



*Workforce Innovation in Regional Economic Development*

# '08

## LaborMarket

# SURVEY

### WIRED Targeted Industry Employers

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### Acknowledgments

The assistance of the NM Department of Workforce Solutions in making available their master employer list and of Central New Mexico Community College in developing the survey form is appreciated.



## *Executive Summary*

This report compiles and analyzes the hiring plan and training need information from 193 targeted industry employers responding to a labor market survey conducted as part of the Workforce Innovation in Regional Economic Development (WIRED) Project, a federal grant for central New Mexico. The survey pool consisted of 395 employers in advanced manufacturing, aerospace/aviation, green building, microelectronics, optics, and renewable energy.

The responding employers indicated, at the time of response, plans to hire 1850 workers over the next 12 months. Occupations that the most employers planned to hire were Engineers, Machinists, Scientists, Technicians, and Welders.

Occupations reported by the most employers as having the most difficulty finding qualified workers were Engineers, Machinists, Welders, Technicians, and Computer Drafters.

A sizable number of employers reported lack of basic employability skills in applicants; dependability, time management and problem solving were named most often.

Suggested actions to meet employer needs include increasing the number of engineers through education and recruitment, expanding machinist training, determining if welder training needs to be increased and computer assisted drafting training modified, emphasizing employability and basic skills training at the same time as technical skill acquisition, increasing on the job (OJT) programs, advertising college placement offices as a good source of workers, and publicizing job opportunities in the targeted industries.

Many employers offered to provide company tours, speakers, or materials, and several indicated a willingness to meet with college program administrators.





### *Purpose*

This report provides final information compiled from an employer based labor market survey to assist educators and training providers in meeting targeted industry employment needs.

### *Background*

New Mexico received a Workforce Innovation in Regional Economic Development (WIRED) three year grant from the US Department of Labor in 2007 to promote economic development in targeted industries in central New Mexico counties through special workforce projects. One of the initial implementation plan activities was a labor market needs survey to assist in project career counseling, employment and training decisions. The survey was conducted utilizing WIRED program funds by New Mexico Technet, an Albuquerque non-profit organization, as part of their administrative assistance contract to the New Mexico Department of Workforce Solutions, the project manager and fiscal agent.



## *Survey Procedures*

**Employer List** Utilizing the New Mexico Department of Workforce Solutions' master Unemployment Insurance Tax Employer File, a list of employers in the WIRED six targeted sectors - Advanced Manufacturing, Aerospace, Green Building, Microelectronics, Optics and Renewable Energy - residing in the eight county central New Mexico WIRED region was compiled. The North American Standard Industrial Classification system codes for this master list were supplemented by lists from other sources such as the NM Business Journal Book of Lists where the NMDWS did not have industry specific designation. The resulting list consisted of 385 employers with at least four employees.

**Employer Solicitation** Local mailing addresses were then obtained for all employers, and a one page survey with cover letter and return stamped envelope was mailed to the Human Resource Director at each company in May 2008. A second mailing was made in June to non-respondents with subsequent follow-up phone calls and personal visits in June, July, and August. Responses were received through September.

**Information Requested** The survey requested short answer quantitative and qualitative information on company hiring plans and needs, technical and employability skills lacking in applicants, expected skill changes, recruitment methods, training needed from colleges, and information employers could provide students and job seekers. Respondents were given the option of replying by mail, email, website, or telephone. Copies of the survey and cover letter are included as attachments.

## *Employer Responses*

**Rate** As of September 30, 193 employers had responded for a 50.1% response rate. The highest number of companies surveyed and reporting was in Advanced Manufacturing.

**Results** Findings for all industries and for each of the six targeted industries are shown on the following pages. These are based on aggregating the individual employer responses.



## *Findings*

### **All Targeted Industries**

The total number of expected hires listed by employers in these targeted industries was about 2400 (2200-2622) over the next 12 months and 1850 (1832-1890) over the next 24 months.\* A substantial number of new hires are expected in the aerospace and advanced manufacturing sectors and fewer in the green building, microelectronics, and optics sectors according to reporting employers. (See limitations on page 10.) New hires by industry are shown in Table 2.

Occupations reported as expected new hires by the most employers were Engineers (all types), Machinists, Scientists, Welders, and Technicians (electrical, solar, manufacturing).

Occupations for which employers were having the most difficulty finding workers reported by the most companies across all industries were Engineers, Machinists (especially advanced manufacturing and aerospace), Welders (aerospace and

advanced manufacturing), Technicians, and Computer assisted designers and drafters. (A list of occupations specific to each industry is listed in the sections specific to that sector.)

Employers reported that technical skills lacking in job applicants were general lack of experience working in relatively new industries such as aerospace and renewable energy and the inability of new workers to have both general and specific skills needed by the industry

Employability skills were reported as lacking in job applicants and new employees in a sizable number of areas with Dependability, Time Management and Problem Solving leading the list (see Table 5.) A number of employers described a general lack of work ethic and employability skills, and a few went on to say the problem is getting worse. Several suggested further formal

\*see Limitations section page 11.

training in this area, both generally and specifically, in areas such as communications and time management.

The primary method of recruitment was referral followed by newspaper and company website. Relatively few (less than 20 %) use the college placement office.

Thirty two employers asked that an educational administrator contact them to discuss training needs.

One hundred thirteen offered to provide speakers, tours, job shadowing or career materials.

## Advanced Manufacturing

(Predominantly machine shops, scientific instruments, medical equipment, test and diagnostic test equipment, precision steel materials, audio systems, and mechanical controls)

**Number of companies:** 114

Hiring plans: 12 months-561, 24 months-933

### Employability skills most often lacking:

- Dependability
- Time management
- Problem solving
- Teamwork

**Number using placement office:** 24

### Occupations with largest number of expected new hires:

Engineers (16 employers), Scientists (12), Machinists (16) with several indicating programming and CNC (computer numerical control) capability, Welders (4), Chemical technicians (2), Electronic technicians (2)

Computer technicians, Electrical journeymen, Production technicians and Administrative assistants (one each)

### Difficult to find workers

Machinists (14 employers) including several citing CNC and one emphasizing traditional,

Welders, Electronic technicians, Metal fabricators, Radar technicians, Die designers, Tool and die makers, CADD (computer assisted de-

sign and drafting) operators, and Computer programmers.

### Skills lacking

- Mathematics (3 employers)
- Mechanical (2)
- Fabrication, blue print reading, measuring equipment, and English as a Second Language (one each)

### Skill changes expected

- More advanced technology and automated equipment (2)
- Multitasking, Communications
- CADD (computer assisted design and drafting)

### Training requested by Employers

- Certificate: machinist (3) including one naming CNC and real time systems and one non programmable, welding (2), CADD (2), work ethic (2), Microsoft office, job search, computer
- Credit: mathematics, quality assurance, electronics refresher
- Modifications: radar technician in electronics
- Degree: fabrication

### Other

- Need OJT and apprenticeship (3)
- "CNM does a good job training machinists"

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## Aerospace/Aviation

### Number of companies: 24

Hiring plans: 12 months-1189, 24 months\*-  
314 Significant hiring in addition to Eclipse

### Employability skills most often lacking

Dependability  
Motivation

### Number using placement office: 5

### Occupations with largest number of expected new hires

Engineers (8)  
A&P mechanics (2)  
Sheet metal workers (2)  
Welders (2)  
Machinists (2)

### Difficult to find workers

Engineers (3)  
A&P mechanics (3)

*\* does not include Eclipse*

Sheet metal workers (2)

Welders (2)

### Skills lacking

Experience in the aviation industry (5)  
Sheet metal (2)  
Welding  
Electronics  
Helicopter maintenance  
Advanced technical

### Skill changes expected

Increasing need for jet engine mechanics

### Training requested

Certificate: A&P mechanics (4) including one adding apprenticeship

### Other

Helicopter employer recruits exmilitary

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## Green Building

### Number of companies: 12

Hiring plans: 12 months-41, 24 months-43  
(Construction economy uncertain)

### Employability skills most often lacking

Problem solving  
Dependability  
Time management

### Number using placement office: 0

### Occupations with largest number of expected new hires

Construction laborers (5)  
Construction superintendents (4)

### Difficult to find workers

Construction laborers (2)  
Construction superintendents  
Engineers  
Estimators

### Skills lacking

CADD  
Code knowledge  
Specialized craft such as carpentry and welding  
General building



## **Skill changes expected**

Increasing technical knowledge  
More business knowledge  
Multitasking

Degree: carbon management, solar technician, CADD (computer assisted design & drafting)

## **Training requested**

Certificate: project management, LEED (leadership in energy & environmental design), computer design  
Credit: basic building technical (3), communications, code compliance, employability

## **Other**

Expressed uncertainty about economy's effects on home building

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## **Microelectronics**

### **Number of companies: 11**

Hiring plans: 12 months-43, 24 months-50

### **Employability skills most often lacking**

Adaptability  
Dependability  
Time management

### **Skills lacking**

Mechanical  
Hands on experience  
Machinery operations  
CADD (computer assisted design and drafting)  
Computerized records control  
Wire banding  
IC (integrated circuit) assembly  
Cryogenic system knowledge  
RF (radio frequency) experience  
Electro-mechanical assembly

### **Number using placement office: 3**

### **Occupations with largest number of expected new hires**

Technicians (electronic, process, manufacturing)  
Assemblers (4)  
Engineers (4)

### **Skill changes expected**

More automation and technological advances  
Computerized records control  
More CADD  
Increasing assembler qualifications

### **Difficult to find workers**

Engineers (7)  
Process technicians  
Electronic technicians  
Assemblers  
Buyers

### **Training requested**

Certificate: soldering, recertification  
Credit: self management, production records control, systems and software control, robotics, radio frequency wireless  
Degree: radio frequency wireless

## Optics

**Number of companies:** 12

Hiring plans: 12 months 49, 24 months- 90

### Employability skills most often lacking

Time management

Leadership

**Number using placement office:** 1

### Occupations with largest number of expected new hires

Engineers (4)

Assemblers and fabricators (3)

Photonics and optics technicians (3)

Scientists (2)

### Difficult to find workers

Engineers (3)

Opticians (2)

Purchasing agents

Machinists

Inventory managers

### Skills lacking

Physics

Optics alignment

### Skill changes expected

More digital technical assembly

Increasing computer skills for optics designing

### Training requested

Certificate: technical certificate, laser optics, work ethic, project management

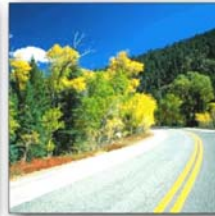
Credit: project management, work ethic

Degree: chemical spectroscopy

### Other

Industry needs are concentrated in university degree occupations





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## Renewable Energy

**Number of companies:** 18

Hiring plans: 12 months-152, 24 months-136

### Employability skills most often lacking

Problem solving

Multitasking

**Number using placement office:** 1

### Occupations with largest number of expected new hires

Engineers (11)

Computer drafters (2)

Solar technicians (2)

Sales (2)

### Difficult to find workers

Engineers (5)

Technicians (4)

Managers (2)

Computer drafters

### Skills lacking

Solar and photovoltaic knowledge (2)

Electrical design

Mechanical design

Drafting

Pipe fitting

Electrical journeyman

Project management

### Skill changes expected

More electronics

Increasing automation

More need for general skills

### Training requested

Certificate: solar installer, electrical, journeyman, plumber, problem solving, data analysis, MS office

Credit: oral and written communications (2), solar and renewable energy fundamentals

## *Analyst Suggestions*

*Based on employer response*

### **Occupational Education and Training**

- Increase availability of engineers through education and out of state recruitment.
- Consider expansion and curriculum revisions in machinist training programs.
- Closely monitor the computer assisted drafting and design programs for technology related curriculum changes and increased and specialized employer needs.
- Determine if there is a need for welder programs expansion.

### **Employability Skills**

- Expand the employability skills training as special stand alone courses and as incorporated in technical training courses.
- Emphasize to prospective and new students as well as graduates that these critical skills are as important as technical knowledge.
- Work with the WIRED program and the public education system to publicize the importance of these skills.

### **Placement**

- Publicize to employers the availability of graduates through community college placement offices.

### **Career Planning**

- Assist WIRED program to publicize the targeted industries and emphasize the employment and training opportunities.

### **On the Job Training**

- Increase on the job training, apprenticeship and internship opportunities so graduates acquire industry recommended experience and knowledge.

### **Basic Skills**

- Ensure all graduates have the necessary mathematical, writing and presentation skills required in the workplace.





## *Limitations*

This survey was based on aggregation of short answers to specific questions and does not include detailed in-depth information that would be obtained from interviews.

Employers responding do not include new start ups such as Schott Solar and such major area employers as Los Alamos National Laboratory, Intel, Air Force Research Laboratory and Public Service Company of New Mexico, all of whom declined to participate.

Expected hiring data by employers are notoriously inexact based on their inability to accurately predict their company response to future national and industry economic conditions. This is further exacerbated by the current uncertain national economic picture. Many responses were received prior to the onset of the major eco-

nomic downturn in late 2008. Some employers declined to make a prediction and several did so only for the next 12 months which is one of the reasons that the 24 month total may be smaller than the 12 month.

There were few employers reporting outside the Albuquerque area.

Different employers listed the same subject training need at different levels such as credit, certificate, degree or modification. This may accurately reflect the amount of emphasis that they felt the subject should receive, or it may indicate confusion about the way programs are offered. This may require further discussions with employers.



## Tables

**Table 1  
Response Rates**

Employers	Responses	Number of Employees				
		1 to 9	10 to 24	25 to 49	50 to 99	100+
<b>Total</b>	<b>193</b>	<b>64</b>	<b>56</b>	<b>25</b>	<b>24</b>	<b>24</b>
Sub-Industries	Responses	1 to 9	10 to 24	25 to 49	50 to 99	100+
Advanced Mfg.	114	33	41	17	9	14
Micro Electronics	12	4	3	2	2	1
Aerospace	24	7	2	1	9	5
Green Building	12	6	3	1	1	1
Clean & Renewable Energies	19	9	5	2	2	1
Optics	12	5	2	2	1	2

**Table 2  
Total Number of New Hires**

Total for All Businesses Surveyed	Next 12 Months	Next 24 Months
	2290-2622	1832-1896
Advanced Manufacturing	524-573	812-933
Micro Electronics	39-293	150
Aerospace	1214	344
Green Building	41	43
Clean & Renewable Energies	428-452	398-436
Optics	44-49	85-90

**Table 3  
Most New Hire Occupations**

Employers Reporting	
Engineers .....	39
Machinists .....	16
Scientists .....	14
Technicians.....	11
Welders .....	6



**Table 4**  
**Difficult to Find Occupations**

Occupations	
• Engineers	• Technicians
• Machinists	• CADD Drafters
• Welders	

**Table 5**  
**Lacking in Current Employees & Applicants**

Qualities Lacking	
• Dependability .....69	• Interpersonal skills .....35
• Time management .....57	• Oral communications .....33
• Problem solving .....54	• Computer skills .....29
• Motivation .....48	• Honesty .....29
• Teamwork .....45	• Learning skills (or behaviors) ...18
• Leadership .....41	• Research skills .....14
• Adaptability .....40	• Other* .....16
• Multifunctional .....37	
* <i>Lack of common sense/intelligence, social behaviors, safety clearance, drug/ alcohol free, soft skills/ basics, general construction knowledge, customer service skill follow through, following directions, independence, professional appearance, listening skills, bi-lingual capabilities, math, writing &amp; language skills, and life skills.</i>	

**Table 6**  
**Recruitment Sources**

Qualities Lacking	
• Referral .....116	• Private .....37
• Newspaper, Radio .....90	• NM .....34
• Company Website .....73	• College .....32
• Online Job Bank .....61	• Job .....30
• Promotion .....38	



**State of New Mexico Department of Workforce Solutions**

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Phone 505.841.8474 - FAX 505.841.8491



**WORKFORCE  
INNOVATION  
IN REGIONAL  
ECONOMIC  
DEVELOPMENT**

**BILL RICHARDSON**  
Governor  
**BETTY SPARROW DORIS**  
Secretary  
**RAYMOND H. GONZALES**  
Deputy Secretary

May 5, 2008

Dear

New Mexico was recently awarded a federal three year \$5 million grant to support economic development for targeted industries through improved workforce and educational activities in the central part of our state. This Workforce Innovation in Economic Development (WIRED) grant is explained in the enclosed flyer and in detail on the NM Dept of Workforce Solutions website at [dws.state.nm.us](http://dws.state.nm.us).

One of the first project activities specified in the grant is to identify industry hiring and training needs as well as career opportunities. You have been identified as a key employer in one of these industries. It would greatly assist our efforts if you could complete and return the enclosed short survey form.

All individual company information will be kept strictly confidential by project staff. We will provide you and the cooperating educational institutions and employment agencies aggregate data reports and suggested action recommendations.

Please return the enclosed survey by May 28, 2008 in the enclosed envelope or fax to 505-343-7625. You can also complete the survey on line at [technet.nm.org](http://technet.nm.org). Call Charles Lehman at 938-1282 if you have any questions or if you would like to discuss your training and employment needs in more detail.

Sincerely,

Sherman McCorkle  
Chair  
T2 Private Industry Board

Betty Sparrow-Doris  
Secretary  
NM Dept of Workforce Solutions

encl survey form  
return envelope  
WIRED flyer

Sherman McCorkle, President &  
CEO, Technology Ventures  
Corporation,  
Board Co-Chair

Lawrence Rael, Executive  
Director, Mid-Region Council  
of Governments,  
Board Co-Chair

Rusty Schmit, Founder,  
President and CEO,  
Advent Solar,  
Board Co-Chair

# LaborMarket **SURVEY**



## WIRED Employer Survey

**PURPOSE:** Data for sectors targeted for training assistance by an education/government/industry economic development team.

Company Name _____	Respondent Name _____	Title _____ <input type="checkbox"/> 1-9 <input type="checkbox"/> 10-24 <input type="checkbox"/> 25-49 <input type="checkbox"/> 50-99 <input type="checkbox"/> 100+
Phone _____	email _____	Current No. of Employees _____
Major Products or Services _____		

Expected number of hires (due to growth and replacement of current workers): Next 12 months: _____ Next 24 months: _____	List below occupations with largest numbers of expected new hires: _____ _____ _____	Education Level (HS, AA, BA, MA) _____ _____ _____	List below occupations with difficulty finding qualified workers: _____ _____ _____
--	---	---	--

**Skills lacking in current employees and applicants:**

*Technical:*

*Employability:*

<input type="checkbox"/> oral communication	<input type="checkbox"/> honesty	<input type="checkbox"/> teamwork	<input type="checkbox"/> motivation	<input type="checkbox"/> research
<input type="checkbox"/> dependability	<input type="checkbox"/> adaptability	<input type="checkbox"/> leadership	<input type="checkbox"/> interpersonal	<input type="checkbox"/> creativity
<input type="checkbox"/> problem solving	<input type="checkbox"/> multifunctional	<input type="checkbox"/> computer	<input type="checkbox"/> learning	
<input type="checkbox"/> time management	<input type="checkbox"/> other _____			

*Other:* \_\_\_\_\_

Which of the above is most important?  
 What skill changes do you expect over the next 2-3 years: \_\_\_\_\_

**Training needed from area university and community college for existing workforce and new applicants that is not currently being provided:**

*Credit/No Credit Courses:* \_\_\_\_\_

*Certificate Programs:* \_\_\_\_\_

*Degree Programs:* \_\_\_\_\_

*Existing course/program modifications:* \_\_\_\_\_

**Usual Method(s) of Recruitment:**

<input type="checkbox"/> referral	<input type="checkbox"/> promotion	<input type="checkbox"/> newspaper, radio, TV	<input type="checkbox"/> online job bank	<input type="checkbox"/> company website
<input type="checkbox"/> college placement office	<input type="checkbox"/> NM Workforce Solutions Dept.	<input type="checkbox"/> private employment agency	<input type="checkbox"/> job fair	<input type="checkbox"/> other _____

Would you like to be contacted by an educational administrators to discuss training improvements?  Yes  No

Would a company representative(s) be willing to visit high schools to talk about job opportunities?  Yes  No  Already doing so.

Would job shadowing opportunities or company tours for students/faculty be available at your workplace?  Yes  No  Already doing so.

Can you supply company printed or electronic materials that could be provided to website developers and school counseling offices about job opportunities?  Yes  No

Comments: \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_

**Return:** Please fax the response to 505.343.7625 attn: Charles Lehman, or mail in the enclosed stamped envelope to:

WIRED Employer Survey, c/o NM Technet, 5921 Jefferson NE, Albuquerque, NM 87112.  
 Survey can be completed on the Technet website at [www.technet.nm.org](http://www.technet.nm.org).

**Thank you for your time and input - All respondents will receive a copy of the final report.**

## *WIRED Map of New Mexico*

