	BA	N	N	B9	B2	B3	B7	B10							
Roofers	1,875	2,145	1.4	15.88	33,041	< HS	N	M	SO1	T4	B2	B3	R4							
Machinists	5,570	6,335	1.4	18.41	38,301	HS	N	L	T5	T8	T4	T11	B3	B6						
Construction & Building Inspectors	725	815	1.3	26.25	54,608	HS	> 5	M	B2	B7	C1	B3	SY1	B9						
Bus & Truck Mechanics & Diesel Engine Specialists	4,175	4,710	1.3	18.95	39,412	HS	N	L	T9	T11	T1	T4	T5							
Wholesale & Retail Buyers, Ex Farm Products	1,395	1,555	1.1	24.22	50,385	HS	N	L	B2	SO3	SO4	B9	B3							
Maintenance & Repair Wkrs, General	14,600	16,250	1.1	17.94	37,322	HS	N	L	T9	T1	T11	B3	C1	T2	B6	T5	T8	B7	R4	
Automotive Service Technicians & Mechanics	9,795	10,875	1.1	18.29	38,047	HS	N	L	T1	T9	T11	T2	T8							
Inspectors, Testers, Sorters, Samplers, & Weighers	5,505	6,095	1.1	17.40	36,188	HS	N	M	B3	B2	B9	B7	B6	T5						
General & Operations Mgrs	10,360	11,470	1.1	43.55	90,580	BA	< 5	N	B2	B7	B9	B3	B6							
Agricultural & Food Science Technicians	1,075	1,175	0.9	16.18	33,655	AS	N	M	B7	B3	B10	B2	C1	SO1	B9					
Sales Reps, Wholesale & Mfg, Tech & Scientific Products	4,455	4,865	0.9	36.70	76,328	BA	N	M	B9	SO4	B2	SO6	SO3	B7	SO5					
Mechanical Engineers	2,420	2,605	0.8	35.43	73,699	BA	N	N	C1	B3	B2	SY1	B5	B7						
Architectural & Engineering Mgrs	1,300	1,395	0.7	54.24	112,813	BA	> 5	N	B2	B7	B9	B10	C1	SO1	R3	B6	T6	R4		
Industrial Engineering Technicians	665	710	0.7	22.88	47,593	AS	N	N	B3	C1	B6	B2	B7							
Transportation, Storage, & Distribution Mgrs	1,215	1,295	0.7	35.54	73,916	HS	> 5	N	SO1	B2	B3	B9	R3	SO3	SO4	SO6	R4			
Separate/Filter/Clarify/Precipitate/Still Machine Operators	1,185	1,255	0.6	19.13	39,789	HS	N	M	T5	B6	T4	C1	B3	SY1	C1	B3	SY1	T8	B9	B10
Shipping, Receiving, & Traffic Clerks	6,750	7,105	0.5	15.30	31,819	HS	N	S	B7	B2	SY1	B6	R4							
Electrical Engineers	1,335	1,400	0.5	37.08	77,129	BA	N	N	B3	B7	B2	C1	B10							
Electrical & Electronics Engineering Technicians	1,225	1,220	0.0	27.09	56,337	AS	N	N	C1	B7	R4	B2	B3	B9						
Power Plant Operators	665	620	-0.7	29.59	61,553	HS	N	L	T5	B2	B3	B9	T4	T8						
Farmers, Ranchers, & Other Agricultural Mgrs	89,100	80,180	-1.0	35.45	73,745	HS	> 5	N	B3	B9	B2	SY1	B7	R4						
Reporters & Correspondents	985	825	-1.6	14.82	30,825	BA	N	N	B2	B9	B10	B7	B3	R4						

Legend/Methodology/Selection Criteria:

The basis for **Iowa's Green Jobs** comes from occupational effects orientative research (or the "greening" of occupations) conducted by O*NET, a primary occupational data source of the Employment and Training Administration, U.S. Department of Labor. As defined by O*NET, the "greening" of occupations "refers to the extent to which green economy activities and technologies increase the demand for existing occupations, shape the work and worker requirements needed for occupational performance, or generate unique work and worker requirements." This report focuses on growing occupations from two O*NET-identified occupational categories describing the effects of activities and technologies on occupational performance: **Green Increased Demand Occupations** (occupations impacted by green economy activities and technologies causing an increase in demand but no significant change to the occupation's tasks) and **Green Enhanced Skills Occupations** (occupations impacted by green economy activities and technologies with significant changes to the work and worker requirements but not necessarily an increase in demand). Residual or undefined occupations were not included in this report which may include "new and emerging" green jobs not representative enough in the general economy to warrant a separate and distinct classification of their own (Examples may include Geothermal Technicians, Recycling Coordinators, Sustainability Specialists, and Wind Turbine Service Technicians.). Additional information on "green occupations" can be viewed on the O*NET OnLine website at <http://online.onetcenter.org/>.

[1] **Employment** includes: **Estimated** = Estimation of labor force by occupation (rounded); **Projected** = Projection of future labor force by occupation (rounded); and **Annual Growth Rate (%)** = Ten year growth rate (not shown) divided by ten.

[2] **Mean (Average) Wage & Salary (\$)** = dividing the estimated total pay for an occupation by its weighted employment. Pay provided in wage (hourly) and salary (annual) formats; Missing pay data may be derived from calculation or proration of reported wage/salary data if available (i.e., legislator pay based on 4-months service, education and coaching pay based on 12-months service); Occupations with limited or no compensation data (which inhibits either wage or salary calculated derivations) are subsequently omitted from any methodological calculations.

[3] **Career Preparation** determined by the U.S. Department of Labor's Bureau of Labor Statistics (BLS). Alternative employment pathways may exist as well as differing educational, training, or licensing requirements per state. Iowa requirements are used in this publication when available. Career Preparation areas/levels include:

Education (typical education level needed to enter an occupation): DP = Doctoral or Professional degree; MA = Master's degree; BA = Bachelor's degree; AS = Associate's degree; PS = Postsecondary non-degree award; SC = Some college, no degree; HS = High school diploma or equivalent; < HS = Less than high school; **Work Experience** (typical work experience level commonly considered necessary for entry into an occupation, or substitutable for formal types of training): > 5 = 5 years or more; < 5 = Less than 5 years; N = None; and **Job Training** (typical on-the-job training level needed to attain occupational competency): I = Internship/residency; A = Apprenticeship; L = Long-term on-the-job training; M = Moderate-term on-the-job training; S = Short-term on-the-job training; None = N.

[4] **Top Skills** refers to the top five (or more if tied) most important skills for a particular occupation as identified by sampled workers' questionnaire responses conducted by occupational analysts of the U.S. Department of Labor's Occupational Information Network (O*NET). These include: **Basic Skills**: B1 = Active Learning; B2 = Active Listening; B3 = Critical Thinking; B4 = Learning Strategies; B5 = Mathematics; B6 = Monitoring; B7 = Reading Comprehension; B8 = Science; B9 = Speaking; B10 = Writing; **Complex Problem Solving Skills**: C1 = Complex Problem Solving; **Resource Management Skills**: R1 = Management of Financial Resources; R2 = Management of Material Resources; R3 = Management of Personnel Resources; R4 = Time Management; **Social Skills**: SO1 = Coordination; SO2 = Instructing; SO3 = Negotiation; SO4 = Persuasion; SO5 = Service Orientation; SO6 = Social Perceptiveness; **Systems Skills**: SY1 = Judgment and Decision Making; SY2 = Systems Analysis; SY3 = Systems Evaluation; and **Technical Skills**: T1 = Equipment Maintenance; T2 = Equipment Selection; T3 = Installation; T4 = Operation and Control; T5 = Operation Monitoring; T6 = Operations Analysis; T7 = Programming; T8 = Quality Control Analysis; T9 = Repairing; T10 = Technology Design; T11 = Troubleshooting. N.A. = Not Available.

Sources:

Education/Work Experience/Job Training: Bureau of Labor Statistics, U.S. Department of Labor; **Employment**: 2012-2022 Occupational Projections estimates based on 2012 annual industry employment data and 2013 2nd quarter occupational staffing pattern data, Labor Market and Workforce Information Division, Iowa Workforce Development; **Skills**: Occupational Information Network (O*NET), Employment and Training Administration, U.S. Department of Labor; **Wages**: 2015 Iowa Wage Survey estimates (based on 2014 2nd quarter occupational wage data updated to 2015 2nd quarter using Employment Cost Index), Labor Market and Workforce Information Division, Iowa Workforce Development.

This workforce product was funded by a grant awarded by the U.S. Department of Labor's Employment and Training Administration. The product was created by the recipient and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership. This product is copyrighted by the institution that created it. Internal use by an organization and/or personal use by an individual for non-commercial purposes is permissible. All other uses require the prior authorization of the copyright owner. This publication was produced by the Labor Market and Workforce Information Division of Iowa Workforce Development. Revisions and/or corrections made when necessary. Inquiries may be directed to Brent Paulson at 515.281.3439 or Brent.Paulson@iwd.iowa.gov. Visit www.iowaimi.gov to obtain the latest workforce data and trends including this document. Published 11/2015.